

# Northern Virginia Region Draft Needs Summary

## Needs Map: Need A

### TYPES OF NEEDS

	REGION WIDE OR SITE SPECIFIC	CORRIDOR-BASED	ACTIVITY CENTER-BASED
CORRIDOR RELIABILITY/CONGESTION			
NETWORK CONNECTIVITY			
TRANSPORTATION DEMAND MANAGEMENT			
MODAL CHOICE			
WALKABLE/BIKEABLE PLACES			

Note that 2 or more Types of Needs are shown with multiple colors

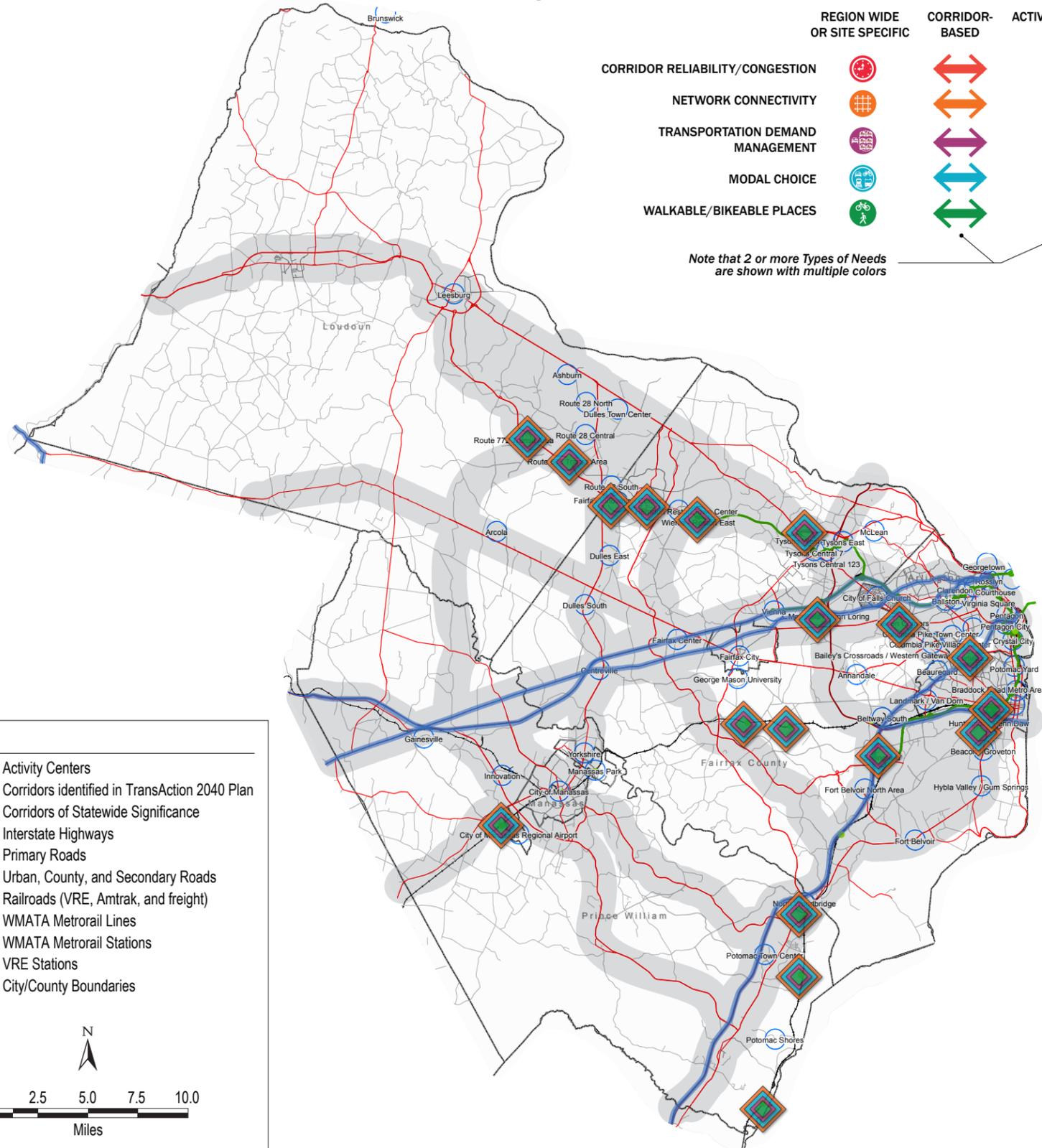
## Needs Table

NEED	ECONOMIC	TRANSPORTATION	EXAMPLE LOCATIONS*
<b>A</b> Enhance multimodal networks and facilities around transit access points such as existing and emerging rail stations, high capacity bus stops, and intermodal transfer centers	<p>There is a need for improved multimodal networks that include walking, biking, and “feeder” transit services and facilities to make transit a more viable option for travel within the region, particularly around current and future station areas and other activity centers. In some cases, traffic congestion can be reduced by improving multimodal linkages among activity centers.</p>	<p>The ability of communities around transit stations (particularly the areas within 1-2 miles of the stations and other travel hubs) to attract skilled workers and grow businesses can be enhanced by building safe, convenient walking and bicycling networks and providing high-frequency transit services throughout the day. A robust array of travel choices for commuting and local trips is a critical asset for attracting workers and businesses. Employers' abilities to access skilled workers is a top concern, and 21st century workers seek to live and work in locations they can reach via multiple travel modes.</p>	<p>Multimodal enhancements would benefit all of the region's current and future rail station areas and other key transit hubs, such as those with high-capacity and high-frequency bus services. Multimodal enhancements would help to solve “last mile” challenges for commuters. Extra priority should be placed on enhancements in and around activity centers, as they have higher average residential densities and are expected to contain a significant portion of the region's new housing development and economic activity. Because of higher densities, improvements near transit hubs have the potential to serve and benefit the large numbers of residents in a cost-effective way. In some cases, improvements are needed to Metrorail stations themselves to increase capacity and improve safety.</p>
			<p>Areas surrounding Orange and Silver Line stations (Dunn Loring, Wiehle Avenue, Spring Hill), Blue/Yellow stations (Franconia-Springfield, Huntington, Eisenhower), VRE stations, and intermodal transit hubs (e.g. Shirlington, Seven Corners). This also applies to areas preparing for Metro expansion, such as the stations planned for Loudoun County.</p>

\* Example locations are provided for illustrative purposes only. The inclusion of example locations does not indicate that areas omitted do not fit the description of this need.

**Legend**

- Activity Centers
- Corridors identified in TransAction 2040 Plan
- Corridors of Statewide Significance
- Interstate Highways
- Primary Roads
- Urban, County, and Secondary Roads
- Railroads (VRE, Amtrak, and freight)
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- WMATA Metrorail Stations
- VRE Stations
- City/County Boundaries



# Northern Virginia Region Draft Needs Summary

## Needs Map: Need B

### TYPES OF NEEDS

	REGION WIDE OR SITE SPECIFIC	CORRIDOR-BASED	ACTIVITY CENTER-BASED
CORRIDOR RELIABILITY/CONGESTION			
NETWORK CONNECTIVITY			
TRANSPORTATION DEMAND MANAGEMENT			
MODAL CHOICE			
WALKABLE/BIKEABLE PLACES			

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## Needs Table

NEED	DESCRIPTION
<b>B</b>	<b>Increase equity in access to high quality transportation facilities</b>
NEED	A fundamental factor in economic advancement, multimodal transportation accessibility is most urgently needed in communities with high concentrations of economically disadvantaged residents. Strategic multimodal transportation investments can yield equity benefits. Improvements to facilities of all types used by disadvantaged residents, and increased awareness and availability of affordable travel options through TDM and other programs, are needed.
ECONOMIC	Improving service workers' and disadvantaged residents' access to jobs and services provides both social and economic benefits. Many of the region's low- and moderate-income workers provide essential goods and services to residents, visitors, and businesses, which strengthens the attractiveness of the region to prospective employers, tourists, and other generators of economic activity. In addition, multimodal access to health service centers, which contribute significantly to the region's economic activity, is critical for people with disabilities and older adults who rely upon demand response transit services, and for employees who use transit and/or bike and walk to work.
TRANSPORTATION	There is a need to enhance the operations and affordability of key commuting facilities, roadways and transit, to improve accessibility from communities with high concentrations of low- and moderate-income residents to jobs and services, which are often located in communities with higher-cost housing. Bus transportation is sometimes the only affordable and readily accessible mode of transportation for many service workers in the region. Higher-frequency, higher-capacity, and more efficient transit services would produce benefits for the region's workforce. Stronger TDM programs could enhance availability and awareness of affordable commuting options to expand travel options for all residents. A lack of ADA-compliant facilities in strategic locations creates "broken links" in multimodal networks, which render entire areas inaccessible to low-mobility residents.
EXAMPLE LOCATIONS*	Toll roadway facilities, activity centers, non-ADA-compliant facilities, and communities with heavy concentrations of disadvantaged residents.

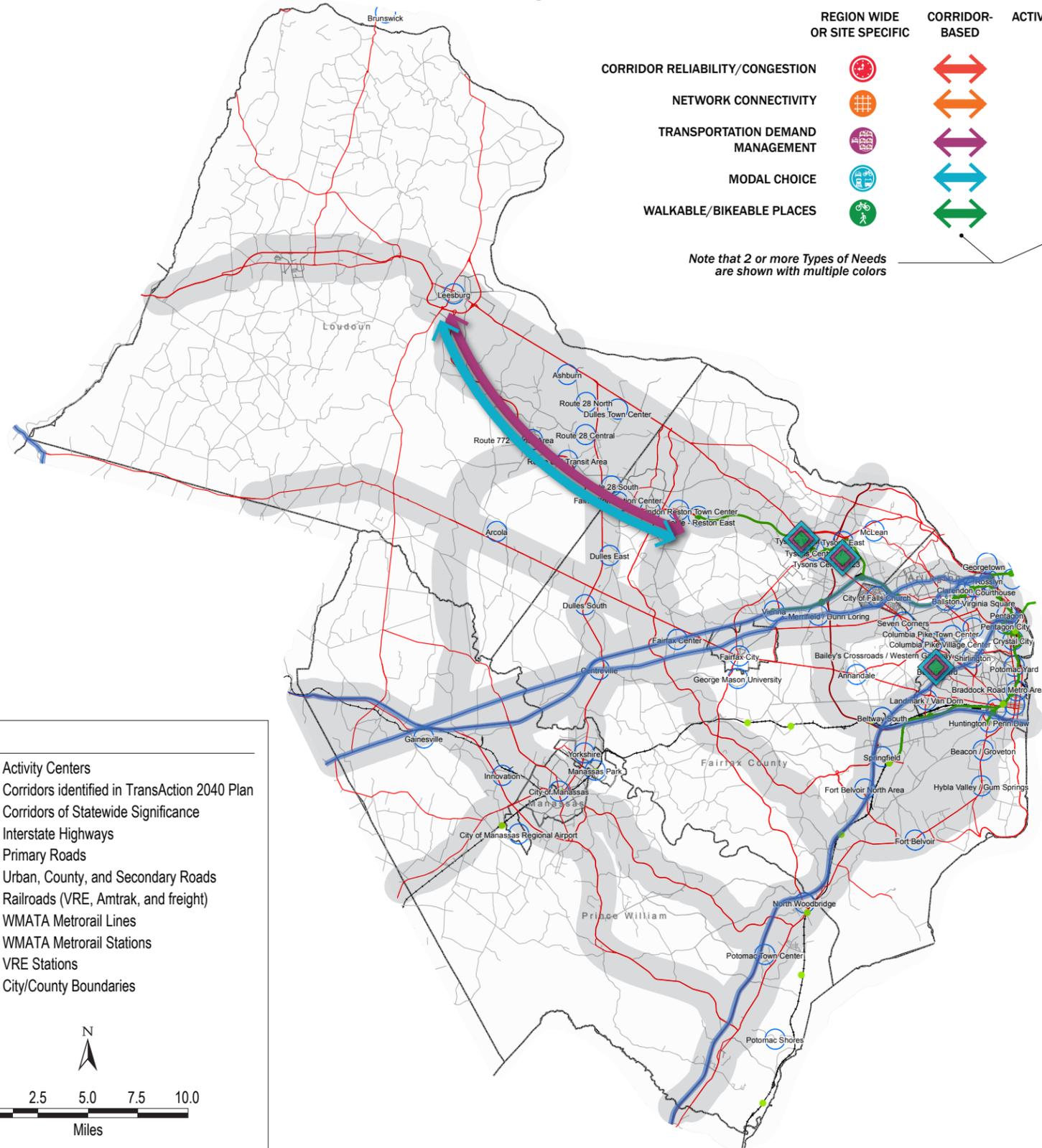
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**Legend**

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# Northern Virginia Region Draft Needs Summary

## Needs Map: Need C

### TYPES OF NEEDS

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CORRIDOR RELIABILITY/CONGESTION			
NETWORK CONNECTIVITY			
TRANSPORTATION DEMAND MANAGEMENT			
MODAL CHOICE			
WALKABLE/BIKEABLE PLACES			

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## Needs Table

NEED	ECONOMIC	TRANSPORTATION	EXAMPLE LOCATIONS**
<b>C</b>	<b>NEED</b>	<b>NEED</b>	<b>NEED</b>
<p><b>Make roadway safety and operational improvements to alleviate bottlenecks and reduce acute congestion, including "hot spots" with frequent but unpredictable (non-recurring) congestion</b></p> <p>The Northern Virginia region suffers from some of the most severe congestion in the nation, which results in economic losses and reduces the region's attractiveness to workers and businesses. While congestion is common throughout the region, crashes and breakdowns in numerous "hot spots" cause frequent but unpredictable bouts of severe congestion, which degrades the reliability of the travel network. As such, safety improvements to reduce the frequency of crashes and breakdowns, and operational improvements to improve accessibility for emergency vehicles to enhance the efficiency of incident clearance, have significant potential to alleviate this challenge.</p> <p>Severe congestion and subsequent lost productivity and freight movement results in economic losses that are borne by the region's residents and businesses. Increased congestion and travel times on all modes make the area less attractive to current and prospective residents and, consequently, the businesses that want their skills. In particular, lack of reliability for freight can have profoundly negative economic impacts. Congestion on key routes leading to cargo and transport hubs (e.g. Dulles Airport, National Airport, Union Station) results in lost economic productivity.</p> <p>Recurring and non-recurring acute congestion events present major challenges to roadway users in all types of motorized vehicles, from passenger cars and motorcycles to buses and trucks. On corridors that support pedestrians and cyclists, motorized traffic congestion also threatens safety and efficiency for non-motorized travelers. Roadway safety and operational improvements, and improvements that would enhance the efficiency with which emergency vehicles can clear roadways after accidents, are urgently needed throughout the entire region. This is particularly urgent on routes that lead to the airports and train stations that provide interregional transportation for people and goods. In some cases, improving signal timing, access management, and integration of more "intelligent" technologies can be cost-effective ways to alleviate congestion. In particular, improvements are needed on many of the facilities identified by NVTAs as corridors of regional importance.*</p>			
			<p>I-66; I-95 south of the Springfield interchange; I-495; Route 1 corridor between Fort Belvoir and Washington, DC; Route 7; Route 15; Route 28; Route 29; Route 50; Route 123; Prince William County Parkway; other corridors providing airport access; Columbia Pike; Dale Boulevard; Glebe Road; Minnieville Road; Pentagon-Beauregard Corridor; activity centers in Prince William County (Gainesville, Innovation center, Potomac Communities).</p>

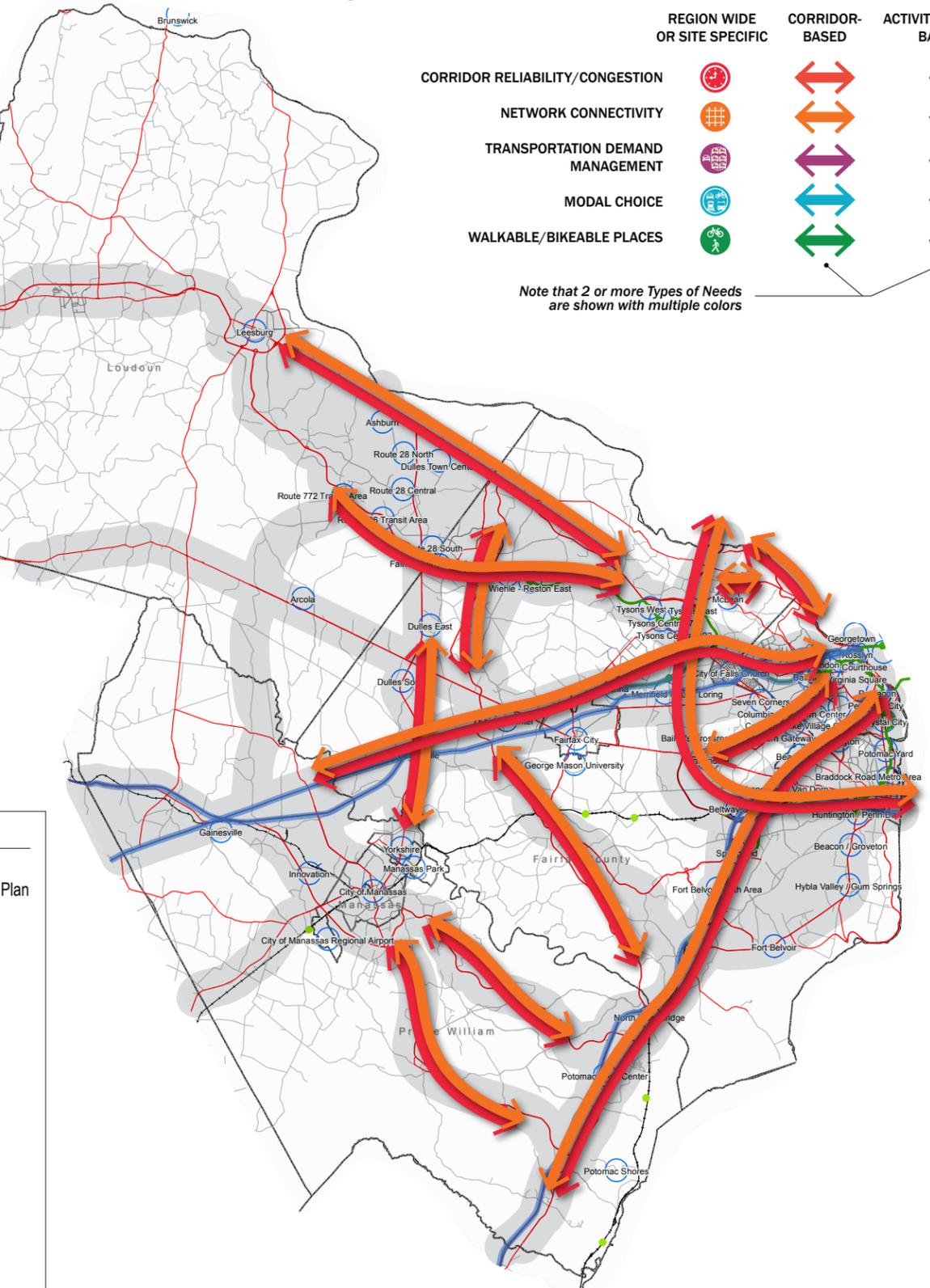
\* NVTAs Corridors:

- Virginia Route 7 and Dulles Toll Road Corridor, including the future Metrorail Silver Line
- Loudoun County Parkway/Tri-County Parkway/Belmont Ridge Road/Gum Springs Road Corridor
- Virginia Route 28 Corridor
- Prince William Parkway Corridor
- Fairfax County Parkway Corridor
- I-66/U.S. Route 29/U.S. Route 50 Corridor, including the Metrorail Orange Line
- Beltway (I-495) Corridor
- I-95/I-395/U.S. Route 1 Corridor, including the VRE and Metrorail Blue and Yellow Lines.

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**Legend**

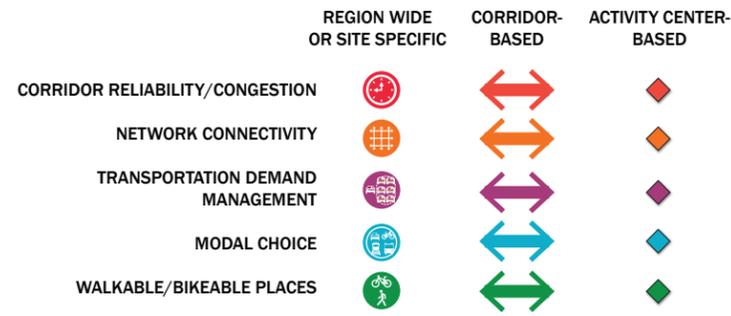
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# Northern Virginia Region Draft Needs Summary

## Needs Map: Need D

### TYPES OF NEEDS

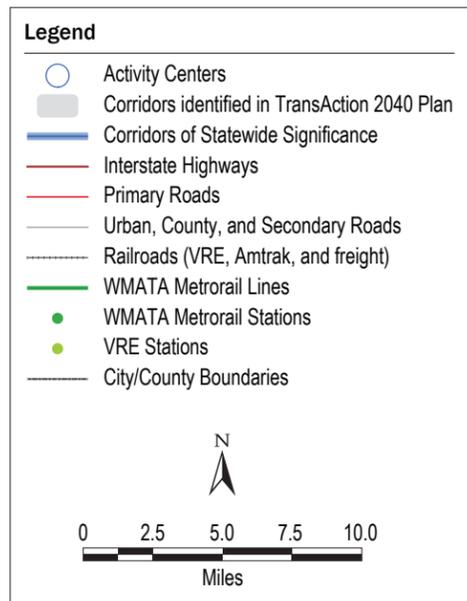


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## Needs Table

NEED	ECONOMIC	TRANSPORTATION	EXAMPLE LOCATIONS*
<b>D</b> Expand and improve multimodal accessibility to existing and emerging hubs of economic activity	<p> The Northern Virginia region suffers from some of the most severe congestion in the nation, which results in economic losses and reduces the region's attractiveness to workers and businesses. While congestion is common throughout the region, crashes and breakdowns in numerous "hot spots" cause frequent but unpredictable bouts of severe congestion, which degrades the reliability of the travel network. As such, safety improvements to reduce the frequency of crashes and breakdowns, and operational improvements to improve accessibility for emergency vehicles to enhance the efficiency of incident clearance, have significant potential to alleviate this challenge.</p> <p> Activity centers' viability and desirability is highly correlated with the presence of multimodal travel options. Jurisdictions throughout the region have identified activity centers where they will encourage a higher concentration of future residential, commercial, and office development. These activity centers need adequate transportation facilities to support their growth and prosperity. In addition, existing activity centers need enhanced modal choices. The defense industry, for example, is a significant economic driver in the region. Current and anticipated military expansion and relocation sites, many of which are located in areas already experiencing heavy highway and transit congestion, have critical modal enhancement needs.</p>	<p> Activity centers need multimodal travel improvements to ensure safe, reliable movement for workers, consumers, and the goods and services they need. Enhancing networks to allow access to workplaces and services via walking, biking, and transit is necessary, while expanding the frequency and capacity of transit services can make non-SOV travel a more viable option. In particular, gaps in walking and bicycling networks pose significant barriers to using these modes, while the bottlenecks caused by limited capacity in the Rosslyn Metrorail Tunnel limit any frequency increases of Metrorail cars running into and out of DC. Further, there is a need for enhanced transit services that operate frequently throughout the day and evening, including during non-peak hours, to make transit a more viable travel option for those with non-traditional work schedules.</p>	<p>Activity centers throughout the region such as Tysons, the Rosslyn-Ballston Corridor, and the Pentagon. Multimodal options are needed along key travel routes including but not limited to Columbia Pike, Route, Route 7, and Route 29.</p>

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# Northern Virginia Region Draft Needs Summary

## Needs Map: Need E

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CORRIDOR RELIABILITY/CONGESTION			
NETWORK CONNECTIVITY			
TRANSPORTATION DEMAND MANAGEMENT			
MODAL CHOICE			
WALKABLE/BIKEABLE PLACES			

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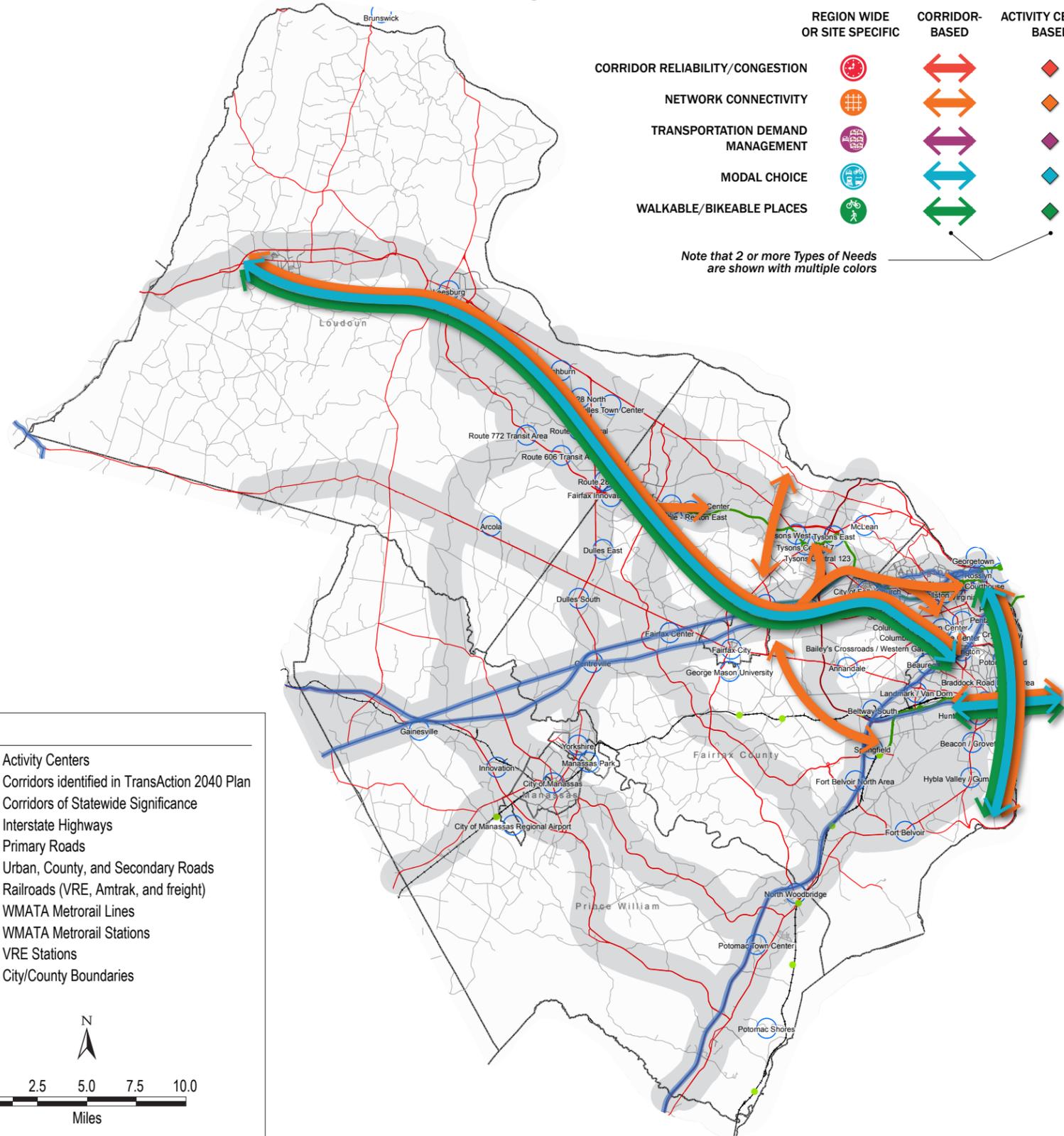
## Needs Table

NEED	ECONOMIC	TRANSPORTATION	EXAMPLE LOCATIONS*
<b>E</b> Improve bicycle and pedestrian facilities and networks to provide additional and uninterrupted connections for bicyclists and pedestrians within and between activity centers	<p> The percentage of workers commuting by bike and foot continues to increase in the region. However, gaps in existing bicycle and pedestrian networks, as well as capacity challenges on some existing facilities, limit the viability of biking and walking. Walking and biking are both affordable and healthy travel options, and can help alleviate roadway congestion and transit capacity challenges. Increasing the mode share of bicyclists and pedestrians among commuters and everyday travelers could help reduce the rising rates of automobile congestion, even while the region continues to attract residents and jobs.</p>	<p> The ability to bike and walk for all types of trips is seen as a highly desirable asset among 21st century workers seeking to locate in work-live communities. Easily navigable bike and walking routes for people of all ages and abilities are also essential assets for attracting tourists, who contribute significantly to the region's economy, and for helping communities to attract and retain lifelong residents.</p>	<p> Many of the region's residents regularly bicycle and walk to work and other destinations along popular trails and other facilities that make up the region's bike and pedestrian networks. Congestion and conflicts among different types of users (such as fast-moving cyclists and runners versus child cyclists and walkers) has become an increasing safety concern along many multi-use trails and facilities. Expanding the capacity, availability, and connectivity of trails will make bicycling and walking more viable travel options. Expanded bicycle and pedestrian facilities are needed at many transit stations to improve intermodal connections. Improvements such as eliminating gaps in bicycle and pedestrian networks and improving accessibility at pedestrian crossings are also needed along roadway corridors.</p>
			<p>Custis Trail, Mount Vernon Trail, Woodrow Wilson Bridge Trail, locations where pedestrian and bicycle facilities do not provide complete and continuous connections between activity centers and other hubs (e.g. the Custis Trail does not provide connections to the Ballston activity center).</p>

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# Northern Virginia Region Draft Needs Summary

## Needs Map: Need F

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CORRIDOR RELIABILITY/CONGESTION			
NETWORK CONNECTIVITY			
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## Needs Table

### F Improve multimodal connectivity among existing and emerging activity centers

**NEED**

Many key roadways and bicycle and transit networks in the region were designed to provide routes for commuters into and out of the District of Columbia and "first-tier" suburbs, which historically contained most of the region's employment centers. But employment and residential growth patterns have changed over the years, to the point that high concentrations of jobs and services as well as residential communities are located in a wide range of areas throughout Northern Virginia. Today, the volume of residents traveling between activity centers in non-core areas ("suburb to suburb") is higher than the planned capacity on many roadway and bicycle networks. Connectivity improvements can improve the efficiency of travel throughout the Northern Virginia region and may thereby reduce congestion on routes leading into the region's core areas.

**ECONOMIC**

Improving multimodal accessibility to and within existing and emerging activity centers can improve their attractiveness and economic prospects. The need is particularly urgent in areas where private investors and local governments have developed partial multimodal networks and mixed-use communities. In these cases, filling in multimodal network gaps would maximize the return on investment and strengthen the ability of localities to attract the planned balance of residents and workers.

**TRANSPORTATION**

In many areas, completion of "missing links" to planned transportation system networks will enhance accessibility for travelers using all modes. Disconnected roadway, transit, bicycle and pedestrian networks force travelers to take circuitous routes, resulting in neighborhood congestion and air quality issues. Lack of connections also discourages travelers from choosing to walk or bike for short trips. Making suburban activity centers more transit-accessible can further help to alleviate or reduce traffic congestion by enabling communities to add jobs and workers that generate fewer vehicle trips than the number of trips that area associated with automobile-oriented growth.

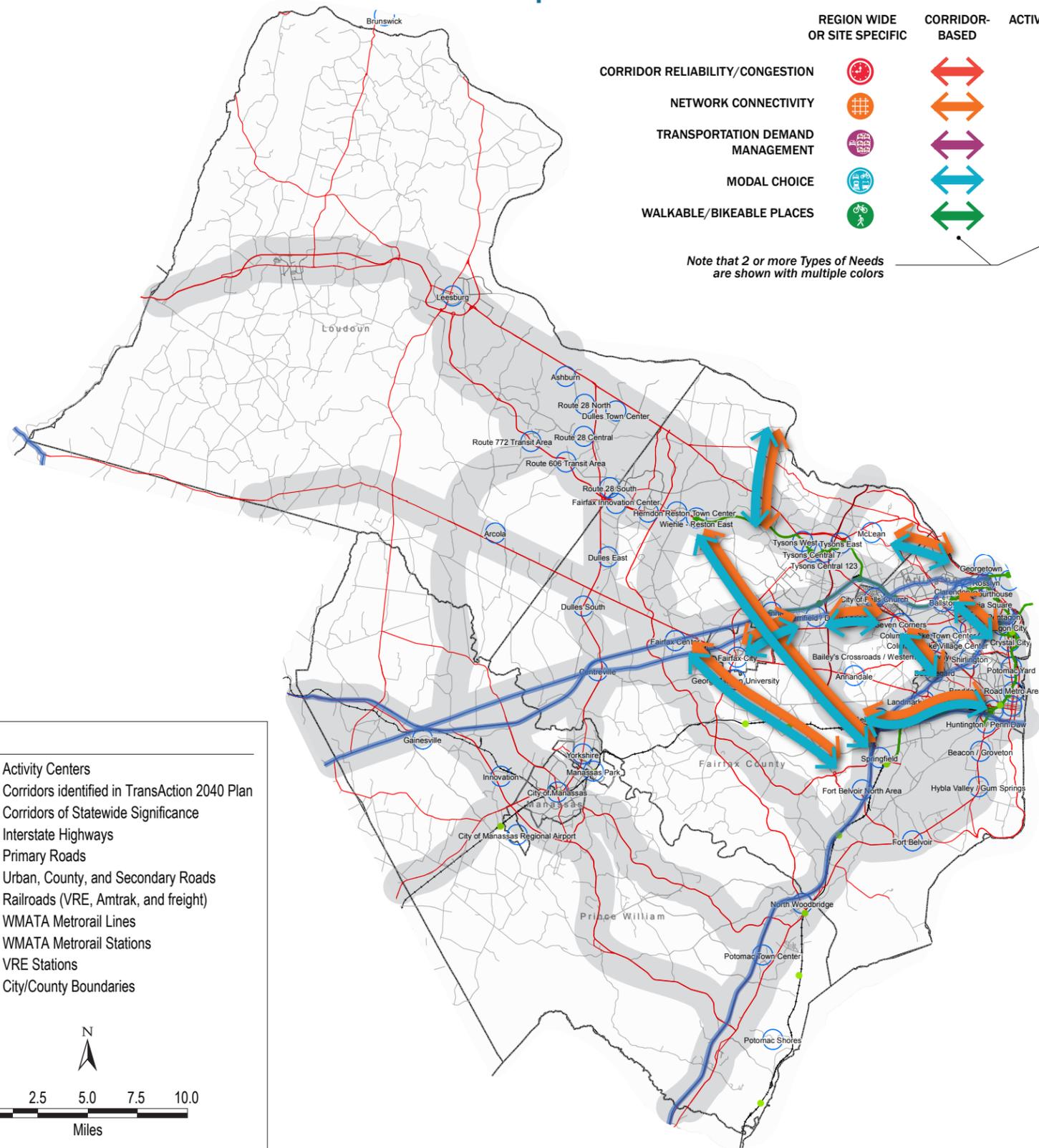
**EXAMPLE LOCATIONS\***

Accessibility between activity centers such as those in Arlington; Alexandria; Tysons; Reston; Springfield; Merrifield; Baileys Crossroads; Columbia Pike; Seven Corners; Fairfax Center, and other areas with high concentrations of economic activity and high travel volumes.

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# Northern Virginia Region Draft Needs Summary

## Needs Map: Need G

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CORRIDOR RELIABILITY/CONGESTION			
NETWORK CONNECTIVITY			
TRANSPORTATION DEMAND MANAGEMENT			
MODAL CHOICE			
WALKABLE/BIKEABLE PLACES			

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## Needs Table

NEED	DESCRIPTION
<b>G</b>	<b>Improve rail accessibility and reliability for both freight and passengers</b>
NEED	<p>  Rail lines throughout the region enable inter-regional movement for both freight and passengers. Rail services suffer from congestion and unreliability. Passenger rail services connect workers and consumers with areas of concentrated economic activity, while freight rail brings needed goods into and out of the region.</p>
ECONOMIC	<p>Freight and passenger rail transportation supports the region's economy. Workers in all sectors rely on VRE and Amtrak for inter-city service. Providing multimodal alternatives to commuters using key corridors (I-95, I-66, I-395) prevents congestion and reliability from worsening on roadways.</p>
TRANSPORTATION	<p>Rail traffic throughout the region is congested and suffers from delays that affect passenger and freight traffic. Some existing VRE stations have inadequate platforms. Conflicts between passenger and freight trains can magnify the negative impacts of even slight delays.</p>
EXAMPLE LOCATIONS*	<p>North-South rail lines along I-95, VRE, Amtrak, and freight lines throughout the region.</p>

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