(Sikeri/Flickr)

CHAPTER 7

ADDITIONAL ELEMENTS

Introduction

The TPB coordinates many different types of transportation planning and programs which convene regional leaders to plan for a better future. This chapter summarizes many of the TPB's activities in this regard.

No one piece of the transportation system functions in a vacuum - various elements must work together to move people and goods efficiently and effectively in the National Capital Region. Regional planning and policy efforts help the region prepare for more people, help reduce congestion on the roads, and make it easier for people to walk and bike, leave their cars at home, or not own a car at all. They make it easier for freight to move through the region and help connect transportation-disadvantaged communities. Most importantly, this coordination helps our region accomplish its goals and further its policy priorities.

Moving People and Goods

The region's transportation system must be able to move people and goods both within the region and beyond. Bicycle and pedestrian planning helps more people get around without needing access to cars. Freight planning not only helps move goods but also supports the economy. Intercity buses and airports provide connections to cities across the nation and the world.

Bicycle and Pedestrian Planning

The metropolitan Washington region is a national leader in bicycle and pedestrian-oriented community design. Bike sharing, protected bike lanes, bike trails, and bike parking have been critical to the success of new developments such as the Wharf in the District of Columbia and Potomac Yards in Arlington. Projects like the National Capital Trail, a circumferential route around the core of the region, are knitting trails across the region into a true network, and projects like Frederick's Ballenger Creek Trail are linking residential and commercial areas to parks and other community assets.

Currently, there are over 500 miles of bike paths and over 200 miles of bike lanes in the region. Since 2006, the region has added roughly 300 miles of paved bike paths and bike lanes to the network, or roughly 20 miles per year. Walking and biking are forecast to increase at much higher rates than any other mode of travel (see the performance analysis summary in Chapter 5).

TPB'S ROLE

As long-time regional priorities, biking and walking are highlighted in the TPB's Vision, RTPP, and the recently endorsed aspirational initiatives. In 2012, the TPB adopted a regional Complete Streets policy that helped build a consensus that the transportation system should provide safe and adequate accommodation for all users. Today, all three states and most of the local jurisdictions in the region have a Complete Streets policy.

The TPB's Bicycle and Pedestrian Subcommittee oversees the maintenance of the regional Bicycle and Pedestrian Plan, as well as the region's Street Smart Pedestrian and Bicycle Safety Campaign. The subcommittee also helps state and local agencies share information and coordinate their bicycle and pedestrian planning efforts. The subcommittee worked with stakeholders, including the National Park Service, to identify trail gaps and needed improvements for the National Capital Trail, a bike route around the urban core, and the subcommittee also promoted the trail as an initiative for the TPB's endorsement.

The 2015 Bicycle and Pedestrian Plan for the National Capital Region identifies the capital improvements, studies, actions, and strategies that the region proposes to carry out by 2040 for major bicycle and pedestrian improvements in the state, local, and agency plans. The plan provides a regional picture of bicycle and pedestrian planning and serves as a resource for planners and the public. The plan is updated every four years, with a new version due for public release in Fall 2018. More information about the plan can be found at mwcog.org/BikePedPlan.

Other TPB activities include "Street Smart," a cost-effective regional media campaign that draws attention to the human impact of unsafe driving and, through Commuter Connections, COG and the TPB promote bicycling as a commuter option through programs like Bike to Work Day.

VISUALIZE THE FUTURE

In the future, people in the region will have even more options to travel throughout the region by foot or by bike. More trails, sidewalks, and ways to get around safely and comfortably will not only inspire more people to choose biking and walking but also reduce congestion by taking cars off the roads, improve the environment, and provide a healthy way to travel.

ONGOING CHALLENGES

The boom in walking and bicycling has been largely confined to the urban core and a few places in the inner suburbs. Much of the region is built around driving. Safe and adequate accommodation for pedestrians and bicyclists is a challenge in low-density communities, where roads are wider and traffic speeds are higher.

THE POLICY CONTEXT

Aspirational Initiatives

Completing the National Capital Trail and making it easier to walk and bike to transit are two of the seven initiatives.

Planning Factors

- Increase the safety of the transportation system for motorized and nonmotorized users.
- Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns.

RTPP Goals

- Provide a comprehensive range of transportation options
- Promote a strong regional economy, including a healthy regional core and dynamic activity centers
- Maximize operational effectiveness and safety of the transportation system.

Freight Planning

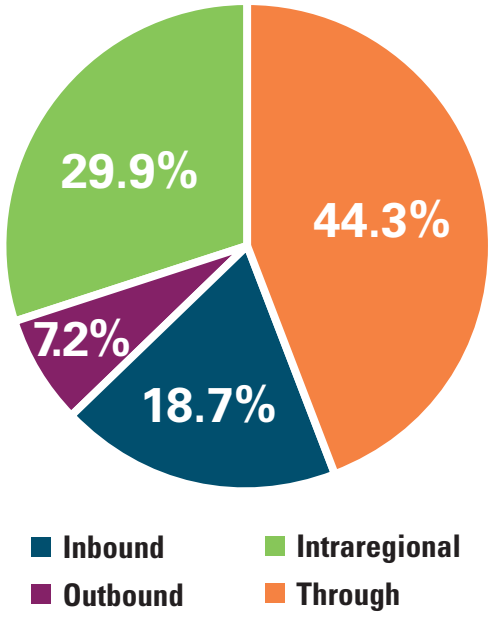
Each year hundreds of millions of tons of freight valued in the billions of dollars move over the region's roadways and railways and pass through its airports, contributing to the economic vitality of metropolitan Washington. The TPB has an important role to play in ensuring that the regional transportation system continues to be responsive to and supportive of the freight demands placed upon it by its residents, businesses, and visitors.

TPB'S ROLE

The freight element is a collaborative and education-oriented process. One of the TPB's key roles in this element is to host the TPB Freight Subcommittee, which provides a venue in which both public- and private-sector representatives share information and provide freight-related input to the regional transportation planning process. Other key activities include fostering coordination on freight transportation issues and disseminating research findings to member jurisdictions and other public- and private-sector stakeholders.

The National Capital Region Freight Plan[2] is produced (or updated) roughly every four years. This plan describes the role freight transportation plays in the region's economy, discusses the drivers of freight demand and the freight flows resulting from it, identifies the most significant freight issues in the region, and provides policies and recommendations to ensure the multimodal freight transportation system continues to support the economy of the region and the quality of life of its residents and visitors. The most recent update to this plan was completed in 2016 and includes a set of 17 freight policies developed and approved by the TPB (see the TPB-approved freight policies on page 80 of the Freight Plan). The Freight Plan as well as information about other freight topics can be found at **mwcog.org/freight**.

Figure 7.1 Direction of Freight by Weight



- **Inbound** freight is moved from other states, or other countries, to the region.
- **Outbound** freight is moved from the region to other areas of the United States, or to other countries.
- **Intraregional** freight is moved from one point in the region to another point in the region.
- **Through** freight is moved from a location outside of the region to another location outside of the region, via transportation infrastructure within the region.

[2] *National Capital Region Freight Plan. July 2016. mwcog.org/documents/2010/07/28/national-capital-region-freight-plan-freight/*

(Mike Mozart/Flickr)

VISUALIZE THE FUTURE

Efficient movement of goods is vital to our economy and is an enabler of livability – it supports businesses of all types and allows residents of the region to enjoy a high quality of life. Analyses of federal data indicate that the region receives about 2½ times more inbound freight than it produces outbound freight (see Figure 7.1). The forecast for continued economic growth along the eastern seaboard, throughout the nation, and across the world will result in greater quantities of goods moving into, out of, and through our region. Through collaborative efforts and planning, the TPB is committed to helping the region realize the benefits of freight while mitigating its negative externalities.

ONGOING CHALLENGES

More people now than ever order goods online and for delivery to their residence, workplace, or other convenient locations, and businesses have responded by investing in new technologies and systems to better satisfy these demands. The resulting growth of e-commerce combined with the desire by many people to live in amenity-rich urban neighborhoods has increased the number of trucks competing for the limited supply of roadway and curbside space. Street design features common in more densely populated areas, such as bike lanes and narrower intersections with tighter turning radii, can make it difficult for trucks to navigate turns, and trucks making deliveries can block access for pedestrians and cyclists. As more trucks operate in dense urban areas, some negative aspects of freight such as unwanted noise, pollutants, and vibrations from freight vehicles present significant challenges to communities in our region.

THE POLICY CONTEXT

Aspirational Initiatives

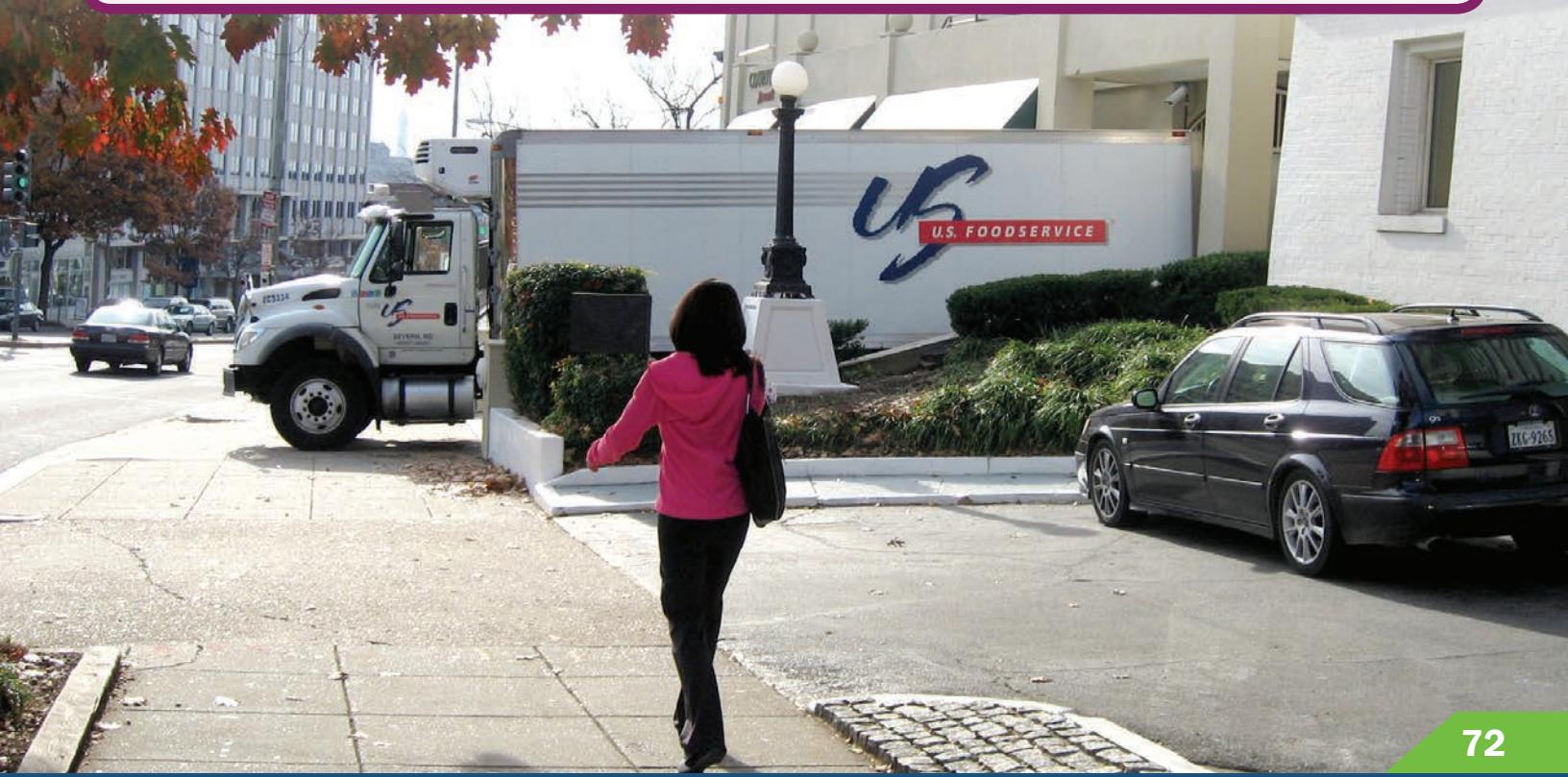
By addressing the congestion and mobility challenges forecast for the region, the aspirational initiatives would improve the ability of the transportation system to respond to the demands that freight deliveries place on it.

Planning Factors

- Increase the accessibility and mobility of people and freight.
- Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight.

RTPP Goals

- Promote a strong regional economy, including a healthy regional core and dynamic Activity Centers.
- Support inter-regional and international travel and commerce.



Airport Systems Planning

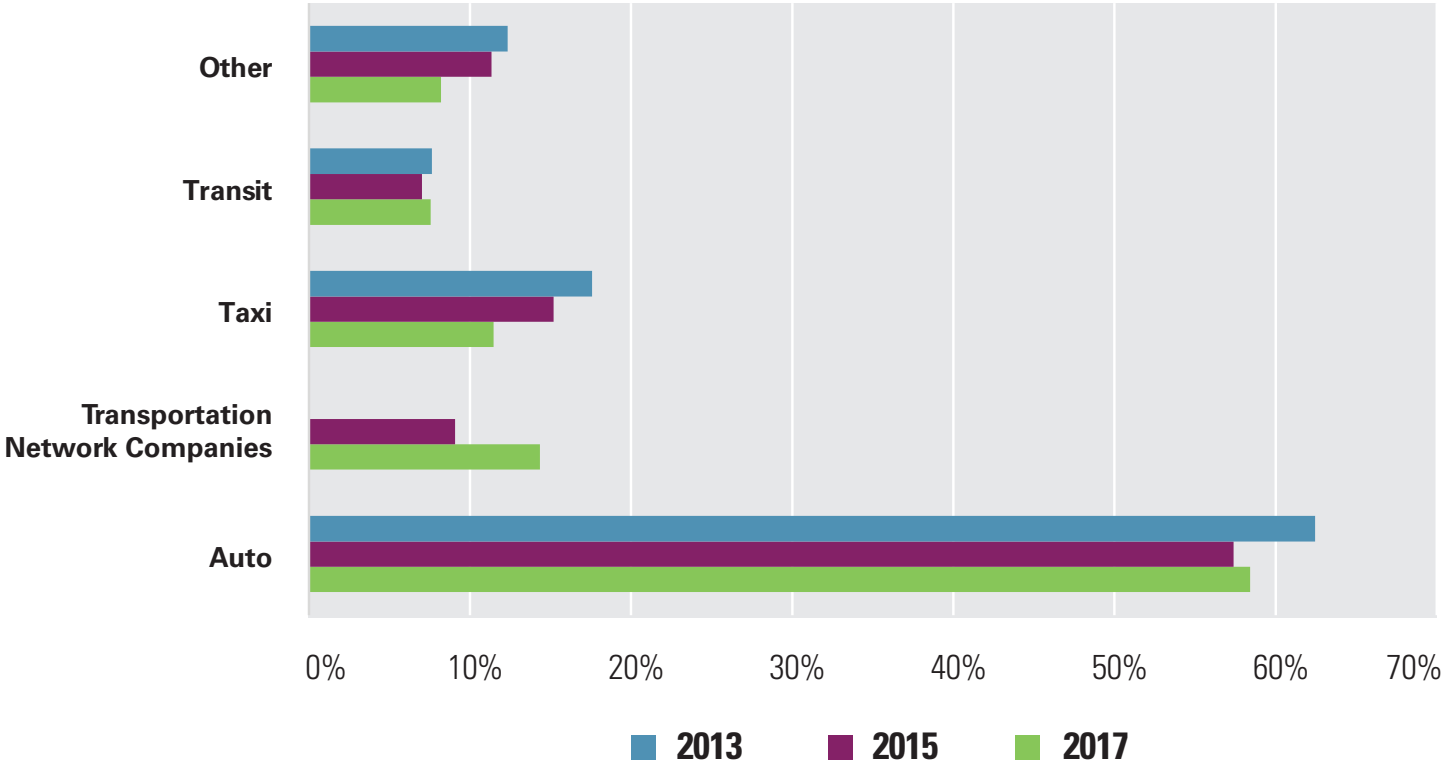
Each year, more than 35 million people and 400,000 tons of freight cargo pass through the region's three major airports—Ronald Reagan Washington National (DCA), Washington Dulles International (IAD), and Baltimore-Washington International Thurgood Marshall (BWI) airports. In all, the airports directly or indirectly support more than 450,000 jobs and some $50 billion in annual economic activity.

Through its Continuous Airport Systems Planning (CASP) program, the TPB supports the planning, development, and operation of airport facilities and the transportation facilities that serve the airports in a systematic framework for the region. This work includes monitoring local air travel patterns, forecasting future air passenger and air cargo needs, and developing plans for improving how people and goods get to and from the region's airports.

TPB'S ROLE

The CASP program is developed, implemented, and monitored under the oversight of the Aviation Technical Subcommittee, which is responsible for coordinating airport system planning with the regional transportation planning process. The airport system planning process begins with a regional air passenger survey and is followed by forecasts of future air passenger travel and the ground travel of these air passengers to and from the airports. These forecasts in turn influence the Regional Airport System Plan update. Figure 7.2 shows some of the information that the TPB gathers on ground travel to the region's airports. More information about the airport system planning process can be found at **mwcog.org/CASP**.

Figure 7.2 Departing Passengers Mode of Access to Airport



VISUALIZE THE FUTURE

According to the Federal Aviation Administration (FAA) Terminal Area Forecast, between 2015 and 2040, overall enplanement (boarding air passengers) in the region is projected to increase by 62%. As the region's airports will continue to serve more and more passengers each year, the TPB's airport systems planning and coordination efforts will help make access to air travel easier for air passengers, airport employees, and freight products alike. One significant change in the near future will be the upcoming expansion of Metrorail's Silver Line to Dulles Airport.

ONGOING CHALLENGES

Recently, as more people use application-based ride hailing services (transportation network companies, also known as TNCs, like Uber and Lyft), fewer people are using taxis and – pending additional data - other transportation modes as well. This trend should be carefully monitored as reductions in transit ridership due to TNC growth could counter ongoing regional efforts to reduce roadway congestion. Technological disruptors, such as autonomous vehicles, flying taxis (such as Uber Elevate), and unmanned aerial vehicles (i.e. drones) must be factored into long-term regional airport systems ground access planning efforts. Additionally, with the upcoming expansion of Metrorail's Silver Line to Dulles Airport, upcoming air passenger surveys must be designed in a way to accurately measure the impact of the Metro extension.

THE POLICY CONTEXT

Aspirational Initiatives

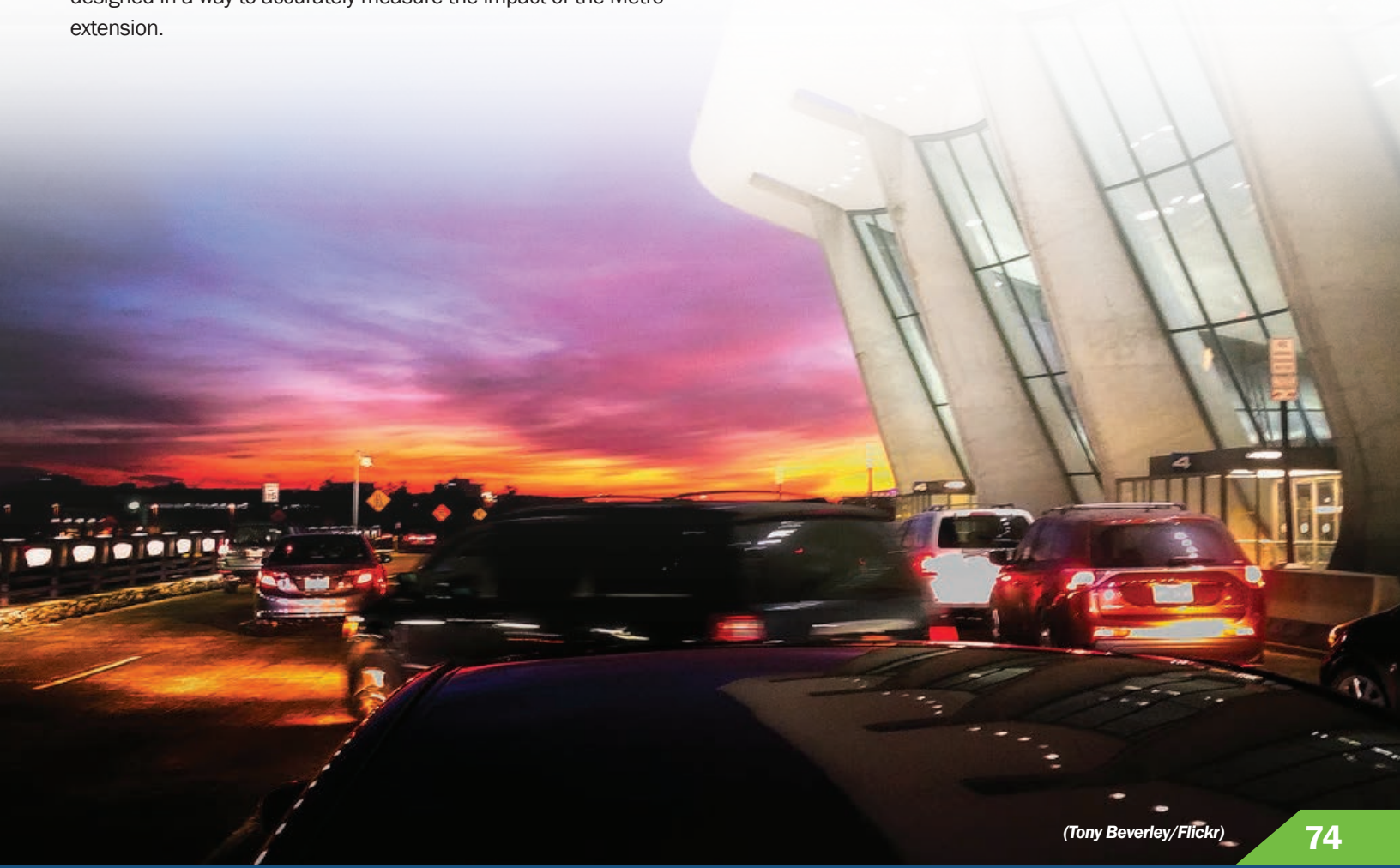
The express travel network would provide several benefits for airport ground access connectivity, including reducing congestion and incentivizing travelers to either carpool or travel by transit vehicle. Expanding Metrorail capacity would increase logistical ease and comfort for those traveling by Metrorail to and from airports.

Planning Factors

- Enhance travel and tourism.
- Increase accessibility and mobility of people.
- Increase accessibility and mobility of freight.

RTPP Goals

- Provide a comprehensive range of transportation options.
- Support inter-regional and international travel and commerce.



(Tony Beverley/Flickr)

Intercity Buses

Intercity buses are privately operated bus services that travel between the metropolitan Washington area and other major cities or destinations, primarily for non-commuting purposes.[3] The region's intercity bus network serves thousands of person trips daily through companies such as Greyhound and Peter Pan. While these trips are primarily originating from or traveling to the New York City metropolitan area in and out of Union Station in Washington, DC, opportunities remain for a regionally coordinated effort to capture additional markets and expand capacity and connectivity to stations throughout the region.

(Elvert Barnes/Flickr)

TPB'S ROLE

In 2016 TPB completed a study called "Intercity Bus Traffic and Patronage in the Metropolitan Washington Region."[4] This study was the region's first known effort to quantify intercity bus ridership, the locations where travelers board and alight, and origins and destinations outside of the region (some results are shown in Table 7.3). The study has the potential to inform transportation demand management and other TPB planning efforts. The study also has laid the groundwork for developing a regional strategy to expand, enhance, and better coordinate increased capacity, multimodal connectivity, information sharing, and tourism efforts for the region's intercity bus network. The TPB's intercity bus planning efforts are overseen by the Regional Public Transportation Subcommittee, whose mission is to provide a permanent process for coordinating public transportation planning throughout the region.

Figure 7.3 Top Seven Origins/Destinations of Intercity Bus Routes

Place of Origin or Destination	Daily Bus Routes	Percentage
New York	301	34%
District of Columbia	232	27%
Virginia (outside TPB modeled region)	98	11%
Virginia (inside TPB modeled region)	71	8%
Pennsylvania	58	7%
Maryland (outside TPB modeled region)	49	6%
Maryland (inside TPB modeled region)	42	5%

[3] The definition of intercity buses excludes commuter bus service to suburban and exurban areas of Maryland and Virginia, nor does it include transit bus service provided by WMATA and the local governments of the region. Sightseeing, charter bus, school bus and contract bus services are also not included in the definition of intercity bus.

[4] Intercity Bus Traffic and Patronage in the Metropolitan Washington Region, January 2017 (TPB, 2017) mwcog.org/documents/2017/01/18/intercity-bus-traffic-and-patronage-in-the-metropolitan-washington-region-bus/

ONGOING CHALLENGES

As the region continues to experience great economic success, and the increased density that comes with it, there will be additional competition for staging areas among intercity buses, commuter buses, and tour buses. Developing a regional intercity bus strategy that establishes the appropriate systems for effectively coordinating across jurisdictional and agency boundaries is a key step to further coordinating and improving activities for the future.

VISUALIZE THE FUTURE

The existing robust network of intercity buses could be made even better in the future with coordinated planning activities. Additional studies and other efforts for improving the region's intercity bus network might include conducting bus passenger surveys that collect more detailed information about when and why people travel by intercity bus. Such a survey could provide key insights that help shape a regional strategy for coordinating and expanding intercity bus services. The attainment of this additional information could also potentially help integrate external transit trip data into the TPB travel demand model.

THE POLICY CONTEXT

Aspirational Initiatives

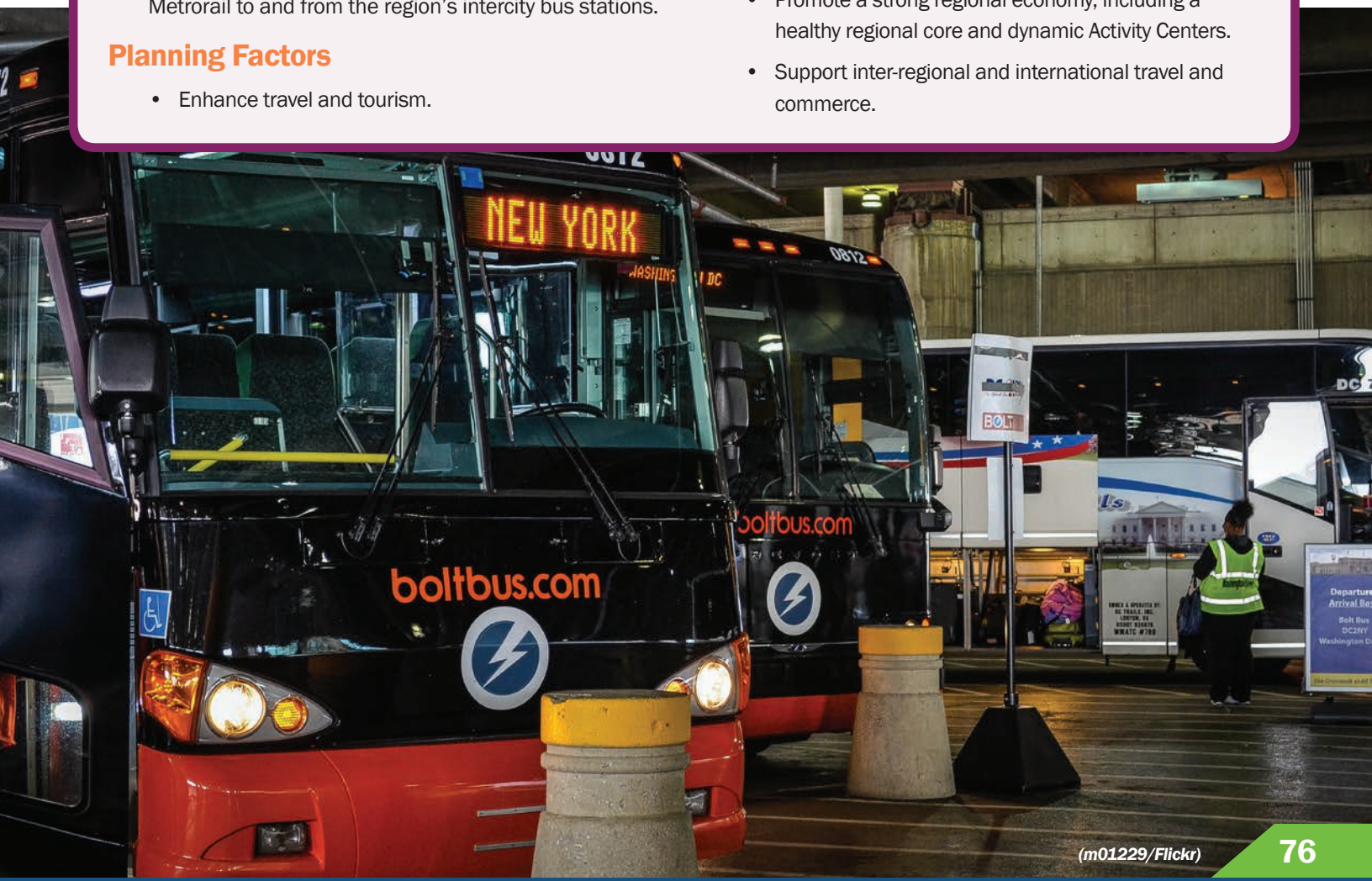
Expanding BRT throughout the region with improved bicycle and pedestrian connections would provide additional connectivity needed for making existing and future intercity bus stations more accessible for all. Expanding Metrorail core capacity would provide logistical ease and comfort for those traveling by Metrorail to and from the region's intercity bus stations.

Planning Factors

- Enhance travel and tourism.
- Increase the accessibility and mobility of people and for freight.
- Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight.

RTPP Goals

- Promote a strong regional economy, including a healthy regional core and dynamic Activity Centers.
- Support inter-regional and international travel and commerce.



(m01229/Flickr)

Planning and Policy

Transportation systems work best when they are integrated with local land-use, consider the environment, and serve all the region's residents. These systems also must work well when they are disrupted by weather events or emergencies such as flooding, snow, fires, or human acts. By working together as a region, we can plan better systems to address people's needs and implement a transportation network that works for everyone.

Land-Use Coordination

Land-use and transportation have a complex and intertwined relationship. Together they influence travel behavior, how goods and services are distributed, the environment, health, community character, and economic vitality. Coordinated planning plays a key role in effectively using existing facilities, continuing sustainable development, and maintaining global competitiveness.

TPB'S ROLE

The TPB and its staff collaborate with COG's Department of Community Planning and Services (DCPS) staff to support regional land-use and transportation coordination. At the policy level, the TPB, COG Board, and Region Forward Coalition work to develop long-range regional planning goals and to integrate planning policies around land-use, transportation, housing, and the environment.

Through staff support, local jurisdictions are provided with opportunities to inform the TPB about market conditions, real estate development, land-use plans, and growth forecasts for employment, population, and households. In addition, DCPS staff also coordinates closely with the National Capital Planning Commission (NCPC) and General Services Administration (GSA) in planning and locating federal facilities throughout the region. The TPB Technical Committee and COG's Planning Directors Technical Advisory Committee (PDTAC) coordinate at the technical and policy level. COG's Cooperative Forecasting Program develops forecasts of employment, population, and households. The TPB's Travel Forecasting Subcommittee oversees how these forecasts are used to develop the regional travel demand forecasting model as well as the collection of household travel behavior data.

The TPB's Transportation/Land Use Connections (TLC) program supports planning for vibrant and accessible communities. The program has three major components. First, it provides technical assistance to local jurisdictions working on creative and sustainable plans and projects. Second, it supports a competitive selection process for the federal Transportation Alternatives Set Aside Program and seeks to fund projects aligned with TPB's regional priorities and goals. And third, it provides a way for planners in the region to share information about best practices and model projects through the TLC Peer Exchange Network.

(Geoff Livingston/Flickr)

VISUALIZE THE FUTURE

Through coordinated land-use and transportation planning, the region has prioritized employment, population, and household growth in Activity Centers and near premium transit. Two-thirds of forecasted employment growth and nearly one-third of forecasted population growth between now and 2045 is forecasted to be located in Activity Centers. With continued coordination, these urban centers, suburban town centers, traditional towns, and transit hubs will develop into vibrant places that support the region's economic vitality.

ONGOING CHALLENGES

Land-use goals approved in COG's Region Forward plan recommend focusing half of the region's residential growth and three-fourths of future job growth in Activity Centers. Due to the desirability of these places, focusing affordably priced housing in Activity Centers is particularly challenging. Also, while the TPB has endorsed aspirational goals to re-direct additional growth into Activity Centers, high-capacity transit stations, or other key locations, it is important to acknowledge that more than three-quarters of the total number of jobs and housing forecast for the year 2045 already exist. Jobs will continue be more concentrated in Activity Centers and housing will grow more in Activity Centers than in the past – but a fair amount of housing will continue to grow outside Activity Centers. Regional leaders will continue to face the challenge of balancing job and housing growth. Much of the anticipated development for the next decade is underway, so policy makers will need to act now to influence these longer-term goals.

THE POLICY CONTEXT

Aspirational Initiatives

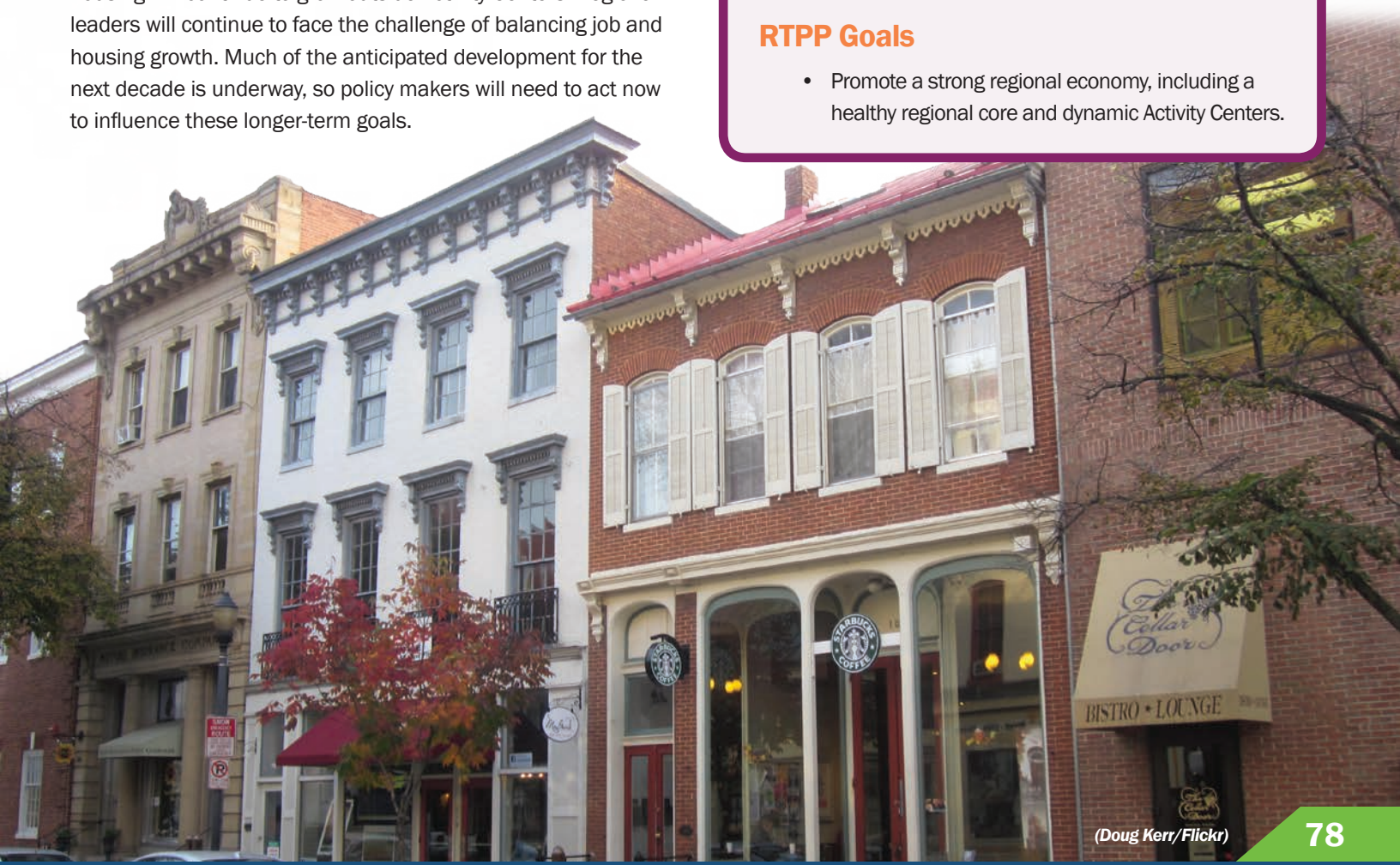
Analyzing growth, providing technical assistance, and sharing best practices for placemaking and development play fundamental roles in the optimizing regional land-use balance initiative. This coordination plays a fundamental role in helping the region increase jobs and housing around underused rail stations and Activity Centers with high-capacity transit. It also helps coordinate building the additional housing needed to match employment demand shown in regional projections.

Planning Factors

- Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency.
- Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns.

RTPP Goals

- Promote a strong regional economy, including a healthy regional core and dynamic Activity Centers.



(Doug Kerr/Flickr)

Equity and Inclusion

The TPB is committed to ensuring transportation-disadvantaged populations are actively included in the planning process. The TPB works to meet and exceed federal requirements by first engaging these populations on regional issues and, secondly, evaluating the financially constrained element of Visualize 2045 for disproportionately high and adverse impacts on low-income and minority populations.[5] The TPB proactively ensures that people with limited English skills and those with disabilities can fully participate in and benefit from TPB-related work.

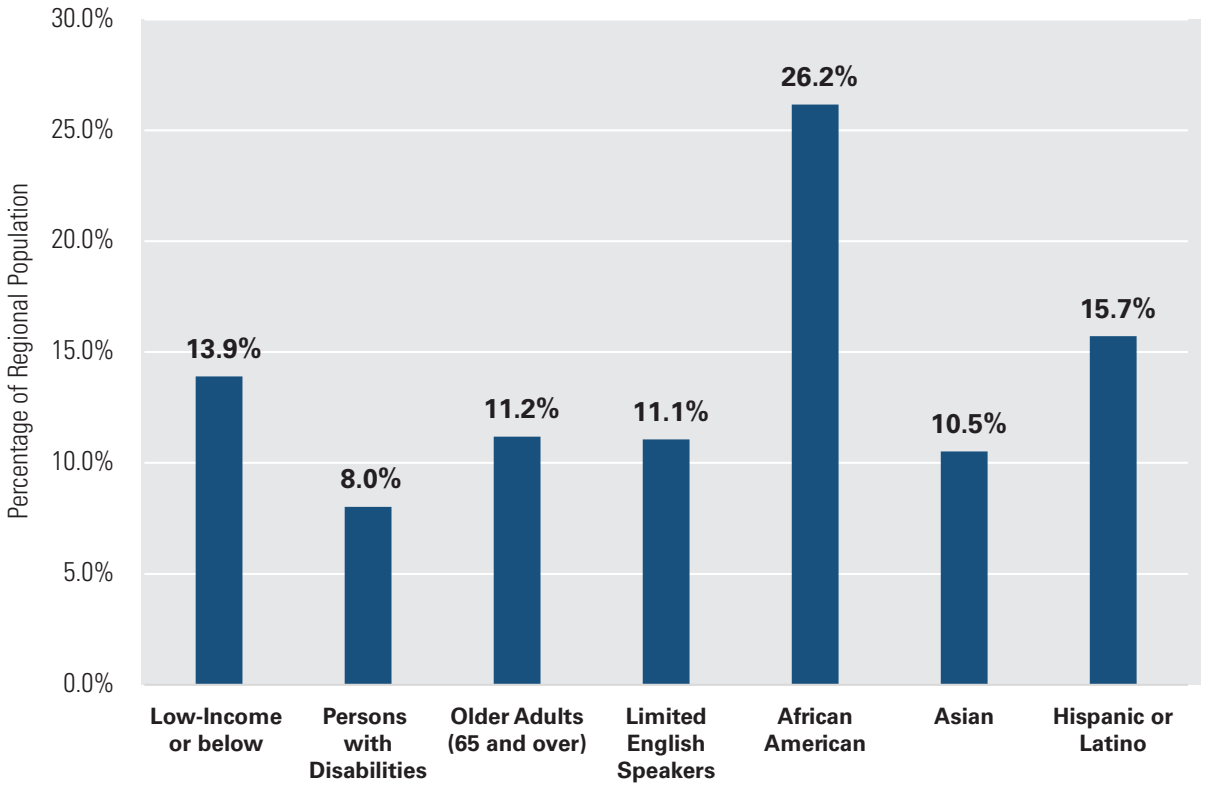
TPB'S ROLE

In 2017, the TPB adopted the "Equity Emphasis Areas" (EEAs, Figure 7.5) as a tool to examine demographic patterns in our region and also to analyze the regional long-range transportation plan for disproportionate and adverse impacts. EEAs are small geographic areas that have concentrations of low-income and/or minority populations based on Census data. An online interactive map of the EEAs helps inform the region about spatial patterns for various population groups: **mwcog.org/EEAmap**. More information about the EEAs can be found at **mwcog.org/EEA**.

The EEAs will be used to analyze the financialy constrained element of Visualize 2045 by comparing accessibility and mobility measures in the Equity Emphasis Areas versus the rest of the region projected for the year 2045. The EEAs are also used in other COG and TPB planning activities and the data have been made available to local jurisdictions to assist them in considering equity in initiatives, such as housing, education, health care and greenspace.

The TPB also has a proactive public involvement process to ensure that the concerns of these populations are being heard. Chapter 8 describes this process, including the important role that the Access for All Advisory Committee plays, advising the TPB on transportation issues, programs, policies, and services important to traditionally underserved communities. The regional makeup of these communities can be seen in Figure 7.4.[6] Finally, COG's Title VI Plan provides necessary policies and practices to ensure non-discrimination, available at **mwcog.org/TitleVI**.

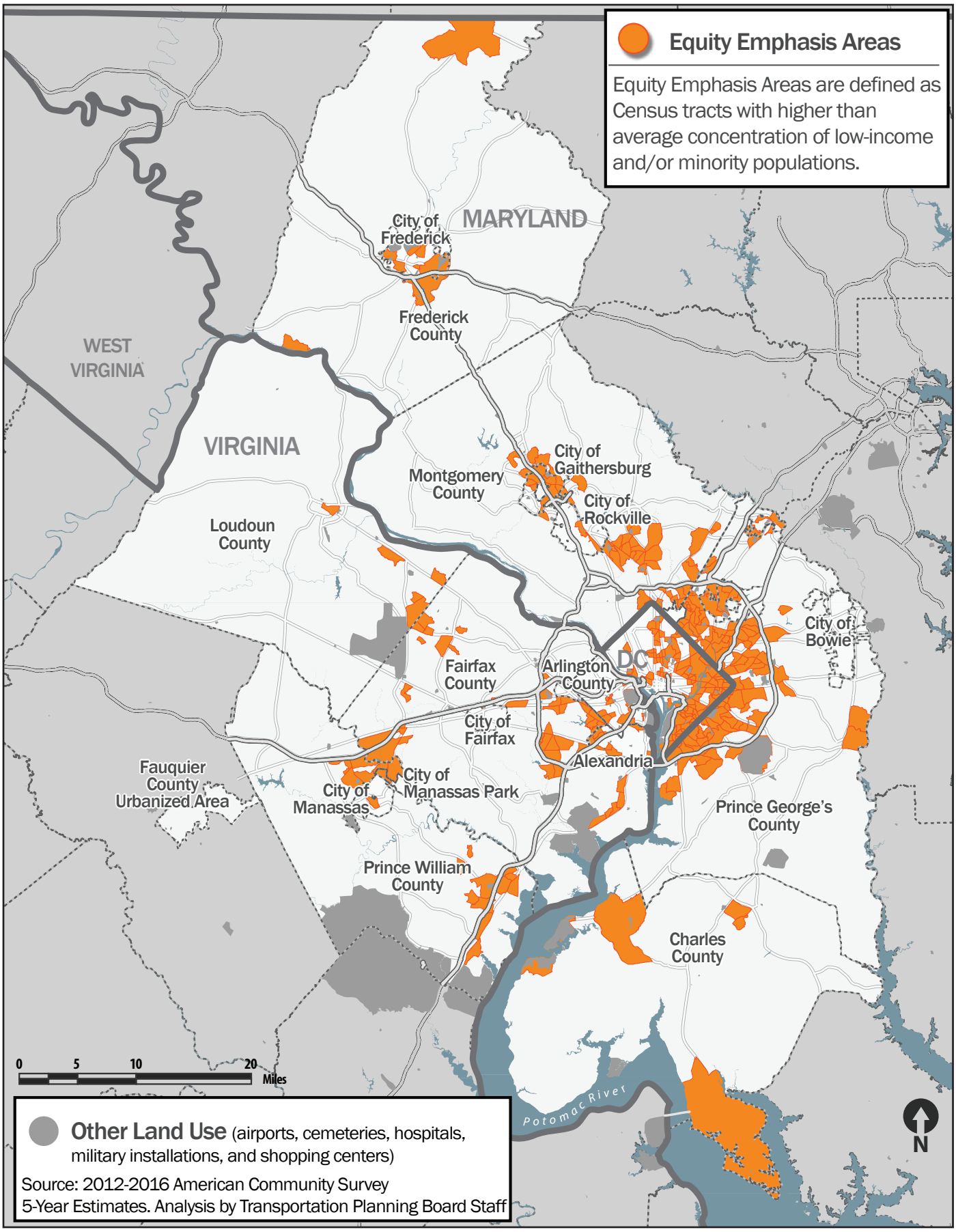
Figure 7.4 Regional Demographic Profile of Transportation-Disadvantaged Populations in the Washington Region, 2016 (Source: 2012-2016 U.S. Census American Community Survey)



[5] The legal basis for this requirement comes from Title VI of the 1964 Civil Rights Act and Executive Order 12898 on Environmental Justice (EJ). These requirements mean that the TPB must not deny participation in or the benefits of planning activities based on an individual's race, ethnicity, or income.

[6] Due to each groups' unique sampling "Percent of Region" will not compute with total population; "Low-income" is commonly defined as income between 100-150% of the poverty level. For a family of four an annual income of $36,509 or below is considered low income; "Persons with disabilities" includes individuals with a physical, sensory, and/or cognitive disability; Limited English Proficiency includes individuals who speak English less than "very well."

Figure 7.5 Equity Emphasis Areas



ONGOING CHALLENGES

In a dynamic and growing region such as the metropolitan Washington area, demographics shift and change – often quickly – and it's a challenge to keep demographic data up to date. This makes analyzing the future impact of the financially constrained element of Visualize 2045 on transportation-disadvantaged populations even more challenging. Forecasting the impacts of the constrained element on these populations in the future is an inexact science. The TPB is committed to using the most current methods of analysis, the latest demographic data, and public engagement methods to help inform the region about the transportation needs of all population groups—and to creating a fair, accessible, and inclusive transportation system.

THE POLICY CONTEXT

Aspirational Initiatives

The Equity Emphasis Areas may be used by state and local agencies, at their discretion, to consider equity in any of the initiatives. Optimizing land-use in which jobs and housing are closer together could improve accessibility in the Equity Emphasis Areas.

Planning Factors

- Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns.

RTPP Goals

- Promote a strong regional economy, including a healthy regional core and dynamic Activity Centers.
- Enhance environmental quality and protect natural and cultural resources.

(Elvert Barnes/Flickr)

Coordinated Human Service Transportation Plan

INTRODUCTION

The TPB engages in human service transportation coordination efforts to improve transportation for persons with disabilities, older adults, and other transportation-disadvantaged populations. TPB partners with COG, which is the designated recipient of the Federal Transit Administration's (FTA) Enhanced Mobility of Seniors and Individuals with Disabilities program. The Enhanced Mobility program provides matching grants to improve access to transportation for older adults and people with disabilities.

A coordinated human service transportation plan is required to guide Enhanced Mobility funding decisions. The TPB adopted the Coordinated Human Service Transportation Plan in 2014. An update is scheduled to be adopted in late 2018.

(The Arc of Prince William)


(CHV)

TPB'S ROLE

The coordinated plan highlights unmet transportation needs for people with disabilities, older adults, and those with low incomes, and identifies strategies to meet those needs. These needs can be grouped into four themes: accessiblity, availability, affordability and awareness.

The plan also includes priority projects that can help the region better serve targeted groups. The priority projects and the selection criteria inform the selection process for Enhanced Mobility grant funding. Since 2007, the TPB has awarded more than 100 projects totalling over $60 million in Enhanced Mobility, Job Access and Reverse Commute and New Freedom grants. These grants have given more options to people who otherwise have few. The Access for All Advisory Committee is charged with providing input into the development of the coordinated plan. The Coordinated Plan can be found on the Enhanced Mobility website, **tpbcoordination.org**.

VISUALIZE THE FUTURE

The TPB's Human Service Transportation Coordination work moves the region towards a more inclusive transportation system and true "access for all." While the unmet needs for transportation-disadvantated populations are broad and wide-ranging, the coordinated plan helps inform the region about current conditions and also can guide discussions about future transportation opportunities and in some cases, how technology can address the needs of transportation disadvantaged populations.

ONGOING CHALLENGES

In this diverse and complex region, a variety of transportation options and strategies will be needed to meet the wide-ranging and broad challenges faced by older adults, people with disabilities, and those with limited incomes today and in the future. As the population continues to age, meeting the needs of older drivers and transitioning people from driving to other options will be important. Ensuring that people with disabilities can access and use pedestrian infrastructure and public transit will also be imperative, as well as providing tailored transportation options such as door-to-door services.

Inclusive planning for the region's transportation future involves having continued discussions with community groups and transportation-disadvantaged popuations. In particular, engaging these populations to help make app-based services and automated vehicles universally accessible will contribute to planning for a region that fullfills the hopes people have for addressing mobility challenges with technology.

THE POLICY CONTEXT

Aspirational Initiatives

The transit-focused initiatives, such as the bus rapid transit and Metrorail ones, could help address the unmet transportation needs of people with disabilities and older adults. Optimizing the region's land-use and building more housing in Activity Centers would provide more easily accessible services for transportation-disadvantaged populations.

Planning Factors

- Increase the accessibility and mobility of people and freight
- Increase the safety of the transportation system for motorized and nonmotorized users

RTPP Goals

- Provide a comprehensive range of transportation options
- Maximize operational effectiveness and safety of the transportation system

(BeyondDC/Flickr)

Travel and Tourism

INTRODUCTION

Tourism is one of the largest export sectors in the metropolitan Washington regional economy, accounting for $6.8 billion of the $27 billion total 2014 export value.[7] The region's transportation infrastructure is a key element to the tourism economy: there are three major commercial airports, significant intercity rail and bus networks, as well as one of the largest rail and bus transit systems in the country. Opportunities abound for aligning transportation planning efforts with a regional travel and tourism strategy to meet the transportation needs of the region's current and future tourism economy.

(Jeffrey Zeldman/Flickr)

TPB'S ROLE

Travel and tourism planning is overseen by the Regional Public Transportation Subcommittee (RPTS),[8] whose mission is to provide a permanent process for coordinating public transportation planning throughout the metropolitan Washington region. Visualize 2045 marks the first time the TPB is incorporating travel and tourism into the long-range transportation plan due to new federal requirements. However, over the past few decades TPB and COG have laid the policy and research groundwork for regional travel and tourism planning. Visualize 2045 marks a new phase in that planning effort.

- The TPB Vision emphasizes a regional transportation system that promotes the region's economy and joins rail, roadway, bus, air, water, pedestrian, and bicycle fatalities into a fully interconnected network.
- Among other relevant elements within the Regional Transportation Priorities Plan, Goal Six calls for the support of inter-regional and international travel and commerce.
- A 2016 TPB study, "Intercity Bus Traffic and Patronage in the Metropolitan Washington Region,"[9] is the region's first known effort to quantify intercity bus ridership, where travelers board and alight, and origins and destinations outside of the region.
- A COG report called "State of the Region: Economic Competitiveness Report"[10] highlights some of the many regional attractions fueling growth in the National Capital Region's tourism industry, including the dozens of museums, embassies, and entertainment venues, combined with natural amenities such as major rivers and almost 190,000 acres of parklands.

[7] *Benchmarking Greater Washington's Global Reach: The National Capital Region in the World Economy, Global Cities Initiative, 2015-page 16*

[8] *For more information about the TPB's Regional Public Transportation Subcommittee, please visit mwcog.org/committees/regional-public-transportation-subcommittee/*

[9] *Intercity Bus Traffic and Patronage in the Metropolitan Washington Region, January 2017 (TPB, 2017) mwcog.org/documents/2017/01/18/intercity-bus-traffic-and-patronage-in-the-metropolitan-washington-region-bus/*

[10] *State of the Region: Economic Competitiveness Report (MWCOG, 2016) mwcog.org/documents/2016/1/13/state-of-the-region-economic-competitiveness-report/*

VISUALIZE THE FUTURE

The TPB has the opportunity to embark on developing a regional strategy for travel and tourism, although exact pathways still need to be determined. Additional studies and other coordinated efforts for developing a regional travel and tourism strategy could include conducting regional surveys on people traveling to the region for vacation purposes, which would collect key information regarding travel behavior as it pertains to tourism. This information could also provide additional relevant data to the TPB's travel demand model, which currently does not include external public transit trips.

ONGOING CHALLENGES

The region prioritizes making our transportation system easy to use for everyone regardless of whether they live here or not, but there are still challenges. Having easy-to-understand signage on public transit, on roadways and in airports is key, as well as providing information in different languages. Making travel affordable matters to visitors and residents alike. With so many jurisdictions in the National Capital Area it can also be a challenge for users to understand the different transit systems and transfer between them. Developing a regional strategy that establishes the appropriate systems for effectively coordinating travel and tourism efforts across jurisdictional and agency boundaries will require significant cooperation and strategic planning.

THE POLICY CONTEXT

Aspirational Initiatives

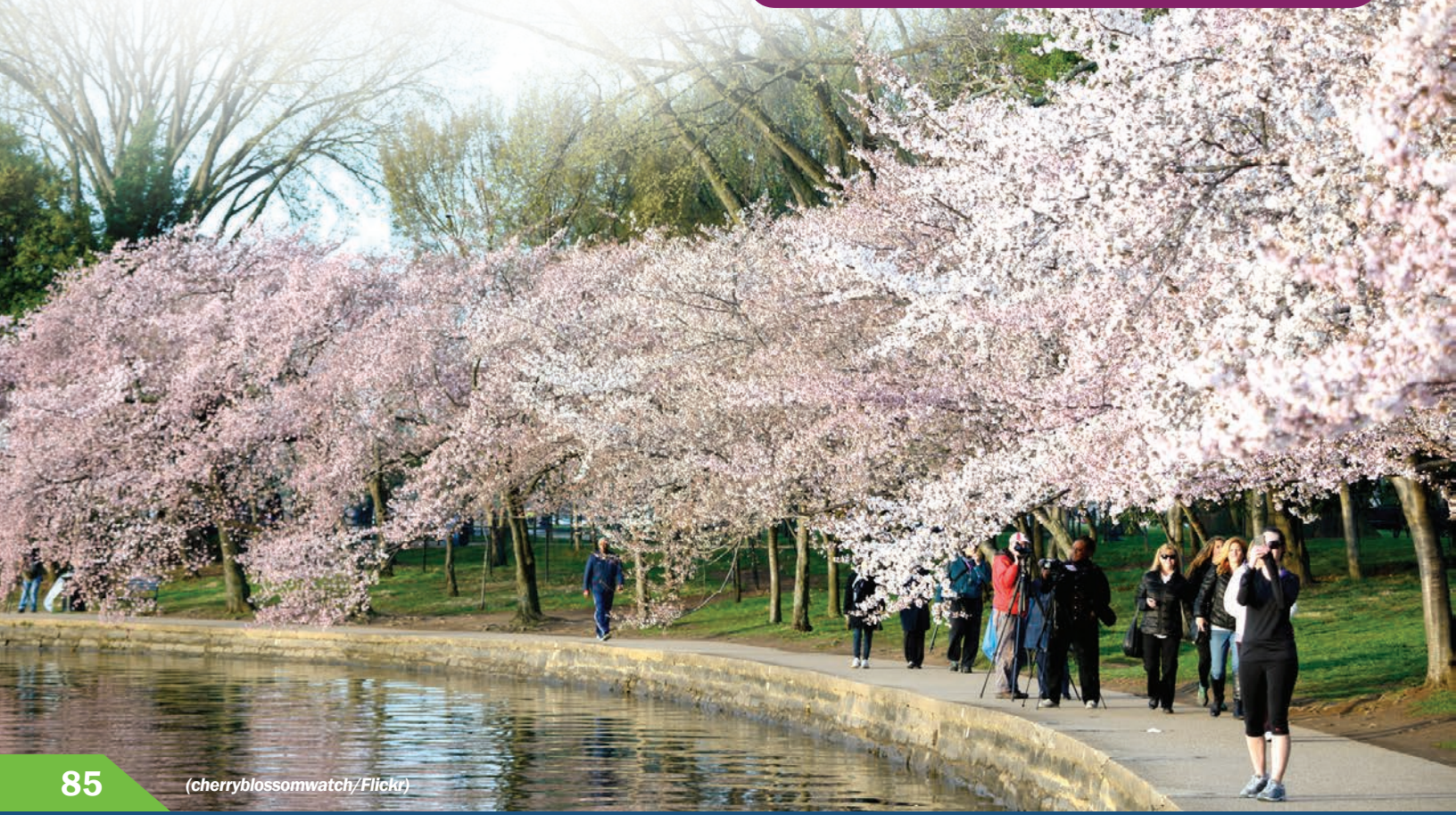
Metrorail core capacity improvements and expanding BRT in the region would provide more frequent and reliable public transportation, which is essential for providing a welcoming and efficient system to support travel and tourism. Bicycle and pedestrian improvements around transit stations will also encourage public transportation use among tourists.

Planning Factors

- Enhance travel and tourism.
- Support the economic vitality of the metropolitan area.
- Enhance the integration and connectivity of the transportation system across and between modes for people.

RTPP Goals

- Promote a strong regional economy, including a healthy regional core and dynamic Activity Centers.
- Support inter-regional and international travel and commerce.



(cherryblossomwatch/Flickr)

Resiliency and Reliability

INTRODUCTION

In the context of this plan, "resiliency" is the ability of transportation systems to withstand or recover from extreme or changing conditions and continue to provide reliable mobility and accessibility in the region. Impacts of weather, other natural events, or man-made events need to be considered in resiliency. Examples of such impacts include hurricanes and other high wind events, floods, snow and ice, wildfires, temperature extremes, earthquakes, and other hazards.

TPB'S ROLE

Resiliency and reliability are key concerns to the TPB, and this topic is a federally-required element of metropolitan transportation plans. Many events over the years serve as reminders that the region must be as prepared as possible to deal with disruptions to the system from weather-related events. Visualize 2045 supports the region's transportation agencies in their resiliency activities in coordination with Metropolitan Washington Council of Governments Department of Environmental Programs (DEP - for more information visit **mwcog.org/environment**).

Ensuring resiliency involves understanding hazards and identifying mitigation strategies. Ensuring reliability involves providing near-term continuity of operations and eventual recovery to normal operations by using operations or demand-oriented strategies. TPB, DEP, and external agencies such as the U.S. Army Corps of Engineers will continue to coordinate efforts to plan for resiliency and reliability in the region.

VISUALIZE THE FUTURE

The damage from extreme events can lead to severe or extended challenges to affected residents and to the region's economy. A resilient transportation system, as envisioned by Visualize 2045, could mitigate or lessen such impacts.

ONGOING CHALLENGES

What will the nature of hazards be in 2045? Uncertainty is a big challenge to planning for a resilient transportation system in the future. Additionally, hazards may occur infrequently but can have a high-impact when they do occur. There are also tradeoffs in determining how to use limited resources in transportation planning – how resiliency ends up being prioritized will impact whether resources will go towards improving the existing system versus spending money on other objectives such as expanded capacity or new services.

THE POLICY CONTEXT

Aspirational Initiatives

The initiatives support resiliency and reliability by promoting alternative means of mobility. Improved transit and non-motorized facilities will provide people with more options for travel in the event of a disturbance. Additionally, the initiative promoting telework and subsidies for transit will help regional preparedness because telework plays an important role in "continuity of operations" of public and private-sector employers during emergencies.

Planning Factors

- Improve the resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation.
- Increase the safety of the transportation system for motorized and nonmotorized users.

RTPP Goals

- Maximize operational effectiveness and safety of the transportation system and commerce.

(Steven Green/Flickr)

Emergency Preparedness and Transportation Security

INTRODUCTION

The transportation system plays an important role in emergencies ranging from everyday traffic incidents to major disasters. Many events over the years, notably the attacks of September 11, 2001, serve as reminders that the region must be as prepared as possible. Preparedness and security are key concerns of the TPB.

TPB'S ROLE

Visualize 2045 both supports and reflects a wider-ranging set of emergency preparedness planning activities. The TPB coordinates efforts with the Metropolitan Washington Council of Governments' (COG's) Homeland Security and Public Safety program, which brings together emergency preparedness and public safety officials from across the region. Together, COG and TPB help facilitate coordination across the region to ensure the preparedness, resiliency and safety of our transportation system. Federal, state, and regional homeland security requirements are fulfilled through numerous COG committees that convene transportation and public safety subject matter experts, especially COG's Transportation Emergency Preparedness Committee. For more information, visit **mwcog.org/public-safety-and-homeland-security/**

VISUALIZE THE FUTURE

The public depends upon the mobility and accessibility that the region's transportation system provides. Emergencies can place exceptional strains on the transportation system, at times when the transportation system is so critical to the public's well-being. Being as ready as possible, whether through resilient infrastructure, operational programs, or information sharing, is vital in transportation's role in emergencies. By coordinating efforts, TPB and COG help the region prepare for emergencies and incidents today and into the future.

ONGOING CHALLENGES

The region's transportation and public safety agencies regularly work in close coordination to address issues of security and emergency preparedness. Risks to the security of the region's transportation system are myriad and constantly evolving. Regional officials are tasked with the challenge of prioritizing security considerations while also taking into account mobility and accessibility needs.

THE POLICY CONTEXT

Aspirational Initiatives

The initiative encouraging increased teleworking will help regional preparedness because telework plays an important role in "continuity of operations" of public and private-sector employers during emergencies.

Planning Factors

- Increase the safety of the transportation system for motorized and nonmotorized users.
- Increase the security of the transportation system for motorized and nonmotorized users.

RTPP Goals

- Maximize operational effectiveness and safety of the transportation system.

Operations and Technology

Transportation systems need to be monitored and maintained on a regular basis so travelers can get the most out of the system no matter how they get around. Transportation Demand Management (TDM) helps people find alternatives to driving alone and gives them simple ways to find other options with the goal of easing congestion on the roads. In the future, emerging technologies may allow better ways of operating the system or provide even more options for people to get around. These programs and technology help provide people in the region with the most up-to-date information, so travelers know what to expect or can have the chance to adjust.

(VDOT/Flickr)

Management and Operations

INTRODUCTION

Getting the most out of the existing transportation system is an important goal of the TPB. Actively managing the system, through management and operations planning and techniques, is one of the most effective ways to accomplish this goal. Transportation agencies are tasked with ensuring that the region's transportation system operates efficiently when faced with incidents, emergencies or varying travel conditions. Examples of management and operations (M&O) planning and techniques include providing real-time traveler information that keeps people informed, timing traffic signals to optimize traffic flow, and creating response plans for managing incidents when they occur; applying current and evolving information technologies such as these often shows strong benefit-cost outcomes.

TPB'S ROLE

The TPB Vision states that "[t]he Washington metropolitan region will use the best available technology to maximize system effectiveness." The TPB and the region's transportation operators pursue efficient and effective M&O solutions to the region's transportation problems through committee work and other activities such as the Metropolitan Area Transportation Operations Coordination (MATOC) program.[11] TPB's Systems Performance, Operations and Technology Subcommittee (SPOTS) explores ways M&O strategies can improve congestion, safety, maintenance, and system efficiency. Identifying technologies, projects and actions that will support effective M&O in the region is a core SPOTS planning program activity. TPB also maintains a Regional Intelligent Transportation Systems (ITS) Architecture website[12] that provides a regional ITS framework for the foreseeable future and serves as a resource for developing ITS technology. More information about TPB's M&O activities can be found at **mwcog.org/mgmt-ops**.

VISUALIZE THE FUTURE

People in the region rely on robust transportation-related information technology every day, while planning for travel and travelling, and the demand for good, dynamic information is growing. Technological capabilities are expanding, bringing more useful features and information to travelers. For example, in certain corridors, equipment detects changing traffic flows and automatically adjusts traffic signal timing accordingly. Additionally, advanced data systems feed traveler information, whether through public services such as 511 websites, mobile phone apps, or the media, helping the public avoid recurring and non-recurring traffic congestion, as well as enabling travelers to choose between options of driving, taking transit, or biking/walking. Electronic signs show when the next bus will arrive at a stop, freeway signs show the travel time to the next major interchange, and multitudes of information are available on mobile phone apps. In the future, these technologies that are currently available will become more widespread; more robust and dynamic technology will enhance the operation of the transportation system to help people travel more efficiently in our region.

[11] MATOC is a consortium of the major transportation agencies of the National Capital Region, whose staff ensures regional real-time information-sharing about incidents and traffic conditions, helping to facilitate the M&O actions of member agencies. See matoc.org.

[12] The Regional Intelligent Transportation Systems (ITS) Architecture website can be found at mwcog.org/itsarch/.

ONGOING CHALLENGES

Rapid technological changes challenge transportation agencies to keep up – today's cutting-edge technology is tomorrow's outdated technology. The public's travel patterns change quickly, and transportation agencies must always be ready to adjust. TPB will help regional transportation agencies face these challenges by continually facilitating information exchange and collaboration.

THE POLICY CONTEXT

Aspirational Initiatives

Technology, management and operations will be key components of the BRT and regional express travel network initiatives. Real-time systems monitoring and "smart" infrastructure enable the safety and travel efficiencies that are key objectives of these initiatives.

Planning Factors

- Increase the safety of the transportation system for motorized and nonmotorized users.
- Increase the security of the transportation system for motorized and nonmotorized users.

RTPP Goals

- Maximize operational effectiveness and safety of the transportation system.

Transportation Demand Management

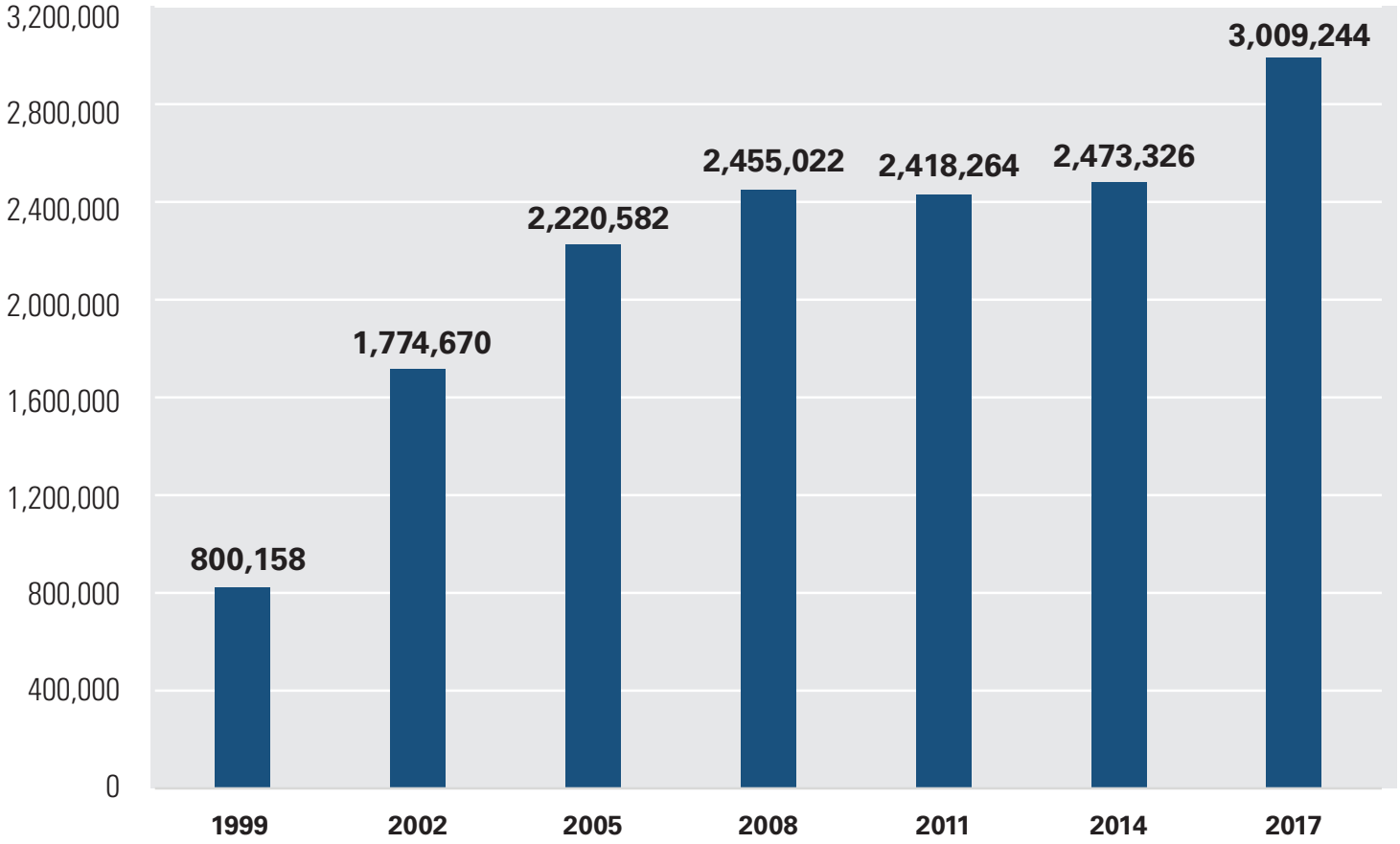
INTRODUCTION

Transportation Demand Management (TDM) is intended to help people find and use alternatives to driving alone. TDM uses marketing, incentives, and employer-based programs to reduce congestion and improve air quality. Commuter Connections is the TPB's TDM program. The Commuter Connections regional network provides commuter services and information to area residents and employers in the Washington metropolitan region to reduce traffic congestion and emissions caused by single occupant vehicles (SOVs). The outreach mission is to create awareness of SOV alternatives and their resulting benefits, to build the Commuter Connections network as an umbrella resource that provides support services to network organizations and individuals who currently drive alone, and to facilitate those who are seeking to change SOV behavior by providing information about commute alternatives. The Commuter Connections network primarily promotes activities including ridesharing, using transit, bicycling, walking, teleworking, and employer services.

TPB'S ROLE

Commuter Connections is the major demand management component of the TPB's congestion management process and it helps support regional air quality goals. Its products and services are provided to member agencies through central program administration, implementation, and monitoring tasks outlined in the annual Commuter Connections Work Program. Approximately 30 independently run programs are members of the Commuter Connections network. Each has its own funding sources, budgets, goals, staff, and operational strategies. Many of the operational logistics are carried out at the local level and are coordinated regionally through subcommittees and ad-hoc groups, which meet both regularly and as needed. This allows for each jurisdictional program to have its own strategic TDM plan based on local resources and needs. The Commuter Connections Subcommittee provides overall technical review and provides input to program services. More information about Commuter Connections can be found at **www.commuterconnections.org**.

Figure 7.6 Daily Vehicle Mile Travels Reduced in the Region by the Commuter Connections Program (1999-2017)



VISUALIZE THE FUTURE

The Commuter Connections program is generally regarded as among the most effective commuter assistance programs in the nation in terms of reducing vehicle trips and vehicle miles travelled. Fewer people choosing to drive alone in the future will make the region's air cleaner and help reduce congestion on the roads.

ONGOING CHALLENGES

TDM faces many challenges in influencing commuters to choose other ways to get to work. Commuters may not understand the value of carpools or vanpools because they may have trouble quantifying how much time they spend commuting. Employer policies may reduce access to telework options and may encourage driving by offering free parking. In addition, low gas prices may encourage more people to continue to drive alone.

THE POLICY CONTEXT

Aspirational Initiatives

Transportation demand management is the basis for the telework and other commute options initiatives. Commuter Connections promotes and encourages employer-based parking cash-out, transit/vanpool benefits, teleworking, and flexible work schedules.

Planning Factors

- Protect and enhance the environment, promote energy conservation, and improve the quality of life.

RTPP Goals

- Provide a comprehensive range of transportation options.

Evolving Technology

INTRODUCTION

There is much uncertainty about the future of technology's impacts on transportation. This uncertainty makes it hard to predict how and when these evolving technologies will impact transportation systems and travel behavior. The changes could range from small to major "disruptive" changes. Chief among these will be the emergence of autonomous vehicles. Other evolving technologies relevant to transportation include systems that provide for operational efficiency and improved safety of roadway travel, tools that make public transit more convenient and efficient, and smart device applications that allow people to hail a ride or use a shared car, bicycle, or motorized scooter.

TPB'S ROLE

TPB has long championed emerging technologies for infrastructure but must now plan for the impacts of autonomous vehicles and other major new user technologies while accounting for the uncertainties of their implementation and impacts. The TPB Vision states that "the Washington metropolitan region will use the best available technology to maximize system effectiveness." The TPB's Technical Committee and its advisory committees, particularly the Systems Performance Operations, and Technology Subcommittee (SPOTS), will continue to monitor the impacts and advise the TPB as technologies evolve.

VISUALIZE THE FUTURE

The ideal future will provide more transportation choices for everyone, with heightened efficiency and fewer negative externalities for our region. Technology could help make passenger travel and freight movement more seamless and safe.

ONGOING CHALLENGES

There is a great deal of uncertainty surrounding the potential impacts of emerging and future technologies. Some challenges include the safety impacts of mixing newer self-driving cars with older non-self-driving cars, pedestrian and bicyclist safety, and impacts on the viability of public transportation services. Impacts, both good and bad, could reach far beyond transportation infrastructure and its operations, to job/economic impacts as well as urban form, density, and sprawl. Key to addressing these challenges will be working hard to sustain our community values as articulated in the TPB Vision even in the face of these disruptive changes.

THE POLICY CONTEXT

Aspirational Initiatives

Synergies may emerge between future technologically advanced vehicles and a number of the initiatives, most explicitly the bus rapid transit network and the regional express travel network.

Planning Factors

- Increase the accessibility and mobility of people and freight.
- Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight.

RTPP Goals

- Maximize operational effectiveness and safety of the transportation system.
- Enhance environmental quality, and protect natural and cultural resources.

ENVIRONMENTAL CONSULTATION AND MITIGATION

The TPB's environmental consultation and mitigation activities provide resources and opportunities for environmental and historic resources agencies at the state and local levels to engage in the regional long-range transportation planning process.

Through TPB and COG committees and the public participation process, the TPB conducts a consultation effort that engages, as appropriate, state and local agencies responsible for land-use management, natural resources, environmental protections, conservation, and historic preservation concerning the development of the transportation plan. The consultation process includes a comparison of the transportation plans with state conservation plans or maps and inventories of natural or historic resources.

The TPB also must include a discussion of possible mitigation activities that may have the greatest potential to restore and maintain environmental functions, (see Appendix G). The areas where mitigation efforts can be focused include: neighborhoods and communities, cultural resources; wetlands and water resources; forested and other natural areas; endangered and threatened species; and air quality. State and local transportation agencies examine, document and implement any needed environmental mitigation actions at the individual project level.

Possible environmental mitigation activities may include: avoiding impacts altogether; minimizing a proposed activity/project size or its involvement; rectifying impacts (restoring temporary impacts); employing special features or operational management measures to reduce impacts; and compensating for environmental impacts by providing suitable, replacement or substitute environmental resources of equivalent or greater value, on or off-site. Some more specific examples of commonly used mitigation activities at the project level in the region include: minimizing noise impact with sound barriers, replacing or restoring wetlands, improving storm water management, replacing or restoring forested areas, and minimizing the idling of heavy construction vehicles.

A new interactive map provides a regional-level resource to inform the relationship between the transportation and environmental concerns: mwcog.org/EnviroInventoryMap. The map allows the public and decision makers to view the natural resource data layers along with the transportation projects expected to be built by 2045 from the financially constrained element of this plan. By defining and inventorying environmental resources and data, the interactive map can be used to inform state and local agencies and the public about the relationship between the projects in the constrained element and environmental concerns at the regional scale.

Visualize 2045: Environmental Consultation - Environmental Inventory Mapping

Floodplains

Green Infrastructure

Shows large contiguous areas of natural land cover.

The District of Columbia Wooded Areas represents planimetric Wooded Areas. These features were originally captured in 1999 and updated in 2005, 2008, 2010, and 2013.

The Virginia cores and buffers layer represents "cores," or unfragmented natural habitats and large patches of natural land cover with at least 100 acres of interior conditions, and "natural landscape blocks", or slightly fragmented areas of natural cover that buffer cores from major roads and human land uses.

The Maryland Green Infrastructure, Hubs and Corridors layer shows "hubs," which are contiguous areas of at least 100 acres of interior forest, unmodified wetlands, important animal and plant habitats, sensitive aquatic habitats, and/or existing protected natural resource lands that buffered from major roads and/or human land uses; and "corridors," which connect generally similar types of hubs together to help animals and plant propagules to move between hubs.

Source: National Park Service, District of Columbia Department