MEMORANDUM

TO: Transportation Planning Board

FROM: Lyn Erickson, TPB Program Director, Plan Development and Coordination
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SUBJECT: Outline and Preliminary Budget for the Fiscal Year 2025 Unified Planning Work Program (UPWP)

DATE: January 5, 2023

The Unified Planning Work Program (UPWP) is the annual statement of work, and associated budget, identifying the planning priorities and activities to be carried out within a metropolitan planning area. This memo includes a draft itemized set of activities/tasks for the Fiscal Year (FY) 2025 UPWP (July 1, 2024 through June 30, 2025) for the National Capital Region Transportation Planning Board (TPB). The work activities are organized into 11 work activities/tasks which reflect and support the activities that the TPB is federally required to undertake. This information is preliminary and will be refined over the next two months as funding information is made available from the state departments of transportation (DOTs), which oversee all Metropolitan Planning Organization (MPO) work and work products. The purpose of this memo is to start to identify and refine a list of tasks that will be elaborated on in the actual UPWP document which will be distributed for review in February. The TPB will be asked to approve the FY 2025 UPWP at its March 2024 meeting.

The TPB and its staff commit to being guided by the following statement on equity, and the activities described in the UPWP are intended to reflect this:

> *Every action that the TPB considers - including every debate we have, and every decision we make as the region's MPO - must be viewed through the lens of justice, equity, and fairness. We must recognize past actions that have been exclusionary or had disparate impacts on people of color and marginalized communities, and we must take actions to correct or mitigate the resulting unfairness. From infrastructure to education and enforcement, we must act fairly to ensure equitable and true access to safety, accessibility, and mobility.*[1]

UPWP REVENUE ESTIMATES

The budget for the FY 2025 UPWP is based upon MPO planning funding allocations provided by our three state DOTs. Federal Metropolitan Planning Funds are apportioned to the state DOTs, which then allocate and distribute these funds to the MPO to enable the TPB to conduct the metropolitan planning process. As with all federal funds, there is a state and local match that is necessary to

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[1] "Resolution to Establish Equity as a Fundamental Value and Integral Part of All Transportation Planning Board's Work Activities (TPB R1-2021)," Resolution (Washington, D.C.: National Capital Region Transportation Planning Board, July 22, 2020), https://www.mwcog.org/documents/2020/07/22/resolution-r1-2021---resolution-to-establish-equity-as-a-fundamental-value-and-integral-part-of-all-transportation-planning-boards-work-activities/.

access the federal funds. In our case, 80 percent of the revenue comes from a combination of Federal Transit Administration Section 5303 funds and Federal Highway Administration Metropolitan Planning (PL) funds. The state DOTs provide a 10 percent state match and the local jurisdictions, through the COG dues, provide a 10 percent local match. Funding amounts are determined by the FY 2024 USDOT budget from the 2021 Bipartisan Infrastructure Law (enacted as the Infrastructure Investment and Jobs Act). The Continuous Airport System Planning (CASP) Program is funded separately through Airport Improvement Grants from the Federal Aviation Administration as well as support from the Maryland Aviation Administration and the Metropolitan Washington Airports Authority to conduct the biennial regional air passenger survey.

Detailed budget information will be provided when it becomes available. The budget process begins based on previous estimates, previously approved budgets, and with preliminary funding information from the DOTs.

The UPWP documents the planned work activities of the TPB for FY 2025. Consistent with the purpose of the federal funds provided, the planned tasks are designed to comply fully with federal requirements for metropolitan planning (23 CFR Part 450 / 49 CFR Part 613) and recommendations from the most recent federal review of the TPB work activities (June 2, 2023).[2] The scope of work for planned tasks also reflects enhancements, wherever viable and as appropriate, to reflect regional planning priorities/aspirations adopted by the TPB.

The recently enacted Bipartisan Infrastructure Law (Infrastructure Investment and Jobs Act, November 16, 2021) contains requirements affecting the metropolitan planning process. The UPWP will be reviewed and amended, as needed, to comply with these new requirements once federal regulations are promulgated.

The following table provides an outline of the 11 topic areas of work for FY 2025. Pending finalization of the revenues for FY 2025, these proposed tasks will be further refined.

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[2] "Metropolitan Washington, D.C., Transportation Management Area," Summary Report, Transportation Management Area Planning Certification Review (Washington, D.C.: U.S. Department of Transportation, Federal Highway Administration & Federal Transit Administration, June 2, 2023).

OUTLINE OF PROPOSED UPWP WORK ACTIVITIES FOR FY 2025

1. LONG-RANGE TRANSPORTATION PLANNING

1.1 Visualize 2045 Implementation
1.2 Environmental Justice and Equity
1.3 Future Plan Development
1.4 Federal Compliance
1.5 Policy Board-Directed Activities
1.6 Resiliency Planning

2. TRANSPORTATION IMPROVEMENT PROGRAM

2.1 Transportation Improvement Program
2.2 TIP Database Support

3. PLANNING ELEMENTS

3.1 Performance-Based Planning and Programming
3.2 Congestion Management Process
3.3 Systems Performance, Operations, and Technology Planning
3.4 Transportation Emergency Preparedness Planning
3.5 Transportation Safety Planning
3.6 Bicycle and Pedestrian Planning
3.7 Regional Public Transportation Planning
3.8 Freight Planning
3.9 Metropolitan Area Transportation Operations Coordination Program Planning

4. PUBLIC PARTICIPATION

4.1 Public Participation and Outreach
4.2 Communications

5. TRAVEL FORECASTING

5.1 Network Development
5.2 Model Development and Support

6. MOBILE EMISSIONS AND CLIMATE CHANGE PLANNING

6.1 Air Quality Conformity & Other Activities Associated with the LRTP
6.2 Mobile Emissions Analysis & Climate Change Planning

7. TRANSPORTATION RESEARCH AND DATA PROGRAMS

7.1 Transportation Research and Analysis
7.2 Data Management and Visualization Services

8. REGIONAL LAND USE AND TRANSPORTATION PLANNING COORDINATION

9. MOBILITY AND ENHANCEMENT PROGRAMS

9.1 Enhanced Mobility Grant Program
9.2 Regional Roadway Safety Program
9.3 Transportation Alternatives Program
9.4 Transportation and Land Use Connection Program

10. TPB MANAGEMENT AND SUPPORT

10.1 TPB Committees Support and Management and UPWP

11. TECHNICAL ASSISTANCE PROGRAM

11.1 DDOT
11.2 MDOT
11.3 VDOT
11.4 Regional Transit Technical Assistance

CONTINUOUS AIRPORT SYSTEM PLANNING PROGRAM (CASP)

1. **LONG-RANGE TRANSPORTATION PLANNING**

Visualize 2045 Update, Implementation
- Conduct general coordination and outreach to members to help members understand and implement the plan and the priority strategies supported by the TPB.
- Conduct analysis as necessary to support the TPB priorities and identify progress made towards accomplishing them.

Environmental Justice and Equity
- Coordinate with TPB public participation staff to support outreach and engagement with traditionally disadvantaged population groups.
- [[New Activity]] Conduct and communicate additional analysis that may arise from TPB's FY 2024 equity activities.
- Prepare and begin the environmental justice analysis of Visualize 2050 by advancing the update to TPB's Equity Emphasis Areas
- Track and respond to equity initiatives applicable to the TPB

Future Plan Development Visualize 2050
- Provide opportunities for consideration, coordination, and collaborative enhancement of the TPB's metropolitan transportation plan.
- Communicate to Board and other stakeholders the key planning activities for the next plan update, Visualize 2050. This update is expected to be completed by the end of the fiscal year with adoption in June 2025.
- Conduct coordination across all tasks to support plan development among internal staff, external stakeholders, and consultants.
- Conduct planning and coordination activities related to PBPP and the federal planning factors (See Task 3 for more detail).
- [[New Activity]] Publish the draft plan for public review and comment anticipated in the spring 2025.
- Revise the draft plan as needed for final presentation to the Board for approval.

Federal Compliance
- Track, research, and respond to all federal activities and regulations that impact the metropolitan transportation planning process.
- Document key regional transportation planning activities conducted as part of the process to develop the Visualize 2050 plan.

Policy Board-Directed Activities
- Update plan with targeted completion date of 2025
- Support implementation of TPB Resolution R4-2022 that focuses on building transit-oriented communities throughout the region around High-Capacity Transit (HCT) station areas using Equity Emphasis Areas as a key planning concept and tool to inform decision making and action.
- Produce all products through an 'equity lens' as directed by TPB Resolution R1-2021, which requires all TPB activities to be conducted with an equity lens.
- Carry out additional activities as directed by the TPB.

<u>Resiliency Planning</u>

- General
  - o Conduct regional planning regarding transportation resilience activities and infrastructure, incorporating consideration of equity, including information gathering and sharing, subcommittee briefings, and discussions among stakeholders; produce one or more summary memorandums/presentations for the TPB Technical Committee regarding this year's findings and recommendations.
  - o Coordinate with relevant jurisdictions and committees on regional transportation resilience issues.
  - o Compile and analyze data to support regional transportation resilience planning.
- Phase II Transportation Resiliency Planning Study: Follow-Up Post Completion
  - o Conduct outreach and follow-up activities regarding the Transportation Resilience Improvement Plan (TRIP) to socialize the plan.
  - o Incorporate findings and recommendations from Phase II Study into TPB Regional Transportation Resiliency Planning Program.
  - o Conduct one or more regional resiliency planning training, outreach or professional development forums to strengthen regional awareness about resiliency planning issues specifically in the transportation sector.
  - o Plan for annual/bi-annual update of transportation resilience project list.
  - o Expand the TRIP project request guidance document into an educational document/resource guide for regional planners.
- [[New Activity]] Form a regional transportation resilience planning subcommittee to meet regularly on related issues, continuing the collaboration of member agencies in the working group during the TRIP process and to help guide regional work post-TRIP.
- [[New Activity]] Interior flood (hydraulic and hydrologic) analysis
  - o Complete a feasibility study to receive proposed approaches, scopes, and cost estimates for a regional flood analysis. This project is important to better understand the impact of rainfall events in both current and future climate scenarios.
  - o Depending on the proposed approach and cost estimate, initiate this flood analysis, potentially in a phased approach. Compare results to existing FEMA regulatory 100-year and 500-year floodplains to determine most at-risk areas for future flood events.
  - o **Data:** This analysis would include acquiring and analyzing data for historic, current, and predictive precipitation levels for more accurate interior and urban flooding information. This would be used for and integrated into interior flood/H&H analysis study noted above but can be used for other analysis and projects as well.
- [[New Activity]] Economic analysis of adaptation scenarios for up to five case studies to quantify the benefits of resilience investments in regional transportation assets.
- [[New Activity]] Analyze RITIS data for all TPB localities for road closures due to natural hazards for each year data is available. Create GIS layer to add to interactive mapping tool to better understand reported historical flooding on roadways in our region.

2. TRANSPORTATION IMPROVEMENT PROGRAM

Transportation Improvement Program (TIP) Programming
- Prepare, review, and process administrative modifications and amendments to the currently approved TIP.
- Review administrative modifications and amendments for fiscal constraint.
- Enhance documentation of the TIP with additional analysis as a part of the long-range plan/TIP publications and the Visualize 2050 website.
- Provide public access to long-range plan and TIP project data through an improved online searchable database with integrated GIS project mapping.
- Prepare an annual listing of projects for which federal funds have been obligated in the preceding fiscal year compared against the federal funding programmed for that year in the TIP of record.
- [[New Activity]] Prepare for FY 2026-2029 TIP inputs.

TIP Database Support
- Provide additional customizations to the system's forms, reports, and functionality.
- Provide assistance and guidance in using the Project InfoTrak system for the amendments and the new iteration of the plan.
- Provide ongoing help desk service for TPB staff and agency users to troubleshoot any technical issues that arise.
- Assist State DOT and other agency users with large-scale data transfer requests for major TIP amendments.

3. PLANNING ELEMENTS

This task considers the following aspects of metropolitan transportation planning, in conjunction with federal surface transportation planning requirements. Also included for all elements will be coordination with related state, regional, and local efforts, as well as outreach to members, stakeholders, and subject matter experts, to gather information and collaborate to advise future planning and committee activities. Conduct all Planning Elements activities and related products through an 'equity lens' as directed by TPB Resolution R1-2021.

Performance-Based Planning and Programming (PBPP)
- Develop data and reports for the TPB's setting and tracking of federally specified PBPP targets, in accordance with Letters of Agreement that have been signed between TPB and partner agencies.
- Coordinate with the states and public transportation providers on data collection and sharing, targets, and federally required reporting.
- Set annual highway safety targets.
- Set regional annual transit safety targets.
- [[New Activity]] Ensure that regional Greenhouse Gas targets have been set by early FY 2025, in accordance with federal requirements issued during FY 2024.
- Report on performance in relation to previously set targets, as required.
- Support TPB as it reviews data and sets required targets.

- [[New Activity]] Enhance availability, visualization, and mapping (GIS) of performance-based information on the TPB website, in conjunction with Task 7.

Congestion Management Process (CMP)

- Compile information and undertake analysis for the development of major CMP components, including application of "big data" sources, in conjunction with big data acquisition and analysis activities in Tasks 5 and 7.
- Produce the National Capital Region Congestion Report, released as a quarterly website "dashboard", in conjunction with travel monitoring and data publishing activities undertaken in Task 7.
- Provide CMP technical input to the Performance-Based Planning task.
- Produce special CMP analyses, such as following a major event or roadway improvement, or examining short- to mid-range trends, such as for impacts of the COVID-19 pandemic, on an as-needed basis.
- Support the Vehicle Probe Data Users Group (VPDUG) in its role to foster technical and methodological coordination in the application of vehicle probe data by member agencies and jurisdictions.

Systems Performance, Operations, and Technology (SPOT) Planning
- Conduct regional planning activities regarding regional transportation systems management and operations (RTSMO) and emerging technologies, including information gathering and sharing, subcommittee briefings, and discussions among stakeholders; produce one or more summary memorandums/presentations for the TPB Technical Committee regarding this year's findings and recommendations.
- Conduct Traffic Incident Management (TIM) planning as a component of RTSMO.
- Conduct regional planning activities regarding connected/autonomous vehicles (CAVs).
- Compile information on ITS and CAV deployments in the region.
- Maintain the Regional Intelligent Transportation Systems (ITS) Architecture.
- Conduct supporting activities as necessary on the above topics, potentially including in-depth studies, development of reports or white papers, or stakeholder workshops.
- Support the regional Systems Performance, Operations, and Technology Subcommittee (SPOTS).

Transportation Emergency Preparedness Planning
- Undertake transportation emergency coordination and response planning through the emergency management and Homeland Security Urban Area Security Initiative (UASI) processes, in conjunction with COG's Department of Homeland Security and Public Safety.
- Conduct Traffic Incident Management (TIM) planning as it relates to transportation emergency preparedness planning.
- Support the regional Transportation Emergency Preparedness Committee (R-ESF 1).

Transportation Safety Planning
- Conduct regional roadway safety planning in a manner that emphasizes equity, including information gathering and sharing as well as subcommittee briefings and discussions among stakeholders; produce one or more summary memorandums/presentations for

the TPB Technical Committee regarding this year's findings and recommendations.
- Support engineering, education, and enforcement strategies to reduce fatalities, serious injuries, and crashes in the National Capital Region, including consideration of equity.
- Compile and analyze regional crash data to produce updated roadway safety performance measures and coordinate with member states to develop federally required regional roadway safety targets.
- [[New Activity]] Undertake Phase II of crash data analysis from previous regional safety studies to develop new charts, graphs, and tables that include the latest available data; produce one or more memorandums/presentations for the TPB and the TPB Technical Committee regarding the findings. This effort will help inform local planning and programming efforts to improve transportation safety and achieve/exceed the region's PBPP targets.
- Participate in and coordinate with the Strategic Highway Safety Plan development and implementation efforts of the District of Columbia, Maryland, and Virginia, as well as other state, regional, and local safety efforts.
- Coordinate regional transportation safety planning with the Regional Roadway Safety Program undertaken in Task 9.
- Provide technical advice to the "Street Smart" regional pedestrian and bicycle safety public outreach campaign (Street Smart is supported by funding outside the UPWP).
- Conduct one or more workshops, targeting member agency staff, regarding transportation/roadway safety.
- [[New Activity]] Conduct one or more board-level safety events, targeting policy-level officials, regarding transportation/roadway safety.
- [[New Activity]] Explore regional coordination on "zero deaths" goals and approaches. Most TPB members have adopted a "zero deaths" approach; there are opportunities to strengthen these activities through regional coordination.
- Maintain and enhance the Transportation Safety portions of the TPB website to ensure its value as a regional resource.
- Support the Transportation Safety Subcommittee in its coordination and advisory roles.

Bicycle and Pedestrian Planning
- Conduct regional planning regarding bicycle and pedestrian activities and infrastructure, incorporating consideration of equity, including information gathering and sharing, subcommittee briefings, and discussions among stakeholders; produce one or more summary memorandums/presentations for the TPB Technical Committee regarding this year's findings and recommendations.
- Conduct outreach and follow-up activities regarding the Regional Bicycle and Pedestrian Plan update published in FY 2022.
- Update the National Capital Trail Network map; monitor implementation of National Capital Trail Network projects.
- Monitor and update nonmotorized recommendations for project information in the Transportation Improvement Program (TIP) and Project Info Tracker (PIT), in conjunction with Task 2.
- Monitor Regional Complete Streets and Green Streets activities.
- Conduct regional planning regarding emerging mobility technologies, such as dockless bikesharing and electric scooters.

- Provide technical advice to the "Street Smart" regional pedestrian and bicycle safety public outreach campaign (Street Smart is supported by funding outside the UPWP).
- Conduct two or more regional bicycle and pedestrian planning or design training, outreach, or professional development opportunities for member agency staff.
- Support the Bicycle and Pedestrian Subcommittee in its coordination and advisory roles.

Regional Public Transportation Planning
- Conduct regional planning regarding public transportation activities and infrastructure, incorporating consideration of equity, including information gathering and sharing, subcommittee briefings, and discussions among stakeholders; produce one or more summary memorandums/presentations for the TPB Technical Committee regarding this year's findings and recommendations.
- [[New Activity]] Update the inventory of regional transit-related electrification/zero emissions assets, including an inventory of transit operator plans as well as operator needs.
- Continue implementation of federal requirements for performance-based planning, specifically transit safety and transit asset management, including data collection, analysis of the performance measures, forecasting, and setting of targets.
- Continue gathering usage information on inter-city buses, commuter buses, rail transit, and commuter rail, to advise regional planning and coordination.
- Address Bus Rapid Transit (BRT) planning and coordination as part of regional public transportation planning activities.
- Address TPB-related recommendations from the regional Bus Transformation Project and the WMATA Better Bus/Network Redesign effort, as part of regional public transportation planning activities.
- Produce an annual report on the "State of Public Transportation."
- Conduct supporting activities as necessary on the above topics, potentially including in-depth studies, development of reports or white papers, or stakeholder workshops.
- Support the Regional Public Transportation Subcommittee in its coordination and advisory roles.

Freight Planning
- Conduct regional planning regarding freight and goods movement activities and infrastructure, incorporating consideration of equity, including information gathering and sharing, subcommittee briefings, and discussions among stakeholders; produce one or more summary memorandums/presentations for the TPB Technical Committee regarding this year's findings and recommendations.
- Conduct outreach and follow-up activities regarding the Freight Plan update published in FY 2023.
- Compile and analyze data to support regional freight planning.
- Conduct a symposium/workshop on the topic of curbside management in the National Capital Region, across fields of planning for freight, safety, public transportation, and related areas.
- Coordinate with relevant jurisdictions and committees on regional rail issues.
- Address federal requirements related to regional freight transportation planning, including PBPP measures and targets.
- Conduct supporting activities as necessary on the above topics, potentially including in-depth studies, development of reports or white papers, or stakeholder workshops.
- Support the TPB Freight Subcommittee in its coordination and advisory roles.

Metropolitan Area Transportation Operations Coordination (MATOC) Planning
- Provide administrative support for the MATOC Steering Committee, including preparation of agendas and summaries and tracking of action items.
- Provide TPB staff input and advice to the MATOC Steering Committee and its subcommittees and working groups.
- Address Traffic Incident Management (TIM) as it relates to MATOC planning.
- Provide briefings to the TPB on MATOC Program progress as requested.

4. PUBLIC PARTICIPATION

Public Participation and Outreach
- Conduct public involvement as described in the TPB Participation Plan, which was approved by the TPB in October of 2020. The plan calls upon staff to integrate public engagement, as appropriate, into planning activities throughout the department. All such public involvement activities will be developed and implemented with consideration given to an equity perspective, as directed by TPB Resolution R1-2021, which called for equity, as a foundational principle, to be woven into all of the TPB's work.
- Provide regular opportunities for comment on TPB activities and products, including public comment sessions at the beginning of TPB meetings and official public comment periods prior to the adoption of key TPB plans and programs.
- [[New Activity]] Conduct outreach to support update to the Long-Range Transportation Plan.
- Provide staff support for the TPB Community Advisory Committee (CAC), including organizing monthly meetings and outreach sessions, and drafting written materials for the committee. Staff will ensure that CAC comments are communicated to the TPB regarding transportation plans, projects, programs, and issues that are important to the committee and its members.
- Provide staff support for the TPB Access for All Advisory (AFA) Committee that includes leaders and representatives of traditionally underserved communities, including low-income communities, underrepresented communities, people with limited English proficiency, people with disabilities, and older adults as the TPB's primary strategy for engaging traditionally underserved population groups in the planning process and for providing guidance on Human Service Transportation Program activities. Feedback from the AFA Committee on transportation plans, projects, programs, services, and issues that are important to the communities the AFA represents will be shared with the TPB.
- Conduct training activities, as needed, to help community leaders learn how to get more actively involved in transportation decision making in the Washington region.
- Ensure that all public participation is consistent with and meets the Federal Civil Rights Act (Title VI) and Executive Order 12988 Environmental Justice.

Communications
- Develop written and visual materials to spread information about regional transportation planning issues, explain how transportation decision-making works, and engage the public.

- Support staff as they develop meeting materials and publications to communicate information developed in other tasks in the UPWP.
- Produce content for the TPB News, Visualize 2050 newsletter, and other digital publications.
- Regularly update information on the TPB's webpages, ensuring the site is timely, thorough, and user-friendly.
- Effectively use social media and other digital tools to engage the public in current TPB activities.

5. TRAVEL FORECASTING

Network Development
- Develop a base-year transit network representing recent conditions, which is used as the starting point for developing future-year transit networks used by the regional travel demand forecasting model. This typically represents a recent year, but the choice of year can be influenced by factors such as COVID-19-related disruptions.
- Produce a series of forecast-year transportation networks used as inputs to the regional travel demand forecasting model, in support of transportation planning studies, air quality studies, and mobile emissions planning work. Examples include scenario studies, project-planning studies, and air quality conformity (AQC) analyses of the TPB's Long-Range Transportation Plan (LRTP), Transportation Improvement Program (TIP), State Implementation Plans (SIPs) for attaining or maintaining air pollution standards, and greenhouse gas (GHG) planning studies.
- Maintain, refine, and enhance both 1) the multi-year transportation network geodatabase used in regional travel demand modeling and 2) the software used to edit and update the geodatabase, known as COGTools.
- Develop transportation networks in formats that support both 1) the production-use travel models, such as the Gen2/Ver. 2.4 and Gen2/Ver. 2.4.6 models, which require networks in Cube TRNBUILD format; and 2) developmental travel models, such as the Gen3 Model, which requires networks in Cube Public Transport (PT) format. As we transition from the aggregate, trip-based travel model (Gen2/Ver. 2.4 Model) to the disaggregate, activity-based travel model (Gen3 Model), transit networks will transition from having two time-of-day periods (peak and off-peak) to four time-of-day periods (AM peak, midday, PM peak, and nighttime).
- Maintain and update network development documentation, such as the COGTools User's Guide and the highway and transit network report.
- [[New Activity]] Develop a new highway and transit network report for the Gen3 Travel Model.
- Respond to network-related technical data requests.

Model Development and Support

- Staff the TPB Travel Forecasting Subcommittee (TFS). Conduct about six meetings per year.
- [[New Activity]] Update COG/TPB's strategic plan for model development that directs the model development activities from a long-term perspective to support regional transportation planning.
- Maintain, update, and enhance the TPB's current production-use, trip-based, Gen2 Travel Demand Model, potentially with the 2017/2018 Regional Travel Survey (RTS) data.
- Support both internal and external users of the TPB's production-use travel demand forecasting models (e.g., the Gen2/Ver. 2.4 Model and the Gen2/Ver. 2.4.6 Model).
- Develop the TPB's next-generation travel demand forecasting model that is expected to provide enhanced modeling capabilities. TPB staff is currently working with a consultant to develop a disaggregate, activity-based travel model (ABM), to be known as the Generation 3, or Gen3, Travel Model. The Gen3 Model is to be implemented in both the open-source ActivitySim software platform and Bentley Cube software. Model development is planned to last about five years (FY 2020-2024). Development will occur via two main phases. Phase 1 development of the Gen3 Model concluded in February 2022. Phase 1 created a developmental model that had gone through an initial round of calibration and had been tested by TPB staff. Phase 2 of the Gen3 Model started in March 2022 (FY 22) and is planned to run through approximately January 2024 (FY 24). The goal of Phase 2 is to obtain a travel model that is calibrated and validated.
- [[New Activity]] Following delivery from the consultant team of the final Gen3 Model, COG/TPB staff will conduct usability testing to ensure that the model is ready for production use. Usability testing is predicted to last from January 2024 through July 2024 (FY 25), with a goal of having the Gen3 Model ready for production use by summer 2024 (FY 25). During this testing period, COG/TPB staff will assemble model inputs, execute the model for all analysis years of Visualize 2050, and compare Gen2 and Gen3 modeling results. Staff will also be developing other facets of the travel model that are needed for production use, such as routines for estimating/setting toll values.
- [[New Activity]] Promote the regional coordination of transit on-board surveys (RC TOBS) to ensure that the surveys provide information needed by both transit agencies and COG/TPB staff, who use the data to estimate, calibrate, and validate regional travel demand forecasting models. TPB staff plan to finalize the plan for coordination, determine which agencies will participate, and, if possible, implement the first few surveys as part of RC TOBS. See Work Activity 7 ("Transportation Research and Data Programs") for further details.
- Identify, and possibly obtain, data needed to support development of the Gen3 Model and/or its successor model, such as the Gen4 Model. This could include Big Data, such as passively collected origin-destination (O-D) data. See Work Activity 7 ("Transportation Research and Data Programs") for further details.
- Attend the ActivitySim Consortium meetings, participate in the decision making representing MWCOG and coordinate with other member agencies, including MPOs, state DOTs, and other transportation agencies, on the maintenance and development of ActivitySim and PopulationSim, the underlying software of the Gen3 Travel Model.
- Keep abreast of best practices in travel demand modeling.

- Continue developing knowledge of, and provide support for, other DTP staff in the use of strategic planning models, such as sketch and scenario planning models (e.g., VisionEval and RSPM). Coordinate with DTP's Planning Data & Research (PDR) Team.
- Respond to travel-model-related technical data requests from consultants, state/local agencies, and academics.
- Working with COG's Office of Information Technology (IT), acquire and maintain the hardware and software needed to conduct regional travel demand modeling on computers and servers located at COG (on premises) and/or in the cloud (off premises). Assist COG IT to ensure that both on-prem and cloud computers meet the modeling needs of staff.
- Continue to use version control software, such as Git and GitHub, to manage the computer code for COG's production-use travel models, developmental travel models, and network management software (currently COGTools).

6. MOBILE EMISSIONS AND CLIMATE CHANGE PLANNING

Air Quality Conformity and Other Activities Associated with the Long-Range Transportation Plan
- Conduct the air quality conformity (AQC) analysis (i.e., travel demand modeling and mobile emissions modeling) of the constrained element of the TPB's 2025 Long-Range Transportation Plan (LRTP), known as Visualize 2050, and the current Transportation Improvement Program (TIP), which is a subset of the LRTP, and document findings in a report. Provide technical support for any other activities related to the LRTP.
- Conduct the AQC analysis of any off-cycle analysis, if requested by implementing agencies. This task may be funded from Technical Assistance accounts.
- Keep abreast of federal requirements and legislation related to air quality conformity determinations and the EPA's MOtor Vehicle Emission Simulator (MOVES) software, especially the latest versions of this tool, MOVES3 and MOVES4.
- [[New Activity]] Begin to use MOVES4 for production work for development of state implementation plans for attainment of air quality standards and/or for conducting air quality conformity analyses.
- Continue working to incorporate Performance-Based Planning and Programming (PBPP) requirements pertaining to the Congestion Mitigation and Air Quality (CMAQ) Improvement Program into the planning process as it relates to the adopted LRTP.
- Maintain communication and consultation among transportation agencies, air agencies, and the public regarding air-quality-related matters in the region.

Mobile Emissions Analysis, Including Activities Associated with Climate Change Planning
- Support COG's Department of Environmental Programs (DEP) and state air agencies, in coordination with the Metropolitan Washington Air Quality Committee (MWAQC) and its subcommittees, in the development of state implementation plans (SIPs), such as attainment plans or maintenance plans, designed to allow the metropolitan Washington region to attain or maintain National Ambient Air Quality Standards (NAAQS), such as the 2008 Ozone NAAQS and/or the 2015 Ozone NAAQS. This work may include the development of motor vehicle emissions budgets (MVEBs), which are set in the SIP for use in the AQC analysis. This work would typically involve developing inventories of on-

road mobile emissions for volatile organic compounds (VOC) and nitrogen oxides (NOx), two ozone precursors, using the EPA's MOVES model.

- [[New activity]] Procurement and/or processing of vehicle registration/vehicle identification number (VIN) data for motor vehicle registrations, including possible consultant assistance (extra $100k of funding).
- Revisit opportunities to refresh inputs to the EPA's MOVES software in consultation with regional environmental and transportation agency partners.
- Keep abreast of MOVES model updates and best practices and conduct sensitivity tests of new versions of the MOVES model that may be released by EPA (e.g., MOVES3 and MOVES4).
- [[New Activity]] Begin to use MOVES4 for production work for development of state implementation plans for attainment of air quality standards and/or for conducting air quality conformity analyses.
- Working with COG's Office of Information Technology (IT), acquire and maintain the hardware and software needed to conduct regional mobile emissions modeling on computers and servers located at COG (on premises) and/or in the cloud (off premises).
- Provide technical support to COG/DEP staff regarding regional climate change planning and electric vehicle planning activities.
- [[New activity]] Keep abreast of federal requirements and legislation related to climate change and electric vehicle planning (e.g., new GHG PBPP, see Task 3),[3] and work with our members and COG/DEP staff to comply with the new requirements. Even though the GHG PBPP targets will be set in FY 24, we anticipate modeling to support analyses during FY 25.
- Respond to technical requests from COG/DEP and from TPB member jurisdictions for readily available mobile emissions information.
- Follow established TPB interagency and public consultation procedures and coordinate with COG/DEP staff to involve the MWAQC in the public and interagency consultation process.

7. TRANSPORTATION RESEARCH AND DATA PROGRAMS

Transportation Research and Analysis

This subtask entails conducting data collection, such as conducting surveys or acquiring external data, and analysis to support research that inform regional transportation planning policy development and decision-making.

- [[New activity]] Commence the Regional Travel Survey (RTS). This will entail implementing new procedures for collecting RTS on an a more frequent basis than the conventional once-a-decade tempo that had been used previously. Activities will include procuring consultant support; developing the survey questionnaire, sampling techniques, and survey sample; and conducting pre-test.

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[3] "National Performance Management Measures; Assessing Performance of the National Highway System, Greenhouse Gas Emissions Measure," Rule, 88 Fed. Reg. 85394 (Washington, D.C.: U.S. Department of Transportation, Federal Highway Administration, December 7, 2023), https://www.federalregister.gov/documents/2023/12/07/2023-26019/national-performance-management-measures-assessing-performance-of-the-national-highway-system.

- Continue coordination of future transit on-board surveys (TOBS) to ensure that the surveys: 1) Are largely consistent across agencies; 2) Provide transit agencies the customer satisfaction, subsidy allocation, and Title VI demographic information that transit agencies need to carry out their mission; and 3) Provide COG/TPB staff the data needed to estimate, calibrate, and validate regional travel demand models, which support many transportation planning studies. This effort would be coordinated with other DTP teams, the TPB Travel Forecasting Subcommittee, and the TPB Regional Public Transportation Subcommittee. This item is also noted under Work Activity 5 ("Travel Forecasting").
- Provide cross-program coordination support for all survey efforts. This may include, for example, collaborating with the Travel Forecasting and Emissions Analysis program staff, to develop and oversee a Transit On-board Survey (TOBS) to support regional travel demand forecasting activities, or with the Plan Development Coordination staff on public opinion survey(s) that may be conducted as part of the LRTP update.
- Perform and provide cross-program support to research and analysis efforts using a variety of analytical tools that support regional transportation planning activities and incorporate resulting data into department transportation data products and visualizations. This may include:
  - Research and update traffic volume data with AADT and AAWDT volume estimates, hourly directional traffic volume counts, and vehicle classification counts received from state DOTs and participating local jurisdiction agencies.
  - Performance Based Planning and Programming, bridge and pavement condition analysis
  - Baseline (existing) conditions for the LRTP performance analysis
- Perform travel monitoring studies based on programmatic needs of the regional travel demand forecasting model, PBPP requirements, and LRTP development activities.
- Develop a program to collect and report active transportation data along the National Capital Trail Network. This may include compiling data collected by other jurisdictions and/or collecting data in the field.
- Support use of planning tools in regional transportation planning practice and build staff technical capabilities to test and apply scenario planning tools in transportation planning studies and analyses. This may include the use of scenario planning tools intended to support complex "what if" analyses that examine the effects and impacts that could occur under varying future conditions.
- Provide briefings to the TPB, TPB Technical Committee, the Travel Forecasting Subcommittee, and other subcommittee and stakeholders, as appropriate, on analysis and findings of travel surveys and travel survey research, including comprehensive analysis of multiple surveys and the overall regional story they tell of travel in the region.
- Respond to inquiries from state and local government staff, survey participants, and the media concerning research, analysis, and findings developed in this task.

Data Management and Visualization Services

This subtask entails hosting and managing data collected and compiled across numerous programs and developing visualizations of these data as part of research and analysis activities.

- Develop and implement new plan to manage collection of important travel trends and travel behavior data and information on a more on-going basis. The plan will include 1) identifying and establishing a base set of data that can be refreshed and updated on a regular basis developing methodologies for more robust travel trends research and analysis, 2) developing plan and identifying resources to support continued update of data 3) leveraging appropriate data sources from partner agencies and other external sources, 4) evaluate new data management techniques and software that may be considered for future applications in transportation research
- Apply the use of Big Data to support travel trends and travel behavior analysis as well as supporting the estimating, calibrating, and validating the regional travel demand model. [[New activity]] This will include developing and applying use cases to use Big Data in specific analyses to evaluate the efficacy and applicability of Big Data in regional travel research and analyses. This could include passively collected origin-destination (O-D) data, roadway speed/volume data, roadway congestion data, transit speed/volume data, or other similar data for other travel modes, such as biking (see Task #5, "Travel Forecasting" and Task #3, "Planning Elements").
- Maintain and improve the Regional Transportation Data Clearinghouse as a GIS web-based application to distribute RTDC Data to TPB member agencies by ongoing system administration and updates. Promote the availability and use of the RTDC to local, state, and transit agency partners. Regularly publish and update the following resources on the Regional Transportation Data Clearinghouse (RTDC), as available:
    - Traffic volume and vehicle classification count data.
    - Regional average weekday transit ridership data
    - Freeway and arterial road speed and level of service data
    - Performance Based Planning and Programming Requirements data including Bridge and pavement condition data
    - Socio-economic forecasting data
- Develop and maintain user-friendly and convenient travel trends information and visualizations, including a web-based dashboard that consolidates various regional transportation-related data and information products.
- Provide cross-program and/or cross-department support and coordination to
    - Identify opportunities to integrate additional datasets into the regional transportation data clearinghouse, travel monitoring dashboard, or other visualization products.
    - Connect internal and external stakeholders to data resources, including to support the development of the Gen3 Regional Travel Demand Model (see Task #5, "Travel Forecasting").
    - Integrate data and products to be consistent across program areas to ensure consistency when presenting to TPB's stakeholders/audience.
- Provide data and technical support to staff using GIS for development and distribution of data and information developed for TPB planning activities, including, among others, the development of the LRTP.
- Provide technical guidance and develop GIS-based products (web maps and applications, visualization, etc.) for TPB planning activities.
- Collaborate with other TPB staff on the development of new spatial data products that will enhance the visibility of TPB's programs and planning activities to TPB's stakeholders/audience. This may include an active transportation monitoring application

for the National Capital Trail Network. Also, update existing products (e.g. "major projects map" and dashboard for LRTP).
- Respond to requests for TPB GIS metadata, databases, and applications.
- Coordinate regional GIS activities with state DOTs, WMATA, and the local governments through COG's GIS Committee and subcommittees.
- Maintain and update GIS-related hardware and software used by staff for regional transportation planning activities.

8. REGIONAL LAND USE AND TRANSPORTATION PLANNING COORDINATION

This activity coordinates local, state, and federal planning activities, develops population, household, and employment forecasts that are used as input into the TPB travel demand forecasting model, and facilitates the integration of land use and transportation planning in the region.

- Support initiatives of COG Board of Directors and the TPB on matters related to the coordination and analysis of regional transportation and land use planning to support important regional policy discussions and decisions. This may entail analyzing the relationship between regional land use and transportation using a variety of analytical tools. These may include the use of scenario planning tools intended to support complex "what if" analyses that examine the effects and impacts that could occur under varying future land use and transportation conditions.
- Support the COG Planning Directors Technical Advisory Committee (PDTAC) in the coordination of local, state, and federal planning activities and the integration of land use and transportation planning in the region.
- Work with the CFDS and the region's Planning Directors to develop technical updates to the Round 10 Cooperative Forecasts (population, household, and employment forecasts), if necessary.
- Update and maintain Cooperative Forecasting land activity databases of TAZ-level population, household, and employment forecasts that are used as input into the TPB travel demand-forecasting model.
- Document key land use and transportation assumptions used in making updates to the Cooperative Forecasting land activity forecasts.
- Develop annual Baseline Employment Guidance update to support local governments preparing employment forecast estimates.
- Work with the CFDS to analyze results and implications of newly-released baseline data products such as the American Community Survey and the Bureau of Labor Statistics employment and labor force estimates for use in developing future updates to and assumptions in the Cooperative Forecasts. Continue to provide regular seminars and trainings on accessing and analyzing Census data and other data products to support local demographic analysis and small-area forecasting.
- Map and analyze updated Cooperative Forecasting growth forecasts in relation to COG Activity Centers, high-capacity transit locations, and Equity Emphasis Areas
- Respond to public and stakeholder comments on the Cooperative Forecasts and the Cooperative Forecasting process.

- Develop Travel Model Employment Definition Adjustment Factors, which are applied during post-processing to apply a consistent definition of employment to forecasts for use in the travel demand model.
- Provide continued support for the Transportation Analysis Zone (TAZ) system used in the regional travel demand forecasting model and the Cooperative Forecasting process, including any activities that may be necessary to make TAZ adjustments to support future model development processes.
- Conduct analysis related to regional land use and transportation in support of the development of the LRTP, as well as the consideration of equity in regional land use and transportation planning. This includes supporting LRTP performance analysis, baseline (existing conditions), and developing supporting graphics and visualizations to convey complex land use and transportation planning concepts to myriad stakeholders.
- Develop and publish economic, demographic and housing-related information products including the Regional Economic Monitoring System (REMS) reports, the annual "Commercial Development Indicators," the "Multi-family Rental Housing Construction" report, and economic and demographic data tables to be included in the Region Forward work program.
- Use TPB transportation planning data to update information for the approved COG Region Forward Targets and Indicators.
- Develop and publish analyses and user-friendly visualizations and tools of land use, demographic, socioeconomic, and other applicable data to support the TPB's initiative to optimize high-capacity transit areas (HCTs) and elevating Equity Emphasis Areas (EEAs) in its planning program.

9. COMPLETE STREETS MOBILITY AND ENHANCEMENT PROGRAMS

Enhanced Mobility Grant Program
- Support the implementation of the Coordinated Plan by furthering the goals and strategies in the plan to provide an array of transportation services and options to older adults and people with disabilities.
- [[New Activity]] The next solicitation begins in late 2025; there will be some preparations beginning at this time. EM 7 is FY 2026.
- The UPWP does not provide financial support to implement the projects and oversee the grants that have been awarded. These activities are funded by the FTA Section 5310 Program.

Regional Roadway Safety Program
- Conduct a regional program that provides short-term consultant services to member jurisdictions or agencies to assist with planning or preliminary engineering projects that address roadway safety issues, including studies, planning, or design projects that will improve roadway safety and lead to a reduction in fatal and serious injury crashes on the region's roadways.
- Fund approximately three to eight technical assistance planning projects, or project design effort to achieve 30% completion, supported by UPWP core funding plus portions of the DDOT, MDOT, and VDOT Technical Assistance Programs (and potentially more projects if additional funding is provided by state or local agencies).
- Develop tools and activities to facilitate regional learning about roadway safety issues among TPB member jurisdictions through regional peer exchange.
- Provide staff support for project proposal solicitation, review, and conduct.

Transportation Alternatives Program
- Conduct the selection process for small capital improvement projects using funding sub-allocated to the Washington metropolitan region through the state DOTs from the federal Transportation Alternatives Set-Aside Program (TAP).
- Promote TAP funding for projects that seek to complete the National Capital Trail Network (NCTN) or promote pedestrian and bicycle access in Transit Access Focus Areas (TAFAs). The TPB approved the NCTN and TAFA concepts and maps in July 2020.

Transportation and Land Use Connection Program
- Fund at least six technical assistance planning projects.
- Fund at least one project to perform project design to achieve 30% completion.
- Develop tools and activities to facilitate regional learning about TLC issues among TPB member jurisdictions. Organize at least one regional meeting to facilitate an exchange of information about lessons learned from past TLC projects.
- Provide staff support for TLC Technical Assistance Projects to be conducted as part of the MDOT and VDOT Technical Assistance Programs and for other projects where additional funding is provided by state or local agencies.
- Promote TLC funding for projects that seek to complete the National Capital Trail Network (NCTN) or promote pedestrian and bicycle access in Transit Access Focus Areas (TAFAs). The TPB approved the NCTN and TAFA concepts and maps in July 2020, and updated the NCTN in February 2023.

10. TPB MANAGEMENT AND SUPPORT
TPB Committee Support and Management and UPWP
- Make all administrative arrangements and provide staff support for TPB, the TPB Steering Committee, the State Technical Working Group, the TPB Technical Committee, and special TPB work groups meetings.
- Maintain TPB Committee membership rosters and distribution lists and prepare meeting materials for TPB Committee meetings.
- Prepare the monthly Director's Report.

- Respond to periodic requests from TPB members, federal agencies, Congressional offices, media, and others for information or data of a general transportation nature.
- Meet with TPB Board members and participating agency staff to discuss current and emerging regional transportation planning issues.
- Respond to TPB correspondence and draft correspondence requested by the Board.
- Participate in meetings of other agencies whose programs and activities relate to and impact the TPB work program.
- Draft Memoranda of Understanding with other agencies for the TPB's review and approval.
- Participate in the Association of Metropolitan Planning Organizations (AMPO) and meetings.
- Coordinate TPB Planning Activities with Program Directors.
- Day-to-day management of and allocation of staff and financial resources.
- Monitor all work program activities and expenditures.
- Develop a Unified Planning Work Program (UPWP) that complies with anticipated metropolitan planning requirements in the Fixing America's Surface Transportation (FAST) Act.
- Supervise the preparation, negotiation, and approval of the annual work program and budget involving the State Transportation Agencies, the TPB Technical Committee, the TPB Technical Committee, the Steering Committee, and the TPB.
- Prepare monthly UPWP progress reports for each of the state agencies administering planning funding and prepare all necessary federal grant applications submissions.
- Review all monthly UPWP invoices going to each of the state agencies administering planning funding.
- Prepare the FY 2026 UPWP.

11. TECHNICAL ASSISTANCE PROGRAM

The UPWP Technical Assistance Program provides assistance to state departments of transportation and regional transit agencies. Examples of past Technical Assistance projects have included the VRE-MARC Run-Through Study, support to the District of Columbia travel monitoring program, state- and mode-specific travel monitoring studies, technical support to state project pre-planning activities, and supplemental support to the Transportation Land-Use Connections (TLC) Program, among others.

11.1.   DDOT Technical Assistance
11.2.   MDOT Technical Assistance
11.3.   VDOT Technical Assistance
11.4.   Regional Transit Technical Assistance