



VTRANS

VIRGINIA'S
TRANSPORTATION PLAN

Mid Term Needs
Assessment Regional
Workshop Summary
Roanoke Valley Area
Tuesday July 30, 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

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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 Roanoke 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 Roanoke College in Salem, 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		
Anita McMillan	Town of Vinton	Planning and Zoning Director
Cristina Finch	Roanoke Valley-Alleghany Regional Commission/RVTPO	Director of Transportation
Bill Bestpitch	Roanoke Valley-Alleghany Regional Commission	Commissioner
Cody Sexton	Botetourt County	Assistant to the County Administrator
Dorian Allen	Roanoke Valley-Alleghany Regional Commission/RVTPO	Transportation Planner
Ian Shaw	City of Roanoke	Planning Administrator
Jeremy Holmes	RIDE Solutions	Director
Kevin Price	Valley Metro	General Manager
Mariel Fowler	Bedford County	Transportation Planner

Mark Jamison	City of Roanoke	Transportation Division Manager
Nicole Pendleton	Botetourt County	Director of Community Development
Rachel Ruhlen	Roanoke Valley-Alleghany Regional Commission/RVTPO	Transportation Planner
Ronnie Parker	Valley Metro	Assistant General Manager
Tim Pohlada-Thomas	RIDE Solutions	Outreach and Communications Specialist
Mary Ellen Wines	City of Salem	Zoning Administrator
Nathan McClung	Town of Vinton	Principal Planner
Liz Belcher	Roanoke Valley Greenway Commission	Greenway Coordinator
David Holladay	Roanoke County	Planning Administrator
Additional Regional and Local Representatives Invited but Unable to Attend		
Benjamin Tripp	Salem	City Planner
Dan Collins	Craig County	County Administrator
Nathan T. Sanford	RADAR Transit	Executive Director
Jonathan Lanford	Alleghany County	
Allen Dressler	City of Covington	
Lisa Cooper	Franklin County	
Steve Sandy	Franklin County	
Diana Lewis	Roanoke - Blacksburg Regional Airport	
Bart Warner	Town of Bedford	
B.T. Fitzpatrick	Town of Boones Mill	
Harry Gleason	Town of Buchanan	

Jason Tyree	Town of Buchanan	
Darlene Burcham	Town of Clifton Forge	
David Tickner	Town of Fincastle	
John (Bucky) Johnson	Town of New Castle	
Nina Davis	Town of New Castle	
Brian Schofield	Town of Rocky Mount	
James Ervin	Town of Rocky Mount	
David Horton	Town of Troutville	
State Agency Staff		
Carol Linkenhoker	VDOT Salem District Planning	Planning Specialist
Michael Gray	VDOT Salem District	Planning Manager
Rusty Harrington	Virginia Department of Aviation	Manager, Planning and Environmental Section
Ray Varney	VDOT	Resident Engineer
Patrice Strachan	DRPT	Transit
Emily Stock	DRPT	Rail
Jitender Ramchandani	OIPI	Transportation Planning Program Manager
Chris Wichman	OIPI	Transportation Planner
Katie Schwing	OIPI	Transportation Planner
Ronique Day	OIPI	Deputy Director
Consultant Facilitators and Scribes		
Hannah Twaddell	VTrans Consultant team	Facilitator
Vlad Gavrilovic	VTrans Consultant team	Facilitator
Philip White	VTrans Consultant team	Scribe
Marissa Sperry	VTrans 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 data developed for the region. Detailed descriptions of each measure and analysis method are included in the plenary presentation slides posted to the VTrans website.

4 SYNTHESIS OF COMMENTS

The following section provides a summary of comments about each performance measure, compiled from the plenary session, breakout groups, and comment sheets. 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	The variation between weekend and weekdays is a little surprising.
2	Trucks slowing down as they climb mountains 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. Perhaps the variation between weekday and weekend PECC percentage is related to this.
3	Many traffic slowdowns are caused by accidents
4	Would be useful to contextualize data with # of lanes on interstates
5	High truck traffic creates slowdowns that aren't being captured - consider adding measure of truck volumes
6	The measures/thresholds don't capture the level of important congestion in the region
7	Weekday average not as important as brief periods of severe congestion
8	The thresholds don't capture this region's pattern of intermittent but severe delays
9	Recommend Peak Hour as more appropriate measure of congestion rather than All Day - Peak hour is when local commuter traffic mixes with the interregional and interstate traffic to create real problems on I-81.. may be diluted with all day measures
10	Recommend looking at measures for in-school months rather than all year - seasonal variations - Colleges in area are a high proportion of population - college age population --- two months of no school in session dilutes in the all-year measures
11	PECC Threshold could take into account the expense involved in making a "dent," priorities other than congestion
12	It is not measuring the peak hours AM, PM, weekend traffic for recreational activities.
13	Yes and no; regional citizens are not used to congestion, so they have a heightened awareness of it
14	Data doesn't reflect non-recurring issues
15	Metric doesn't seem to accurately capture peak demand and issues with truck traffic causing slow down and from speeding to make up delay (road rage/safety issue)
16	Look at segments rather than whole network, at peak times.
17	Aiming for 75% threshold seems to be reasonable. 60% seems too restrictive

	Comment
18	If threshold is lowered, more populous regions light up even more. Consider different thresholds for different parts of state
Congestion: Travel Time Index (TTI)	
19	Looking at VMT alone does not take into account the nature of the traffic. Reliability on a road that serves a hospital may be more critical than reliability on a rural residential road, even if they have similar VMT.
20	Again, TTI doesn't reflect non-recurring congestion
21	Take into account the truck/freight traffic on the roads and their impact on the road speeds. We have a psychology issue with the perception of congestion. Our citizens are not accustomed to regular congestion, so they have a heightened response to it.
22	Travel distance matters - level of impact can be high from one particular incident on interstate (even with relatively low traffic compared to urban areas)
23	Reliability (especially I-81 and 220 S) affects our economic competitiveness, particularly in that freight schedules can affect availability of products, and employee need to arrive at work on time. Our businesses and citizens need to know that they can get people and freight to destinations reliably on time. I81 is not regularly backed up, but when it does, it is a major problem
24	Our region's reliability is relative and non-recurring; [sometimes] only a short time as one gets behind a slow moving truck. These instances aren't captured in data
25	Our low population volumes may affect the data.
26	[Perception that] every day it is unreliable
27	This is not a good measure - relatively short duration of congestion is hard to capture with this data
28	No matter the threshold, the measure will depress our scores in relation to NoVa & HR
Reliability: Buffer Time Index (BTI)	
29	This measure does [seem more consistent with] our experience. In some ways, people are adjusting their daily trips in order to account for the rush of an accident
30	The measure does not capture our intermittent unreliability issues. We are unpredictably unreliable. Our needs may function well most days, but when an incident occurs, reliability greatly deteriorates
Passenger Rail: Amtrak Station On-Time Performance	
31	Appreciate that the on-time performance of our service is good. It is important because being on time is of significant importance to business travelers.

	Comment
32	[More broadly, the problem of] limited passenger rail access affects our region's economic competitiveness: access to workforce, access to buyers; an additional mode choice for inter-regional travel.
Accessibility: Transit Access Deficit to Activity Centers	
33	Consider ways to account for emerging modes such as scooters and e-bikes
34	Measure is confusing as to being able to tell whether transit access is good or highway access is bad & vice versa
35	Accessibility to Activity Centers is important because getting from urban area to suburban industrial parks (jobs) is an issue for those without cars (equity issue for those without vehicular access or who can't drive). Affordable housing tends to be in urban core, not near employment centers (industrial parks). Additionally, transit helps to attract prospective employers
36	A number of our actively developing areas do not currently [qualify for consideration in] VTrans. Economic development only becomes viable with sufficient transportation infrastructure. We need to capture future development potential as opposed to reacting to development that has already occurred. (e.g., Botetourt County is moving government offices to the Botetourt Center at Greenfield in Daleville, VA)
37	This measure is not useful because transit operating funds don't come through SmartScale. The bulk of costs are for operating the system, which challenges our ability to expand the system. So identifying need doesn't translate to funding.
Travel Options: Disadvantaged Population Beyond ¼ Mile Access to Fixed Route Transit	
38	Consider graying out areas on the map that have transit service so the maps reveal potential need more clearly. There may be a lot of opportunity for fixed route commuter services.
39	Question - there should be fewer colored areas on the 80% than on the 90% threshold but the map shows the opposite - is this because these are percentiles, not percentages? Wordsmith the measure description to be more intuitive
40	Transit needs for workers/jobs important too - Example - Call center medical facilities
41	We have a large population of impoverished and elderly citizens. Low-income residents tend to be in the city while the "blue collar" (well-paying jobs) tend to be in the industrial parks with no or limited transit access. The existing bus service has limited hours of service/doesn't run on Sundays.
42	This measure is important because our transit system in the region is lacking and needs assistance because of unmet demand.
43	Prefer 80% threshold.

	Comment
44	It is hard to tie operational needs to the availability of funding sources for transit operations [see similar comments under Access to Activity Centers]
45	Populations in the rural areas (such as Northern Botetourt) are aging.
Safety: Vehicle Crashes	
46	Safety data needs to be shown in some context: compared to state, per capita, etc
47	Need to consider severity of crashes in PSI - Should fatalities be weighted more heavily?
48	Perception of safety is important; it can cause people to take less direct routes, such as elderly residents who avoid I-81
49	Crash rates hard to compare equally by region - This area scored poorly on HSIP - data should be made relative for each region (e.g., identify top 3% of crashes within each region)
50	Consider adding non-motorized crashes in PSI - Underreporting of data an issue
51	Need to account for school & other seasonal congestion - reduced numbers of high school/ college age drivers depresses congestion numbers in the summer months
52	Consider severe injury as similar to fatality; impact on quality of life
53	Look at crash rates as well as numbers
54	Cross reference facility types to data - the injuries (total) seems to be holding steady while total crashes going up - does this consistency relate to certain facilities?
55	Identify types of injuries, cross referenced to facility types
56	What are the sources of accident reports?
57	Factor in challenges in rural areas such as higher fatalities, wildlife crossings; versus urban areas, where there are lots of different risks in the same place
58	Identify causes and related information about crashes, e.g., distracted driving; behavioral issues; effects of DMV campaigns for Distraction, seatbelt, "standard practice;" impacts of enforcement?
59	Discuss potential impacts of automated vehicle technologies
60	Major areas of concern: Interstate 81 feels unsafe with truck traffic and truck/auto interaction. 20-south of Roanoke, north of Fincastle.
61	I think folks have a heightened awareness of the accidents that occur, and people are changing their travel choices because of it [e.g. emphasis in news coverage affecting behavior]

	Comment
62	Normalize the crash data by region. Detour #/miles traveled for example
63	Use comparison to other regions as an average value
64	Identifying the top 100 [PSI locations} as done in the last VTrans is pretty good, based on data
65	The measure reflects our experience, although our level of acceptable safety problems may be lower. Our threshold of acceptability would generally be smaller than other areas because of people’s reactions to the crashes
66	The measure doesn’t consider severity of crashes
67	Consider more detailed crash rate data to enable better comparisons for functional classes in less “urban”/less populous/densely developed areas of the state
68	There needs to be some sort of comparative model between human injury and property damage accidents. For example, is \$1M of property damage comparable to a fatality?
69	Look at the state safety study for VisionZero

Economic Development: Urban Development Areas and VEDP Business Ready Sites

70	Level 3 is a good threshold for including a business ready site in VTrans. That’s where the government is showing some investment. Big gap between Tier 4 and Tier 5 - Tier 5 usually means you have a business moving in already. Tier 5 is too high bar for most small communities; Many of the qualities of Tier 5 sites only occur once a project has already chosen a site for development. Recommend something lower than Tier 5 for threshold.
71	The VEDP site criteria favor more greenfield sites (e.g., require 100 contiguous acres of developable land). In Vinton, issue is Brownfield redevelopment, we have shovel-ready sites that don’t meet VEDP criteria for greenfield development. Brownfield redevelopment is not readily captured as a need.
72	VEDP business-ready site program preference for greenfield development has the potential to promote sprawl. Incentivizes long-distance commuters, not thinking about where workers will come from or if they have transportation; creating tradeoffs between cheap land and public investment needs.
73	Vet the idea of adding these sites a little more with the regional stakeholders; provide more info about the program.
74	It is important to add business-ready sites because a number of our actively developing areas do not currently meet a need in VTrans. Economic development only becomes viable with sufficient transportation infrastructure

	Comment
75	It is important to consider business ready sites because we need to capture future development potential as opposed to reacting to development that has already occurred
76	A preference for greenfield development has the potential to promote sprawl. Brownfield redevelopment is not readily captured as a need.

5 APPENDIX: COMMENTS FROM PLENARY PRESENTATION, BREAKOUTS, AND WORKSHOP HANDOUTS

i. COMMENTS DURING PLENARY PRESENTATION

The following section summarizes questions and comments about the topics covered during the plenary presentation by Jitender Ramchandani. Questions from participants are shown in italics, followed by brief responses from the plenary speaker.

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.

VTRANS NEEDS ASSESSMENT PROCESS

- *Is there a deadline for providing input about measures or needs?* Nothing is final until the Commonwealth Transportation Board takes action on the needs, anticipated in December 2019.
- *Does the seven-year needs timeline coincide with the SMART SCALE project development timeline?* The needs assessment does not focus on specific projects, so it is best not to think in terms of when projects would be built. Instead, focus on identifying problems that need to be addressed within the coming 7-10 years.

CONGESTION MEASURES

Percent Person Miles Traveled in Excessively Congested Conditions (PECC)

- The variation in congestion levels between weekend and weekdays is a little surprising [weekend is higher than expected, despite drop in commuter traffic.] Trucks slowing down as they climb mountains 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. Perhaps the variation between weekday and weekend PECC percentage is related to this.
- Show-of-hands for opinion about which PECC threshold would be considered a true problem in this region:
 - No hands raised for the 90% value (i.e. 62 mph in a 70 mph zone); almost all raised for the 75% value (i.e. 52 mph); all raised for 60% value (i.e. 42 mph).
- Many traffic slowdowns are caused by accidents
- *Have you made a decision on how to define the needs for congestion?* We have not; that's part of the purpose of the discussion.

Travel Time Index (TTI)

- *There is a big difference between a delay of 5 or 10 minutes versus 15 or 30 minutes - why are they classified within the same TTI category?* That is something we are exploring. You will see that maps of this region only show a few problem areas with the TTI minimum set to 1.5.
- Request for opinions on whether the TTI threshold or findings should be adjusted to reflect differences in the numbers of vehicles or vehicle miles traveled (VMT) on given corridors:
 - Looking at VMT alone does not take into account the nature of the traffic. Reliability on a road that serves a hospital may be more critical than reliability on a rural residential road, even if they have similar VMT.

ACCESSIBILITY TO ACTIVITY CENTERS

Potential measures for nonmotorized accessibility analyses (not mapped yet)

- Request for opinions on whether the potential measure was reasonable.
 - Consider ways to account for emerging modes such as scooters and e-bikes

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

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.

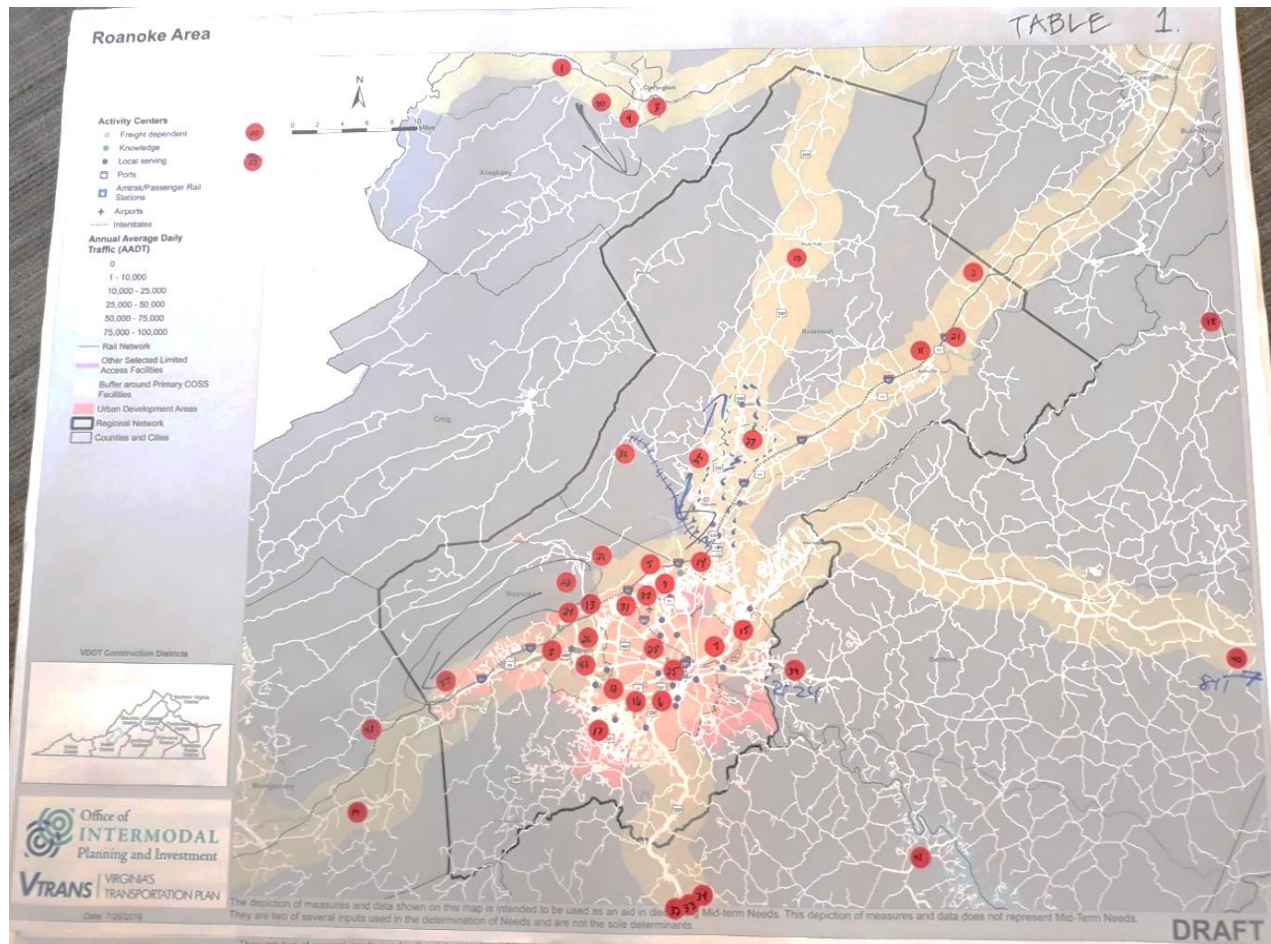


Facilitators and scribes assigned to each group recorded the input by writing notes on a flip chart and on a laptop. For comments with geographic specificity, facilitators and/ or group members placed numbered stick-on dots onto a poster-sized base map and noted the meaning of the numbered dot on the flip chart.

Participants were invited to jot down additional notes on the Comment Form 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. A summary of input from the written Comment Forms is included at the end of this section

GROUP 1 COMMENTS

Breakout Group 1 Marked Up Map



Congestion

- 1) PECC due to trucks slowing down in mountainous terrain such as north of Covington on I-64. Traffic low in this region. Generally don't see routine average slowdowns (except in one spot north of Lexington)
- 2) Would be useful to contextualize data with # of lanes on interstates
- 3) Westvaco entrance may contribute to congestion along 64 west area/Covington
- 4) Opportunity for shifting truck to rail freight? Talk to VEDP. DRPT is looking into this.
- 5) Could higher levels of weekend delay be attributable to the outdoor recreation economy?
- 6) Retail area traffic south of Roanoke
- 7) Commuter traffic Roanoke → Bedford County: Lots of residential growth, Opportunity for transit? Park and ride? Vanpools?
- 8) Traffic lights contribute to backups/ slowdowns.
- 9) Traffic lights cause problems here also.
- 10) Eagle Rock? Don't know why it's showing high TTI
- 11) Buchanan interchange congestion

- 12) Salem traffic lights/commuter traffic congestion
- 13) Intersection/interchange congestion- Some improvements being made but won't fix everything

Reliability

- 14) Generally, delays are reliable, but also this threshold might not pick up whatever Unreliable Delay is present.
- 15) Commuter traffic to Bedford
- 16) Brandon Avenue - [narrowing to] one lane each direction can cause delays
- 17) Brambleton Avenue - No alternative route for commuter traffic
- 18) Blue Ridge Parkway - winding, hilly roads [and scenic character with low posted speed limit] makes traffic intentionally slow
- 19) Shawsville - reliability issues may be caused by geometric factors with number of lanes + hilly terrain along 460. There are also impacts of traffic being diverted to these locations during incidents on I-81 -- could this be a candidate for a reversible lanes strategy in which the directional flow of one lane changes in response to diverted traffic during an incident on U-81?

General notes on Reliability: Generally, there is almost no difference among the UD maps. One potential reason for this is that there isn't much UD. But also this number is impacted by numbers of people - less traffic in this area causes these maps to look like this. Some places in this region have congestion some days, and other days there is none. Generally, this area has predictable delays. You know when the delays are going to take place. In some ways that might be better than unreliable. In some of these areas, it is higher just due to traffic volumes. Some of these roads only have one lane in each direction which increases the volume of the road. Some of the roads that have higher volumes, it is because those are basically the only ways to get out of the area.

Safety

- 20) Safety data needs to be shown in some context: compared to state, per capita, etc.
- 21) Exit 168 off I-81 consistent safety concern due to Curves - Trying all kinds of strategies in the "s-curves" area: flashing chevrons, gripping surfaces to make it less slippery.
- 22) See I-81 study for crash data and safety concerns along I-81
- 23) Safety trends: Note a 2018 spike in crashes after steady decline in 2013-17. Some of this could be due to economic growth. Most growth is rural/suburban; urban area is stable is declining. Growth in healthcare, research, university. Bedford & Montgomery are growing, not but rapidly.

General notes on Safety: From 2013 - 2017 crashes went down but spiked up in 2018. This could be linked with economy - when people have more money, they travel more, which increases the risk for crashes.

Passenger Rail On-Time Performance

- 24) Potential VA Breeze stop @ Park & Ride lot at Exit 140 - Roanoke currently has no service; Issue with eligibility for rural funding to support intercity transit.
- 25) N.E. regional Amtrak very popular; Desire for more frequency

Accessibility to Activity Centers

- 26) Transit from Salem to Roanoke is quite limited. There is also limited route coverage within Salem, and poor sidewalk access to transit within some neighborhoods
- 27) Greenfield Industrial Park in Botetourt has no transit access, just roadway access to/from I-81. There is also high school traffic along this corridor.
- 28) Transit within city is ok generally but limited frequency e.g. no Sunday service
- 29) Little to no transit outside city in Roanoke County or other counties; One activity center is at the industrial park on 81 and 581, but there is no transit to connect.
- 30) Need transit from Covington/Clifton Forge to urban area
- 31) I-81-581 interchange: new regional development site

Economic Development

- 32) Dogwood site is very active; [local staff will] check with VEDP about potential missing data to make sure it's classified properly. See also dot # 33, 34, and 37.
- 33) Dogwood site activity
- 34) Dogwood site activity
- 35) 220 all along segment from Fincastle/Daleville/to 81- lots of existing and new development including industry with potential for freight rail, and a school, and traffic congestion/ safety issues where the road transitions from rural 2 lane to busy 4 lane
- 36) Active freight line serves existing concrete plant, more industrial development in that area could increase the potential for freight rail markets
- 37) Summit view business park - Good Industrial Development Area to add to the VTrans needs assessment
- 38) ROA airport- runway capacity issue? Longer runway needed for larger jets?
 - a. Terrain, airspace constraints
 - b. Airport master plan is kicking off now
 - c. Key concern for economic competitiveness
 - d. Could the I-81 money support multi-modal investments?
 - e. People want more frequent passenger service, but that's really an issue for the air carriers, more than an infrastructure investment issues. Generally, service at small regional airports is declining.
- 39) Rt 24 - consider adding to Regional Network; has a lot of RN characteristics - Important connectors for commuters to access 460, 221, to & from residential, commercial, school

40) Rt 811 - Consider adding to Regional Network, similar characteristics to Rt 24

General consensus is that level 3 is a good threshold for including a business ready site in VTrans, that's where the government is showing some investment.

Travel Options for Disadvantaged Populations

41) Broader issue of need for rural transit at areas like Smith Mtn Lake that attract retirees

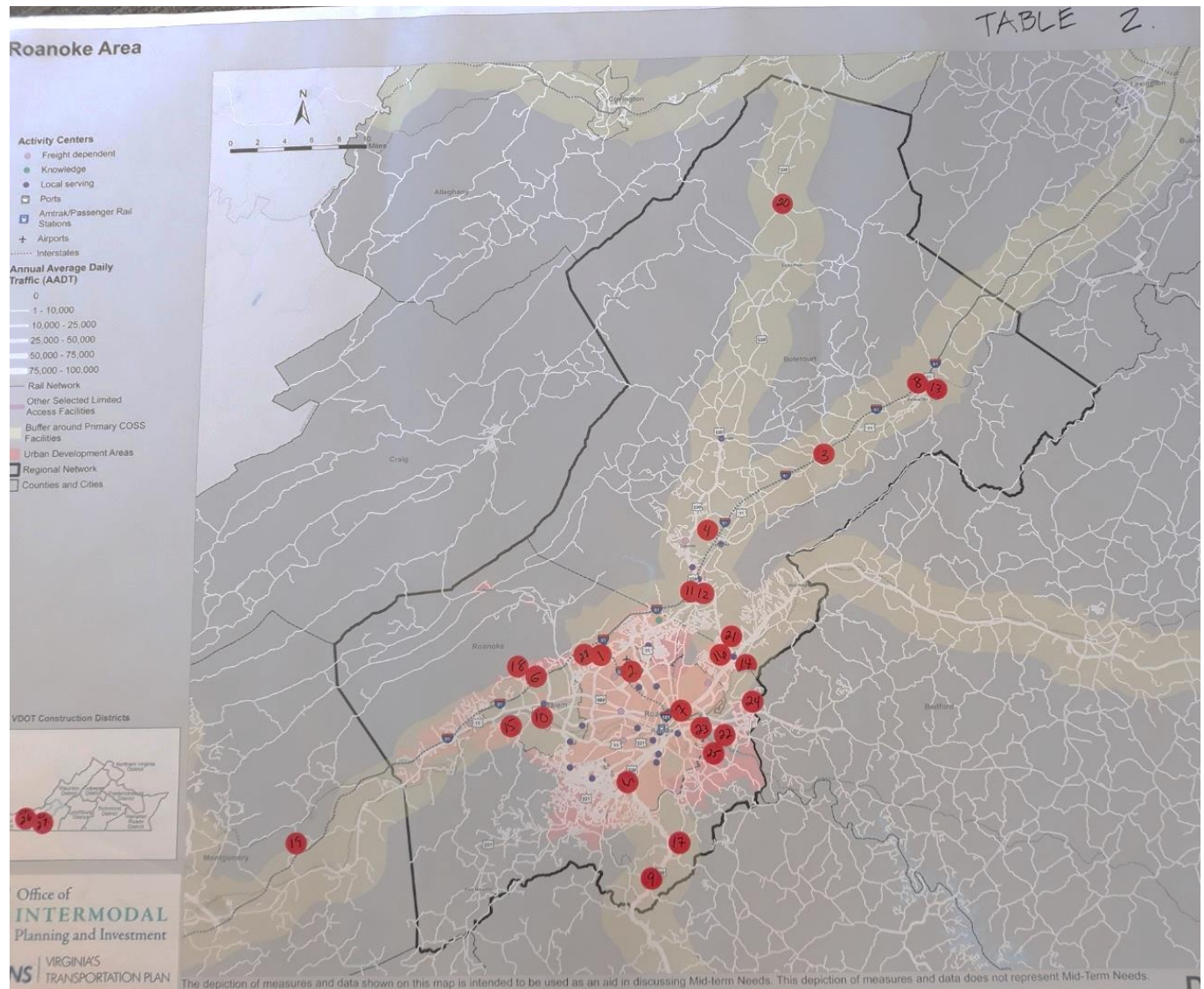
42) Opportunity for use of rail line connecting Salem to Roanoke?



General notes on Travel Options: Consider graying out areas that have service so the maps reveal potential need more clearly. There may be a lot of opportunity for fixed route commuter services.

GROUP 2 COMMENTS

Breakout Group 2 Marked Up Map



Congestion

- 1) Peters Creek Rd is relief corridor
- 2) In this region, a plus is short commutes (e.g. to the airport), a minus is incident congestion
 - a. Rt. 11 works as a parallel route to I-81 until you get to urban areas
- 3) I-81 congestion is key to economic competitiveness
 - a. Frustration factor is key
 - b. Lack of interconnectedness is factor for incidents- accidents, weather, terrain
 - c. Lack of route redundancy
- 4) Lack of E/W connections between 81 & 220, issue for Botetourt
- 5) 419 congestion
- 6) I-81 exits 137 & 132 - congestion hot spot

- 7) US 460 in Roanoke - congestion hot spot
- 8) I-81 without parallel U11 alternative - congestion hot spot
- 9) US 220 Boone's Mill - congestion hot spot
- 10) US 460 Salem - congestion hot spot
- 11) I-81 Exit 150 - congestion hot spot

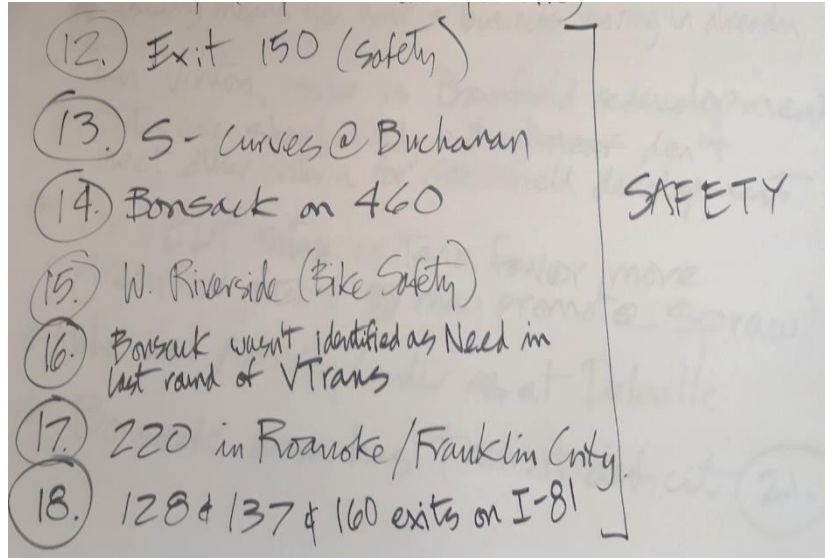
General notes on congestion issues

- High truck traffic creates slowdowns that aren't being captured - Consider adding measure of truck volumes
- Congestion has a bigger psychological factor in this area than in NoVa
- The measures/thresholds don't capture the level of important congestion in the region
- Weekday average not as important as brief periods of severe congestion
- Need crash rate data
- Lack of multi-lane facilities has great impact on delay due to incidents
- The thresholds don't capture this region's pattern of intermittent but severe delays - need a way to make our maps "light up" compared to areas like NoVa
- Interconnectedness needed not just for incidents
- Not much route choice
- Route Redundancy is critical
 - Real concerns along stretches of I-81 without 11 parallel as a viable alternative
 - Route 11 bottlenecks into Downtown Salem
 - Primary routes all come into Roanoke and come back out -- a bunch of spokes and a hub
- The link between congestion and economic competitiveness is Quality of Life
 - Short travel times to work is part of attraction for living here
 - "No congestion" is the expectation - any deviation from free flow becomes a big deal in a way it may not in other areas that are more used to congestion
 - Citizens here are not acclimated to congestion - more highly attuned to when congestion occurs -- we choose to live here partly because we want to avoid the congestion of a more urban region.
- Airport as a connector to bringing companies to area
- Trucks and climbing on I-81 --- do your measures capture Trucks?
 - Long lines of trucks - can vary by hour of day and day of week - Sunday seems to generate more trucks
- Do we know the relative volumes of commuters from New River Valley to Roanoke Valley and vice versa -- is it 1:1?
- 220 South toward Franklin County is a hotspot
- Recommend Peak Hour as more appropriate measure of congestion rather than All Day - Peak hour is when local commuter traffic mixes with the interregional and interstate traffic to create real problems on I-81.. may be diluted with all-day measures

- Recommend looking at measures for in-school months rather than all year - seasonal variations - Colleges in area are a high proportion of population - college age population --- two months of no school in session dilutes in the all-year measures

Safety:

- 12) I-81 Exit 150
- 13) curves at Buchanan
- 14) Bonsack on 460
- 15) West Riverside (bike safety)
- 16) Bonsack wasn't identified as need in last round of VTrans
- 17) 220 in Roanoke/Franklin County
- 18) I-81 Exits 128, 137, & 160
- 19) Ironto (US 220) to exit on 81
- 20) 220 north of Eagle Rock



- Look at statewide “Vision Zero” study
- Need to consider severity of crashes in PSI - Should fatalities be weighted more heavily?
- Perception of safety - some folks no longer use the most direct routes - example, elderly residents who no longer drive on I-81
- Crash rates hard to compare equally by region
 - This area scored poorly on HSIP
 - Crash rates - if used should be made relative for each region - identify the top 3% of crashes for a region
- Consider adding non-motorized crashes in PSI
 - Underreporting of data an issue
- Need to account for school & other seasonal congestion
 - High school population depresses congestion numbers in the summer months
- On safety: consider severe injury as similar to fatality (impact on Quality of Life)

Economic Development

- 21) Bonsack area commercial & industrial with no transit access
 - 22) Vinton MidTown UDA is important
 - 23) Vinton downtown UDA is important
- Big Gap between Tier 4 and Tier 5 of VEDP business ready site program - Tier 5 usually means you have a business moving in already
 - In Vinton, issue is Brownfield redevelopment - Sites are shovel-ready but don't meet other criteria for Greenfield development

- The VEDP site criteria favor more greenfield sites & may promote sprawl
- Note new activity center at Daleville

Transit Access For Disadvantaged Populations:

- 24) Area in Roanoke County just east of Vinton has large elderly population without transit access
- 25) Area at South end of Vinton has large elderly population without transit
- Question - there should be fewer colored areas on the 80% than on the 90% threshold but the map shows the opposite? Is this because these are percentiles, not percentages? Wordsmith the measure description to be more intuitive.
- Transit viability - it's not a realistic solution in all the areas
- Non-motorized access - sidewalk needs

On Time Rail Service:

- 26) VA Tech connections to Roanoke are increasing
 - a. Intercity connections are very important for regional economy - Roanoke and Blacksburg/Christiansburg are becoming increasingly joined at the hip economically
 - b. Growth in Health care sector in Radford
 - c. Smartway Bus - Roanoke to Blacksburg - example of success - will become more important as option when Virginia Tech medical center being constructed in Roanoke is opened.
- 27) Woodhaven Tech Park

In general, rail is important as a reliable alternate mode choice. On-time performance is key to attracting business and teleworkers attracted to our high quality of life - increasingly people have "portable jobs, live here and connect to DC for work. Inter-city buses can't provide reliability on I-81, using the same infrastructure as cars. Affordability is a consideration, but there is a willingness to pay more to get to DC on time. Connectivity of colleges and universities - Megabus Christiansburg to Washington DC.

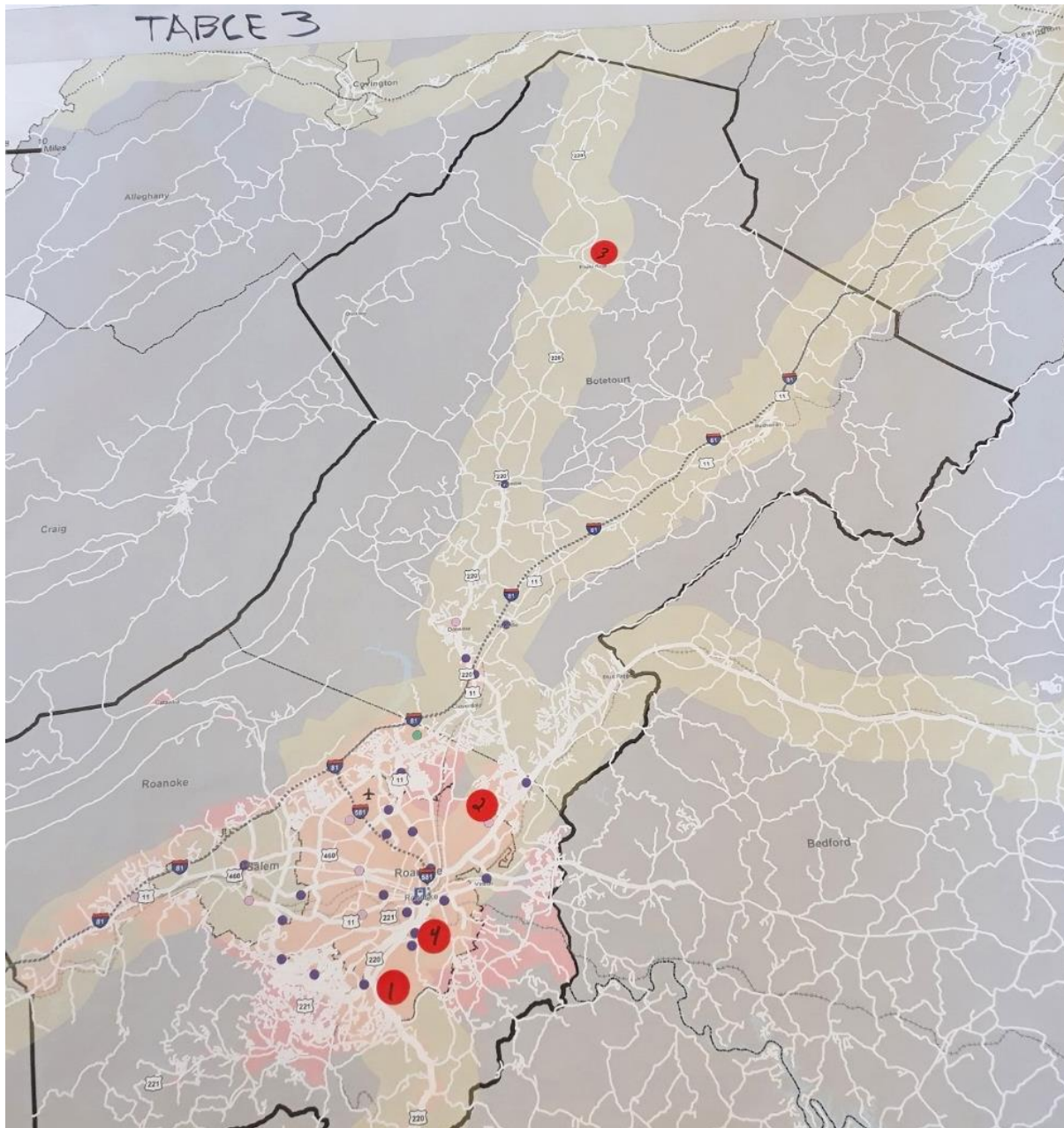
Rail freight issues are nationwide, not just in Virginia. If we want more freight rail on the Northeast Corridor, to pull significant truck traffic off of I-81 it has to be a multistate effort. Note the stalled plans for an intermodal facility that was formerly under consideration in the region. Most of the freight in this region is passing through, containing commodities or intermodal cargo (example coal on the Norfolk-Southern Heartland Corridor); the challenge in capturing economic value from long-distance freight traveling through the area.

Economic Development / VEDP Business Ready Sites

- Tier 5 is too high bar for most small communities - recommend something lower for threshold.

GROUP 3 COMMENTS

Breakout Group 3 Marked Up Map



Congestion (I-81)

- 1) 220 near Tanglewood hot spot
 - 2) 460 coming out of Roanoke hot spot
 - 3) 43 in Eagle Rock hot spot
- Data doesn't show whether the congestion is from incidents or commuters; opinion is that truck-related incidents [are the bigger factor]
 - Maybe reliability is a bigger issue than "normal" [recurring] congestion and safety

- Backups caused by trucks passing each other [e.g. taking up both lanes and/or crowding out passenger vehicles on I-81] makes for uncomfortable travel
- Operational issues are primary contributors to congestion, rather than roadway capacity
- When setting the threshold, consider the expense involved in “making a dent” in solving the problem, consider priorities other than congestion
- Overall congestion does not seem to be a big issue in this region
- PECC
 - Is congestion on 81 commuter-driven or incident-driven?
 - Not really used for commuting, unless diverted from local network by incident
 - Seems to be incident-driven
 - There is persistent non-recurring traffic on 81, it’s “predictably unpredictable”
 - Trucks passing trucks [e.g. taking up both lanes] might back up traffic - managing this situation might be a need
 - Congestion on 95 [in other regions] is more expected/reliable than congestion on 81 here.
 - Congestion on 81 feels less safe than on other interstates due to the mixture of needs that the roadway serves, i.e., high freight traffic volume plus high passenger traffic [in constant close proximity to each other]
 - Disaggregating freight and personal vehicles, or other vehicle types, when examining speed data might be useful [to discern issues more clearly], or using a weighted average based on volumes for each type [freight vs passenger]
- TTI - see locations of concern noted on map (dots # 1, 2, and 3)

Reliability:

- 4) US 220 reliability issues are related to commuting (green on measure map)
 - Elm Ave interchange reliability issues (red on measure map)
 - US 419 & 220 reliability issues (orange on measure map) - we have hit capacity, experiencing backups; Currently not a huge issue but don’t want it to get worse
 - In general reliability levels seem satisfactory for the area, but would like to prevent them from rising.
 - Lack of alternatives to 81 (parallel routes) presents problems for local networks when incidents occur
 - Level of impact can be high from a particular incident
 - What happens in other areas? How do we compare? Do other, worse interstates exhibit this, and if so, can this be quantified?
 - The lack of alternatives also present psychological effect of feeling trapped on 81 when congestion occurs Addressing this might be a need
 - Over-hyping by local media of congestion and crashes inflates the perception of congestions/transportation issues in the area - news creates an “anxiety factor”

- For info about nonrecurring delay- see I-81 study

Rail On-time Performance

- Roanoke station performance generally ok comparatively
- Demand for travel options
 - Rail - No train to Richmond & Hampton Roads
 - Virginia Breeze intercity bus - adding a stop in Roanoke (exit 140) would be great

Accessibility to Activity Centers:

- Measure is confusing, can't tell whether a high deficit means transit access is good and highway access is bad, or if it means the opposite
- Data doesn't make sense in areas where there is no transit, because they should have a product of infinity if "0" transit is the denominator
- Surprising that the transit deficit around Lewis Gale (Hospital) is the same as that of Hollins University, because there is available transit to Lewis Gale but not to Hollins. The Lewis Gale center should indicate a lower transit deficit (e.g. higher transit accessibility) because it has peak service.
- Surprising that transit deficit around Exit 150 toward Botetourt is high, while Botetourt center is low, because neither center has transit.
- Multimodal priorities vary by locality, hard to quantify
- [Growing need for transit in] new development around Roanoke County

Disadvantaged Population Access to Transit

- Review regional transit vision plan and transit development plan for info
- Roanoke just completed the ReImagine plan for 419 from Tanglewood to Starkey; Transit was mentioned a number of times suggesting an increase in interest in transit. Available at http://viriniadot.org/projects/salem/route_419_safety_improvements_at_tanglewood.asp
- DRPT is beginning Coordinated Human Services Mobility Plan for disabled population
- Areas of concern - South of Salem, I-81 Exit 137 (Richfield Retirement Community)
- Transit needs for workers/jobs important too - Example - Call center medical facilities

Safety:

- Would like to see more about the following topics:
 - Both crash rates & numbers
 - Data showing facility type and types of injuries. The injuries (total) seems to be holding steady while total crashes going up - does this consistency relate to certain facilities?
 - Source of accident reporting

- Causes of the crashes? e.g., distracted driving, Behavioral issues→DMV campaigns for Distraction, seatbelt, “standard practice;” Enforcement?
- Challenges in rural areas... fatalities, wildlife; urban areas - Lots of different risks in the same place
- Automated Vehicle technologies - Are these helping? Safety impacts? (too early to tell)
- Use local data and studies, there is a lot available such as the Roanoke region Safety Study (VDOT)
- Fairly steady increase in crashes on interstates and urban freeway compared with other functional classes, which are mostly steady or declining - we don't see a correlation between the functional class and the severity
- Increase in property damage crashes might be caused by regulatory change allowing new types of collisions to be reported as “property damage only”
- Focus at state level of systemic improvements, on causes of crashes and those that can be prevented via roadway design/management as opposed to enforcement

Economic Development:

- Location of VEDP business ready sites - Do they promote sprawl? What do VEDP and employers do to consider transportation needs?
 - Land use/transportation connection - VMT is driven by this (and parking availability);
 - Political funding decisions drive initial investment dollars to industrial development sites, without consideration of where workers will come from (especially in rural areas). A lot of employers tend to underestimate the low levels of car ownership in more rural areas.
 - [emphasis on greenfield development] incentivizes long-distance commuters
 - Cheap land vs. public investment trade off - do the cost/benefits even out [when we locate new industry in greenfield/ rural areas]?
 - Most sites located along freight highway network (adjacent to 220, 81 or 11) so it does seem like the decisions are taking freight-oriented street networks into account
- Further vetting needed on addition of VEDP sites, and more info about program

iii. COMMENT SHEET INPUT

The following section lists the written input from participants who chose to fill out the printed comment sheet in their meeting packets. Key points and concepts from this input are reflected in Table 2 (Synthesis of Comments). 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.

Congestion:

Does Congestion affect this region's economic competitiveness? If so- where, how, and why?

- Don't feel that this map is a true reflection of congestion on I-81. Vehicles always slow down to <50 mph with no accidents
- Maybe look at freight solutions instead of trucks for carrying materials. Some delays west of Covington based on mountainous terrain, diverting truck traffic [to other modes] could be helpful.
- Airport [passenger service] not reliable
- Congestion on 81, 220, 460 [biggest concerns]
- No redundancy [in the network exacerbates congestion]
- Congestion issues on I-81, 220, or 460 are compounded due to lack of interconnectedness between the CoSSs in the region. We have limited route and modal redundancy. Our congestion is also unreliable, it is accident and weather dependent.
- Non-recurring congestion on I-81, 460; recurring congestion in urban areas
- US 220- recurring congestion southbound, out of Roanoke
- US 419 congestion
- Commuter issues, some driven by terrain with respect to freight/ truck/ industrial development
- Yes:
 - Commute times could be used for short periods
 - If weekend traffic is worse, does this affect tourism at all (or just a sign of successful marketing)?
 - Generally not a big problem

Person hours in Excessively Congested Conditions (PECC):

Does this measure reveal the region's needs as YOU perceive them? If not, why?

- It is not measuring the peak hours AM, PM, weekend traffic for recreational activities.
- No
- Yes and no; regional citizens are not used to congestion, so they have a heightened awareness of it
- Data doesn't reflect non-recurring issues
- Metric doesn't seem to accurately capture peak demand and issues with truck traffic causing slow down and from speeding to make up delay (road rage/safety issue)
- [PECC] Map 1A: not accurate, look at I-81 study (trucks)

Do you have an opinion on the Analysis threshold?

- Look at segments rather than whole, at peak times.
- Yes, aiming for 75% seems to be reasonable. 60% seems too restrictive
- If lowered, more populous regions light up even more. Consider different thresholds for different parts of state

Travel Time Index (TTI):

Does this measure reveal the region's needs as YOU perceive them? If not, why?

- Yes
- Again, doesn't reflect non-recurring

Do you have an opinion on the Analysis threshold?

- No

In addition to the analysis of statewide measures, what other data or information could help us to pinpoint mid-term needs associated with congestion?

- Information from localities, residents.
- Taking into account the truck/freight traffic on the roads and their impact on the road speeds. We have a psychology issue with the perception of congestion. Our citizens are not accustomed to regular congestion, so they have a heightened response to it.

Reliability

Does travel time reliability affect this region's economic competitiveness? If so-where, how, and why?

- Freight schedule can affect availability of product.
- Employees arriving to work on time
- Yes: I-81 & 220 S
- Yes, our businesses and citizens need to know that they can get people and freight to destinations reliably on time. I81 is not regularly backed up, but when it does, it is a major problem
- Yes but reliability is relative and non-recurring
- Maybe only a short time as one gets behind a slow moving truck
- These instances aren't captured in data
- Usually congestion doesn't seem to be an issue outside accidents on I-81

Person Delay During Unreliable Conditions (UD):

Does this measure reveal the region's needs as YOU perceive them? If not, why?

- Yes
- No, due to low population volume
- Every day it is unreliable
- No, it does not capture our unreliability of unreliably conditions
- Not a good measure. Unreliability makes it hard to measure- relatively short duration so data doesn't capture
- Yes
- [UD] Map 3A-B no- does not reflect our experience

Do you have an opinion on the Analysis threshold?

- No
- No matter the threshold, the measure will depress our scores in relation to NoVa & HR

Buffer Time Index (BTI):

Does this measure reveal the region's needs as YOU perceive them? If not, why?

- Yes
- yes
- In some ways, people are adjusting their daily trips in order to account for the rush of an accident

Do you have an opinion on the Analysis threshold?

- No
- It does not capture our intermittent unreliability issues

In addition to the analysis of statewide measures, what other data or information could help us to pinpoint mid-term associated with travel time reliability in this region?

- Map/comments entered
- We are unpredictably unreliable. Our needs may function well most days, but when an incident occurs, reliability greatly deteriorates

Passenger Rail on Time Performance

Does passenger rail on-time performance affect this region's economic competitiveness? If so- where, how, and why?

- Limited access affects our region's economic competitiveness
- Employees arriving to work, access to workforce, access to buyers
- Yes- like it on-time is good
- It is important because it provides an additional mode choice for inter-regional travel
- Yes to the extent that being on time is of significant advantage for the business traveler
- no

Does this measure reveal the region's needs as YOU perceive them? If not, why?

- Yes
- Good ridership but still relatively small compared to auto traffic
- yes

Do you have an opinion on the Analysis threshold?

- No

In addition to the analysis of statewide measures, what other data or information could help us to pinpoint mid-term needs associated with passenger rail on-time performance in this region?

- Studies done by localities, around the area

Accessibility to Activity Centers

Is accessibility to activity centers a concern for this region? If so- where, how, and why?

- Yes, getting from urban area to suburban industrial parks (jobs) is an issue for those without cars (equity issue for those without vehicular access or who can't drive). Affordable housing tends to be in urban core, not near employment centers (industrial parks)
- Yes but challenged by locality ability to fund transit service
- Yes, attracting prospective employers

Does this measure reveal the region's needs as YOU perceive them? If not, why?

- No, transit operating funds don't come through SmartScale- bulk of costs are operating so expansion of service is challenged. Identifying need doesn't translate to funding
- yes

Do you have an opinion on the Analysis threshold?

- no

In addition to the analysis of statewide measures, what other data or information could help us to pinpoint mid-term needs associated with accessibility to activity centers in this region?

- Botetourt County is moving government offices to the Botetourt Center at Greenfield in Daleville, VA

Travel Options for Disadvantaged Populations

Is the availability of travel options for disadvantaged populations a concern for this region? If so- where, how, and why?

- Yes, map/comments entered
- Yes, we have a large population of impoverished and elderly citizens
- Yes
 - 1) low-income residents tend to be in the city while the "blue collar" (well-paying) jobs tend to be in the industrial parks with no or limited transit access
 - 2) Existing bus service has limited hours of service/doesn't run on Sundays

Disadvantaged Population Beyond ¼ Mile Access To Transit Service

Does this measure reveal the region's needs as YOU perceive them? If not, why?

- Yes
- Yes, our transit system in the region is lacking and needs assistance because of unmet demand
- yes

Do you have an opinion on the Analysis threshold?

- No
- 80% threshold

In addition to the analysis of statewide measures, what other data or information could help us to pinpoint mid term needs associated with travel options for disadvantaged populations in this region?

- It is hard to tie operational needs to the availability of funding sources for transit operations
- Populations in the rural areas (such as Northern Botetourt) are aging

Safety:

Is traveler safety a concern for this region? If so- where, how, and why?

- Interstate 81 feels unsafe with truck traffic and truck/auto interaction
- Yes, 81
- 220-south of Roanoke, north of Fincastle
- Yes, I think folks have a heightened awareness of the accidents that occur, and people are changing their travel choices because of it
- YES
- Yes, map comments entered

Vehicular Crashes

Does this measure reveal the region's needs as YOU perceive them? If not, why?

- Normalize the crash data.... Detour #/miles traveled for example
- Comparison to other regions as an average value
- Top 100 from last VTrans is pretty good, based on data
- Yes, I think so. Although, our level of acceptable safety issues may be lower
- No doesn't consider severity
- yes

Do you have an opinion on the Analysis threshold?

- Consider more detailed crash rate data to enable better comparisons for functional classes in less "urban"/less populous/densely developed areas of the state
- Yes, our threshold of acceptability would generally be smaller than other areas because of people's reactions to the crashes
- no

In addition to the analysis of statewide measures, what other data or information could help us to pinpoint mid-term needs associated with safety in this region?

- There needs to be some sort of comparative model between human injury and property damage accidents. For example, is \$1M of property damage comparable to a fatality?
- State safety study for VisionZero

Economic Development

- There is a large gap between Tier 5 & 4. Many of the qualities of Tier 5 sites only occur once a project has already chosen a site for development
- It is important to add business-ready sites because a number of our actively developing areas do not currently meet a need in VTrans. Economic development only becomes viable with sufficient transportation infrastructure
- It is important to consider business ready sites because we need to capture future development potential as opposed to reacting to development that has already occurred
- A preference for greenfield development has the potential to promote sprawl. Brownfield redevelopment is not readily captured as a need.