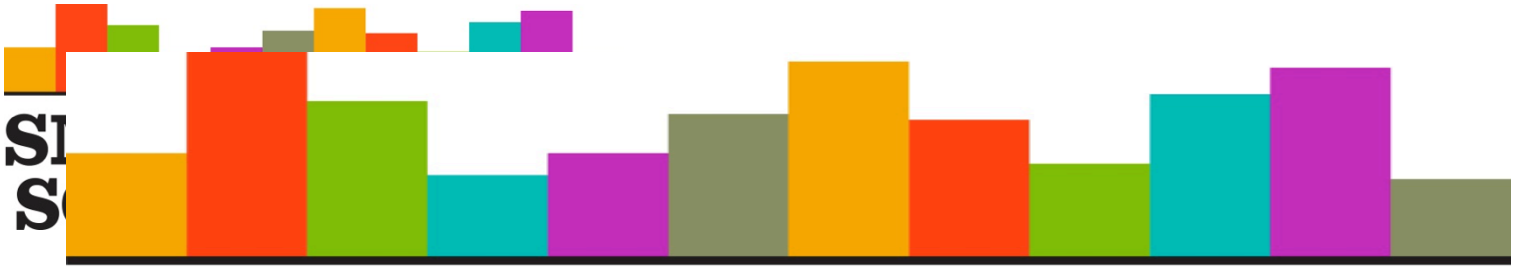


SMART SCALE

Funding the Right Transportation Projects in Virginia

Virginia's Smart Scale Prioritization Process – Implementing HB2

ASHE
Chad Tucker, Transportation and Mobility Planning
August 11, 2016

SMART SCALE

Funding the Right Transportation Projects in Virginia

Overview

- Integration into planning and programming
- Grant application
- Screening and Validation
- Measures and Scoring
- Round 1 summary and lessons learned

SMART SCALE

Funding the Right Transportation Projects in Virginia

Integrating into the planning and programming processes

SMART SCALE
Funding the Right Transportation Projects in Virginia

Life Cycle of a Candidate Project

- How it's planned.

VTrans 2040
SAFE • STRATEGIC • SEAMLESS

- MPO CLRPs
- Corridor Studies
- STARS program
- Local Comp Plans

How it's scored.

SMART SCALE

How it's funded.

HB1887

- District Grant
- High-Priority

VDOT | DRPT

SMART SCALE
Funding the Right Transportation Projects in Virginia

How are projects filtered?

VTrans 2040
SAFE • STRATEGIC • SEAMLESS

VTrans2040 - Long Range Statewide Multimodal Policy Plan

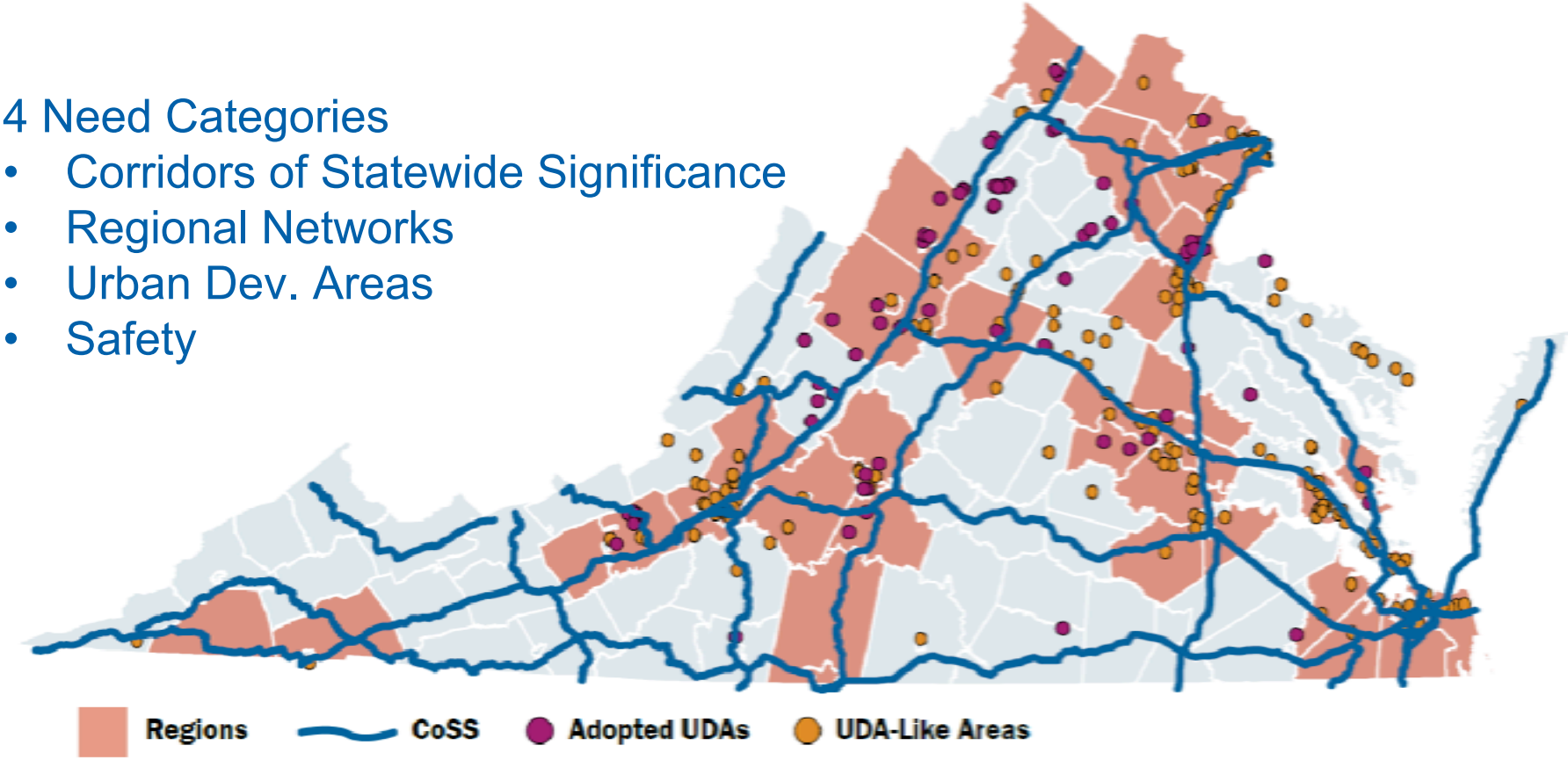
- Vision Document
- Multimodal Transportation Plan and Needs Assessment

www.vtrans.org

VTrans - Needs Assessment

4 Need Categories

- Corridors of Statewide Significance
- Regional Networks
- Urban Dev. Areas
- Safety

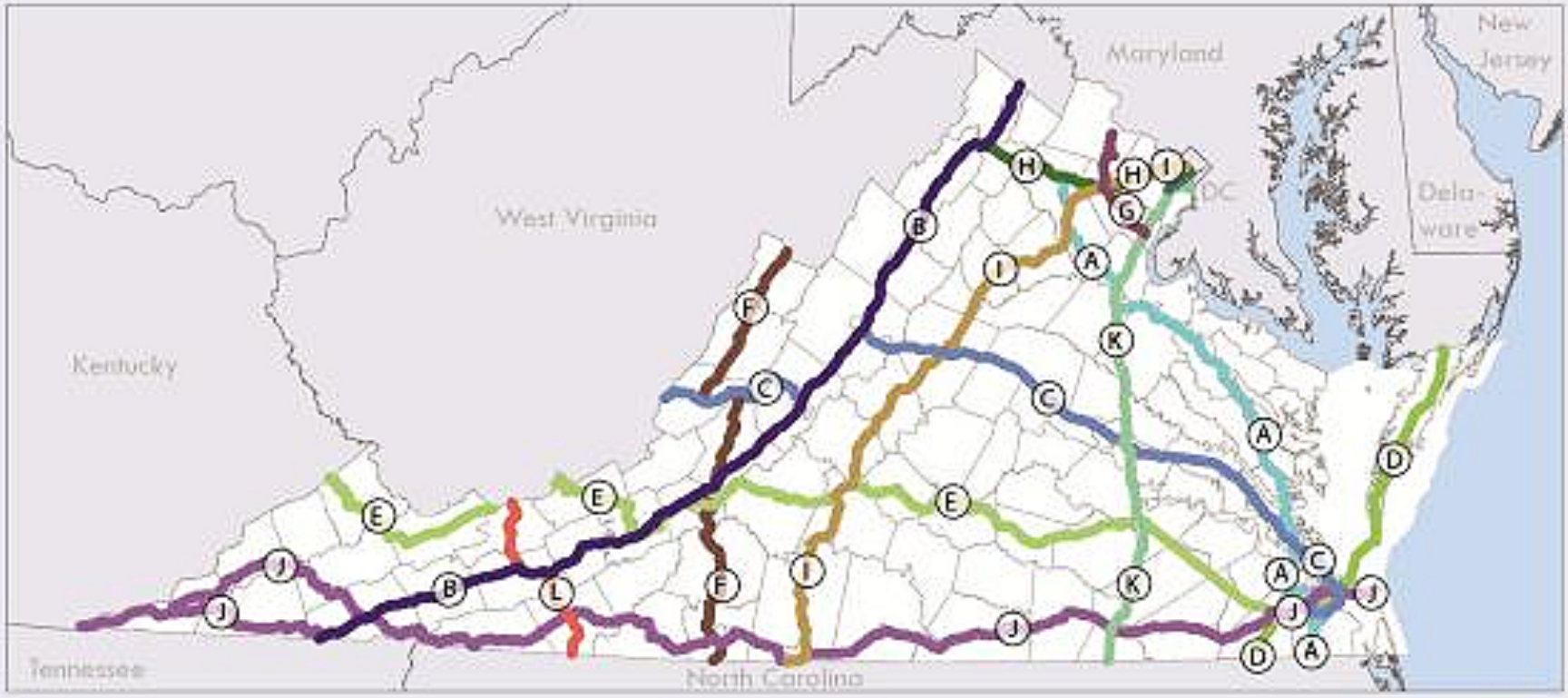


Note: Map includes all locally designated growth areas that appear consistent with the intent of 15.2-2223.1. OIPI is asking that localities who want their growth areas to qualify for HB2 funding to add a code reference (15.2-2223.1) by October 1, 2015 to ensure that projects submitted to promote these areas meet the HB2 screening requirement. Projects promoting UDA-like designated growth areas with the proper code reference submitted after October 1 will not be considered in the first round of HB2 project screening.

6

6

Virginia CoSS

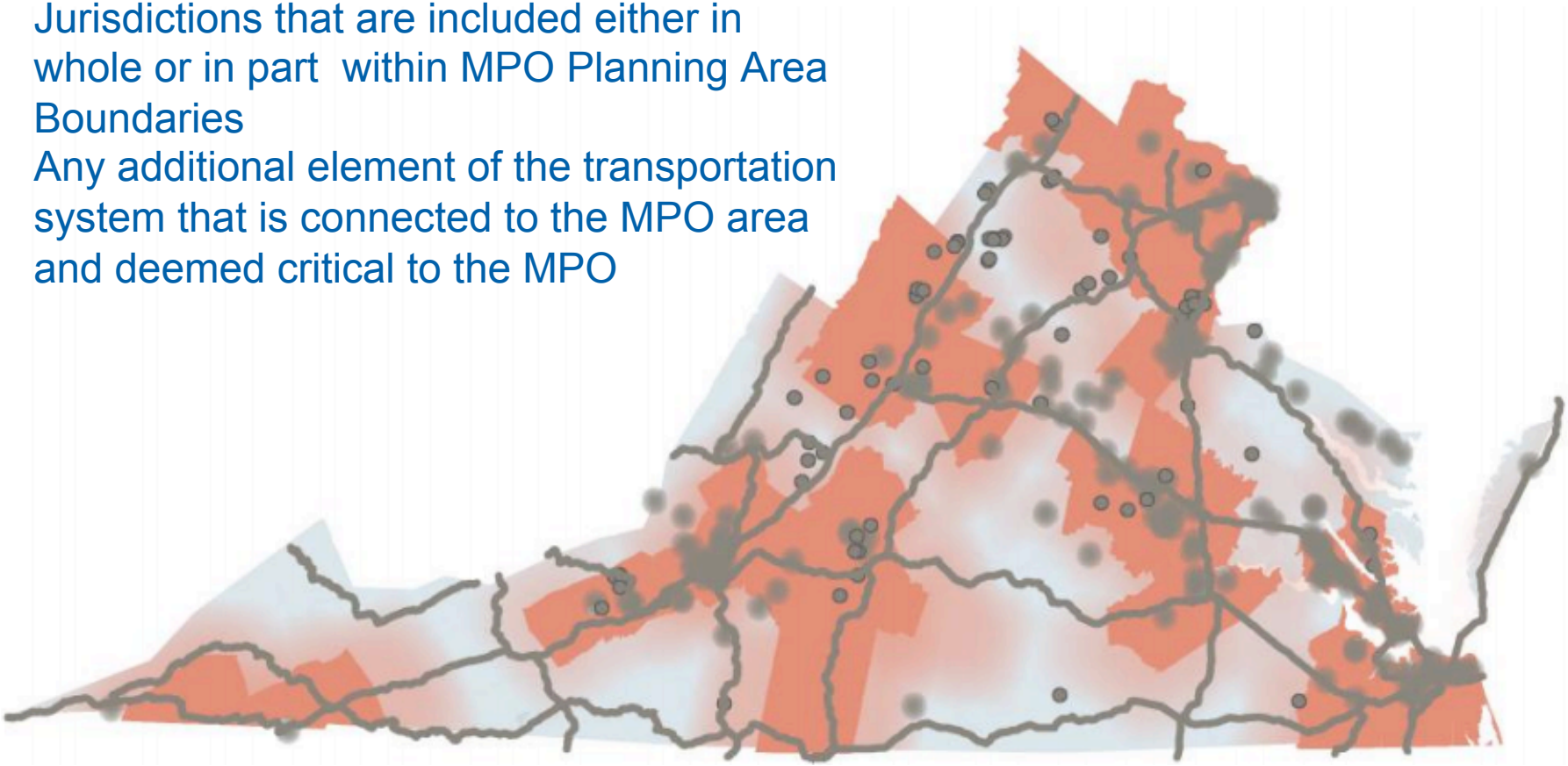


SMART SCALE
Funding the Right Transportation Projects in Virginia

Regional Networks

Defined as:

- Jurisdictions that are included either in whole or in part within MPO Planning Area Boundaries
- Any additional element of the transportation system that is connected to the MPO area and deemed critical to the MPO

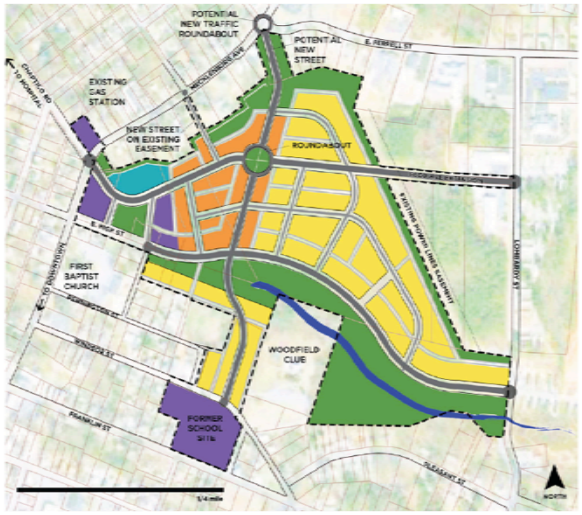


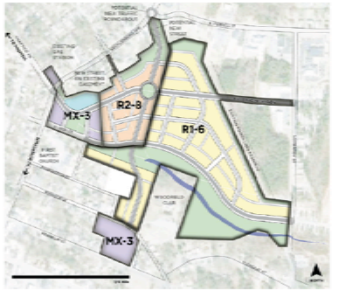
SMART SCALE
Funding the Right Transportation Projects in Virginia

Urban Development Areas
UDAs

Areas voluntarily designated by local governments as prime areas for future economic growth pursuant to 15.2-2223.1

- Must reflect transportation-efficient land use principles including
  - Mixed-use land use
  - Interconnected streets
  - Moderately compact growth

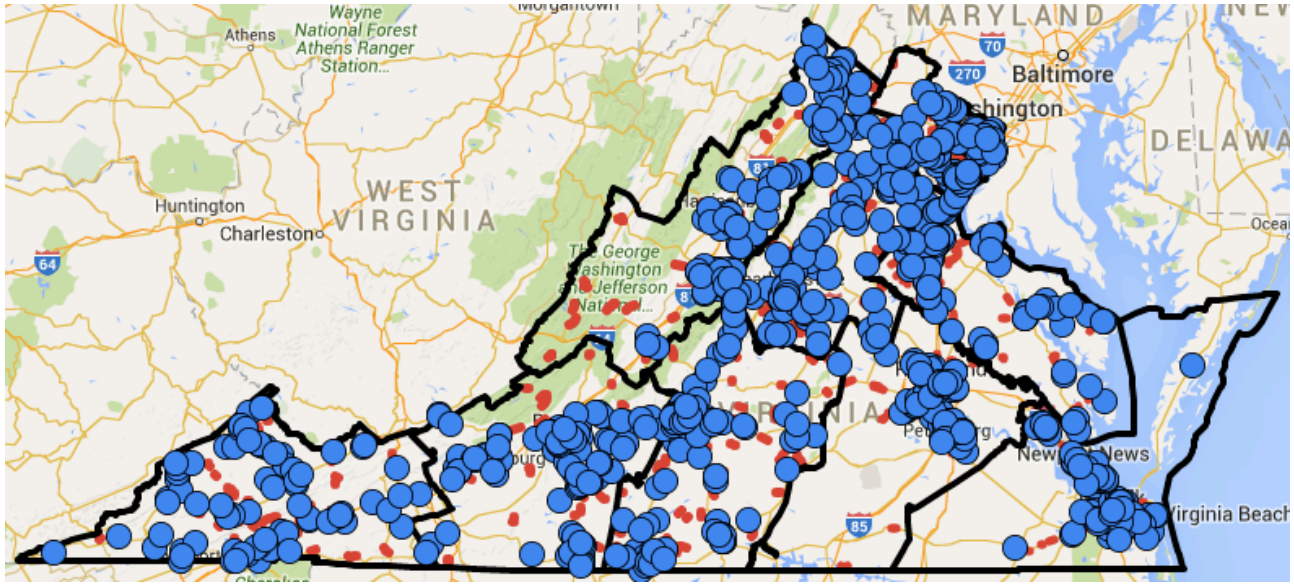




SMART SCALE
Funding the Right Transportation Projects in Virginia

Safety

- Safety needs based on the top 100 intersections and segments identified based on PSI, Potential for Safety Improvement, in each district
- PSI score is the number of serious or fatal crashes minus the predicted rate for that type/volume roadway



https://www.google.com/maps/d/u/0/viewer?mid=1mQGiz1QQWRJ0T3HEVUiiDGS9dLQ

SMART SCALE

Funding the Right Transportation Projects in Virginia

SMART Scale Grant Application

SMART SCALE
Funding the Right Transportation Projects in Virginia

Fund Eligibility

	High Priority Project Program	Construction District Grant Program
Capacity Need on Corridors of Statewide Significance	Yes	Yes
Capacity Need on Regional Networks	Yes	Yes
Improvement to Support Urban Development Areas	No	Yes
Safety Need	No	Yes

All project applications must meet an identified need in the Commonwealth's long-range transportation plan – VTrans2040.

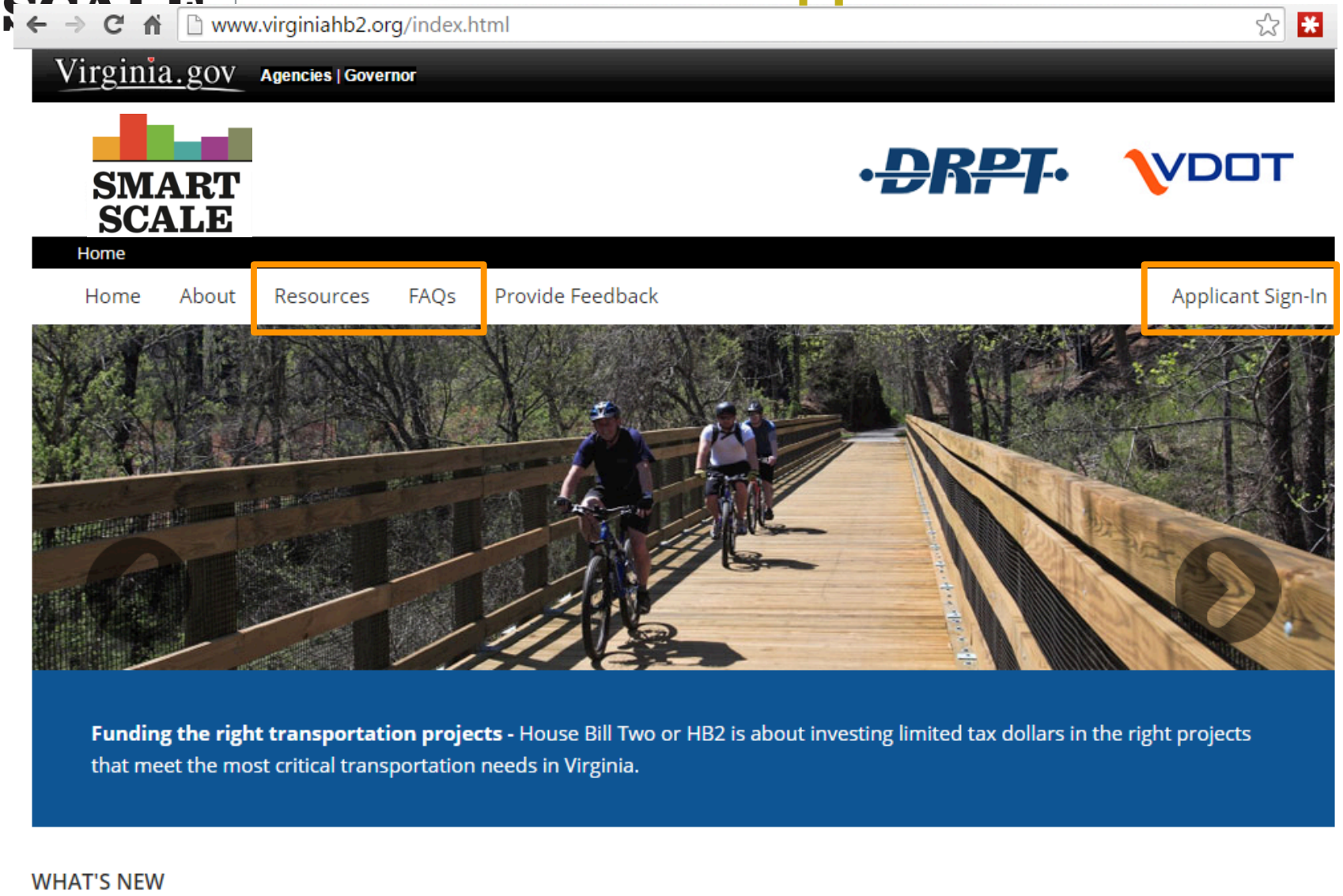
SMART SCALE
Funding the Right Transportation Projects in Virginia

Applicant Eligibility

Project Type	Regional Entity (MPOs, PDCs)	Locality (County, City, and Towns)	Public Transit Agency
Corridor of Statewide Significance	Yes	Yes, with resolution of support from relevant regional entity	Yes, with resolution of support from relevant regional entity
Regional Network	Yes	Yes	Yes, with resolution of support from relevant regional entity
Urban Development Area	No	Yes	No
Safety	No	Yes	No

SMART SCALE
Funding the Right Transportation Projects

How do they submit an application?



ProjectPortal

Funding the Right Transportation Projects

Office of INTERMODAL Planning and Investment

DRPT

VDOT

Welcome

The ProjectPortal is about investing limited tax dollars in the right projects that meet the most critical transportation needs in Virginia. This site is where eligible entities enter, manage, and submit project applications for funding as well as identify project priority when multiple projects are submitted. Stakeholders desiring to submit project applications must identify one person as the Administrator for the entity (organization, agency).

The Administrator will obtain the initial Log-In credentials to obtain access, manage access for other entity personnel, and determine user access roles (edit, review, submit). The Administrator is also used as the default point of contact for each project application submitted. Another responsible charge individual, who will be the contact for evaluation teams and oversight agencies, may be entered on project applications.

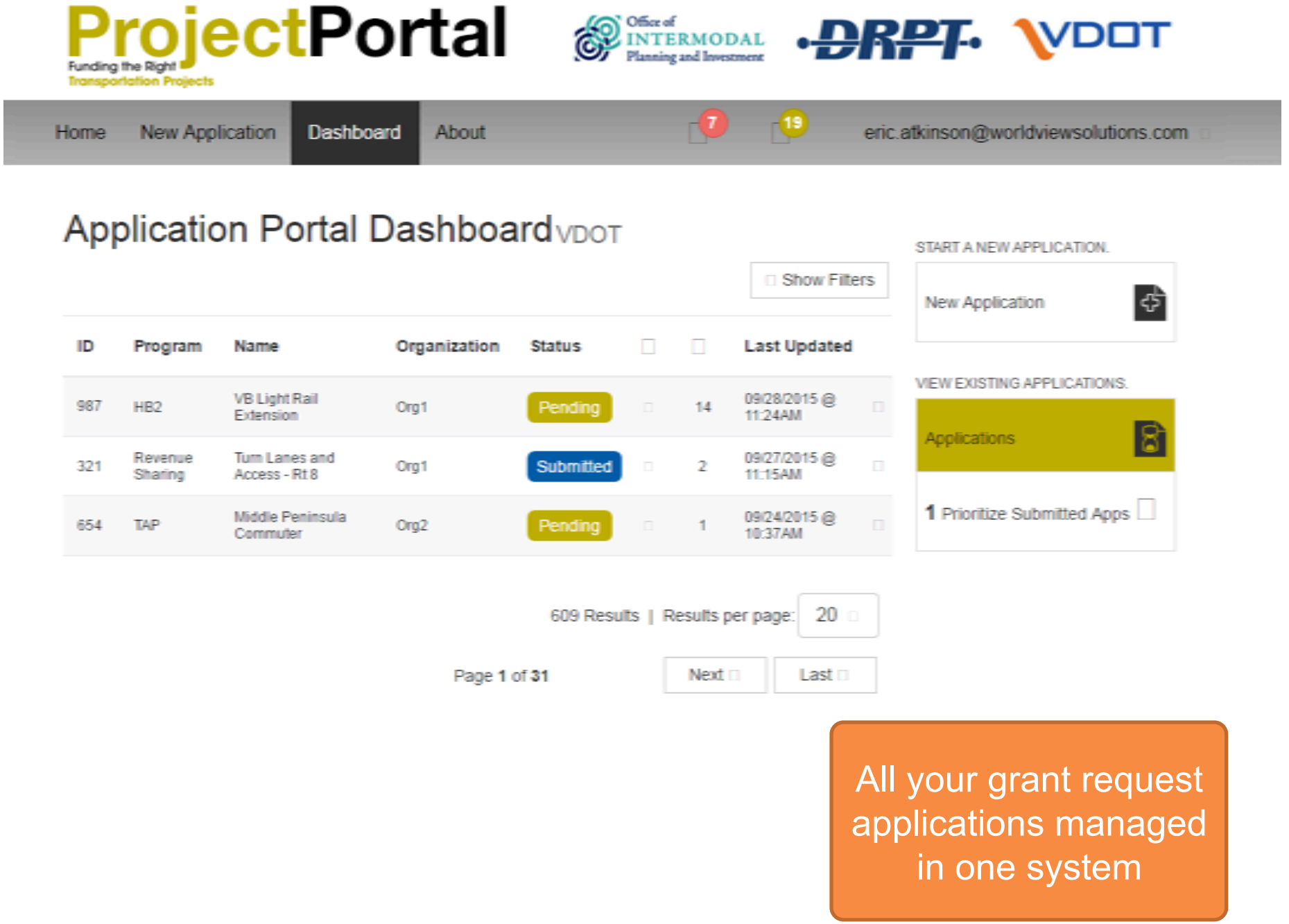
Please Log In using your credentials.

Username

Password

Login

Forgot password?



All your grant request applications managed in one system

Editing Application - attachment test 1 Project Status: Pending

Project ID: 286

General | **Location** | Features | Factors | Delivery/Funding | Review

Use the mapping tool below to locate your project ares(s).

Zoom in to the project location, then click "Add Project Area". Then draw a polygon around your project area by clicking on the map. While drawing, you can click and hold mouse button to pan around the map. Double-clicking will complete the polygon. Please be sure to draw your polygon as close to the project footprint as possible. You can add additional polygons by clicking the "Add Project Area" button. To remove a polygon, click on the polygon, then click the "Remove Project Area" button. Note: Internet Explorer 9 only allows 30 points per polygon.

Add Project Area | Remove Project Area

Areas Served

PDCs Served
- Roanoke Valley-Alleghany Regional Commission
- Central Shenandoah
- Region 2000

MPOs Served
- Lynchburg Area MPO

Jurisdictions Serve
- Alleghany County
- Bedford County
- Botetourt County
- Craig County
- Rockbridge County

Enhanced project location mapping

SMART SCALE

Funding the Right Transportation Projects in Virginia

SMART Scale Validation and Screening

SMART SCALE
Funding the Right Transportation Projects in Virginia

Validation Process

- **VDOT and DRPT review of application**
- **Focus on the following**
  - **Project eligibility**
    - Studies not allowed
    - New Interchanges with no study or Interchange Justification Report (IJR)
    - Projects lacking a planning preferred alternative
  - **Scope and Cost Estimate**
  - **Project readiness**
  - **HB2 Factors**
    - Scoring items that applicant provides in the following categories – 1) Accessibility, 2) Environment, 3) Economic Development and 4) Land Use and Transportation Coordination (Area Types A and B only)

SMART SCALE
Funding the Right Transportation Projects in Virginia

Screening Process

- High Priority Projects – Project must meet a need identified for
  - Corridor of Statewide Significance
  - Regional Network
- Construction District Grant Programs – Project must meet a need identified for
  - Corridor Statewide Significance
  - Regional Network
  - Urban Development Area
  - Safety

VTrans Multimodal Work Group

VDOT

SMART SCALE

Funding the Right Transportation Projects in Virginia

SMART Scale Measures and Scoring

SMART SCALE

Funding the Right Transportation Projects in Virginia

SMART Scale Factors

Safety

Congestion mitigation

Accessibility

Environmental quality

Economic development

Land use and transportation coordination (areas with over 200,000 people)

SMART SCALE
Funding the Right Transportation Projects in Virginia

Factor Areas

Goals that guided measure development

- **Safety** – reduce the number and rate of fatalities and severe injuries
- **Congestion** – reduce person hours of delay and increase person throughput
- **Accessibility** – increase access to jobs and travel options
- **Economic Development** – support economic development and improve goods movement
- **Environmental Quality** – improve air quality and avoid impacts to the natural environment
- **Land Use** – support transportation efficient land development patterns

SMART SCALE
Funding the Right Transportation Projects in Virginia

Measuring SAFETY

- 50% of score – Expected reduction in total fatalities and severe injuries (100% of score for transit projects)
- 50% of score – Expected reduction in the rate of fatalities and severe injuries per 100 million vehicle miles traveled

SMART SCALE
Funding the Right Transportation Projects in Virginia

Safety - How

- Highway Projects
  - Compile fatal/severe crash data for project limits (5 years)
  - Based on project scope select Crash Modification Factor
  - Use CMF to calculate reduction in crashes and rate
- Transit/Travel Demand Management/New Location
  - Identify corridor served
  - Use ridership/volume reduction to calculate reduction in VMT
  - Use VMT reduction to calculate crash reduction

25

SMART SCALE
Funding the Right Transportation Projects in Virginia

Measuring CONGESTION MITIGATION

- 50% of score – Change in peak period (multimodal) person throughput in the project corridor
- 50% of score - Change in the amount of peak period person hours of delay in the project corridor

SMART SCALE
Funding the Right Transportation Projects in Virginia

Congestion – How
Person Throughput

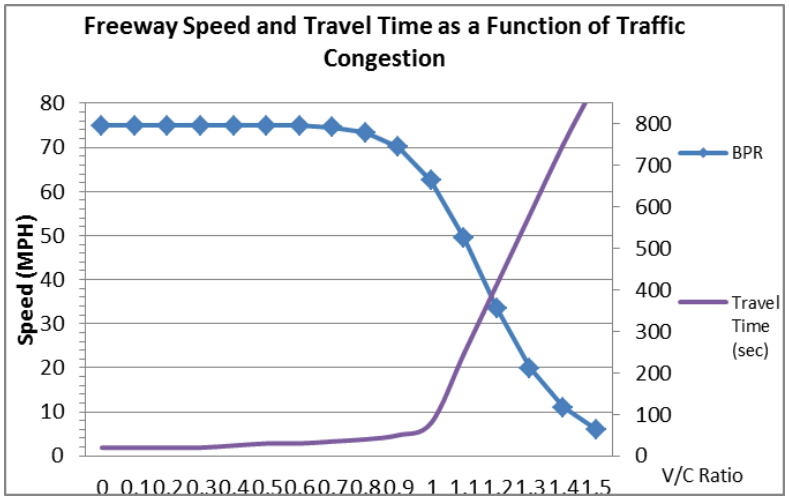
- Highway Projects
  - Volume to Capacity ratio calculated for peak hour
  - Calculate volume above capacity now being served by improvement – convert to person throughput
  - Apply expansion factor to account for peak period – based on INRIX Travel Time Index (TTI)
- Transit/Travel Demand Management
  - Identify corridor served
  - Determine peak period ridership/volume reduction (Throughput A)
  - Using process above for highways, calculate additional vehicle demand that can now be served based on transit diversion in corridor served (Throughput B)
  - Add together to get total person throughput

27

SMART SCALE
Funding the Right Transportation Projects in Virginia

Congestion – How
Person Hours of Delay

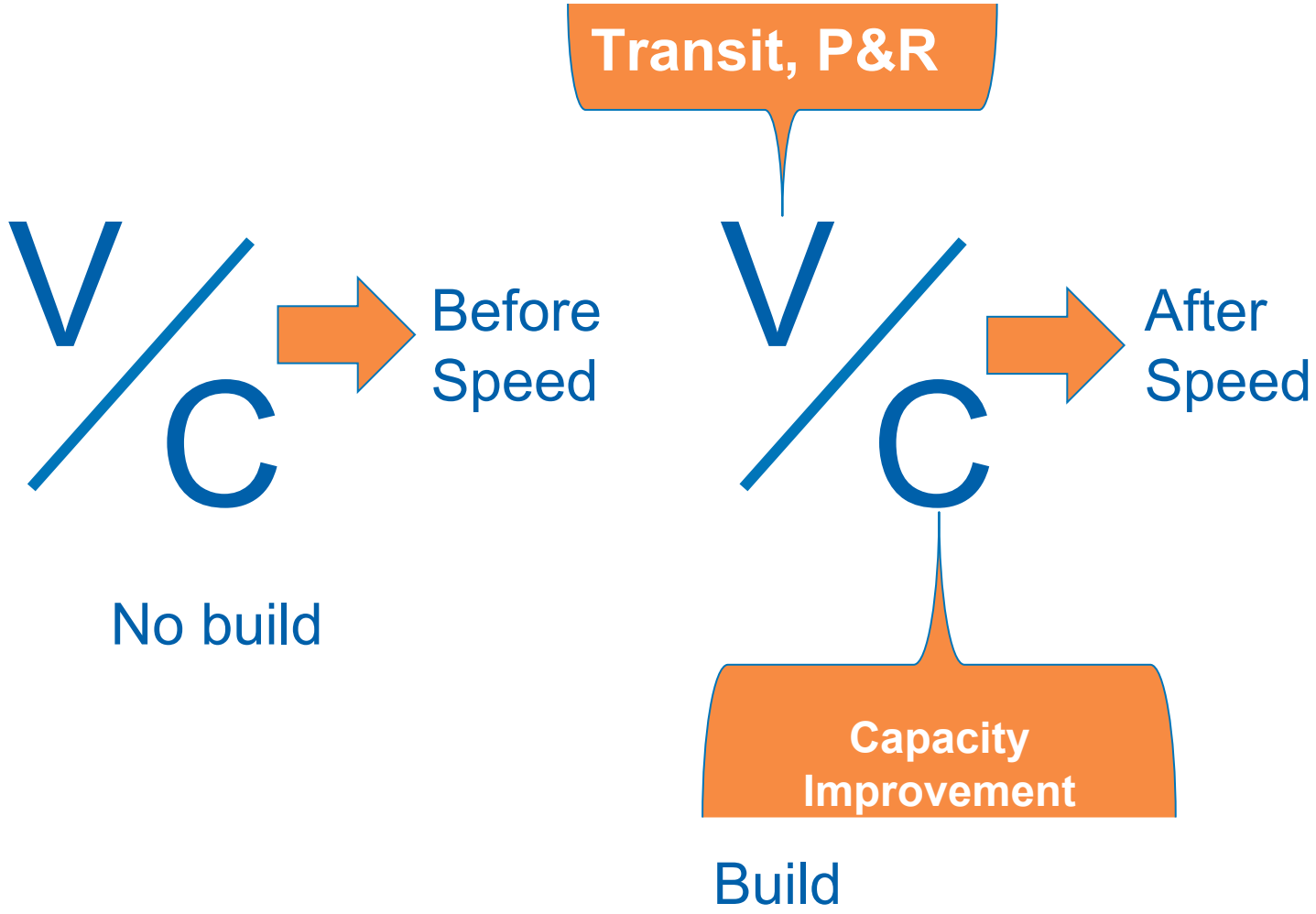
- Highway Projects
  - Volume to Capacity ratio calculated for each hour of day to estimate speed
  - Sum delay reduction (up to posted speed limit) for peak period and convert to person hours
- Transit/Travel Demand Management
  - Identify corridor served
  - Determine peak period ridership/ volume reduction
  - Using process above for highways, calculate reduction in person hours



28

SMART SCALE
Funding the Right Transportation Projects in Virginia

Congestion – How
Adjusting Volume to Capacity



SMART SCALE
Funding the Right Transportation Projects in Virginia

Measuring ACCESSIBILITY

- 60% of score – Change in cumulative job accessibility (within 45 minutes) (within 60 minutes for transit projects)

- 20% of score - Change in cumulative job accessibility for disadvantaged populations (within 45 minutes by automobile and 60 minutes by transit)

- 20% of score – Assessment of the project support for connections between modes, and promotion of multiple transportation choices

30

SMART SCALE
Funding the Right Transportation Projects in Virginia

Accessibility - How
Access to Jobs

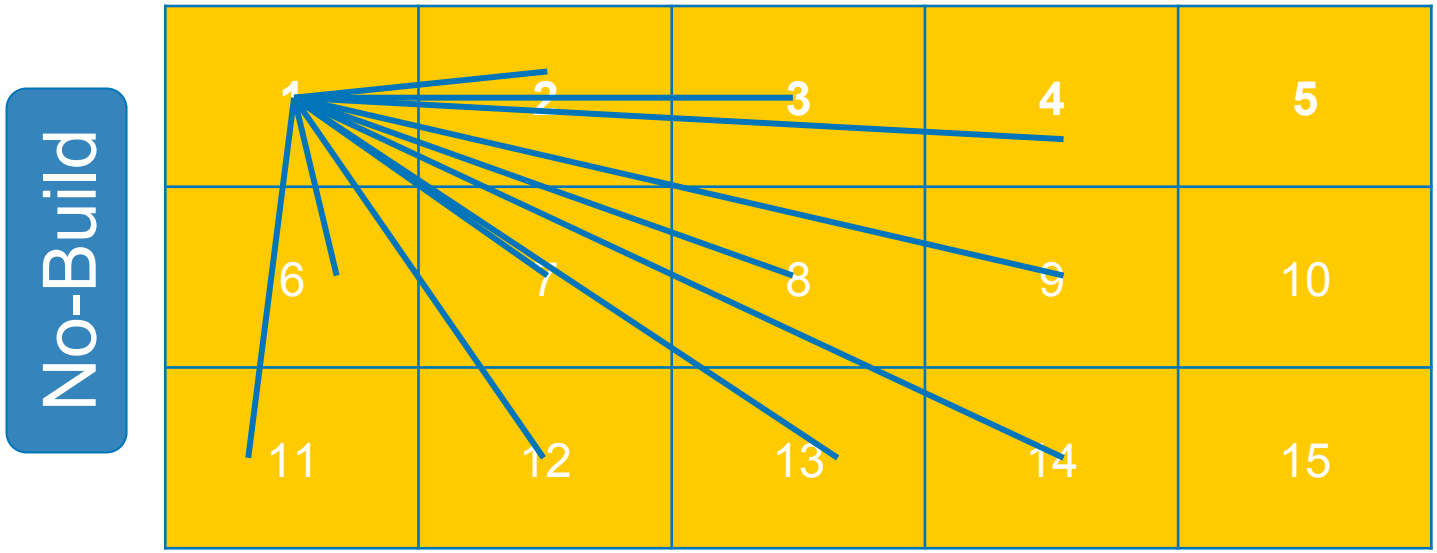
- All Projects
  - Using analysis for congestion measures – use change in speed
  - Also consider reduced travel distances from new facilities and changes in land development patterns
  - Use improvement in speed to code improvement into Accessibility GIS tool – conduct before and after analysis to get change in cumulative job access
- Accessibility Tool
  - GIS based model
  - Analysis done at Census block group level – job access between each block group within 45 minutes (60 minutes for transit)
  - Decay factor applied based on travel time

31

SMART SCALE
Funding the Right Transportation Projects in Virginia

Accessibility - How
Access to Jobs

- **Accessibility Tool**



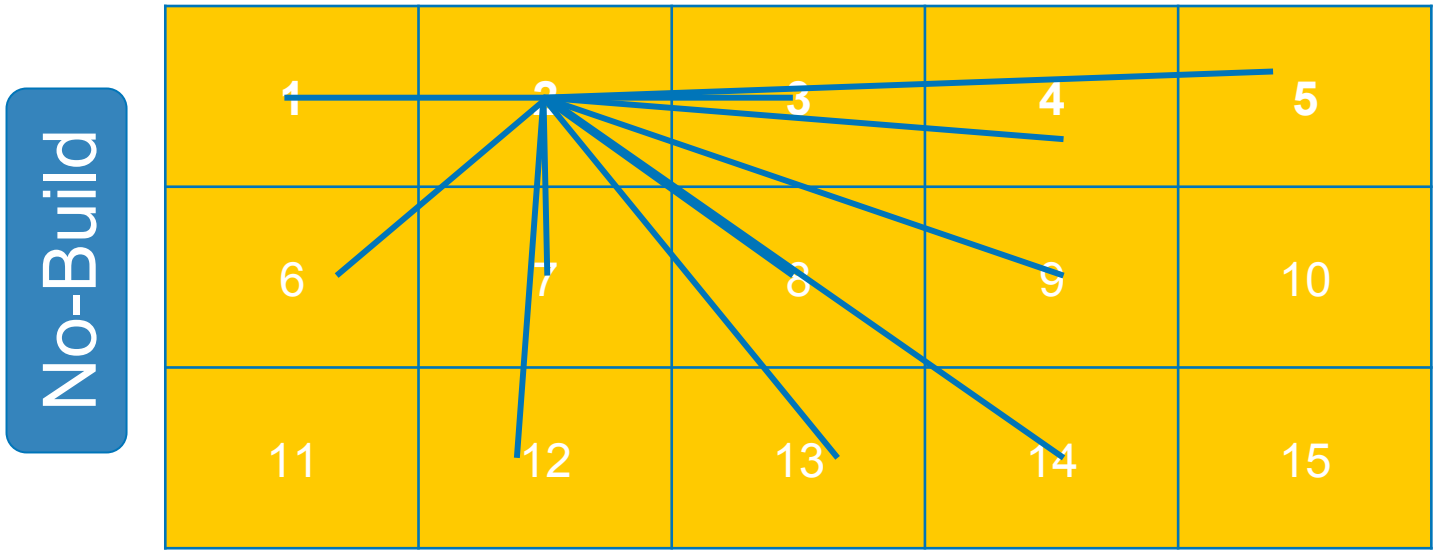
Tool analyzes existing accessibility to jobs

32

SMART SCALE
Funding the Right Transportation Projects in Virginia

Accessibility - How
Access to Jobs

- **Accessibility Tool**



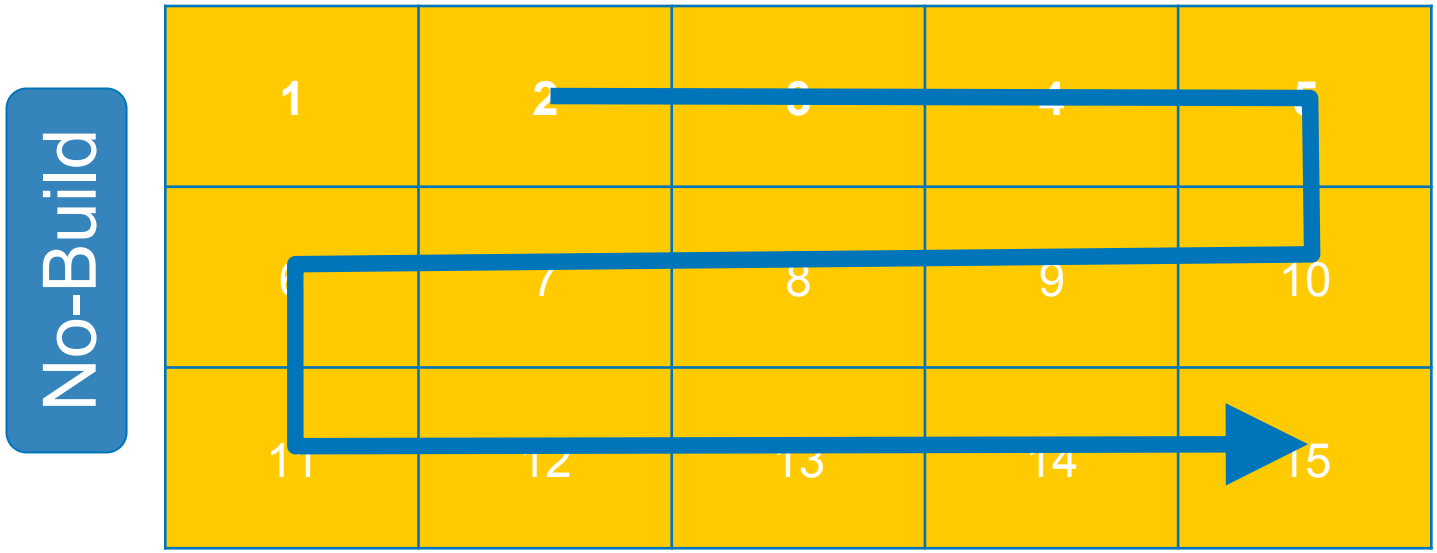
Tool moves to next block, assessing existing accessibility

33

SMART SCALE
Funding the Right Transportation Projects in Virginia

Accessibility - How
Access to Jobs

- **Accessibility Tool**



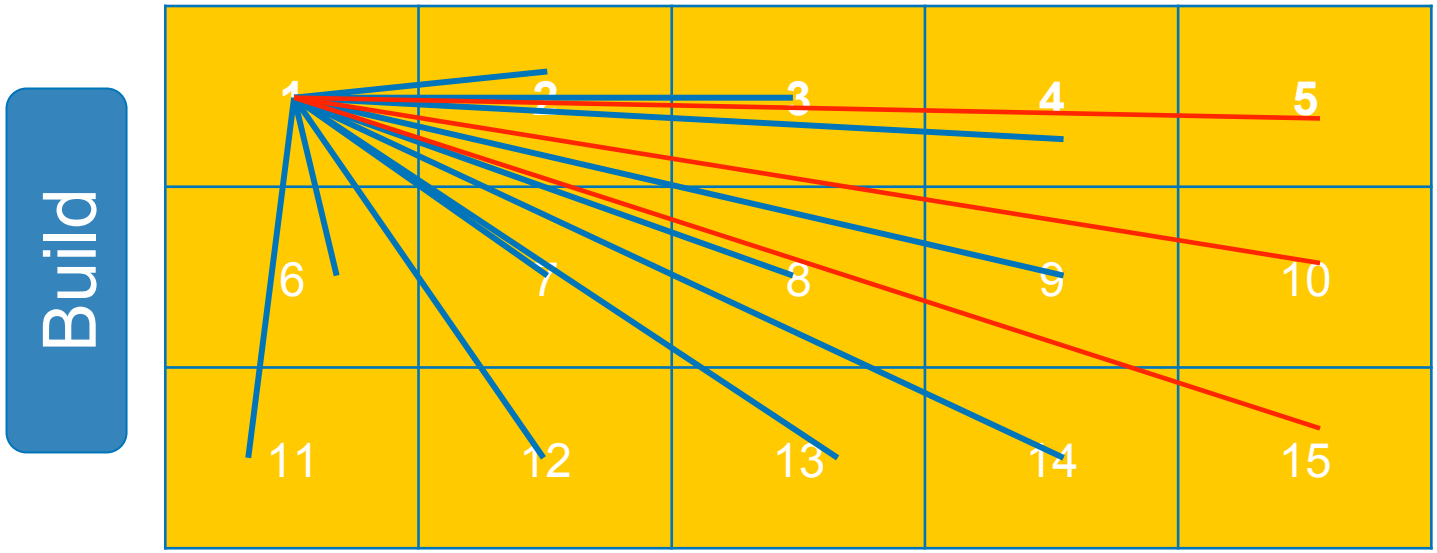
Process is repeated for all blocks to establish existing accessibility to jobs

34

SMART SCALE
Funding the Right Transportation Projects in Virginia

Accessibility - How
Access to Jobs

- **Accessibility Tool**



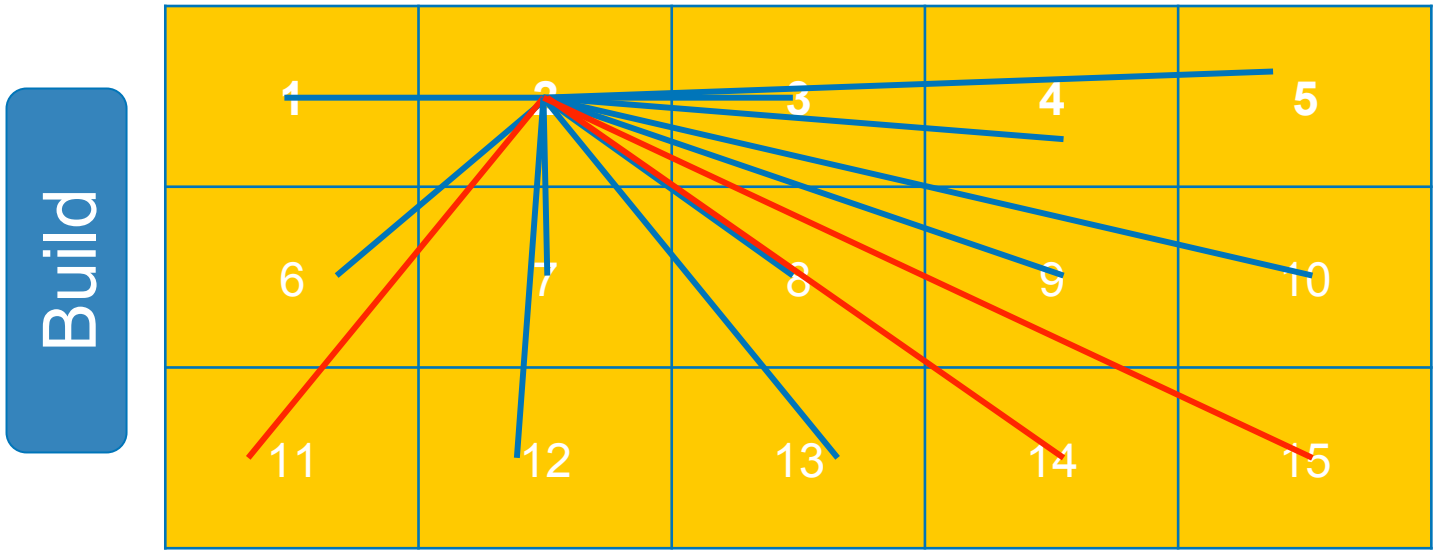
Tool then analyzes change in access to jobs based on proposed improvement

35

SMART SCALE
Funding the Right Transportation Projects in Virginia

Accessibility - How
Access to Jobs

- **Accessibility Tool**



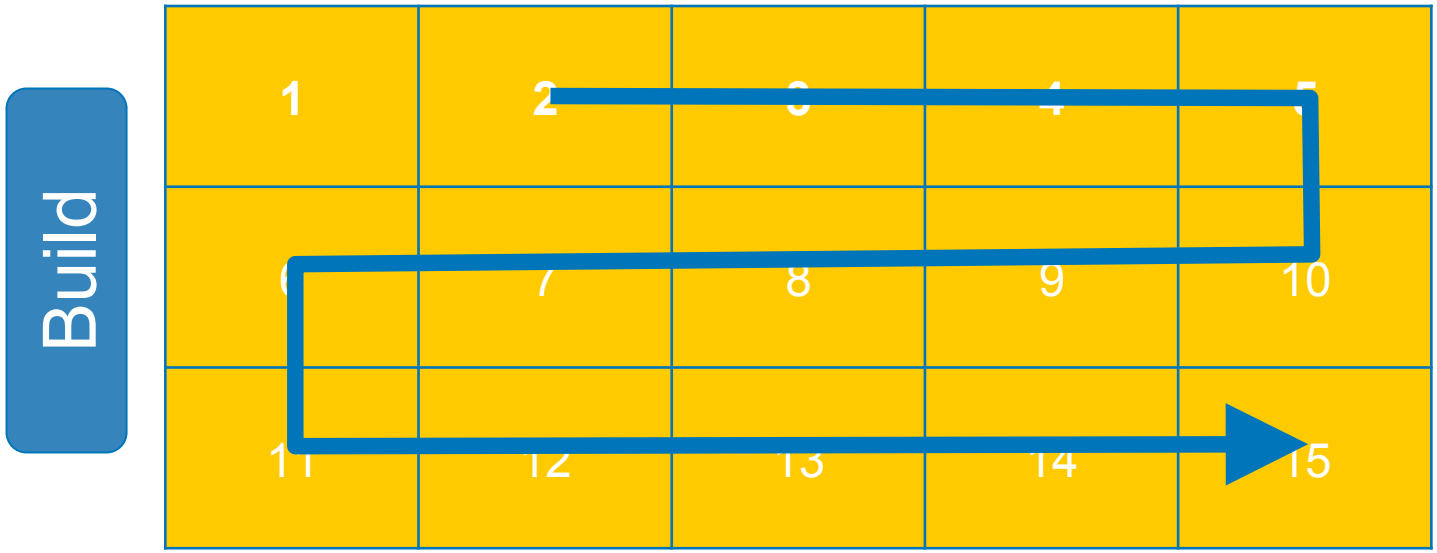
Tool moves to next block, calculating change in job access

36

SMART SCALE
Funding the Right Transportation Projects in Virginia

Accessibility - How
Access to Jobs

- **Accessibility Tool**



Process is repeated for all blocks – increase in access for each block is summed and used to score projects

37

SMART SCALE
Funding the Right Transportation Projects in Virginia

Disadvantaged Access to Jobs

- Similar process in previous slides used for disadvantaged access to jobs
- Main difference is the utilization of disadvantaged population data in the calculation
- Disadvantaged population
  - Low income, elderly, minority, and Limited English Proficiency population percentage by Census Block Group
  - Compared block group and identified block groups in the 75th percentile of the region – regions defined as PDC/MPO/NVTA

38

SMART SCALE
Funding the Right Transportation Projects in Virginia

Accessibility - How Access to Travel Options

- Projects receive points based on features than enhance multimodal access (Max 5 points)
  - Transit
  - Park and Ride
  - Bike
  - Pedestrian
  - HOV/HOT
  - Real time traveler info or wayfinding
- Scaled by the number of anticipated Non-SOV users
  - Transit Users + Bike Users + Pedestrians + HOV/ Park and Ride

39

SMART SCALE
Funding the Right Transportation Projects in Virginia

Measuring ENVIRONMENTAL QUALITY

- 50% of score – Potential of project to reduce criteria air pollutant and greenhouse gas emissions

- 50% of Score – Potential impacts to natural and cultural resources

40

SMART SCALE
Funding the Right Transportation Projects in Virginia

Environment – How
Air Quality and Energy

- **Air Quality/Energy**
  - **Points awarded based on:**
    - Providing bicycle or pedestrian facilities
    - Improvements for transit
    - Addressing freight bottlenecks
    - New or expanded Park and Ride lot
    - Provisions for hybrid/electric vehicles or energy efficient infrastructure
  - **Points scaled based on number of non-SOV users and truck volume**

41

SMART SCALE
Funding the Right Transportation Projects in Virginia

Environment – How

Natural/Cultural Resource Impact

Sum the total acreage of land (within ¼ mile of project) in four categories:

- Conservation Land
- Species/Habitat
- Cultural Resources
- Wetlands

(Data sources: VOF, VDCR, VDOF, VDGIF, NPS, VDHR, USFWS)

Example

Project	Conservation	Species/Habitat	Cultural Resources	Wetlands	Total Acres
A	100	25	25	150	300

42

SMART SCALE
Funding the Right Transportation Projects in Virginia

Environment – How

Natural/Cultural Resource Impact

Scaling Impact and Assigning Points:

The type of environmental document required for each project will be used to assess and scale the potential natural resource impacts.

- *Environmental Impact Statement* – 50% of acreage will be used for scoring
- *Environmental Assessment* – 30% of acreage will be used for scoring
- *Categorical Exclusion* – 10% of acreage will be used for scoring

- Points based on the amount of potentially impacted area divided by the total buffer area (Lowest Impact = 100 points)

43

SMART SCALE
Funding the Right Transportation Projects in Virginia

Environment – How

Natural/Cultural Resource Impact

Project	Conservation	Species/ Habitat	Cultural Resources	Wetlands	Total Acres	Enviro Doc	Scaled Acres
A	100	25	25	150	300	EA	100
B	100	25	25	150	300	EIS	150
C	20	0	0	5	25	CE	2.5

This value gets divided by the total acres within the ¼ mile project buffer

44

SMART SCALE
Funding the Right Transportation Projects in Virginia

Measuring ECONOMIC DEVELOPMENT

- 60% of score – Assessment of progress made towards new economic development (new and expansion of existing)

- 20% of score - Rate projects based on the extent to which the project is deemed to enhance access to critical intermodal locations, interregional freight movement, and/or freight intensive industries

- 20% of score – Project's impact to travel time reliability

45

SMART SCALE
Funding the Right Transportation Projects in Virginia

Economic Development – How Development Supported

- For each project, development sites are identified that the project supports
- Proposed transportation improvement is evaluated on:
  - Consistency with Local Comp Plan/Local Economic Development Strategy – up to 1 point
  - Consistency with Regional Economic Development Strategy – up to 1 point
- Each development site is evaluated on:
  - Consistency with local comp plan/zoning – up to 1 point
  - Development status – up to 1 point
  - Site utilities – up to 1 point
- Max 5 points per site – used to weight square footage

46

SMART SCALE
Funding the Right Transportation Projects in Virginia

Economic Development – How Development Supported

- **Adjusting Weighted Square Footage**
  - **Two Adjustments**
    - Distance from project in miles (except sites less than 1 mile)
    - Type of access provided

Project provides a new, direct (physically to the site), primary access to the site that does not exist today	100%
Project improves existing access (or relocates existing access) to the site directly (Site must be physically adjacent to the project)	100%
Project enhances economic development by improving congestion, mobility, access, or operations in the vicinity of the site but the site is not physically adjacent to the project	50%

- **Formula – (Points) x (Square Footage) / (Distance) x (Access Adjustment)**

Development Name	Total Points	Square Footage	Distance	Site Access	Access Adjustment	Adjusted Square Footage
Development A	5	250000	2	Project enhances economic development by improving congestion, mobility, access, or operations in the vicinity of the site but the site is not physically adjacent to the project	50%	312500
Development B	5	250000	0.2	Project improves existing access (or relocates existing access) to the site directly (Site must be physically adjacent to the project)	100%	1250000

SMART SCALE
Funding the Right Transportation Projects in Virginia

Economic Development – How Intermodal Access

- **Project can get up to 6 points**
  - **Improve access to distribution centers or intermodal/manufacturing facilities**
    - Within 1 mile – 2 points
    - 1 to 3 miles – 1 point
  - **Improve STAA Truck Route**
    - Improvement to STAA route - 2 points,
    - Improve access to STAA route – 1 point
  - **Improve access or reduce congestion around port/airports**
    - Within 1 mile - 2 points
    - 1-3 miles – 1 point
- **Point are scaled by freight tonnage along corridor – IHS Transearch data was used to calculate daily tonnage on the project**

	Improve Access to distro, intermodal and manufacturing	Improve STAA truck route	Improve access reduce congestion ports/airports	Tonnage (1000's) per day	Measure Scaled by tonnage
Project A	2.00	2.00	0.00	163.07	652.28
Project B	1.00	2.00	0.00	208.15	624.45
Project C	2.00	1.00	0.00	4.77	14.31

48

SMART SCALE
Funding the Right Transportation Projects in Virginia

Measuring LAND USE

- 100% of score – Degree to which project will support transportation efficient land use patterns and local policies

  - Points awarded based on:
    - Promoting walkable bicycle friendly mixed use development
    - Supporting in-fill development
    - Having an adopted corridor/access management plan that exceeds VDOT standards
  - Points scaled by projected 2025 population and employment density (from MPO approved travel demand model)

49

SMART SCALE
Funding the Right Transportation Projects in Virginia

Land Use – How

Local/Regional Land Use Policies

- **Local/Regional Land Use Policies**
  - **Points awarded based on:**
    - Promoting walkable bicycle friendly mixed use development
    - Supporting in-fill development
    - Having an adopted corridor/access management plan that exceeds VDOT standards
  - **Points scaled by projected population and employment density (from MPO approved travel demand model)**

50

SMART SCALE

Funding the Right Transportation Projects in Virginia

How Scoring Works

Everything is Relative

51

SMART SCALE

Funding the Right Transportation Projects in Virginia

Everything is Relative

Highest Value Dictates Scores*

Project	Measure	Score
A	250	50
B	300	60
C	75	15
D	15	3
E	500	100
F	150	30

Change here only affects one score

Project	Measure	Score
A	200	40
B	300	60
C	75	15
D	15	3
E	500	100
F	150	30

Change here affects all scores

Project	Measure	Score
A	250	33.3
B	300	40
C	75	10
D	15	2
E	750	100
F	150	20

The best project for that measure dictates the score for all other projects

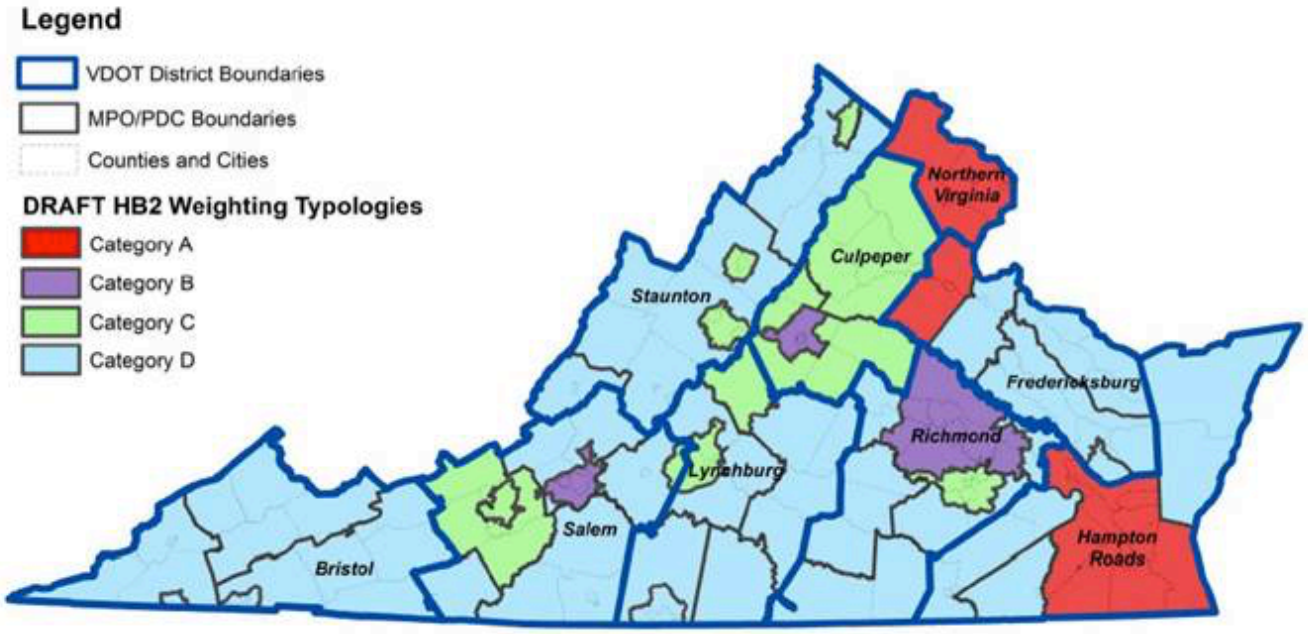
***for potential environmental impact, lowest value gets highest score**

52

SMART SCALE

Funding the Right Transportation Projects in Virginia

Area Type Weighting



Factor	Congestion Mitigation	Economic Development	Accessibility	Safety	Environmental Quality	Land Use
Category A	45%	5%	15%	5%	10%	20%
Category B	15%	20%	25%	20%	10%	10%
Category C	15%	25%	25%	25%	10%	
Category D	10%	35%	15%	30%	10%	

Sample Project Scoring

Project "A" - located in Typology A	Congestion		Safety		Accessibility			Environ.		Econ. Dev.			Land Use
	Throughput	Delay	F &SI Crashes	F &SI Crash Rate	Access to Jobs	Access to Jobs (Dis. Pop.)	Multimodal Choices	Air Quality	Natural & Cult. Resources	Economic Development	Goods Movement	Travel Time Reliability	Trans. Efficient Land Use
Measure Score	62	48	20	32	10	20	10	38	28	30	20	20	17
Measure Weight	50%	50%	50%	50%	60%	20%	20%	50%	50%	60%	20%	20%	100%
Weighted Measure Score	31	24	10	16	6	4	2	19	14	18	4	4	17
Raw Factor Score	55		26		12			33.0		26.0			17
Factor Weighting (Typ. A)	45%		5%		15%			10%		5%			20%
Weighted Factor Score	24.8		1.3		1.8			3.3		1.3			3.4
Project Score	35.9												
Total Project Cost	$20,000,000												
Score Divided by Total Cost	17.95												
HB2 Cost	$10,000,000												
Score Divided by HB2 Cost	35.9												

SMART SCALE
Funding the Right Transportation Projects in Virginia

How does cost affect the score?

- House Bill 2 requires that benefits produced by a project be analyzed on a basis of relative costs

- Results to be provided to CTB based on:
  - Benefits relative to $ request
  - Benefits relative to Total costs

$$\frac{\text{Benefit Score}}{\text{Cost}}$$

55

SMART SCALE

Funding the Right Transportation Projects in Virginia

Round 1 Summary and Lessons Learned

SMART SCALE
Funding the Right Transportation Projects in Virginia

Summary of Applications Received

- **321 applications submitted**
- **131 entities submitted at least one application**
- **Requested $6.95 billion in Smart Scale funds**
- **Applications include other funding equal to $6.2 billion**
- **287 projects advanced through validation and screening to measures development and scoring**

SMART SCALE

Funding the Right Transportation Projects in Virginia

Funds Available for Smart Scale

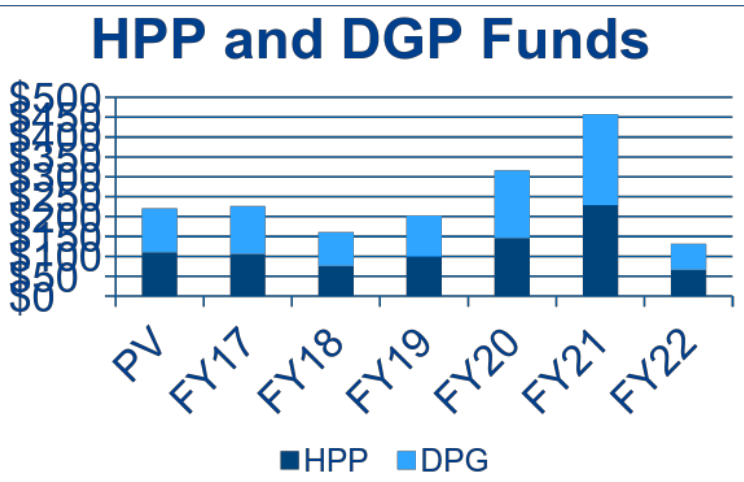
(in millions)

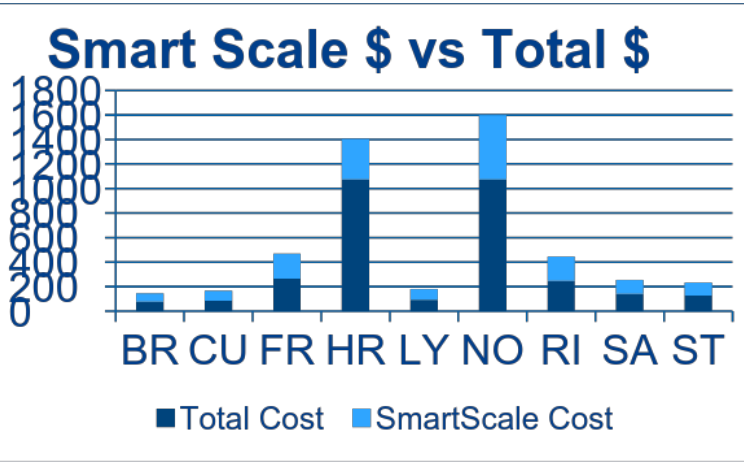
HB 1887 Grant Programs	Percentage	Round 1 Total
District Grant Program		
Bristol	7.0%	$62.2
Culpeper	6.2%	$54.9
Fredericksburg	6.9%	$60.5
Hampton Roads	20.2%	$178.0
Lynchburg	7.1%	$63.1
Northern Virginia	20.7%	$183.1
Richmond	14.4%	$127.4
Salem	9.6%	$84.9
Staunton	7.8%	$68.9
High Priority Projects Program (Statewide)		$833.1
Total	**100.0%**	**$1,716.2**

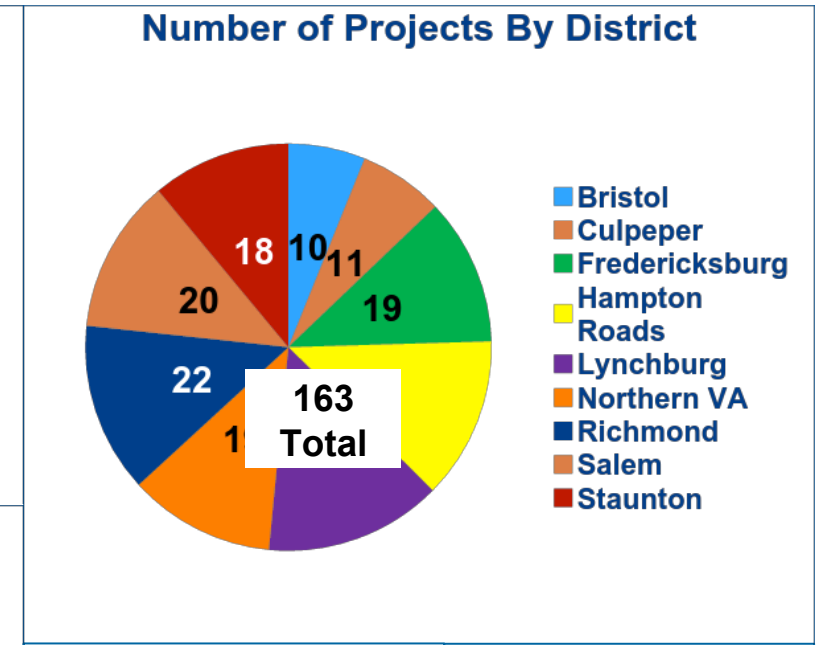
SMART SCALE

Funding the Right Transportation Projects in Virginia

Round 1 Results







Avg Score / Smart Scale Cost **10.7**

$3.2 B Total Cost all Projects

SMART SCALE
Funding the Right Transportation Projects in Virginia

Areas for Improvement Identified by Implementation Team

- **Guidance and Information Sources**
  - Update and improve clarity of Policy Guide and FAQs
  - Add tutorials and include example projects
- **Pre-Application Training and Coordination**
  - Start coordination process now
  - Develop “Train the Trainer” materials on process to ensure consistent guidance statewide
  - Provide clear direction on application requirements, and ensure project readiness before proceeding with application
  - Require completion of the pre-application form
- **Validation/Screening**
  - Define criteria for meeting VTrans needs and project type eligibility
- **Evaluation and Scoring**
  - Provide better definitions of inputs such as mixed-use land use and economic development impacts
  - Potentially consider tiers of projects based on size – so that a turn lane project is not competing against a mega project

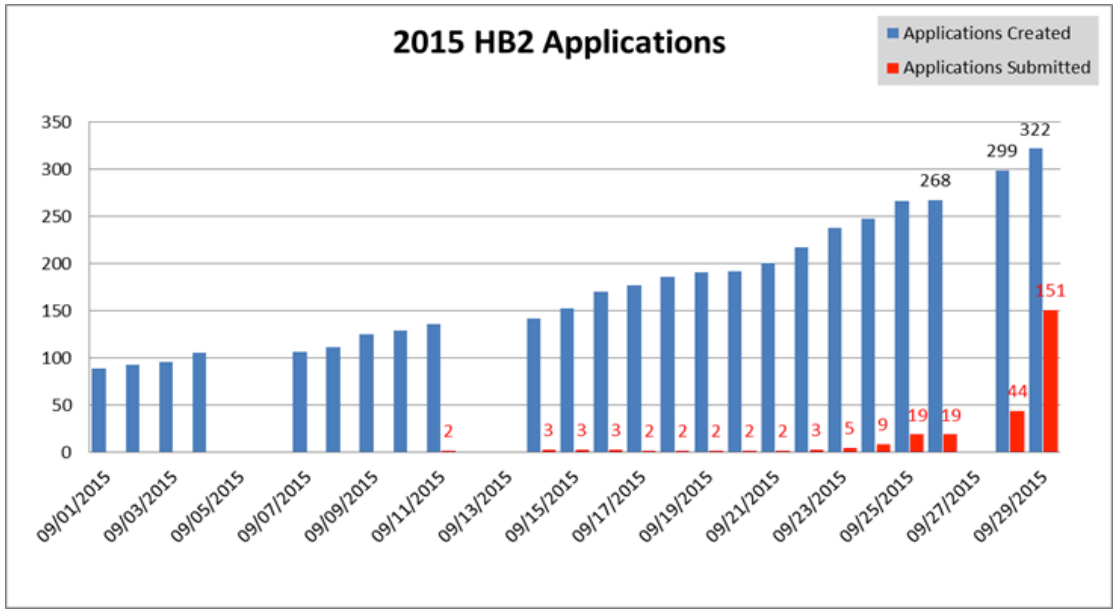
SMART SCALE

Funding the Right Transportation Projects in Virginia

Recommendations to Improve Application Process

- **Update application tool to allow feedback during application submission (pre-screening and validation)**
- **Strongly encourage submission of information early**
  - Advance knowledge of the number and types of applications
  - Key fields of on-line application filled out by August 15th to guarantee technical assistance from VDOT and DRPT – Notice of Intent to Apply

Over half the 321 submitted applications were created the final two weeks



SMART SCALE
Funding the Right Transportation Projects in Virginia

Improvements to Administrative Process

- **Project includes matching funds from other sources then documentation of availability of other funds will be required**
- **Rescoring**
  - Cost Estimate
    - Total Cost Estimate <$5 million: 20% increase in funding requested
    - Total Cost Estimate $5 million to $10 million: $1 million or greater increase in funding requested
    - Total Cost Estimate > $10 million: 10% increase in funding requested; $5 million maximum increase in funding requested.
  - Scope Change
    - *Significant changes to either the scope or cost of the project, such that the anticipated benefits relative to funding requested would have substantially changed will trigger rescoring.*
    - Applicant is responsible for any costs associated with an increase in the project scope (features/treatments not covered in the original application) – example> extensive landscaping

SMART SCALE
Funding the Right Transportation Projects in Virginia

Improvements to Factor Areas

- **Economic Development Site Support**
  - Types of projects evaluated do not influence growth over the same impact area
  - In many localities zoning took place 30+ years ago and does not necessarily have relationship to current growth patterns
  - Restrict the distance around certain types of projects where benefits may be considered – buffers by project type
  - Eliminate the extra scaling point for having zoning in place

SMART SCALE
Funding the Right Transportation Projects in Virginia

Improvements to Factor Areas

- **Potential Environmental Impact**
  - Projects receiving significant amount of points without providing any other benefits
  - Determine points by scaling environmental score based on impact to environment (current methodology) and benefits in other categories.

Potential Enviro Impact	Score in other areas (congestion, safety, econ dev, ect	Points
None/Low	High	High
None/Low	Low	Low
High	High	Low

- **Air Quality/Energy**
  - Removed eligibility for point for including LED light or signals

SMART SCALE
Funding the Right Transportation Projects in Virginia

Improvements to Factor Areas

- **Reliability**
  - Buffer Time Index (BTI) comes from INRIX data – does not provide statewide coverage
  - For facilities where data does not exist, method pulls BTI from other nearby facilities – this approach leads to questionable results on low volume roadways
  - If INRIX BTI data does not exist, assume there is no reliability issue and score will be 0
  - Include scaling factor based on vehicle miles traveled – to better scale the benefit – testing underway
- **Intermodal Access**
  - Questionable results when comparing measure scores to project types, specifically with using mainline tonnage
  - Refine methodology to adjust tonnage for ramps

SMART SCALE
Funding the Right Transportation Projects in Virginia

Improvements to Factor Areas

- **Safety**
  - Fatal and Severe Injury crashes represent about 7% of total crashes
  - Some fatal and severe injuries crashes are random and due to factors unrelated to roadway design
  - Look at Fatal and All Injury crashes – apply federal EPDO weighting
- **Land Use**
  - Measure provides points based on projected future density but does not consider whether there is any growth between today and the future
  - Base score on both future density and the change in density between today and the future

SMART SCALE
Funding the Right Transportation Projects in Virginia

How To Score Better

- Area Type Weighting – keep this is mind – what is weighted high/versus low – projects that provide benefits in factor areas that are weighted high will score better
- Project Cost – focus scope on problem/needs
- Thinking beyond SOVs – opportunities for bike/ped, transit, TDM
- Economic Development – leaving blank = 0 points
- We cannot consider data/information if it is not included in application submittal – uploading traffic/studies/analysis

SMART SCALE
Funding the Right Transportation Projects in Virginia

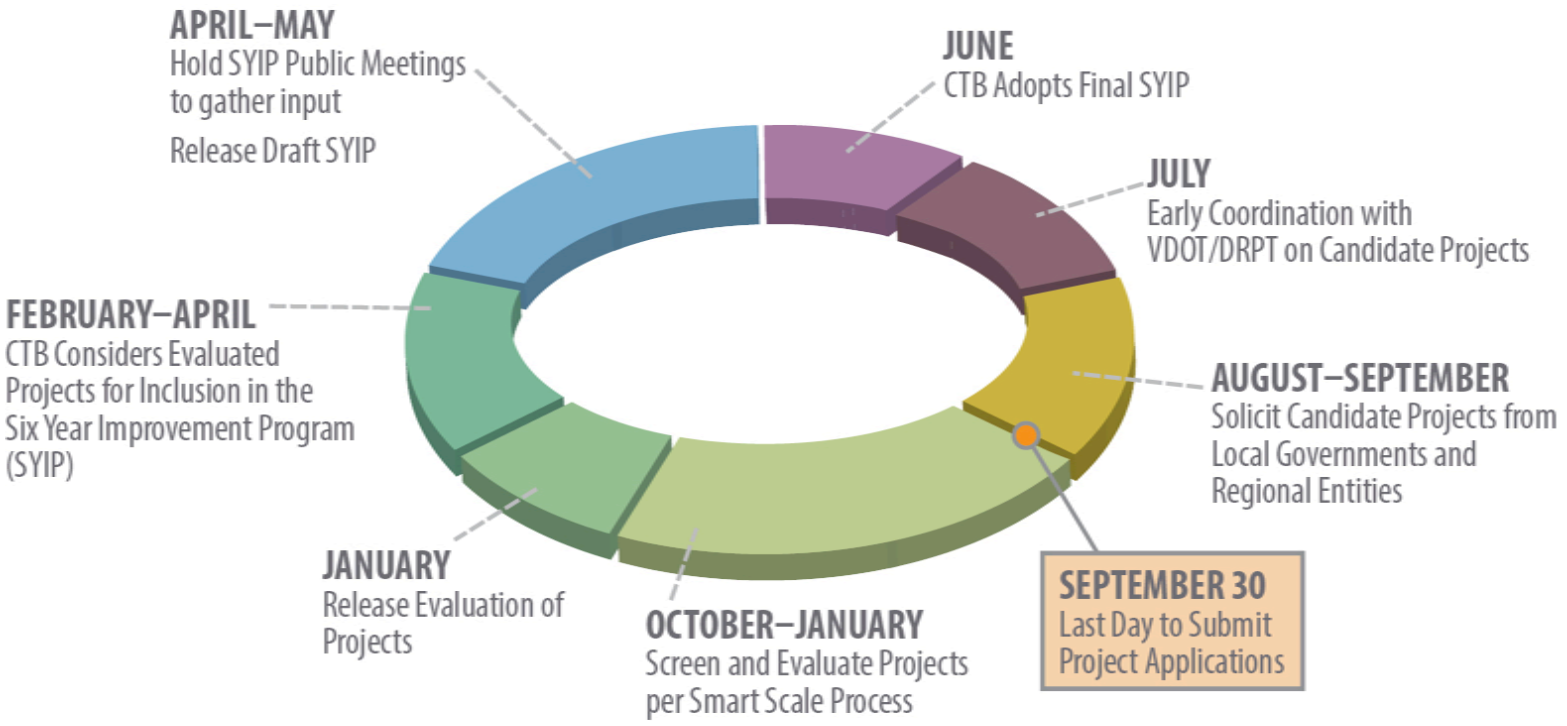
Impact of SMART Scale

- Stronger and more thorough project planning
  - Planning before capital improvement program
- Project Scopes and Estimates – focusing scope on problem/needs – trimming the fat
  - Re-evaluating solutions to problems
  - Evaluate whether identified need can be addressed through operational improvements or TDM
  - Evaluate current scope to determine if there are components that do not address identified need(s)
  - Evaluate current scope to determine whether design can be modified or design exceptions utilized to reduce costs
- Thinking beyond SOVs – opportunities for bike/ped, transit, TDM

SMART SCALE

Funding the Right Transportation Projects in Virginia

Biennial Cycle



SMART SCALE

Funding the Right Transportation Projects in Virginia

Resources

- Draft Smart Scale Policy Guide and Technical Guide - http://vasmartscale.org/
- VTrans

  www.vtrans.org

SMART SCALE

Funding the Right Transportation Projects in Virginia

Q&A