VISUALIZE 2050

National Capital Region Transportation Plan

I-495 SOUTHSIDE EXPRESS LANES AIR QUALITY CONFORMITY SCOPE OF WORK

Proposed Amendment to Visualize 2050

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Metropolitan Washington Air Quality Committee
December 2, 2026

Agenda Item 3

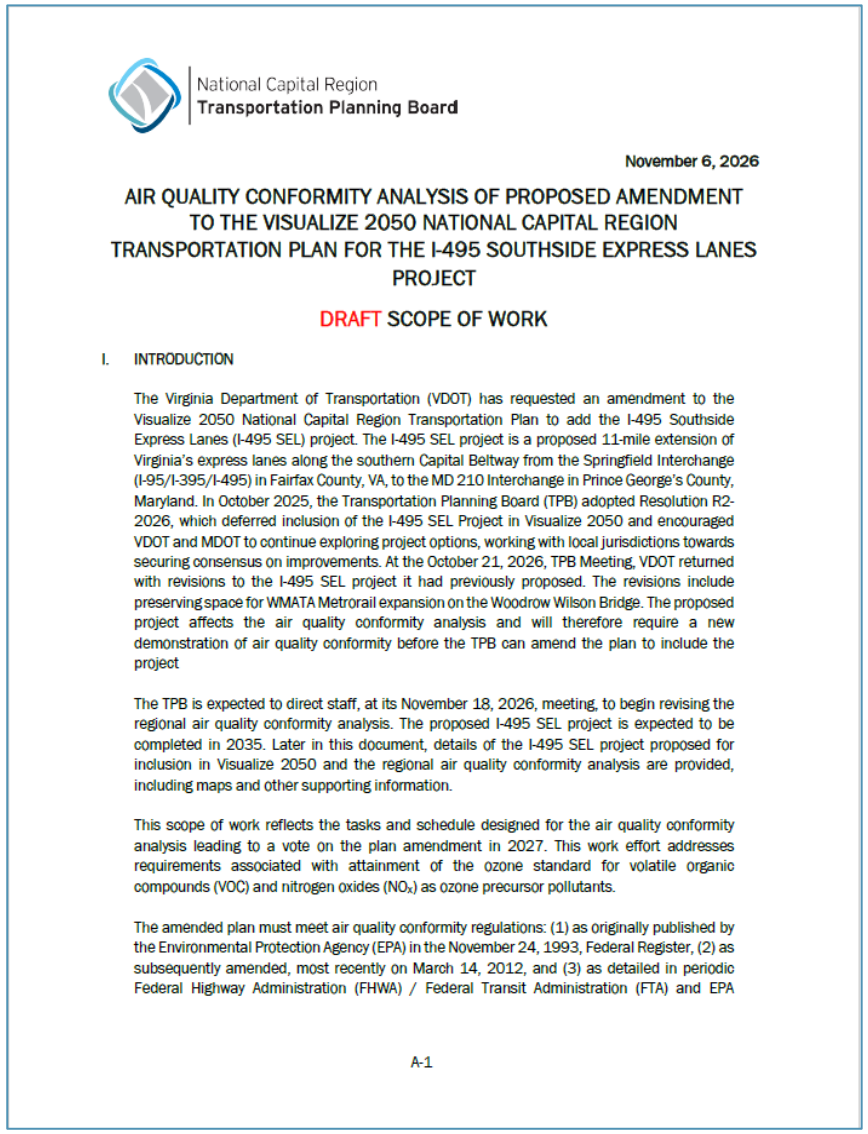
National Capital Region
Transportation Planning Board

Background

- In October 2025, TPB Resolution R2-2026 deferred the inclusion of the I-495 Southside Express Lanes (SEL) project in Visualize 2050 and directed VDOT to provide the TPB a report in 2026 on the status and outcomes of its work on the project with all relevant jurisdictions.
- To fulfill this obligation, VDOT presented the updated project concepts, commitments, and project coordination with MDOT and Prince George's County to date at the October 2026 TPB meeting.
- At the October 2026 TPB meeting, VDOT also requested that TPB staff initiate activities to revise the air quality conformity analysis with the intent of asking the TPB to amend the new project into the TPB's metropolitan transportation plan, Visualize 2050.

I-495 SEL Project

- Proposed 11-mile extension of express lanes along the southern Capital Beltway from the Springfield Interchange (I-95/I-395/I-495) in Fairfax County, VA, to the MD 210 Interchange in Prince George's County, MD.
  - One/two High-Occupancy Toll (HOT) lanes in each direction.
  - Vehicles with 3+ people may travel free with EZ Pass Flex.
  - Express bus route between the Branch Avenue Metro Station and Tysons Corner.
  - Space maintained on the Woodrow Wilson Bridge for future Metrorail expansion.



National Capital Region
Transportation Planning Board

November 6, 2026

AIR QUALITY CONFORMITY ANALYSIS OF PROPOSED AMENDMENT TO THE VISUALIZE 2050 NATIONAL CAPITAL REGION TRANSPORTATION PLAN FOR THE I-495 SOUTHSIDE EXPRESS LANES PROJECT

DRAFT SCOPE OF WORK

I. INTRODUCTION

The Virginia Department of Transportation (VDOT) has requested an amendment to the Visualize 2050 National Capital Region Transportation Plan to add the I-495 Southside Express Lanes (I-495 SEL) project. The I-495 SEL project is a proposed 11-mile extension of Virginia's express lanes along the southern Capital Beltway from the Springfield Interchange (I-95/I-395/I-495) in Fairfax County, VA, to the MD 210 Interchange in Prince George's County, Maryland. In October 2025, the Transportation Planning Board (TPB) adopted Resolution R2-2026, which deferred inclusion of the I-495 SEL Project in Visualize 2050 and encouraged VDOT and MDOT to continue exploring project options, working with local jurisdictions towards securing consensus on improvements. At the October 21, 2026, TPB Meeting, VDOT returned with revisions to the I-495 SEL project it had previously proposed. The revisions include preserving space for WMATA Metrorail expansion on the Woodrow Wilson Bridge. The proposed project affects the air quality conformity analysis and will therefore require a new demonstration of air quality conformity before the TPB can amend the plan to include the project

The TPB is expected to direct staff, at its November 18, 2026, meeting, to begin revising the regional air quality conformity analysis. The proposed I-495 SEL project is expected to be completed in 2035. Later in this document, details of the I-495 SEL project proposed for inclusion in Visualize 2050 and the regional air quality conformity analysis are provided, including maps and other supporting information.

This scope of work reflects the tasks and schedule designed for the air quality conformity analysis leading to a vote on the plan amendment in 2027. This work effort addresses requirements associated with attainment of the ozone standard for volatile organic compounds (VOC) and nitrogen oxides (NO_x) as ozone precursor pollutants.

The amended plan must meet air quality conformity regulations: (1) as originally published by the Environmental Protection Agency (EPA) in the November 24, 1993, Federal Register, (2) as subsequently amended, most recently on March 14, 2012, and (3) as detailed in periodic Federal Highway Administration (FHWA) / Federal Transit Administration (FTA) and EPA

A-1

Air Quality Conformity Scope of Work

- The air quality analysis for the proposed Visualize 2050 amendment to add the I-495 SEL must comply with Air Quality Conformity (AQC) regulations.



VISUALIZE 2050
National Capital Region Transportation Plan

Pollutants	Ozone Season VOC and NO_x
Emissions Model	MOVES5 NEW
Conformity Test	Budget Test: Using EPA approved mobile emissions budgets from the 2008 Ozone NAAQS Maintenance Plan
Vehicle Fleet Data	December 2023 vehicle registration data
Geography	8-hour ozone non-attainment area
Network Inputs	Regionally significant projects already approved in Visualize 2050 plus the proposed I-495 SEL project NEW
Land Activity	Cooperative Forecasts Round 10.1 NEW
HOV/HOT	VA: I-66, I-95, I-395, and I-495 are all HOT3+; all HOV facilities will be HOV2+ through 2050 MD: HOV facility on US 50 will remain HOV2+ through 2050; HOV facility on I-270 will convert from HOV2+ to HOT3+ when additional lanes are added;
Roadway Restrictions	Roadway restrictions, such as truck prohibitions, are reflected in the travel model network using information supplied by the Departments of Transportation
Analysis Years	2040 and 2050 NEW
Modeled Area	6,800 square mile area with 3,722 Transportation Analysis Zones (TAZs)
Travel Demand Model	Gen2/Version 2.4.6

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AQC Scope of Work – Policy & Technical Approach

- Summary of Key Elements
  - Network Inputs
  - Land Activity
  - Analysis Years
  - Emissions Model



EMISSIONS MODEL

- EPA's MOVES5 model
  - Used for development of the Maintenance Plan for 2015 Ozone NAAQS.
  - Being used for conformity in this region for the first time.
- Guidance for using MOVES5
  - MOVES5 includes federal vehicular emissions reduction rules that have recently been rescinded *(EPA's Endangerment Finding Rescission Rule, Disapproval of Advanced Clean Trucks (ACT) waiver, and reduced incentives for EVs and EV charging infrastructure).*
  - EPA released MOVES6 on October 27, 2026, reflecting the above rule changes and other corrections
  - EPA provided a two-year grace period and guidance for using MOVES5 for conformity purposes, allowing agencies time to transition to MOVES6.
  - Per EPA guidance and to account for legislative changes, MOVES5 will be used for Visualize 2050 amendment and will apply the "Constant Fraction" approach for modeling electric vehicles (EVs), assigning EV fractions from 2025 to all future years.

Schedule

Timeframe	Activity
November 6, 2026	TPB Technical Committee receives a briefing on the draft inputs for the proposed amendment to Visualize 2050 and the draft air quality conformity (AQC) analysis scope of work.
November 10, 2026	MWAQC-TAC receives a briefing on the draft inputs for the proposed amendment to Visualize 2050 and the draft AQC analysis scope of work.
November 18, 2026	TPB receives a briefing on the draft AQC analysis scope of work and is asked to approve it.
December 2, 2026	MWAQC receives a briefing on the inputs for the proposed amendment to Visualize 2050 and the AQC analysis scope of work.
December 2026 through January 2027	TPB staff undertake the technical analysis and develop the draft AQC report, draft financial analysis, and draft amendment materials for public comment.
February 5, 2027	TPB Technical Committee receives a briefing on the proposed amendment to Visualize 2050 draft AQC analysis findings.
February 5, 2027	The proposed amendment to Visualize 2050 and the draft AQC analysis findings are released for 30-day public comment period at the Community Advisory Committee (CAC) meeting.
February 9, 2027	MWAQC-TAC receives a briefing on the proposed amendment to Visualize 2050 and the draft AQC analysis findings.
February 17, 2027	TPB receives a briefing on the proposed amendment to Visualize 2050 and the draft AQC analysis findings
March 7, 2027	Public comment period ends
March 17, 2027	TPB reviews comments, responses to comments and is presented with the Air Quality Conformity Analysis Report and the proposed amendment to include the I-495 SEL project in Visualize 2050 for action.

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