

4. Safe and Efficient Travel

Issues and Challenges

The main structure of Montgomery County's and the region's transportation network was created in the early 20th century primarily for automobile travel with all major roads leading to Washington, D.C., as the main employment center. Over time, the county and the region created many employment centers served mainly by car and a land use pattern defined by sprawl. Each subsequent residential subdivision, office park, shopping center, public service and amenity was designed to connect with the nearest major road with little or no consideration given to transit, walking or biking. Today, traffic congestion in the Washington metro area is one of the worst in the country. In addition to the economic drag and lost personal time, transportation has a huge environmental impact in the form of greenhouse gas (GHG) emissions. In 2015, 41% of the county's GHG emissions were generated by transportation.

Although the county has made significant investments in its transit network, the basic underlying land-use pattern of low-density sprawl continues to pose challenges for the creation of a fast and reliable transit system that will meet the needs of a growing population in the next 30 years and beyond. Low-income communities, people with disabilities, young adults and others who can't afford to own cars must rely on public transit for reliable access to regular and late-night jobs, education, health care, food, and entertainment options within the county and the region. They are disproportionately affected by the current transportation network. Places that have good access to transit or are located near employment centers are generally too expensive for low-income families, forcing them to live farther from job centers and other destinations, limiting their access to job opportunities and better resources. While owning and operating a vehicle is expensive, transit can also be expensive and, for many, difficult to access.

Additionally, many of our major roads and neighborhood streets are unsafe for pedestrians, cyclists and people with disabilities, therefore discouraging walking and cycling as transportation and exercise. Major roadways, especially in down-county areas, have become barriers dividing adjacent neighborhoods. Low-income people living along these corridors rely heavily on transit access and are disproportionately impacted by these unsafe conditions.

Vision for Safe and Efficient Travel

In 2050, Montgomery County's high-quality transportation system plays a critical role in supporting the county's economic health, environmental resilience and equity. County residents shifted from heavy reliance on private vehicles to public transit, the backbone of the county's transportation network. This safe, reliable and efficient transit network is composed of Metrorail, Purple Line, commuter rail, bus rapid transit (BRT) and regional and local buses, and a robust network of sidewalks, bikeways and trails. A large majority of people use the system to connect to their destinations within the county and the region. Technologies such as micromobility, autonomous vehicles and ridesharing offer new options for transportation. Some of this technology increases transit ridership by making it easier for people to connect to rail or BRT. Major roadways are transformed into safe and attractive boulevards with reduced speeds, trees and dedicated lanes for transit. Walkable and bikeable paths and crosswalks are safe enough to allow children to walk and bike to nearby schools. In Central Business Districts (CBDs) and town centers, a dense mix of land uses and high-quality walkways and bikeways make walking, bicycling, rolling and micromobility the preferred modes of travel. All greenhouse gas (GHG) emissions are eliminated from the transportation system thanks to the significant reduction in vehicle miles traveled (VMT) and the conversion of all motorized vehicles to renewable energy.

Focus on Transit and Walkability

To achieve our GHG emissions reduction, economic competitiveness and equity goals, we need to shift our transportation focus from automobiles to public transit, walking, biking and micromobility. We simply cannot solve traffic congestion, be equitable, address climate change and support a strong economy by building more roads. And we are not yet benefiting fully from the promise of technological advances such as telework, drone deliveries and autonomous vehicles that could revolutionize how we travel and transport goods and services. Until all our energy is generated from renewable sources so that we are truly net-zero energy consumers, public transit is the best way to reduce our transportation related GHG emissions.

To make transit the preferred mode of travel will require making it competitive and even superior to car travel. This will require a cultural shift. For example, Metrorail can be too expensive for low- income residents or not close to their homes, so they use buses instead. But bus service can be slow, less frequent, and not considered high quality (bus stops are exposed to the elements), so more affluent residents who can afford to drive may choose to not take buses. Therefore, Montgomery County should continue to enhance the desirability and ridership experience of bus travel.

We also need to reorient the underlying land use pattern into walkable, bikeable complete communities and make transit more accessible to a greater number of people by concentrating all future development in transit-oriented places. The Metropolitan Washington Council of Governments, working with Montgomery County and other jurisdictions across the DC region, set a target of putting at least 75% of new housing in mixed-use centers near high-capacity transit (rail and BRT). We must also make sure that our employment centers that are currently not accessible by transit have transit access. New micromobility solutions such as e-scooters and rideshare

bicycles will provide new capabilities to solve the first-mile/last-mile¹⁵ problem to bring reliable daily access to high speed transit.

The county's major roadways (or corridors--University Boulevard, Randolph Road, Georgia Avenue, MD 355, New Hampshire Avenue, Veirs Mill Road, Route 29, Corridor Cities Transitway and the North Bethesda Transitway) with existing and planned rail and BRT have great potential to become more transit-oriented places with safe multimodal travel options. They can accommodate a larger portion of the future growth through infill and redevelopment to create vibrant mixed-use nodes around transit stations and bus stops. Some of these corridors provide the critical east-west connections in the county. Since it is not desirable to expand existing roads or create major new roads, implementing new transit or improving transit capacity and the performance of the existing east-west corridors will be essential to address the east-west travel issue. These existing corridors include the new Purple Line or the planned BRT along Randolph Road.

Transportation is as much a regional issue as it is a local one. The regional network is composed of various pieces under the control of various jurisdictions but acts as one system and impacts the ability of all residents and workers to travel throughout the region. Montgomery County will need to increase coordination with our regional partners to improve accessibility to employment, education and other opportunities. We should also be cognizant of challenges and opportunities that may arise from improvements in the regional travel network. We need to consider how to adapt and keep pace with them to make sure that Montgomery County

residents and workers benefit from them. Some of the far-reaching and visionary ideas for regional connection, if realized, may have significant consequences for Montgomery County. For example, the proposed high-speed superconducting magnetic levitation (maglev) system between Washington, D.C., and Baltimore, and a proposed 35-mile underground tunnel/loop to move electric vehicles between Washington and Baltimore in 15 minutes are in very early conceptual planning and regulatory review stages.

And there have been discussions among the supporters of regional connectivity about a Purple Line extension to create suburb-to-suburb connection between Tysons in Fairfax County, Va., and Largo in Prince George's County.

Goals, Policies and Actions

Goal 4.1: Get people out of their cars. Transform Montgomery County into a community of walkable, people-centric places where public transit, walking and bicycling are the preferred travel mode for daily trips and the need for personal vehicles is substantially reduced.

Policy 4.1.1: Change the primary function of streets from moving automobiles to moving people and creating great places that are accessible and safe for all roadway users, environmentally sustainable and economically competitive. All rules and regulations regarding how we approve growth should support this approach.

Action 4.1.1.a: Prepare a Transportation Master Plan that enables safe, convenient and comfortable travel and access for people of all ages and mobility abilities regardless of their mode of transportation.

Action 4.1.1.b: Implement safe, connected, low-stress bicycle and pedestrian networks in downtowns, town centers, rail and BRT corridors and community equity emphasis areas over projects that increase traffic capacity.

Policy 4.1.2: Plan and implement a high-quality transit network that seamlessly connects the county's activity centers and regional destinations. Make transit the fastest and most reliable way to get between downtowns, town centers and rail and BRT corridors.

Action 4.1.2.a: Implement the network of BRT corridors identified in the 2013 [Countywide Transit Corridors Functional Master Plan](#).

Action 4.1.2.b: Update the [Master Plan of Highways and Transitways](#) to reexamine whether to create additional rail and BRT corridors and to upgrade all master-planned BRT corridors to run in the median by repurposing existing travel lanes.

Action 4.1.2.c: Extend rail and/or BRT directly to Tysons and Arlington in Virginia; and Frederick, Columbia and Downtown Baltimore in Maryland.

Action 4.1.2.d: Develop a strategy to expand commuter rail capacity on the MARC Brunswick Line to provide additional station locations in Montgomery County and provide bidirectional all-day service, seven days a week.

Action 4.1.2.e: Develop short-term and long-term transit plans to restructure local and regional bus service to integrate with existing and planned rail and BRT.

Action 4.1.2.f: Ensure safe and comfortable access to transit stations.

Policy 4.1.3: Reduce single-occupancy auto use and incentivize non-auto travel modes by locating most new growth near rail and BRT.

Policy 4.1.4: Strengthen access from low-density areas to rail and BRT stations, commercial areas and other services by providing flexible transportation services, including microtransit and micromobility.

Goal 4.2: Redesign street systems in downtowns and town centers to be active, people-centric places. Most travel to, from and within these areas will occur via walking, bicycling and transit.

Policy 4.2.1: Expand the street grid in downtowns, town centers, rail and BRT corridors and suburban communities to create shorter blocks, improve access and transportation system redundancy and slow the speed of traffic. Use new development projects and roadway modifications to provide new street connections.

Policy 4.2.2: Redesign downtowns and town centers so that walking and bicycling are the preferred modes of transportation by breaking up large blocks, adding more frequent safe crossings, creating space for wide sidewalks, bikeways, trees and adequate lighting and providing accessibility to the transportation system.

Action 4.2.2.a: Limit the number of through-lanes in downtowns and town centers to a maximum of four general purpose lanes and repurpose space for transit lanes, wider sidewalks, bikeways, trees and stormwater management.

Action 4.2.2.b: Reallocate some street space dedicated to motor vehicle travel to other uses such as walking, bicycling and transit; environmental features such as stormwater management and street trees; and placemaking opportunities to align with the economic, environmental and equity values in this plan.

Action 4.2.2.c: Develop curbside management strategies and regulations to provide reliable access to homes, jobs, retail opportunities and public facilities and amenities. This should include a logistics plan to facilitate increasing volumes of e-commerce-related deliveries.

Goal 4.3: Have fewer parking spaces and manage the spaces that remain effectively.

Policy 4.3.1: Reduce public and private space dedicated to motor vehicle storage.

Action 4.3.1.a: Repurpose on-street parking and public parking facilities to other uses such as space for walking, bicycling and transit, stormwater management and street trees.

Action 4.3.1.b: Eliminate parking requirements for new development projects in downtowns, town centers and rail and BRT corridors to encourage travel by walking, bicycling and transit.

Policy 4.3.2: Manage parking effectively.

Action 4.3.2.a: Update public parking rates to increase to market rates.

Goal 4.4: Eliminate all transportation-related fatalities and severe injuries.

Provide a transportation system that is safe for everyone.

Policy 4.4.1: Prioritize eliminating transportation-related fatalities and severe injuries in public and private planning and development initiatives and programs, including master plans, capital projects and development projects. Area master plans and transportation capital projects must include safety analyses to inform plan recommendations and project design.

Action 4.4.1.a: Create guidelines for developing a safety component for master plans focused on eliminating transportation-related fatalities and severe injuries. Create metrics and other components for a safety analysis for proposed transportation capital projects and capital budgeting decision-making.

Action 4.4.1.b: Require the design of public and private development transportation projects to focus on the transportation and personal safety needs of the most vulnerable users of the transportation system. All projects should strive to eliminate the risk factors associated with transportation-related severe injuries and fatalities.

Action 4.4.1.c: Reduce conflict points and increase road safety by managing access location and spacing systematically on all county roads. Develop an Access Management Plan to enhance the Complete Streets Design Guide.

Policy 4.4.2: Prioritize changes to the transportation system at locations with a history of high rates of crashes and address safety issues in areas with little or no crash history. Base priorities on an analysis of locations where future crashes are likely to occur.

Policy 4.4.3: Assess and harness technology to improve transportation safety, such as innovative roadway designs, safety enforcement, autonomous vehicles, and new vehicle technology.

Goal 4.5: Eradicate greenhouse gas emissions and dangerous pollutants from the transportation system.

Policy 4.5.1: Incentivize the use of modes other than single-occupant vehicles by providing high-quality transit, walking and bicycling networks.

Policy 4.5.2: Use pricing mechanisms to deter the use of single-occupant vehicles and encourage more walking, bicycling and transit use.

Action 4.5.2.a: Conduct a study to determine how to apply congestion pricing in Montgomery County, including how to foster equity and distribute the revenue to promote walking, bicycling and transit.

Policy 4.5.3: Facilitate the mass adoption of zero emission vehicles.

Action 4.5.3.a: Develop an implementation plan for transitioning to zero emission fueling in residential and commercial development and public facilities and spaces.

Action 4.5.3.b: Update all county fleets and contracted fleet providers to zero emission vehicles.

Action 4.5.3.c: Develop county incentives to accelerate conversion of privately-

owned fleets to sustainable, zero emission vehicles.

Goal 4.6: Create an equitable transportation system that provides affordable and accessible travel options to jobs, education and services.

Policy 4.6.1: Prioritize projects that provide safe, comfortable, reliable and affordable transit for disadvantaged and physically challenged residents.

Action 4.6.1.a: Prepare an Aging Readiness Master Plan to support safe transportation options for the county's aging population. The plan should address transportation topics such as transit use, curbside management, and street infrastructure.

Action 4.6.1.b: Incorporate universal design principles into the county code, regulations, policies and guidelines to improve access for seniors and persons with disabilities.

Action 4.6.1.c: Conduct a study to determine the travel needs of vulnerable users of the transportation system and create strategies to improve access. Examine the impacts faced by underserved populations. Evaluate vulnerable transit users' access to employment centers, food centers, age-restricted housing, health centers and other services.

Action 4.6.1.d: Develop an approach to prioritize transportation projects to improve walking, bicycling and transit in community equity emphasis areas.

Action 4.6.1.e: Provide low-cost transportation for low-income populations through transit fare and toll policies.

Goal 4.7: Convert auto-centric transportation corridors into safe, people-centric multimodal streets with rail and BRT. Most travel to, from and within transportation corridors will occur via walking, bicycling and transit.

Policy 4.7.1: Prioritize implementing safe and connected low-stress bicycle and pedestrian networks in rail and BRT corridors over projects that increase traffic capacity.

Policy 4.7.2: Build out a BRT network with exclusive transit lanes preferably located in the median to ensure travel time reliability.

Action 4.7.2.a: Limit the number of through-lanes on rail and BRT corridors to four general purpose lanes and repurpose excess lanes to implement transitways. Reallocate excess space to other uses, such as for walking, bicycling and transit; stormwater management; and street trees.

Policy 4.7.3: Plan and implement a grid of streets and alleys to reduce roadway speeds, provide frequent safe crossings and eliminate driveways along rail and BRT corridors.

Goal 4.8: Create a seamlessly integrated regional transportation system by coordinating transportation planning within the region and between neighboring jurisdictions.

Policy 4.8.1: Coordinate transportation policy with jurisdictions throughout the region (including the county's 21 municipalities) to improve economic vitality, environmental sustainability and equity.

Action 4.8.1.a: Work with the Metropolitan Washington Council of Governments (MWCOG) and other jurisdictions to create a regional active transportation plan and prioritize walking, cycling and transit in interjurisdictional infrastructure projects.

Action 4.8.1.b: Assemble a regional coalition of jurisdictions and other stakeholders to guide transportation technological change related to connected and autonomous vehicles in a way that preserves our values and that addresses the needs of disadvantaged populations.

Action 4.8.1.c: Coordinate policies to discourage the use of single-occupant vehicles to improve air quality regionwide and explore ways to raise revenue and better coordinate transportation policy and projects in Maryland counties surrounding Washington, D.C. For example, consider forming a subregional transportation or transit authority such as the Northern Virginia Transportation Authority.

Goal 4.9: Increase resilience of the transportation system to withstand future climate conditions and natural or human-made disasters.

Policy 4.9.1: Create and enhance redundancy in the transportation system to ensure the continued flow of people, goods and services in the region in the event that segments of the system become constrained or unusable for extended periods of time.

Policy 4.9.2: Promote the integration of climate-adaptive, resilient design into transportation projects.

Action 4.9.2.a: Design streetscapes to mitigate disruption from climate change, manage stormwater effectively and provide tree canopy for shade and habitat.

Action 4.9.2.b: Develop, prioritize and implement flood mitigation measures for existing flood-prone transportation facilities based on vulnerability assessments and consideration of extreme precipitation events and sea level rise.

Policy 4.9.3: Ensure that government can provide quick responses to events such as terrorism, environmental disasters and public health crises that create major impacts to the transportation system.