

ITEM 8 – INFORMATION
November 19, 2025

Draft Visualize 2050 National Capital Region Transportation Plan, FY 2026-2029 Transportation Improvement Program (TIP), and Air Quality Conformity Analysis Report of the Plan and TIP

Background: The Draft Visualize 2050 National Capital Region Transportation Plan, FY 2026-2029 TIP, and related Air Quality Conformity Analysis Report are now available for public comment between October 23 and November 21, 2025. TPB staff will share key elements of each document along with an interim report of comments received. Board members are invited to read the documents and provide input



MEMORANDUM

TO: Transportation Planning Board
FROM: Cristina Finch, TPB Transportation Planner
SUBJECT: Visualize 2050 Public Comment Period Materials Overview
DATE: November 13, 2025

This memorandum provides an overview of the Visualize 2050 National Capital Region Transportation Plan, the FY 2026-2029 Transportation Improvement Program (TIP), and the required air quality conformity analysis of both.

At the October 15, 2025 TPB meeting, the TPB finalized the regionally significant projects list for Visualize 2050 and decided to not include the I-495 Southside Express Lanes project in the continued development of Visualize 2050. With this decision, staff were able to finalize the draft Visualize 2050 plan, FY 2026-2029 TIP, and the related Air Quality Conformity Analysis Report. These documents were released for review and comments from the public. The comment period, scheduled for Thursday, October 23 to Friday, November 21, 2025, is being held in advance of the TPB's action to adopt these documents in December. Public comment materials and instructions for how to provide input are available at visualize2050.org.

BACKGROUND

Throughout the past three years, TPB staff have been developing the content of Visualize 2050. Along the way, the TPB, the TPB Technical Committee, and other subcommittees have been informed of relevant information throughout this process. As the final approval date for the Visualize 2050 National Capital Region Transportation Plan, the FY 2026-2029 Transportation Improvement Program (TIP), and Air Quality Conformity Analysis Report approaches in December, this memorandum and its accompanied presentation serves to provide an overview of the contents and key takeaways on these documents.

OVERVIEW OF VISUALIZE 2050 CONTENT

Visualize 2050 includes seven chapters: 1. Introduction; 2. Transportation System Today; 3. Current Transportation System Performance; 4. Societal Topics; 5. Financial Plan for Future Investments; 6. 2050 System & Performance; 7. Planning Together for Further Progress. Together, this forward-looking vision for the region outlines the current conditions, key issues, anticipated funding through 2050, and priority investments to operate, maintain, and make improvements to the region's transportation infrastructure and services. The plan showcases the transportation system envisioned for 2050 and presents the level of performance anticipated for this system in 2050, based on forecasted changes in travel demand. Lastly, key challenges that remain beyond the capabilities of the plan are acknowledged, and continued regional collaboration and commitment to address them and achieve shared goals is emphasized for future efforts.

Chapter 1: Introduction

The first chapter of Visualize 2050 provides an overview of the National Capital Region. The region is home to 5.9 million residents and supports 3.3 million employees within 3,500 square miles and 22 local jurisdictions. The TPB's eight goals help guide local planning efforts and align with the transportation goals in Washington, DC, Maryland, and Virginia.

Chapter 2: Transportation System Today

The second chapter reflects on the strengths of the region's current multimodal system and how it serves as a foundation for future improvement. People and goods rely on the roadways, railways, bus transit systems, pedestrian network, bike network, micromobility programs, pipelines, waterways, and surface connections to airports to get to their destinations. Behind the scenes, transportation demand management (TDM) programs like Commuter Connections, help people make more informed commuting decisions, helping to reduce daily vehicle trips by nearly 100,000 each year.

The more than 17,000 road lane miles in the region support 97 million daily vehicle miles. The 318 miles of high-capacity rail transit among WMATA, MARC, and VRE move over 492,000 people daily. Freight rail carries 6.7 million tons of freight per year to support the region's economy. Over 450,000 people per day rely on the 15 local bus systems and three commuter bus systems. In 2023, 752 miles of the National Capital Trail Network and over 400 miles of bike lanes, coupled with dense land use activity, allow residents to get around by foot and bike.

Chapter 3: Current Transportation System Performance

The third chapter reflects on how the region's transportation system performs in moving people and goods based on accessibility, reliability and congestion, safety, maintenance, and system management. The chapter also assesses whether the system has met regional performance targets.

Driving alone is the most widely used mode throughout the region. About one million jobs are accessible by car within a 45-minute commute compared to 400,000 jobs by transit. A major determinant of making transit accessible is having jobs and people close to high-capacity transit (HCT) stations. As of 2025, 16 percent of the region's population and 40 percent of the region's jobs are located within a half-mile of an HCT station. Alongside Regional Activity Centers (RACs) and high-density development, pedestrian and bicycle access is supported by the National Capital Trail Network, from which 63 percent of residents and 72 percent of jobs are located within half a mile of existing portions.

All targets were met for reliability and congestion on the roadways. Despite this, about 10 percent of all roadway lane miles were congested daily at peak times in 2023, mostly on interstates. Alongside this, freight truckers have had issues with securing reliable truck parking. On buses, reliability for riders is dependent on overall traffic conditions. On rail transit, there is overcrowding during rush hours.

The safety of all travelers is a priority for the TPB. The current system performance reveals there is still much work to be done to improve safety as no targets for drivers, passengers, or non-motorists were met. A concerning trend is also reflected in where there is an observed increase in number and rate of roadway fatalities and that non-motorist fatalities are becoming a larger share of this total. For targets relating to rail and transit riders, eight out of 15 targets have been met.

Most of the targets for highway, bridge, and transit assets were met, showcasing the priority the region has in maintaining infrastructure for prolonged use. Lastly, chapter 3 closes with discussions on system management, which offers an integrated approach to planning, engineering, and operating existing facilities. On roadways, dynamic parking pricing, dynamic tolls, curb space management, traveler information programs, and roadway designs have all contributed to managing the system's demand without adding roadway capacity. For the system management of rail and bus transit, the network monitoring, route optimization, and track agreements are discussed.

Chapter 4: Societal Topics

Chapter 4 reflects on the many topics that influence and that are impacted by transportation. The transportation network helps support the economy in many ways. The chapter discusses the following topics related to the economy: population and demographics; households and housing; housing affordability; employment and income; tourism; land use and development patterns; activity density; and Regional Activity Centers (RACs).

Every aspect of transportation is deeply connected to the environment. Motor vehicle emissions contribute to air pollution, while natural hazards disrupt transportation systems and infrastructure. Additionally, certain activities associated with construction projects can negatively impact natural resources, disrupt ecosystem health, and affect nearby communities.

Transportation also directly impacts public health. Physically there are the safety issues, health issues related to air and water quality, and access to places that support people's health from medical offices to fitness opportunities and healthy food. Mentally, health is impacted by travel-related stress, access to social services, and opportunities for social interaction.

The chapter concludes with discussions on emerging technologies including Regional Intelligent Transportation System Architecture (RITSA); autonomous driving, Connected and Automated Vehicles (CAVs); electric vehicles/zero-emission vehicles; artificial intelligence; drone/automated vehicle deliveries; automated traffic enforcement; automatic train operation; and on-demand transit/microtransit.

Chapter 5: Financial Plan for Future Investments

Chapter 5 highlights the region's investment plan given current and reasonably anticipated funding in the future. The financial analysis confirms that the Visualize 2050 plan, covering 2026 to 2050, is financially constrained by finding that forecasted revenues are reasonably expected to be available to cover the estimated costs of operating, maintaining, and moderately expanding the region's multimodal transportation system.

The chapter also summarizes how the planned projects and programs align with the eight TPB goals. In support of TPB's goals, some of the planned investments implement TPB priority strategies: apply best practices to maintain the transportation system; apply the endorsed safety strategies to design and operate safer infrastructure and encourage safer behavior; provide more telecommuting and other options for commuting; implement Transportation System Management and Operations (TSMO) measures at all eligible locations; and apply effective technologies that advance TPB's goals.

Chapter 6: 2050 System & Performance

Chapter 6 envisions the National Capital Region's 2050 transportation system and its future performance. The entire transportation network across the roadways, railways, bus transit network, and the bicycle and pedestrian system will improve and/or moderately expand. With these

investments, the system is expected to perform differently by 2050 with regard to access, congestion, and environmental impacts.

On the roadways, the region will see over 600 added lane miles, upgraded streetlight technologies, safety improvements, and improved intersections and interchanges. Pedestrians, bicyclists, and micromobility users will gain dedicated infrastructure, along with safety and access improvements. With 79 new bus rapid transit (BRT) lane miles and 90 BRT stations, the bus network reliability will increase. Alongside this bus network expansion, aging bus fleets will be replaced with clean fuel and EV buses. The rail network will gain 18 added rail miles and 27 rail stations, primarily coming from the Purple Line Light Rail project. Other operational enhancements, station upgrades, and accessibility improvements will create a better experience for rail users across the region.

Chapter 6 also highlights projects and programs that advance the following TPB priority strategies: bring jobs and housing closer together; expand the express highway network, with rapid transit, and allow carpool/vanpool to ride free; develop and implement an electric vehicle charging network; move more people on Metrorail; increase frequency and capacity of transit; reduce travel times on all public transportation bus services; convert vehicles to clean fuels; improve walk and bike access to transit; and complete the National Capital Trail Network.

From model output using the Round 10.0 Cooperative Forecast, the future performance of the transportation system with the planned investments in Visualize 2050 is presented. By 2050, changes expected on the roadways include more carpooling, fewer miles driven per person, and increased congestion and delays, leading to fewer jobs being accessible by auto travel within a 45-minute commute. However, without the investments in the plan, congestion and delay would be worse. Walking, biking, and micromobility use is forecast to increase by two percent for all trip types and by one percent for work trips. More jobs will be accessible by transit, and the Inner Suburbs of the region will see the biggest increase in new HCT stations. Between 2025 and 2050, the share of people living in RACs is forecast to increase by five percent (28 percent to 33 percent) and the share of people living within a half mile from HCT will increase by 10 percent (16 percent to 26 percent). As for jobs, the share of jobs located within a half mile from HCT will increase by six percent (40 percent to 46 percent) and the share of jobs in RACs will increase by one percent (63 percent to 64 percent).

Lastly, the environmental forecasts indicate that Visualize 2050 meets air quality conformity requirements for Ozone (Nitrogen Oxides and Volatile Organic Compounds). Despite rising demand and increased travel, vehicle emissions are projected to decline primarily due to improved fuel efficiency. With the expectation of more frequent and severe natural hazards and extreme weather conditions, TPB staff assessed how the planned projects and programs might support the transportation system's resilience. Many projects and programs will include features that contribute to resilience.

Chapter 7: Planning Together for Further Progress

The final chapter recognizes that although the investments in Visualize 2050 will improve how people get around the region, challenges will still remain.

The challenges discussed in this chapter include:

- Continued traveler fatalities & serious injuries
- Anticipated risks to infrastructure from natural hazards
- Continued increase in traffic congestion & delays

- Insufficient truck parking along major routes
- Single-occupant vehicles continue to be most people's choice for commuting
- Insufficient transit revenue to sustain, let alone increase services
- Constrained funds for maintenance
- Antiquated infrastructure at Union Station limiting service and capacity

The region has made significant improvements in mobility and accessibility over the past 25 years, while accommodating significant growth in population and jobs. This is due to the strong foundation of coordination, cooperation, and commitment to multi-modal and multi-sectoral planning and programming. The work towards addressing the above challenges, the TPB will continue and build on its approach of thinking regionally and acting locally and use its eight goals and the related performance measure targets as benchmarks for making progress. The ten Federal Planning Factors further guide the TPB's collaborative work to create a region that is more livable, sustainable, and accessible for all. Moving forward, the region will continue to plan together for better travel tomorrow.

FY 2026-2029 TRANSPORTATION IMPROVEMENT PROGRAM (TIP)

The second document available for public comment is the FY 2026-2029 TIP which describes the planned schedule over the next four years for the use of federal, state, and local funds on state and local transportation projects. The TIP contains an introduction to the transportation improvement program, financial plan, analysis of the TIP, and the regional goals and performance measure targets. The TIP also contains information on its development process, an overview of the amendment and administrative modification procedures, discussions on air quality conformity and the congestion management process, the investments made towards bicycle and pedestrian accommodations, and the progress made improving reliability and congestion, safety, and maintenance.

The TIP includes more than 350 active project and program records and over \$17.73 billion in funding across the region. More than \$8.5 billion in funding comes from federal sources. The majority of the \$17.73 billion, 62%, is derived from Virginia and Maryland. Three projects with the largest share of funding are the Long Bridge, the Purple Line, and a new Bus Rapid Transit line on MD 355.

The TPB will also share information about the November 13, 2025, FY 2026-2029 TIP Forum, which will be held at 6:00 P.M. at the COG office (with a virtual option). TIP Forum details will be posted on the Visualize 2050 website, in newsletters, and on social media.

AIR QUALITY CONFORMITY ANALYSIS REPORT

The third document for public comment is the Air Quality Conformity Report for Visualize 2050 and the FY 2026-2029 TIP. "Conformity" is a requirement of the federal Clean Air Act (CAA) to ensure that the transportation plan and TIP are consistent with the region's air quality goals and that progress is being made toward achieving and maintaining federal air quality standards. The report provides background information on the conformity regulations, a discussion of the region's air quality status for federally regulated air pollutants, an overview of the input data and models used, a summary of the results of the analysis, and a summary of the comment opportunities afforded to the public throughout the conformity process.

The EPA has designated the Metropolitan Washington, DC (DC-MD-VA) region as non-attainment of the 2015 Ozone National Ambient Air Quality Standards (NAAQS). Volatile Organic Compounds (VOCs) and Nitrogen Oxides (NO_x) mix with sunlight to form ground-level ozone. The Metropolitan Washington Air Quality Committee (MWAQC) developed mobile emissions budgets for VOC and NO_x in the 2023 revision of the 2008 Ozone Maintenance Plan. The conformity analysis shows that the total on-road vehicle emissions associated with the Visualize 2050 plan and FY 2026-2029 TIP are within the mobile emissions budgets for VOC and NO_x for all forecast years. Thus, this analysis provides a basis for determination of conformity for the Visualize 2050 plan and FY 2026-2029 TIP.

NEXT STEPS

The key milestones for the remainder of this year are shown in Table 1. TPB staff will provide an interim report on comments received through November 9 to the TPB in the mailout materials for the November 19 TPB meeting. Agencies may be asked to assist TPB staff with responses to comments particularly any that are state- or project-related.

The TPB is scheduled to act on adopting Visualize 2050, the FY 2026-2029 TIP, and approve the AQC Report at the December 17, 2025 meeting. The self-certification document will also be approved at the December meeting which certifies that the TPB has conducted the metropolitan planning and programming process in accordance with federal regulations.

Table 1: Remaining Schedule for Developing Visualize 2050

2025	
November	• 11/13/2025 TIP Forum with TPB, WMATA, and District, Maryland, and Virginia DOTs. • 11/19/2025 TPB briefed on all aspects of Visualize 2050 and the FY 2026-2029 TIP and the interim report on comments. • 11/21/2025 Public comment period closes.
December	• 12/17/2025 TPB updated on additional comments and responses and acts to: approve the results of the AQC analysis and adopt the Visualize 2050 plan and the FY 2026-2029 TIP.