

ITEM 12 – Information

February 19, 2020

Briefing on the FY 2021-2024 TIP and Air Quality Conformity Analysis of the TIP and the 2020 Amendment to Visualize 2045

Background:

The board will be briefed on the FY 2021-2024 TIP and on the conformity analysis of the TIP and the 2020 amendment to Visualize 2045, the region's long-range transportation plan. The TIP, materials on updates to the plan, and the conformity analysis were released for public comment on January 31. The TPB will be asked to approve the conformity analysis, the FY 2021-2024 TIP, and the 2020 amendment to Visualize 2045 at its March 18 meeting.

FY 2021-2024 Transportation Improvement Program (TIP)

and the 2020 Amendment to the Visualize 2045 Long Range Transportation Plan and the Air Quality Conformity Analysis

Andrew Austin, TPB Transportation Planner
Jane Posey, TPB Transportation Engineer

Transportation Planning Board
February 19, 2020

Agenda Item 12



National Capital Region
Transportation Planning Board

The Year of the TIP

Why are we doing this now?

- The TPB produces a new TIP every two years
 - Every new TIP requires a conformity analysis
 - Opened a call for minor updates to Visualize 2045 to keep the plan current
 - Any revision to the plan requires the TPB to self-certify its planning process
- The Harmonic Convergence of 2021–2024
- Support of TPB Leadership



What is the TIP?

- A key for states to unlock federal funding for transportation infrastructure in metropolitan areas
- Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) provide formula funding based on population, population density, geography, and many other factors
- Exercise requiring the state DOTs to demonstrate fiscal constraint and transparency
- Opportunity to highlight project prioritization
- Implementation of Visualize 2045



Federal Requirements of the TIP

- Must cover at least a **4-year period** and be updated every 4 years
- Funding in the first two fiscal years must be “available and committed”
- Project funding in the TIP should be based on an investment plan to attain a set of federally approved performance targets

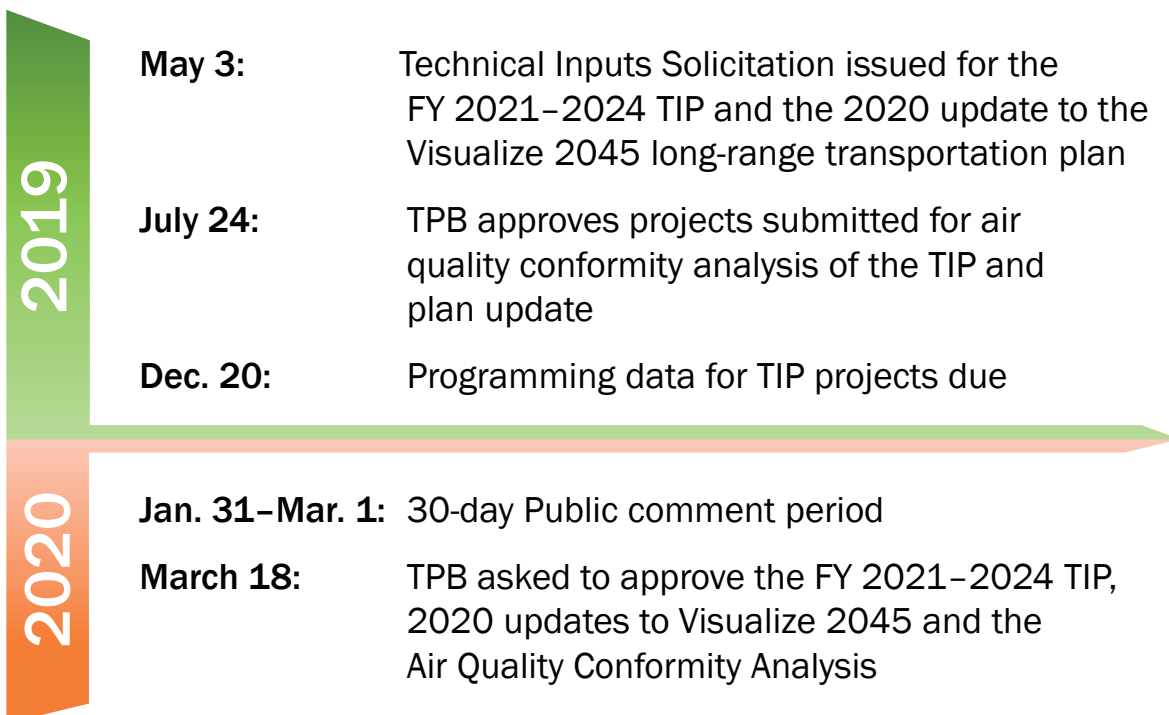
Input Sources for the FY 2021–2024 TIP

Those investment plans are found in the 6-year budgets of the three DOTs, and WMATA and their respective Statewide Transportation Improvement Programs (STIPs)

DDOT	<ul style="list-style-type: none"> • Concurrently developing FY 21–24 STIP
MDOT	<ul style="list-style-type: none"> • Inputs held over from FY 19–24 Consolidated Transportation Plan and the FY 19–24 TIP • Development of their FY 21–24 STIP expected later this year
VDOT	<ul style="list-style-type: none"> • Inputs from their draft FY 21–24 STIP to be finalized and approved this fall
WMATA	<ul style="list-style-type: none"> • Inputs from their DRAFT FY 21–26 Capital Improvement Program – currently out for review.



Development Schedule for the TIP



STIPs and the TPB's TIP

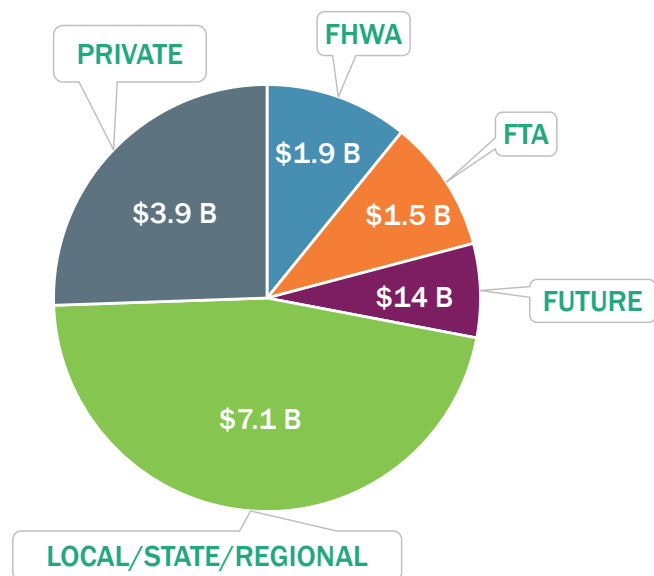
- Following TPB approval, the District, Maryland, and Virginia incorporate their respective portions of the TPB's TIP into their own STIPs
 - Opportunities for public involvement at state level
- STIPs are submitted to FHWA and FTA for approval
 - Must remain consistent with TPB's TIP

Financial Plan for the FY 2021-2024 TIP

Four Year Funding Total

\$15.8 Billion

- \$1.9 B – Federal Highway Administration (Title I)
- \$1.5 B – Federal Transit Administration (Title III)
- \$1.4 B – Future Federal (Advanced Const., GARVEE)
- \$7.1 B – State and Local
- \$3.9 B – Private, P3



Additional Analysis of the TIP

- Performance-Based Planning and Programming (PBPP)
 - *Highway Safety* (performance vs. targets)
 - Pavement and Bridge Conditions (targets only)
 - Highway System (targets only)
 - Congestion Mitigation and Air Quality Program (targets only)
 - *Transit Asset Management* (performance vs. targets)
- Complete Streets Documentation
- Bicycle and Pedestrian Accommodations

Air Quality Conformity: Findings

- Ozone Season VOC within Mobile Budget
- Ozone Season NO_x within Mobile Budget

Minor Update to the Plan

- No Financial Analysis
- No Performance Analysis

Pollutants

- Volatile Organic Compounds (VOC)
- Nitrogen Oxides (NO_x)
- Greenhouse Gases

NOTE: Greenhouse gases are analyzed to track regional trends. They are not officially part of the conformity analysis.

Technical Approach

Analysis Years:

2019, 2021, 2025, 2030, 2040, 2045

Technical Approach

Key Technical Inputs and Tools:

- Round 9.1a Cooperative Forecasts – *NEW*
- “Regionally Significant” Transportation Projects – *NEW*
- Version 2.3.78 Travel Demand Model
- 2016 Vehicle Registration Data (VIN)
- EPA’s MOVES2014b Mobile Emissions Model

Major Project Changes - District of Columbia

Bicycle Lanes, Districtwide

- 9th St. NW from Florida Ave. to Constitution Ave.
- Dalecarlia Pkwy. NW from Loughboro Rd. to Westmoreland Circle
- Florida Ave. NE from 2nd St. to 14th St.
- K St. NE from 1st St. to 8th St.
- M St. SE from Half St. to 11th St.
- Mount Olivet Rd. NE from Brentwood Pkwy. to West Virginia Ave.
- Nebraska Ave. NW from New Mexico Ave. to Loughboro Rd.
- Pennsylvania Ave. SE from 2nd St. to 17th St.



Major Project Changes - District of Columbia (Continued)

Peak Period Bus-Only Lanes

- H St. NW from 14th St. to 19th St.
- I St. NW from 13th St. to Pennsylvania Ave.

K ST. NW Transitway

- Construct two segments from 9th St. to 12th St. and from 12th St. to 21st St.



Major Project Changes - Virginia

- Modify I-495 Capital Beltway Express Lanes
 - Construct 3 additional ramps near Dulles Toll Road interchange
 - Continuation of Peak Period NB Shoulder Lane
- Construct reversible ramp from I-95 at Opitz Dr.
- Construct VA 28 Manassas Bypass from VA 234 Sudley Rd. to VA 28 Centreville Rd.

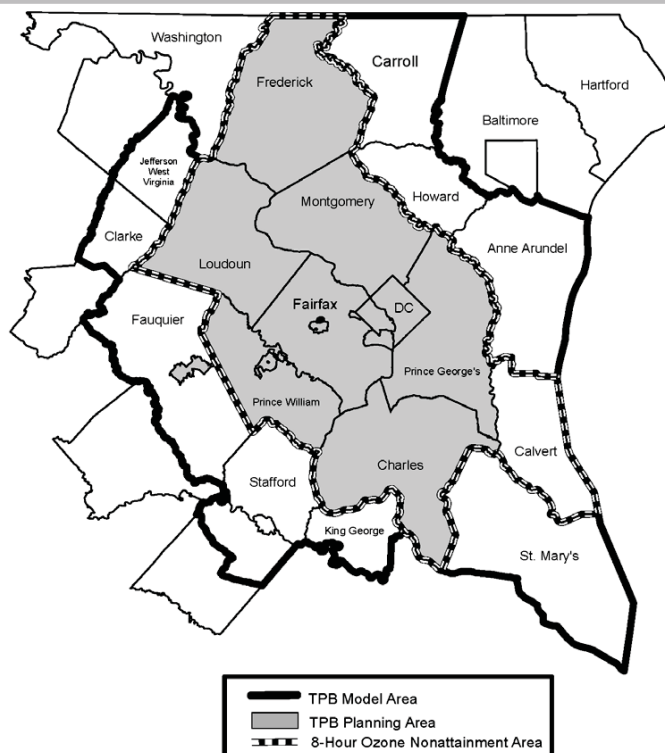
Major Project Changes - Virginia (Continued)

- Widen VA 55 from US 29 to the Town of Haymarket
- Widen VA 123 from VA 267 Dulles Access Rd. to VA 634 Great Falls St.
- Widen VA 286 Fairfax County Parkway from US 29 Lee Hwy. to Rolling Rd.
- Construct West End Transitway Phase II (Southern Segment) from Van Dorn Street Metro to Landmark Mall

Round 9.1a Cooperative Forecasts

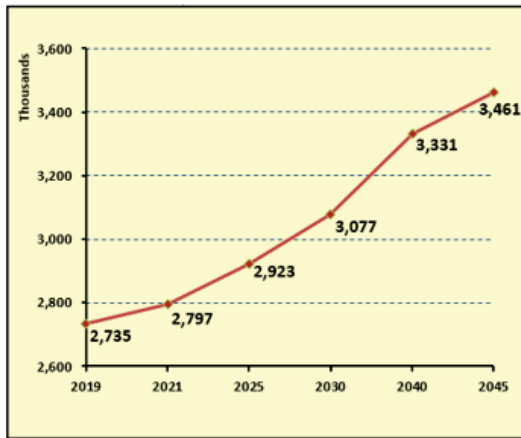
- Updates to BRTB & FAMPO Planning Areas Only
- Adjustments to Employment Factors
 - Provide Consistent Definition For All Jurisdictions
 - Based on 2015 Bureau of Labor Statistics Data, Census Bureau Data, and Military Personnel Data
- Updated External, Miscellaneous, and Airport Trip Forecasts

TPB Planning Areas



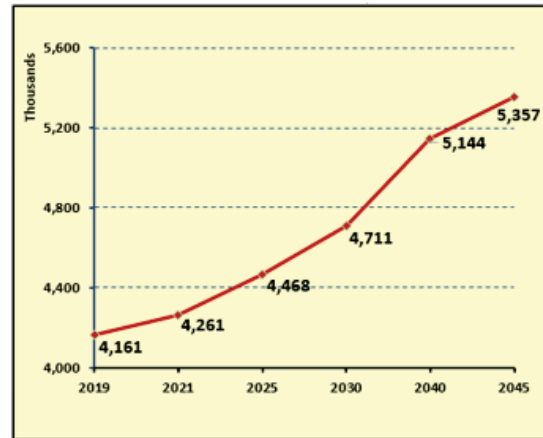
Round 9.1a Cooperative Forecasts

Households
(in thousands)



NOTE: Values are for the modeled area

Employment*
(in thousands)



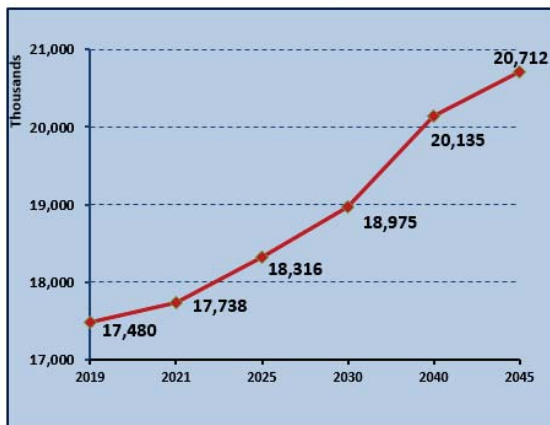
*Includes employment definition adjustment



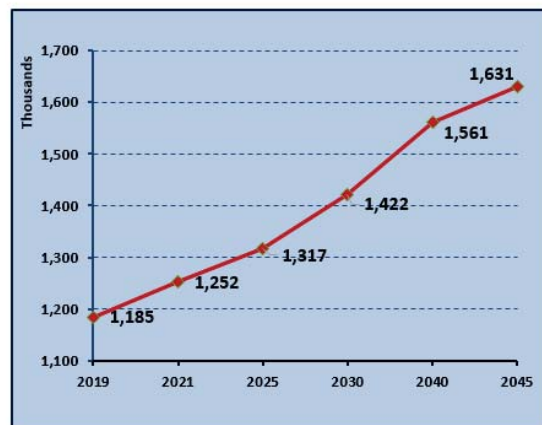
Travel Demand Summaries

Modeled Area Trips

Vehicle Trips
(in thousands)

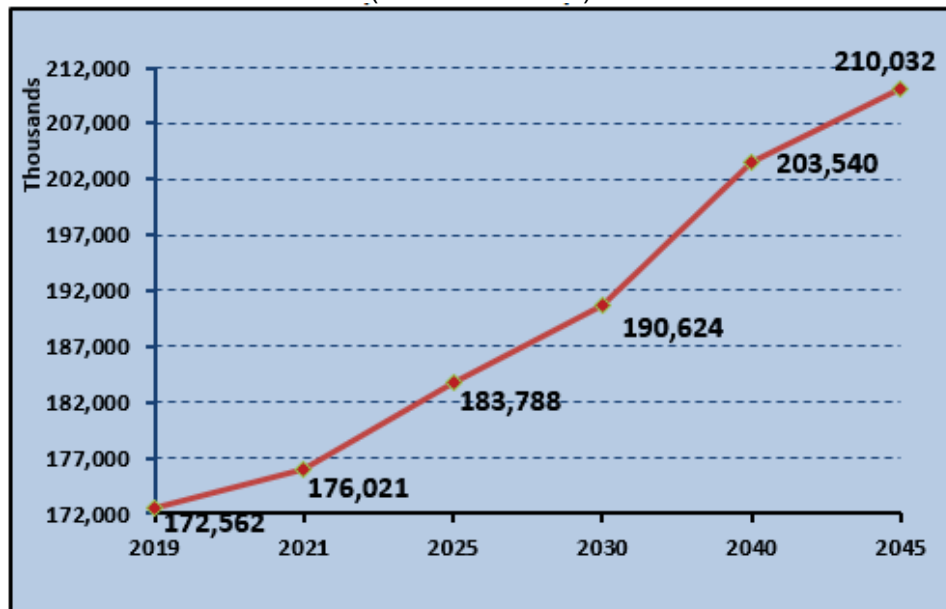


Transit Trips
(in thousands)



Travel Demand Summary

Modeled Area Vehicle Miles Traveled
(in thousands)



Mobile Budgets

From the August 6, 2018 Federal Register – Notice of Adequacy
Finding for the Mobile Budgets in the 2008 Ozone Maintenance SIP:

“The MVEBs ...that include a transportation buffer will be used only as needed in situations where the conformity analysis must be based on *different data, models, or planning assumptions, including, but not limited to, updates to demographic, land use, or project-related assumptions,* than were used to create the first set of MVEBs in the maintenance plan”



Mobile Budgets vs. Conformity

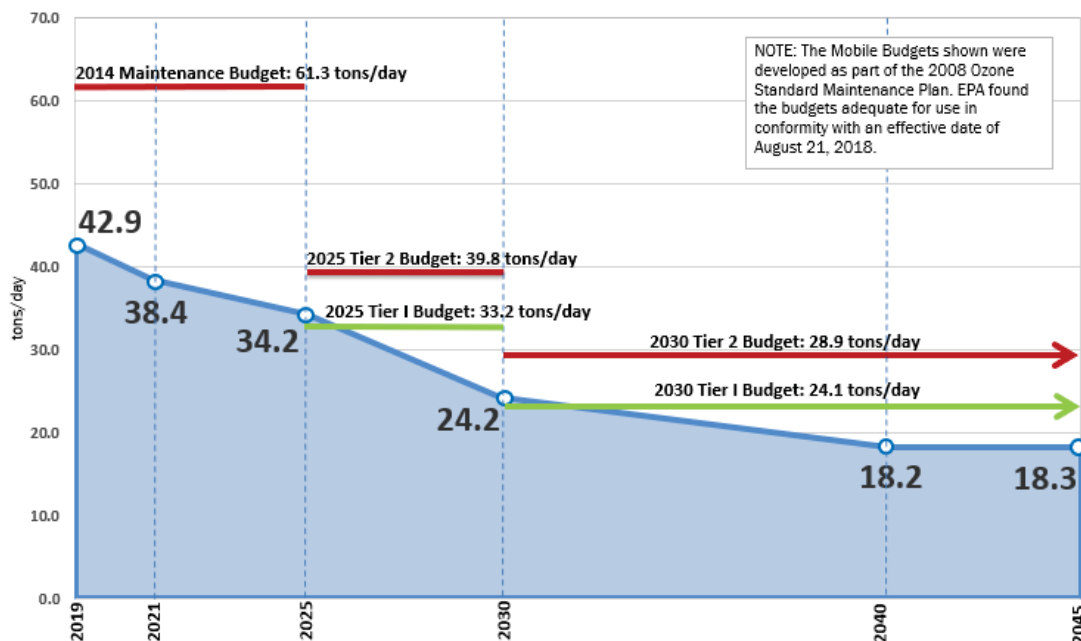
	Maintenance Plan Mobile Budgets	2020 Amendment to Visualize 2045 Conformity Emissions
Cooperative Forecasts	Round 9.0	Round 9.1a
Vehicle Fleet	2014 VIN	2016 VIN
Travel Demand Model	Version 2.3.66	Version 2.3.78
Project Inputs	2016 CLRP	2020 Amendment to Visualize 2045
Metrorail Constraint	yes	no

NOTE: A sensitivity analysis conducted in 2018 showed that the change to the vehicle fleet had the most significant impact on changes to emissions



Mobile Source Emissions

Ozone Season VOC

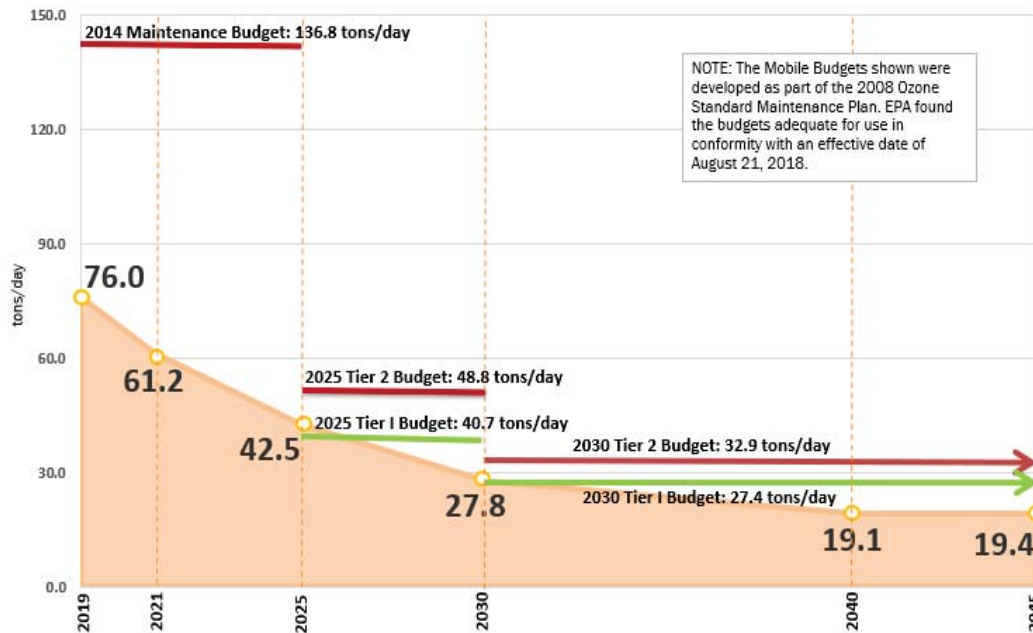


TCMs and TERMS are not included in totals.



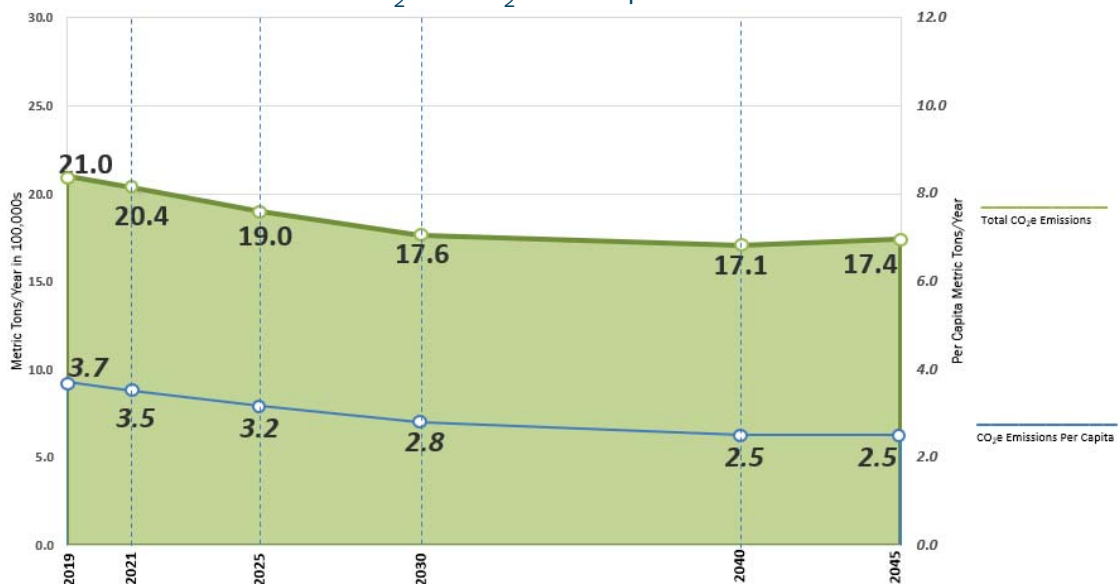
Mobile Source Emissions

Ozone Season NOx



Greenhouse Gases

2020 Amendment to Visualize 2045 Greenhouse Gas Mobile Source Emissions CO₂ and CO₂ e Per Capita



Project Updates

- Long Bridge
- Franconia-Occoquan 3rd Track
- Alexandria 4th Track



Next Steps

- Public Comment Jan 31 – March 1
- TPB Briefing: Conformity Findings Feb 19
- MWAQC Briefing: Conformity Findings Feb 26
- TPB Action: March 18
 - ✓ Conformity Determination
 - ✓ 2020 Amendment to Visualize 2045
 - ✓ FY 2021-2024 TIP
 - ✓ Statement of Certification



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National Capital Region
Transportation Planning Board

Agenda Item 12: FY 2021-2024 TIP & Air Quality Conformity Analysis
February 19, 2020

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MEMORANDUM

DRAFT

TO: National Capital Region Transportation Planning Board
FROM: Jane Posey, TPB Transportation Engineer
SUBJECT: Summary Report: Air Quality Conformity Analysis of the 2020 Amendment to Visualize 2045
DATE: January 31, 2020 (for distribution at the February 19, 2020 TPB meeting)

INTRODUCTION

This memorandum documents summary results of the air quality conformity analysis of the 2020 amendment to the Visualize 2045 Long Range Transportation Plan (LRTP) and FY 2021-2024 Transportation Improvement Program (TIP) with respect to ozone season pollutants, Volatile Organic Compounds (VOC) and Nitrogen Oxides (NO_x). TPB staff has found that **the estimated emissions from the LRTP and TIP adhere to the motor vehicle emissions budgets (MVEBs) for the pollutants analyzed, VOC and NO_x**. The results and findings of the analysis have been reviewed by the National Capital Region Transportation Planning Board (TPB) Technical Committee and the Metropolitan Washington Air Quality Committee Technical Advisory Committee (MWAQC TAC). The findings were released for a 30-day public comment and interagency consultation period on January 31, 2020 which will end on March 1, 2020.

OZONE STANDARD & MOBILE BUDGETS

2015 Ozone Standard

Effective August 3, 2018 EPA designated the Metropolitan Washington, DC (DC-MD-VA) region as “marginal” non-attainment for the 2015 Ozone Standard. Under a “marginal” designation, it is not necessary to develop MVEBs, and consequently there are no MVEBs specific to the 2015 Ozone Standard. Provisions of the conformity regulations¹, however, require that emissions from the Plan and TIP conform to previously approved (or “found adequate for conformity purposes”) MVEBs. The current MVEBs for the DC-MD-VA non-attainment area are those developed for the Maintenance Plan for the 2008 Ozone Standard (discussed below). The emissions from the 2020 amendment to the Visualize 2045 Plan and FY2021-2024 TIP adhere to these MVEBs.

Marginal non-attainment areas have three years, from the date of designation, to achieve the 2015 Ozone Standard. Accordingly, the DC-MD-VA area would have an attainment year of 2021 (i.e., three years following the August 3, 2018 designation).

¹ U.S. Environmental Protection Agency Transportation Conformity Regulations as of April 2012; EPA-420-B-12-013 April 2012; <https://nepis.epa.gov/Exe/ZyPDF.cgi/P100E7CS.PDF?Dockey=P100E7CS.PDF>

2008 Ozone Standard Maintenance Plan Budgets

In 2012, EPA designated the Metropolitan Washington, DC (DC-MD-VA) region as “marginal” non-attainment for the 2008 Ozone Standard. With this designation EPA regulations do not require the development of MVEBs. Instead, as per EPA regulations, conformity analyses for the region’s Plan and TIP were being demonstrated to previously approved MVEBs from the older 1997 Ozone Standard.

In 2015, the region attained the 2008 Ozone Standard, based on the readings from ambient air quality monitors. The Metropolitan Washington Air Quality Committee (MWAQC) developed a Redesignation Request and Maintenance Plan which the State Air Agencies submitted to the EPA in early 2018. The 2008 Ozone Maintenance Plan included MVEBs for VOC and NOx. In August 2018, EPA found these mobile emissions budgets adequate for use in the region’s conformity analyses.

The 2008 Ozone Maintenance Plan established VOC and NOx emissions budgets for three specific periods: the attainment year (2014), an intermediate year (2025), and for the final year (2030) of the Maintenance Plan. The plan includes two sets of mobile budgets for each pollutant. The first set of budgets, referred to as “Tier 1 budgets”, were based on projected emissions developed as part of the Maintenance Plan, and were set at the inventory level for each year. The second set of budgets, referred to as “Tier 2 budgets”, were developed by adding a 20% transportation buffer to the mobile emissions inventories for VOC and NOx in 2025 and 2030. Tier 1 and Tier 2 mobile budgets for VOC and NOx are shown in Exhibit 1 and Exhibit 2, below.

The maintenance plan provides for using the Tier 2 budgets (buffers) in situations “where the conformity analysis must be based on different data, models, or planning assumptions, including but not limited to updates to demographic, land use, or project-related assumptions, than were used to create the [mobile budgets] in the Maintenance Plan”.²

Exhibit 1: Tier 1 Mobile Budgets¹

Year	NO_x On-Road Emissions (tpd)	VOC On-Road Emissions (tpd)
Attainment Year 2014 Emission & Budget	136.8	61.3
Intermediate Year 2025 Emission & Budget	40.7	33.2
Final Year 2030 Emission & Budget	27.4	24.1

² *Maintenance Plan for the Washington DC-MD-VA 2008 Ozone NAAQS Nonattainment Area*. Prepared by the Metropolitan Washington Council of Governments for the District Department of the Environment, the Maryland Department of the Environment, and the Virginia Department of Environmental Quality on behalf of the Metropolitan Washington Air Quality Committee. December 20, 2017.

<https://www.mwcog.org/documents/2017/09/18/washington-dc-md-va-2008-ozone-naaqs-marginal-nonattainment-area-redesignation-request-and-maintenance-plan-air-quality-air-quality-conformity-ozone/>

Exhibit 2: Tier 2 Mobile Budgets¹

Year	NO _x On-Road Emissions (tpd)	VOC On-Road Emissions (tpd)
Attainment Year 2014 Emission & Budget	136.8	61.3
Predicted 2025 Emission	40.7	33.2
Transportation Buffer	8.1	6.6
Intermediate Year 2025 Budget	48.8	39.8
Predicted 2030 Emission	27.4	24.1
Transportation Buffer	5.5	4.8
Final Year 2030 Budget	32.9	28.9
<p>Note: ¹The MVEBs with transportation buffers will be used only as needed in situations where the conformity analysis must be based on different data, models, or planning assumptions, including but not limited to updates to demographic, land use, or project-related assumptions, than were used to create the first set of MVEBs in the maintenance plan.</p>		

Budget Setting vs. Conformity

An air quality conformity analysis is conducted to formally demonstrate that projected motor vehicle emissions associated with the regional transportation plan and TIP are less than or equal to the mobile budgets for each analysis year. The conformity regulations require the use of the “latest planning assumptions,” which means that each conformity analysis must incorporate the most up-to-date planning inputs and technical methods available at the beginning of the process. Therefore, the inputs used in regional air quality conformity analyses change with time. Mobile budgets in air quality plans are established based on analyses that incorporate the “latest planning assumptions” when the air quality plan is developed, and do not change with time.

Changes to the inputs used in air quality conformity analysis are not limited to transportation projects. They include other assumptions such as vehicle fleet mix and demographics. Such changes to inputs in conformity analyses relative to inputs used to establish mobile emissions will inevitably yield mobile emissions differences that are not strictly attributable to the transportation plan itself.

Anticipating such situations, federal air quality conformity regulations allow air quality (Attainment and Maintenance) plans to provide a “conformity buffer” while establishing MVEBs. Accordingly, the DC-MD-VA 2008 Ozone Maintenance Plan established the Tier 2 mobile emissions budgets with a 20% buffer to address uncertainty that is introduced when inconsistent assumptions are used between budget-setting and the conformity analysis.

Exhibit 3 below lists the contrasting assumptions used in the mobile budget development and in the current air quality conformity analysis (of the 2020 amendment to the Visualize 2045 plan and FY 2021-2024 TIP). Details related to these inputs are discussed in the next section of this summary report.

EXHIBIT 3 INPUT ASSUMPTIONS

	Maintenance SIP Mobile Budgets	2020 Amendment to Visualize 2045 Conformity Emissions
Cooperative Forecasts	Round 9.0	Round 9.1a
Vehicle Fleet	2014 VIN	2016 VIN
Travel Demand Model	Version 2.3.66	Version 2.3.78
Project Inputs	2016 CLRP	2020 Amendment
Metrorail Constraint	Yes	No

WORK ACTIVITIES & TECHNICAL INPUTS

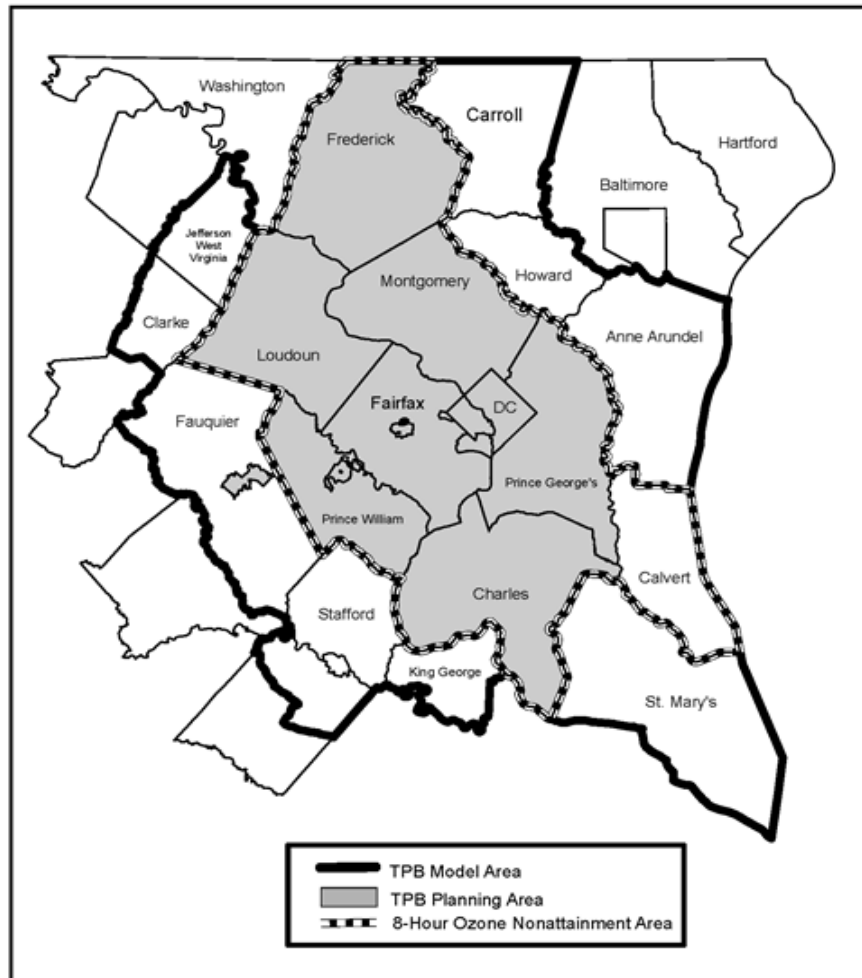
The TPB approved the Scope of Work and project submissions for the 2020 amendment to Visualize 2045 and the FY 2021-2024 TIP air quality conformity analysis on July 17, 2019. The Scope of Work is included as Attachment A.

Key technical planning assumptions and methods include:

- New Cooperative Land Activity Forecasts- Round 9.1a
- December 2016/Jan 2017 Vehicle Registration Data (with District of Columbia corrections, described later)
- New Transportation Projects and Updates to Existing Projects
- Metrorail capacity constraint through the regional core (modeling assumption): No longer used.
- EPA's MOVES 2014b Mobile Emissions Model
- TPB Version 2.3.78 Travel Demand Model

Mobile emissions inventories were developed for ozone season VOC and NO_x for six forecast years (2019, 2021, 2025, 2030, 2040 and 2045). These inventories address a primary conformity requirement to demonstrate that emissions associated with the plan and TIP do not exceed the EPA-approved mobile budgets. Exhibit 4 depicts the geographic areas for travel demand modeling and for emissions reporting.

EXHIBIT 4 Planning Areas

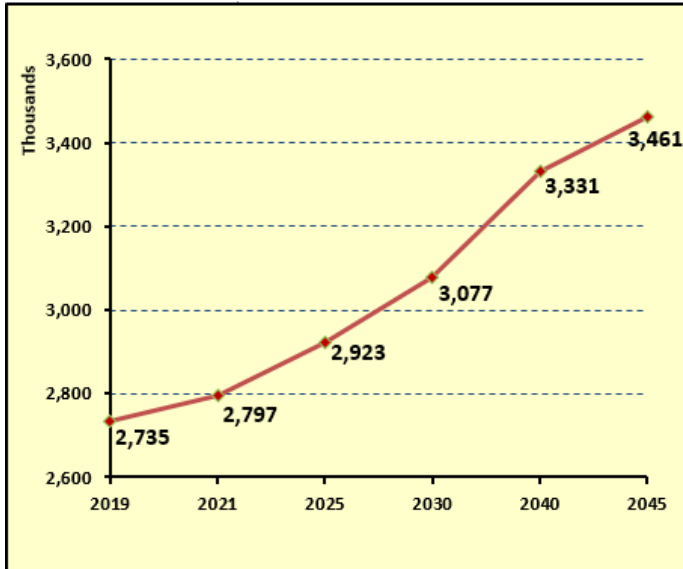


Cooperative Forecasts

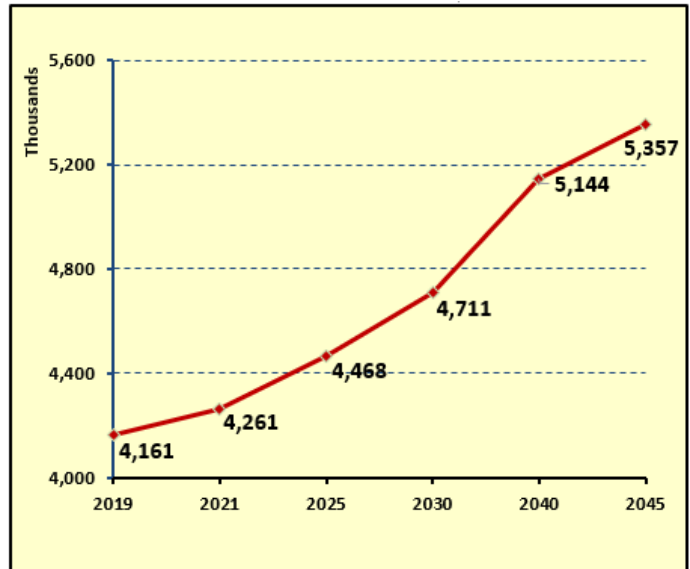
The Metropolitan Washington Council of Governments (COG) Board approved the draft Round 9.1 Cooperative Forecasts for use in the air quality conformity analysis of the Visualize 2045 Plan and FY 2019-2024 TIP in January 2018. In the Spring of 2019, staff received updated land activity forecasts from the Baltimore Metropolitan Council (BMC) and the Fredericksburg Area Metropolitan Planning Organization (FAMPO). Staff in COG's Department of Community Planning and Services (DCPS) developed the Round 9.1a Cooperative Forecasts by combining the Round 9.1 Cooperative Forecasts with the updated data from BMC and FAMPO. Subsequently, TPB staff revised employment definition adjustment factors to assure a consistent definition of employment for all jurisdictions. The Round 9.1a data were used for the conformity analysis of the 2020 amendment to the Visualize 2045 plan and are summarized in Exhibit 5.

EXHIBIT 5 Round 9.1a Cooperative Forecasts

Households
(in thousands)



Employment*
(in thousands)



NOTE: Values are for the modeled area

*Includes employment definition adjustment

Vehicle Registration Data

TPB staff has analyzed vehicle fleet inventory information on a regular basis since 2005. This information is used to understand the vehicle type composition and vehicle age distributions, which are important determinants of mobile emissions. Periodic inventory reviews enable staff to refresh mobile emissions modeling inputs with the most current available information. The current data are from December 2016.³ TPB staff analyzed the December 2016 vehicle registration data (known as VIN data) and the analysis was reviewed by the COG/TPB technical oversight committees prior to being approved for use in transportation planning applications. The December 2016 data were used for the first time in 2018 for the air quality conformity analysis of Visualize 2045. The District of Columbia Department of Energy and Environment (DOEE) found an error in the District's data and provided updated 2016 VIN data for the city in June 2018. The updated data were used in the air quality conformity analysis of the 2020 amendment to Visualize 2045.

Exhibits 6 and 7 show characteristics of the region's vehicle fleet through time. The exhibits indicate that the fleet is continuing to grow, and that light duty trucks (SUVs) are growing at the fastest rate, relative to other vehicle types. Light duty trucks have a higher emissions rate than light duty cars. Also, for the first time since the TPB has collected fleet data, the average vehicle fleet age has decreased, as seen when comparing 2014 to 2016 statistics in Exhibit 7. Typically, such a trend favors reduced emissions because of better emissions controls on newer vehicles.

³ Maryland and Virginia data are from December 31, 2016 and the District of Columbia data are from January 1, 2017.

EXHIBIT 6 Historical growth in vehicles by type

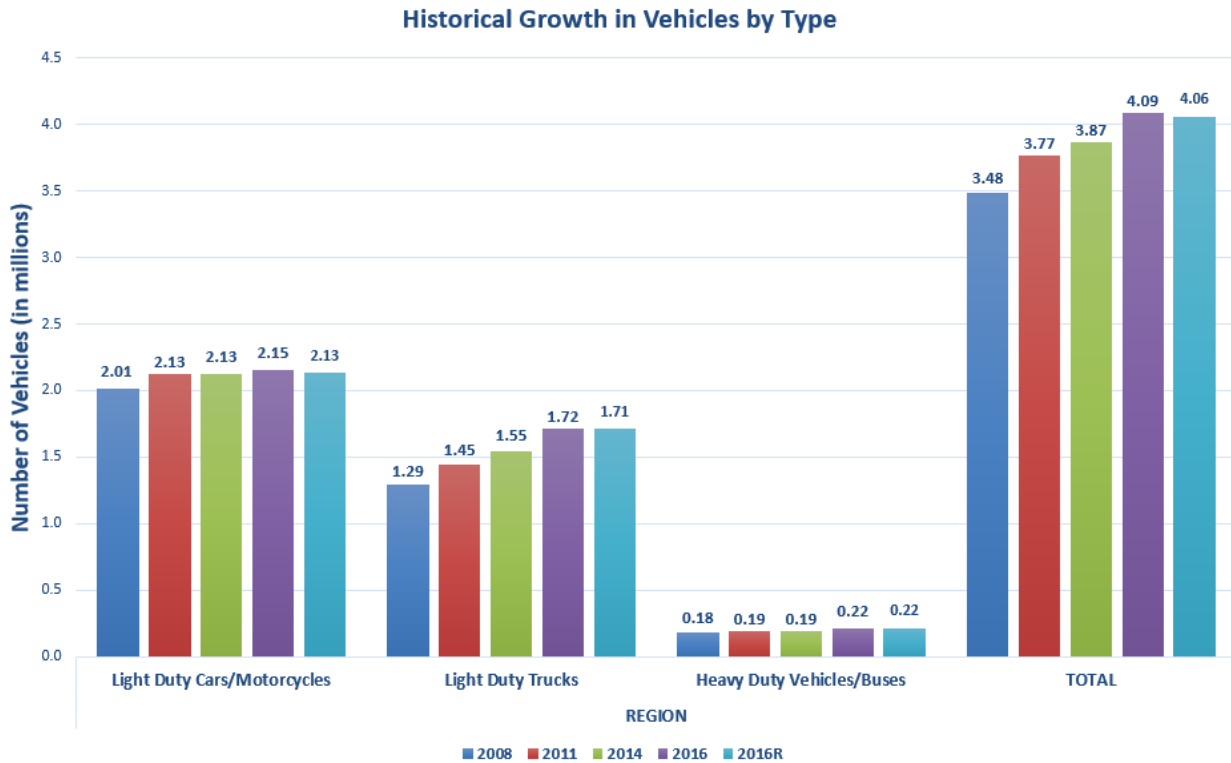


EXHIBIT 7 Average Age of Regional Vehicle Fleet by Year

Year	Light Duty Vehicles* (LDV)	Light Duty Trucks (LDT)	Heavy Duty Vehicles (HDV)	All Vehicle Types
2008	8.51	7.53	9.21	8.18
2011	9.25	8.55	10.56	9.05
2014	9.62	9.09	11.30	9.49
2016	9.32	8.68	11.29	9.16

*Motorcycles are included

Transportation Project Inputs

Attachment B contains the transportation project changes and additions from the Visualize 2045 plan that are included in the 2020 amendment conformity analysis. A complete list of highway and transit projects, as approved by the TPB on July 17, 2019, is shown in Appendix B of the full technical report. An on-line interactive map showing all project can be found here: https://www.mwcog.org/maps/map-listing/visualize-2045-2020_amendment_projects_map/.

Metrorail Capacity Constraint

In March 2018, lawmakers from the District of Columbia, Maryland, and Virginia agreed to jointly provide an additional \$500 million annually for regional transit under the Washington Metropolitan Area Transit Authority (WMATA). All three governments passed legislation to provide dedicated funding

sources to support the transit agency. This money will fund WMATA's capital improvements to ensure the system is in a state of good repair, which will include investments such as the infrastructure and equipment needed to support a 100% 8-car train system.

Since 2000, due to the lack of such a funding commitment for WMATA's capital needs, the TPB's air quality conformity analysis had included a technical adjustment to travel forecasts to account for the expectation that future peak-period Metrorail ridership in the region's "core" downtown area will be subject to capacity limitations of the Metrorail system. This so-called "Metrorail transit constraint" was used to account for WMATA's expressed concern that the Metrorail ridership would exceed peak period capacity in the regional core unless the rail fleet and station infrastructure were expanded to allow for 8-car trains. The 2018 legislation establishing stable long-term funding will now support WMATA's plans to implement all 8-car trains during peak periods. Consequently, the transit constraint was removed from the travel model process for the Visualize 2045 Plan and subsequent updates.

TRAVEL MODELING

Travel demand forecasts were developed for each of the analysis years using the Version 2.3.78 Travel Demand Model. Changes between the version of the model used to set the mobile budgets (Version 2.3.66) and the version of the model used for conformity (Version 2.3.78) include updates to airport trips to more accurately reflect travel to and from the region's three major airports and enhancement of managed lanes modeling to account for the operational nature of facilities in MDOT's Traffic Relief Plan (TRP). Exhibit 8 presents the resulting average weekday vehicle and transit trips through time for each conformity analysis year for the modeled area.

EXHIBIT 8 Modeled Area Trips

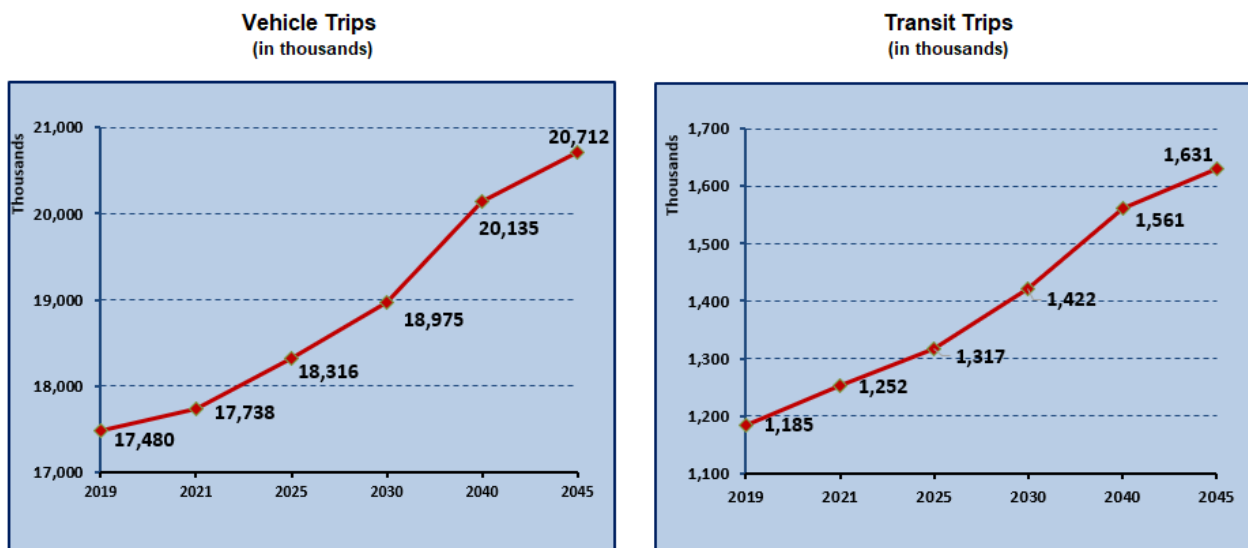
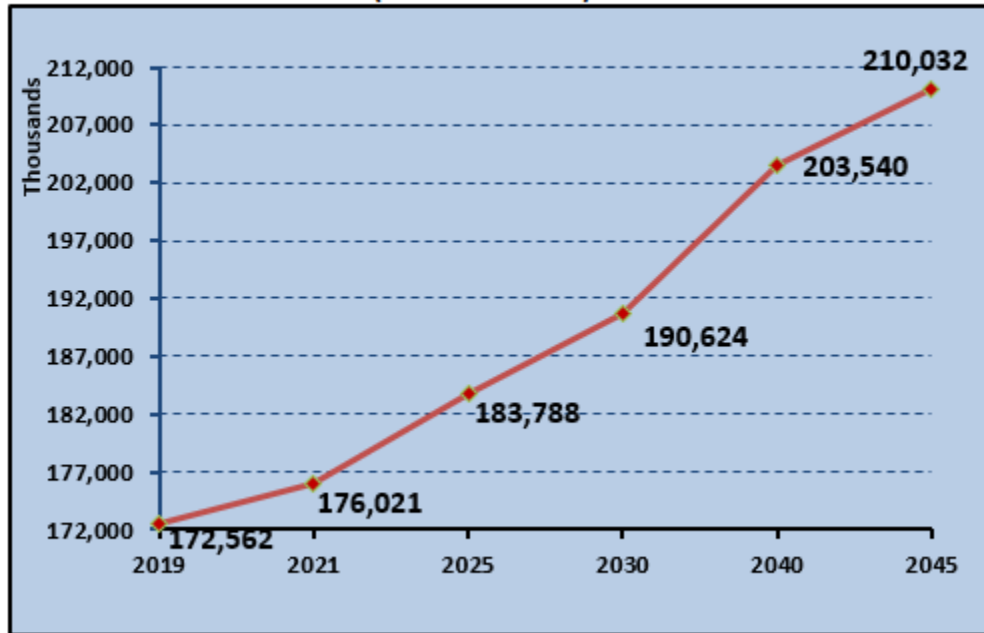


Exhibit 9 shows Vehicle Miles Traveled (VMT) results through time for each conformity analysis year for the modeled area.

EXHIBIT 9

Vehicle Miles Traveled (in thousands)



EMISSIONS

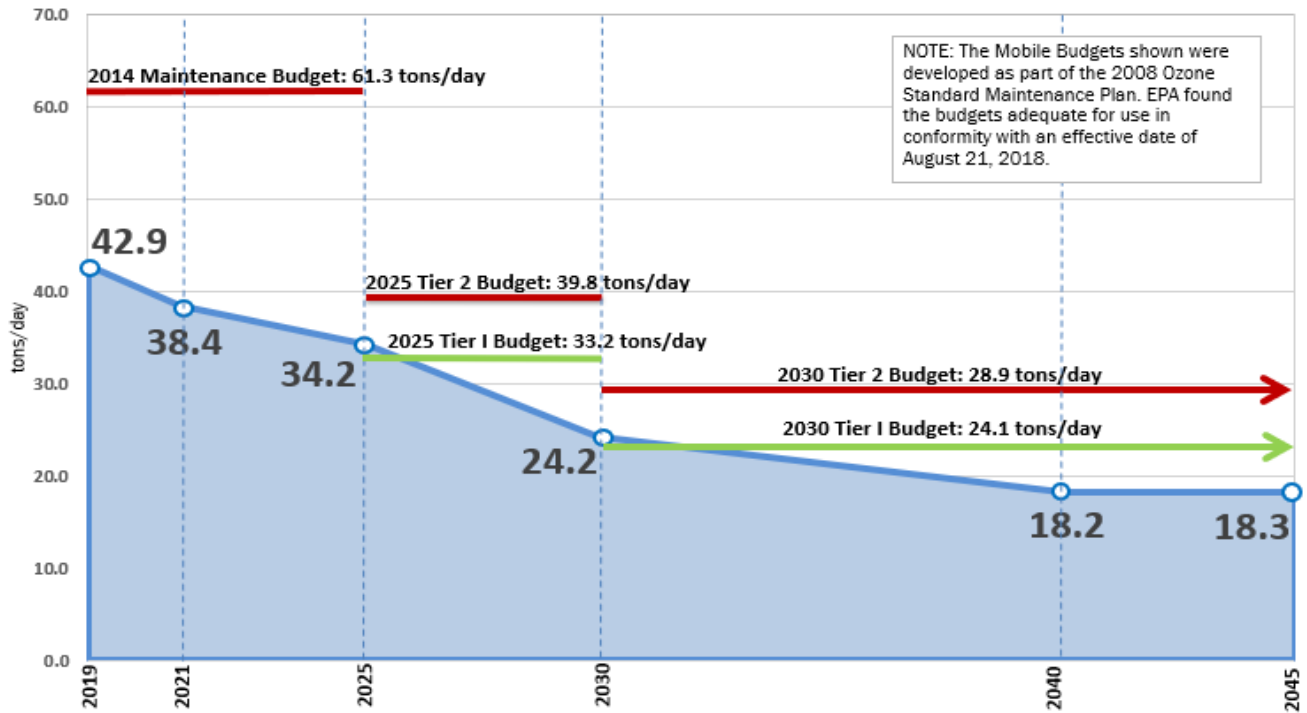
Mobile Emissions Inventories & Tier 1 and Tier 2 Mobile Budgets

Ozone season emissions totals are illustrated in Exhibits 10 and 11. The emissions are shown in relation to the Tier 1 and Tier 2 mobile budgets for each pollutant. Emissions levels for VOC and NO_x are slightly above the Tier 1 mobile budgets for the 2025 and 2030 analysis years. For the 2025 analysis year, the VOC emissions level is 1 ton/day above the 34.2 tons/day Tier 1 budget, and the NO_x emissions level is 1.8 tons/day above the 40.7 tons/day Tier 1 budget. For the 2030 analysis year, the VOC emissions level is 0.1 tons/day above the 24.1 tons/day Tier 1 budget, and the NO_x emissions level is 0.4 tons/day above the 27.4 tons/day Tier 1 budget. These emissions are marginally higher than Tier 1 budget levels due to the differences in the inputs used in this conformity analysis relative to those used in the 2008 Ozone Maintenance Plan.

The transportation buffers established in the Tier 2 Mobile Budgets were implemented to account for changes in data, models, or planning assumptions used in the conformity analysis. As outlined earlier in this report, there were numerous input changes between the conformity analysis and the analysis used to set the mobile budgets. Therefore, the Tier 2 budgets are used to demonstrate conformity of the 2020 amendment to the Visualize 2045 transportation plan and FY2021-2024 TIP with respect to VOC and NO_x. Emissions levels for VOC and NO_x are well below the Tier 2 mobile budgets for all analysis years, as shown in Exhibit 10 and Exhibit 11.

EXHIBIT 10

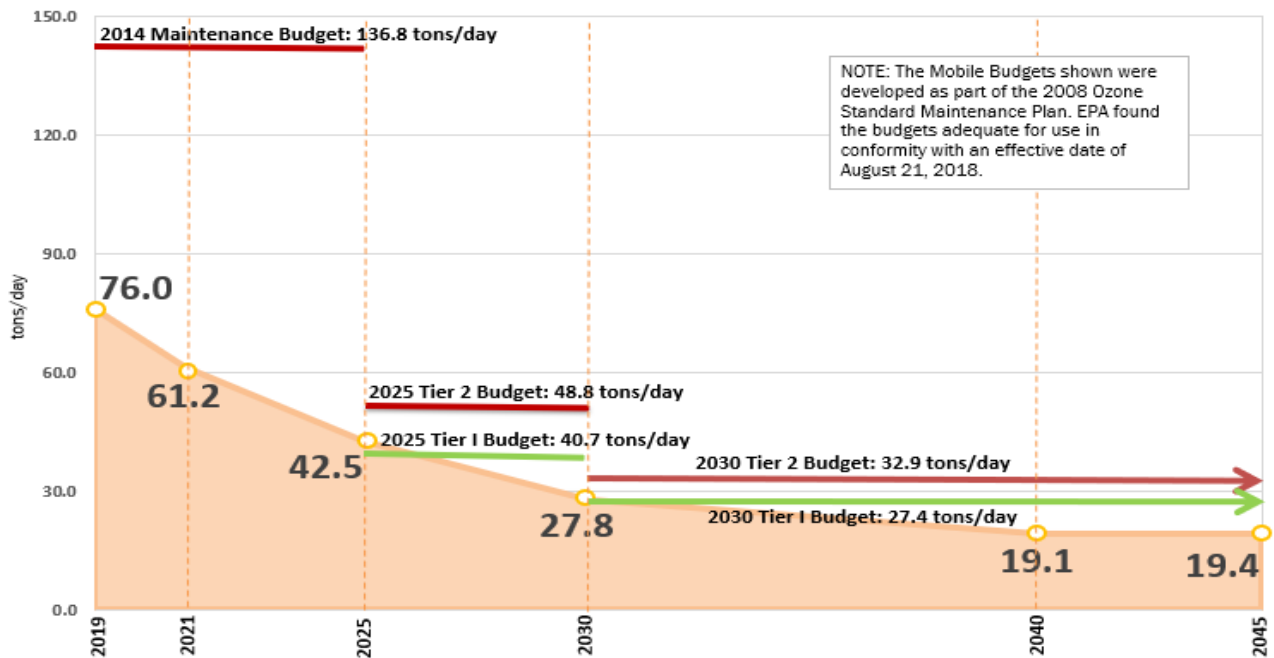
Mobile Source Emissions Ozone Season VOC



TCMs and TERMS not included in totals.

EXHIBIT 11

Mobile Source Emissions Ozone Season NOx



TCMs and TERMS not included in totals.

VIN Data Sensitivity Test

Each input to the conformity analysis impacts the resulting emissions estimates. It would not be feasible with respect to the project schedule to test the impact of each input change individually, but staff did conduct a sensitivity test for the Visualize 2045 analysis to determine the impact of the change in the vehicle fleet. At that time, staff re-estimated mobile emissions for the 2025 analysis year, one of the years for which new MVEBs were established in the 2008 Ozone Maintenance Plan, substituting the 2014 VIN data (same data used in the Maintenance plan) for the newer 2016 VIN data (used in conformity analysis). The sensitivity test indicated that the updated vehicle fleet data caused most of the increase in emissions in the conformity analysis when compared to the analysis used to create the mobile budgets.

TERMs

Transportation Emission Reduction Measures (TERMs) are special strategies or actions that the TPB and/or its member agencies can employ to further reduce forecasted emissions from mobile sources. All TERMs are intended to reduce motor vehicle emissions by reducing either the number of vehicle trips (VT), vehicle miles traveled (VMT), or both. These strategies may include ridesharing and telecommuting programs, improved transit and bicycling facilities, clean fuel vehicle programs or other possible actions. TERMs benefits were calculated for the Visualize 2045 plan and FY2019-2024 TIP conformity analysis. They were not updated for the 2020 amendment to the Visualize 2045 plan because the amendment is considered a minor update to the plan and the changes in emissions benefits would be minimal. The next major update of the Visualize 2045 plan is scheduled for 2022.

TERMs analyzed for the Visualize 2045 conformity analysis were grouped into four categories:

- TPB Commuter Connections Program
- Regional Incident Management Program
- Pedestrian Facilities Expansions & Enhancements
- Freeform Carpooling (Slug Lots)

Exhibit 12 lists the emission reduction potential of these TERMs, by pollutant, for each analysis year. The benefits of these projects are not included in the conformity emissions totals in this report, but are available, if necessary, to ensure that regional emissions stay below the approved motor vehicle emissions budgets and help offset future growth in mobile emissions.

EXHIBIT 12

Transportation Emission Reduction Measures

ADDITIONAL EMISSIONS REDUCTIONS: ALL TERMS COMBINED		
Years/Pollutants	Ozone - VOC (tons/day)	Ozone - NOx (tons/day)
2019	0.228	0.214
2021	0.223	0.191
2025	0.229	0.162
2030	0.177	0.106
2040	0.162	0.074
2045	0.172	0.076

NOTE: Benefits from these TERMS are not included in the emissions totals in this conformity analysis.

SUMMARY

The analytical results described in this air quality analysis provide a basis for a determination, by the TPB, of conformity for the 2020 amendment to the Visualize 2045 Long Range Transportation Plan and the FY 2021-2024 TIP.

ATTACHMENT A

Air Quality Conformity Scope of Work



July 3, 2019

**AIR QUALITY CONFORMITY ANALYSIS:
FY 2021-2024 TIP & 2020 Amendment to the Visualize 2045 Plan
DRAFT SCOPE OF WORK**

I. INTRODUCTION

The FY2021-2024 Transportation Improvement Program (TIP) and 2020 Amendment to the Visualize 2045 Plan are scheduled to be finalized at the March 18, 2020 Transportation Planning Board (TPB) meeting. This work effort addresses requirements associated with attainment of the ozone standard (volatile organic compounds (VOC) and nitrogen oxides (NOx) 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, and (2) as subsequently amended, most recently on March 14, 2012, and (3) as detailed in periodic FHWA / FTA and EPA guidance. These regulations specify both technical criteria and consultation procedures to follow in performing the assessment.

This scope of work provides a context in which to perform the conformity analyses and presents an outline of the work tasks required to address all regulations currently applicable.

II. FEDERAL REQUIREMENTS

As described in the 1990 Clean Air Act Amendments, conformity is demonstrated if transportation plans and programs:

1. Are consistent with most recent estimates of mobile source emissions budgets
2. Provide expeditious implementation of Transportation Control Measures (TCMs)
3. Contribute to annual emissions reductions

The federal requirements governing air quality conformity compliance are contained in §93.110 through §93.119 of the Transportation Conformity Regulations (printed April 2012), as follows:

CONFORMITY CRITERIA & PROCEDURES	
All Actions at all times	
§93.110	Latest Planning Assumptions
§93.111	Latest Emissions Model
§93.112	Consultation
§93.113	TCMs
§93.114	Currently conforming Plan and TIP
§93.115	Project from a conforming Plan and TIP
§93.116	CO, PM10 and PM2.5 hot spots
§93.117	PM10 and PM2.5 Control Measures
§93.118 and/or §93.119	Emissions Budget and/or Interim Emissions

§ 93.110 Criteria and procedures: Latest planning assumptions - The conformity determination must be based upon the most recent planning assumptions in force at the time of the conformity determination.

§ 93.111 Criteria and procedures: Latest emissions model - The conformity determination must be based on the latest emission estimation model available.

§ 93.112 Criteria and procedures: Consultation – The Conformity must be determined according to the consultation procedures in this subpart and in the applicable implementation plan, and according to the public involvement procedures established in compliance with 23 CFR part 450.

§ 93.113 Criteria and procedures: Timely implementation of TCMs - The transportation plan, TIP, or any FHWA/FTA project which is not from a conforming plan and TIP must provide for the timely implementation of TCMs from the applicable implementation plan.

§93.114 Criteria and procedures: Currently conforming transportation plan and TIP - There must be a currently conforming transportation plan and currently conforming TIP at the time of project approval.

§93.115 Criteria and procedures: Projects from a plan and TIP - The project must come from a conforming plan and program.

§93.116 Criteria and procedures: Localized CO, PM10, and PM2.5 violations (hot spots) -The FHWA/FTA project must not cause or contribute to any new localized CO, PM10, and/or PM2.5 violations or increase the frequency or severity of any existing CO, PM10, and /or PM2.5 violations in CO, PM10, and PM2.5 nonattainment and maintenance areas.

§93.117 Criteria and procedures: Compliance with PM10 and PM2.5 control measures -The FHWA/FTA project must comply with PM10 and PM2.5 control measures in the applicable Implementation Plan.

§93.118 Criteria and procedures: Motor vehicle emissions budget - The transportation plan, TIP, and projects must be consistent with the motor vehicle emissions budget(s).

§93.119 Criteria and procedures: Interim emissions in areas without motor vehicle budgets - The FHWA/FTA project must satisfy the interim emissions test(s).

Assessment Criteria:

Ozone season pollutants will be assessed by comparing the forecast year pollutant levels to the mobile budgets in the 2008 Ozone National Ambient Air Quality Standards (NAAQS) Maintenance Plan. In August 2018 EPA found these budgets adequate for use in conformity analyses, and the budgets were used in the Visualize 2045 conformity analysis. The 2008 Ozone NAAQS Maintenance Plan includes mobile budgets for 2014 (attainment year), 2025 (intermediate year), and 2030 (out year). The 2014 budgets will be used for any analysis year between 2014 and 2024, the 2025 budgets will be used for any analysis year between 2025 and 2029, and the 2030 budgets will be used for any analysis year beyond 2029.

III. POLICY AND TECHNICAL APPROACH

The table below summarizes the key elements of the Policy & Technical Approach:

Pollutants	Ozone Season VOC and NOx
Emissions Model	MOVES2014b
Conformity Test	<u>Budget Test</u> : Using mobile budgets most recently approved by EPA: 2008 Ozone NAAQS Maintenance Plan mobile budgets found adequate by EPA in August, 2018.
Vehicle Fleet Data	December 2016 vehicle registration data for all jurisdictions
Geography	8-hour ozone non-attainment area
Network Inputs	Regionally significant projects
Land Activity	Cooperative Forecasts Round 9.1a
HOV/HOT	<u>VA</u> : All HOV 2+/HOT 2+ facilities become HOV 3+/HOT 3+ in 2020 and beyond except I-66 inside the Beltway, which will convert to HOT3+ when I-66 outside the Beltway opens <u>MD</u> : All HOV facilities remain HOV2+ through 2045
Transit Constraint	NO Metrorail “capacity constraint” (removed with March 2018 passage of annual funding for WMATA agreement)
Analysis Years	2019, 2021, 2025, 2030, 2040, 2045
Modeled Area	3,722 TAZ System
Travel Demand Model	Version 2.3.75 or latest

IV. CONSULTATION

The TPB adheres to the specifications of the consultation procedures (as outlined in the consultation procedures report adopted by the TPB on May 20, 1998). The TPB will participate in meetings of MWAQC, its Technical Advisory Committee, and its Conformity Subcommittee to discuss the Scope of Work, project inputs, and other elements as needed.

V. WORK TASKS

The work tasks associated with the air quality conformity analysis are as follows:

1. Receive project inputs from programming agencies and organize into conformity documentation listings by:
 - Project type, limits, etc.
 - Phasing with respect to forecast years
 - Transit operating parameters, e.g., schedules, service
2. Update Travel Model Base Transit Service to reflect:
 - Service current to December 2018
 - Fares current to July 1, 2019
3. Update 2016 Vehicle Registration Data (VIN data)
 - Corrections to DC VIN data as provided by the DC Department of Energy and Environment on June 19, 2018
4. Review and Update Land Activity files to reflect Round 9.1a Cooperative Forecasts with respect to:
 - Zonal data files
 - Employment Data Census Adjustment
 - Households by auto ownership, size and income
 - Coordination with agencies outside the MWCOG Cooperative Forecast area (Baltimore Metropolitan Council, Fredericksburg Area Metropolitan Planning Organization, Calvert-St. Mary's Metropolitan Planning Organization, etc.)
 - Exogenous Travel (external, through trips etc.)
5. Prepare forecast year highway, HOV, and transit networks including regionally significant projects, as follows:
 - 2019, 2021, 2025, 2030, 2040, and 2045 highway networks
 - 2019, 2021, 2025, 2030, 2040, and 2045 transit network input files
 - Update highway tolls, as necessary

6. Execute travel demand modeling for years 2019, 2021, 2025, 2030, 2040, and 2045
7. Derive Mobile Emissions Estimates for years 2019, 2021, 2025, 2030, 2040, and 2045 using inputs from the 2008 Ozone NAAQS Maintenance Plan mobile budgets
8. Summarize key inputs and outputs (VMT, mode share, emissions, etc.) of the conformity determination
9. Assess conformity and document results in a report
 - Document methods
 - Draft conformity report
 - Forward to technical committees, policy committees
 - Make available for public and interagency consultation
 - Receive comments
 - Respond to comments and present to TPB for action
 - Finalize report and forward to FHWA, FTA, and EPA

DRAFT

SCHEDULE FOR DEVELOPMENT & ADOPTION FY 2021-2024 TIP & 2020 Amendment to the Visualize 2045 Plan

May 3, 2019	Technical Committee is briefed on request for TIP and Plan updates; solicitation opens
May 31, 2019	Solicitation closes; all air quality conformity project inputs are due
June 7, 2019	Technical Committee briefed on draft project inputs and draft air quality conformity Scope of Work
June 19, 2019	TPB briefed on draft project inputs and draft air quality conformity Scope of Work
June 2019	TPB staff briefs Metropolitan Washington Air Quality Committee Technical Advisory Committee (MWAQC TAC) on inputs and Scope of Work
July 17, 2019	TPB is asked to approve inputs and draft Scope of Work
December 20, 2019	Financial updates for the FY 2021-2024 TIP are due
January 16, 2020	Public Forum on the FY 2021-2024 TIP
January 31, 2020	Draft FY 2021-2024 TIP, 2020 Amendment to the Visualize 2045 Plan, and air quality conformity analysis are released for 30-day comment period
February 7, 2020	Technical Committee reviews draft TIP, Plan, and conformity analysis
February 2020	TPB staff briefs MWAQC TAC on the draft TIP, Plan, and conformity analysis
February 19, 2020	TPB is briefed on TIP, Plan, and conformity analysis
March 1, 2020	Comment period ends
March 18, 2020	TPB reviews comments and responses to comments, and is presented with the FY 2021-2024 TIP, the 2020 Amendment to the Visualize 2045 Plan, and the air quality conformity analysis for approval

ATTACHMENT B

Additions & Changes
for the FY 2021-2024 TIP
& 2020 Amendment
to the Visualize 2045 Plan



MEMORANDUM

TO: Transportation Planning Board
FROM: Jane Posey, Transportation Engineer
SUBJECT: Project Inputs and Scope of Work for the Air Quality Conformity Analysis of the FY 2021-2024 TIP and the 2020 Amendment to the Visualize 2045 Plan
DATE: July 18, 2019

The project submissions and the Scope of Work for the air quality conformity analysis of the FY 2021-2024 Transportation Improvement Program (TIP) and the 2020 Amendment to the Visualize 2045 Plan were reviewed by the Technical Committee in June and July and shared with the TPB at its June meeting. The board will be asked to approve the project submissions for inclusion in the air quality conformity analysis of the FY 2021-2024 Transportation Improvement Program (TIP) and the 2020 Amendment to the Visualize 2045 Plan, and the corresponding Scope of Work.

Attachment A lists the proposed inputs to the FY 2021-2024 TIP and changes to the Visualize 2045 Plan for inclusion in the air quality conformity analysis.

Attachment B documents the air quality conformity analysis Scope of Work, which presents an outline of the work tasks required to address all regulations currently applicable.

CHANGES AND CORRECTIONS MADE TO PROJECT INPUTS AND SCOPE OF WORK

The attached conformity project input tables and the Scope of Work for the upcoming air quality conformity analysis are identical to the materials shared with the TPB in June, with the exception of the following minor corrections/updates:

In project inputs table (Attachment A):

Page A-1 Added K St. NW Transitway project with transit projects (was mentioned in significant changes list and included with the highway projects)

Page A-1 Changed completion date of Corridor Cities Transitway from 2022 to 2028

Page A-1 Changed completion date of VRE Service Improvements from 2020 to 2028

Page A-1 Added Long Bridge Study (already included in listing under DDOT)

Page A-1 Changed completion date of Crystal City Transitway Northern Extension dedicated lanes from 2021 to 2022

Page A-2 Added two segments of the Crystal City/Potomac Yards Transitway realignment to dedicated right-of-way in 2025 and 2030

Page A-2 Changed West End Transitway limits from “Van Dorn St. to Pentagon” to “Van Dorn St. to Pentagon & Landmark”

Page A-5 Changed “Reduce Capacity- Streetcar” to “Reduce Capacity- Transitway” for the two segments of the K St. NW Transitway

Page A-6 Added a capacity reduction- bike lane project on Lottsford Road from MD 202 to Largo Dr. West.- reduce from 6 to 4 lanes in 2020

Page A-8 Changed South Clark St. (Arlington) demolition limits from “12th St. S. to 18th St. S.” to “12th St. S. to 20th St. S.”

In the Scope of Work (Attachment B):

The reference to the Cooperative Forecasts was changed from “Round 9.1 or latest” to “Round 9.1a”

SUMMARY OF MAJOR PROJECT SUBMISSIONS

This section of the memo highlights the new or updated major project submissions from those listed in Attachment A.

DISTRICT OF COLUMBIA

The District Department of Transportation (DDOT) has proposed **to add the following projects** to the conformity analysis of the FY 2021-2024 TIP and Visualize 2045 amendment:

1. Two **Peak Period Bus-Only Lane Pilot Projects** implemented in 2019:
 - a. **H St. NW from 14th St. to 19th St.**, reduce capacity from 5 to 4 lanes (CON IDs 582, 822)
 - b. **I St. NW from 13th St. to Pennsylvania Ave.**, reduce capacity from 4 to 3 lanes (CON IDs 583, 823)
2. Eight **bicycle lane projects** that would reduce capacity for vehicular traffic (CON IDs 1003-1013):
 - a. **9 St. NW from Florida Ave. to Massachusetts Ave.** (4 to 2 lanes); **from Massachusetts Ave. to Constitution Ave.** (6/4 lanes to 4/2 lanes), complete 2019
 - b. **Dalecarlia Pkwy. NW from Loughboro Rd. to Westmoreland Circ.** (4 to 2 lanes), complete 2020
 - c. **Florida Ave. NE from 2nd St. to West Virginia Ave.** (6 to 4 lanes) **and from West Virginia Ave. to 14th St.** (3 to 2 lanes), complete 2019
 - d. **K St. NE from 1st St. to 8th St.** (3 to 2 lanes), complete 2019
 - e. **M St. SE from Half St. to 11th St.** (6 to 5 lanes), complete 2020
 - f. **Mount Olivet Rd. NE from Brentwood Pkwy. to West Virginia Ave.** (4 to 3 lanes), complete 2020
 - g. **Nebraska Ave. NW from New Mexico Ave. to Loughboro Rd.** (4 to 3 lanes), complete 2020
 - h. **Pennsylvania Ave. SE from 2nd St. to 17th St.** (8 to 6 lanes), complete 2020

3. Construct two segments of the **K St. NW Transitway from 9th St. to 12th St.**, reducing capacity from 4 lanes to 2 lanes **and from 12th St. to 21st St.**, reducing capacity from 6 lanes to 4 lanes allowing bus-only service on the transitway by 2021.

COMMONWEALTH OF VIRGINIA

The Virginia Department of Transportation (VDOT) has proposed to **add the following projects:**

1. Modifications to the **I-495 Capital Beltway Express Lanes ramps around the Dulles Toll Road interchange**, complete in 2025 and 2045 (CON IDs 999-1002)
2. Construct a **reversible ramp from I-95 at Opitz Dr.**, complete in 2022 (CON ID 1011)
3. Construct **VA 28 Manassas Bypass from VA 234 Sudley Rd. to VA 28 Centreville Rd.**, 4 lanes, complete in 2025 (CON ID 995)
4. Widen **VA 55 from US 29 to the Town of Haymarket**, 2 to 4 lanes, complete in 2028 (CON ID 997)
5. Widen **VA 123 from VA 267 Dulles Access Rd. to VA 634 Great Falls St.**, 4 to 6 lanes, complete in 2030 (CON ID 1015)
6. Widen **VA 286 Fairfax County Parkway from US 29 Lee Hwy. to Rolling Rd.**, 4 to 6 lanes, complete in 2030 (CON ID 728)
7. Construct **West End Transitway Phase II (Southern Segment) from Van Dorn Street Metro to Landmark Mall**, complete in 2026 (CON ID 1034)

NEXT STEPS

Following the TPB approval of the project inputs and Scope of Work, the air quality conformity analysis will be conducted between July 2019 and January 2020. Draft results will be released on January 31, 2020 for a public comment period. After the public comment period, the board will be asked to approve the air quality conformity analysis and the FY 2021-2024 TIP and the 2020 Amendment to the Visualize 2045 Plan at the March 18, 2020 meeting.

2020 Amendment to VISUALIZE 2045 AIR QUALITY CONFORMITY NETWORK INPUTS (transit)

DRAFT 7/15/2019

ConID	Scenario	Improvement	Facility	From	To	Projected Complete
DDOT						
822		Study-Implement	H St. NW Peak Period Bus-Only Lanes Pilot Project	47th St. NW- 19th St NW	New-York-Ave.-NW- 14th St NW	Not-Coded 2019
823		Study-Implement	I St. NW Peak Period Bus Only Lanes Pilot Project	13th St. NW	Pennsylvania Ave. NW	Not-Coded 2019
		Construct	K St. NW Transitway	9th St. NW	21st St. NW	2021
610	DCSTGTWN	Construct	Union Station/Georgetown Streetcar	K Street/34th Street NW	3rd Street/H Street NE	2025 2030
MDOT/MTA						
481	CCTBRT	Construct	Corridor Cities BRT	Shady Grove	Comsat	2022 2028
VDOT						
1028		Construct	Franconia to Occoquan 3rd Track Project	Control Point RO (Arlington) Rosslyn (RO) Interlocking near Long Bridge Park in Arlington, Virginia	L'Enfant (LE) Interlocking near 10th Street SW in the District of Columbia	2028
1029		Construct	Alexandria 4th Track Project	milepost 110.1 south of the George Washington Memorial Parkway	near milepost 104.3 south of Telegraph Road	2025
504	VREFREQ	Implement	VRE Service Improvements (Reduce Headways) - associated with 3rd and 4th Track Projects	Fredericksburg and Manassas lines		2020 2028
1030		Study	Long Bridge (also in DDOT)	One mile north of the Franconia-Springfield VRE station (CFP 99.0)	Approximately 400 feet north of Furnace Road, just north of the Occoquan River (CFP 90.08)	Not Coded
511	MWAYBRT	Construct	Crystal City/Potomac Yard Busway (2 lane dedicated)	Vicinity of Glebe Road Extended (City/County Line)	Pentagon City Metro Station	Complete
861		Construct	Crystal City Transitway: Northern Extension - complete dedicated lanes	Crystal City Metro Station	Army Navy Drive Transit Station (Army Navy Dr halfway between Hayes St and Joyce St)	2021 2022

NOTE: Shaded areas represent changes from Visualize 2045

2020 Amendment to VISUALIZE 2045 AIR QUALITY CONFORMITY NETWORK INPUTS (transit)

DRAFT 7/15/2019

ConID	Scenario	Improvement	Facility	From	To	Projected Complete
		Construct	Crystal City Transitway: Southern Extension - complete dedicated lanes	South Glebe Road	Alexandria city line	2025
		Construct	Crystal City/Potomac Yard Transitway-realign with dedicated right-of-way	East Glebe Road	Evans Lane	2030
1018	SILVER 2	Construct	Park-and-Ride Garage	Herndon-Monroe Station		2020
1019	SILVER 2	Construct	Park-and-Ride Garage	Innovation Station		2020
		Expand	Park-and-Ride Lot	Stringfellow Road Park-and-Ride		COMPLETE
505	VANDBRT	Construct	West End Transitway (City Funded)	Van Dorn Street Metro	Pentagon & Landmark	2026
806		Expand-Construct	I-66 Corridor Park and Ride lot garage	Fairfax County Government-Center/Monument Drive		2021

NOTE: Shaded areas represent changes from Visualize 2045

2020 Amendment to VISUALIZE 2045 AIR QUALITY CONFORMITY NETWORK INPUTS (highway)

DRAFT 7/15/2019

Con ID	Project ID	Agency ID	Improvement	Facility	From	To	Facility		Lanes		Completion Date
							Fr	To	Fr	To	
DDOT											
605	DI9		Reconstruct	I 295 Interchange at Malcolm X Blvd.	Add above grade ramp connection from NB I-295 off ramp to new St. Elizabeth's Access Road						2018 2020
584	DS3		Construct	Southern Ave. SE	Branch Ave. SE	Maylor Rd. SE		0	2		2019- withdrawn
582			Study- Reduce Capacity	H St. NW Peak Period Bus-Only Lanes Pilot Project	17th St. NW 19th St NW	New York Ave. NW- 14th St NW		5	4		Not Coded- 2019
583			Study- Reduce Capacity	I St. NW Peak Period Bus Only Lanes Pilot Project	13th St. NW	Pennsylvania Ave. NW		4	3		Not Coded- 2019
558	DP16	ED0C2A	Reduce Capacity	C Street/N. Carolina Avenue	Oklahoma Avenue	14th Street NE		5	3		2019 2020
567	DP16		Reduce Capacity	East Capitol Street	40th Street	Southern Ave		6	4		2019 2021
608			Reconstruct	New Jersey Avenue NW 1-way to 2-way	H Street NW	N Street NW					2019 2020
717	DS13		Reduce Capacity	Florida Avenue NE	3rd Street	West Virginia Avenue		6	4		2015 2019
710			Reduce Capacity	Florida Avenue NE	2nd Street	3rd Street		6	5		2017 2019
707	NRS		Reduce Capacity	New Jersey Avenue NW	H Street	Louisiana Ave		4	2		2016 2020
713	DS14		Reduce Capacity	Pennsylvania Avenue NW	18th Street	20th Street		5	4		2017 2020
712	DS15		Reduce Capacity	Pennsylvania Avenue NW	17th Street	18th Street		6	4		2017 2021
715	DS16		Reduce Capacity	Pennsylvania Avenue NW	26th Street	28th Street		5	4		2017 2021
716	DS17		Reduce Capacity	Pennsylvania Avenue NW	28th Street	29th Street		4	2		2017 2021
714	DS18		Reduce Capacity	Pennsylvania Avenue NW	20th Street	26th Street		6	4		2017 2021
709	DS19		Reduce Capacity	Wheeler Road SE	Alabama Avenue	Southern Avenue		4	2		2016 2020
837	DS20		Reduce Capacity - bike lanes	4th Street NE	Lincoln Rd. NE	Harewood Rd. NE		4	2		2016- Complete
832	in base		Reduce Capacity - bike lanes	Blair Road NW	Peabody St. NW	Aspen St. NW		3	2		2019 2021
833	DP21		Reduce Capacity - bike lanes	Constitution Avenue	1st Street NW	Pennsylvania Avenue NW		6	4		2016
860	DS23		Reduce Capacity - bike lanes	Harewood Road NW	Rock Creek Church Road NW	North Capitol Street		2	1		2016 2020
834	DS24		Reduce Capacity - bike lanes	Klinge Road NW	Adams Mill Road NW	Porter Street NW		4	2		2016- Complete
836	DS25		Reduce Capacity - bike lanes	Piney Branch Road NW	Georgia Avenue NW	Underwood Street NE		4	2		2018- Complete

NOTE: Shaded areas represent changes from Visualize 2045

2020 Amendment to VISUALIZE 2045 AIR QUALITY CONFORMITY NETWORK INPUTS

DRAFT 7/15/2019

(highway)

Con ID	Project ID	Agency ID	Improvement	Facility	From	To	Facility		Lanes		Completion Date
							Fr	To	Fr	To	
944	DP32		Reduce Capacity - bike lanes	17th Street NW	New Hampshire Avenue	Massachusetts Avenue NW	3	3	2	1	2018 2020
945	DP33		Reduce Capacity - bike lanes	17th Street	Massachusetts Avenue NW	K Street	3	3	6	4	2018-Complete
946	DP34		Reduce Capacity - bike lanes	K Street NW	3rd Street NW 7th Street NW	1st Street NE			6	4	2018 2020
947	DP35		Reduce Capacity - bike lanes	Pennsylvania Ave	2nd Street SE	14th Street SE	2	2	6	4	2019 2020
948	DP36		Reduce Capacity - bike lanes	Pennsylvania Ave SE	14th Street SE	Barney Circle			8	6	2019 2020
949	DP37		Reduce Capacity - bike lanes	Irving Street NE/NW	Michigan Avenue NE	Warder Street NW			6	4	2019 2020
1013			Reduce Capacity - bike lanes	9th St NW	Massachusetts Ave	Florida Ave			4	2	2019
1012			Reduce Capacity - bike lanes	9th St NW	Constitution Ave	Massachusetts Ave			6/4	4/2	2019
1010			Reduce Capacity - bike lanes	Nebraska Ave NW	New Mexico Ave	Loughboro Road			4	3	2020
1009			Reduce Capacity - bike lanes	Pennsylvania Ave SE	2nd St	17th St			8	6	2020
1008			Reduce Capacity - bike lanes	Dalecarlia Pkwy NW	Loughboro Road	Westmoreland Circle			4	2	2020
1007			Reduce Capacity - bike lanes	K St NE	1st St	8th St			3	2	2019
1006			Reduce Capacity - bike lanes	Mount Olivet Rd NE	Brentwood	West Virginia Ave			4	3	2020
1005			Reduce Capacity - bike lanes	M St SE	Half St	11th St			6	5	2020
1004			Reduce Capacity - bike lanes	Florida Ave NE	West Virginia Ave	14th St			3	2	2019
1003			Reduce Capacity - bike lanes	Florida Ave NE	2nd St	West Virginia Ave			6	4	2019
839	DP23		Reduce Capacity - Bus Priority	16th Street NW	Arkansas Avenue NW	Columbia Road NW			6	4	2021 2020
840	DP24		Reduce Capacity - Bus Priority	16th Street NW	Columbia Road NW	W Street NW			5	4	2021 2020
841	DP25		Reduce Capacity - Streetcar	H Street NE/NW	3rd Street NE	New Jersey Ave NW			6	4	2022 2030

NOTE: Shaded areas represent changes from Visualize 2045

2020 Amendment to VISUALIZE 2045 AIR QUALITY CONFORMITY NETWORK INPUTS (highway)

Con ID	Project ID	Agency ID	Improvement	Facility	From	To	Facility		Lanes		Completion Date
							Fr	To	Fr	To	
842	DS26		Reduce Capacity - Streetcar	New Jersey Avenue NW	H St NW	K Street NW			3 lanes 1-way	1 lane each 2-way	2022 2030
844	DP26		Reduce Capacity - Streetcar	K Street NW	New Jersey Avenue NW	7th Street NW			3	2	2022 2030
845	DP27		Reduce Capacity - Transitway	K Street NW	9th Street NW	12th St NW			4	2	2022 2021
846	DP28		Reduce Capacity - Transitway	K Street NW	12th St NW	21st St NW			6	4	2022 2021
847	DP29		Reduce Capacity - Streetcar	K Street NW	21st St NW	25th Street NW			4	2	2022 2030
848	DP30		Reduce Capacity - Streetcar	K Street NW	25th Street NW	29th Street NW			6/4	4	2022 2030
849	DP31		Reduce Capacity - Streetcar	K Street NW	29th Street NW	Wisconsin Avenue NW			4	2	2022 2030

MDOT

Interstate

952	M12T5B6		Construct	1270 southbound auxiliary lane (innovative congestion management)	South of Shady Grove Rd local slip ramp	South of Shady Grove Rd express lanes slip ramp			1	1		2019 2020
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Primary

139	MP10A	PG2531	Reconstruct	US 1	College Avenue	MD 193			2	2	4	4	2024 2023
358	MP15	FR5711	Construct	US 15 Catactin Mountain Highway Interchange	at Monocacy Blvd./Christophers Crossing				2 5	2 5	6 4	6 4	2018 2019
391	FP2A	FR3881	Widen Construct/Widen	MD 85 Buckeystown Pike	Crestwood Drive/Shockley Drive	Spectrum Drive			2	2	4	6	2024 2022
353	NRS	PG7001	Upgrade	MD 210	at Kerby Hill Road/Livingston Road				2 5	5	6	6	2020 2021

Secondary

924	MS36A	FR5491	Construct/Widen	MD 180	I-70 (west junction) Greenfield Drive	Greenfield Drive			4	4	2	4	2030
857	MS36B	FR6781	Construct/Widen	MD 180	600 ft north of I-70 I 70 (west junction)	Ballenger Center Drive			4	4	2- 2/4	4	2020 2021

Frederick County

Secondary

NOTE: Shaded areas represent changes from Visualize 2045

2020 Amendment to VISUALIZE 2045 AIR QUALITY CONFORMITY NETWORK INPUTS (highway)

Con ID	Project ID	Agency ID	Improvement	Facility	From	To	Facility		Lanes		Completion Date	
							Fr	To	Fr	To		
648	MS36C	FR5491	Widen/Upgrade	MD 180 Ballenger Creek Pike	Greenfield Drive Ballenger Center Drive	Corporate Drive	4	3	4	2	2019	2020
993			Widen/Upgrade	Christopher's Crossing	Whittier Drive	Poolle Jones Road	3	2	2	2	2024	2024
880	FS3		Expansion	Christopher's Crossing	Walter Martz Road	Thomas Johnson Drive	3	3	0 to 2	4	2024	2020
879	NRS		Construct	Christopher's Crossing	Shookstown Road	Rocky Springs Road	3	3	0	4	2020	2026
651	FS2a		Widen	Monocacy Boulevard	Schifferstadt Boulevard	Gas House Pike	3	2	3	2	2	2019
691		F3	Study Construct	Spectrum Drive	Technology Way	MD 85 Buckeystown Pike	0	4	0	2	Net-Coded-	2030

Prince George's County

Secondary

PGS40b			Reduce Capacity - bike lanes	Lottsford Road	MD 202 (Largo Rd.)	Largo Dr. West	3	3	6	4	4	2020
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VDOT

Federal Lands

243	VP1A	VP1A-103073	Widen	US 1 Jefferson Davis Highway	Telegraph Road	VA 235 South	2	2	4	6	2016-	COMPLETE
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Interstate

769	166R17 166R18		Revise Operations	I-66 Express Lanes Interchange Ramps	Existing reversible HOV ramp converted to HOT EB on ramp only, 24 hrs/day. Construct new flyover ramp for HOT WB off-ramp from I-66 Express Lanes, operating 24 hrs/day The existing reversible HOV ramp at Stringfellow Road will be expanded and converted to Express Lanes ramps providing access to and from the east using the Express Lanes. The new ramps will allow two-way traffic to and from the Express Lanes toward the Beltway 24 hours a day.	@ Stringfellow Road	1	1	1	0	1	0	2022
270	V12AC		Remove Reconstruct	I-395 HOV/HOT SB Slip Ramp to I-395 main lanes I95 Interchange	Just south of Eads St VA 613 Van Dorn Street		1	0	1	0	1	0	2019 2015-2030

NOTE: Shaded areas represent changes from Visualize 2045

2020 Amendment to VISUALIZE 2045 AIR QUALITY CONFORMITY NETWORK INPUTS (highway)

DRAFT 7/15/2019

Con ID	Project ID	Agency ID	Improvement	Facility	From	To	Facility		Lanes		Completion Date	
							Fr	To	Fr	To		
969	VI2X		Construct	I-95 Auxiliary Lane SB	VA 123	VA 294	1	1	0	1	2028 2022	
1011			Construct	I-95 Opitz Drive Reversible Ramp	I-95 Express Lanes at Opitz Drive	Optiz Drive	1	1	0	1	2022	
999			Construct	I-495 Express Lanes On-Ramp	Dulles Connector Road WB	I-495 Express Lanes NB	0	1	0	1	2025	
1000			Construct	I-495 Express Lanes (Shoulder Lane) - NB DIRECTION PEAK PERIODS ONLY	Dulles Connector WB On-Ramp	GW Parkway Off-Ramp	0	1	0	1	2025	
1001			Construct	I-495 NB Exchange Ramp	Interstate Ramp	I-495 NB GP Lanes at Dulles Toll Road	0	1	0	1	2045	
1002			Construct	I-495 SB Exchange Ramp	Interstate Ramp	I-495 SB Express Lanes at Dulles Toll Road	0	1	0	1	2045	
Primary												
633	NRS	100938	Reconstruct	US 1 Richmond Highway	at VA 123 Gordon Boulevard (Interchange)							2025 2028
626	NRS	82135	Construct	VA 7 Leesburg Pike	Bridge over Dulles Toll Road			2	2	4	6	2030-Complete
628	VP2Lb		Widen	VA 7 Leesburg Pike	VA 123 Chain Bridge Road			2	2	6	8	2021 2030
87	VP2N		Widen	VA 7 Leesburg Pike	I-495			2	2	4	6	2021 2030
347	VP2B	TBD	Widen	VA 7	Seven Corners			2	2	4	6	2025 2030
1022			Study	VA 7 Interchange	VA 123 Dolly Madison Road							2030
1023			Construct	US 15 Bypass / Battlefield Parkway Interchange								
737	VP6N	108720	Widen	VA 28 Centreville Road	VA 898 Old Centreville Road US 29	Prince William County Line	2	2	4	4	6	2025 2023
995			Construct	VA 28 Manassas Bypass	VA 234 Sudley Road	VA 28 Centreville Road			0	4	4	2025
622	VP7AG		Widen	US 29 (add NB lane)	Legato Road	Shirley Gate/Waples Mill Rd.	2	2	2	2	3	2017-Complete
997			Widen	VA 55	Route 29	Town of Haymarket			2	4	4	2028
235	VP10H		Widen	VA 123 Ox Road	Hoopes Rd.	Fairfax Co. Parkway	2	2	4	4	6	2025 2030
337	VP10F	1784	Widen	VA 123 Ox Road	Fairfax Co. Parkway	Burke Center Parkway	2	2	4	4	6	2025 2030
300	VP10R		Widen	VA 123	Burke Center Parkway	Braddock Road	2	2	4	4	6	2025 2030
95	VP10S		Widen	VA 123	VA 677 Old Courthouse Road	VA 7 Leesburg Pike			4	4	6	2025 2030
595	VP10T		Widen	VA 123 Chain Bridge Road	VA 7 Leesburg Pike	I-495 Capital Beltway	2	2	6	6	8	2025 2030
1016			Upgrade	VA 123	I-495 Capital Beltway	VA 267 Dulles Access Road	3	3	6	6	6	2030
1015			Widen	VA 123	VA 267 Dulles Access Road	VA 634 Great Falls Street	2	2	4	4	6	2030
1024		111725	Widen/Construct	VA 286 Fairfax County Parkway Interchange	VA 654 Pope's Head Road		2	2	4	4	6	2025
728			Study	Widen	VA 286 Fairfax County Parkway	Rolling Road	2	2	4	4	6	2030
104	VSF26a		Construct	VA 289 Franconia-Springfield Parkway HOV Interchange	Neuman Street		1	1				2025-2035
			Construct	VA 234 Bypass Interchange	Clover Hill Road							2026
1028			Construct	VA 294 Prince William Parkway Intersection Improvements	VA 641 Old Bridge Road							2028
1027			Construct	VA 294 Prince William Parkway Interchange	VA 640 Minnieville Road							2028

NOTE: Shaded areas represent changes from Visualize 2045

2020 Amendment to VISUALIZE 2045 AIR QUALITY CONFORMITY NETWORK INPUTS (highway)

Con ID	Project ID	Agency ID	Improvement	Facility	From	To	Facility		Lanes		Completion Date	
							Fr	To	Fr	To		
106	VP15CD		Construct	Collector-Distributor Rd Westbound (parallels Dulles Toll Rd.)	Spring Hill Rd- Route 7 Leesburg Pike	VA 828 Wiehle Avenue	0		0	1	2037 2035	
107	VP15CD		Construct	Collector-Distributor Rd Eastbound (parallels Dulles Toll Rd.)	VA 828 Wiehle Avenue	Spring Hill Rd- Route 7 Leesburg Pike	0		0	1	2036 2035	
			Construct	Collector-Distributor Rd Westbound (parallels Dulles Toll Rd.)	Route 7 Leesburg Pike	Spring Hill Rd.			0	2	2037 2035	
			Construct	Collector-Distributor Rd Eastbound (parallels Dulles Toll Rd.)	Spring Hill Rd.	Route 7 Leesburg Pike			0	2	2036 2035	
Secondary												
Arlington County												
	AR31		Demolish	South Clark Street	12th Street South	48th 20th Street South	4	0	2	0	2019	
Fairfax County												
241	VSF4f	VSF4f	Widen	VA 611 Furnace Road	VA 123 Ox Road	VA 642 Lorton Road	3	3	2	4	2016-COMplete 2022 2035	
586	VSF10E	102905	Widen	VA 638 Rolling Road	Rt 5297 DeLong Drive	Fullerton Drive	3	3	2	4	2020 2030	
217	FFX11a		Widen	VA 645 Stringfellow Road	US 50	VA 286 Fairfax County Parkway	3	3	2	4	2025 2030	
688	VSF17b		Construct	VA 655 Shirley Gate Road	VA 286 Fairfax County Parkway	VA 620 Braddock Road	0	3	0	4	2024	
724	VSF46		Construct	VA 2677 Frontier Drive	Franconia-Springfield Transportation Center	VA 789 Loisdale Road	0	4	4	2	2024	
1017			Construct	Town Center Parkway Underpass of Dulles Toll Road	VA 5320 Sunrise Valley Dr.	VA 675 Sunset Hills Road	0	4	0	4	2030	
Loudoun County												
330	VSL1B	97529, 105064	Widen/Upgrade	VA 606/607 Old Ox Rd/Loudoun County Parkway	VA 634 Moran Rd	VA 621 Evergreen Mills Rd	4	3	2	4	2017 2018	
564			Construct	Glasseek-Road Dulles West Blvd. Phase I	Dulles Landing Drive	Hutcheson Farm Drive	0	4	0	4	2023 2022	
565			Construct	Glasseek-Road Dulles West Blvd. Phase II	Hutcheson Farm Drive	Arcolia Blvd	0	4	0	4	2023 2022	
1031			Construct	Glasseek-Road Dulles West Blvd. Phase III	Arcolia Blvd	Northstar Dr.	0	4	0	4	2023 2025	
Prince William County												
996			Widen	VA 621 Devlin Road	Linton Hall Road	Wellington Road			2	4	2028	
998			Widen	VA 674 Wellington Road	University Boulevard	VA 621 Devlin Road/Balls Ford Road			2	4	2028	

NOTE: Shaded areas represent changes from Visualize 2045



MEMORANDUM

TO: Transportation Planning Board
FROM: Stacy M. Cook, Principal Planner
SUBJECT: 2020 Amendment to Visualize 2045
DATE: February 19, 2020

PURPOSE OF THIS MEMORANDUM

The purpose of this memorandum is to provide information about the March 2020 amendment which updates the National Capital Region Transportation Planning Board (TPB) long-range plan, Visualize 2045 (approved October 2018). This memorandum communicates the steps that the TPB staff have taken related to this update.

2020 AMENDMENT TO VISUALIZE 2045

For details regarding the long-range plan update and inputs to the air quality conformity analysis, please view Agenda item #8 from the July 2019 Transportation Planning Board Meeting. This information can be found on the following website: https://www.mwcog.org/assets/1/28/Item_8_-_TIP_and_Conformity.pdf

The 2020 amendment to Visualize 2045 includes technical updates to three projects, the Long Bridge project, the Franconia-Occoquan 3rd Track project, and the Alexandria 4th Track project. Attachment A to this memorandum includes a letter from the Virginia Department of Rail and Public Transportation (DRPT) that provides a brief summary of the updates and TPB Project Description Forms that provides the most current information available for these projects.

To document the 2020 amendment to the long-range plan, TPB staff:

- Performed an air quality conformity analysis and produced a summary memorandum of results
- Updated the air quality conformity report (Visualize 2045 Appendix C)
- Updated the Visualize 2045 online project map: [mwcog.org/maps/map-listing/visualize-2045-2020_amendment_projects_map/](https://www.mwcog.org/maps/map-listing/visualize-2045-2020_amendment_projects_map/)
- Published the 2020 amendment on the Visualize 2045 website: visualize2045.org

For the 2020 amendment, to the long-range plan, TPB staff are *not* updating the following documents:

- The existing Visualize 2045 long-range plan final plan document /appendices. (TPB will publish the materials related to the 2020 amendment online at visualize2045.org)
- The system performance analysis summary (Visualize 2045 pages 46-54)
- The financial plan (Visualize 2045 Appendix A), nor any other appendices but Appendix C.

The next major update to the long-range plan will occur in 2022.

Attachment A



COMMONWEALTH of VIRGINIA

DEPARTMENT OF TRANSPORTATION

4975 Alliance Drive
Fairfax, VA 22030

Stephen C. Brich, P.E.
COMMISSIONER

January 24, 2020

The Honorable Kelly Russell, Chair
National Capital Region Transportation Planning Board
Metropolitan Washington Council of Governments
777 North Capitol Street, N.E., Suite 300
Washington, DC 20002-4201

RE: DRPTCLRP Project Update Submission January 2020

Dear Ms. Russell:

On behalf of the Virginia Department of Rail and Public Transportation (DRPT), the Virginia Department of Transportation (VDOT) is submitting CLRP updates for three Virginia rail projects. DRPT is providing technical updates to the Long Bridge project, the Franconia-Occoquan 3rd Track project, and the Alexandria 4th Track project. The attached CLRP forms will bring the CLRP up-to-date with the most current information available for these projects. A brief summary of the updates is provided below.

Long Bridge Engineering Design & Construction

A CLRP amendment form is attached that updates the Long Bridge project in the CLRP from a Study to an Engineering Design and Construction project. The amendment also updates the completion year, description, project managers, and the project cost for Long Bridge.

The Long Bridge Project extends from the Control Point RO Rosslyn (RO) Interlocking near Long Bridge Park in Arlington, Virginia to L'Enfant (LE) Interlocking near 10th Street SW in the District of Columbia. The Long Bridge project is currently listed as a study in Visualize 2045. The project is near the completion of the Environmental Impact Statement and Section 106 process (collectively known as the "EIS"). The Draft EIS (DEIS) was released to the public this September 2019 and identified Alternative A, a separated two-track railroad bridge that will be constructed north of the existing Long Bridge, as the preferred alternative. A pedestrian-bicycle bridge will also be constructed as part of the Project, as a 4f mitigation to National Park System property. DPRT was named as the Project Sponsor in the DEIS, and has committed to the completing the engineering design and the construction of the Long Bridge project, and the associated mitigation work that will be identified in the Final EIS and the Record of the Decision for the Project.

As the Project Sponsor for the Long Bridge project in the EIS, DRPT is committed to completing the construction of four-tracks, the new two-track railroad bridge, and the pedestrian-bicycle bridge for construction. On December 19, 2019 DRPT announced that it has reached a financial agreement with CSX to own railroad right of way in the District of Columbia and along the RF&P rail corridor through Virginia to North Carolina. The financial agreement will ensure that future railroad infrastructure described in the

Long Bridge EIS will be designed and constructed by DRPT. The agreement also ensures that the Long Bridge project will be publicly owned. Once it is completed, the Long Bridge project will achieve separation of passenger from freight railroad traffic, relieving regional railroad congestion.

3rd and 4th Track Project CLRP Updates

In addition to the Long Bridge Project, VDOT requests, on behalf of DRPT, the creation of specific 3rd and 4th track projects that are currently included in the CLRP as segments of the larger CSX RF&P Rail Corridor Third Track Project and Washington D.C. to Richmond Southeast High-Speed Rail (DC2RVA) Project, respectively. Brief project descriptions are below:

- **Franconia to Occoquan 3rd Track Project:** This project will add approximately eight miles of third main line track, inclusive of a three-mile passenger rail bypass (flyover) to an existing two-track portion of the RF&P rail corridor from one mile north of the Franconia-Springfield VRE station to approximately 400 feet north of Furnace Road, just north of the Occoquan River. The project will enable improved network operations for Amtrak and VRE service while reducing conflicts with freight traffic.
- **Alexandria 4th Track Project:** This project will add approximately six miles of a fourth main line track to an existing three-track portion of the RF&P rail corridor from the south bank of the Potomac River to just south of the Alexandria Amtrak/VRE station. The project will provide expanded rail capacity, enabling reduced rail traffic congestion and improved rail operations.

Funding

The Long Bridge and the related track projects in Northern Virginia entail over \$3 billion of railroad infrastructure improvements. The funding includes Long Bridge, the Franconia-Occoquan 3rd Track project, the Alexandria 4th Track project, and other rail projects from DC to Richmond. The financial plan for Long Bridge includes a mix of state rail and transportation funding as well as regional, federal, and other sources. The Commonwealth will utilize available state rail funding and has also requested regional financial support through an NVTA grant and from NVTC through toll revenues. Virginia is also seeking support from the District of Columbia and through various Federal grant applications.

Virginia has identified funding for Long Bridge, Alexandria 4th Track, and Franconia-Occoquan 3rd Track. The Commonwealth in 2019 committed \$214 million in funding for Long Bridge preliminary engineering, and has commitments from Amtrak, VRE, and state rail and transportation funds for construction. This follows up on the previous allocations of \$185 million for the Alexandria 4th Track project (\$45 million of which is through a FAST lane grant through the Federal Railroad Administration) and \$220 million to design and construct the 3rd track from Franconia to Occoquan. Thank you for your consideration of these three very important projects.

Sincerely,



Helen L. Cuervo, P.E.
District Administrator
Northern Virginia District

cc: Ms. Renée Hamilton, VDOT-NoVA
Ms. Jennifer Mitchell, DRPT
Mr. Nicholas Roper, P.E., VDOT-NoVA
Mr. Norman Whitaker, VDOT-NoVA
Ms. Katherine Youngbluth, DRPT - NoVA

PROJECT SUBMISSION FORM

Basic Project Information

CEID

1. **Submitting Agency:** Virginia Department of Rail & Public Transportation
2. **Secondary Agency:** Federal Railroad Administration
3. **Agency Project ID:** Long Bridge
4. **Project Type:**
 Interstate
 Primary
 Secondary
 Urban
 Bridge
 Bike/Ped
 Transit
 CMAQ
 ITS
 Enhancement
 Other
 Federal Lands Highways Program
 Human Service Transportation Coordination
 TERMS
5. **Category:**
 System Expansion
 System Maintenance
 Operational Program
 Study
 Other
6. **Project Name:** Long Bridge Engineering & Construction

	Prefix	Route	Name	Modifier
7. Facility:			CSX Richmond, Fredericksburg and Potomac (RF&P) Subdivision	
8. From (<input type="checkbox"/> at):			Control Point RO (Arlington) Rosslyn (RO) Interlocking near Long Bridge	
9. To:			Park in Arlington, Virginia	
10. Description:			L'Enfant (LE) Interlocking near 10 th Street SW in the District of Columbia	

Expand existing two-track rail bridge across Potomac to four tracks by building a second parallel two-track rail bridge. Includes expansion of railroad track to four tracks and includes additional rail bridges over roads and waterways and a parallel, separated bicycle/pedestrian bridge.

11. **Projected Completion Year:** 2027
12. **Project Manager:** Michael McLaughlin (DRPT), Katherine Youngbluth (DRPT)
13. **Project Manager E-Mail:** michael.mclaughlin@drpt.virginia.gov, katherine.youngbluth@drpt.virginia.gov
14. **Project Information URL:** <https://longbridgeproject.com/>
15. **Total Miles:** 1.8
16. **Schematic (file upload):**
17. **State/Local Project Standing (file upload):**
18. **Jurisdictions:** Arlington, VA, Washington, DC
19. **2018 Baseline Cost (in Thousands):** \$1,911,000 cost estimate as of 06/17/2019
20. **Amended Cost (in Thousands):** cost estimate as of MM/DD/YYYY
21. **Funding Sources:** Federal State Local Private Bonds Other

The estimated total cost of a new two-track Long Bridge is \$1.91Billion. Construction of the new Virginia-owned Long Bridge across the Potomac River is part of the Commonwealth of Virginia's plan to expand reliability and service of Virginia's rail lines throughout the Commonwealth. The statewide rail service expansion and reliability improvements comprise a 10- year \$3+ billion program that, when completed, will provide a new bridge across the Potomac River separating freight and passenger train movements across the river, and add third and fourth tracks along the I 95 corridor. The Project will also build a stand-alone pedestrian bridge allowing people to walk or bike across the Potomac River, double the Amtrak trains in Virginia, increase VRE service along the I-95 corridor, and lay the foundation for Southeast High Speed Rail from Petersburg, VA to North Carolina. The Commonwealth's broad financial plan anticipates the total program costs to be shared among federal, state and regional sources, with Amtrak expected to invest about \$944M as part of the federal and state shares. The Commonwealth of Virginia has executed an agreement with CSX and entered into a MOU with Amtrak. The Commonwealth of Virginia is bringing together federal, state, and regional partners along with CSX and Amtrak to implement the program.

Long Bridge (including the stand-alone pedestrian bridge). In addition, the Commonwealth has allocated funding for related projects including, \$185 million for the Alexandria 4th Track projects (including a \$45M FASTLANE FRA grant) and \$220M for design and construction of the 3rd track from Franconia to Occoquan. Additional funding is reasonably expected to be available from: Virginia Intercity Passenger Rail Operating and Capital Fund, Commonwealth of Virginia discretionary funds, bond funding including those backed by Northern Virginia toll revenues, Virginia Railway Express, other Northern Virginia transportation boards and contributions from the District of Columbia and Maryland.

Regional Policy Framework

Questions 22-27 address the goals identified in the Regional Transportation Priorities Plan. Question 28 should be used to provide additional context of how this project supports these goals or other regional needs identified in the Call for Projects.

22. Provide a Comprehensive Range of Transportation Options

Please identify all travel mode options that this project provides, enhances, supports, or promotes.

- | | | | |
|---|---|---|------------------------------------|
| <input type="checkbox"/> Single Driver | <input type="checkbox"/> Carpool/HOV | | |
| <input type="checkbox"/> Metrorail | <input checked="" type="checkbox"/> Commuter Rail | <input type="checkbox"/> Streetcar/Light Rail | |
| <input type="checkbox"/> BRT | <input type="checkbox"/> Express/Commuter bus | <input type="checkbox"/> Metrobus | <input type="checkbox"/> Local Bus |
| <input checked="" type="checkbox"/> Bicycling | <input checked="" type="checkbox"/> Walking | <input checked="" type="checkbox"/> Other | |

Does this project improve accessibility for historically transportation-disadvantaged individuals (i.e., persons with disabilities, low-incomes, and/or limited English proficiency?)

23. Promote Regional Activity Centers

- Does this project begin or end in an Activity Center?
- Does this project connect two or more Activity Centers?
- Does this project promote non-auto travel within one or more Activity Centers?

24. Ensure System Maintenance, Preservation, and Safety

- Does this project contribute to enhanced system maintenance, preservation, or safety?

25. Maximize Operational Effectiveness and Safety

- Project is primarily designed to reduce travel time on highways and/or transit without building new capacity (e.g., ITS, bus priority treatments, etc.)?
- Does this project enhance safety for motorists, transit users, pedestrians, and/or bicyclists?

26. Protect and Enhance the Natural Environment

- Is this project expected to contribute to reductions in emissions of criteria pollutants?
- Is this project expected to contribute to reductions in emissions of greenhouse gases?

27. Support Interregional and International Travel and Commerce

Please identify all freight carrier modes that this project enhances, supports, or promotes.

- Long-Haul Truck Local Delivery Rail Air

Please identify all passenger carrier modes that this project enhances, supports, or promotes.

- Air Amtrak intercity passenger rail Intercity bus

28. Additional Policy Framework Response

Please provide additional written information that describes how this project further supports or advances these and other regional goals or needs.

Federal Planning Factors

29. Please identify any and all planning factors that are addressed by this project:

- a. Support the **economic vitality** of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency.
- b. Increase the **safety** of the transportation system for all motorized and non-motorized users.
 - i. Is this project being proposed specifically to address a safety issue? Yes; No
 - ii. If yes, briefly describe (in quantifiable terms, where possible) the nature of the safety problem:
- c. Increase the ability of the transportation system to support **homeland security** and to safeguard the personal security of all motorized and non-motorized users.
- d. Increase **accessibility and mobility** of people.
- e. Increase accessibility and mobility of **freight**.
- f. 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.
- g. Enhance the **integration and connectivity** of the transportation system, across and between modes, for people and freight.
- h. Promote efficient system **management and operation**.
- i. Emphasize the **preservation** of the existing transportation system.
- j. Improve **resiliency** and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation.
- k. Enhance travel and **tourism**.

Environmental Mitigation

30. Have any potential mitigation activities been identified for this project? Yes; No
- a. If yes, what types of mitigation activities have been identified?
- Air Quality; Floodplains; Socioeconomics; Geology, Soils and Groundwater; Vibrations;
 - Energy; Noise; Surface Water; Hazardous and Contaminated Materials; Wetlands

Congestion Management Information

31. Congested Conditions

- a. Do traffic congestion conditions necessitate the proposed project or program? Yes; No
- b. If so, is the congestion recurring or non-recurring? Recurring; Non-recurring
- c. If the congestion is on another facility, please identify it: I-95, Route 1

32. Capacity

- a. Is this a capacity-increasing project on a limited access highway or other principal arterial? Yes; No
- b. If the answer to Question 32.a was “yes”, are any of the following exemption criteria true about the project? (Choose one, or indicate that none of the exemption criteria apply):
- None of the exemption criteria apply to this project – a Congestion Management Documentation Form is required
 - The project will not use federal funds in any phase of development or construction (100% state, local, and/or private funding)
 - The number of lane-miles added to the highway system by the project totals less than one lane-mile
 - The project is an intersection reconstruction or other traffic engineering improvement, including replacement of an at-grade intersection with an interchange
 - The project, such as a transit, bicycle or pedestrian facility, will not allow private single-occupant motor vehicles
 - The project consists of preliminary studies or engineering only, and is not funded for construction
 - The construction costs for the project are less than \$10 million.
- c. If the project is not exempt and requires a Congestion Management Documentation Form, click [here](#) to open a blank Congestion Management Documentation Form.

Record Management

33. Completed Year:
34. Project is being withdrawn from the CLRP: Yes
35. Withdrawn Date: MM/DD/YYYY
36. Record Creator:
37. Created On:
38. Last Updated by:
39. Last Updated On:
40. Comments:

Basic Project Information

CEID

1. Submitting Agency: Virginia Department of Rail & Public Transportation
2. Secondary Agency:
3. Agency Project ID: Alexandria 4th Track Project
4. Project Type:
 - Interstate Primary Secondary Urban Bridge Bike/Ped Transit CMAQ
 - ITS Enhancement Other Federal Lands Highways Program
 - Human Service Transportation Coordination TERMS
5. Category:
 - System Expansion System Maintenance Operational Program Study Other
6. Project Name: Alexandria 4th Track Project

Prefix	Route	Name	Modifier
		CSX Richmond, Fredericksburg and Potomac (RF&P) Subdivision	
		Control Point Rosslyn (CFP RO) near milepost 110.1 south of the George Washington Memorial Parkway	
		Control Point Alexandria (CFP AF) near milepost 104.3 south of Telegraph Road	

7. Facility:
8. From (at):
9. To:
10. Description: Add approximately six miles of a fourth main line track to an existing three-track portion of the RF&P rail corridor from the south bank of the Potomac River to just south of the Alexandria Amtrak/VRE station to provide expanded rail capacity, enabling reduced rail traffic congestion and improved rail operations
11. Projected Completion Year: 2025
12. Project Manager: Michael McLaughlin; Katherine Youngbluth
13. Project Manager E-Mail: michael.mclaughlin@drpt.virginia.gov ; katherine.youngbluth@drpt.virginia.gov
14. Project Information URL: http://www.atlanticgateway.net/learn_more/component_1.asp
15. Total Miles: 6
16. Schematic (file upload):
17. State/Local Project Standing (file upload):
18. Jurisdictions: Alexandria, Arlington
19. 2018 Baseline Cost (in Thousands): \$185,000 cost estimate as of 05/31/2019
20. Amended Cost (in Thousands): cost estimate as of MM/DD/YYYY
21. Funding Sources: Federal State Local Private Bonds Other

Regional Policy Framework

Questions 22-27 address the goals identified in the Regional Transportation Priorities Plan. Question 28 should be used to provide additional context of how this project supports these goals or other regional needs identified in the Call for Projects.

22. Provide a Comprehensive Range of Transportation Options

Please identify all travel mode options that this project provides, enhances, supports, or promotes.

- Single Driver Carpool/HOV
- Metrorail Commuter Rail Streetcar/Light Rail

PROJECT SUBMISSION FORM (Continued)

- BRT
- Express/Commuter bus
- Metrobus
- Local Bus
- Bicycling
- Walking
- Other

Does this project improve accessibility for historically transportation-disadvantaged individuals (i.e., persons with disabilities, low-incomes, and/or limited English proficiency?)

23. Promote Regional Activity Centers

- Does this project begin or end in an Activity Center?
- Does this project connect two or more Activity Centers?
- Does this project promote non-auto travel within one or more Activity Centers?

24. Ensure System Maintenance, Preservation, and Safety

- Does this project contribute to enhanced system maintenance, preservation, or safety?

25. Maximize Operational Effectiveness and Safety

- Project is primarily designed to reduce travel time on highways and/or transit without building new capacity (e.g., ITS, bus priority treatments, etc.)?
- Does this project enhance safety for motorists, transit users, pedestrians, and/or bicyclists?

26. Protect and Enhance the Natural Environment

- Is this project expected to contribute to reductions in emissions of criteria pollutants?
- Is this project expected to contribute to reductions in emissions of greenhouse gases?

27. Support Interregional and International Travel and Commerce

Please identify all freight carrier modes that this project enhances, supports, or promotes.

- Long-Haul Truck Local Delivery Rail Air

Please identify all passenger carrier modes that this project enhances, supports, or promotes.

- Air Amtrak intercity passenger rail Intercity bus

28. Additional Policy Framework Response

Please provide additional written information that describes how this project further supports or advances these and other regional goals or needs.

Federal Planning Factors

29. Please identify any and all planning factors that are addressed by this project:

- a. Support the **economic vitality** of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency.
- b. Increase the **safety** of the transportation system for all motorized and non-motorized users.
 - i. Is this project being proposed specifically to address a safety issue? Yes; No
 - ii. If yes, briefly describe (in quantifiable terms, where possible) the nature of the safety problem:
- c. Increase the ability of the transportation system to support **homeland security** and to safeguard the personal security of all motorized and non-motorized users.
- d. Increase **accessibility and mobility** of people.
- e. Increase accessibility and mobility of **freight**.
- f. 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.
- g. Enhance the **integration and connectivity** of the transportation system, across and between modes, for people and freight.
- h. Promote efficient **system management and operation**.
- i. Emphasize the **preservation** of the existing transportation system.
- j. Improve **resiliency** and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation.
- k. Enhance travel and **tourism**.

Environmental Mitigation

30. Have any potential mitigation activities been identified for this project? Yes; No
- a. If yes, what types of mitigation activities have been identified?
- Air Quality; Floodplains; Socioeconomics; Geology, Soils and Groundwater; Vibrations;
 - Energy; Noise; Surface Water; Hazardous and Contaminated Materials; Wetlands

Congestion Management Information

31. Congested Conditions

- a. Do traffic congestion conditions necessitate the proposed project or program? Yes; No
- b. If so, is the congestion recurring or non-recurring? Recurring; Non-recurring
- c. If the congestion is on another facility, please identify it: I-95, Route 1

32. Capacity

- a. Is this a capacity-increasing project on a limited access highway or other principal arterial? Yes; No
- b. If the answer to Question 32.a was "yes", are any of the following exemption criteria true about the project? (Choose one, or indicate that none of the exemption criteria apply):
- None of the exemption criteria apply to this project – a Congestion Management Documentation Form is required
 - The project will not use federal funds in any phase of development or construction (100% state, local, and/or private funding)
 - The number of lane-miles added to the highway system by the project totals less than one lane-mile
 - The project is an intersection reconstruction or other traffic engineering improvement, including replacement of an at-grade intersection with an interchange
 - The project, such as a transit, bicycle or pedestrian facility, will not allow private single-occupant motor vehicles
 - The project consists of preliminary studies or engineering only, and is not funded for construction
 - The construction costs for the project are less than \$10 million.
- c. If the project is not exempt and requires a Congestion Management Documentation Form, click here to open a blank Congestion Management Documentation Form.

Record Management

33. Completed Year:
34. Project is being withdrawn from the CLRP: Yes
35. Withdrawn Date: MM/DD/YYYY
36. Record Creator:
37. Created On:
38. Last Updated by:
39. Last Updated On:
40. Comments:

Basic Project Information

CEID

1. **Submitting Agency:** Virginia Department of Rail & Public Transportation
2. **Secondary Agency:** Federal Railroad Administration
3. **Agency Project ID:** Franconia to Occoquan 3rd Track Project
4. **Project Type:**
 Interstate
 Primary
 Secondary
 Urban
 Bridge
 Bike/Ped
 Transit
 CMAQ
 ITS
 Enhancement
 Other
 Federal Lands Highways Program
 Human Service Transportation Coordination
 TERMS
5. **Category:**
 System Expansion
 System Maintenance
 Operational Program
 Study
 Other
6. **Project Name:** Franconia to Occoquan 3rd Track Project

Prefix	Route	Name	Modifier
		CSX Richmond, Fredericksburg and Potomac (RF&P) Subdivision	
		One mile north of the Franconia-Springfield VRE station (CFP 98.8)	
		Approximately 400 feet north of Furnace Road, just north of the Occoquan River (CFP 90.08)	

7. **Facility:**
8. **From** (at):
9. **To:**
10. **Description:** Add approximately eight miles of a third main line track to an existing two-track portion of the RF&P rail corridor from one mile north of the Franconia-Springfield VRE station to approximately 400 feet north of Furnace Road, just north of the Occoquan River. Project includes a three-mile passenger rail bypass (flyover) at the northern end of the project limits
11. **Projected Completion Year:** 2028
12. **Project Manager:** Michael McLaughlin; Katherine Youngbluth
13. **Project Manager E-Mail:** michael.mclaughlin@drpt.virginia.gov ; katherine.youngbluth@drpt.virginia.gov
14. **Project Information URL:** http://www.atlanticgateway.net/learn_more/component_1.asp
15. **Total Miles:** 8
16. **Schematic (file upload):**
17. **State/Local Project Standing (file upload):**
18. **Jurisdictions:** Fairfax County, Virginia
19. **2018 Baseline Cost (in Thousands):** \$555,000 cost estimate as of 09/27/2019
20. **Amended Cost (in Thousands):** cost estimate as of MM/DD/YYYY
21. **Funding Sources:**
 Federal
 State
 Local
 Private
 Bonds
 Other

Regional Policy Framework

Questions 22-27 address the goals identified in the Regional Transportation Priorities Plan. Question 28 should be used to provide additional context of how this project supports these goals or other regional needs identified in the Call for Projects.

22. Provide a Comprehensive Range of Transportation Options

Please identify all travel mode options that this project provides, enhances, supports, or promotes.

- | | | |
|--|---|---|
| <input type="checkbox"/> Single Driver | <input type="checkbox"/> Carpool/HOV | |
| <input type="checkbox"/> Metrorail | <input checked="" type="checkbox"/> Commuter Rail | <input type="checkbox"/> Streetcar/Light Rail |
| <input type="checkbox"/> BRT | <input type="checkbox"/> Express/Commuter bus | <input type="checkbox"/> Metrobus |
| <input type="checkbox"/> Bicycling | <input type="checkbox"/> Walking | <input checked="" type="checkbox"/> Other |

- Does this project improve accessibility for historically transportation-disadvantaged individuals (i.e., persons with disabilities, low-incomes, and/or limited English proficiency?)

23. Promote Regional Activity Centers

- Does this project begin or end in an Activity Center?
- Does this project connect two or more Activity Centers?
- Does this project promote non-auto travel within one or more Activity Centers?

24. Ensure System Maintenance, Preservation, and Safety

- Does this project contribute to enhanced system maintenance, preservation, or safety?

25. Maximize Operational Effectiveness and Safety

- Project is primarily designed to reduce travel time on highways and/or transit without building new capacity (e.g., ITS, bus priority treatments, etc.)?
- Does this project enhance safety for motorists, transit users, pedestrians, and/or bicyclists?

26. Protect and Enhance the Natural Environment

- Is this project expected to contribute to reductions in emissions of criteria pollutants?
- Is this project expected to contribute to reductions in emissions of greenhouse gases?

27. Support Interregional and International Travel and Commerce

Please identify all freight carrier modes that this project enhances, supports, or promotes.

- Long-Haul Truck
- Local Delivery
- Rail
- Air

Please identify all passenger carrier modes that this project enhances, supports, or promotes.

- Air
- Amtrak intercity passenger rail
- Intercity bus

28. Additional Policy Framework Response

Please provide additional written information that describes how this project further supports or advances these and other regional goals or needs.

Federal Planning Factors

29. Please identify any and all planning factors that are addressed by this project:

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- b. Increase the safety of the transportation system for all motorized and non-motorized users.
 - i. Is this project being proposed specifically to address a safety issue? Yes; No
 - ii. If yes, briefly describe (in quantifiable terms, where possible) the nature of the safety problem:
- c. Increase the ability of the transportation system to support homeland security and to safeguard the personal security of all motorized and non-motorized users.
- d. Increase accessibility and mobility of people.
- e. Increase accessibility and mobility of freight.
- f. 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.
- g. Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight.
- h. Promote efficient system management and operation.
- i. Emphasize the preservation of the existing transportation system.
- j. Improve resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation.
- k. Enhance travel and tourism.

Environmental Mitigation

30. Have any potential mitigation activities been identified for this project? Yes; No
- a. If yes, what types of mitigation activities have been identified?
- Air Quality; Floodplains; Socioeconomics; Geology, Soils and Groundwater; Vibrations;
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Congestion Management Information

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