

Appendix K

**Information to support board action on Visualize 2045:
Regional and Federal Policy Alignment for All Projects**

**VDOT, DRPT, VRE and Multi-Jurisdictional
Projects in Virginia**

MEMORANDUM

TO: Transportation Planning Board
FROM: Stacy Cook, TPB Transportation Planner/Long-Range Transportation Plan Manager
SUBJECT: Information to support board action on Visualize 2045: Regional and Federal Policy Alignment for All Projects
DATE: May 13, 2021

At its June 2021 meeting, the TPB staff will ask the board to approve the inputs to the air quality conformity analysis (conformity analysis) of the long-range transportation plan (Visualize 2045) and Transportation Improvement Program (TIP) and the scope of work for the conformity analysis. They will also be asked to accept the comments from the 2021 comment period on these inputs, in the form of the comment /response summary.

Please note, the projects proposed to be included in the air quality conformity analysis are a subset of projects in Visualize 2045 and TIP. Not all projects in the plan and TIP can, nor should be, included in the conformity analysis. Federal conformity analysis regulations inform the projects and programs to be included in the analysis and publishes a list of projects that are exempt from such analysis. Also, the inputs, assumptions, and methodology used to conduct the conformity analysis are guided by the federal requirements to ensure that estimated levels of criteria pollutants comply with the federally established emissions levels.

This memorandum and its associated [appendices](#) with the responses to policy questions (32-45 of the Technical Inputs Solicitation) for all capital projects provide information to assist board members as they continue their review and discussions, from last month, of the projects proposed to be included in the regional conformity analysis. The focus of the last month's review and discussions were the policy related information sought for the various projects.

Project Inputs for Conformity Analysis

The Technical Inputs Solicitation document was approved by the TPB on December 20, 2020. The document provides an overview of the process used by TPB to solicit technical inputs (projects, programs and policies) to be included in Visualize 2045, the TIP and the conformity analysis. The solicitation documents place a particular emphasis on projects that would have to be included in the regional air quality conformity analysis.

Regionally Significant Projects

Federal regulations (40.CFR.Part 93), based in the Clean Air Act Amendments (section 176(c); 42 U.S.C. 7506(c)), prescribes the process and method for conformity. These regulations dictate that "regionally significant projects" shall be included in the conformity analysis. While all projects across our region are important because of the local and regional benefits they provide, the term 'regional significance' has a specific meaning as used by the TPB and the federal agencies in reference to air quality conformity.

The definition from federal regulation document (40 CFR § 93.101) is:

"Regionally significant project means a transportation project (other than an exempt project) that is on a facility which serves regional transportation needs (such as access to and from the area outside of the region, major activity centers in the region, major planned developments such as new retail malls, sports complexes, etc., or transportation terminals as well as most terminals themselves) and would normally be included in the modeling of a metropolitan area's transportation network, including at a minimum all principal arterial highways and all fixed guideway transit facilities that offer an alternative to regional highway travel."

At the TPB, the staff interpret this definition for the purposes of the technical inputs solicitation as below, irrespective of the funding used for the project.

- 1) Any project on a facility that is included in the TPB model's coded regional network that adds or removes at least one continuous vehicular lane from one major road to the next, or adds a new access/egress location or capacity; or
- 2) Any transit project that adds or modifies fixed-guideway transit facilities (heavy rail, light rail, streetcar, bus rapid transit).

These technical inputs are what the TPB staff include in the air quality conformity project input tables which the TPB staff makes available for comment. After this review the TPB staff asks the TPB to approve the projects along with the scope of work to conduct the conformity analysis so that the required analysis may begin. While the TPB periodically conducts studies to explore alternative or aspirational scenarios regarding future land use, travel demand, transportation projects, programs, policies and fuel types to identify strategies for future implementation, the air quality conformity analysis must be based on official latest planning assumptions with a demonstration of the funding availability to implement all projects, programs and policies assumed in the conformity analysis.

TPB Policy Framework and Federal Planning Factors

The TPB's Visualize 2045 includes a policy element that informs its planning and programming activities. There are a set of documents that comprise this policy framework communicating the region's transportation goals, priorities, and needs that member agencies ought to consider making transportation investment and implementation decisions on projects that have to be part of the regional plan and TIP. The TPB takes strides to achieve its goals and address its priorities through the projects, programs, and policies in Visualize 2045.

Additionally, federal law identifies a list of planning factors meant to guide metropolitan planning. Collectively, the projects, programs, and policies in Visualize 2045 must address these factors. Please visit [Visualize2045.org](https://visualize2045.org) to learn more about these planning factors. A summary of these policy elements is included in each of the appendices.

REGIONAL AND FEDERAL POLICY QUESTIONS AND RESPONSES

The TPB's project description form has several questions needed to help staff develop the Plan, TIP and prepare for the conformity analysis. Among these, questions 32 thru 45 relate to the TPB's policy priorities and federal planning factors. When projects are submitted to the TPB through the technical inputs solicitation process, the sponsoring agency technical staff are asked to provide

responses these policy questions. The responses help the project sponsor communicate how the project supports the TPB goals, Aspirational Initiatives, and the federal planning factors. A listing of the policy questions is included in each appendix. While most questions are binary (yes/no), four questions seek narrative responses to explain if and how the project addresses issues of equity, greenhouse gas reduction, and how it supports the Aspirational Initiatives and TPB goals. Not all projects that were reviewed by the TPB members during their April work session had this information.

While agencies were asked to provide these responses, by April 1, for all new projects and existing projects for which major changes were being proposed, agencies had requested and secured additional time (end of April) to provide the information for remaining projects that were in previous editions of the plan. All of the information received for the policy questions, for existing and new projects, have now been compiled for the board's use. Given the large number of projects, the information has been arranged and included in appendices and tables. The following section is a guide on how to use the appendices and tables.

VISUALIZE 2045 UPDATE: PROJECT LEVEL POLICY QUESTIONS AND RESPONSES

For each existing or proposed project, staff from the sponsoring agencies have responded to policy questions including narrative responses. These responses are listed in tables 1-4 as described below.

The projects listed are the same in each table 1-4. These tables are mapped against the policy questions of the Technical Inputs Solicitation document, showing how projects support:

- Table 1: the goals of the TPB's Regional Transportation Priorities Plan (regional policy questions 32-42 that require a binary response)
- Table 2: Aspirational Initiatives, (regional policy question 43, binary response)
- Table 3: Federal Planning Factors (federal policy question 45, binary response).
- Table 4: narrative responses
 - If a person that reviews the binary responses in the matrices would like more information, the following questions include a narrative response:
 - equity (question 34b),
 - GHG reduction (question 40b),
 - support for the Aspirational Initiatives (44a) or
 - the regional goals (44b).

Each project has a project identification number listed, to quickly find this project across the various tables, this number is a useful reference. (*Hint: If one views the file on a computer, use of a search feature (such as pressing control+f on the keyboard) to search this project number, to expedite one finding the same project throughout the document*).

Organization of the Appendices:

Each appendix starts with this memorandum, followed by the TPB policy summary and questions, then the responses in summary tables 1-4. The sponsoring agency(ies) provided the yes/no and written responses for each project for questions 32-45 for each project. The TPB staff facilitated the administrative development of appendices A-K to present the capital projects (existing and proposed, by geographic area) in Visualize 2045 and the TIP.

The [appendices](#) are organized by state and county for projects that are within those geographies (in other words, the projects are organized by geography, not lead agency). Appendix A-K include this memorandum and the policy framework and questions. To find state-level projects that traverse more than one jurisdiction please see the MDOT and VDOT multijurisdictional appendices E and K. Not all geographies, jurisdictions or member agencies have projects that must be in the constrained element of Visualize 2045. Some agencies, such as WMATA, may not have projects listed in the constrained element but do have regular activity such as WMATA maintenance and vehicle replacement programs which are not listed here. To learn more about local or operational projects, please visit the local jurisdiction's or agency's website.

All of the appendices can be found by online by [clicking here](#) or using the following webpage: <https://www.mwcog.org/documents/2021/05/12/information-to-support-board-action-on-the-update-to-visualize-2045-regional-and-federal-policy-alignment-for-all-capital-projects-tpb-visualize-2045/>

APPENDIX	CONTENT	JURISDICTION
A	Responses to policy questions in Tables 1 thru 4	District of Columbia
B	As above	Frederick County
C	As above	Montgomery County
D	As above	Prince George's County
E	As above	Multi-jurisdictional projects in Maryland/MARC ¹
F	As above	City of Alexandria
G	As above	Arlington County
H	As above	Fairfax County
I	As above	Loudoun County
J	As above	Prince William County and the City of Manassas
K	As above	VDOT / VDRPT / VRE/ multiple jurisdiction/owner projects

HOW TO USE THE APPENDICES

Overview:

- If there is a particular area of the region you are interested in, find the appendix by state/county.
- If there is a particular type of project you are interested in, note each table lists projects in categories of roadway or transit as the primary project types, many of these projects also include bicycle and pedestrian improvements as indicated in Table 1.
- If there is a particular type of question you are interested in, see the guidance above as to what questions are addressed in Tables 1-4.

¹ Note, while the local government is advancing transportation projects in Charles County and the Maryland Department of Transportation (MDOT) has projects that traverse the county, there is not a county-specific appendix. Please see the Appendix E for the projects that traverse Charles County.



Regional and Federal Policies

Regional Policy Framework and Priorities

The TPB’s LRTP seeks to respond to both federal requirements and its own adopted set of policy goals and priorities. To a large extent, federal and regional goals intersect. The following pages summarize the federal requirements and the region’s policy goals.

The TPB has worked continually to develop and adopt a set of consensus-based policy goals and priorities to inform local decision making on the types of projects, programs and policies it seeks for its LRTP and TIP. The [Vision](#), adopted in 1998, is the overarching policy document that describes regional goals and objectives as well as strategies to achieve them. This vision informed the 2014 [Regional Transportation Priorities Plan](#). The vision and goals focus on multimodal transportation solutions that give people greater choice in finding the travel

mode that works best for them. It emphasizes the important role of land-use, especially strengthening the region’s Activity Centers by providing high-quality connections between centers and improving non-auto travel options within them. System maintenance is also paramount, recognizing that our existing roadways and transit systems must be in a state of good repair to be safe, efficient, and reliable.

Climate Resiliency

In 2010, the TPB joined MWCOC’s action to set greenhouse gas (GHG) reduction targets to mitigate the impact of climate change. Over the last decade the TPB completed two studies to evaluate strategies to address these targets, including the [What Would It Take](#) analysis and the [Multisector Working Group](#) study that identified the various types of projects, programs and policies that have the greatest potential to reduce GHG in the transportation sector.

In October 2020, the TPB endorsed new interim GHG reduction goals and new climate resiliency goals. These include a 2030 interim regional greenhouse gas reduction goal of 50% below 2005 levels by 2030; the region’s climate resilience goals of becoming a Climate Ready Region and making significant progress to be a Climate Resilient Region by 2030; and the need to incorporate equity principles and expand education on climate change into CEEPC, COG and TPB members’ actions to reach the climate mitigation and resiliency goals. This will require a reduction in vehicle miles traveled and associated emissions in Visualize 2045.

Equity

In 2020, the TPB established equity as its fundamental value and as an integral part of all its activities and decisions. TPB asks the member agencies explicitly consider the equity impacts of the projects, programs and policies that they sponsor and propose for inclusion in the TPB’s LRTP.

Strategies for our Future: Seven Aspirational Initiatives

In 2018, the TPB adopted seven transportation initiatives grounded in the TPB’s Vision to advance the Regional Transportation Priorities Plan. TPB noted that these ideas, if funded and enacted, would have the potential to significantly improve the region’s transportation system performance compared to current plans and programs. The realization of these initiatives would not only improve mobility, accessibility and air quality in the region it would also contribute to the region’s greenhouse gas reduction and climate resiliency goals.

The seven Aspirational Initiatives are:

- 1. **Bring Jobs and Housing Closer Together** by having more housing and jobs in central locations to take advantage of underused Metro stations and reducing single occupant auto commute trips.
- 2. **Expand Bus Rapid Transit and Transitways** throughout the region to provide people not only more transit options but also a reliable and fast bus service for work and non-work trips.
- 3. **Move More People on Metrorail**, having restored it to an excellent state of good repair, provide more frequent services with longer trains and expanded stations that are accessible by non-motorized modes.
- 4. **Provide More Telecommuting and Other Options for Commuting** to take advantage of the many jobs suitable to telework and provide employees with transit and non-motorized travel benefits and disincentivize commute parking.

- 5. **Expand Express Highway Network** strategically, in an environmentally sensitive manner to create a network that connects much of the region, with express bus systems operating and where carpools and vanpools are exempt from tolls.
- 6. **Improve Walk and Bike Access to Transit**, as investments that remove barriers to walking and biking to transit stations not only help to reduce auto travel but also helps to fully utilize the investments already made in high capacity transit.
- 7. **Complete the National Capital Trail Network** to create an extensive network of trails that provides walk and bicycle access to jobs and other activities by connecting communities across the region to activity centers.

The project submission form seeks detailed project information that will help staff assess how the next set of projects in the LRTP and TIP address regional priorities and federal planning requirements.

Through this project technical inputs solicitation process the TPB requires its member agencies to prioritize investments on projects, programs, and policies to reduce greenhouse gas emissions, prioritize the aspirational strategies, and achieve COG’s land use and equity goals as they submit their inputs for inclusion in the TPB’s LRTP and TIP.

Shared Regional Goals and Priorities

When agencies submit new projects, policies or programs for inclusion in the Visualize 2045 update, they will be asked to document how the initiatives support or advance regional goals, including equity and climate considerations, as shown in the table below. Agencies will also be asked how projects implement the Aspirational Initiatives.

<p>Provide a Comprehensive Range of Travel Options</p>	<ul style="list-style-type: none"> • Does this project promote non-auto travel or can it be expected to reduce VMT? Identify all travel mode options that this project provides, enhances, supports or promotes. • Is this project physically in an Equity Emphasis Area (EEA)? How does it improve equity? • Does this project improve accessibility for historically transportation-disadvantaged individuals (i.e., persons with disabilities, low incomes, and/or limited English proficiency)?
<p>Promote Regional Activity Centers</p>	<ul style="list-style-type: none"> • 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? • Does this project connect an Equity Emphasis Area to an Activity Center?
<p>Ensure System Maintenance, Preservation, and Safety</p>	<ul style="list-style-type: none"> • Does this project contribute to enhanced system maintenance, preservation?
<p>Maximize Operational Effectiveness and Safety</p>	<ul style="list-style-type: none"> • Is this project primarily designed to reduce travel time on highways and/or transit without building new capacity (e.g., ITS, bus priority treatments, etc.)? • Is this project expected to significantly reduce fatalities or injuries among motorists, transit users, pedestrians, and/or bicyclists?
<p>Protect and Enhance the Natural Environment</p>	<ul style="list-style-type: none"> • Is this project expected to contribute to reductions in emissions of criteria pollutants, specifically, to attainment of ozone levels consistent with the National Ambient Air Quality Standard (NAAQS)? • Is this project expected to contribute to meeting the regional goal of reducing greenhouse gasses by 50% below 2005 levels by 2030?
<p>Support Interregional and International Travel and Commerce</p>	<ul style="list-style-type: none"> • Does this project enhance, support, or promote the following freight carrier modes: long-haul truck, local delivery, rail, or air freight carrier modes? • Does this project enhance, support, or promote the following passenger carrier modes: air, Amtrak intercity passenger rail, intercity bus?

Federal Requirements and Policy Considerations

Visualize 2045 meets all federal requirements for a Metropolitan Planning Organization's long-range plan and was approved by the Federal Highway Administration and the Federal Transit Administration in December 2018. Any updates to Visualize 2045 must continue to meet these federal requirements in order to receive federal approval and for federal funding to flow to transportation projects in our region. The two main requirements are that the plan must:

- Identify all regionally significant projects and programs for which funding is reasonably expected to be available between now and 2045. Regionally significant projects and programs are those that add or remove capacity on the existing transportation system.
- Demonstrate that these projects and programs together support regional air quality improvement goals. An official Air Quality Conformity Analysis carried out by the TPB must show that forecast vehicle-related emissions under the plan will not exceed approved regional limits.

Under federal law, the plan must also address ten federal planning factors, as identified by the U.S. Department of Transportation (USDOT). (See sidebar)

Updates to the constrained element of Visualize 2045 must meet a number of other federal requirements as well, including non-discrimination and equity, congestion management documentation, public participation, and others. For a full listing of these requirements, refer to the Resources and Maps section of this document.

FEDERAL PLANNING FACTORS

Federal law also identifies a list of planning factors meant to guide metropolitan transportation planning. Collectively, the projects, programs, and policies in Visualize 2045 must address these factors. Agencies will therefore be asked to identify which of the federal.

1. Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency;
2. Increase the safety of the transportation system for all motorized and non-motorized users;
3. Increase the ability of the transportation system to support homeland security and to safeguard the personal security of all motorized and non-motorized users;
4. Increase accessibility and mobility of people and freight;
5. 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;
6. Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight;
7. Promote efficient system management and operation;
8. Emphasize the preservation of the existing transportation system;
9. Improve resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation (New under the FAST Act); and
10. Enhance travel and tourism. (New under the FAST Act)

Regional Policy & Federal Planning Factor Support

The questions in this section address the goals identified in the Regional Transportation Priorities Plan (RTPP). Question 39 should be used to provide additional context of how this project supports the TPB Aspirational Initiatives the RTPP goals or other regional needs identified in the Technical Inputs Solicitation Project Submission Guide.

- 32. Non Auto Travel** a. ----- Does the project promote non-auto travel or can it be expected to reduce VMT?
- b. Transportation Options ----- Identify all travel mode options that this project provides, enhances, supports, or promotes.
- Single Driver
 - Carpool/HOV
 - Metrorail
 - Commuter Rail
 - Streetcar/Light Rail
 - Walking
 - BRT
 - Express/Commuter Bus
 - Metrobus
 - Local Bus
 - Bicycling
 - Other
- 33. Accessibility Improvement** ----- Does this project improve accessibility for historically transportation-disadvantaged individuals (i.e., persons with disabilities, low-incomes, and/or limited English proficiency?)
- 34. Equity Emphasis Areas** a. ----- Is this project physically in an Equity Emphasis Area (EEA)?
- b. Additional Equity Response ----- Please provide additional written information that describes how this project further supports or advances equity as described by the TPB July 2020 resolution.
- 35. Activity Centers** ----- Indicate if the project begins or ends within an activity center, connects two or more centers, and/or promotes non-auto travel within one or more centers
- a. Begins or Ends in ----- Does this project begin or ends in an Activity Center?
- b. Activity Center without ----- Does this project connect two or more Activity Centers?
- c. Non-Auto Travel within ----- Does this project promote non-auto travel within one or more Activity Centers?
- d. EEA-Activity Center Connect ----- Does this project connect an Equity Emphasis Area to an Activity Center?

-
36. **Maintenance** ----- Does this project contribute to enhanced system maintenance or preservation?
37. **Operations and Travel Demand** ----- Does this project reduce travel time on highways and/or transit without building new capacity, (e.g., ITS, bus priority treatments, etc.)?
38. **Safety** ----- Is this project expected to significantly reduce fatalities or injuries among motorists, transit users, pedestrians, and/or bicyclists?
39. **Reduce Emissions Pollutants** ----- Is the project expected to contribute to reductions in emissions of criteria pollutants, specifically, to attainment of ozone levels consistent with the National Ambient Air Quality Standard (NAAQS)?
40. **Reduce Greenhouse Gases** a. ----- Is this project expected to contribute to reductions in emissions of greenhouse gases by 50% below 2005 levels by 2030?
- Additional response. b ----- If the answer to question #40 regarding contributing to greenhouse gas emission reductions was yes, then how is this project anticipated to reduce emissions? If 'No', please describe how the project will mitigate increased greenhouse gas emissions or vehicle miles traveled.
41. **Promotes Freight** ----- This project enhances, supports, or promotes the following freight carrier modes (select all that apply):
- Air
 - Local Delivery
 - Long-Haul Truck
 - Rail
42. **Passenger Carrier Modes** ----- This project enhances supports, or promotes the following passenger carrier modes (select all that apply):
- Air
 - Amtrak Intercity Passenger Rail
 - Intercity Bus
43. **Aspirational Initiatives** ----- Please check each initiative that is implemented by this project. The aspirational initiatives are: (see next page)

-
- Bring Jobs and Housing Closer Together.
 - Expand Bus Rapid Transit and Transitways Regionwide.
 - Move More People on Metrorail.
 - Provide More Telecommuting and Other Options for Commuting.
 - Expand Express Highway Network.
 - Improve Walk and Bike Access to Transit.
 - Complete the National Capital Trail Network
- 44. Additional Policy a. Framework** ----- Please provide additional written information that describes how this project further supports or advances the TPB Aspirational Initiatives.
- b.** ----- Please provide additional written information that describes how this project further supports or advances other regional goals or needs.
- 45. Federal Planning Factors** ----- This project supports the following planning factors (select all that apply):
- Emphasize the preservation of the existing transportation system.
 - Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight.
 - Enhance travel and tourism
 - Improve resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation
 - Increase accessibility and mobility of people
 - Increase accessibility and mobility of freight
 - Increases the ability of the transportation system to support homeland security and to safeguard the personal security of all motorized and non-motorized users.
 - Increases the safety of the transportation system for all motorized and non-motorized users.
 - Promote efficient system management and operation.
 - 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.
 - Support the economic vitality of the metropolitan area especially by enabling global competitiveness productivity and efficiently.

TABLE 2
VISUALIZE 2045 UPDATE - PROJECT SUBMISSIONS AND THE ASPIRATIONAL INITIATIVES

Projects in Virginia

This matrix provides a summary of the responses provided by the relevant implementing agencies as to how their existing and proposed projects support the Aspirational Initiatives.

Project	Project ID	Bring Jobs and Housing Closer Together	Expand Bus Rapid Transit and Transitways Regionwide	Move More People on Metrorail	Provide More Telecommuting and Other Options for Commuting	Expand Express Highway Network	Improve Walk and Bike Access to Transit	Complete the National Capital Trail Network
Gum Spring Rd.	CE1818							
New Telegraph Rd/Summit School Road	CE1921							
New Braddock Rd.	CE2206							
Moorefield Boulevard Mooreview Parkway to Moorefield Station	CE3602	X		X			X	
Braddock Road Route 659 to Fairfax County Line	CE3604							
Braddock/ Summerall/ Supreme Intersection Improvements	CE3606							
Croson Lane Claiborne Parkway to Old Ryan Road	CE3607							
Roundabout Sudley/Centreville	CE3629							
Widen Dulles Greenway - Eastbound Only	CE3680							
Widening John Marshall Highway	CE3694							
Widening John Marshall Highway (VA 55)	CE3695							
Widening VA 123	CE3698	X					X	
Town Center Parkway (underpass DTR)	CE3699	X					X	
VA 294 / VA 641 Interchange	CE3704							
VA 294 / VA 640 Interchange	CE3705							
Route 15 Widening	CE3738							
Route 50 Widening	CE3740							
Belmont Ridge Road	CE3742						X	
Interchange at US 15 & Bypass	CE3752							
Spring Street Widen 4 to 6 lanes, intersection & ramp impv., sidewalks	CE1952	X		X	X		X	
Herndon Metrorail Intermodal Access Imprvmts - PH II - (Worldgate Drive Ext at Herndon Pkwy)	CE3759	X		X	X		X	
Transit Service Improvements	CE1759			X	X	X		
US 1, Widen, Reconstruct Interchange, Study	CE1942					X		
Braddock Rd	CE2158							
SB I-95 Ramp	CE2667				X	X		
Farrington Avenue	CE3286	X			X			
Arcola Boulevard (Northern Segment)	CE3307							
VA 17 Intersection Improvements in Warrenton	CE3441							
I-66 Multimodal Improvement Project, inside the Beltway	CE3484			X	X	X	X	X
Evergreen Mills Road Realignment - Reservoir Road & Watson Road	CE3601	X						
Route 50/ Everfield Drive Roundabout	CE3603							
Braddock Road Route 659 to Royal Hunter Drive	CE3605							
Rock Hill Road Overpass (Connector Rd. from Sunrise Valley to Innovation Ave)	CE3609						X	
Four Mile Run Trail expansion	CE3616				X			X
Dulles Greenway EB Transition	CE3671					X		
Convert 27th Street South to 2-way	CE3677				X		X	
Remove South Clark Street	CE3678				X		X	

TABLE 2 (cont.)
VISUALIZE 2045 UPDATE - PROJECT SUBMISSIONS AND THE ASPIRATIONAL INITIATIVES

Projects in Virginia

This matrix provides a summary of the responses provided by the relevant implementing agencies as to how their existing and proposed projects support the Aspirational Initiatives.

Project	Project ID	Bring Jobs and Housing Closer Together	Expand Bus Rapid Transit and Transitways Regionwide	Move More People on Metrorail	Provide More Telecommuting and Other Options for Commuting	Expand Express Highway Network	Improve Walk and Bike Access to Transit	Complete the National Capital Trail Network
VA 621 Devlin Road Widening	CE3693							
VA 7 / 123 Interchange	CE3701			X				
Fairfax County Parkway Interchange with Popes Head Road	CE3702							
VA 234 Bypass interchange at Clover Hill Road	CE3703							
Shirlington Interchange Improvements	CE3762	X	X	X				
VA 28 PPTA, Upgrade, Construct	CE1734	X		X	X			
TIP Grouping project for Construction: Safety/ITS/Operational Improvements	CE2695							
Manassas National Battlefield Park Bypass	CE3061							
Widen Rte 1 from Telegraph Rd (Fairfax County) to Annapolis Way (Prince William Cnty)	CE3180	X						X
Frontier Drive Extension plus Braided Ramps	3460	X						
Rolling Road Widening	3301	X					X	
Lee Highway Widening	3474	X					X	
VA 638 Rolling Road Widening	1936	X					X	
VA 123 Widen	CE1723						X	
Transit								
Alexandria 4th Track Project	6673	X	X	X			X	X
Franconia to Occoquan 3rd Track Project	6706							
Dulles Corridor Metrorail Project	CE1981	X						
VRE - Tracks and Storage Yards	CE1996	X		X				
VRE - Rolling Stock Acquisition	CE2163	X		X				
VRE - Stations and Facilities	CE2164	X		X				
VRE Track Lease Improvements	CE2684	X		X				
Arkendale to Powel Creek Third Track Project and Potomac Shores Station	CE2831	X	X	X			X	
VRE Service Improvements (Reduce Headways)	CE2832	X		X				
US 1 Bus Rapid Transit	CE3496	X	X				X	
Crystal City Potomac Yard Transitway Northern Extension	CE3521	X	X	X	X		X	
New Herndon Station Park and Ride Garage	CE3700						X	
Innovation Station Park and Ride Garage	CE3711			X				
Herndon Metrorail Intermodal Access Improvements	CE3166	X	X	X			X	
L'Enfant Station and Fourth Track	CE3758	X		X			X	
VRE - Broad Run Expansion	CE2420	X		X			X	
Long Bridge Construction	6727	X	X	X			X	X

TABLE 3
VISUALIZE 2045 UPDATE - PROJECT SUBMISSIONS AND THE FEDERAL PLANNING FACTORS
 Projects in Virginia

Project	Project ID	Federal Planning Factors											
		Economic Vitality	Safety	Homeland Security	Accessibility/Mobility People	Accessibility/Mobility Freight	Environment	Integration/Connectivity	Management & Operation	Preservation	Resiliency & Stormwater Impact	Tourism	
Local Streets and Roadways													
Gum Spring Rd.	CE1818	X	X	X	X	X	X	X	X	X			
New Telegraph Rd/Summit School Road	CE1921	X	X		X	X		X					
New Braddock Rd.	CE2206	X	X		X	X		X					
Moorefield Boulevard Mooreview Parkway to Moorefield Station	CE3602	X			X		X	X	X				
Braddock Road Route 659 to Fairfax County Line	CE3604	X	X	X	X	X	X	X	X	X			
Braddock/ Summerall/ Supreme Intersection Improvements	CE3606	X	X	X	X	X	X	X	X	X	X	X	X
Croson Lane Claiborne Parkway to Old Ryan Road	CE3607	X			X	X	X	X		X			
Roundabout Sudley/Centreville	CE3629		X		X	X							
Widen Dulles Greenway - Eastbound Only	CE3680	X	X		X	X			X				
Widening John Marshall Highway	CE3694	X	X		X	X		X					
Widening John Marshall Highway (VA 55)	CE3695	X	X		X	X		X					
Widening VA 123	CE3698	X	X		X	X		X					
Town Center Parkway (underpass DTR)	CE3699	X	X		X	X							
VA 294 / VA 641 Interchange	CE3704	X	X										
VA 294 / VA 640 Interchange	CE3705	X	X										
Route 15 Widening	CE3738	X	X	X	X	X							
Route 50 Widening	CE3740	X	X	X	X	X		X					
Belmont Ridge Road	CE3742	X	X		X	X		X					
Interchange at US 15 & Bypass	CE3752	X	X										
Spring Street Widen 4 to 6 lanes, intersection & ramp impv., sidewalks	CE1952	X	X		X	X	X		X	X			
Herndon Metrorail Intermodal Access Imprvmts - PH II - (Worldgate Drive Ext at Herndon Pkwy)	CE3759				X								
Transit Service Improvements	CE1759	X	X		X		X	X	X				
US 1, Widen, Reconstruct Interchange, Study	CE1942	X	X										
Braddock Rd	CE2158	X	X	X	X	X		X	X				
SB I-95 Ramp	CE2667	X	X	X	X		X			X			
Farrington Avenue	CE3286	X	X	X	X	X	X	X	X	X	X	X	X
Arcola Boulevard (Northern Segment)	CE3307	X	X	X	X	X	X	X	X	X	X	X	X
VA 17 Intersection Improvements in Warrenton	CE3441	X	X		X	X			X				
I-66 Multimodal Improvement Project, inside the Beltway	CE3484	X	X	X	X	X	X	X	X		X		
Evergreen Mills Road Realignment - Reservoir Road & Watson Road	CE3601	X	X	X	X	X	X	X	X	X	X	X	X
Route 50/ Everfield Drive Roundabout	CE3603	X	X	X	X	X	X	X	X	X	X	X	X
Braddock Road Route 659 to Royal Hunter Drive	CE3605	X	X	X	X	X	X	X	X	X			
Rock Hill Road Overpass (Connector Rd. from Sunrise Valley to Innovation Ave)	CE3609	X			X		X						
Four Mile Run Trail expansion	CE3616	X	X				X	X	X				
Dulles Greenway EB Transition	CE3671	X	X		X	X		X	X				
Convert 27th Street South to 2-way	CE3677	X	X		X		X	X					
Remove South Clark Street	CE3678	X	X		X		X	X					

TABLE 3 (cont.)
VISUALIZE 2045 UPDATE - PROJECT SUBMISSIONS AND THE FEDERAL PLANNING FACTORS
 Projects in Virginia

Project	Project ID	Economic Vitality	Safety	Homeland Security	Accessibility/Mobility People	Accessibility/Mobility Freight	Environment	Integration/Connectivity	Management & Operation	Preservation	Resiliency & Stormwater Impact	Tourism
Local Streets and Roadways												
VA 621 Devlin Road Widening	CE3693	X	X	X	X	X		X	X			
VA 7 / 123 Interchange	CE3701	X	X	X	X	X		X	X			
VA 234 Bypass interchange at Clover Hill Road	CE3703	X	X	X	X	X		X	X			
Shirlington Interchange Improvements	CE3762	X	X		X	X	X		X			
VA 28 PPTA, Upgrade, Construct	CE1734	X	X	X	X	X	X					X
TIP Grouping project for Construction: Safety/ITS/Operational Improvements	CE2695	X	X	X	X	X	X	X	X	X	X	
Manassas National Battlefield Park Bypass	CE3061	X	X	X	X	X	X	X	X	X	X	X
Widen Rte 1 from Telegraph Rd (Fairfax County) to Annapolis Way (Prince William Cnty)	CE3180	X		X	X	X						
Frontier Drive Extension plus Braided Ramps	3460			X	X	X						
Rolling Road Widening	3301		X									
Lee Highway Widening	3474		X	X			X					
VA 638 Rolling Road Widening	1936		X									
VA 123 Widen	CE1723								X			
Transit												
Alexandria 4th Track Project	6673	X	X	X	X	X	X	X	X	X		X
Franconia to Occoquan 3rd Track Project	6706	X		X	X	X			X	X		X
Dulles Corridor Metrorail Project	CE1981	X	X	X	X		X	X	X	X		
VRE - Tracks and Storage Yards	CE1996	X	X		X	X	X	X	X	X	X	X
VRE - Rolling Stock Acquisition	CE2163	X	X		X		X	X	X	X	X	X
VRE - Stations and Facilities	CE2164	X	X		X		X	X	X	X	X	X
VRE Track Lease Improvements	CE2684	X			X		X	X	X	X	X	X
Arkendale to Powell Creek Third Track Project and Potomac Shores Station	CE2831	X			X	X	X	X	X			
VRE Service Improvements (Reduce Headways)	CE2832	X	X		X		X				X	X
US 1 Bus Rapid Transit	CE3496	X	X		X		X	X	X		X	X
Crystal City Potomac Yard Transitway Northern Extension	CE3521	X	X		X		X	X	X			
New Herndon Station Park and Ride Garage	CE3700	X			X		X	X				
Innovation Station Park and Ride Garage	CE3711	X			X		X	X				
Herndon Metrorail Intermodal Access Improvements	CE3166	X	X				X	X	X	X		
L'Enfant Station and Fourth Track	CE3758	X	X		X	X	X	X	X		X	X
VRE - Broad Run Expansion	CE2420	X	X		X	X	X	X	X		X	X
Long Bridge Construction	6727	X	X		X	X	X	X	X	X	X	X

Project	Project ID	Question 34b How this project further supports or advances equity as described by the TPB July 2020 resolution.	Question 40b If the answer to question 40a regarding contributing to greenhouse gas emission reduction was yes, then how is this project anticipated to reduce emissions? If No, please describe how the project will mitigate increased greenhouse gas emissions or vehicle miles traveled.	Question 44a How this project further supports or advances the TPB Aspirational Initiatives, other regional goals, or needs.	Question 44b How this project further supports or advances other regional goals or needs.
Local Streets and Roadways					
Gum Spring Rd.	CE1818	This project supports the commitment to providing fair and equitable transportation and mobility and meeting accessibility needs by providing mobility, safety and efficiency enhancements on the regional travel network serving a diverse public. The project development process, environmental reviews and public involvement activities are in place to allow identification and mitigation of inequitable project impacts.	This project will enhance continuity and connectivity of the street network, which will contribute to lower emissions, as some vehicles will be able to take a more direct, and shorter, route. Related bicycle and pedestrian facility improvements will provide an alternative to motorized travel.	This project supports the TPB Vision goals 2 (develop, implement, and maintain an interconnected transportation system.) and 3 (give priority to management, performance, maintenance, and safety of all modes and facilities).	Supports RTPP goals 1 (Comprehensive Range of Transportation Options) and 4 (Operational Effectiveness and Safety).
New Telegraph Rd/Summit School Road	CE1921	This project supports the commitment to providing fair and equitable transportation and mobility and meeting accessibility needs by providing mobility, safety and efficiency enhancements on the regional travel network serving a diverse public. The project development process, environmental reviews and public involvement activities are in place to allow identification and mitigation of inequitable project impacts.	This project will enhance continuity and connectivity of the street network, which will contribute to lower emissions, as some vehicles will be able to take a more direct, and shorter, route.	This project supports the TPB Vision goals 2 (develop, implement, and maintain an interconnected transportation system.) and 3 (give priority to management, performance, maintenance, and safety of all modes and facilities).	Supports RTPP goals 1 (Comprehensive Range of Transportation Options) and 4 (Operational Effectiveness and Safety).
New Braddock Rd.	CE2206	This project serves an Equity Emphasis Area. This project supports the commitment to providing fair and equitable transportation and mobility and meeting accessibility needs by providing mobility, safety and efficiency enhancements on the regional travel network serving a diverse public. The project development process, environmental reviews and public involvement activities are in place to allow identification and mitigation of inequitable project impacts.	This project will enhance continuity and connectivity of the street network, which will contribute to lower emissions, as some vehicles will be able to take a more direct, and shorter, route.	This project supports the TPB Vision goals 2 (develop, implement, and maintain an interconnected transportation system.) and 3 (give priority to management, performance, maintenance, and safety of all modes and facilities).	Supports RTPP goals 1 (Comprehensive Range of Transportation Options) and 4 (Operational Effectiveness and Safety).
Moorefield Boulevard Mooreview Parkway to Moorefield Station	CE3602	This project supports the commitment to providing fair and equitable transportation and mobility and meeting accessibility needs by providing mobility, safety and efficiency enhancements on the regional travel network serving a diverse public. The project development process, environmental reviews and public involvement activities are in place to allow identification and mitigation of inequitable project impacts.	This project will enhance continuity and connectivity of the street network to encourage metro access/use, which will contribute to lower emissions, as some vehicles will be able to take a more direct, and shorter, route. Related bicycle and pedestrian facility improvements will provide an alternative to motorized travel.	This project supports the TPB Vision goals 2 (develop, implement, and maintain an interconnected transportation system.) and 3 (give priority to management, performance, maintenance, and safety of all modes and facilities).	Supports RTPP goals 1 (Comprehensive Range of Transportation Options) and 4 (Operational Effectiveness and Safety).

Project	Project ID	Question 34b How this project further supports or advances equity as described by the TPB July 2020 resolution.	Question 40b If the answer to question 40a regarding contributing to greenhouse gas emission reduction was yes, then how is this project anticipated to reduce emissions? If No, please describe how the project will mitigate increased greenhouse gas emissions or vehicle miles traveled.	Question 44a How this project further supports or advances the TPB Aspirational Initiatives, other regional goals, or needs.	Question 44b How this project further supports or advances other regional goals or needs.
Braddock Road Route 659 to Fairfax County Line	CE3604	This project supports the commitment to providing fair and equitable transportation and mobility and meeting accessibility needs by providing mobility, safety and efficiency enhancements on the regional travel network serving a diverse public. The project development process, environmental reviews and public involvement activities are in place to allow identification and mitigation of inequitable project impacts.	This project will enhance continuity and connectivity of the street network, which will contribute to lower emissions, as some vehicles will be able to take a more direct, and shorter, route. Related bicycle and pedestrian facility improvements will provide an alternative to motorized travel.	This project supports the TPB Vision goals 2 (develop, implement, and maintain an interconnected transportation system.) and 3 (give priority to management, performance, maintenance, and safety of all modes and facilities).	Supports RTPP goals 1 (Comprehensive Range of Transportation Options) and 4 (Operational Effectiveness and Safety).
Braddock/ Summerall/ Supreme Intersection Improvements	CE3606	This project supports the commitment to providing fair and equitable transportation and mobility and meeting accessibility needs by providing mobility, safety and efficiency enhancements on the regional travel network serving a diverse public. The project development process, environmental reviews and public involvement activities are in place to allow identification and mitigation of inequitable project impacts.	This is an operational improvement that promotes safety, more efficient operation and mitigates congestion. Projects of this type are one way to improve efficiency of the transportation system without widening. Generally, operation improvements result in reduced vehicular emissions by reducing the time vehicles spend idling or moving slowly in congested areas.	This project supports the TPB Vision goals 2 (develop, implement, and maintain an interconnected transportation system.) and 3 (give priority to management, performance, maintenance, and safety of all modes and facilities).	Supports RTPP goals 1 (Comprehensive Range of Transportation Options), 3 (System Maintenance, preservation, and Safety) and 4 (Operational Effectiveness and Safety).
Croson Lane Claiborne Parkway to Old Ryan Road	CE3607	This project serves an Equity Emphasis Area. This project serves an Equity Emphasis Area. This project supports the commitment to providing fair and equitable transportation and mobility and meeting accessibility needs by providing mobility, safety and efficiency enhancements on the regional travel network serving a diverse public. The project development process, environmental reviews and public involvement activities are in place to allow identification and mitigation of inequitable project impacts.	This project will enhance continuity and connectivity of the street network, which will contribute to lower emissions, as some vehicles will be able to take a more direct, and shorter, route.	This project supports the TPB Vision goals 2 (develop, implement, and maintain an interconnected transportation system.) and 3 (give priority to management, performance, maintenance, and safety of all modes and facilities).	Supports RTPP goals 1 (Comprehensive Range of Transportation Options) and 4 (Operational Effectiveness and Safety).
Roundabout Sudley/Centreville		This project supports the commitment to providing fair and equitable transportation and mobility and meeting accessibility needs by providing mobility, safety and efficiency enhancements on the regional travel network serving a diverse public. The project development process, environmental reviews and public involvement activities are in place to allow potential inequitable project impacts to be identified and mitigated.	This is an operational improvement that promotes safety, more efficient operation and mitigates congestion. Projects of this type are one way to improve efficiency of the transportation system without widening. Generally, operation improvements result in reduced vehicular emissions by reducing the time vehicles spend idling or moving slowly in congested areas.	This project supports the TPB Vision goals 2 (develop, implement, and maintain an interconnected transportation system.) and 3 (give priority to management, performance, maintenance, and safety of all modes and facilities)	Supports RTPP goals 1 (Comprehensive Range of Transportation Options) and 4 (Operational Effectiveness and Safety)
Widen Dulles Greenway - Eastbound Only	CE3680	This project serves an Equity Emphasis Area. This is on a regional-scale facility providing fair and equitable transportation and mobility and meeting accessibility needs of the residents and travelers in the region without regard to race, ethnicity, age or income. Multiple modes are advanced, and transit, ridesharing and financial subsidies are utilized to assure all travelers groups have access.	This project will result in more efficient operation of the route 267 system (Loudoun County Greenway and Dulles Toll Road). Dulles Toll Road is HOV-2 and will transition to HOV-3, possibly as soon as 2022. More efficient operation of this HOV facility will encourage ride sharing, eliminating some vehicle trips and the related air emissions.	This project expands express Highway Network strategically, in an environmentally sensitive manner to create a network that connects much of the region, with express bus systems operating and where carpools and vanpools are exempt from tolls.	Supports RTPP goals 1 (Comprehensive Range of Transportation Options) and 4 (Operational Effectiveness and Safety).

Project	Project ID	Question 34b How this project further supports or advances equity as described by the TPB July 2020 resolution.	Question 40b If the answer to question 40a regarding contributing to greenhouse gas emission reduction was yes, then how is this project anticipated to reduce emissions? If No, please describe how the project will mitigate increased greenhouse gas emissions or vehicle miles traveled.	Question 44a How this project further supports or advances the TPB Aspirational Initiatives, other regional goals, or needs.	Question 44b How this project further supports or advances other regional goals or needs.
Widening John Marshall Highway (VA 55)	CE3694/ CE3695	This project supports the commitment to providing fair and equitable transportation and mobility and meeting accessibility needs by providing mobility, safety and efficiency enhancements on the regional travel network serving a diverse public. The project development process, environmental reviews and public involvement activities are in place to allow identification and mitigation of inequitable project impacts.	This project will enhance continuity and connectivity of the street network to encourage VRE access/use, which will contribute to lower emissions, as some vehicles will be able to take a more direct, and shorter, route. Related bicycle and pedestrian facility improvements will provide an alternative to motorized travel.	This project supports the TPB Vision goals 2 (develop, implement, and maintain an interconnected transportation system.) and 3 (give priority to management, performance, maintenance, and safety of all modes and facilities).	Supports RTPP goals 1 (Comprehensive Range of Transportation Options) and 4 (Operational Effectiveness and Safety).
Widening VA 123	CE3698	This project supports the commitment to providing fair and equitable transportation and mobility and meeting accessibility needs by providing mobility, safety and efficiency enhancements on the regional travel network serving a diverse public. The project development process, environmental reviews and public involvement activities are in place to allow identification and mitigation of inequitable project impacts.	This project will enhance continuity and connectivity of the street network to encourage metro access/use, which will contribute to lower emissions, as some vehicles will be able to take a more direct, and shorter, route. Related bicycle and pedestrian facility improvements will provide an alternative to motorized travel.	This project brings Jobs and Housing Closer Together by having more housing and jobs in central locations to take advantage of underused Metro stations and reducing single occupant auto commute trips.	Supports RTPP goals 1 (Comprehensive Range of Transportation Options), 2 (Connecting to activity center and 4 (Operational Effectiveness and Safety).
Town Center Parkway (underpass DTR)	CE3699	This project supports the commitment to providing fair and equitable transportation and mobility and meeting accessibility needs by providing mobility, safety and efficiency enhancements on the regional travel network serving a diverse public. The project development process, environmental reviews and public involvement activities are in place to allow identification and mitigation of inequitable project impacts.	This project will enhance continuity and connectivity of the street network, which will contribute to lower emissions, as some vehicles will be able to take a more direct, and shorter, route. Related bicycle and pedestrian facility improvements will provide an alternative to motorized travel.	This project brings Jobs and Housing Closer Together by having more housing and jobs in central locations to take advantage of underused Metro stations and reducing single occupant auto commute trips.	Supports RTPP goals 1 (Comprehensive Range of Transportation Options), 2 (Connecting to activity center and 4 (Operational Effectiveness and Safety).
VA 294 / VA 641 Interchange	CE3704	This project supports the commitment to providing fair and equitable transportation and mobility and meeting accessibility needs by providing mobility, safety and efficiency enhancements on the regional travel network serving a diverse public. The project development process, environmental reviews and public involvement activities are in place to allow potential inequitable project impacts to be identified and mitigated.	This is an operational improvement that promotes safety, more efficient operation and mitigates congestion. Projects of this type are one way to improve efficiency of the transportation system without widenings. Generally, operation improvements result in reduced vehicular emissions by reducing the time vehicles spend idling or moving slowly in congested areas.	This project supports the TPB Vision goals 2 (develop, implement, and maintain an interconnected transportation system.) and 3 (give priority to management, performance, maintenance, and safety of all modes and facilities).	Supports RTPP goals 1 (Comprehensive Range of Transportation Options) and 4 (Operational Effectiveness and Safety).

Project	Project ID	Question 34b How this project further supports or advances equity as described by the TPB July 2020 resolution.	Question 40b If the answer to question 40a regarding contributing to greenhouse gas emission reduction was yes, then how is this project anticipated to reduce emissions? If No, please describe how the project will mitigate increased greenhouse gas emissions or vehicle miles traveled.	Question 44a How this project further supports or advances the TPB Aspirational Initiatives, other regional goals, or needs.	Question 44b How this project further supports or advances other regional goals or needs.
VA 294 / VA 640 Interchange	CE3705	This project supports the commitment to providing fair and equitable transportation and mobility and meeting accessibility needs by providing mobility, safety and efficiency enhancements on the regional travel network serving a diverse public. The project development process, environmental reviews and public involvement activities are in place to allow potential inequitable project impacts to be identified and mitigated.	This is an operational improvement that promotes safety, more efficient operation and mitigates congestion. Projects of this type are one way to improve efficiency of the transportation system without widenings. Generally, operation improvements result in reduced vehicular emissions by reducing the time vehicles spend idling or moving slowly in congested areas.	This project supports the TPB Vision goals 2 (develop, implement, and maintain an interconnected transportation system.) and 3 (give priority to management, performance, maintenance, and safety of all modes and facilities).	Supports RTPP goals 1 (Comprehensive Range of Transportation Options) and 4 (Operational Effectiveness and Safety).
Route 15 Widening	CE3738	This project supports the commitment to providing fair and equitable transportation and mobility and meeting accessibility needs by providing mobility, safety and efficiency enhancements on the regional travel network serving a diverse public. The project development process, environmental reviews and public involvement activities are in place to allow identification and mitigation of inequitable project impacts.	This project will enhance continuity and connectivity of the street network, which will contribute to lower emissions, as some vehicles will be able to take a more direct, and shorter, route. Related bicycle and pedestrian facility improvements will provide an alternative to motorized travel.	This project supports the TPB Vision goals 2 (develop, implement, and maintain an interconnected transportation system.) and 3 (give priority to management, performance, maintenance, and safety of all modes and facilities).	Supports RTPP goals 1 (Comprehensive Range of Transportation Options) and 4 (Operational Effectiveness and Safety).
Route 50 Widening	CE3740	This project supports the commitment to providing fair and equitable transportation and mobility and meeting accessibility needs by providing mobility, safety and efficiency enhancements on the regional travel network serving a diverse public. The project development process, environmental reviews and public involvement activities are in place to allow identification and mitigation of inequitable project impacts.	This project will enhance continuity and connectivity of the street network, which will contribute to lower emissions, as some vehicles will be able to take a more direct, and shorter, route. Related bicycle and pedestrian facility improvements will provide an alternative to motorized travel.	This project supports the TPB Vision goals 2 (develop, implement, and maintain an interconnected transportation system.) and 3 (give priority to management, performance, maintenance, and safety of all modes and facilities).	Supports RTPP goals 1 (Comprehensive Range of Transportation Options) and 4 (Operational Effectiveness and Safety).
Belmont Ridge Road	CE3742	This project supports the commitment to providing fair and equitable transportation and mobility and meeting accessibility needs by providing mobility, safety and efficiency enhancements on the regional travel network serving a diverse public. The project development process, environmental reviews and public involvement activities are in place to allow identification and mitigation of inequitable project impacts.	This project will enhance continuity and connectivity of the street network, which will contribute to lower emissions, as some vehicles will be able to take a more direct, and shorter, route. Related bicycle and pedestrian facility improvements will provide an alternative to motorized travel.	This project supports the TPB Vision goals 2 (develop, implement, and maintain an interconnected transportation system.) and 3 (give priority to management, performance, maintenance, and safety of all modes and facilities).	Supports RTPP goals 1 (Comprehensive Range of Transportation Options) and 4 (Operational Effectiveness and Safety).

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Interchange at US 15 & Bypass	CE3752	This project supports the commitment to providing fair and equitable transportation and mobility and meeting accessibility needs by providing mobility, safety and efficiency enhancements on the regional travel network serving a diverse public. The project development process, environmental reviews and public involvement activities are in place to allow identification and mitigation of inequitable project impacts.	This is an operational improvement that promotes safety, more efficient operation and mitigates congestion. Projects of this type are one way to improve efficiency of the transportation system without widenings. Generally, operation improvements result in reduced vehicular emissions by reducing the time vehicles spend idling or moving slowly in congested areas.	This project supports the TPB Vision goals 2 (develop, implement, and maintain an interconnected transportation system.) and 3 (give priority to management, performance, maintenance, and safety of all modes and facilities).	Supports RTPP goals 1 (Comprehensive Range of Transportation Options) and 4 (Operational Effectiveness and Safety).
Spring Street Widen 4 to 6 lanes, intersection & ramp impv., sidewalks	CE1952	This project supports the commitment to providing fair and equitable transportation and mobility and meeting accessibility needs by providing mobility, safety and efficiency enhancements on the regional travel network serving a diverse public. The project development process, environmental reviews and public involvement activities are in place to allow potential inequitable project impacts to be identified and mitigated.	This is an operational improvement that promotes safety, more efficient operation and mitigates congestion. Projects of this type are one way to improve efficiency of the transportation system without widenings. Generally, operational improvements result in reduced vehicular emissions by reducing the time vehicles spend idling or moving slowly in congested areas.	Supports the TPB Vision goals 2 (develop, implement, and maintain an interconnected transportation system.) and 3 (give priority to management, performance, maintenance, and safety of all modes and facilities)	Supports RTPP goals 1 (Comprehensive Range of Transportation Options) and 4 (Operational Effectiveness and Safety)
Herndon Metrorail Intermodal Access Improvements - PH II - (Worldgate Drive Extension at Herndon Parkway)	CE3759	This project supports the commitment to providing fair and equitable transportation and mobility and meeting accessibility needs by providing mobility, safety and efficiency enhancements on the regional travel network serving a diverse public. The project development process, environmental reviews and public involvement activities are in place to allow identification and mitigation of inequitable project impacts.	This project will enhance continuity and connectivity of the street network, which will contribute to lower emissions, as some vehicles will be able to take a more direct, and shorter, route. Related bicycle and pedestrian facility improvements will provide an alternative to motorized travel. Will provide safe, convenient access to a new MetroRail station, thereby allowing substitution of transit trips for vehicle trips.	Supports the TPB Vision goals 2 (develop, implement, and maintain an interconnected transportation system.) and 3 (give priority to management, performance, maintenance, and safety of all modes and facilities)	Supports RTPP goals 1 (Comprehensive Range of Transportation Options) and 4 (Operational Effectiveness and Safety)
Transit Service Improvements	CE1759	<p>Connects Equity Emphasis Areas to Activity Centers</p> <p>This is a regional-scale project providing fair and equitable transportation and mobility and meeting accessibility needs of the residents and travelers in the region without regard to race, ethnicity, age or income. Multiple modes are advanced, and transit, ridesharing and financial subsidies are utilized to assure all travelers groups have access.</p> <p>This project supports the commitment to providing fair and equitable transportation and mobility and meeting accessibility needs by providing mobility, safety and efficiency enhancements on the regional travel network serving a diverse public.</p>	Transit services associated with the I-66 Multimodal Improvement Project, inside the Beltway will allow travelers to substitute transit trips for vehicle trips, thus benefitting efforts to reduce GHG and VMT.	Advances the regional initiative "Expand the Express Highway Network". Also supports the TPB Vision goals 1 (provide reasonable access at reasonable cost to everyone in the region),2 (develop, implement, and maintain an interconnected transportation system) 2 (develop, implement, and maintain an interconnected transportation system.) ,3 (give priority to management, performance, maintenance, and safety of all modes and facilities) and 4 (Use the best available technology to maximize system effectiveness)	Supports RTPP goals 1 (Comprehensive Range of Transportation Options), 2 (Promote a Strong Regional Economy), 4 (Operational Effectiveness and Safety) and 6 (Support Inter-Regional and International Travel and Commerce.)

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US 1, Widen, Reconstruct Interchange, Study	CE1942	Connects Equity Emphasis Areas to Activity Centers When completed, this project will support the commitment to providing fair and equitable transportation and mobility and meeting accessibility needs by providing mobility, safety and efficiency enhancements on the regional travel network serving a diverse public.	When completed, this project will provide safety and operational improvements to the Route 1 corridor in parts of Fairfax and Prince William counties. Widening of some segments to 6 lanes is required to address congestion but will facilitate a lane for buses and right turns during peak periods in peak direction. Mitigating congestion will provide an air quality benefit, with less time for motorists driving in congested conditions. Additional transit and bike/pedestrian will provide a further GHG/VMT mitigation benefit.	Supports the TPB Vision goals 2 (develop, implement, and maintain an interconnected transportation system.) and 3 (give priority to management, performance, maintenance, and safety of all modes and facilities)	Supports RTPP goals 1 (Comprehensive Range of Transportation Options) and 4 (Operational Effectiveness and Safety)
Braddock Rd	CE2158	Serves an Equity Emphasis Area. This project supports the commitment to providing fair and equitable transportation and mobility and meeting accessibility needs by providing mobility, safety and efficiency enhancements on the regional travel network serving a diverse public. The project development process, environmental reviews and public involvement activities are in place to allow	This project will enhance continuity and connectivity of the street network, which will contribute to lower emissions, as some vehicles will be able to take a more direct, and shorter, route.	Supports the TPB Vision goals 2 (develop, implement, and maintain an interconnected transportation system.) and 3 (give priority to management, performance, maintenance, and safety of all modes and facilities)	Supports RTPP goals 1 (Comprehensive Range of Transportation Options) and 4 (Operational Effectiveness and Safety)
SB I-95 Ramp	CE2667	Serves an Equity Emphasis Area. This project is on a regional-scale facility providing fair and equitable transportation and mobility and meeting accessibility needs of the residents and travelers in the region without regard to race, ethnicity, age or income. Multiple modes are advanced, and transit, ridesharing and financial subsidies are utilized to assure all travelers groups have access.	This is an operational improvement that promotes safety, more efficient operation and mitigates congestion. Projects of this type are one way to improve efficiency of the transportation system without widenings. Generally, operational improvements result in reduced vehicular emissions by reducing the time vehicles spend idling or moving slowly in congested areas.	Supports the TPB Vision goals 2 (develop, implement, and maintain an interconnected transportation system.) and 3 (give priority to management, performance, maintenance, and safety of all modes and facilities)	Supports RTPP goals 1 (Comprehensive Range of Transportation Options) and 4 (Operational Effectiveness and Safety)
Farrington Avenue	CE3286	Serves an Equity Emphasis Area. This project supports the commitment to providing fair and equitable transportation and mobility and meeting accessibility needs by providing mobility, safety and efficiency enhancements on the regional travel network serving a diverse public. The project development process, environmental reviews and public involvement activities are in place to allow potential inequitable project impacts to be identified and mitigated.	This project will enhance continuity and connectivity of the street network, which will contribute to lower emissions, as some vehicles will be able to take a more direct, and shorter, route. Related bicycle and pedestrian facility improvements will provide an alternative to motorized travel.	Supports the TPB Vision goals 2 (develop, implement, and maintain an interconnected transportation system.) and 3 (give priority to management, performance, maintenance, and safety of all modes and facilities)	Supports RTPP goals 1 (Comprehensive Range of Transportation Options) and 4 (Operational Effectiveness and Safety)
Arcola Boulevard (Northern Segment)	CE3307	Serves an Equity Emphasis Area. This project supports the commitment to providing fair and equitable transportation and mobility and meeting accessibility needs by providing mobility, safety and efficiency enhancements on the regional travel network serving a diverse public. The project development process, environmental reviews and public involvement activities are in place to allow identification and mitigation of inequitable project impacts.	This project will enhance continuity and connectivity of the street network, which will contribute to lower emissions, as some vehicles will be able to take a more direct, and shorter, route. Related bicycle and pedestrian facility improvements will provide an alternative to motorized travel.	Supports the TPB Vision goals 2 (develop, implement, and maintain an interconnected transportation system.) and 3 (give priority to management, performance, maintenance, and safety of all modes and facilities)	Supports RTPP goals 1 (Comprehensive Range of Transportation Options) and 4 (Operational Effectiveness and Safety)

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VA 17 Intersection Improvements in Warrenton	CE3441	This project supports the commitment to providing fair and equitable transportation and mobility and meeting accessibility needs by providing mobility, safety and efficiency enhancements on the regional travel network serving a diverse public. The project development process, environmental reviews and public involvement activities are in place to allow potential inequitable project impacts to be identified and mitigated.	This is an operational improvement that promotes safety, more efficient operation and mitigates congestion. Projects of this type are one way to improve efficiency of the transportation system without widenings. Generally, operational improvements result in reduced vehicular emissions by reducing the time vehicles spend idling or moving slowly in congested areas.	Supports the TPB Vision goals 2 (develop, implement, and maintain an interconnected transportation system.) and 3 (give priority to management, performance, maintenance, and safety of all modes and facilities)	Supports RTPP goals 1 (Comprehensive Range of Transportation Options) and 4 (Operational Effectiveness and Safety)
I-66 Multimodal Improvement Project, inside the Beltway	CE3484	Connects Equity Emphasis Areas to Activity Centers. This is a regional-scale project providing fair and equitable transportation and mobility and meeting accessibility needs of the residents and travelers in the region without regard to race, ethnicity, age or income. Multiple modes are advanced, and transit, ridesharing and financial subsidies are utilized to assure all travelers groups have access.	This project uses technology, travel demand management, congestion pricing and spot widenings to reduce congestion and dis-incentivize single occupant vehicle trips. Some of the toll revenues fund transit services, which further reduces vehicle trips. All of these project elements support the effort to minimize GHG and VMT.	Advances the regional initiative "Expand the Express Highway Network". Also supports the TPB Vision goals 1 (provide reasonable access at reasonable cost to everyone in the region),2 (develop, implement, and maintain an interconnected transportation system) 2 (develop, implement, and maintain an interconnected transportation system.) ,3 (give priority to management, performance, maintenance, and safety of all modes and facilities) and 4 (Use the best available technology to maximize system effectiveness).	Supports RTPP goals 1 (Comprehensive Range of Transportation Options), 2 (Promote a Strong Regional Economy), 4 (Operational Effectiveness and Safety) and 6 (Support Inter-Regional and International Travel and Commerce.)
Evergreen Mills Road Realignment - Reservoir Road & Watson Road	CE3601	This project supports the commitment to providing fair and equitable transportation and mobility and meeting accessibility needs by providing mobility, safety and efficiency enhancements on the regional travel network serving a diverse public. The project development process, environmental reviews and public involvement activities are in place to allow potential inequitable project impacts to be identified and mitigated.	This is an operational improvement that promotes safety, more efficient operation and mitigates congestion. Projects of this type are one way to improve efficiency of the transportation system without widenings. Generally, operational improvements result in reduced vehicular emissions by reducing the time vehicles spend idling or moving slowly in congested areas.	Supports the TPB Vision goals 2 (develop, implement, and maintain an interconnected transportation system.) and 3 (give priority to management, performance, maintenance, and safety of all modes and facilities)	Supports RTPP goals 1 (Comprehensive Range of Transportation Options) and 4 (Operational Effectiveness and Safety)
Route 50/ Everfield Drive Roundabout	CE3603	This project supports the commitment to providing fair and equitable transportation and mobility and meeting accessibility needs by providing mobility, safety and efficiency enhancements on the regional travel network serving a diverse public. The project development process, environmental reviews and public involvement activities are in place to allow identification and mitigation of inequitable project impacts.	This is an operational improvement that promotes safety, more efficient operation and mitigates congestion. Projects of this type are one way to improve efficiency of the transportation system without widenings. Generally, operational improvements result in reduced vehicular emissions by reducing the time vehicles spend idling or moving slowly in congested areas.	Supports the TPB Vision goals 2 (develop, implement, and maintain an interconnected transportation system.) and 3 (give priority to management, performance, maintenance, and safety of all modes and facilities)	Supports RTPP goals 1 (Comprehensive Range of Transportation Options) and 4 (Operational Effectiveness and Safety)
Braddock Road Route 659 to Royal Hunter Drive	CE3605	This project supports the commitment to providing fair and equitable transportation and mobility and meeting accessibility needs by providing mobility, safety and efficiency enhancements on the regional travel network serving a diverse public. The project development process, environmental reviews and public involvement activities are in place to allow identification and mitigation of inequitable project impacts.	This project involves construction of a new major collector. The project improves connectivity of and continuity of the transportation network and will mitigate unnecessary VMT resulting from vehicles taking circuitous routes due to the incomplete nature of the Loudoun road network.	Supports the TPB Vision goals 2 (develop, implement, and maintain an interconnected transportation system.) and 3 (give priority to management, performance, maintenance, and safety of all modes and facilities)	Supports RTPP goals 1 (Comprehensive Range of Transportation Options), 2 (Promote a Strong Regional Economy), 4 (Operational Effectiveness and Safety) and 6 (Support Inter-Regional and International Travel and Commerce.)

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Rock Hill Road Overpass (Connector Road from Sunrise Valley Dr to Innovation Ave)	CE3609	Serves an Equity Emphasis Area. This project supports the commitment to providing fair and equitable transportation and mobility and meeting accessibility needs by providing mobility, safety and efficiency enhancements on the regional travel network serving a diverse public. The project development and equitable transportation and mobility and meeting accessibility needs by providing mobility, safety and efficiency enhancements on the regional travel network serving a diverse public.	This project will enhance continuity and connectivity of the street network, which will contribute to lower emissions, as some vehicles will be able to take a more direct, and shorter, route. Related bicycle and pedestrian facility improvements will provide an alternative to motorized travel.	Supports the TPB Vision goals 2 (develop, implement, and maintain an interconnected transportation system.) and 3 (give priority to management, performance, maintenance, and safety of all modes and facilities)	Supports RTPP goals 1 (Comprehensive Range of Transportation Options) and 4 (Operational Effectiveness and Safety)
Four Mile Run Trail expansion	CE3616	This project supports the commitment to providing fair and equitable transportation and mobility and meeting accessibility needs by providing mobility, safety and efficiency enhancements on the regional travel network serving a diverse public. The project development process, environmental reviews and public involvement activities are in place to allow potential inequitable project impacts to be identified and mitigated.	This project offers an alternative to motorized travel. Providing this option to bicyclists and pedestrians will result in the elimination of some motorized trips and contribute to more connectivity of the bike-pedestrian network.	This project advances the regional initiatives “Include Walk and Bike Access to Transit” and “Complete the National Capital Trail”.	Supports RTPP goals 1 (Comprehensive Range of Transportation Options) and 4 (Operational Effectiveness and Safety)
Dulles Greenway EB Transition	CE3671	Serves an Equity Emphasis Area. This is on a regional-scale facility providing fair and equitable transportation and mobility and meeting accessibility needs of the residents and travelers in the region without regard to race, ethnicity, age or income. Multiple modes are advanced, and transit, ridesharing and financial subsidies are utilized to assure all travelers groups have access.	This project will result in more efficient operation of the route 267 system (Loudoun County Greenway and Dulles Toll Road). Dulles Toll Road is HOV-2 and will transition to HOV-3, possibly as soon as 2022. More efficient operation of this HOV facility will encourage ride sharing, eliminating some vehicle trips and the related air emissions.	Advances the regional initiative “Expand the Express Highway Network”. Also supports the TPB Vision goals 1 (provide reasonable access at reasonable cost to everyone in the region),2 (develop, implement, and maintain an interconnected transportation system) 2 (develop, implement, and maintain an interconnected transportation system.) ,3 (give priority to management, performance,	Supports RTPP goals 1 (Comprehensive Range of Transportation Options), 2 (Promote a Strong Regional Economy), 4 (Operational Effectiveness and Safety) and 6 (Support Inter-Regional and International Travel and Commerce.)
Convert 27th Street South to 2-way	CE3677	Serves an Equity Emphasis Area. This project supports the commitment to providing fair and equitable transportation and mobility and meeting accessibility needs by providing mobility, safety and efficiency enhancements on the regional travel network serving a diverse public. The project development process, environmental reviews and public involvement activities are in place to allow potential inequitable project impacts to be identified and mitigated.	This is an operational improvement that promotes safety, more efficient operation and mitigates congestion. Projects of this type are one way to improve efficiency of the transportation system without widenings	This project, which converts a one-way street to a two-way street, will enhance pedestrian and bicycle safety. .	Supports RTPP goals 1 (Comprehensive Range of Transportation Options) and 4 (Operational Effectiveness and Safety)

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Remove South Clark Street	CE3678	Serves an Equity Emphasis Area. This project supports the commitment to providing fair and equitable transportation and mobility and meeting accessibility needs by providing mobility, safety and efficiency enhancements on the regional travel network serving a diverse public. The project development process, environmental reviews and public involvement activities are in place to allow potential inequitable project impacts to be identified and mitigated.	This is an operational improvement that promotes safety, more efficient operation and mitigates congestion. Projects of this type are one way to improve efficiency of the transportation system without widenings. Generally, operational improvements result in reduced vehicular emissions by reducing the time vehicles spend idling or moving slowly in congested areas.	Supports the TPB Vision goals 2 (develop, implement, and maintain an interconnected transportation system.) and 3 (give priority to management, performance, maintenance, and safety of all modes and facilities)	Supports RTPP goals 1 (Comprehensive Range of Transportation Options) and 4 (Operational Effectiveness and Safety)
VA 621 Devlin Road Widening	CE3693	This project supports the commitment to providing fair and equitable transportation and mobility and meeting accessibility needs by providing mobility, safety and efficiency enhancements on the regional travel network serving a diverse public. The project development process, environmental reviews and public involvement activities are in place to allow identification and mitigation of inequitable project impacts.	This project will enhance continuity and connectivity of the street network, which will contribute to lower emissions, as some vehicles will be able to take a more direct, and shorter, route. Related bicycle and pedestrian facility improvements will provide an alternative to motorized travel.	Supports the TPB Vision goals 2 (develop, implement, and maintain an interconnected transportation system.) and 3 (give priority to management, performance, maintenance, and safety of all modes and facilities)	Supports RTPP goals 1 (Comprehensive Range of Transportation Options) and 4 (Operational Effectiveness and Safety)
VA 7 / 123 Interchange	CE3701	This project supports the commitment to providing fair and equitable transportation and mobility and meeting accessibility needs by providing mobility, safety and efficiency enhancements on the regional travel network serving a diverse public. The project development process, environmental reviews and public involvement activities are in place to allow potential inequitable project impacts to be identified and mitigated.	This is an operational improvement that promotes safety, more efficient operation and mitigates congestion. Projects of this type are one way to improve efficiency of the transportation system without widenings. Generally, operational improvements result in reduced vehicular emissions by reducing the time vehicles spend idling or moving slowly in congested areas.	Supports the TPB Vision goals 2 (develop, implement, and maintain an interconnected transportation system.) and 3 (give priority to management, performance, maintenance, and safety of all modes and facilities)	Supports RTPP goals 1 (Comprehensive Range of Transportation Options) and 4 (Operational Effectiveness and Safety)
Fairfax County Parkway Interchange with Popes Head Road	3702	This project supports the commitment to providing fair and equitable transportation and mobility and meeting accessibility needs by providing mobility, safety and efficiency enhancements on the regional travel network serving a diverse public. The project development process, environmental reviews and public involvement activities are in place to allow identification and mitigation of inequitable project impacts.	This project will enhance continuity and connectivity of the street network, which will contribute to lower emissions, as some vehicles will be able to take a more direct, and shorter, route. Related bicycle and pedestrian facility improvements will provide an alternative to motorized travel.	Supports the TPB Vision goals 2 (develop, implement, and maintain an interconnected transportation system.) and 3 (give priority to management, performance, maintenance, and safety of all modes and facilities)	Supports RTPP goals 1 (Comprehensive Range of Transportation Options) and 4 (Operational Effectiveness and Safety)

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VA 234 Bypass interchange @ Clover Hill Road	CE3703	This project supports the commitment to providing fair and equitable transportation and mobility and meeting accessibility needs by providing mobility, safety and efficiency enhancements on the regional travel network serving a diverse public. The project development process, environmental reviews and public involvement activities are in place to allow identification and mitigation of inequitable project impacts.	This is an operational improvement that promotes safety, more efficient operation and mitigates congestion. Projects of this type are one way to improve efficiency of the transportation system without widenings. Generally, operational improvements result in reduced vehicular emissions by reducing the time vehicles spend idling or moving slowly in congested areas.	Supports the TPB Vision goals 2 (develop, implement, and maintain an interconnected transportation system.) and 3 (give priority to management, performance, maintenance, and safety of all modes and facilities)	Supports RTPP goals 1 (Comprehensive Range of Transportation Options) and 4 (Operational Effectiveness and Safety)
Shirlington Interchange Improvements	CE3762	This project supports the commitment to providing fair and equitable transportation and mobility and meeting accessibility needs by providing mobility, safety and efficiency enhancements on the regional travel network serving a diverse public. The project development process, environmental reviews and public involvement activities are in place to allow potential inequitable project impacts to be identified and mitigated.	This is an operational improvement that promotes safety, more efficient operation and mitigates congestion. Projects of this type are one way to improve efficiency of the transportation system without widenings. Generally, operational improvements result in reduced vehicular emissions by reducing the time vehicles spend idling or moving slowly in congested areas.	Supports the TPB Vision goals 2 (develop, implement, and maintain an interconnected transportation system.) and 3 (give priority to management, performance, maintenance, and safety of all modes and facilities)	Supports RTPP goals 1 (Comprehensive Range of Transportation Options) and 4 (Operational Effectiveness and Safety)
VA 28 PPTA, Upgrade, Construct	CE1734	This project serves an Equity Emphasis Area and this project serves an Equity Emphasis Area (EEA) and connects an EEA to an Activity Center.	This project will result in more efficient operation of the Route 28 system (Dulles Greenway and I-66) More efficient operation of this HOV facility will encourage ride sharing, eliminating some vehicle trips and the related air emissions.	This project advances the regional initiatives "Expand Express Highway Network".	Supports RTPP Goal 1 (Comprehensive Range of Transportation Options), Goal 2 (Promote a Strong Regional Economy, Including a Healthy Regional Core and Dynamic Activity Centers), Goal 4 (Operational Effectiveness and Safety), and Goal 6 (Support Inter-Regional and International Travel and Commerce). This project will link commuters to five activity centers. The HOV lanes provides users the option to bypass congestion or incidents, therefore increasing travel times. This project will also enhance trucks and vehicles flow to access warehousing and Dulles Airport.
TIP Grouping project for Construction: Safety/ITS/Operational Improvements	CE2695	N/A	These projects enhance traffic operations to keep traffic moving, while also benefiting roadway safety. Various research efforts (i.e. National Center for Sustainable Transportation) indicates recently emerged environmental-ITS programs specifically designed to minimize the environmental impacts of transportation have shown to reduce energy and emissions on the order of 5% to 15%.	N/A	Supports RTPP Priority 3 to "Move More People and Goods More Efficiently". These projects do not add capacity, and they enhance and make the existing safer, such as creating lighting, upgrading shoulders, updating traffic signal systems for increase operations, adding guardrail, etc

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Manassas National Battlefield Park Bypass	CE3061	This project serves an Equity Emphasis Area and this project serves an Equity Emphasis Area (EEA) and connects an EEA to an Activity Center.	This project will enhance continuity and connectivity of the street network, as some vehicles will be able to take a more direct, and shorter, route, which will contribute to lower emissions.	N/A	Supports RTPP Goal 1 (Comprehensive Range of Transportation Options, and Goal 5 (Enhance Environmental Quality & Protect Natural Cultural Resources). This project will help mitigate the negative impacts of the heavy traffic congestion within the Manassas National Battlefield Park from non-park related traffic on historic preservation, park interpretation, visitor experience, and park management. With this project implemented, it will help spur tourism to this historical site.
Widen Rte 1 from Telegraph Rd (Fairfax County) to Annapolis Way (Prince William Cnty)	CE3180	This project serves an Equity Emphasis Area.	This project will enhance continuity and connectivity of the street network, which will contribute to lower emissions, as some vehicles will be able to take a more direct, and shorter, route. Related bicycle and pedestrian facility improvements will provide an alternative to motorized travel.	This project advances the regional initiatives "Include Walk and Bike Access to Transit" and "Complete the National Capital Trail".	Supports RTPP Goal 1 (Comprehensive Range of Transportation Options), Goal 2 (Promote a Strong Regional Economy, including a Healthy Regional Core and Dynamic Activity Centers), Goal 4 (Operational Effectiveness and Safety), and Goal 5 (Enhance Environmental Quality & Protect Natural Cultural Resources). This project will provide commuters access to the North Woodbridge activity center. The southern segment and northern segment are part of the National Capital Trails Network, planned and existing respectively. When I-95 conditions are several congested, motorists oftentimes use Route 1 to bypass I-95, which creates bottlenecks on Route 1 (especially at signals). This widening project will provide users increase travel time reliability, increases speeds, which will help reduce emissions, thus improving air quality.
Frontier Drive Extension plus Braided Ramps	3460	Serves an Equity Emphasis Area. This project is on a regional-scale facility providing fair and equitable transportation and mobility and meeting accessibility needs of the residents and travelers in the region without regard to race, ethnicity, age or income. Multiple modes are advanced, and transit, ridesharing and financial subsidies are utilized to assure all travelers groups have access.	This is an operational improvement that promotes safety, more efficient operation and mitigates congestion. Projects of this type are one way to improve efficiency of the transportation system without widenings. Generally, operational improvements result in reduced vehicular emissions by reducing the time vehicles spend idling or moving slowly in congested areas.	Supports the TPB Vision goals 2 (develop, implement, and maintain an interconnected transportation system.) and 3 (give priority to management, performance, maintenance, and safety of all modes and facilities)	Supports RTPP goals 1 (Comprehensive Range of Transportation Options) and 4 (Operational Effectiveness and Safety)

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Rolling Road Widening	3301	This project supports the commitment to providing fair and equitable transportation and mobility and meeting accessibility needs by providing mobility, safety and efficiency enhancements on the regional travel network serving a diverse public. The project development process, environmental reviews and public involvement activities are in place to allow identification and mitigation of inequitable project impacts.	This project will enhance continuity and connectivity of the street network, which will contribute to lower emissions, as some vehicles will be able to take a more direct, and shorter, route. Related bicycle and pedestrian facility improvements will provide an alternative to motorized travel.	Supports the TPB Vision goals 2 (develop, implement, and maintain an interconnected transportation system.) and 3 (give priority to management, performance, maintenance, and safety of all modes and facilities)	Supports RTPP goals 1 (Comprehensive Range of Transportation Options) and 4 (Operational Effectiveness and Safety)
Lee Highway Widening	3474	This project supports the commitment to providing fair and equitable transportation and mobility and meeting accessibility needs by providing mobility, safety and efficiency enhancements on the regional travel network serving a diverse public. The project development process, environmental reviews and public involvement activities are in place to allow identification and mitigation of inequitable project impacts.	This project will enhance continuity and connectivity of the street network, which will contribute to lower emissions, as some vehicles will be able to take a more direct, and shorter, route. Related bicycle and pedestrian facility improvements will provide an alternative to motorized travel.	Supports the TPB Vision goals 2 (develop, implement, and maintain an interconnected transportation system.) and 3 (give priority to management, performance, maintenance, and safety of all modes and facilities)	Supports RTPP goals 1 (Comprehensive Range of Transportation Options) and 4 (Operational Effectiveness and Safety)
VA 638 Rolling Road Widening	1936	This project supports the commitment to providing fair and equitable transportation and mobility and meeting accessibility needs by providing mobility, safety and efficiency enhancements on the regional travel network serving a diverse public. The project development process, environmental reviews and public involvement activities are in place to allow identification and mitigation of inequitable project impacts.	This project will enhance continuity and connectivity of the street network, which will contribute to lower emissions, as some vehicles will be able to take a more direct, and shorter, route. Related bicycle and pedestrian facility improvements will provide an alternative to motorized travel.	Supports the TPB Vision goals 2 (develop, implement, and maintain an interconnected transportation system.) and 3 (give priority to management, performance, maintenance, and safety of all modes and facilities)	Supports RTPP goals 1 (Comprehensive Range of Transportation Options) and 4 (Operational Effectiveness and Safety)
VA-123 Widen	CE1723	This project is located near an Equity Emphasis Area and will improve connectivity and increase accessibility to transit for low income/minority populations.	The project provides additional capacity, which will lead to reduced congestion along the corridor, reducing travel time. Related bike and pedestrian improvements will provide an alternative to motorized travel. Corridor provides bus routes as well and provides improved access to the Burke Centre VRE Station.	This project will also contribute to the development of an interconnected transportation system that enhances quality of life and promotes a strong and growing economy in Fairfax County and throughout the entire region.	Supports RTPP goals 1 (Comprehensive Range of Transportation Options) and 4 (Operational Effectiveness and Safety)

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Transit					
Alexandria 4th Track Project	6673	N/A	The expansion of Long Bridge will double the long-term capacity for passenger and freight rail traffic and improve the reliability of rail service. In addition, this expansion is a regional asset that will contribute to a more cohesive railroad network connecting the metro areas between Richmond, VA, and Baltimore, MD, and provide riders with improved mobility and connectivity.	This project advances the regional initiatives Move More People on Metrorail, Bring Jobs and Housing Closer Together, Improve Walk and Bike Access to Transit, and Complete the National Capital Trail Network.	Supports RTPP Goal 1 (Comprehensive Range of Transportation Options), Goal 2 (Promote a Strong Regional Economy, Including a Healthy Regional Core and Dynamic Activity Centers), Goal 3 (Ensure Adequate System Maintenance, Preservation, and Safety), Goal 4 (Operational Effectiveness and Safety), and Goal 5 (Enhance Environmental Quality & Protect Natural Cultural Resources) and Goal 6 (Support Inter-Regional and International Travel and Commerce). This project will provide commuters direct access following four activity centers and other nearby centers in DC. A segment of the National Capital Trails Network is planned as part of the new crossing (pedestrian bridge). The Long Bridge (built in 1904) will include upgrades to roadway overpasses, improve travel time of transit users of MARC, VRE, and Amtrak and provide safer connection to region's commerce centers (Union Station and National Airport). This project will also include enhance park amenities through mitigation.
Franconia to Occoquan 3rd Track Project	6706	N/A	This project supports and expands the operation of commuter rail service, making using transit a more attractive commute choice. It benefits removing more vehicles off the road which helps to reduce GHG emissions in the region.	This project advances the regional initiatives Move More People on Metrorail and Bring Jobs, Provide More Teleworking and Other Options for Commuting, and Housing Closer Together.	Supports RTPP Goal 1 (Comprehensive Range of Transportation Options), Goal 2 (Promote a Strong Regional Economy, Including a Healthy Regional Core and Dynamic Activity Centers) and Goal 6 (Support Inter-Regional and International Travel and Commerce). This project will allow for increased rail capacity which will provide commuters access to several activity centers along the corridor. It will expand commuter rail service in the region, thereby providing options for commuting to regional residents and making commuting by rail more attractive and feasible for more people, which increase travel time reliability.
Dulles Corridor Metrorail Project	CE1981	This project serves an Equity Emphasis Area and this project serves an Equity Emphasis Area (EEA) and connects an EEA to an Activity Center.	This project, Phase II of the Silver Line, will divert vehicle trips to Metrorail and will serve as a catalyst for construction of walkable transit-oriented development near metro stops.		

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VRE - Tracks and Storage Yards	CE1996	N/A	This project supports the operation of commuter rail service. The majority of VRE riders report having switched from driving alone thus reducing greenhouse gas emissions. This project enables continued maintenance and operation of VRE service, allowing more drivers to commute by rail transit and leave their cars closer to home.	This project advances the regional initiatives Bring Jobs and Housing Closer Together and Provide More Telecommuting and Other Options for Commuting.	Supports RTPP Goal 1 (Comprehensive Range of Transportation Options), Goal 2 (Promote a Strong Regional Economy, Including a Healthy Regional Core and Dynamic Activity Centers) This project will allow for upgraded tracks and the ability to store transit vehicles, which will allow for safe trips on VRE vehicles. This project will thereby make commuting by rail more attractive and feasible for more people.
VRE - Rolling Stock Acquisition	CE2163	N/A	This project supports the operation of commuter rail service. The majority of VRE riders report having switched from driving alone thus reducing greenhouse gas emissions. This project enables continued maintenance and operation of VRE service, allowing more drivers to commute by rail transit and leave their cars closer to home.	This project advances the regional initiatives Bring Jobs and Housing Closer Together and Provide More Telecommuting and Other Options for Commuting.	Supports RTPP Goal 1 (Comprehensive Range of Transportation Options), Goal 2 (Promote a Strong Regional Economy, Including a Healthy Regional Core and Dynamic Activity Centers). This project will allow for more transit vehicles which allow for increase ridership capacity. This will thereby make commuting by rail more attractive and feasible for more people.
VRE - Stations and Facilities	CE2164	N/A	This project supports the operation of commuter rail service. The majority of VRE riders report having switched from driving alone thus reducing greenhouse gas emissions. This project enables continued maintenance and operation of VRE service, allowing more drivers to commute by rail transit and leave their cars closer to home.	This project advances the regional initiatives Bring Jobs and Housing Closer Together and Provide More Telecommuting and Other Options for Commuting.	Supports RTPP Goal 1 (Comprehensive Range of Transportation Options), Goal 2 (Promote a Strong Regional Economy, Including a Healthy Regional Core and Dynamic Activity Centers). This project will allow for new and upgraded stations and facilities. This will thereby make commuting by rail more attractive and feasible for more people.
VRE Track Lease Improvements	CE2684	N/A	These improvements by VRE are required as part of the lease agreements with the railroads. The lease improvements enable the continuation of commuter rail service, allowing more drivers to commute by rail transit and leave their cars closer to home.	This project advances the regional initiatives Bring Jobs and Housing Closer Together and Provide More Telecommuting and Other Options for Commuting.	Supports RTPP Goal 1 (Comprehensive Range of Transportation Options), Goal 2 (Promote a Strong Regional Economy, Including a Healthy Regional Core and Dynamic Activity Centers). This project will allow for VRE to lease tracks, which new and upgraded stations and facilities. This will thereby make commuting by rail more attractive and feasible for more people.

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Arkendale to Powell Creek Third Track Project and Potomac Shores Station	CE2831	This project serves an Equity Emphasis Area.	This project supports and expands the operation of commuter rail service that parallels I-95. It will provide commuters more options to switch from using vehicles to using transit, thus reducing greenhouse gas emissions.	This project advances the regional initiatives Move More People on Metrorail and Bring Jobs, Provide More Teleworking and Other Options for Commuting, and Housing Closer Together.	Supports RTPP Goal 1 (Comprehensive Range of Transportation Options), Goal 2 (Promote a Strong Regional Economy, Including a Healthy Regional Core and Dynamic Activity Centers) and Goal 6 (Support Inter-Regional and International Travel and Commerce). This project will provide commuters access to several activity centers along the VRE corridor, includes the planned VRE Station at Potomac Shores, an existing activity center. It will expand commuter rail service in the region, thereby providing options for commuting to regional residents and making commuting by rail more attractive and feasible for more people, which increase travel time reliability.
VRE Service Improvements (Reduce Headways)	CE2832	This project serves an Equity Emphasis Area and connects an EEA to an Activity Center.	The majority of VRE riders report having switched from driving alone thus reducing greenhouse gas emissions. This project will increase the frequency of VRE service making VRE a more attractive commute choice to more people and contributing to greenhouse gas emissions reductions in the region.	This project advances the regional initiatives Bring Jobs and Housing Closer Together and Provide More Telecommuting and Other Options for Commuting.	Supports RTPP Goal 1 (Comprehensive Range of Transportation Options), Goal 2 (Promote a Strong Regional Economy, Including a Healthy Regional Core and Dynamic Activity Centers), Goal 4 (Operational Effectiveness and Safety), and Goal 6 (Support Inter-Regional and International Travel and Commerce). This project will allow for more headway or more frequent transit trips for VRE commuters, thereby making commuting by rail more attractive and feasible for more people, which increase travel time reliability.
US 1 Bus Rapid Transit	CE3496	This project serves an Equity Emphasis Area and this project serves an Equity Emphasis Area (EEA) and connects an EEA to an Activity Center.	This project provides for a dedicated bus lanes and traffic signal priority system that will allow for free-flow transit bus operations and minimize traffic delays, therefore helping to reduce emissions.	This project advances the regional initiatives Bring Jobs and Housing Closer Together, Expand Bus Rapid Transit and Transitways, Provide More Telecommuting and Other Options for Commuting, Improve Walk and Bike Access to Transit.	Supports RTPP Goal 1 (Comprehensive Range of Transportation Options), Goal 2 (Promote a Strong Regional Economy, Including a Healthy Regional Core and Dynamic Activity Centers), Goal 4 (Operational Effectiveness and Safety), and Goal 6 (Support Inter-Regional and International Travel and Commerce). This project will provide commuters access to several activity centers along the Richmond Highway (Route 1) Corridor and allow for safer access for bicyclists and pedestrian to the bus stop locations. IT will increase the bus operations allow for more travel time reliability.

Project	Project ID	Question 34b How this project further supports or advances equity as described by the TPB July 2020 resolution.	Question 40b If the answer to question 40a regarding contributing to greenhouse gas emission reduction was yes, then how is this project anticipated to reduce emissions? If No, please describe how the project will mitigate increased greenhouse gas emissions or vehicle miles traveled.	Question 44a How this project further supports or advances the TPB Aspirational Initiatives, other regional goals, or needs.	Question 44b How this project further supports or advances other regional goals or needs.
Crystal City Potomac Yard Transitway Northern Extension	CE3521	This project serves an Equity Emphasis Area (EEA) and connects an EEA to an Activity Center.	This project extends BRT and provides connections to existing Crystal City and Pentagon Metrorail stations, making using transit a more attractive commute choice. It benefits removing more vehicles off the road which helps to reduce GHG emissions in the region.	This project advances the regional initiatives Bring Jobs and Housing Closer Together, Provide More Telecommuting and Other Options for Commuting, Improve Walk and Bike Access to Transit.	Supports RTPP Goal 1 (Comprehensive Range of Transportation Options), Goal 2 (Promote a Strong Regional Economy, Including a Healthy Regional Core and Dynamic Activity Centers), Goal 4 (Operational Effectiveness and Safety), and Goal 6 (Support Inter-Regional and International Travel and Commerce). This project will provide commuters access to several activity allow for safer access for bicyclists and pedestrian to Metrorail and transitway bus stop locations. It will increase allow for more travel time reliability.
New Herndon Station Park and Ride Garage	CE3700	n/a	This project will make using WMATA a more attractive commute choice and safe option for commuter and bicycle parking. If garage reaches full-capacity it will remove 1900 vehicles from the region's roadways, therefore contributing to greenhouse gas emissions reductions in the region.	This project advances the regional initiatives Move More People on Metrorail Bring Jobs and Housing Closer Together, Provide More Telecommuting and Other Options for Commuting, Improve Walk and Bike Access to Transit	Supports RTPP Goal 1 (Comprehensive Range of Transportation Options), Goal 2 (Promote a Strong Regional Economy, Including a Healthy Regional Core and Dynamic Activity Centers), and Goal 6 (Support Inter-Regional and International Travel and Commerce). This project will provide direct access to Herndon activity center and provide a safe option for Metrorail users to park their vehicles and bikes, thereby helping to make using transit as a more attractive commuting option.
Innovation Station Park and Ride Garage	CE3711	N/A	This project will make using WMATA a more attractive commute choice. If garage reaches full-capacity it will remove 2,000 vehicles from the region's roadways, therefore contributing to greenhouse gas emissions reductions in the region.	This project advances the regional initiatives Move More People on Metrorail Bring Jobs and Housing Closer Together, Provide More Telecommuting and Other Options for Commuting, Improve Walk and Bike Access to Transit.	Supports RTPP Goal 1 (Comprehensive Range of Transportation Options), Goal 2 (Promote a Strong Regional Economy, Including a Healthy Regional Core and Dynamic Activity Centers), and Goal 6 (Support Inter-Regional and International Travel and Commerce). This project will provide direct access to Innovation Station activity center and provide a safe option for Metrorail users to park their vehicles and bikes, thereby helping to make using transit as a more attractive commuting option.

Project	Project ID	Question 34b How this project further supports or advances equity as described by the TPB July 2020 resolution.	Question 40b If the answer to question 40a regarding contributing to greenhouse gas emission reduction was yes, then how is this project anticipated to reduce emissions? If No, please describe how the project will mitigate increased greenhouse gas emissions or vehicle miles traveled.	Question 44a How this project further supports or advances the TPB Aspirational Initiatives, other regional goals, or needs.	Question 44b How this project further supports or advances other regional goals or needs.
Herndon Metrorail Intermodal Access Improvements	CE3166	This project provides users of all incomes access to a new MetroRail station.	This project will provide safe, convenient access to a new MetroRail station, thereby allowing substitution of transit trips for vehicle trips.	This project advances the regional initiatives Bring Jobs and Housing Closer Together, Provide More Telecommuting and Other Options for Commuting, Improve Walk and Bike Access to Transit and Move more people by MetroRail	Supports RTPP Goal 1 (Comprehensive Range of Transportation Options), Goal 2 (Promote a Strong Regional Economy, Including a Healthy Regional Core and Dynamic Activity Centers), Goal 4 (Operational Effectiveness and Safety), and Goal 6 (Support Inter-Regional and International Travel and Commerce). This project will provide commuters access to several activity allow for safer access for bicyclists and pedestrian to Metrorail and transitway bus stop locations. It will increase allow for more travel time reliability.
L'Enfant Station and Fourth Track	CE3758	N/A	The majority of VRE riders report having switched from driving alone to work thus reducing greenhouse gas emissions. This project as a part of the Transforming Rail in VA initiative will support expansion of commuter and passenger rail travel in the region allowing more drivers to leave their cars closer to home.	This project advances the regional initiatives Bring Jobs and Housing Closer Together and Provide More Teleworking and Other Options for Commuting.	Supports RTPP Goal 1 (Comprehensive Range of Transportation Options), Goal 2 (Promote a Strong Regional Economy, Including a Healthy Regional Core and Dynamic Activity Centers), Goal 4 (Operational Effectiveness and Safety), and Goal 6 (Support Inter-Regional and International Travel and Commerce). This project will provide commuters access to several activity centers along the VRE corridor. Also, along with the Transforming Rail in VA initiative aim to improve capacity and reliability of the passenger and freight rail service in the region. This project will bring jobs and housing closer and expand commuting options by contributing to improvements in the operational efficiency of the passenger/commuter rail service and making these commutes feasible for more people.

Project	Project ID	Question 34b How this project further supports or advances equity as described by the TPB July 2020 resolution.	Question 40b If the answer to question 40a regarding contributing to greenhouse gas emission reduction was yes, then how is this project anticipated to reduce emissions? If No, please describe how the project will mitigate increased greenhouse gas emissions or vehicle miles traveled.	Question 44a How this project further supports or advances the TPB Aspirational Initiatives, other regional goals, or needs.	Question 44b How this project further supports or advances other regional goals or needs.
VRE - Broad Run Expansion	CE2420	N/A	The majority of VRE riders report having switched from driving alone thus reducing greenhouse gas emissions. This project will expand capacity of the VRE Broad Run Station and adjacent rail corridor and non-SOV travel in the region, allowing more drivers to leave their cars closer to home.	This project advances the regional initiatives Bring Jobs and Housing Closer Together, Provide More Telecommuting and Other Options for Commuting and Improve Walk and Bike Access to Transit.	Supports RTPP Goal 1 (Comprehensive Range of Transportation Options), Goal 2 (Promote a Strong Regional Economy, Including a Healthy Regional Core and Dynamic Activity Centers), Goal 4 (Operational Effectiveness and Safety), and Goal 6 (Support Inter-Regional and International Travel and Commerce). This project, along with the Transforming Rail in VA initiative, aims to improve capacity and reliability of the passenger and freight rail service in the region. This project will bring jobs and housing closer and expand commuting options by contributing to improvements in the operational efficiency of the passenger/commuter rail service and making these commutes feasible for more people.
Long Bridge Construction	6727	The project would result in job creation by enabling expansion of railroad service, requiring railroad operators to hire more employees. Also, improved commuting would expand the labor pool for the economic centers located in the Local Study Area and would provide more access to employment opportunities for those who live in the region. As noted in numerous regional studies, including the Northern Virginia Transportation Commission's September 2017 report, The Value of Metrorail and Virginia Railway Express to the Commonwealth of Virginia, the presence of Metrorail and VRE currently supports an additional 85,000 households and 130,500 jobs in Northern Virginia, resulting in more than \$600 million annually in sales and income tax revenue.	<p>Although not quantified, the additional railroad service would likely result in a modal shift, causing a reduction of regional motor vehicle activity. This reduction in regional motor vehicle activity would likely result in reduced pollutant emissions from vehicles on the roadways. When compared to the No Action Alternative, the preferred alternative selected in the Long Bridge EIS would see increases of 9 tons per year of CO, 12 tons per year of NOx, 0.5 tons per year of VOC, 0.5 tons per year of PM10, 0.2 tons per year of PM2.5, and 3,242 metric tons per year of GHG.</p> <p>While VMT was not specifically studied, the Virginia I-95 Corridor Improvement Plan cited that the Project will:</p> <hr/> <ul style="list-style-type: none"> - Remove 1 million trucks from the road - Remove 5 million cars from the road 	This project supports the Aspirational Initiative Improve Walk/Bike Access to transit, as the project includes construction of a new bike-pedestrian shared-use path spanning the George Washington Memorial Parkway and the Potomac River. Stations along the railway have Capital Bikeshare access. This project will improve commuting options for people in the region, connecting numerous activity centers, which supports the Initiatives Bring Jobs and Housing Closer Together and Provide More Options for Commuting.	The Project further supports and advances regional goals and needs by expanding the railroad capacity in the region, making way for increased passenger rail service and the ability to maintain and grow the existing freight rail within the region. The project advances the following goals: <ul style="list-style-type: none"> - Provides a Comprehensive Range of Travel Options & Promote Regional Activity Centers: Expansion of passenger rail operations supported by the additional capacity permitted by the project. -Ensures System Maintenance, Preservation and Safety: Benefits to separating passenger from freight rail, building and re-building system infrastructure and modernizing existing infrastructure to current standards. - Support Interregional and International Travel and Commerce: providing infrastructure that will support regional and national expansion in rail service; support and expand existing freight operations



COMMONWEALTH of VIRGINIA

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Overview of VDOT Environmental Stewardship Initiatives

This summary is in response to a request at the April 21 TPB work session on Visualize 2045 for a summary of VDOT's efforts to address climate change and mitigate greenhouse gas production. Environmental stewardship is a focus across the Commonwealth of Virginia, and VDOT and DRPT are playing a major role. Throughout the state, environmental stewardship is integral to what we do.

Virginia's Commitment to Environmental Stewardship

Climate change and air quality are prominent in the Commonwealth's plans and policies. The Commonwealth's commitment to air quality is illustrated by the recently enacted Executive Order 43 and SB 851. Executive Order 43 is intended to ensure that the modernization of Virginia's electric grid is done in a way that prioritizes carbon free sources of electricity to reduce our environmental impact and mitigate the impacts of climate change.

(<https://www.governor.virginia.gov/media/governorviriniagov/executive-actions/EO-43-Expanding-Access-to-Clean-Energy-and-Growing-the-Clean-Energy-Jobs-of-the-Future.pdf> .

Similarly, The goal of SB 851 (<https://lis.virginia.gov/cgi-bin/legp604.exe?201+ful+SB851>) is 100 percent carbon-free electric energy generation by 2050 at least cost for ratepayers. VDOT's top transportation leaders discussed environmental stewardship, including greenhouse gas mitigation and resiliency in the face of climate change, at the April 20, 2021 Commonwealth Transportation Board Meeting. This discussion begins 39 minutes into this video:

https://www.youtube.com/watch?v=ETjpTT26su0&list=PLw3yV1Midq46Z8a_MUzfEigR15h9L4CCy&index=1

Transportation Agency Efforts to Protect and Improve Air Quality

On the transportation front, VDOT and DRPT are involved in a wide range of environmental stewardship initiatives ranging from littering abatement to groundbreaking planning and research involving climate change mitigation and resiliency. We are also preparing for a clean energy transportation fleet and automated/connected vehicles.

Greenhouse Gas Mitigation Planning and Projects

Greenhouse gas mitigation is one of the environmental areas the Commonwealth is focusing on. VDOT is a national leader among state DOTs in developing assessment techniques for air quality and greenhouse gases. VDOT is preparing a Statewide Planning Level Greenhouse Gas Analysis that includes a mobile source inventory of highway, transit, and rail emissions for a base year and

the 2040 build and no-build scenarios. This will include operational (tailpipe), construction and maintenance, and fuel cycle emissions. VDOT is currently scoping a GHG Pilot Project that will include a quantitative GHG analysis of the I-95 Corridor between the Springfield Interchange and Fredericksburg. The Southern Environmental Law Center is assisting with scoping. Both of the above studies will help inform ways that VDOT can better address GHG and climate change in project development and funding.

This focus is not limited to policies and planning, as VDOT and DRPT fund or implement a number of transportation initiatives designed to improve air quality and mitigate climate change. These include bicycle and pedestrian projects, travel demand management (TDM) programs that seek to reduce the amount of commuting in single-occupancy vehicles, and investment in electric vehicles and charging infrastructure. Additionally, DRPT distributes funding to transit agencies and the Commonwealth, along with Maryland and DC, provides substantial funding to WMATA. This funding was increased significantly two years ago. Virginia localities also provide funding to WMATA.

Multi-Modal Projects

It is important to note that VDOT and DRPT, along with our local government partners, prioritize multi-modal projects, intelligent transportation systems and operational improvements in the Virginia planning and funding process. This multi-modal approach, coupled with coordination of transportation and land use planning and far-sighted advance preparation for advanced transportation technologies.

“Mega Projects”, such as I-66 Inside and Outside the Beltway, exemplify this approach. . The Demand for travel in the I-66 corridor will only continue to grow, but the two mega-projects are accommodating this demand through a multi-modal approach that dis-incentivize single occupant vehicles and provides transit, bicycle and ridesharing alternatives. These projects are using variable congestion pricing, technology, travel-demand management programs and new transit services to focus on moving more people rather than more cars. Some of the tolls from these projects will fund new transit services administered through the Northern Virginia Transportation Commission. I-66 outside the Beltway was designed to not preclude future Metrorail extensions, and a network of park-and-ride lots are being provided. A new separated bike and pedestrian trail are being funding along I-66 Outside the Beltway, and new bike/pedestrian improvements are being provided as part of the I-66 Inside the Beltway project.

VDOT and DRPT oversee hundreds of smaller projects, and these projects are subject to official state policies requiring provision of pedestrian and bicycle accommodations. Virginia’s performance based project selection program, Smart Scale, heavily incentivizes projects which provide bicycle/pedestrian accommodations, transit connections, operational improvements rather than capital intensive road widening, and careful consideration of land use impacts of transportation projects.

Under state law, comprehensive plan amendments and major rezoning cases must be submitted to VDOT’s Land Development staff for review by VDOT and DRPT so that land development and transportation are planned in a coordinated manner. DRPT has developed Multimodal System

Design Guidelines (http://www.drpt.virginia.gov/media/1055/drpt_mmsdg_final_full.pdf) which encourage provision of transit, bicycle and pedestrian accommodations as central features of new walkable, transit oriented neighborhoods, districts and corridors. VDOT is authorized to waive certain dimensional standards for roadways in areas covered by these plans so that the limited rights of way can accommodate alternative transportation modes.

Planning for Resiliency

VDOT, along with regional and local agency partners in the state, have already engaged in efforts to plan for resiliency. As part of the development of VTrans, Virginia's Long Range Transportation Plan, the Office of Intermodal Planning and Investment undertook a vulnerability assessment. Initial work for this assessment conducted in 2019 established a definition of climate change vulnerability and resilience for the agency; created a draft vulnerability assessment methodology to score the state's transportation assets based on exposure, sensitivity to climate change, and adaptive capacity; and performed a review of Virginia's transportation vulnerability assessments. The Office is working to refine the indicators and weighting approach as needed, finalize remaining data collection, and produce a vulnerability rating for each segment of the National Highway System and for each bridge under the state's jurisdiction.