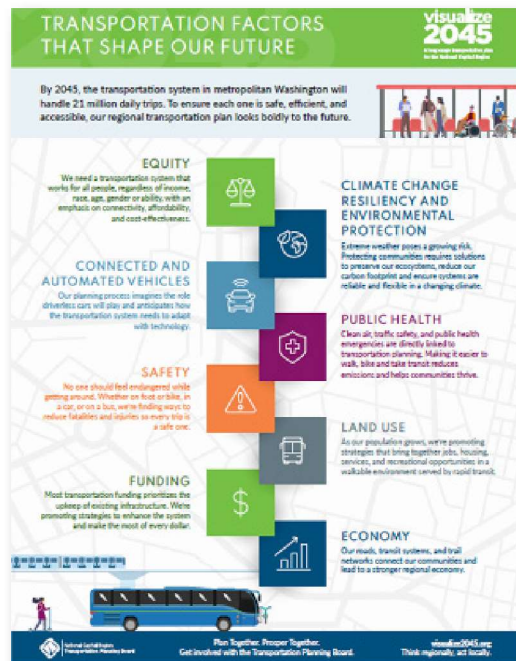


## 4

## CHAPTER

# What Factors Affect Our Future?



See TPB's infographic on the Future Factors that will impact transportation.

## Today's Emerging and Significant Planning Considerations

The future is always uncertain, but the region's agencies work together to manage the transportation system effectively in an ever-changing world. While the TPB examines many planning areas, including the federal planning factors noted in Chapter 1, this chapter highlights emerging and significant factors that can impact the well-being of our communities and impact transportation demand, services, operations, maintenance, planning, and investments. The TPB calls these Future Factors. Learn more about regional planning activities for each of these factors in Chapter 6, Strategies for a Brighter Future.



The Future Factors introduced in this chapter include:



EQUITY



CLIMATE CHANGE AND  
THE ENVIRONMENT



TRANSPORTATION SAFETY



EMERGING TECHNOLOGIES



PUBLIC HEALTH



ECONOMY



LAND USE, POPULATION,  
AND EMPLOYMENT



FUNDING

As the TPB plans, it conducts scenario planning and other analyses to examine a range of possible futures and the strategies that could be most effective in them. It is not possible to know everything now, therefore, the region needs to work together to develop potential strategies and solutions that can be re-examined over time. The TPB also engages the public to gain insights as to public perspectives on the factors and how they imagine the future transportation system. The Voices of the Region survey asked: **“What transportation investments should we make today that future generations will thank us for tomorrow?”** Many responses reflected public concerns and hopes relating to the future factors, and suggested preferred strategies to address these factors. This chapter highlights select responses and then provides a summary of the responses.





## EQUITY

In 2020, the TPB affirmed its commitment to considering equity in everything we do. To consider equity in our work, we need to plan our transportation system to address historic disadvantages due to characteristics such as race, ethnicity, age, and ability. The TPB also needs to consider and mitigate the impacts that the existing transportation system has on disadvantaged populations and ensure all people have easy access to the transportation system.

In response to the 2020 TPB Resolution on equity, the TPB will examine its work through an equity lens and will continue to share information and tools to examine and improve transportation equity in our region.



### Voices of the Region

**“If bus stops and Metro stations could be more accessible to everyone, including more handicap options. Maybe textured sidewalk near transit stops, for the blind.”**



## CLIMATE CHANGE AND THE ENVIRONMENT

The TPB works alongside other sectors and with the public to halt climate change. The TPB also plans for the resiliency and reliability of the transportation system to ensure safe and dependable travel for its users. While the region has always experienced natural disasters, we need to prepare for a changing climate that is expected to increase the frequency, duration, and intensity of extreme weather events. The TPB and its members work to minimize greenhouse gases emissions from the transportation sector and meet air quality standards for the transportation system. The region's transportation agencies continue to plan and implement strategies and transportation options that limit emissions to mitigate climate change and enhance the system's resiliency.

When planning for transportation operations and investments, it is important to consider and mitigate any negative impacts on our environment, from the waters that are part of the Chesapeake Bay watershed to landcover and air. The TPB also partners with COG and its members on issues of environmental consultation and mitigation.

### Voices of the Region

**“I am extremely concerned about climate change. Please do everything you can to reduce emissions. As a farmer, I have no choice but to live in a remote area away from public transport, but I'd like you to build great systems for all who live within reach. And hopefully eventually solar powered and self-driving cars for those of us in the rural areas.”**



Beyond DC/Flickr



## TRANSPORTATION SAFETY

Safety remains a priority. The TPB and its members are working to reduce transportation fatalities and injuries by conducting analysis to identify high priority strategies and to implement transportation planning processes and projects that prioritize safety for people traveling in our region. Everyone should be able to get around safely. Whether on foot or bike, in a car, or on a bus, we are working together to reduce fatalities and injuries, so every trip is a safe one.

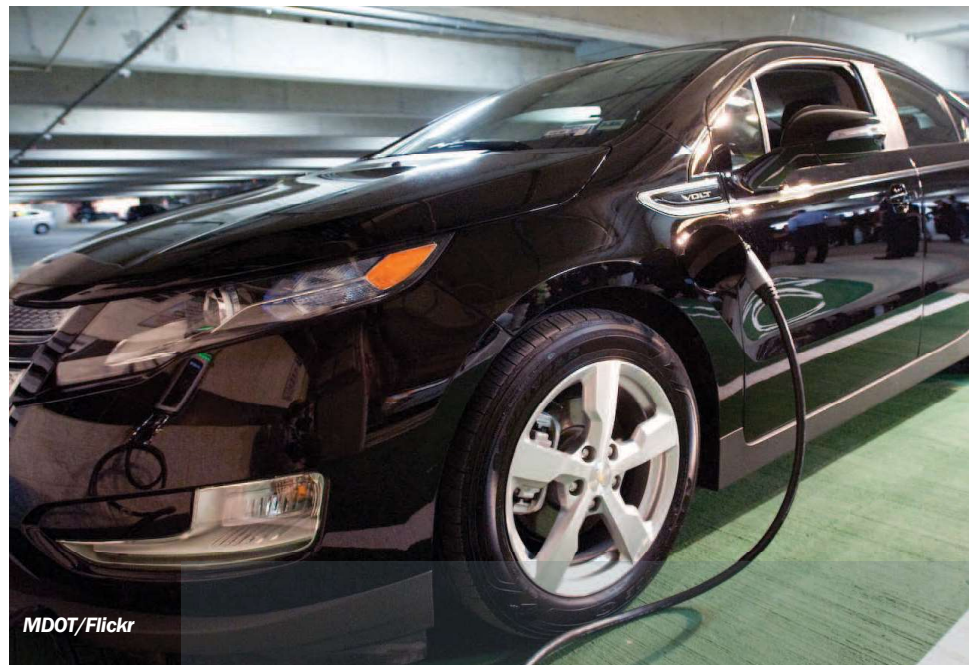
### Voices of the Region

**“Improve crosswalk safety, lighting, and sidewalks/lanes for bikers, walkers, and runners. The Metro is close enough for people to access without buses or cars, but the pedestrian safety concerns are a barrier.”**



## EMERGING TECHNOLOGIES

Connected and Automated Vehicles (CAVs), also known as driverless cars, utilize technological advancements to enable vehicles to take over some or all the driving responsibilities that a person has traditionally fulfilled. Driverless cars will impact the future but how and when remain uncertain. Other technologies will expand our transportation options, improve operations, and expand the availability of information at our fingertips. We need to anticipate possibilities and identify how the transportation system needs to adapt with technology.



MDOT/Flickr

### Voices of the Region

**“I think the future is electric, autonomous, and flexible...I think the region needs to lay out more guidelines and incentives for private citizens to participate in next generation transportation options; especially solar electricity generation tied to powering electric vehicles, and how to support such things in urban areas with few garages/driveways for dedicated charging stations.”**





Beyond DC/Flickr

## PUBLIC HEALTH

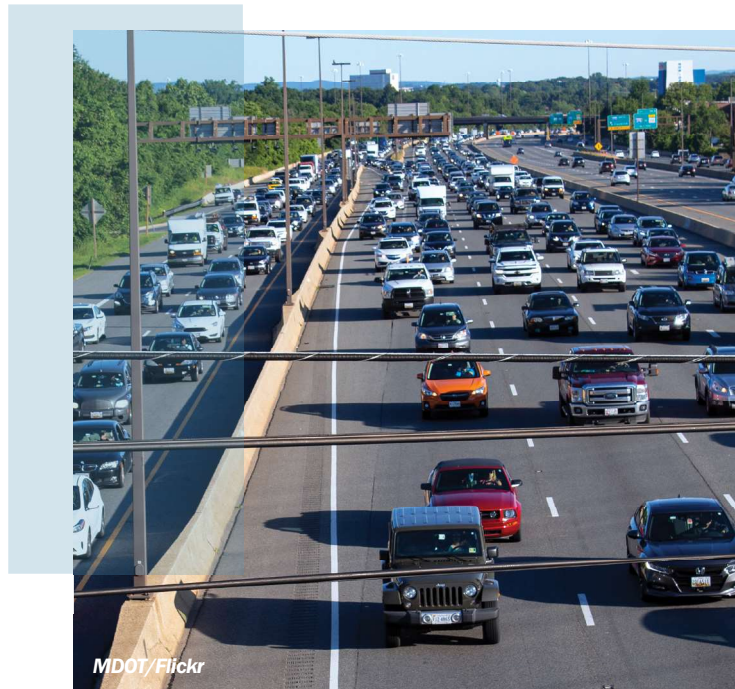
Considering public health in the transportation planning process is vital to foster healthy communities. It underscores investments in walking and biking and other active travel options. Public health considerations include access to transportation options, access to goods and services, and issues such as air quality and traffic safety. Impacts of COVID-19 have raised new transportation planning considerations. By aligning transportation planning with public health considerations, we can plan for healthier communities and better outcomes.

### Voices of the Region

**“I would think the investment in ensuring the bus is running on schedule, frequent cleaning especially in and after pandemic and creating a priority lane for a bus would help encourage more passengers, hence reduce the car density on the road.”**

## ECONOMY

Our roads, transit systems, and trail networks connect our communities, support the movement of goods and services, and lead to a stronger regional economy. With a population of more than five million residents today, the metropolitan Washington region consumes and produces a wide variety of goods. These goods, such as produce, technology, home goods, vehicles, and fuel, are delivered by modes such as truck, rail, air, water, and pipeline. Often, freight travels by multiple modes on its journey from origin to the consumer. Warehouse and distribution centers supply and support the freight system. Smooth and efficient goods movement is vital to maintaining a strong regional economy. The TPB prepares for the evolution of the economy which will impact the way employers function, employees travel, and the demand for freight.



MDOT/Flickr

### Voices of the Region

**“Improve I-270, [there is] congestion all the time even during COVID. [We] need to address the flow so it remains smooth; need to bring subway in the area to Frederick so that is connected with DC. It will reduce traffic and bring business in the area.”**



Ron Cogswell/ Flickr



## LAND USE, POPULATION, AND EMPLOYMENT

Population in the region will reach just over 7.0 million by 2045. Land use and development patterns put pressure on transportation infrastructure to meet the growing demands. As communities continue to grow, it is crucial that we plan to prioritize land uses that bring together jobs, housing, services, and recreation in a walkable environment served by transit. Through coordination and planning, the transportation system and development patterns can support one another more effectively and help metropolitan Washington accommodate significant growth and continue to prosper.

### Voices of the Region

**“ I live about 2 miles from a Metro. It would be really nice if there was a bus that ran directly to the closest Metro. Additionally, I wish the Metro ran longer so I could take a Metro home from the bar and not an Uber. ”**



Beyond DC/ Flickr

## \$ FUNDING

Most of the federal and state transportation funding is allocated to the upkeep and operations of existing infrastructure. As the region continues to grow in population and employment, the TPB anticipates more trips on all transportation modes. While the plan includes capacity expansion, the existing highway and transit systems will need to accommodate most of the increased travel demand. Even with technological improvements and changes in trip demand due to increased telework, the TPB forecasts increases in travel congestion.

To meet the growing demand and provide an efficient and resilient transportation system, we need to make the most of every dollar. The TPB's Aspirational Initiatives represent some of the most effective approaches to improve transportation performance. By implementing these initiatives together, the region can get the most out of the existing transportation system and land-use, as well as system enhancements.

### Voices of the Region

**“ I would encourage more investment in public transportation, especially high-speed express trains and buses and much less privatized road...The system should provide safe, efficient and convenient transportation at reasonable costs to all citizens regardless of income level. Also, there needs to be much more investment in the electrical grid and distribution system to support electric cars and the public transportation system. ”**



# visualize 2045

## Visualizing Our Future Together: Voices of the Region



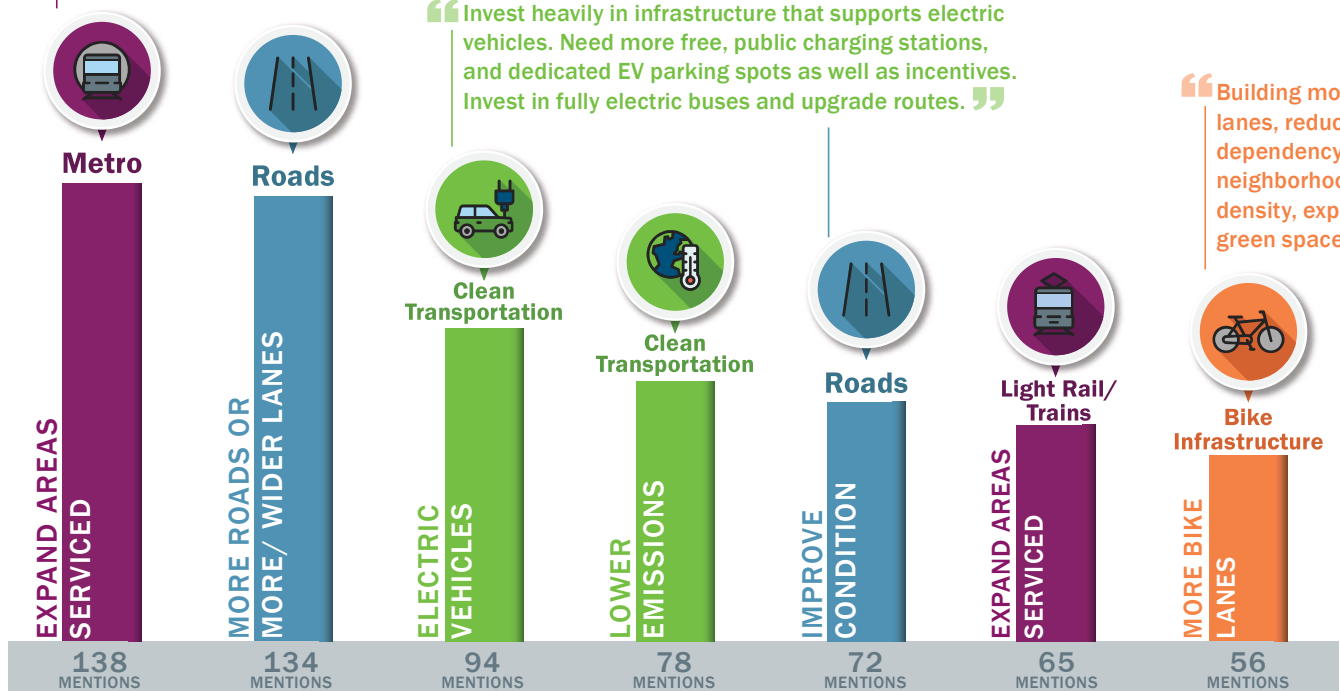
**“What transportation investments should we make today that future generations will thank us for tomorrow?”**

“Our Metro access in the region is quite inconvenient when major transfers can only happen at the Metro Center...if there are more sub station connections...it would provide more access.”

“Improve road infrastructure including aging major bridges, deteriorating road surfaces, and stormwater effects on roads (including washouts/temporary flooding.)”

“Invest heavily in infrastructure that supports electric vehicles. Need more free, public charging stations, and dedicated EV parking spots as well as incentives. Invest in fully electric buses and upgrade routes.”

“Building more bike lanes, reducing car dependency, livable neighborhoods, density, expanding green space.”



“Expanding roads in congested and soon to be congested (ehem, Potomac Yard with Amazon) areas now before it gets too bad.”

“Anything we can do to reduce our carbon footprint would be appreciated.”

“Extend rail services beyond the current metro region in areas not yet developed for new subdivisions.”

## PUBLIC TRANSPORTATION

Respondents primarily looked for further investment in public transportation, including service to the core, the inner and outer suburbs, and more rural areas. They generally looked for lower fares, improved reliability, and better connectivity. They looked for more options, stops, and frequency, as well as expanded service hours. Respondents also indicated an interest in better transit access to airports.

## METRO

Regarding Metro, respondents' comments focused on increased investments, improving service, reliability, safety, and maintenance. They were optimistic about completing the Silver Line expansion and adding further service to the outer areas of the region.

## BUSES

Regarding buses, respondents noted lower fares and improved service and reliability, including the presence of dedicated bus lanes, frequent service, and express buses. Also mentioned, was a desire for better bus stops including more stops, and safer, better lit stops.

## OTHER TRANSITWAYS

Respondents identified an interest in investment in a range of transitways that could serve the region, from the Purple Line in Maryland (under construction as of 2022), and street cars, to more frequent and expansion of service for rail, including services such as light rail, commuter rail and high-speed rail.

## RIDESHARING/RIDEHAILING

Respondents noted support for ridesharing and ridehailing options, and suggested more incentives for ridesharing.

## ROADS

Respondents noted an interest in improved road conditions and reduced traffic and congestion. Recommendations included more roads and wider lanes. Some proposed use of tolls and others voiced support for no lane restrictions. Others noted more lights and managed operations.

## WALKING/BIKING

Respondents suggested further investments in infrastructure to create a safer and more interconnected system for people that walk or ride a bicycle. Recommendations included car-free zones, more pedestrian crossings, and wider sidewalks. They also included more bicycle trails, mixed-use trails, and bike lanes, including lanes separated from traffic.

## CLEAN TRANSPORTATION

Regarding clean transportation, respondents reflected a future with lower emissions vehicles including alternative fuels and electric vehicles. They looked for more climate-friendly alternatives, emphasizing more use of clean public transportation and fewer cars.

## EQUITY/ACCESS

Regarding equity, respondents looked to improvements that improve accessibility for older adults and people with physical disabilities. They also noted improved access to transportation options, and consideration of the needs of essential workers.

## EMERGING TECHNOLOGY

Respondents noted improvements such as CAV technologies and infrastructure. They suggested investments to make technology easy to integrate, including access to safe self-driving vehicles and public transportation and mobility systems that offer a seamless travel experience. Some people saw the future of freight having delivery vans being replaced by delivery drones.

## INFRASTRUCTURE

Respondents focused on infrastructure investments that would ensure a well-maintained and safe system that considered the need to accommodate cars across the diverse region, including in suburban and rural metropolitan Washington.

## PLANNING/DESIGN

Respondents identified planning and design concepts such as reducing car use and dependence and creating more walkable communities. They noted managing development patterns, considering unique needs of rural areas, and modernizing infrastructure.