

Approved June 15, 2022

visualize
2045 A long-range
transportation plan
for the National
Capital Region

APPENDIX K

Federal Requirements Checklist

June 15, 2022



National Capital Region
Transportation Planning Board

**FEDERAL REQUIREMENTS CHECKLIST FOR THE VISUALIZE 2045 UPDATE (2022)
LONG-RANGE TRANSPORTATION PLAN FOR THE NATIONAL CAPITAL REGION**

June 15, 2022

ABOUT VISUALIZE 2045 & THE TPB

Visualize 2045 is the federally required long-range transportation plan for the National Capital Region. It identifies and analyzes all regionally significant transportation investments planned through 2045 to help decision makers and the public “visualize” the region’s future.

Visualize 2045 is developed by the National Capital Region Transportation Planning Board (TPB), the federally designated metropolitan planning organization (MPO) for metropolitan Washington. It is responsible for developing and carrying out a continuing, cooperative, and comprehensive transportation planning process in the metropolitan area. Members of the TPB include representatives of the transportation agencies of the states of Maryland and Virginia and the District of Columbia, 24 local governments, the Washington Metropolitan Area Transit Authority, the Maryland and Virginia General Assemblies, and nonvoting members from the Metropolitan Washington Airports Authority and federal agencies. The TPB is staffed by the Department of Transportation Planning at the Metropolitan Washington Council of Governments (COG).

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VISUALIZE 2045 2022 UPDATE - FEDERAL REQUIREMENTS CHECKLIST

This checklist includes applicable federal requirements to the TPB based on the USDOT’s May 27, 2016, [final planning rule](#). The 21 items in this checklist are not an exhaustive list of requirements for the MPO process nor plan.

Table 1 – Federal Requirements Checklist

#	Regulatory citation (23 CFR)	Key content of requirement	Comments, including where in plan
1	450.324(a)	The long-range transportation plan (“plan”) has no less than a 20-year planning horizon.	Visualize 2045 has a 23- year planning horizon: 2023 to 2045.
2	450.324(b)	The plan includes both long-range and short-range strategies/actions that provide for the development of a safe and integrated multimodal transportation system to address current and future transportation demand.	<p>Visualize 2045 includes both long- and short-range strategies and actions that address this requirement, as demonstrated by projects in the constrained element (Chapter 7), the TPB policy framework (Chapter 3) and the Strategies for Brighter Future Chapter (6) which includes a description of the TPB’s endorsed Aspirational Initiatives</p> <p>In response to the TPB’s December 2020 Technical Inputs Solicitation, project sponsors answered questions about how projects advance the TPB’s goals, priority strategies, and the federal planning factors. Chapter 7 summaries these responses in table 7.2-7.9 and full responses can be found online: https://www.mwcog.org/documents/2021/05/12/information-to-support-board-action-on-the-update-to-visualize-2045-regional-and-federal-policy-alignment-for-all-capital-projects-tpb-visualize-2045/</p>
3	450.324 (f)(11)(vi)	If the applicable State Implementation Plans (SIPs) include transportation control measures (TCMs), the MPO should coordinate the plan	The currently active SIPs do not include any transportation control measures. However, Appendix G of the Visualize 2045 Air Quality Conformity report documents the completion of all TCMs from all previous SIPs.

		development with process for developing the TCMs.	
4	450.324(e), 450.324(f)(1)	The MPO, the State(s), and the public transportation operator(s) shall validate data used in preparing other existing modal plans for providing input to the plan. The Plan shall use the latest available estimates and assumptions for population, land use, travel, employment, congestion, and economic activity. The Plan shall include current and projected transportation demand of persons and goods to the horizon year of the plan.	Visualize 2045 uses the latest available estimates and assumptions for population, households, and employment from The COG Board of Directors endorsed COG’s Cooperative Forecast Round 9.2 at their February 9, 2021, meeting for use by TPB in the Conformity Analysis. The Cooperative Forecast is described in Chapter 2. The TPB’s regional travel demand model forecasts demand on the region’s transportation system by residents and workers in both the base year (2023) and the horizon year of the plan—2045 (Chapter 8). The travel demand model, which includes the Cooperative Forecasts as a significant assumption, is validated and used by transportation agencies and others in local planning efforts for future projects and inputs to the constrained element.
5	450.324(a), 450.306(b)(1) 450.306(b)(2), 450.306(b)(3), 450.306(b)(4), 450.306(b)(5), 450.306(b)(6), 450.306(b)(7), 450.306(b)(8), 450.306(b)(9), 450.306(b)(10)	The MPO planning process shall provide for the implementation of projects and strategies that address the following planning factors: <ul style="list-style-type: none"> • Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency; • Increase the safety of the transportation system for motorized and non-motorized users; 	<p>Prior to the plan development, the TPB staff conducted, with consultant support, a ‘Strength, Weakness, Opportunities and Threats (SWOT)’ analysis to review of its activities across many planning areas, including many of the federal planning factors. This study identified opportunities to enhance regional planning. The TPB implemented numerous study recommendations to inform the Visualize 2045 update, such as conducting the TPB Resiliency Study.</p> <p>These planning factors continue to help shape Visualize 2045 and appear in multiple ways throughout the plan. In several ways, but most specifically through reporting data on funding levels for the state of good repair of the transportation system (Chapter 7), system preservation is emphasized. As described in Chapter 7, Table 7.9 (“Consideration of the Federal Planning Factors”), the first step in plan development is the solicitation of projects for inclusion in the constrained element, and implementing agencies were asked which planning factors their project addressed. Throughout Chapter 6 of the Visualize 2045 document, text boxes appear which link plan elements to the planning factors. Also</p>

		<ul style="list-style-type: none"> • Increase the security of the transportation system for motorized and non-motorized users; • Increase accessibility and mobility of people and freight; • Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns; • Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight; • Promote efficient system management and operation; • Emphasize the preservation of the existing transportation system; • Improve the resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts of 	<p>described in Chapter 3 is the TPB policy framework which reflects many of the planning factors. The sections on planning activities and strategies in Chapter 6 includes a section on planning for 'Future Factors' and the Federal Planning Factors. This section provides details on the TPB's work on planning factors such as travel and tourism, resiliency and reliability, transportation security and safety planning.</p> <p>Also, Appendix F of this plan provides additional information on regional roadway safety planning, and safety targets and progress are described in Chapter 8 - Performance Planning. The TPB also conducted a new study related to planning for resiliency and reliability of the transportation system, described in Appendix L of this plan and a study on strategies to mitigate climate change which is summarized in Appendix M.</p> <p>The region's Planning Directors are involved in numerous aspects of community planning, including economic development and tourism. The TPB leadership and technical staff regularly attend the COG Planning Directors meetings, often presenting information, such as information about the plan and the initiatives. TPB staff have also presented on the impacts of the COVID-19 pandemic in collaboration with COG staff.</p>
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		<p>surface transportation; and</p> <ul style="list-style-type: none"> • Enhance travel and tourism. 	
6	450.324(f)(2)	The plan shall include existing and proposed transportation facilities that serve important national and regional transportation functions over the period of the transportation plan.	Existing transportation facilities are described in Chapter 2 and the proposed facilities are shown in Chapter 7 with additional details provided in Appendix B.
7	450.324(f)(4)	The plan shall include a description of the performance measures and performance targets used in assessing the performance of the transportation system, and a report on progress achieved in meeting the performance targets.	Chapter 8 of the plan, Planning for Performance, includes a description of the performance measures, targets and progress, where data is available at this time, that resulted from the cooperative process. Performance measures include the regional PBPP measures, Air Quality measures, and measures produced through the TPB regional transportation system performance analysis.
8	450.324(f)(5)	The plan shall include operational and management strategies to improve the performance of existing transportation facilities to relieve congestion and maximize the safety and mobility.	Operational and management strategies are found in Chapter 6, Strategies for a Brighter Future, which includes a discussion of TDM and the TPB's endorsed Aspirational Initiatives that represent many TDM strategies. Chapter 6 also includes a specific section on Operations and Management, and Emerging Technology that provide technology-based strategies to improve performance of the transportation system. Appendix F further discusses Safety Planning and highlights the TPB endorsed strategies and Safety Program that resulted from the TPB's regional study.
9	450.324(f)(6)	The plan shall include consideration of the results of the congestion management process, including the identification of SOV projects.	Chapter 8 describes how numerous TDM, multimodal and operational strategies in Chapter 6 are documented through the Congestion Management Process (CMP). Appendix E further discusses how the CMP is an integrated process informing the planning, strategies and ultimately the projects, programs and policies documented in Visualize 2045. It

			<p>clarifies this integration by reviewing the components of the CMP and how they inform and are integrated into Visualize 2045.</p> <p>When TPB member agencies submit new projects in response to the TPB Technical Inputs Solicitation, they are required to indicate if the project is an SOV project and respond to other questions regarding and confirming the consideration of congestion management strategies. Forms are required for SOV projects that add SOV capacity that do not meet exemption criteria. The lists of projects and maps on pages 37 and 38 in Chapter 7 identify all of the regionally significant projects in the Visualize 2045 update that will add capacity to the region’s highways and arterial roadways. The projects symbolized on the map as “New Road” or “Widen/Improve Existing Road” will add capacity specifically for all roadway users, including single-occupant vehicles. The Air Quality Conformity Project Input Tables in Appendix B of the conformity report provide greater detail on all new capacity being added to regionally significant roadway segments as well as smaller secondary and urban roads.</p>
10	450.324(f)(7)	<p>The plan shall include an assessment of capital investment and other strategies to preserve the existing and future infrastructure, provide for multimodal capacity increases based on regional priorities and needs, and reduce the vulnerability of the existing transportation infrastructure to natural disasters.</p>	<p>Visualize 2045 accomplishes this requirement in a number of ways. Chapter 7, Funding the Transportation System demonstrates the focus on preservation (as 28 percent of the expenditures are slated for maintaining the system in a state-of-good-repair). Multimodal capacity increases account for 19 percent of the expenditures forecast in the financial plan – Appendix A, (also summarized in Chapter 7). Chapter 2 discusses existing conditions and highlights environmental and equity considerations in relation to the transportation system. Chapter 3 discusses the TPB’s policy framework, and challenges and needs to address to achieve the TPB’s goals. The Strategies Chapter, including the Aspirational Initiatives, (Chapter 6) speaks to regional priorities and needs and strategies to address those needs. Chapter 6 has a discussion ‘Climate Change Mitigation and Resiliency’ relating to TPB planning activities to mitigate climate change and prepare for resiliency and reliability of the transportation system - reducing the vulnerability of transportation infrastructure to natural disasters under “Planning for Resiliency.” (climate mitigation and resiliency studies are summarized in Appendix M and L).</p>

11	450.324(f)(8)	The plan shall include transportation and transit enhancement activities, including consideration of the role that intercity buses may play in reducing congestion, pollution, and energy consumption.	The 'Transit' section of Chapter 6, Strategies for a Brighter Future, discusses the role of transit, including intercity buses and rail. The financially constrained element (Chapter 7) includes transportation and transit enhancement activities. Tables 7.2 and 7.7 summarize these activities and is based on project sponsor responses to questions asked in the December 2020 Technical Inputs Solicitation, project totals that support, enhance or promote transit, including intercity bus. Individual responses for each project are provided online at https://www.mwcog.org/documents/2021/05/12/information-to-support-board-action-on-the-update-to-visualize-2045-regional-and-federal-policy-alignment-for-all-capital-projects-tpb-visualize-2045/
12	450.324(f)(9)	The plan shall include a description of existing and proposed transportation facilities in sufficient detail and include cost estimates.	A description of existing and proposed transportation facilities is found in Chapter 2 and Chapter 7, respectively. The TPB's financial plan includes cost estimates for the existing and proposed transportation facilities which is summarized in Chapter 7 with details in Appendix A.
13	450.324(f)(10)	The plan shall include a discussion of types of potential environmental mitigation activities and potential areas to carry out these activities.	Chapter 6 has a discussion of potential environmental mitigation activities which are further described in Appendix G. Chapter 6 also includes a section "Climate Change Mitigation and Resiliency," with related studies further documented in Appendix L and M.
14	450.324(g)	The MPO shall consult, as appropriate, with State and local agencies responsible for land use management, natural resources, environmental protection, conservation, and historic preservation concerning the development of the transportation plan. The consultation shall involve, as	Environmental consultation and mitigation are described Chapter 6 and an interactive on-line map allows for the comparison of transportation plans and environmental -related data. Environmental consultation and potential environmental mitigation activities are further described in Appendix G.

		appropriate, a comparison of transportation plans with State conservation plans or maps, if available.	
15	450.324 (f)(11)(i), 450.324 (f)(11)(ii), 450.324(f)(11)(iii)	<p>The plan shall include a financial plan that demonstrates how the plan can be implemented and includes:</p> <ul style="list-style-type: none"> • Cooperatively- developed estimates of costs and revenue sources reasonably expected to be available to adequately operate and maintain the highways and public transit (in “year of expenditure dollars”) • Recommendations on any additional financing strategies to fund projects and programs included in the plan. 	The financial plan includes cooperatively-developed costs and revenues in year of expenditure dollars that are reasonably expected to be available. The financial information is summarized in Chapter 7 and details are provided in Appendix A. Recommendations can also be found in Appendix A.
16	450.324(h)	The metropolitan transportation plan should integrate the priorities, goals and strategies in the State's Highway Safety plans and Improvement programs, and public transportation agency safety plans.	As documented in Chapter 8, the TPB’s planning process, including PBPP target setting, is closely coordinated with member state DOT’s and WMATA; these agencies’ safety plans and programs are reflected in discussions at the TPB’s Transportation Safety and Public Transportation Subcommittees. Chapter 6 includes information on safety planning. Appendix F describes the TPB Safety Study and the new TPB Safety Program.
17	450.316(a)	The plan shall demonstrate that stakeholders were given the opportunity to comment on the plan based on the	Stakeholders were given a number of opportunities to comment on the plan and be involved in plan development as outlined in Chapter 5, which was guided by the TPB’s Public Participation Plan. In addition to the two 30-day public comment periods on the plan (Appendix I), the TPB did

		<p>TPB’s Public Participation Plan; (Including representatives of public transportation employees, public ports, freight shippers, providers of freight transportation services, private providers of transportation (including intercity bus operators, employer-based commuting programs, such as carpool program, vanpool program, transit benefit program, parking cash out program, shuttle program, or telework program), representatives of users of public transportation, representatives of users of pedestrian walkways and bicycle transportation facilities, representatives of the disabled).</p>	<p>extensive public outreach for Visualize 2045 in 2020 and 2021. Coined as ‘Voices of the Region’ the TPB conducted a statistically significant regionwide survey, a series of focus groups that targeted historically under-represented populations and conducted an open event to gather input using a signs with QR-codes approach to “meet people where they are”. Two virtual forums to share information and answer questions about the 2022 update to Visualize 2045 are scheduled for April 2022.</p> <p>The TPB’s comprehensive committee structure provides on-going comment opportunities and coordination with many of the stakeholders listed in this requirement. Committees provide key guidance on many of the planning areas and strategies for Visualize 2045 (Chapter 6). The TPB also conducts studies involving stakeholder interests such as intercity buses (described in Chapter 6 as well).</p>
	450.316(b)	<p>In developing metropolitan transportation plans and TIPs, the MPO should consult with agencies and officials responsible for other planning activities within the MPA that are affected by transportation (including State and local planned growth, economic development, tourism, natural disaster risk reduction, environmental protection,</p>	<p>The TPB’s committee and meeting structure and planning process are organized to consult, coordinate and engage with planning for many planning areas including but not limited to those required under 450.316(b).</p>

		airport operations, or freight movements) or coordinate its planning process (to the maximum extent practicable) with such planning activities. In addition, the MPO shall develop the metropolitan transportation plans and TIPs with due consideration of other related planning activities within the metropolitan area, and the process shall provide for the design and delivery of transportation services within the area.	
18	450.324(a), 450.306(b)(9) 450.306(b)(10)	The plan shall demonstrate consultation with agencies involved in a) tourism; b) natural disaster risk reduction.	Agencies were given an opportunity to participate in the public comment periods, the QR-code event, regular TPB meetings, and virtual public forums (Phase 2). The TPB's work on travel and tourism is described in Chapter 6. As part of the TPB Resiliency study, TPB staff conducted outreach and held discussions with TPB member agency transportation and resiliency planning staff. TPB staff gave presentations to and held discussions with committees, including but not limited to the TPB's Technical Committee, Systems Performance, Operations, and Technology Subcommittee and the COG Transportation Emergency Preparedness Committee (RESF-1) to consult on planning for natural risk reduction.
19	450.324)(k)	The plan was made readily-available for public review in electronically accessible formats.	The plan is made electronically available in a variety of ways. The Visualize2045.org website provides key documents. A Visualize 2045 email list also provided periodic updates by email for stakeholders and members of the public. The TPB News website, bi-monthly TPB News email newsletter, and the use of social media helped keep the public informed of key steps in the process and provided website links for more details in electronically accessible formats.
20	450.316(a)(iii)	Visualization techniques were used to describe the plan.	Beginning in 2010, the TPB made available to the public in an online, searchable database of all the transportation projects and programs in

			<p>the long-range transportation plan and TIP. The Visualize 2045 plan and website also includes a variety of other maps and visualizations to describe the plan, including new major projects in the financially constrained element of the plan, maintains an interactive “Story Map,” which describes the seven aspirational initiatives, a new Voices of the Region “Story Map” was developed to share and make publicly accessible in a unique way, much of the public input received during the Visualize 2045 outreach plan. The TPB worked with a consultant to produce a set of infographics and animated videos about the plan, the Aspirational Initiatives, and more. A recording of a presentation of the plan will be made available on the Visualize 2045 website in April 2022.</p>
21	450.324(c) 450.324(m)	<p>The MPO shall review and update the transportation plan at least every 4 years in air quality nonattainment and maintenance areas and at least every 5 years in attainment areas to confirm the transportation plan's validity and consistency with current and forecasted transportation and land use conditions and trends and to extend the forecast period to at least a 20-year planning horizon.</p> <p>Air quality conformity determination on any updated or amended transportation plan in accordance with the Clean Air Act and EPA regulations.</p>	<p>Following the public comment period, in June 2022, the staff will recommend that the TPB approve the air quality conformity determination of the financially constrained element of Visualize 2045 and the FY 2013-2026 TIP. The plan and TIP conform to the requirements (Sections 174 and 176(c) and (d) of the Clean Air Act as amended (42 U.S.C. 7504, 7506(c) and (d)), and meet air quality conformity regulations: (1) as originally published by the Environmental Protection Agency (EPA) in the November 24, 1993, Federal Register, and (2) as subsequently amended, most recently in April 2012, and (3) as detailed in periodic FHWA / FTA and EPA guidance.</p>