

## **Vision & Goals Introduction**

The development of the vision and goals for the Roanoke Valley Transportation Plan proceeded through several steps:

1. Conduct goals and objectives research from relevant regional, state and federal plans
2. Compare and analyze current vision and goals framework with findings from research
3. Develop draft vision and goals framework for TTC review
4. Survey TTC members on draft vision and goals framework
5. Incorporate TTC input into a refined draft vision and goals framework

The vision and goals framework is a crucial step in the development of the Transportation Plan as it defines the foundational aspirations of the region with respect to transportation planning. The vision and goals can be used as starting points for developing objectives and performance metrics further on in the planning process. They can also be used as a consistent benchmark against which to evaluate the results of project selection and prioritization processes, ensuring that the final outcomes of the planning process are true to the original values established for the region. In addition to goals, objectives and measures, two other considerations influence the overall planning process for the Transportation Plan, Future Factors and Needs and Solutions.

### **Future Factors:**

These are factors or trends such as technology, demographics or the environment that could play a role in shaping the region's future transportation needs and system. Consideration of these factors can help inform how the plan's goals, objectives, and solutions can remain flexible enough to adapt over time as these future factors evolve and future needs change with them.

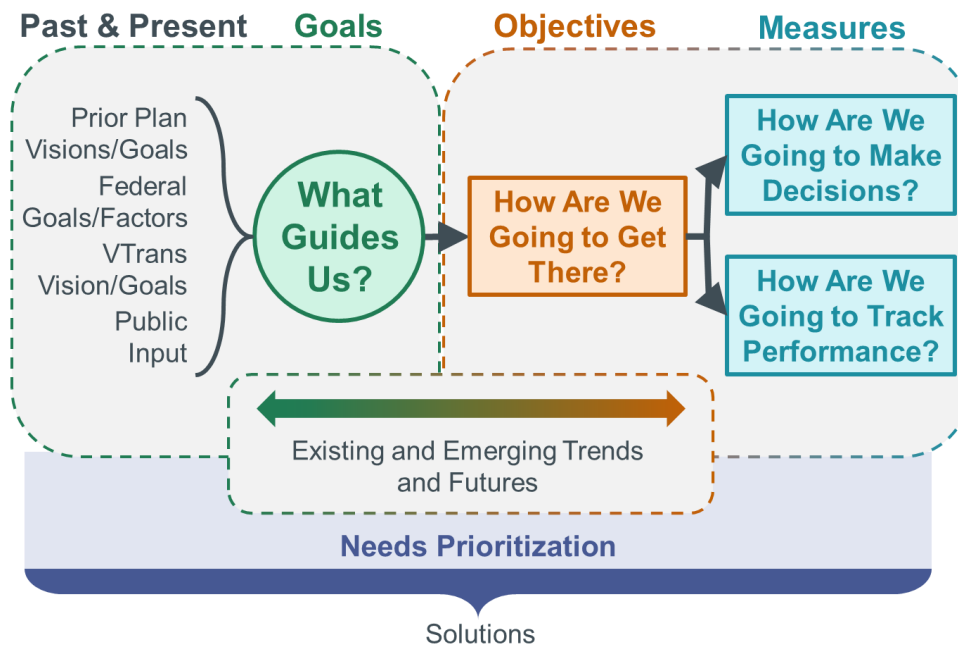
### **Needs and Solutions:**

A transportation need is a problem people or businesses experience in getting to where they are going or in moving goods or services. A transportation solution is a potential transportation infrastructure improvement, service or program that meets that need.

As part of the plan's 2045 update, RVTPO staff reviewed multiple background sources and conducted an extensive public survey to provide a comprehensive assessment of the transportation needs in the region. In addition, the RVTPO's consultant for this project conducted an analysis and prepared a report of Future Factors that was also presented to the TTC. The next phase of the planning process was Needs Prioritization. During this process, RVTPO staff worked with the TTC to develop a prioritization process that is informed by the goals, objectives and future factors into a set of refined needs that will be translated into potential transportation solutions and ultimately into projects.

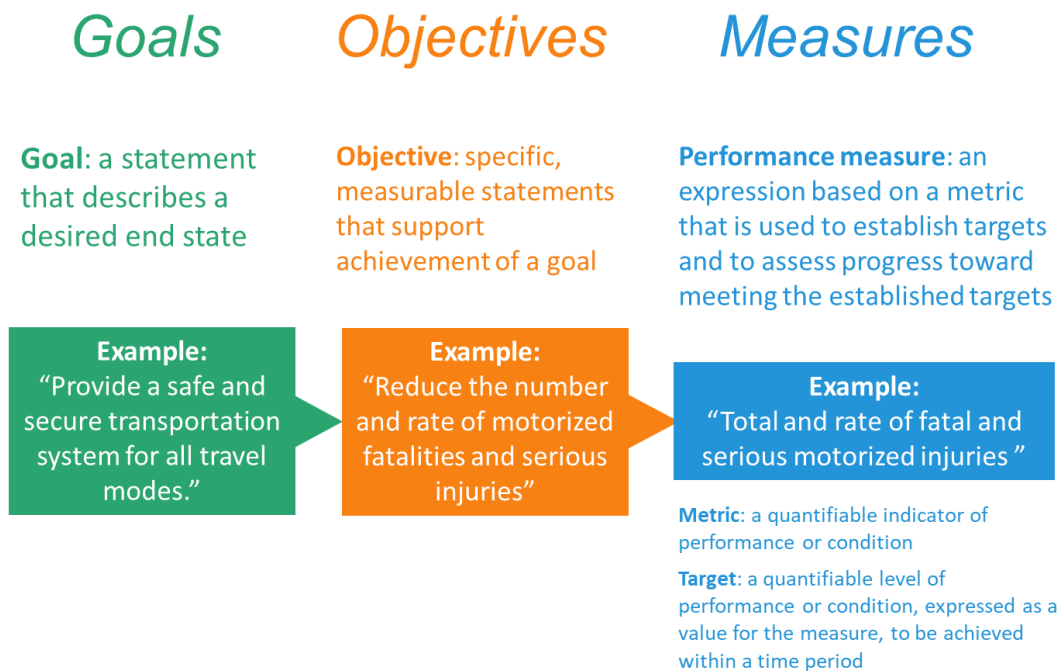
An initial diagram of how all these processes fit together was presented to the TTC and the Policy Board in December 2020 and is shown in Figure 1.

**Figure 1. Diagram of Goals, Objectives, Measures and Needs**



A key facet of this process is understanding the terminology being used – terms such as goals, objectives and measures have very specific meanings in the context of a long-range transportation plan. Figure 2 helps explain the specialized use of these terms in this planning process.

**Figure 2. Definitions of Goals, Objectives, and Measures**



## **Summary of Relevant Research**

As part of the development of a vision and goals framework, RVTPO conducted research at the federal, state, and regional levels. This framework helped to set better context for developing region-specific goals. Goals and objectives research focused on the following Federal, State, and regional sources:

### **Federal Planning Factors:**

- 23 CFR § 450.306 - Scope of the metropolitan transportation planning process
- 23 U.S. Code § 150 - National goals and performance management measures

### **State Planning Factors:**

- VTrans 2045 Goals
- Smart Scale Factors

### **Regional Planning Factors:**

- Roanoke Valley 2040 Long Range Transportation Plan
- RVAR: Comprehensive Economic Development Strategy
- 2020 Needs Survey
- Livable Roanoke Valley Plan

In addition, other relevant documents were surveyed for their relevance to potential regional goals and objectives, including the VTrans Mid-Term Needs for the Roanoke Valley region and the comprehensive plans of all the member jurisdictions in the region. Based on this research, a matrix that compared the various goals frameworks was developed to highlight the areas of similarity and overlap between these different frameworks, as shown in Figure 3.

**Figure 3. Comparison Matrix of Different Goals Frameworks**

RVTP Draft Goals Matrix																														
Potential RVTPO Goal Themes	Federal										State				Regional															
	MPO Planning Factors										National Goals (US Code)				VTrans Goals				CEDS			Livable Roanoke								
	Economic Vitality	Safety	Security	Accessibility and Mobility	Environment	Connectivity	System Management	Preservation of System	Resiliency	Tourism	Safety	Infrastructure Condition	Congestion Reduction	System Reliability	Freight and economic vitality	Environmental sustainability	Reduced project delivery delays	Econ. Competitiveness & Prosperity	Accessible & Connected Places	Safety for All Users	Proactive System Management	Healthy & Sustainability	Connectivity	Competitiveness	Maintenance	Sustainability	Workforce Development	Economic Development	Healthy Roanoke Valley	Natural Assets
Safety Theme		✓								✓									✓										✓	
Access Theme				✓															✓											
System Preservation Theme			✓				✓				✓		✓								✓				✓					
Congestion/Reliability Theme							✓					✓	✓																	
Economic Theme	✓									✓					✓		✓							✓			✓	✓		
Environmental Theme					✓			✓							✓							✓				✓		✓	✓	✓
Equity/Inclusiveness Theme			✓																		✓						✓			

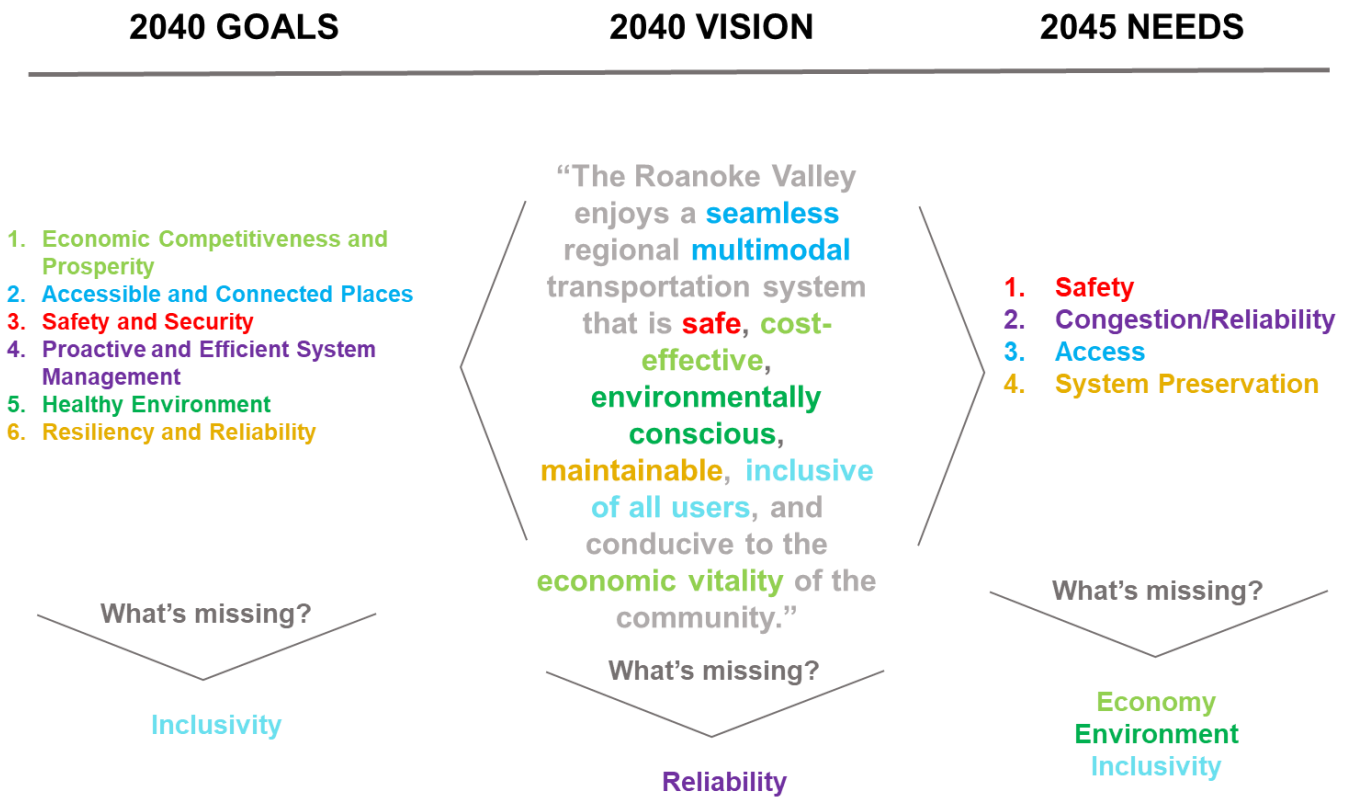
### Comparisons with Goals from the 2040 Transportation Plan

Based on the research of various relevant goal frameworks, as shown in the matrix above, five common themes emerged that had the greatest consistency in each framework:

1. Safety
2. Economy
3. Accessibility
4. Reliability
5. Management

These five overarching goal themes were then compared to the goals and vision statement in the region’s current (year 2040) transportation plan. These were also compared to the themes that emerged from the 2020 Citizen Needs Survey. Figure 4 shows an analysis, using colors to show similarity, of the major themes emerging from the 2040 plan and the current Needs Survey.

**Figure 4. Analysis of Major Themes from the 2040 Transportation Plan and the Needs Assessment**



As shown in Figure 4, the same five themes derived from the research (Safety, Economy, Accessibility, Reliability, Management) also can be found in the 2040 plan’s vision and goals and are partially echoed in the current Needs assessment.

From this analysis, a “crosswalk” matrix was prepared that compared the themes from the 2040 Plan’s vision and goals themes with the 2045 Needs themes and attempted to synthesize these into an initial set of “Potential 2045 Goals” as shown in Figure 5.

**Figure 5. Crosswalk of 2040 Goal Themes and Potential 2045 Goals**

2045 Needs Categories	2040 Vision Themes	2040 LRTP Goals	Potential 2045 LRTP Goals
Safety	Safe	Safety and Security	Safety Theme
Access	Seamless Multimodal	Accessible and Connected Places	Access Theme
System Preservation	Maintainable	Proactive and Efficient System Management	System Preservation Theme
	Cost-Effective		
Congestion/Reliability		Resiliency and Reliability	Congestion/Reliability Theme
	Economic Vitality	Economic Competitiveness and Prosperity	Economic Theme
	Environmentally Conscious	Healthy Environment	Environmental Theme
	Inclusive of all Users		Inclusiveness Theme

This matrix shows that the original six goals from the 2040 Plan could be carried forward into the 2045 Plan, especially because the research that was conducted clearly showed that these six goals are very consistent with current goal frameworks at the state, federal and regional levels. However, one additional goal, that of inclusiveness or equity, was identified in both the 2040 Vision as well as in goal frameworks at the state, federal and regional levels. The Draft 2045 goals were expanded to include action-oriented narratives that could represent the starting point for plan objectives, as seen in Figure 6.

**Figure 6. First Draft of Potential 2045 Goals and Goal Narratives**

Current RVTP0 2040 Goals	RVTP0 2045 Needs	Potential RVTP0 2045 Goals	Potential RVTP0 2045 Goal Narratives
Safety and Security	Safety	<b>Provide a Safe and Secure Transportation System</b>	Ensure a future transportation system that is safe and secure for users on all travel modes
Accessible and Connected Places	Access	<b>Enable all citizens to access destinations</b>	Improve the ability of residents and businesses to access opportunities for employment, commerce, education, recreation and daily needs
Proactive and Efficient System Management	System Preservation	<b>Maintain and Operate an Efficient Transportation System</b>	Provide a well maintained transportation system that is efficient and resilient to future changes
Resiliency and Reliability	Congestion/Reliability	<b>Ensure Reliable Mobility</b>	Ensure a reliable transportation system that enables efficient movement for people and freight
Economic Competitiveness and Prosperity		<b>Support Economic Vitality</b>	Support a growing and competitive regional economy through transportation investments
Healthy Environment		<b>Foster Resilience and Sustainability</b>	Protect the region's natural environment and conserve its natural resources
		<b>Enable affordable transportation choices equitably for all</b>	Enable equitable access to destinations through greater availability of mode choices that are affordable and efficient

This draft set of Goals as well as the Vision from the 2040 Plan were shared with the TTC in the form of a questionnaire for their input and commentary. The questionnaire asked them to register their agreement with the wording of the Vision and Potential Goals and suggest edits or refinements. In addition, the questionnaire asked the TTC, “How well is the region doing to accomplish these goals? (the answer choices being: No Progress, Minor Progress, Good Progress, Achieved this Goal, Not Sure). This latter question was included to give some insight onto the relative priority for implementation of each goal.

The results of the questionnaire showed overall agreement with all seven of the proposed goals, including the new one of equity/inclusiveness. The TTC also provided valuable suggestions for refining the wording of the Goals as well as refinements to the wording of the Vision, which was substantially carried forward from the 2040 plan with minor wording changes.

## **2045 Plan Vision and Goals**

Based on the results of the TTC questionnaire and further vetting at a TTC meeting in May 2021, RVTPO developed the Vision and Goals for the 2045 Roanoke Valley Transportation Plan.

### **Vision:**

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**The Roanoke Valley’s seamless regional multimodal transportation system is safe, cost-effective, environmentally conscious, well maintained and reliable, accessible for all users, and promotes the economic vitality of the community.**

**The Vision describes the desired future state for the Roanoke Region’s multimodal transportation system**

### **Goals:**

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- 1. Provide a safe and secure transportation system**
- 2. Enable reliable mobility**
- 3. Ensure convenient and affordable access to destinations**
- 4. Foster environmental sustainability**
- 5. Maintain and operate an efficient and resilient transportation system**
- 6. Support economic vitality**
- 7. Promote equitable transportation investments**

**Goals describe the priorities which will guide the region toward attaining the Vision**

The Vision and Goals will shape the development of Objectives and Performance Measures. In addition, the Needs and Solutions process, which will also develop its own set of selection criteria to prioritize Needs, can use the draft Vision and Goals as a useful benchmark to ensure that any criteria that are developed are consistent with the overall policy direction established for the 2045 Plan. Finally, when the Constrained and Vision project lists are developed for 2045, it will be important to show that they also are consistent with the Plan’s Vision and Goals so that they can effectively implement the region’s agreed upon direction for its future transportation system.



## **Objectives & Performance Measures Definitions and Purpose**

**Objectives Definition:** Describe how the RVTPO will attain the Plan vision and goals. Objectives represent specific desired Plan outcomes.

**Objectives Purpose:** Objectives inform how to develop solutions to respond to needs, how to prioritize projects within the Plan, and how to track the Plan and overall system performance.

**Performance Measures Definition:** The quantitative link to objectives, performance measures assess the degree to which investments address transportation needs and meet acceptable thresholds.

**Performance Measures Purpose:** Enables the RVTPO to assess the degree to which the transportation system is achieving objectives.

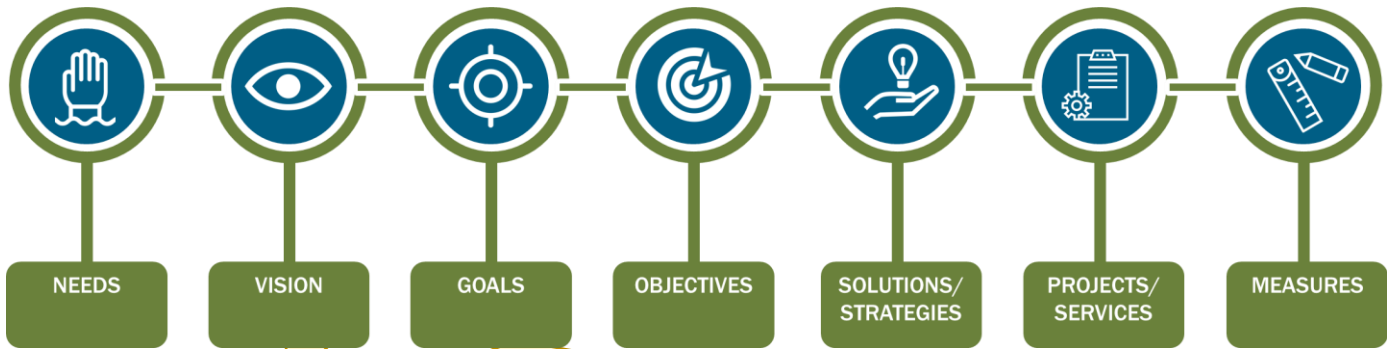
### **Considerations:**

- Objectives and performance measures together meet the SMART framework and are readily measurable based on available data.

**S = Specific   M = Measurable   A = Agreeable   R = Relevant   T = Time-Bound**

- **Federal Performance Measures** – Some objectives have existing and well-defined performance measures, including those established through USDOT rulemakings within performance areas managed by the Federal Highway Administration (FHWA), Federal Transit Administration (FTA), and Federal Railroad Administration (FRA). Targets have been established for these measures by RVTPO (through coordination with VDOT and OIPI), by transit providers (through coordination by DRPT), and by Amtrak (for the FRA measures).
- **Candidate Measures** – Some objectives represent emerging topics where performance measures, and the data to support them, are not yet well defined. For this Plan Update, RVTPO will adopt the objectives and note opportunities for RVTPO to research and develop candidate performance measures in the future. These measures are **highlighted green** in the matrix on the following pages.

## Elements of the Transportation Planning Process



### VISION:

The Roanoke Valley's seamless regional multimodal transportation system is safe, cost-effective, environmentally conscious, well maintained and reliable, accessible for all users, and promotes economic vitality of the community.

### GOALS:

- Provide a safe and secure transportation system
- Enable reliable mobility
- Enable convenient and affordable access to destinations
- Foster environmental sustainability
- Maintain and operate an efficient and resilient transportation system
- Support economic vitality
- Promote equitable transportation investments

Objective	Considerations	Performance Measures (Federal Measure as noted) Note: Candidate measure, developed post Plan adoption
<b>Goal 1: Provide a safe and secure transportation system</b>		
<b>a. Eliminate fatalities and reduce injuries on the multimodal transportation system.</b>	<ul style="list-style-type: none"> <li>• The ultimate long-range goal is to push toward zero fatalities (consistent with Virginia’s current Strategic Highway Safety Plan)<sup>1</sup></li> <li>• Consistent with FHWA and FTA measures, data readily available</li> <li>• Can segment by community to track safety impacts on specific populations (see Goal 7)</li> <li>• Transit safety measures also include security related events (within the <a href="#">National Transit Database, NTD</a><sup>2</sup>)</li> <li>• Transit safety measures are tracked by individual agency, including both fixed-route and on-demand (or paratransit) services</li> </ul>	<ul style="list-style-type: none"> <li>• Number and rate of motorized fatalities per 100 million vehicle miles traveled (VMT) (FHWA)</li> <li>• Number and rate of motorized serious injuries per 100 million VMT (FHWA)</li> <li>• Number of nonmotorized fatalities and serious injuries (FHWA)</li> <li>• Number of reportable fatalities and rate per total vehicle revenue miles by transit agency per year (FTA)</li> <li>• Number of reportable injuries and rate per total vehicle revenue miles by transit agency per year (FTA)</li> <li>• Number of safety events and rate per total vehicle revenue miles by transit agency per year (FTA)</li> </ul>
<b>Goal 2: Enable reliable mobility</b>		
<b>a. Maintain vehicle travel time reliability on priority corridors.</b>	<ul style="list-style-type: none"> <li>• Focus on Congestion Management Process priority corridors</li> <li>• Consistent with FHWA required measures</li> </ul>	<ul style="list-style-type: none"> <li>• % of person miles traveled on the Interstate system and on the non-interstate National Highway System (NHS) that are reliable (FHWA)</li> </ul>
<b>b. Maintain transit and passenger rail on-time performance (OTP).</b>	<ul style="list-style-type: none"> <li>• Reported by system – Amtrak, Valley Metro</li> <li>• Data availability through DRPT and NTD (often at least 1 year behind)</li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">Amtrak on time performance (FRA, DRPT)</a><sup>3</sup></li> <li>• <b>Valley Metro on time performance</b></li> <li>• Distance between transit system major mechanical failures (FTA)</li> </ul>

<sup>1</sup> <https://tzdva.org/>

<sup>2</sup> <https://www.transit.dot.gov/ntd>

<sup>3</sup> <http://drpt.virginia.gov/rail/amtrak-reports/>

Objective	Considerations	Performance Measures (Federal Measure as noted) Note: Candidate measure, developed post Plan adoption
<b>Goal 3: Enable convenient and affordable access to destinations</b>		
<b>a. Provide motorized access to inaccessible properties identified for future development.</b>	<ul style="list-style-type: none"> <li>New developments should be accessible by more than one direction to enable multi-directional vehicle connectivity to the roadway network</li> </ul>	<ul style="list-style-type: none"> <li>Number of localities with ordinances or policies that incentivize or require multiple access points in new developments</li> </ul>
<b>b. Increase accessibility to key destinations by transit.</b>	<ul style="list-style-type: none"> <li>Could include types of destinations (e.g., essential services)</li> <li>Transit level of service measure is an option (see <a href="#">ARC Rural Transit in Appalachia Study<sup>4</sup></a>)</li> <li>Multiple statewide accessibility measures to consider, including VTrans</li> <li>Accessibility measures are consistent with SMART SCALE approach</li> </ul>	<ul style="list-style-type: none"> <li>Number of destinations (government service, major grocery store, medical, school/higher education, business) within ¼ mile of a transit stop</li> <li>Transit level of service (number of days per week and/or hours per day that service is available to key destinations)</li> </ul>
<b>c. Increase transportation connections to markets outside the region, including across Virginia and the U.S.</b>	<ul style="list-style-type: none"> <li>Connections to Amtrak, intercity bus terminals, and airport</li> </ul>	<ul style="list-style-type: none"> <li>Number and frequency of daily or weekly inter-regional or interstate connections offered</li> </ul>
<b>d. Increase transit, bicycle and pedestrian connections for all users within multimodal centers and districts.</b>	<ul style="list-style-type: none"> <li>Transit, on and off-road bicycle and pedestrian connections within centers and districts</li> </ul>	<ul style="list-style-type: none"> <li>Number and percent of transit stops with connecting sidewalks and ADA accommodations in multimodal centers and districts (walk – transit connection)</li> <li>Number and percent of transit stops adjacent to a marked bicycle accommodation in multimodal centers and districts (transit – bike connection)</li> <li>Number and percent of bike racks with connecting sidewalks in multimodal centers and districts (walk – bike connection)</li> </ul>

<sup>4</sup> <https://www.arc.gov/report/public-transportation-in-appalachia/>

Objective	Considerations	Performance Measures (Federal Measure as noted) Note: Candidate measure, developed post Plan adoption
<b>Goal 4: Foster environmental sustainability</b>		
<b>a. Minimize emissions from motorized on-road transportation.</b>	<ul style="list-style-type: none"> <li>• The RVTPO is in attainment of air quality standards per the <a href="#">Clean Air Act</a><sup>5</sup> (existing standards may become more stringent)</li> <li>• Greenhouse gases (GHG) are not part of the Clean Air Act, but many states (including <a href="#">Virginia</a><sup>6</sup>) are developing inventories</li> <li>• GHG related measures likely will be included in the next Federal surface transportation bill</li> </ul>	<ul style="list-style-type: none"> <li>• Track investments and implementation of low and/or zero-emission technologies within the region (zero-emission buses, zero-emission fleets, charging stations, energy efficient infrastructure)</li> </ul>
<b>b. Minimize / mitigate new impervious surfaces created by transportation infrastructure.</b>	<ul style="list-style-type: none"> <li>• Helps consider environmental risks associated with transportation system expansion, particularly in environmentally sensitive areas.</li> </ul>	<ul style="list-style-type: none"> <li>• Track new impervious surface area associated with transportation investments outside of designated growth areas</li> <li>• Track new impervious surface area associated with transportation investments in floodplains</li> </ul>

<sup>5</sup> <https://www.epa.gov/green-book>

<sup>6</sup> <https://www.deq.virginia.gov/air/greenhouse-gases>

Objective	Considerations	Performance Measures (Federal Measure as noted) Note: Candidate measure, developed post Plan adoption
<b>Goal 5: Maintain and operate an efficient and resilient transportation system</b>		
<b>a. Maintain state and national standards for infrastructure and asset condition.</b>	<ul style="list-style-type: none"> <li>Federal measures focus only on the National Highway System</li> <li><a href="#">State measures</a><sup>7</sup> expand to all VDOT owned/maintained bridges and pavement</li> <li>Valley Metro also tracks asset condition and sets targets through coordination with DRPT</li> </ul>	<ul style="list-style-type: none"> <li>% good and poor NHS bridge deck area (FHWA)</li> <li>% good and poor NHS pavement lane miles (FHWA)</li> <li>% sufficient bridges and average weighted General Condition Rating (VDOT)</li> <li>% sufficient pavement lane miles on Interstate, Primary, and Secondary systems (VDOT)</li> <li>% of revenue and of non-revenue vehicles that have met or exceeded their useful life benchmark (FTA)</li> <li>% of facilities rated in poor condition (FTA)</li> </ul>

<sup>7</sup> [http://www.ctb.virginia.gov/resources/2021/sept/pres/2\\_september\\_presentation\\_09012021\\_1.pdf](http://www.ctb.virginia.gov/resources/2021/sept/pres/2_september_presentation_09012021_1.pdf)

Objective	Considerations	Performance Measures (Federal Measure as noted) Note: Candidate measure, developed post Plan adoption
<b>Goal 6: Support economic vitality</b>		
<b>a. Ensure redevelopment and new developments in designated growth areas and multimodal centers/districts are supported by more than one mode of transportation infrastructure.</b>	<ul style="list-style-type: none"> <li>• Could also include access to regional economic development sites and VTrans industrial development areas outside of designated growth areas</li> </ul>	<ul style="list-style-type: none"> <li>• Number of developments approved adjacent to more than one existing and/or planned transportation mode</li> </ul>
<b>b. Maintain truck travel time reliability</b>	<ul style="list-style-type: none"> <li>• Consistency with <a href="#">VTrans Freight Element</a><sup>8</sup> (which tracks freight-related performance measures and truck bottleneck locations)</li> <li>• Truck travel time reliability measure helps characterize performance of the overall regional freight system</li> <li>• Baseline performance relative to 2019 (pre-pandemic levels)</li> </ul>	<ul style="list-style-type: none"> <li>• Interstate truck travel time reliability (FHWA)</li> </ul>
<b>c. Maintain acceptable levels of congestion during peak travel periods on priority corridors</b>	<ul style="list-style-type: none"> <li>• Multiple possible measures to consider consistent with <a href="#">Congestion Management Process (CMP)</a><sup>9</sup>, VTrans, and Improve I-81</li> <li>• Federal measures (peak hours of excessive delay) is not applicable to the RVTPO region currently (only to non-attainment areas over a certain population threshold)</li> </ul>	<ul style="list-style-type: none"> <li>• Planning time index on Congestion Management Process Priority Corridors (RVTPO adopted via the CMP)</li> </ul>

<sup>8</sup> <https://www.vtrans.org/mid-term-planning/freight-plan>

<sup>9</sup> <https://rvarc.org/wp-content/uploads/2020/10/Traffic-Congestion-Management-Process-2020.pdf>

Objective	Considerations	Performance Measures (Federal Measure as noted) Note: Candidate measure, developed post Plan adoption
<b>Goal 7: Promote equitable transportation investments</b>		
<b>a. Assess planning-level benefits or disproportionate adverse effects of transportation projects included in this plan on Equity Emphasis Areas and identify mitigation strategies.</b>	<ul style="list-style-type: none"> <li>Assume that NEPA process protects communities from disproportionate impacts</li> <li>Within solution development and prioritization process, could consider benefits &amp; burdens qualitatively for each project</li> <li>More details on VTrans Equity Emphasis Areas is available <a href="#">here</a><sup>10</sup></li> </ul>	<ul style="list-style-type: none"> <li>Identify projects creating potential disadvantages for Equity Emphasis Areas and track mitigation strategies</li> </ul>
<b>b. Ensure that investments supporting improved non-SOV mobility create opportunities for Equity Emphasis Areas.</b>	<ul style="list-style-type: none"> <li>Consider unique benefits of each project on these communities</li> <li>Incorporate benefits to these communities within project prioritization</li> <li>Consistent with <a href="#">Justice40 initiative</a><sup>11</sup> builds on environmental justice outlined in <a href="#">Executive Order 12898</a><sup>12</sup></li> </ul>	<ul style="list-style-type: none"> <li>Track share of non-highway capacity or operational investments that provide documented benefits primarily for Equity Emphasis Areas compared to the Justice40 initiative goal “to deliver 40 percent of the overall benefits of relevant federal investments to disadvantaged communities”</li> </ul>
<b>c. Reduce fatalities and serious traffic injuries in Equity Emphasis Areas.</b>	<ul style="list-style-type: none"> <li>Special attention to provide a safe and secure transportation system in these communities</li> </ul>	<ul style="list-style-type: none"> <li>Decrease traffic fatalities in Equity Emphasis Areas</li> <li>Decrease traffic serious injuries in Equity Emphasis Areas</li> <li>Decrease nonmotorized fatalities and serious injuries in Equity Emphasis Areas</li> </ul>
<b>d. Maintain state and national standards for infrastructure condition in Equity Emphasis Areas.</b>	<ul style="list-style-type: none"> <li>Special attention to maintain and operate an efficient and resilient transportation system in Equity Emphasis Areas</li> </ul>	<ul style="list-style-type: none"> <li>% good and poor pavement lane miles in Equity Emphasis Areas</li> </ul>

<sup>10</sup> [https://vtrans.org/resources/Technical\\_Guide\\_for\\_the\\_Identification\\_and\\_Prioritization\\_of\\_VTrans\\_Mid-term\\_Needs.pdf](https://vtrans.org/resources/Technical_Guide_for_the_Identification_and_Prioritization_of_VTrans_Mid-term_Needs.pdf)

<sup>11</sup> <https://www.transportation.gov/equity-justice40>

<sup>12</sup> <https://www.epa.gov/laws-regulations/summary-executive-order-12898-federal-actions-address-environmental-justice>