

VTRANS

VIRGINIA'S
TRANSPORTATION PLAN

Mid Term Needs
Assessment Regional
Workshop Summary
New River Valley
August 20, 2019



Office of Intermodal Planning and Investment

1221 E. Broad Street

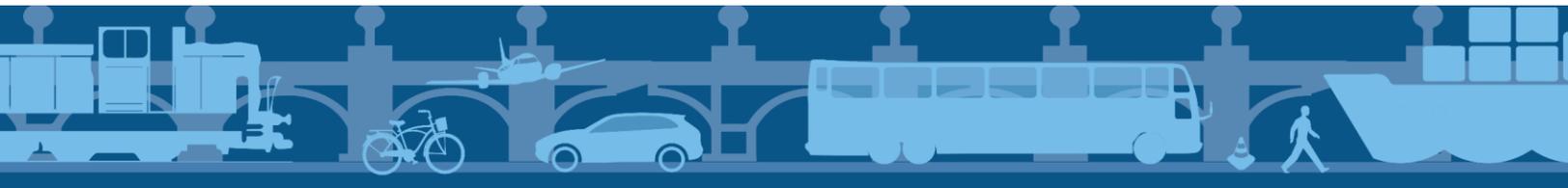
Richmond, Virginia 23219

Final - September 23, 2019

Prepared for OIPI in support of VTrans, Virginia's Statewide
Multimodal Transportation Plan

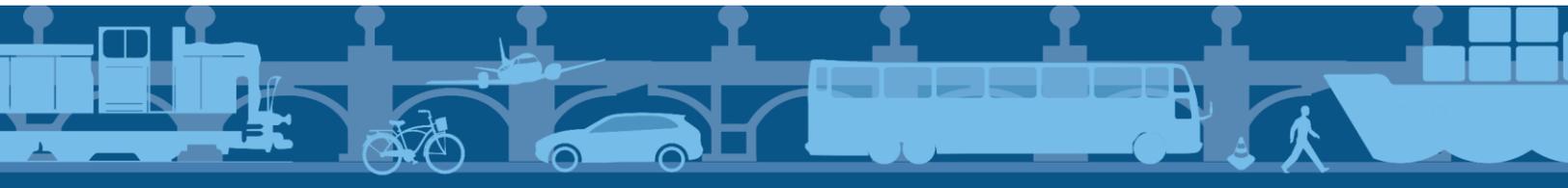
Contract Number 47082, Task Two: Agency Involvement

This page intentionally left blank.



CONTENTS

1	Introduction.....	1
2	Meeting Location And Participants	1
3	Agenda And Materials.....	4
4	Synthesis of Comments.....	4
5	Appendix: Comments from Plenary Session and Breakout Groups	9
i.	Plenary Session Comments	10
ii.	Breakout Session Comments	11



1 INTRODUCTION

This report summarizes the input from a workshop conducted by the Virginia Office of Intermodal Planning and Investment (OIPI) with representatives of local, regional, and state agencies that support transportation planning for the New River Valley area. The purpose of the meeting was to elicit input on the analysis methods (specifically, key performance measures) and the regional results of initial analyses conducted to identify statewide transportation needs for the coming seven to ten years.

2 MEETING LOCATION AND PARTICIPANTS

The workshop was conducted at The Inn at Virginia Tech in Blacksburg, Virginia, from 10:00 a.m. to 2:00 p.m. Table 1 provides a list of participants.

Table 1: Workshop Participants and Invited Representatives

Name	Agency	Title
Regional and Local Representatives		
Justin D. Sanders	Town of Pulaski	Planner I
Kevin Byrd	NRVRC	Executive Director
Melissa Skelton	City of Radford	Community Development Director
Mishell Evans	NRVCS: Radford Transit	Transportation Data Developer
Nick Quint	Virginia Tech	Transportation Network Manager
Will Drake	Town of Christiansburg	Planning Director
Andrew Warren	Town of Christiansburg	Assistant Town Manager
Christy Straight	RIDE Solutions/NRVRC	Senior Planner
Dan Brugh	New River Valley MPO	Executive Director
Elaine HOLETON	Pulaski County	Director of Planning
Eli Sharp	NRVRC	Deputy Executive Director

Erik Olsen	NRVMPO/Blacksburg Transit	Transportation Planner
James Perkins	Radford University	Director of University Services
Jay Eanes	City of Radford	Engineering Technician
Jorge Coartney	Radford University	Asst. V.P. for Facilities
Maeve Gould	Town of Blacksburg	Comprehensive Planner

Additional Regional and Local Representatives Invited but Unable to Attend

Emily Gibson	Montgomery County	
Craig Meadows	Montgomery County	
Nichole Hair	Town of Pulaski	
Shawn Utt	Town of Pulaski	
Monica Musick	Pulaski Area Transit	
John Mills	Giles County	
Chris McKlarney	Giles County	
James Kast	Town of Narrows	
Susan Kidd	Town of Narrows	
Lydeana Martin	Floyd County	
Terri Morris	Floyd County	
Rebecca Wright	Town of Dublin	
Ty Kirkner	Town of Dublin	
Todd Meredith	Town of Pearisburg	
Roger Jones	Town of Rich Creek	

State Agency Staff

David Clarke	VDOT	Resident Engineer - Christiansburg
Paul Brown	VDOT	Asst. Resident Engineer - Christiansburg
Michael Gray	VDOT	District Planning Manager

Nick Ruiz	DRPT	Rail Planning Project Manager
Ray Smoot	CTB	Board Member - Salem District
Marsha Fiol	VDOT	TMPD - Division Administrator
Daniel Sonenklar	DRPT	Statewide Transit Planner
Jitender Ramchandani	OIPI	Transportation Planning Program Manager
Chris Wichman	OIPI	Transportation Planner
Katie Schwing	OIPI	Transportation Planner

Consultant Facilitators and Scribes

Marissa Sperry	Consultant team	Scribe
Michael Stafford	Consultant team	Scribe
Walt Cole	Consultant team	Facilitator
Thomas Jackson	Consultant team	Scribe

3 AGENDA AND MATERIALS

Following a plenary presentation and discussion of the VTrans needs assessment method and performance measures, the participants broke into small groups to review the information developed for the region. They regrouped at the end of the meeting to share their findings and to hear about the process and schedule for developing, reviewing, and finalizing the VTrans mid term needs assessment.

Upon sign-in, each participant received a packet with the following materials, all of which are available for download from VTrans website.¹

- Agenda
- Plenary presentation slides
- VTrans Summer 2019 Newsletter
- VTrans Mid-Term Needs Frequently Asked Questions (FAQ)
- Comment Form
- Regional maps, charts, and/or tables of the data listed in Table 2. Detailed descriptions of each measure and analysis method are included in the plenary presentation slides.

4 SYNTHESIS OF COMMENTS

The following section provides a summary of comments about each performance measure, compiled from discussions at the workshop. The appendix includes transcripts of the sessions and sheets, including photos of the marked-up maps developed by each breakout group. After the participants have reviewed and vetted the draft report, OIPI will synthesize the comments that were associated with the maps and upload them to the online InteractVTrans map.² In addition to serving as a repository for regional workshop comments, InteractVTrans provides a publicly available resource for ongoing input from local stakeholders and the public.

OIPI will consider each comment during the process of refining the needs assessment methodology and developing the draft needs and will respond directly to specific questions posed by stakeholder. As noted in the plenary presentation, OIPI will present the initial list of needs to the Commonwealth Transportation Board in October 2019, and the final needs assessment with a request for Board action in December 2019.

¹ VTrans website: www.vtrans.org Location of workshop summaries: <http://vtrans.org/get-involved/online-meetings/VTrans-Mid-Term-Needs-Regional-Workshops>

² InteractVTrans: www.vtrans.org/mid-term-planning/InteractVTrans

Table 2 Synthesis of Comments

	Comment
	Congestion: Percent Person Miles Traveled in Excessively Congested Conditions (PECC)
1.	Trucks slowing down as they climb hills might skew this metric, making it appear to be a congestion problem when it's more caused by the nature of topography on I-81. Northbound congestion is worse than southbound. However they can cause delay and backups.
2.	Many traffic slowdowns are caused by accidents on I-81
3.	Construction is taking place on I-81 on the bridge near the Montgomery/Pulaski county line, and there is congestion because of reduced speed in the work zone.
4.	Christiansburg and Radford have measures to alleviate Highway 11 congestion (reversible lanes strategies and detours around downtown, respectively)
5.	When backups/congestion occur on I-81, alternate routes (e.g. Highway 11) back up as well. Map red dot #2 and 3 Table 3
6.	When backups occur, people "self re-route" using phone apps e.g. Waze, GoogleMaps, etc. This causes more congestion because some of the detours can't accommodate larger vehicles.
7.	Don't agree with the 90% threshold. It's too low for this area. It might be applicable to southbound lanes (I-81), but not for northbound travel. Worse between Radford and Roanoke.
8.	The lower 90% threshold seems to more accurately show where the problem areas are.
9.	Look at the extreme measures, like 20%, to give a better representation of what is occurring
10.	Is it possible to gather data that separates truck traffic from passenger vehicles?
11.	Regional commission did a freight study recently
12.	Need to look at rest stops and park/ride locations
13.	I-81 exit #114 regularly backs up - sometimes onto the interstate
14.	If data is last year's, there was a major re-paving project on I-77 that caused delays from March to September 2018.
15.	Non-limited access mapping: surprised that the 114/685 intersection does not show up as congested. Heavy commuting double the volume that it is designed for

	Comment
16.	Regional Network Roadways should be added to the mapping. These include 100, 8/221, 685 and 219 West Virginia connection
	Congestion: Travel Time Index (TTI)
17.	Giles County is good re: TTI - it's just terrain and two lane roads. Similar west of 460
18.	Request: study Fairlawn community in Pulaski. It's at the intersection of Route 114 and Highway 11.
19.	Peppers Ferry Road is a congested area
20.	Route 114 is congested with truck traffic
21.	Route 114 and 685 - Radford Arsenal Plant should show up - particularly during peak hours. Christiansburg has added about 2,500 housing units.
22.	Public perception in SW VA of VDOT funding/revenue sharing/ SMART SCALE is that they are being left behind. The state wants us to exceed our road capacities like in NoVA. Overall, in less dense areas like this one, measures get washed out compared to NOVA.
	Reliability: Unreliable Delay (UD)
23.	Route 114 needs to be studied, as it has significant reliability issues.
24.	Look at data outside the 6AM to 8PM window, since more accidents probably occur after between 8PM and 6AM
25.	The areas shown on the maps are accurate for what people experience.
26.	Radford Army Ammunition Plant (Arsenal) employs 1,500 people and can contribute to unreliability of road system. Table 3 Red Dot #4
27.	Concerned that the data showing the once per week/month incidents that gets "washed out" when it's averaged over a year
28.	Maybe 1.5 is too high for travel time. Is there a better metric to use?
29.	Lack of redundancy in road systems elaborates the issues in our area. Time to clear accidents is significant.
	Reliability: Buffer Time Index (BTI)
30.	There is only one route from south to Christiansburg, Blacksburg, and Radford, and it is also the route that school buses use so it causes unreliability
31.	Temporary traffic signal was installed for construction at the 114 exit/off-ramp. Unintended safety benefit as it has cleared up much of the congestion that would normally be there.

	Comment
32.	Route 42 BTI could be due to construction of the Mountain Valley pipeline in 2018
33.	Look at Route 8 coming into Montgomery County from Floyd. This area is always congested causing buffer time.
34.	The intersection of Route 100 and Alexander Road is becoming busier all the time.
35.	Intersection of Route 11 and Patcher Road has a new housing development and middle school adding to buffer time in that area
36.	Why is Route 460 not showing up?
37.	Area on 460 Business that shows up as orange is probably due to the traffic signals being so close together in that area.
38.	Not showing up, but should: Rt. 100 in Giles, 11 and 114 in Fairlawn and 42 north of 460.
	Passenger Rail: Amtrak Station On-Time Performance
39.	The green on the map in Roanoke is because it is the first to leave at 6AM.
40.	The Roanoke station underserves our area
41.	We are ready to pay for Amtrak when they would like to come to NRV. Need to include us.
42.	Biggest constraint in the NRV is the limited viable workforce numbers
	Accessibility: Transit Access Deficit to Activity Centers
43.	Some Activity Centers are not shown. These include the New River Community College, Scattered Good Industrial Park, Christiansburg Industrial Park and Radford Industrial Center. These were designated on the Table 3 map as red dots #8 through #11 .
44.	The New River Valley Volvo Plant was not designated as an activity center, but should be considered.
45.	Were the top 10 employers included in this?
46.	Need to show frequency of routes that do exist. Also, what is the date of the routes shown? They seem to be two years old.
47.	Measure is very confusing and hard to understand
48.	The University is showing up as low on the map - that seems odd
49.	Other factors that may affect mode choice is parking availability, convenience of stops to the destinations.

	Comment
	Travel Options: Disadvantaged Population Beyond ¼ Mile Access to Fixed Route Transit
50.	We typically try to get our analysis on smaller areas (finer grain). We have created service districts to make assumptions
51.	Need a route between the community college and the mall (Note: PAT runs a 2x a day service between the campuses)
52.	80 would be a better threshold than 90 for our area
53.	Transit is needed where there is an older population and some new housing (Table 1, red dot #9)
54.	Metric does not account for existing demand response services
55.	Have you considered zero car households?
56.	Off of Merrimack Road there is a high concentration of low income households that have no transit service (Table 2, red dot #20)
57.	There are gaps in connectivity to the Virginia Breeze to Radford, but overall it works
	Safety: Vehicle Crashes
58.	Blind curves, topography, limited sight distance, and confusing signage contribute to safety problems in this region.
59.	PSI seems to reflect accurate conditions
60.	Is there a way to integrate fatalities/injuries in PSI to weight them higher?
61.	Should look at actual crashes and fatalities, rather than using the PSI
62.	Could conditional data overlay (e.g. alcohol, weather, etc.) be used to refine the data?
63.	I-81 acceleration and deceleration lanes need to be looked at - especially Exit 94
	Economic Development: Urban Development Areas and VEDP Business Ready Sites
64.	Activity Centers not shown should include: <ul style="list-style-type: none"> • Volvo plant - major employer • New River Community College (two campuses) • Scattered Good Industrial Park • Christiansburg Industrial Park • Radford Industrial Center

	Comment
65.	UDAs are not listed as activity centers. This should be applied to both UDAs and Activity Centers.
66.	Missing UDA in Christiansburg
67.	Radford will be adding a UDA in their Comprehensive Plan and will include the Tyler to East Main Connector
68.	NRV Airport is an international port of entry
69.	Majority of VEDP sites have not been “tiered” yet
70.	Not realistic to because Tier 5 is “shovel ready”, which means the site already has sufficient transportation and most likely a tenant already signed up. Tier 3 would be a better threshold.
71.	Does VEDP understand the importance of these sites?
72.	Permitting is an issue to get to Tier 5
73.	Grede site - change to Tier 3 business ready site
74.	The VCI site is not a desirable site
75.	Need to improve corridors from industrial sites to I-81.
76.	The needs within each Tier are going to be important

5 APPENDIX: COMMENTS FROM PLENARY SESSION AND BREAKOUT GROUPS

The following section reflects input from the plenary session and breakout discussion groups. Participants were asked to reflect broadly upon the issues addressed by the performance measures and other data associated with the topics of congestion, reliability, passenger rail on-time performance, accessibility to activity centers, travel options for disadvantaged populations, safety, and economic development. They were also asked for input on the regional applicability of each measure.

Facilitators and scribes assigned to each group recorded the input by writing notes on a flip chart and on a laptop. For comments with geographic specificity, facilitators and/ or group members placed numbered stick-on dots onto a poster-sized base map and noted the meaning of the numbered dot on the flip chart. The meaning of the numbered dots is noted in the summaries below; since the summaries are organized by topic, some of the transcriptions appear out of numerical order.

In addition to making comments during the breakout session, participants were invited to jot down notes on a Comment Form in their packet, and return it to a facilitator at the end of the

meeting, or to fill it out later and email their responses to OIPI staff. No written comment forms were provided to facilitators at the workshop. Some participants planned to send comments to OIPI staff after the meeting; input from these post-meeting messages may not be captured in this meeting summary, but OIPI is considering all continued input during the development of the needs assessment.

i. PLENARY SESSION COMMENTS

The following section summarizes questions and comments about the topics covered during the plenary presentation by Jitender Ramchandani of OIPI. Participant comments are shown in italics; other text indicates comments by OIPI staff.

INTRODUCTION/OVERVIEW

- Jitender re-introduced the purpose of VTrans, the planning context and the federal and state requirements
- He emphasized that the data and analysis presented is meant to spur discussion, and is not the final Needs. He requested that participants also review the data with an eye for completeness/accuracy.
- *Does VTrans have implications beyond SMART Scale application?*
 - Yes. SMART SCALE projects must address a need identified in the VTrans mid term needs assessment, but the needs assessment and the long range policy plan also serve as a resource and guide for decision making by VDOT, DRPT, and other transportation agencies.
- When OIPI asked for a show-of-hands opinion about the travel speed that would be considered congested in this region on a roadway with a posted speed of 70 mph, a few people indicated that a traffic slowdown to 42 mph (60% of posted speed) would indicate congestion; one person felt that a speed of 53 mph (75% of posted speed) would indicate congestion; and no participants felt that a speed of 63 (90% of posted speed) would indicate congestion.
 - One participant noted that *congestion in this region can become severe because there are no alternative routes.*
 - Another noted that *a travel time of 70 minutes to get to Roanoke isn't that big a problem, but 4 hours is a terrible problem.*
- *How is the congestion analysis affected by arbitrary changes in speed limit?*
 - The analysis is scaled to the legal speed limit on each roadway segment.
- *What does percentage of "person-miles-traveled" mean?*
 - We average the number of vehicle miles traveled on a given corridor with the number of vehicle trips to calculate the number of person-miles traveled.
- *Do the congestion and delay analyses factor physical space? Tractor trailers take up same space as 3 cars*
 - No, the space taken up by vehicles is a different factor.

SUMMARY/WRAP-UP

- The facilitators briefly summarized the discussion and comments received at each table
- Jitender asked the group if there was anything that wasn't covered that the participants expected to cover. There was no discussion on this question.

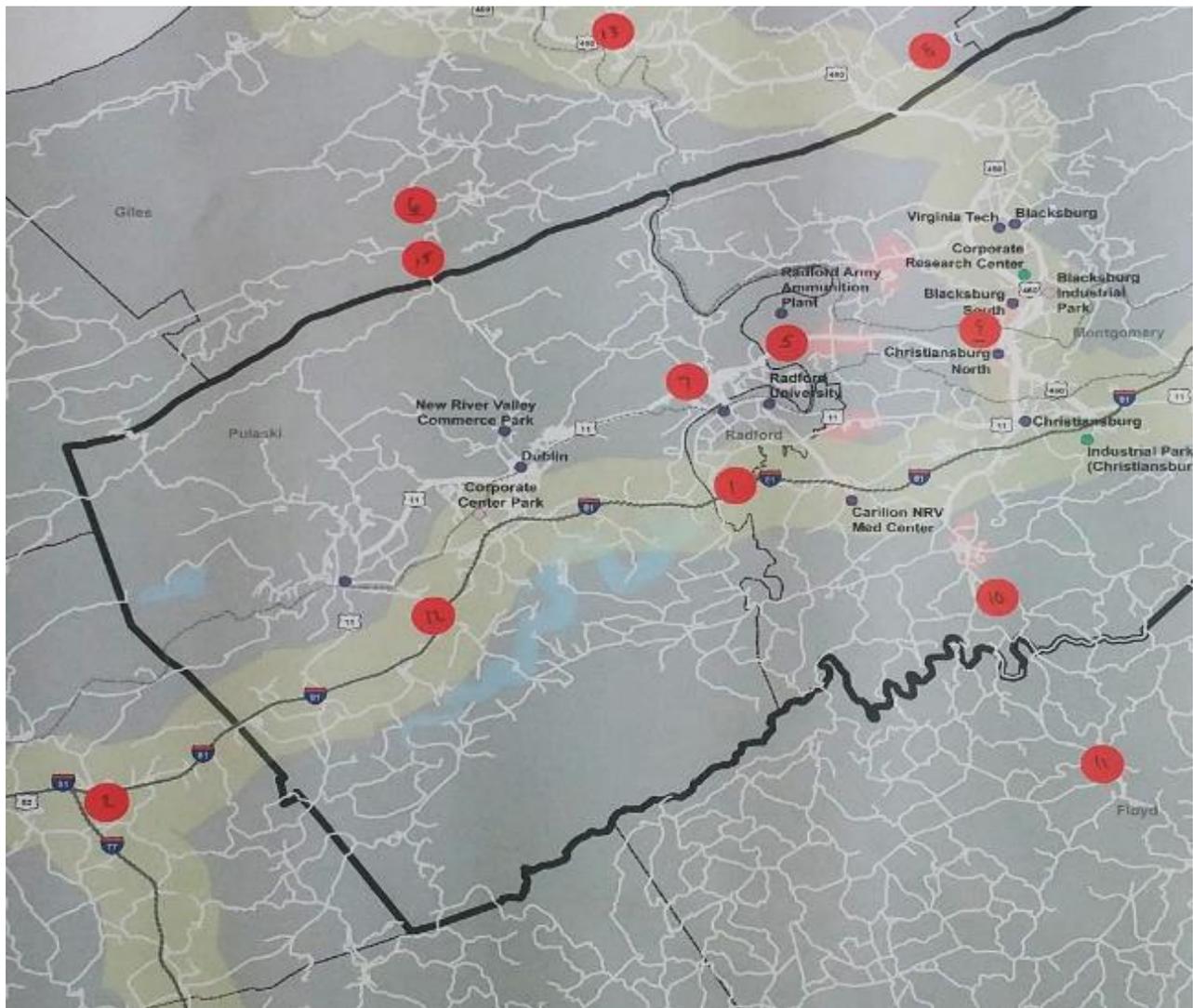
ii. BREAKOUT SESSION COMMENTS

The following synthesis reflects input from all the breakout groups. Participants were asked to reflect broadly upon the issues addressed by the performance measures (i.e., congestion, reliability, passenger rail on-time performance, accessibility to activity centers, travel options for disadvantaged populations, safety, and economic development. They were also asked for input on the regional applicability of each measure.

Facilitators and scribes assigned to each group recorded the input by writing notes on a flip chart and on a laptop. For comments with geographic specificity, facilitators and/ or group members placed numbered stick-on dots onto a poster-sized base map (as shown at the top of each group's summary) and noted the meaning of the numbered dot on the flip chart. These comments are prefaced with "Red Dot #" in the writeup.

GROUP 1 COMMENTS

BREAKOUT GROUP 1 MARKED UP MAP



CONGESTION:

Limited Access Facilities (Percent of person hours traveled in excessively congested conditions [PECC] measure)

- **Red Dot #1:** Within Radford circle (example) - the lower threshold is generally a very accurate representation of reality
- **Red Dot #2:** Intersection of 81 and 77 - A combination of issues with topography, geometries
- **Red Dot #3:** The VDOT paving project from March-September 2018 caused a lot of congestion on I-77 that is not typical in normal years.
- Slowdowns on steep uphill grades are very common - see I-81 study
- We have 4 or 5 big storms that cause traffic to be affected every year - try looking at an analysis of extreme congestion, like 20% of posted speed.
- Since the model data is being used, it is probably a small sample size - request that OIPI double check the data for this region.

- Auxiliary lanes are being built which should help some of our congestion and delay issues.
- The segment of US 460 near the Pearisburg/Pembroke area is limited access [may be appropriate to include in the analysis].

Non-Limited Access (Travel Time Index [TTI] measure)

- **Red Dot #4:** the area where 52 comes into 77.
- **Red Dot #5:** Surprised that Rt 114 at the intersection with Rt 685 is not showing up as congested - it's a heavily traveled commuter corridor, should have about double this traffic.
 - It might not be showing up since the analysis is based on all-day traffic, not limited to peak hours.
 - This is absolutely an extended peak hour segment from 3pm to 8:30pm.
- Consider adding the following corridors to the Regional Network:
 - Rt 100, 8 & 221, 685, and 219 West VA Connection

RELIABILITY:

Limited Access Facilities (Unreliable Delay [UD] measure)

- Nothing is showing on this analysis - maybe the 1.5 threshold is too high
- Could also consider using a different measure since we have a small amount of people in the area.
- The lack of redundant routes exacerbates the issues in our area
- There is at least one 4- to 5-mile back up every week
- Check the incident data - the time required to clear accidents is significant

Non-Limited Access (Buffer Time Index [BTI] measure)

- **Red Dot #6:** Rt 100 in Giles should be showing up
- **Red Dot #7:** US 11 and Rt 114 in Fairlawn should be showing up.
- From Prices Fork to Route 11, there is a lot of traffic here.
- **Red Dot #8:** Rt 42, north of 460 should be showing up.
- Split the weekday and the weekend analyses, it could help reveal more useful information.
- Why is US 460 not showing us?
- The orange-colored segment on 460 Business is where the signals are very close together.

Amtrak (Passenger rail station delay measure)

- We are ready to pay for Amtrak when they would like to come down to NRV
- The Roanoke station underserves our area and we need one for ourselves.
- The lack of delay (green dot on the measure map) in Roanoke is because the northeast regional train starts in Roanoke at 6 a.m.

ACCESSIBILITY:

Transit-deficit access to activity centers measure

- The transit deficit around the university area is low, and that seems weird
- This measure is very confusing and hard to understand. I would not be disappointed if this measure went away.
- Other factors that may affect transit mode choice include parking availability, and availability and convenience of stops to destinations.

Disadvantaged populations beyond ¼ miles access to transit measure

- **Red Dot #9:** Transit need area - includes an older population and some new housing.
- Information about the two locations that light up on this measure map:
 - Near 460 in Blacksburg - Maple ridge and student housing
 - Near Dublin and Route 100/11 - a lot of apartments close by
- We typically try to get our analysis on a smaller area. We have created service districts to make assumptions.
- It would make sense to put in a transit route between the community college and the mall.
- The 80% threshold is better than the 90% threshold for this region.
- Maybe some underserved areas should include better transit
- If we took a second analysis of population and employment, it would be interesting to see the results.

SAFETY:

Vehicle crashes measure (to inform the PSI analysis)

- **Red Dot #10:** Route 8 between Reiner and Floyd County Line
- **Red Dot #11:** Alum Springs, we had 6 fatalities in a six-month period
- Look at all of the interchanges on I-81 on the acceleration and deceleration lanes.
- **Red Dot #12:** Exit 94 on I-81
- **Red Dot #13:** Pembroke area because the speed is at 45 and the road is not divided there.
- **Red Dot #14:** The bluffs where the S curves are
- **Red Dot #15:** The entire segment of 100. The Wabash area to the county line.
- We had several fatalities on Route 100 and applied for a SMART SCALE project, but since the PSI data only went up to 2012, we did not score highly enough.
 - The new data will be through 2018.
- I am familiar with the PSI but am not a fan. I believe we should only look at actual crashes and fatalities.
- The measure map shows 3 dots near the Plum Creek area, and that seems high - do these dots each represent a single fatality?
- I would wonder if we could use conditional data to overlay with the crashes, like alcohol use and/or weather conditions.

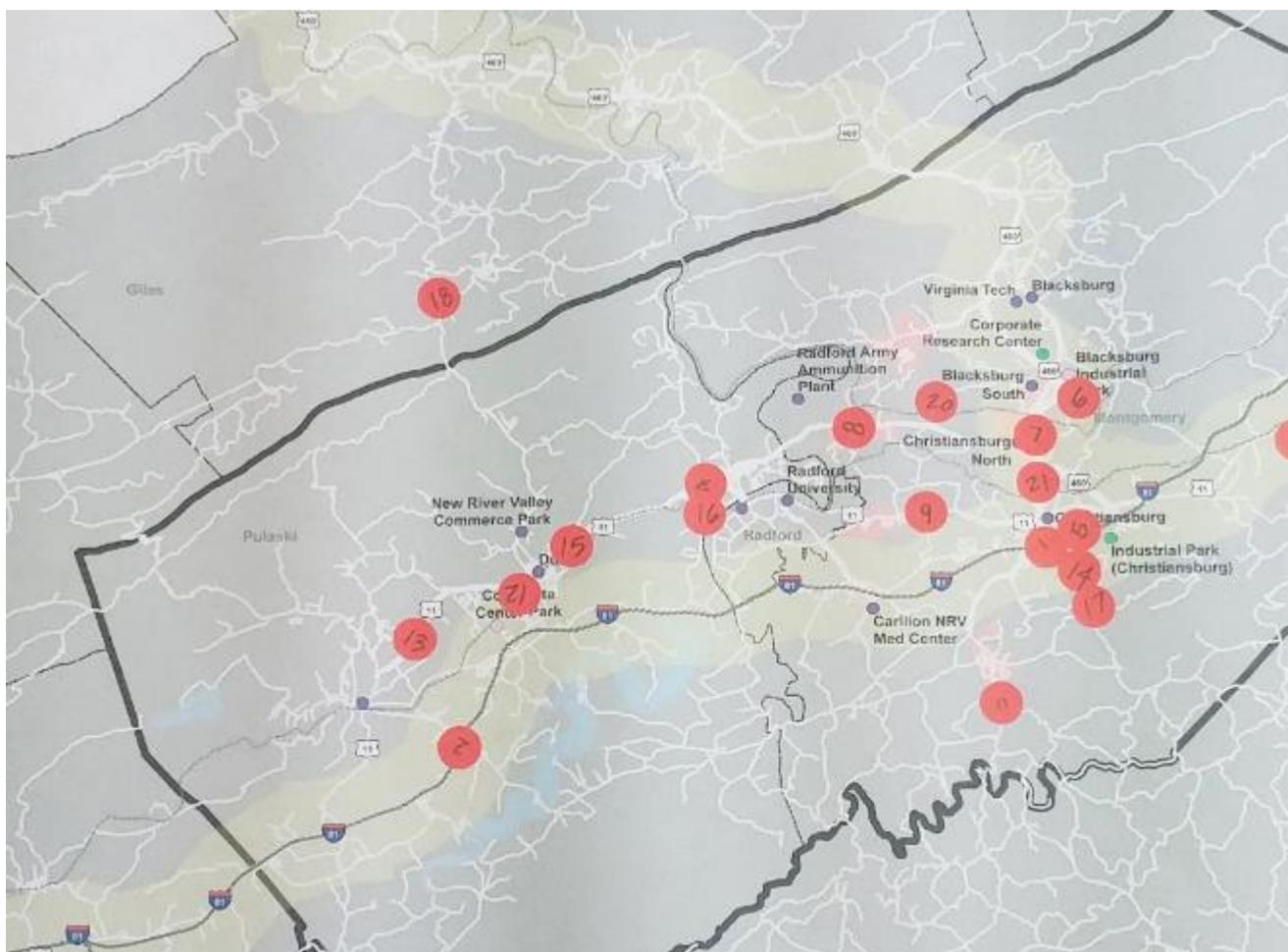
INDUSTRIAL SITES:

VEDP List of Business Ready Sites

- I would put in into VTrans but not base it off the readiness. Site development is chicken and egg, a cash-based proposition. The size of the facility is a big factor. You can go from tier 1 to 5 very quickly.
- On the bigger tier projects, the road that connects it to the highway is very important.
- Route 100 to the interstate could use improvement for these larger tier projects.
- The needs within each tier are going to be important.

GROUP 2 COMMENTS

Breakout Group 2 Marked Up Map



CONGESTION:

Limited Access Facilities (Percent of person hours traveled in excessively congested conditions [PECC] measure)

- **Red Dot #1:** Is there any way to define congestion around interstate entrance/ exit ramps? Exit 114 has concerns of safety backing up close to if not on the interstate.

- **Red Dot #2:** The yellow segment around Pulaski is exit 94, route 99. This is a funky exit where acceleration and deceleration lanes are the same.
- **Red Dot #3:** I-81 exit 118-143 is a big mess - surprised it's not showing up
- The lowest threshold measure maps indicate virtually no congestion on I-81; the highest 90% threshold (map 1c in the packet) highlights some locations around Radford.
 - The segments of red appear to be in the wrong lanes, however - both are on downhill grades [which shouldn't correlate with traffic slowdowns].
 - Might reflect construction of the bridge (reduced speed limit near Montgomery/ Pulaski county lines)
- I-81 exits 118-128 are all through mountainous terrain
- Working on how to establish a detour for major incidents on I-81; US 11 is not able to hold the number of trucks that would have to use it.
- Note that we also have more buses than ever going between Blacksburg and Roanoke, and Blacksburg and DC [e.g., more large vehicles in addition to trucks].
- The regional commission did a freight study recently [make sure to review this]
- Is there a way to track trucks specifically?
 - Some of this data is pulled from fleet vehicles, but there is no freight-specific measure
- Number of trucks has been really high
 - Who pays for construction improvements? Localities versus those who use it most?
- Are there ways to look at rest stops, park and ride locations?

Non-Limited Access (Travel Time Index [TTI] measure)

- **Red Dot #4:** Should be seeing some issues around Fairlawn at the intersection of Rt 114 and Rt 11.
- **Red Dot #5:** Exit 114 - Route 8 and interstate is pretty bad; the traffic light has helped.
- **Red Dot #6:** Pepper's ferry Rd is a congested area
- **Red Dot #7:** Route 114 is a large freight traffic area. UDA, heavy freight
- **Red Dot #8:** Rt. 114/685 at Radford arsenal plant has congestion issues at peak hours, which could exacerbate problems in emergency situations.
 - It's also a growing residential area, with an elementary school nearby.
- The increased TTI in Giles County and the area west of US 460 are not a big issue; the cause is terrain and the two-lane roadway design. are not issues for anyone, it's just terrain and two lane
- Should be seeing some issues on Rt 52 in south Carroll County?
- In general, people may expect some congestion en route to Roanoke, but not as much locally.
 - Rush hour is 15/30 minutes
 - Commute from Floyd has doubled.
- US 460 business around the mall has a new project, creating some minor congestion.
- Christiansburg area has added about 2500 housing units
- Public perception in SW VA where VDOT funding, revenue sharing, and SMART SCALE almost makes us feel like we can't get enough funding and we're being left behind. Almost like the state wants us to become like NOVA where we have exceeded our road capacities.

RELIABILITY:

Limited Access Facilities (Unreliable Delay [UD] measure)

- Since UD is an all-day, annual measure, it doesn't capture/ washes out effects from incidents that might occur once a week/month
- Issue with using vendor-purchased cellphone traffic data to track this measure - signals drop in mountainous terrain, could this create gaps in the data?

Non-Limited Access Facilities (Buffer Time Index [BTI] measure)

- **Red Dot #9:** High BTI (green color) on Rt 11 in Radford around Plumcreek doesn't make sense - there is a flooding issue there.
- **Red Dot #10:** BTI on Rt 11 in Shawsville doesn't make sense.
- **Red Dot #11:** There should be BTI showing on Rt 8 coming into Montgomery from Floyd
- **Red Dot #12:** The intersection of Rt 100 and Alexander Rd is getting busier.
- **Red Dot #13:** Intersection of Rt 11 and Patcher road has a new housing development and new middle school.
- High BTI (green color) on Route 42 around Giles may reflect Mountain Valley pipeline construction in 2018

SAFETY:

Vehicle crashes

- **Red Dot #14:** Issues on Rt 8
- **Red Dot #15:** Issue at intersection of Rt 11 and nd Ruebush Rd
- **Red Dot #16:** Issue at intersection of Rt. 11 and 114
 - Issues as Rt. 114 (Sheetz gas station)
- **Red Dot #17:** Big SMART SCALE project has been a connector road between north Franklin and Peppers Ferry
- **Red Dot #18:** Rt 100 in Giles county is a 2 lane segment about 4 miles long in between 4 lane section
- **Red Dot #19:** Issue on Rt 460 WB between Narrows and Rich Creek is related to topography around Hugs Mountain.
- The one fatality in downtown Floyd is a pedestrian fatality
- Safety issues below 81 in Christiansburg (south Franklin) makes sense - lot of commuter traffic
- Some way to integrate fatalities/injuries as a bonus point in PSI

ACCESSIBILITY:

Transit Deficit Accessibility to Knowledge Based and Local Serving Activity Centers measure

- Why is a freight dependent activity center different?
 - Excluded based on survey
- Shouldn't the activity centers with no transit access be the largest deficit?
 - Dependent on access
- Did you calculate/incorporate top ten employers in this?
 - Volvo is not listed, and they are a major employer
 - New River Community College, two campuses, not listed

- What year are these routes coming from? Seem to be at least two years old
 - May need to look at updating routes
- Frequency of routes is important, but not shown.
- UDAs are also not listed as activity centers
 - Should somehow be applied to UDAs and ACs

Transit access for disadvantaged populations measure

- **Red Dot #20:** The area off of Merrimack Road has a high concentration of low income that has no transit service
- How was viability determined?
 - Based on density (population)
- Looks like non-viable groups touch a lot of fixed route service, are we looking at right measure?
 - Based on bus stop as opposed to the route
- Does this take into account existing demand response?
 - Demand response generally serve in coordination with fixed route service [in urban areas]
- Is there an index between the three metrics?
 - Slide with methodology
- Are we categorizing disadvantaged populations accurately?
 - Consider English level proficiency as a disadvantage?
- Looking at English proficiency, at least for Floyd, those statistics don't measure up, but the income and disability metrics do look right.
- Have you considered zero car households?
- What about students? They often fall through the cracks with regard to income statistics [they can inflate the apparent presence of poverty because their incomes are low but they have access to family's resources, so they're not necessarily as poor as they look]
- Radford to Christiansburg has fixed routes come through but no stops

PASSENGER RAIL

- **Red Dot #21:** Christiansburg has the intent and a station site has been selected, for Amtrak station
- Note that Amtrak site has route from Blacksburg to D.C. but includes a bus route to Roanoke
- The Amtrak train (NE Regional) starts in Roanoke so it's always on time
- Virginia Breeze has been successful intercity bus
- Greyhound stops in max meadows
- A multimodal center will open at Virginia Tech next May

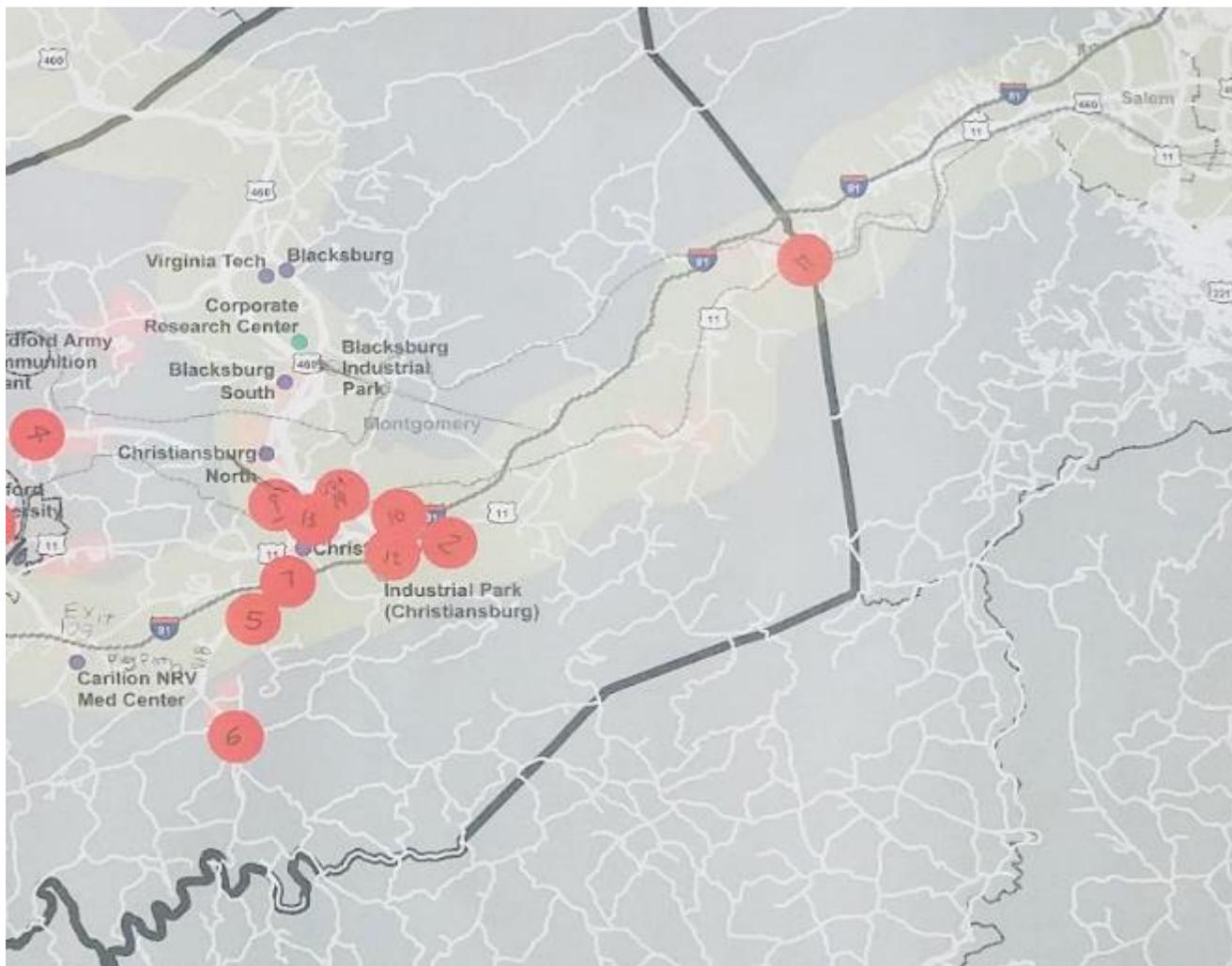
EDA/UDAs:

- Becomes chicken and egg thing.
 - Grant funding based on transportation network.
 - Without knowing what's going in there, you won't have permits in place yet
 - Not realistic because by the time you get the funding, permits won't have been gathered.
- Make sure that assets statewide are reflected properly in VEDP data.
 - Majority of sites have not been tiered

- Tier 3 is probably best for a threshold - If zoning is in place, could help extend infrastructure
- Adding the VEDP sites to the needs assessment is a helpful way to identify strategic transportation investments.

GROUP 3 COMMENTS

Breakout Group 3 Marked Up Map



CONGESTION

- **RED DOT 1:** Construction is taking place, and there is congestion because of that
- **RED DOTS 2 and 3:** Heavy truck traffic, has to do with the geography because it has rolling hills so trucks have to slow down and it causes hang up all throughout that corridor
 - Northbound is worse
 - There are always wrecks
 - Route 11 all the up 81 to Harrisonburg (from dot 2 to 3 is the worst area)
 - Has been talked about in Christiansburg to do reversible lane strategies
 - Radford is trying to keep people on Rock road instead of going all the way through the city as people have historically done with diversion traffic from 81

- Tractor trailers cause branch roads to be shut down because they are not viable options for tractor trailers - trucks are too big for the size of the road
 - Would posting signs on those roads help? They are rerouting themselves
- Don't agree with the 90% threshold - too low
 - Might be applicable to southbound, but northbound tends to have more congestion between Radford and Roanoke
 - Heavy haul traffic, but not always more vehicles in general
- Mostly due to accidents

RELIABILITY

- **RED DOT 4:** non divided highway - people drive 65 and there are driveways off the road. It has one stop light and people are going from Radford and Blacksburg. It is right by the Arsenal, which employs about 1500 people in the area.
 - Radford Army Ammunition Plant
- **RED DOT 5:** employment is all from outside of the county.
 - There is only one route from south to Christiansburg, Blacksburg, and Radford, and it is also the route that school buses use so it causes unreliability
- **RED DOT 6:** Meadowcreek Road is nicknamed the Pig Path because it is winding and geometrically cannot handle the tractor trailers that are trying to drive on it. Police officers direct traffic
- **RED DOT 7:** they put in a stop light there temporarily while construction is going on 114 and it has cleared up the congestion on the off ramp - both off ramps are short so in peak periods, the back up could be on the shoulder of 81.
 - Unintended (safety) benefit - both northbound and southbound directions would benefit from keeping the light.
- Needs to take into account more than just commuting hours because more accidents probably happen outside of those hours
- 114 should be shown - huge reliability issue
- The areas that are shown are accurate for issues that people experience
- 138 and 126 has had infrastructure change to help the congestion
- 460 bypass - there used to be a traffic signal there, but VDOT removed it and the traffic has stopped.

ACCESSIBILITY

Access to Activity Centers

- **RED DOT 8:** New River Community College
- **RED DOT 9:** Scattered Good Industrial Park
- **RED DOT 10:** Christiansburg Industrial Park
- **RED DOT 11:** Radford Industrial Center

Disadvantaged Population Transit Access

- **RED DOT 12:** Park and Ride in Christiansburg at exit 118 - Access to Smart Way Bus, Virginia Breeze - stops at all major universities on 81

- **RED DOT 13:** Rail transit is slated to be in Christiansburg and is located near a bus route between Radford and Blacksburg (which would need some modifications to serve the proposed station).
- Gaps in connectivity to the Virginia Breeze to Radford, but overall it works well
- Radford transit and Blacksburg have been working together to make the connection more seamless
- The number of vehicular accidents since working on this transit project on 114 has decreased so far
 - a) Would reduce the amount of traffic on 81 for people coming back and forth for events and other university activities from outside areas.

SAFETY

- Route 8 is hazardous - blind curves
- Pilot Mountain Road (615) - hot spot for accidents
- 114 - need to widen the road, is very narrow
- Route 11 between Radford and Pulaski
- Rock Road intersection causes a lot of accidents because people misread the traffic lights and signs

ECONOMIC DEVELOPMENT

- **RED DOT 14:** Missing a UDA in Christiansburg
- **RED DOT 15:** pepper's ferry connector - current and Tyler to east main connector is in the works
- **RED DOT 16:** NRV Airport - international port of entry
- Radford will be adding a UDA to comp plan (2017) Tyler to east main connector
- Add in a bypass/parkway to get traffic moving on 114
- Grede site - change to tier 3 business ready
- VCI site - not a desirable site

AMTRAK

- **RED DOT 17:** NRV 2020 - connector
- A lot of people don't travel because they don't want to drive on the interstate - if they had the opportunity to go somewhere without taking the risk of danger then they would take it
- Desire Amtrak extension to this region
- Connection between 460 and 81 - SMART Road Connection
- Biggest constraint in the area is the limited in viable workforce