



COMMONWEALTH *of* VIRGINIA
Office of the
SECRETARY *of* TRANSPORTATION

VTrans – Mid-term Needs and Next Steps

Jitender Ramchandani, AICP, PMP

Joint Annual Planning and Programming/MPO Quarterly Coordination Meeting

March 11, 2020



PRESENTATION TODAY

- 2019 Mid-term Needs
 - CTB Action
 - Methods to Access
- Considerations for SMART SCALE
- Tiering of Mid-term Needs
- Considerations for Future Updates of Mid-term Needs



2019 MID-TERM NEEDS

VTRANS MID-TERM NEEDS | CTB ACTION

- The CTB resolved that for the purposes of SMART SCALE, identified UDA Needs shall also be considered RN Needs if RN Congestion Needs are 20 miles or fewer.
- For the 2019 Update of the VTrans Mid-Term Needs, this applies to the following Regional Networks:
 - Bristol Region
 - Charlottesville Region
 - Danville Region
 - Harrisonburg Region
 - Kingsport Region
 - New River Valley Region
 - Staunton-Augusta-Waynesboro Region
 - Winchester Region

Note: VTrans Travel Markets determine funding eligibility (HPP or DGP) and eligible applicants (Regional Entities, Locality, Transit Agency) per the SMART SCALE policy guide

VTRANS MID-TERM NEEDS | CTB ACTION

- InteractVTrans changes for RN-eligible UDA Needs:

Find Layers Comment

Locations
Limit results to specific areas (optional)
Select a Location Type
Items: 0

Search Criteria
Find features in up to three layers

1. Feature Type to Search For (Required)
2019 VTrans Mid-Term Needs (Segments) x

Criteria
Need - Roadway capacity (UDA)
Select a Filter

2 NO
Yes (UDA only)

3 Yes (UDA, RN) ←

Select a Search Criteria Layer

Clear Find

About InteractVTrans

Zoom to 1 of 2

2019 VTrans Mid-Term Needs (Segments) - Englewood DR (PR - City of Staunton)

Need - Pedestrian Access (RN)	NO
Need - Roadway capacity (UDA)	Yes (UDA, RN)
Need - Roadway operations (UDA)	Yes (UDA, RN)
Need - Transit frequency (UDA)	Yes (UDA, RN)
Need - Transit operations (UDA)	Yes (UDA, RN)
Need - Transit capacity (UDA)	Yes (UDA, RN)
Need - Transit facilities (UDA)	Yes (UDA, RN)
Need - Street Grid (UDA)	Yes (UDA, RN)
Need - Bicycle Infrastructure (UDA)	Yes (UDA, RN)
Need - Pedestrian Infrastructure (UDA)	Yes (UDA, RN) ←
Need - Complete Streets (UDA)	Yes (UDA, RN)
Need - Safety features (UDA)	Yes (UDA, RN)
Need - On-street parking (UDA)	Yes (UDA, RN)
Need - Off-street parking (UDA)	Yes (UDA, RN)

VTRANS MID-TERM NEEDS | CTB ACTION

- The CTB resolved that for SMART SCALE, the identified Safety Needs on CoSS roadways shall also be considered CoSS Need
- Similar to Round 3, localities can submit safety studies to get project funding applications screened in for the Safety travel market.

Note: VTrans Travel Markets determine funding eligibility (HPP or DGP) and eligible applicants (Regional Entities, Locality, Transit Agency) per the SMART SCALE policy guide

VTRANS MID-TERM NEEDS | CTB ACTION

- InteractVTrans changes for CoSS-eligible Safety Needs:

Find Layers Comment

Locations
Limit results to specific areas (optional)
Select a Location Type

Items: 0

Search Criteria
Find features in up to three layers

1. Feature Type to Search For (Required)
2019 VTrans Mid-Term Needs (Segments) x

Criteria
Need - Safety Improvement

Select a Filter

2 NO
YES

3 YES (CoSS) ←

Select a Search Criteria Layer

Clear Find



2019 VTrans Mid-Term Needs (Segments) - I-81N

Need - Transit capacity (UDA)	NO
Need - Transit facilities (UDA)	NO
Need - Street Grid (UDA)	NO
Need - Bicycle Infrastructure (UDA)	NO
Need - Pedestrian Infrastructure (UDA)	NO
Need - Complete Streets (UDA)	NO
Need - Safety features (UDA)	NO
Need - On-street parking (UDA)	NO
Need - Off-street parking (UDA)	NO
Need - Intersection design (UDA)	NO
Need - Signage/wayfinding (UDA)	NO
Need -Traffic calming (UDA)	NO
Need - Environment (UDA)	NO
Need - Sidewalks (UDA)	NO
Need - Safety Improvement	YES (CoSS) ←
Need - Pedestrian Safety	NO

MID-TERM NEEDS | METHODS TO ACCESS NEEDS

	PRINT-READY DOCUMENTS	INTERACTVTRANS	DATABASE – ARCMAP PACKAGE
OPTION	<p>Executive Summary and maps showing Mid-term Needs</p> <p>Methodology Report</p>	<p>InteractVTrans</p> <ul style="list-style-type: none"> • Find / download Needs by geography • Overlay additional layers, such as crashes • Locate where multiple Needs exist on a Segment • Identify Segment and Node IDs for use in Smart Portal 	<p>Download</p>
TARGET AUDIENCE	<ul style="list-style-type: none"> • Policy makers, MPO and PDC Directors, Administrators, etc. 	<ul style="list-style-type: none"> • Planners and engineers 	<ul style="list-style-type: none"> • Power users / analysts with access to ArcGIS and a need to query and customize information



SMART SCALE CONSIDERATIONS

MID-TERM NEEDS | SMART SCALE CONSIDERATIONS

SMART SCALE Screening:

Eligibility

Is the proposed project a capacity or operational improvement for highway, transit, bicycle, pedestrian, or transportation demand management?

Is the applicant an eligible entity?

Readiness

Does the proposed project meet required level of planning and supporting documentation needed for projects to be considered and evaluated for SMART SCALE funding?

VTrans Needs

Is the proposed project or strategy consistent with the assessment of capacity needs for Corridors of Statewide Significance, Regional Networks, Urban Development Areas, and Safety undertaken in VTrans?



MID-TERM NEEDS | SMART SCALE CONSIDERATIONS



SEGMENT IDs RANGE: 100,001-355,503



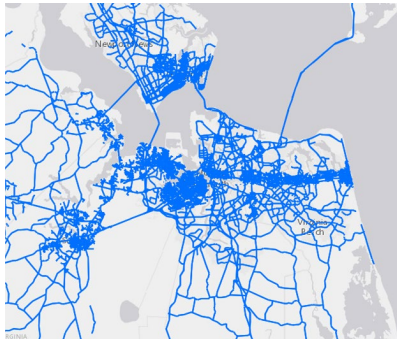
NODE IDs RANGE: 400,001-404,670




1. View and search for locations with Needs
2. Identify context for a proposed improvement by identifying presence of transit, rail, and other features
3. Select locations that have multiple overlapping Needs

1. With established Need and location, initiate funding application

MID-TERM NEEDS | CONVERSION FOR SMART PORTAL - SEGMENTS



- VTrans Mid-Term Needs (Segments)**
- Congestion (CoSS, RN)
 - Reliability (CoSS, RN)
 - Capacity Preservation (CoSS, RN)
 - TDM (CoSS, RN)
 - Transit Access for Equity Emphasis Areas (RN)
 - Bicycle and Pedestrian Access (RN)
 - UDA multiple categories (RN, UDA)
 - Safety Improvement (CoSS, Safety)
 - Pedestrian Safety Improvement (Safety)

NODE IDs RANGE:

100,001-355,503



Corridors of Statewide Significance
 Segments: Congestion, Reliability, Capacity Preservation, TDM, Safety (CoSS)



Regional Networks
 Segments: Congestion, Reliability, Capacity Preservation, TDM, Transit Equity, Bicycle & Pedestrian Access, various UDA Needs (UDA, RN)

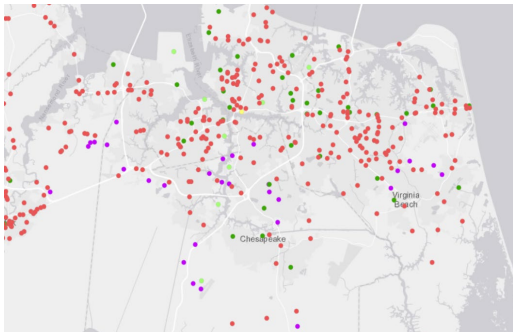


Urban Development Areas
 - Segments: various UDA Needs (UDA Only)



Safety
 Segments: Safety (*non-CoSS*), Pedestrian Safety Improvement

MID-TERM NEEDS | CONVERSION FOR SMART PORTAL - NODES



- VTrans Mid-Term Needs (Nodes)**
- Rail On-time Performance (CoSS)
 - Transit Access (RN)
 - Safety Improvement (CoSS, Safety)
 - Industrial and Economic Development Areas (RN, UDA)

NODE IDs RANGE:
 400,001-404,670



Corridors of Statewide Significance
 - Nodes: Rail, Safety (CoSS)



Regional Networks
 - Nodes: IEDA (UDA, RN), Transit Access



Urban Development Areas
 - Nodes: IEDA (UDA only)



Safety
 - Nodes: Safety (*non-CoSS*)

Need Node ID	400757
Node Name	Montview
Node Type	Activity Center (Freight Dependent)
Need for Rail On-Time Performance (CoSS)	NO
Need for Transit Access (RN)	YES
Need for Safety Improvement	NO
Need for Improved Access to Industrial and Economic Development Area with Readiness Status 3 or higher	NO

Example of how Node-related Needs are depicted on InteractVTrans

MID-TERM NEEDS | NEED ID INTEROPERABILITY

The screenshot displays the InteractVTrans web application. On the left, a map shows the area around Lake Wright and Lake Taylor in Virginia Beach. A search bar at the top left contains the text '101994', with a red arrow pointing to the input field. On the right, a panel titled '2019 VTrans Mid-Term Needs (Segments) - I-64W' contains a table. A red box highlights the first row of the table, with a red arrow pointing to the 'Need Segment ID' value '101994'.

Need Segment ID	101994
AADT (bidirectional)	142,000
Street Name	
Route Common Name	I-64W
Direction	Westbound
Need - Congestion Mitigation (CoSS)	NO
Need - Improved Reliability (CoSS)	NO
Need - Capacity Preservation (CoSS)	NO
Need - Transportation Demand Management (Limited Access CoSS)	YES
Need - Transportation Demand Management (non-limited Access CoSS)	NO
Need - Congestion Mitigation (RN)	NO
Need - Improved Reliability (RN)	NO
Need - Capacity Preservation (RN)	NO
Need - Transportation Demand Management (Limited Access)	NO

MID-TERM NEEDS | NEED ID INTEROPERABILITY

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

Corridors of Statewide Significance

Select the affected corridors by checking the boxes in the list below or clicking on the shapes on the map.

	Need Id	Need Location	Need Categories	Distance to Project		
<input type="checkbox"/>	402119	Roadway Intersection: Baker Rd PR/NP (Virginia Beach City), Northampton Blvd NP (Virginia Beach City) VA 1665 US 13N	Safety Improvement CoSS	0.00		
<input checked="" type="checkbox"/>	101994	I-64W	Limited Access TDM (New or expanded park and ride facilities, rail and public transportation services and facilities, and commuter assistance programs), Roadway Safety Improvement	0.00		
<input type="checkbox"/>	102633	I-64R	Limited Access TDM (New or expanded park and ride facilities, rail and public transportation services and facilities, and commuter assistance programs)	0.00		

Finished selecting Corridors?
Next Step ↻

City of Virginia Beach, VITA, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NAS... esri

- Project Areas
- Corridors of Statewide Significance
- Regional Network
- Urban Development
- Safety
- Summary

MID-TERM NEEDS | SMART SCALE CONSIDERATIONS

- Be sure to select not only a segment or node (location) but also include the Need in project justification

Corridors of Statewide Significance

Need Id	Need Location	Need Categories	Justification
103603	I-64E	Congestion, Limited Access TDM (New or expanded park and ride facilities, rail and public transportation services and facilities, and commuter assistance programs)	Project will improve Congestion by extending accel/decel lanes at Exit 199

Regional Network

Need Id	Need Location	Need Categories	Justification
100424	FR-157N: N Military Hwy	Bicycle Access, Pedestrian Access, Non-limited Access TDM (New or expanded public transit services and facilities, rail and public transit services and facilities, bicycle and pedestrian facilities, commuter assistance programs, and emerging technologies such as travel apps and shared-mobility)	Includes pedestrian accommodations, crosswalk and pedestrian signals, at intersection with off-ramp at exit 199.

Urban Development

Need Id	Need Location	Need Categories	Justification
No Urban Development needs included.			

Safety

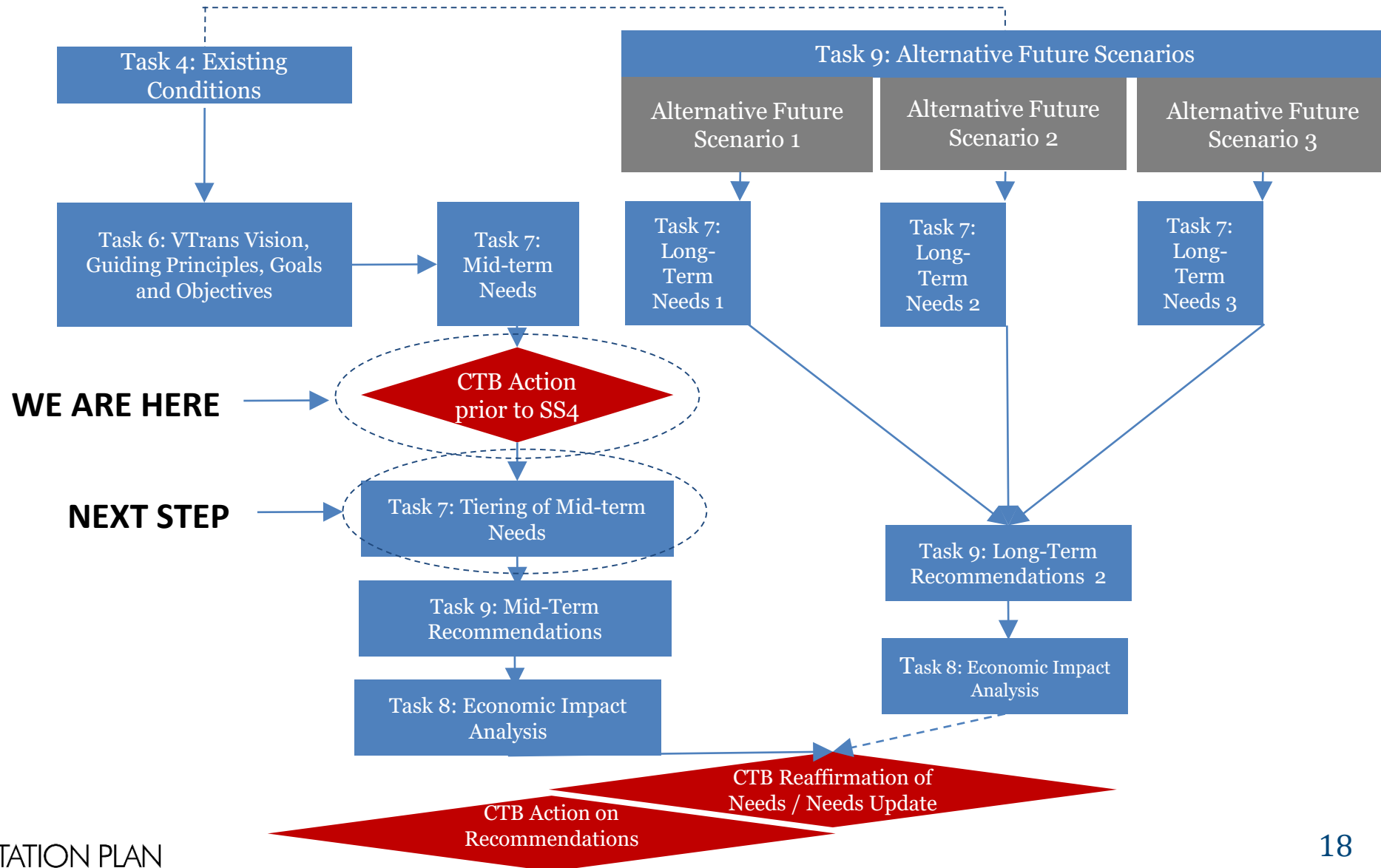
Need Id	Need Location	Need Categories	Justification
138271	US-13N: N Military Hwy	Pedestrian Safety Improvement	Includes pedestrian accommodations, crosswalks and pedestrian signals, that will improve safety at this location.





TIERING OF MID-TERM NEEDS

VTRANS WORKFLOW



Notes:

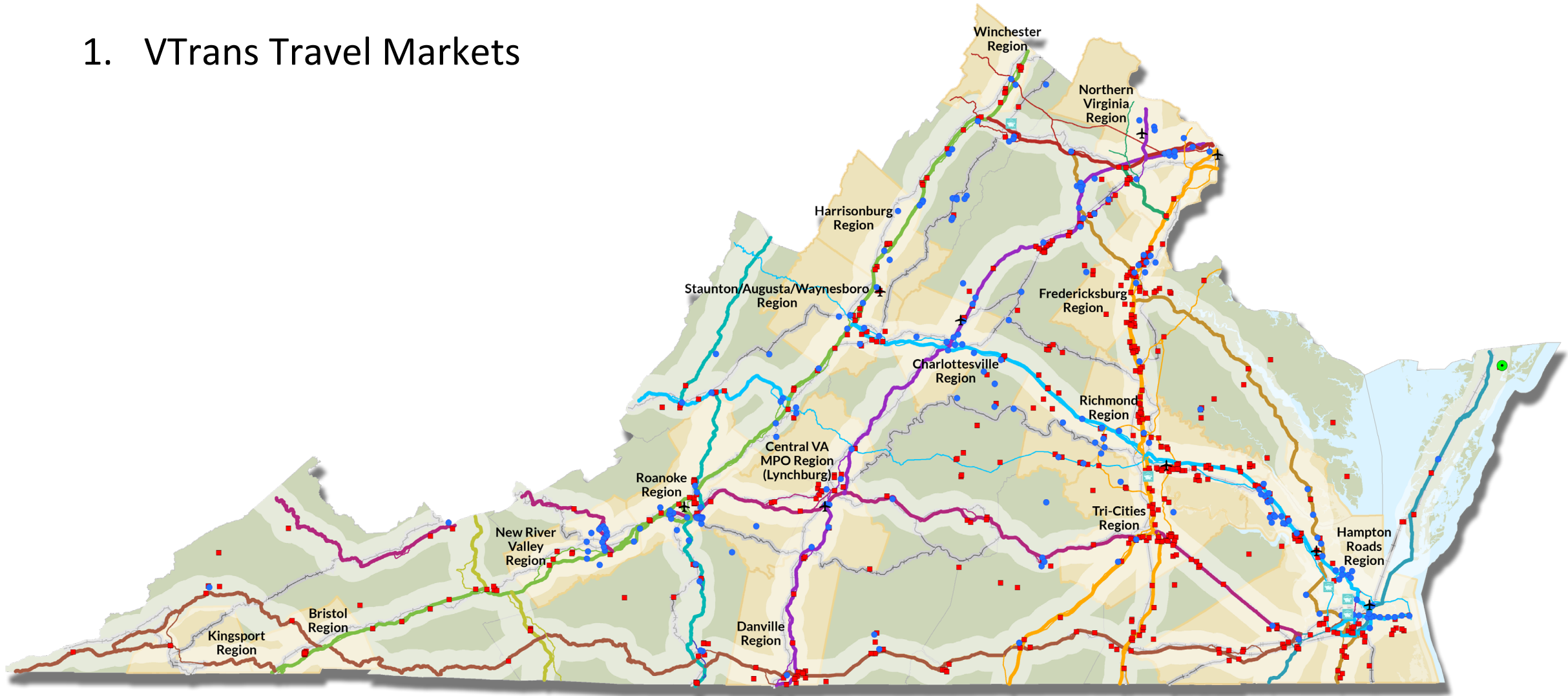
- Please refer to the [VTrans Scope of Services](#) for detailed descriptions of the depicted Tasks.
- Only tasks on the project critical path are shown.

TIERING OF VTRANS NEEDS | INTENT AND PURPOSE

1. Differentiate critical needs from less-pressing needs
 - Provide more nuance, as opposed to a binary selection
2. Inform planning decisions for capacity and safety related investments
3. Provide opportunities to improve coordination among different program areas
 - Allow for a more comprehensive overview of the VTrans Mid-term Needs by including existing and planned activities
4. Ensure that prioritization is transparent, replicable, and reple

TIERING OF VTRANS NEEDS | INITIAL THOUGHTS ON POTENTIAL CRITERIA

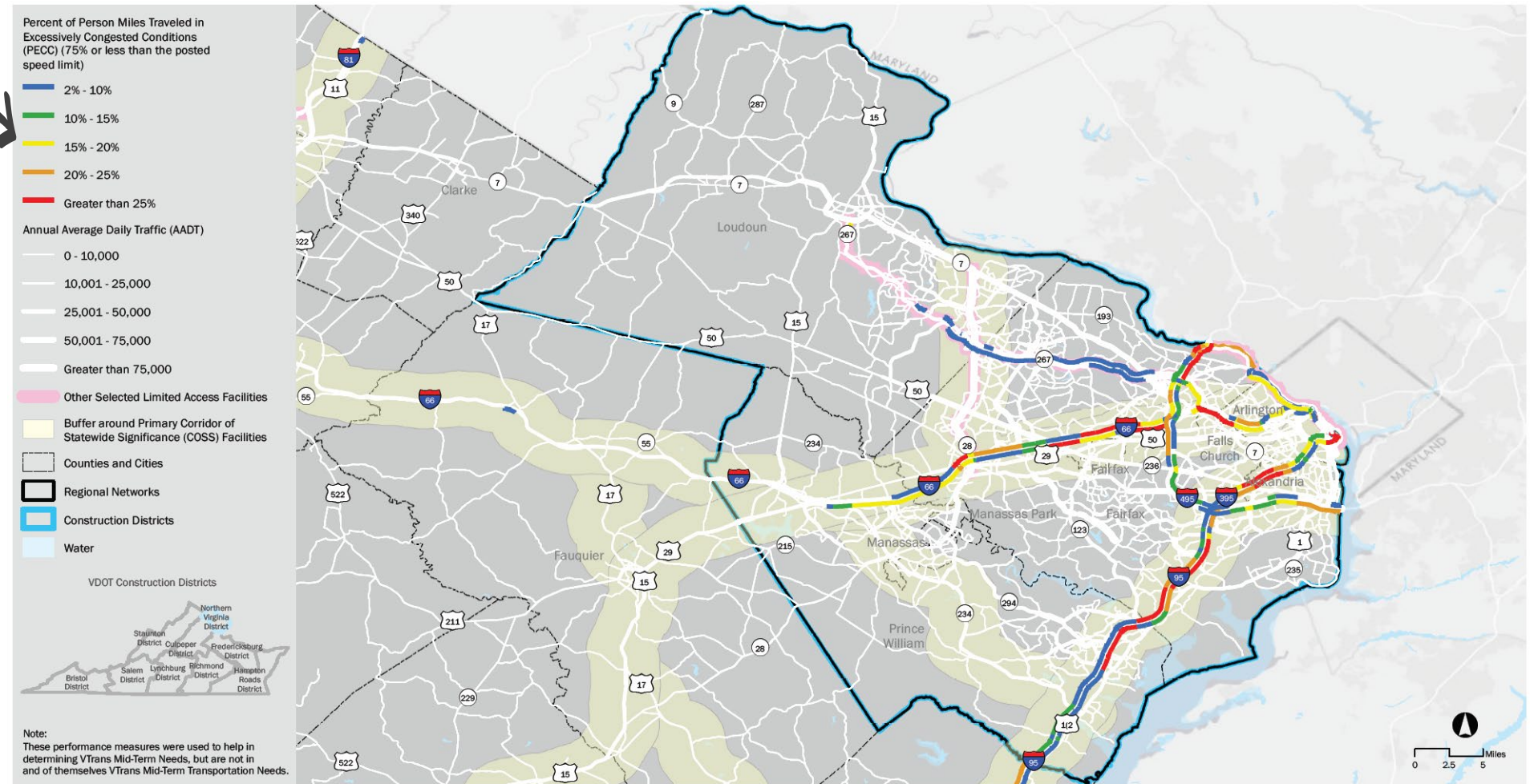
1. VTrans Travel Markets



TIERING OF VTRANS NEEDS | INITIAL THOUGHTS ON POTENTIAL CRITERIA

2. Variance within VTrans Mid-term Needs Performance Measures

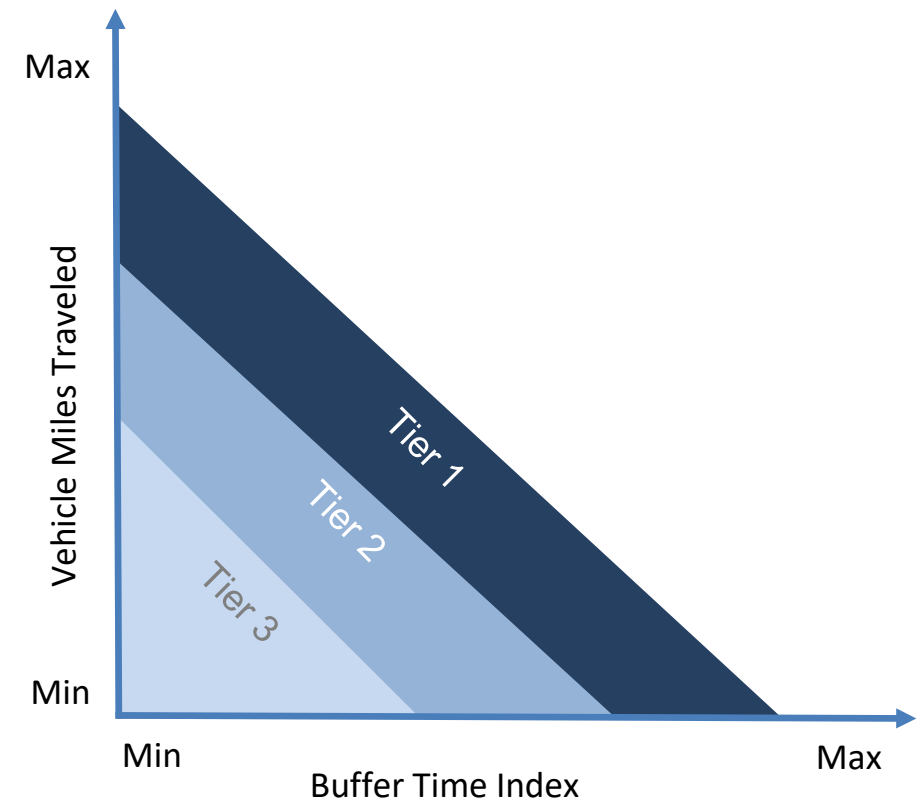
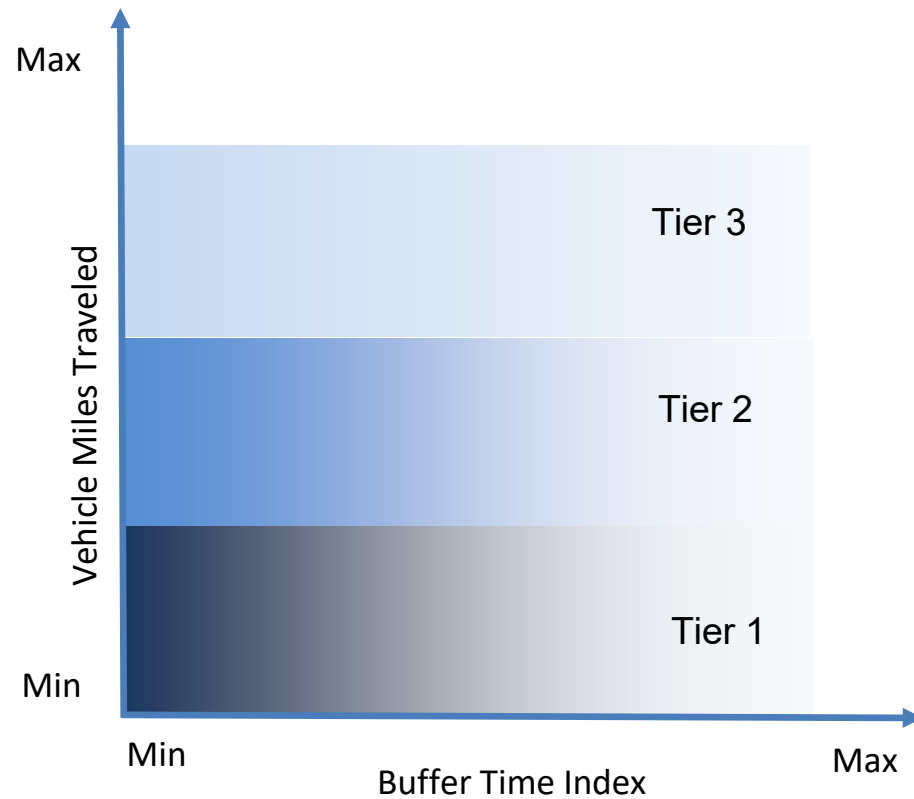
Reflect variance for each measure



Source: Methodology Document for the Northern Virginia Construction District

TIERING OF VTRANS NEEDS | INITIAL THOUGHTS ON POTENTIAL CRITERIA

3. Number of facility or service users (e.g. vehicle or person miles traveled, volume)



TIERING OF VTRANS NEEDS | INITIAL THOUGHTS ON POTENTIAL CRITERIA

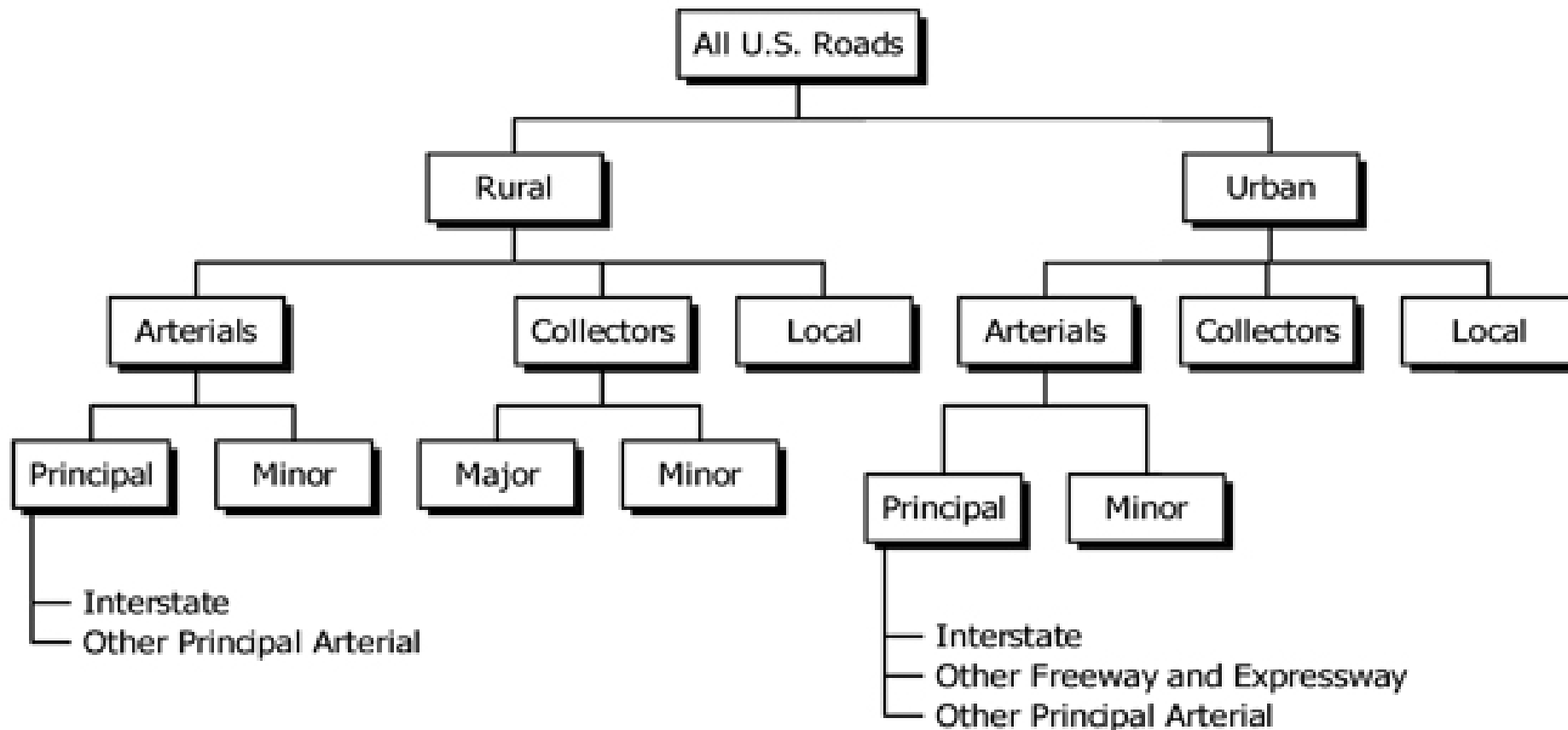
4. Planned, anticipated, or committed State of Good investments



Source: [Bristol Herald Courier](#)

TIERING OF VTRANS NEEDS | INITIAL THOUGHTS ON POTENTIAL CRITERIA

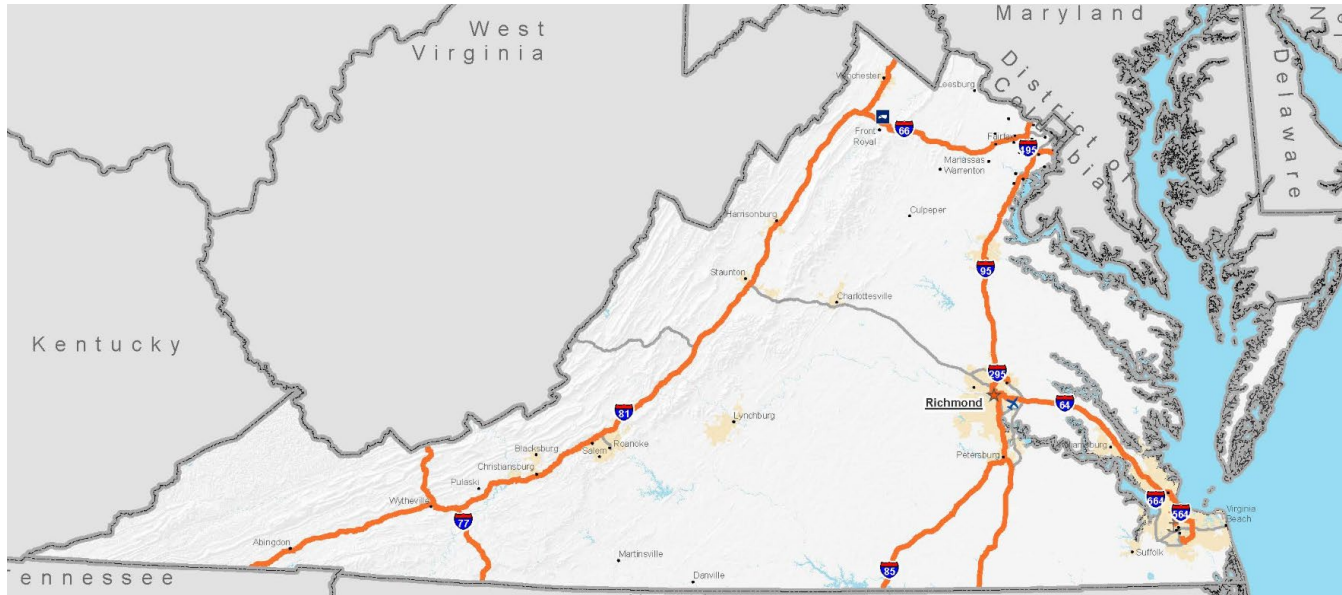
- Existing roadway functional classification system, railroad classes, transit route types (circulator, distributor)



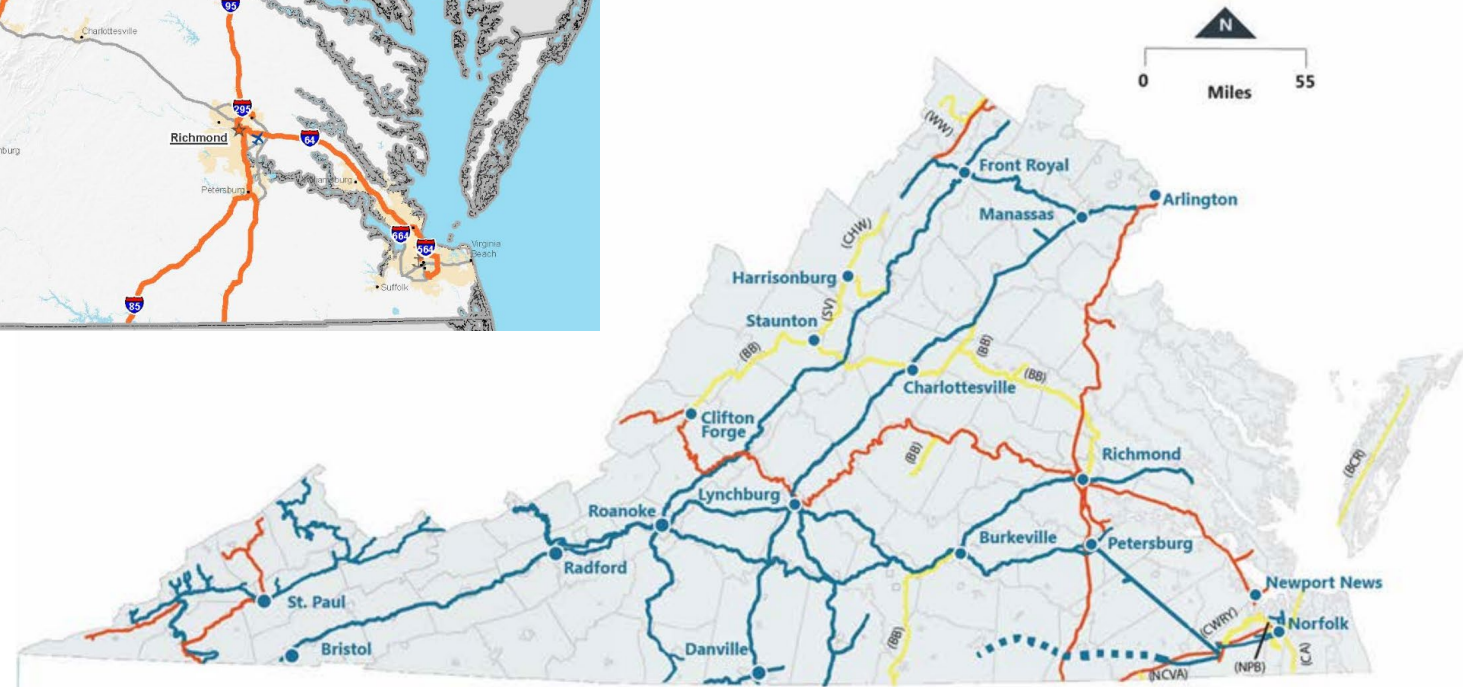
Source: FHWA Functional Classification Guidelines

TIERING OF VTRANS NEEDS | INITIAL THOUGHTS ON POTENTIAL CRITERIA

6. Designated facilities on the Freight Network for Virginia



Virginia's Freight Highway Network



Virginia's Freight Rail Network



CONSIDERATIONS FOR FUTURE UPDATES OF MID-TERM NEEDS

VTRANS MID-TERM NEEDS | CONSIDERATIONS FOR FUTURE UPDATES

- Continued work on refinement to VTrans Mid-term Needs Identification Methodology
 - More than 16 different opportunities recorded from feedback at workshops, from state agencies, and others
 - OIPI plans to explore options for improvements prior to the next Needs update

VTRANS MID-TERM NEEDS | CONSIDERATIONS FOR FUTURE UPDATES

- Continued work on refinements to VTrans Mid-term Needs Identification

Methodology

- Seasonal Variations
- Non-recurring Events
- Construction Zones and Activities
- Committed Improvements



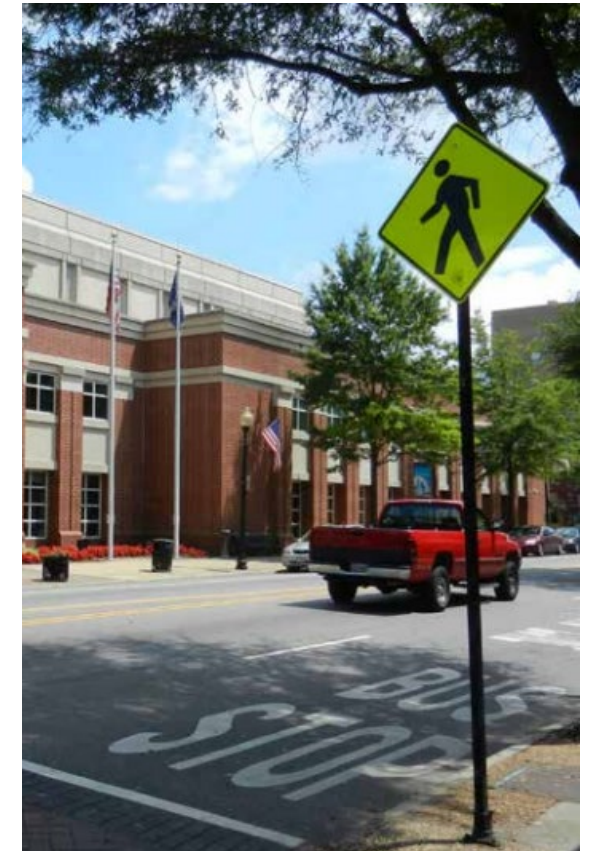
Source: VDOT Flickr

VTRANS MID-TERM NEEDS | CONSIDERATIONS FOR FUTURE UPDATES

- Continued work on refinement to VTrans Mid-term Needs Identification Methodology
 - Transit and Rail Ridership
 - Transit and Rail Quality of Current Service Offered
 - Travel time reliability
 - Trip chaining - accessibility Needs
 - Quality of services offered (frequency, service standards, etc)



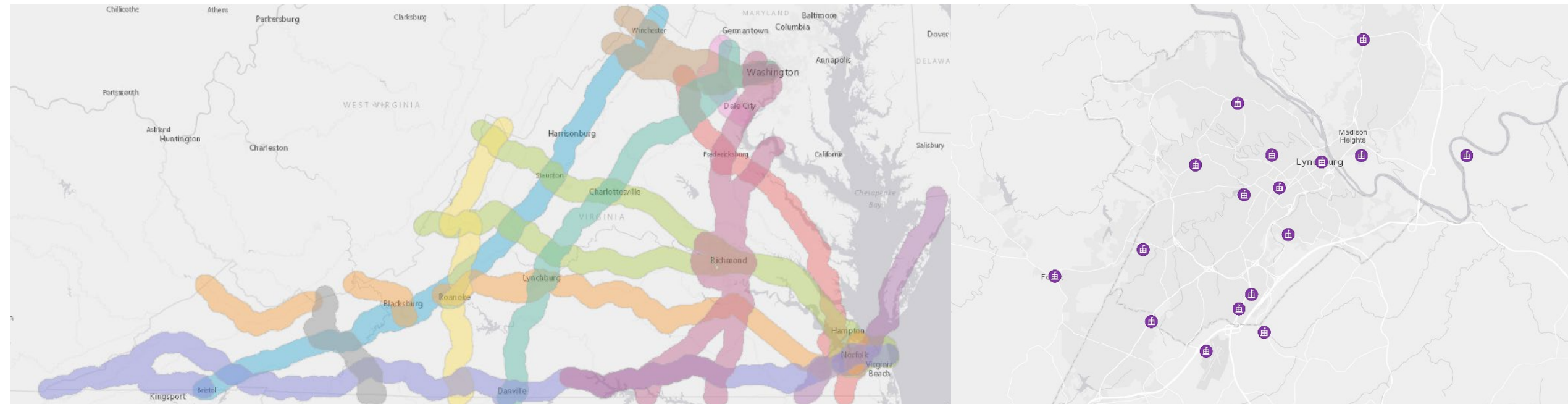
Source: VDOT



Source: City of Suffolk

VTRANS MID-TERM NEEDS | CONSIDERATIONS FOR FUTURE UPDATES

- Evaluation of Criteria used for designation of Corridors of Statewide Significance
 - Requests in 2019 along Rt 288 in Chesterfield, and Rt 360 in Hanover
- Data-driven methods to identify Regional Network Activity Centers



QUESTIONS/DISCUSSION

OIPI Staff Contact Information:

Name	Phone	Email
Jitender Ramchandani	804.786.0868	Jitender.Ramchandani@oipi.Virginia.gov
Katie Schwing	804.786.2362	Kathryn.Schwing@oipi.Virginia.gov
Chris Wichman	804.786.2366	Chris.Wichman@oipi.Virginia.gov



VTRANS | VIRGINIA'S
TRANSPORTATION PLAN