T.1.A.2 Other Agencies

CITY OF GAITHERSBURG – NOVEMBER 6, 2020 LETTER

Gaithersburg
A CHARACTER COUNTS! CITY

November 6, 2020

Lisa B. Choplin, DBIA
Director, I-495 & I-270 P3 Office
State Highway Administration
Maryland Department of Transportation
707 North Calvert Street
Mail Stop P-601
Baltimore, MD 21201

VIA Email: 495-270-P3@mdot.maryland.gov

Re: Technical Comments on the Draft Environmental Impact Statement for the I-495 and I-270 Managed Lanes Project

Dear Ms. Choplin,

Thank you for the opportunity to provide technical comments on the Draft Environmental Impact Statement (DEIS) for the I-495 and I-270 Managed Lanes project.

We would like to provide updated information on two items discussed in Appendix F.2.2.14B (p.138-139):

#1

1. The DEIS notes that augmenting an existing culvert conveying Muddy Branch across I-270 is necessary, but does not acknowledge a second culvert conveying stormwater runoff across I-270 immediately north of Muddy Branch. This second culvert has failed. The City has been in communications with MDOT's Highway Hydraulics Division regarding the repair/replacement of this corrugated metal culvert. MDOT has acknowledged the issue and has said that it is being investigated. Since the collapsed culvert is currently causing damage to the downstream park, we look forward to swift response to this issue.

#2

2. The DEIS notes that the paved path connecting the residential neighborhood with the park may be relocated without impacting pedestrian access because secondary access using a local bridge is possible. This local bridge, however, is no longer in service. The existing paved path is currently located between the culvert headwall and the I-270 roadway. Disrupting the access path to augment the culvert will eliminate pedestrian access between the neighborhood and the park unless specific efforts are made to create a secondary access path during construction.

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Tanisha R. Briley

Response to DEIS Comment #1
The second culvert noted north of Muddy Branch is tracked by MDOT SHA as MDOT SHA drainage investigation number 19-DM-MO-001. Another drainage issue at the upstream end of the Muddy Branch culvert is tracked as 14-DM-MO-009 for a failed pipe under the noise wall, and MDOT SHA records indicate a temporary repair was completed.

The Developer is required to address any drainage investigations that are within the limits of disturbance (LOD) and to mitigate for any issue that is outside the LOD, but under the influence from the MDOT SHA ROW. In the DEIS, the culvert in question, under 19-DM-MO-001, was within the LOD; however, as the roadway designs were refined and the LOD reduced for the Preferred Alternative as detailed in the SDEIS and the FEIS, this area was removed from the LOD, and the area of impact was avoided. Therefore, the project is not expected to include storm drainage improvements for this location. MDOT SHA will need to address the culvert outside of the Managed Lanes Study.

Response to DEIS Comment #2
With the refined design, MDOT SHA does not anticipate that the culvert conveying Muddy Branch under I-270 will be within the Limits of Disturbance of the Preferred Alternative, so augmentation will not be necessary. As a result, the existing path connecting the residential neighborhood is not proposed to be impacted. However, if the path should be disrupted, arrangements for a temporary alternate access will be provided.

Lisa B. Choplin, DBIA
November 6, 2020
Page 2 of 2

If you have any questions concerning these technical comments, please direct them to both Pearce Wroe, Stormwater Project Manager (Pearce.Wroe@gaithersburgmd.gov), and me. Mr. Wroe will be the City's stormwater reviewer for items related to the I-270 Expansion project.

Sincerely,

Beth Forbes, P.E.
Stormwater Project Manager
Beth.Forbes@gaithersburgmd.gov

cc: Tanisha R. Briley, City Manager
Dennis Enslinger, Deputy City Manager
Anthony Berger, P.E., Acting Public Works Director

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CITY OF GAITHERSBURG – AUGUST 20, 2020 EMAIL

From: MiYoung Park <MiYoung.Park@gaithersburgmd.gov>
Sent: Thursday, August 20, 2020 12:15 PM
To: 495-270-P3
Cc: Rob Robinson
Subject: Inquiry about the CEA Area Community Impacts in the City of Gaithersburg

To Whom It May Concern,

My name is MiYoung Park. I am contacting you to inquire about the DEIS Appendix E: Community Effects Assessment and Environmental Justice Analysis while reviewing the DEIS.

Specifically, I have brought the questions about Gaithersburg CEA Analysis Area Community Impacts (See Technical Report Appendix D – Page 70).
It showed that the land use map source for the City of Gaithersburg was used the City GIS Gallery as shown in Figure 3-1 on page 18. Compared to the descriptions of the land use within the CEA Analysis Area on Page 16-17, the City of Gaithersburg defines them differently. We don't have the Zoning Codes for Park/Open Space or Transportation.
Adjacent to the I-270 at I-370 interchange in Gaithersburg, there are 6 City Zoning Codes: 1) "Low Density Residential (R-A)", which includes Park/Open Space, 2) "Moderate Intensity Industrial Park (E-2)", which is an industrial usage, 3) "Urban Employment (E-1)", which might be Commercial/Employment or Industrial, and 4) "Medium Density Residential (RP-T & R-18 & R-20)", which is a residential usage).

My question is:

#1 1. I was wondering if the CEA Analysis specialists recognized that the City defines the Zoning Codes differently.

Also, I have some following questions:
As seen in the Technical Report Appendix D – Page 70, there is a column of the Existing Land Use Conversion to Study Related Transportation ROW, and it provides how much each land use is required for total land of the conversion. For example, Alternative 5 is required for 4.6 acres of total land, 0.8 acre for Mixed-Use, 0.2 acre for Park/Open Space, 1.1 acres for Residential, and 2.5 acres for Transportation.

#2 2. Did the analysts take the required 0.2 acres land for Park/Open Space from two parks, Malcolm King and Morris Parks, which the City defines it "Low Density Residential (R-A)"?
#3 3. How did you take the required 1.1 acres land for Residential?
#4 4. Where is the usages for "Moderate Intensity Industrial Park (E-2)" and, "Urban Employment (E-1)"?
#5 5. How did you define the required 2.5 acres land for Transportation? Does it also include the existing ROW?

Thank you very much for your time in advance and I am looking forward to your reply soon.

Sincerely,
MiYoung

MiYoung Park, Ph.D., Transportation Planner II
Planning and Code Administration
City of Gaithersburg | 31 South Summit Avenue | Gaithersburg, MD, 20877
Direct: 240-805-1155 | Main: 301-258-6330 | www.gaithersburgmd.gov
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Response to DEIS Comment #1
MDOT SHA understands that the zoning designations across the multiple jurisdictions within the study corridors evaluated in the DEIS (Montgomery County, Prince George's County, Fairfax County, City of Rockville, City of Gaithersburg) are defined differently. To present existing conditions consistently among the different jurisdictions, the team sorted the jurisdictions' relevant zoning codes and characterized them in similar terms.

Note that the "relevant zoning codes" used for the study included the City of Gaithersburg zoning data clipped within the CEA Analysis Area, which was downloaded from the City of Gaithersburg GIS web map (maps.gaithersburgmd.gov/gallery/) in 2018.

Response to DEIS Comment #2
Yes, the 0.2 acres of impact were taken from the Malcolm King Park and Morris Park properties. When it came to evaluating land use/zoning impacts, the team reviewed impact data and manually re-categorized the R-A: Low Density Residential code for these two properties as "Park/Open Space."

Response to DEIS Comment #3
Residential impacts in the Gaithersburg CEA Analysis Area Community were taken from the following City of Gaithersburg codes: R-6, R-20, R-90, R-90 C, R-A (from properties not identified as parks), R-B, and RP-T.

Response to DEIS Comment #4
The City of Gaithersburg codes E-2 and E-1 were assigned the high-level category of "Commercial/Employment."

Response to DEIS Comment #5
In general, "transportation" was defined as land area considered transportation use by jurisdictions that was remaining after the MDOT SHA right-of-way was "removed" in the GIS evaluation process.

NOTE: The purpose of the existing and impacted land use/zoning evaluation presented in the DEIS is to give readers a general sense of land use changes throughout the study corridor, rather than an exact count of the impacts that will be determined in final design. This is because of the differences in land use/zoning GIS data among the impacted jurisdictions (i.e. imprecise boundaries or unavoidable overlap in use designations when combining different codes into high-level categories) and the difference in boundaries between the Study's "Gaithersburg CEA Analysis Area" and the City of Gaithersburg proper. Impacts to properties, provided in the Property and Acquisition subsection of the DEIS Chapter 4, provide a more accurate assessment of acreage impacts per property as this evaluation uses more precise and consistent parcel GIS data. The explanation provided in this paragraph has been added to the FEIS to clarify to readers the purpose of the Land Use and Zoning subsection. Final property impact acreages will be finalized during final design.

CITY OF GAITHERSBURG - AUGUST 14, 2020 LETTER

Gaithersburg
A CHARACTER COUNTS! CITY

August 14, 2020

Lisa B. Choplin, DBIA
Director, I-495 & I-270 P3 Office
State Highway Administration
Maryland Department of Transportation
707 North Calvert Street
Mail Stop P-601
Baltimore, MD 21201

VIA Email: 495-270-P3@mdot.maryland.gov

Re: City of Gaithersburg Quantity Waiver Process for State and Federal Projects

Dear Ms. Choplin:

Through your consultant WSP, you have asked the City of Gaithersburg to provide information on its process as it relates to Section 3.3.B of Maryland's Stormwater Management and Erosion & Sediment Control Guidelines for State and Federal Projects.

In order to review and provide concurrence on the acceptability of a waiver the applicant must, at a minimum, submit a letter to the City of Gaithersburg Department of Public Works that provides the following information:

- A brief description of the project,
- A map depicting the location of all Points of Interest (POI),
- A brief description of each POI,
- A brief description of the condition of the outfalls, waterways, floodplains or other hydrologic and hydraulic elements related to each POI as applicable, and
- A summary of the existing and proposed flow characteristics at each POI for the design storm events (Qp, Q10, Qf, or others as applicable) including flow rates and velocities.
- The request to review shall be signed and sealed by a professional engineer registered in the State of Maryland and
- Include space reserved for countersignature by the Director of Public Works or the City Manager.

The City will consider these items and its own historic drainage information in determining if the project has any adverse effects on the receiving drainage systems prior to offering its concurrence or rejecting the waiver request.

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#1

Response to DEIS Comment #1
Thank you for the information on the process for submitting a water quality and/or quantity waiver. MDOT SHA will use this process if a Quantity Waiver is needed.

Lisa B. Choplin, DBIA
August 14, 2020
Page 2 of 2

If you have any questions concerning this process, please feel free to direct them to both Pearce Wroe, Stormwater Project Manager (Pearce.Wroe@gaithersburgmd.gov), and me. Mr. Wroe will be the City's stormwater reviewer for items related to the I-270 Expansion project.

Sincerely,

Beth Forbes

Beth Forbes, P.E.
Stormwater Program Manager
Beth.Forbes@gaithersburgmd.gov

cc: Gregg Iskra, WSP
Michael Lynch, WSP
Justin Bell, WSP
Anthony Berger, Acting Director, Public Works

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CITY OF ROCKVILLE TRAFFIC AND TRANSPORTATION COMMISSION

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CERTIFIED MAIL

November 9, 2020

Ms. Lisa B. Choplin, DBIA
Maryland Department of Transportation
707 North Calvert Street, Mail Stop P-601
Baltimore, Maryland 21202

Dear Ms. Choplin:

This letter is in response to the Draft Environmental Impact Statement (DEIS), from June 2020, by the Maryland Department of Transportation, and U.S. Department of Transportation, Federal Highway Administration. As members of the City of Rockville Traffic and Transportation Commission, and as city residents, we have significant interest in the I-495 and I-270 Managed Lanes project and submit the following comments:

This project, upon completion, will dramatically impact traffic, as well as the physical, and social ecology, of the City of Rockville. We are opposed to both the planned project and the manner in which it has been pursued by the State of Maryland. Based on the recent record of the State – including the Purple Line project and an under-utilized I-370 - we have concerns about the State's ability to manage any public/private transportation partnership in a manner that realizes acceptable public benefit.

#1 Transit components are weak in the study with no standalone transit alternative. This project will induce automobile traffic before addressing choke points most responsible for delays and congestion – including reductions in lanes on I-270 north of Rockville and the American Legion Bridge. The resources being dedicated to the I-495 and I-270 Managed Lanes project once more prioritize automobile traffic over a truly multi-modal traffic system that is the desire of, and to the benefit of, both the citizens of Rockville and the surrounding region.

#2 Projected average toll rate of between $0.68 and $0.77 per mile will be so high as to deter use for many[1]. It, we believe, will be beyond the financial reach of many, especially during the peak periods when the rates are expected to be even higher. Ultimately these fees will be an exclusionary tax on lower and moderate-income persons who cannot afford the increase, yet will suffer from the higher congestion on the non-toll lanes. The inability of many to use toll lanes will severely limit the potential benefit of any modifications.

#3 Failure of the DEIS to examine impacts on climate change and global warming is a glaring omission. The project, as a whole, is deeply problematic in relation to climate change, global warming, and the need to reduce greenhouse emissions. At a time when coastal areas of Maryland are feeling the impacts of increased tidal flooding and all areas of the State are being impacted by more severe weather, due to climate change, the absence of consideration is unacceptable to us.

[1] We suggest that the report provide information on comparative toll rates (per mile) for similar regional toll lanes

The State of Maryland does not have enough funds to construct improvements of the magnitude associated with the Preferred Alternative. Additionally, the State does not have enough bonding capacity to take out loans to pay for the improvements, even with the promise of tolls to pay them back. Therefore, the State elected to use a P3 approach to fund the project.

A P3 is an alternative model for delivery of a capital project in which the governmental sector works with the private entities. The particular P3 model identified for Phase 1 is a progressive multi step approach. This P3 model, like others, seeks to make the most of private sector expertise, innovation, and financing to deliver public infrastructure for the benefit of the public owner and users of the infrastructure. This P3 agreement includes designing, building, financing, operating, and maintaining a transportation facility, however, MDOT SHA would continue to own all lanes and infrastructure on I-495 and I-270 and ensure the highway meets their intended transportation function.

While concerns over the Purple Line project are understandable, the P3 Agreements are different from the Purple Line and other P3s in Maryland, in that this process uses a multi-step Progressive P3 model to further identify and reduce impacts and risks. The first step of this process is the collaborative Predevelopment Work. The evaluation criteria for the Predevelopment Work focused on reducing project risk, providing schedule certainty and the ability to deliver Phase 1 with no State of Maryland funding. The Developer for the project proposed a sound approach to delivering Phase 1 that will greatly reduce the likelihood of challenges that other projects have faced. The Progressive P3 approach allows the Developer to closely collaborate with MDOT, Maryland Transportation Authority (MDTA) and other stakeholders during the Predevelopment phase before finalizing its design and pricing, which will reduce and mitigate risks and challenges that would exist in a more traditional procurement process as well as other P3 models. Refer to Chapter 9, Section 9.3.5 for a response to P3 Program.

Response to DEIS Comment #1

The Study's Purpose and Need allowed for a robust analysis of a full range of alternatives that included evaluation of non-tolled, general purpose lanes, tolled managed lanes, transit only, and a combination of highway and transit improvements. Initially a range of 15 preliminary alternatives were identified and analyzed based on previous studies and planning documents, input from the public and federal, state, and local agencies during the scoping process. Additional alternatives were identified and analyzed in direct response to public and agency comments for a total of eighteen different alternatives, including the Preferred Alternative.

Based on past regional studies and agency and public comments, MDOT SHA considered four separate, standalone transit alternatives: 14A (heavy rail), 14B (light rail), 14C (fixed guideway Bus Rapid Transit, off current alignment), and 15 (dedicated Bus Managed Lanes on existing alignment). None of these alternatives would address existing traffic or long-term traffic growth on I-495 and I-270. Refer to DEIS, Chapter 2 and DEIS, Appendix B.

With respect to either heavy or light rail alternatives, the 2002 Capital Beltway/Purple Line Study (2002 Study) analyzed circumferential rail corridors (approximately 42 miles) along the Capital Beltway Corridor. This analysis concluded: "Congestion on the Beltway itself as well as demand on the other transportation facilities is so great that no single highway or transit improvement will provide significant relief to the long-term demand," (2002 Study, page S-17). It was also recommended that studies of the highway and transit alternatives be conducted separately because transit operates more efficiently if it serves areas where people live and work. Refer to DEIS, Appendix B. This analysis also stressed the basic fact that people do not live and work "on the Beltway" and that transit options generally service users by directly connecting activity (housing and work) locations.

Importantly, major standalone transit projects in the study area have been approved and are in the process of being constructed. For example, the U.S. Federal Transit Administration approved the Record of Decision for the Purple Line project in 2014. The project, a 16-mile two-track light rail system, accommodates significant demand for transit within this priority corridor and offers connections between two ends of the WMATA Red Line, and to key destinations such as the downtown

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Silver Spring Transit Center and the University of Maryland, inside the Capital Beltway. The Purple Line FEIS and Purple Line Travel Forecasts Results Report also evaluated vehicle miles traveled (VMT) in the region. In 2040, under the Purple Line, 0.07 percent less vehicle miles would be traveled in the region each day versus the 2040 No Build alternative. While the Purple Line will provide additional travel options connecting activity centers, the relatively small change in VMT would benefit the corridor roadway system where the reduction would occur. In the 2008 Purple Line Alternatives Analysis/DEIS, a heavy rail option was considered but that alternative was dropped from detailed review because of several factors that are also present in this project: prohibitive capital costs, lack of overall cost-effectiveness due to high construction costs, as well as greater environmental impacts related to the intensity of construction of new heavy rail infrastructure. Congestion on I-495 and the demand for transportation is so great that transit and roadway improvements are needed to address the congestion in the region (2002 Capital Beltway / Purple Line Study).

As with all the alternatives under the Preliminary Range of Alternatives, these non-highway options were evaluated using the various project needs, a review of available data, similar proposals that had been made over time, as well as a qualitative traffic assessment of each alternative's potential to reduce congestion on I-495 and I-270. See DEIS Appendix B at pgs. 19-27. The standalone transit options failed to address all the major areas of need identified and had major engineering and operational challenges associated with them. As one example, the Purple Line FEIS and Purple Line Travel Forecasts Results Report evaluated the impact of transit alternatives on overall automobile usage by presenting the vehicle miles traveled (VMT) in the region. The results showed that in 2040, under the Purple Line Preferred Alternative, 0.07 percent less VMT would be traveled each day in the region versus the 2040 Purple Line No Build Alternative. Based upon the analysis conducted and presented and input from agencies and public, FHWA and MDOT determined they would not adequately address long-term traffic growth, address trip reliability, roadway choices, and none of them accommodated homeland security and freight movement needs. For these reasons, those standalone transit alternatives were dropped from further consideration. Refer to DEIS, Chapter 2, Section 2.5.2.

Although these standalone transit alternatives were found to not meet the Study's Purpose and Need (consistent with findings of the multiple planning studies summarized above), multiple transit elements have been incorporated into the Study to address the identified multi-modal and connectivity needs in the study area as a complement to the congestion relief offered by the proposed highway improvements. These include:

- Allowing bus transit usage of the high occupancy toll (HOT) managed lanes toll free to provide an increase in speed of travel, assurance of a reliable trip, and connection to local bus service/systems on arterials that directly connect to urban and suburban activity centers;
- Accommodating direct and indirect connections from the HOT managed lanes to existing transit stations and planned Transit Oriented Development at the Shady Grove Metro, Twinbrook Metro, Montgomery Mall Transit Center, and Medical Center Metro

MDOT SHA has also committed to regional transit improvements to enhance existing and planned transit and support new opportunities for regional transit service including increasing the number of new bus bays at Washington Metropolitan Area Transit Authority's (WMATA) Shady Grove Metrorail Station and increasing parking at the Westfield Montgomery Mall Transit Center.

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Transit elements were also considered by the Transit Work Group and the joint I-495/American Legion Bridge Transit/Transportation Demand Management (TDM) study by the Virginia Department of Rail and Public Transit and the Maryland Department of Transportation Maryland Transit Administration. Both of these initiatives resulted in reports. The Transit Service Coordination Report completed in coordination with the Transit Work Group was made available to the public in June 2020 on the P3 Program website (https://495-270-p3.com/transitbenefits/) and it is being used to inform affected counties and transit providers about the significant transit opportunities offered by managed lanes such as strategies to maximize the benefits of reliability and speed; provide a basis for the evaluation and prioritization of future capital and operating needs in the service area; and initiate discussions about ways to incorporate regional transit services into the P3 Program. The I-495/ALB Transit/TDM Final Report and Plan was completed in March 2021 and was posted online. (http://www.drpt.virginia.gov/media/3375/i495_alb_transittdm_study_finalreport_030521_combined.pdf) It identified a series of potential investment packages to provide new mobility choices to service bi-state travel. Each package outlined a combination of transit service elements, technology enhancements, Commuter Assistance Programs, and parking needs. The investment packages offered options to move more people across the American Legion Bridge (ALB) in fewer vehicles.

On August 11, 2021, in accordance with Maryland law, MDOT and MDTA received approval from the Board of Public Works to award the Phase 1 P3 Agreement to the Selected Proposer. In accordance with the terms and conditions of the Phase 1 P3 Agreement, MDOT and the Selected Proposer will further advance predevelopment work on Phase 1 South, which includes I-495 from the vicinity of the George Washington Memorial Parkway across the American Legion Bridge to I-270 and on I-270 up to I-370. The Developer has proposed an estimated $300 million for transit services in Montgomery County over the operating term of Phase 1 South. Moreover, upon financial close of the Section P3 Agreement for Phase 1 South, MDOT is committed to fund not less than $60 million for design and permitting of high-priority transit investments in Montgomery County and committed to deliver the Metropolitan Grove Bus Operations and Maintenance facility including the necessary bus fleet. Refer to FEIS Chapter 3, Section 3.2.

Response to DEIS Comment #2

FHWA and MDOT SHA have considered the comments in opposition to managed or tolled lanes in the context of the Study's Purpose and Need and the proposed action's ability to provide substantial, tangible operational benefits to I-495 and I-270. Since general purpose lanes are open to all users, they are susceptible to congestion as traffic volumes increase. Once the traffic volume reaches a certain threshold, traffic operations slow, remaining congested until traffic volumes decrease. Managed lanes remedy this issue by combining two highway management tools- congestion pricing and lane management.

The price managed lanes included in the proposed action are high-occupancy toll (HOT) lanes. HOT lanes often implement a combination of vehicle occupancy requirements and variable tolling, whereby high occupancy vehicles may use the roadway for a reduced toll rate or free of charge, while low occupancy vehicles pay higher toll rates. Toll payments for these lanes may vary by time of day and level of congestion. Minimum vehicle occupancy, such as a minimum of three or more occupants (HOV 3+), is a common eligibility requirement for managed lanes. Such occupancy restrictions allow for the movement of more people relative to the total number of vehicles. Importantly, under the proposed improvements all travelers will be able to continue using the same number of existing general purpose lanes for free. The proposed managed lanes are designed to add value by providing traffic relief throughout the corridor, including in the free general purpose lanes.

The goal of the proposed HOT lanes is to maintain free-flowing traffic by using tolls to influence traffic flow. For this project, the HOT lanes will be designed to maintain a minimum average speed of 45 mph or greater for more than 90 percent of the time during the morning and evening weekday peak period. As such, the toll rates will be set to ensure the HOT lanes operate to established operational metrics, which will apply the economic principles of supply and demand to influence the utilization of the HOT lanes. The Developer will be responsible for setting toll rates within the established toll rate ranges that were approved by the Maryland Transportation Authority Board in November 2021, following three public comment review

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periods. As previously mentioned, the general purpose lanes remain free, and the toll rate ranges will only apply to the HOT lanes, including discounts for qualifying vehicles.

Under the Preferred Alternative, new travel choice would become available for all highway users through the addition of tolled roadway capacity while maintaining the existing, free general purpose lanes on I-495 and I-270. Mobility and access for underserved communities are also increased by the proposed action as a result of new and/or improved bicycle and pedestrian access and toll-free travel for transit vehicles and car/vanpools using the managed lanes. With respect to bus transit usage, it is anticipated that increasing the availability of higher speed and more reliable options connecting major transit locations and economic centers will have a positive impact on transit usage in the study area by encouraging new transit service or modifying routes. Similarly, because High Occupancy Vehicles (HOVs) with three or more passengers will also travel toll-free on the new managed lanes, the use and availability of car and vanpools should be enhanced. These affordable transportation options can particularly benefit potential users who may not have reasonable access to personal vehicles.

Response to DEIS Comment #3

To date, no Greenhouse Gas (GHG) National Ambient Air Quality Standards (NAAQS) have been established by the U.S. EPA under the Clean Air Act and Amendments (CAA) and there is no approved regulatory requirement to analyze these emissions at a project level for transportation projects. However, recognizing the importance of GHG emissions, MDOT SHA utilized the best available data and the U.S. EPA approved emissions model available at the time of the air quality analysis, MOVES2014, to complete a qualitative and quantitative analysis to estimate GHG emissions associated with the Build Alternatives for the Draft Environmental Impact Statement (DEIS). *See DEIS Appendix 1-Air Quality Technical Report*. GHG emissions on the affected transportation network for all modeled Build Alternatives in the DEIS were projected to be lower in the opening (2025) and design (2040) years compared to base year conditions (2016). All Build Alternatives were projected to slightly increase (1.4% on average) annual tailpipe GHG emissions compared to the No Build Alternative in 2040.

For the Preferred Alternative, an updated GHG analysis was conducted using the newest version of the U.S. EPA approved emissions model, MOVES version 3.0.1, or MOVES3, which includes the 2020 SAFE Vehicles Act standards. In addition to using the latest version of the emissions model, the analysis also considered the updated design year of 2045 and a significantly reduced affected transportation network that was developed for the project level MSAT analysis to better align with the reduced limits of build improvements associated with the Preferred Alternative.

The analysis shows GHG emissions are expected to decline in the Opening and Design years for all GHG pollutants when compared to existing conditions. Specifically, for CO2e, there is projected to be a 94,664 TPY decrease (13% reduction) in the Opening year and a 67,272 TPY decrease (9% reduction) in the Design year. These reductions occur despite projected increase in VMT on the affected network between the 2016 and 2025 and 2045 Build scenarios. See FEIS Appendix K- Final Air Quality Technical Report.

MDOT acknowledges concerns about climate change and Maryland is committed to reducing GHG emissions and to prepare our State for the impacts of climate change. The Maryland Commission on Climate Change (MCCC) and its Mitigation Working Group (MWG) have demonstrated that commitment by working collaboratively with experts and stakeholders across State and local agencies, environmental, non-profit, and academic institutions. The resulting body of work quantifies baseline GHG emissions by sector to understand the impacts that specific plans, policies, and programs will have on future emissions economy-wide. Statewide analyses indicate that the I-495 & I-270 Managed Lanes project will not impede Maryland's ability to meet its GHG emission reduction goals. In fact, the Greenhouse Gas Reduction Act (GGRA) Plan documents Maryland's existing and future emissions reductions under several scenarios, all of which include this project. The document illustrates that Maryland will not only meet the 40% by 2030 goal, but that we are dedicated to working together to exceed that goal and to strive for a 50% reduction by 2030.

#4

There is no analysis of impact by proposed interchanges at Wootton Parkway and Gude Drive. The DEIS analysis predicts little to no benefit to local traffic congestion or wait times. We expect however, the interchanges will greatly increase traffic load, speeding, noise, and emissions in areas that are heavily residential. We also expect a resultant decrease in safety on these roads, especially for non-drivers, and that the interchanges will discourage use of alternative transportation modes, in particular bus ridership, biking, and walking.

#5

There is insufficient analysis of impacts from noise[2] and air pollution. There is no study of the health impacts from increased noise an air pollution. Both air pollution and persistent exposure to ambient noise has been shown to have deleterious effects on health, including reducing expected lifespan. These impacts should be at the core of any environmental impact assessment and not ignored because they are difficult to forecast.

These are our major, but certainly not only, objections to the project. We consider to be flawed, backward looking in concept and potential design, and a poor use of public funds.

We appreciate having the opportunity to comment on the Draft Environmental Impact Statement (DEIS). We are happy to discuss these comments further with members of your staff. We ask the Maryland Department of Transportation and Federal Highway Administration take these concerns into consideration. We also endorse the stated position of the City of Rockville that the project not proceed.

Sincerely,

Alan Kaplan, Chairman
Jude Abanulo
Hua "Bill" He
Matthew Perkins
Marc Plante
Mike Stein
Ian Weston
Shu-Ying Wong

cc: Rockville Mayor and Council
Rob DiSpirito, City Manager
Craig Simoneau, PE, Director of Public Works
Day file

[2] We request that MDOT provide information on the location of noise receptor in the City of Rockville

MDOT continues to be an active partner in the MCCC and Maryland's GHG reduction efforts. We are leading the way on transportation sector scenario and emissions analyses. We have worked with stakeholders, communities, and our partners on the MWG to better understand the impacts of the changes within the transportation sector, ranging from technology improvements, such as the deployment of automated, connected, and electric vehicles to the importance of improving mobility and expanding telework.

In addition to an analysis of operational emissions, an analysis of construction emissions associated with the Preferred Alternative using the FHWA Infrastructure Carbon Estimator (ICE) is included in the FEIS. *See FEIS Chapter 9, Section 3.4.I and Appendix K.*

Response to DEIS Comment #4

The analysis in the DEIS was based on a preliminary design that did not include direct access at Gude Drive or Wootton Parkway. Since that time, MDOT SHA has coordinated with various stakeholders, including the City of Rockville, and has updated the design to include direct access connections to the managed lane system at these two interchanges. The results presented in the Supplemental DEIS account for these updates. The results indicate that the net impact of the project will be an overall reduction in delay on the surrounding arterials, including a 4.8% reduction in daily delay on the arterials in Montgomery County, despite some localized increases in arterial traffic near the managed lane access interchanges. The portions of the local road network with an anticipated increase in volumes were evaluated in more detail as part of the FEIS, and mitigation was proposed where needed to maintain acceptable operations and safety per FHWA Interstate Access Point Approval guidelines. Refer to Appendix B of the FEIS. In addition, based on follow-up meetings between MDOT and Rockville, additional improvements were considered and incorporated where feasible, including modifications to the right-turning movement from the I-270 off-ramp onto eastbound MD 189, additional turn lanes at Wootton Pkwy at Seven Locks Road, and additional turn lanes at Gude Drive at Research Blvd.

Response to DEIS Comment #5

MDOT SHA's noise impacts analysis was conducted in compliance with the agency's Highway Noise Abatement Planning and Engineering Guidelines (2020), which are in turn, based on FHWA regulations at 23 C.F.R. Part 772, "Procedures for Abatement of Highway Traffic Noise and Construction Noise." As described in the DEIS, and updated in the SDEIS, the noise analysis presents the predicted loudest hour build traffic levels to determine if those noise levels create a traffic noise impact, and if so, to determine whether abatement is feasible and reasonable for the Preferred Alternative. *See* DEIS and SDEIS Chapters 4.9; DEIS Appendix J, *Noise Impact Analysis* and SDEIS Appendix E, *Noise Impact Addendum*.

The results of the updated analysis on the Preferred Alternative in the SDEIS showed 64 NSAs in the study area (representing a reduction of 69 NSAs from the DEIS). MDOT SHA then analyzed whether each NSA would experience noise impacts and if each location already had an existing noise barrier. As detailed in the SDEIS and Appendix E, 49 of the 64 NSAs are predicted to result in noise impacts; of those 49, eight (8) do not meet established criteria for noise abatement. See SDEIS, Table 4-21, pg. 4-48. A reanalysis of noise for the Preferred Alternative was completed for the FEIS due to design refinements and showed 59 NSAs in the study area (representing a reduction of 64 NSAs from the SDEIS and 69 NSAs from the DEIS). As detailed in the FEIS and Appendix L, 48 of the 59 NSAs are predicted to result in noise impacts; of those, 8 do not meet the established criteria for noise abatement. See FEIS, Chapter 5, Section 5.9.

Having established the modeling results, the federal regulations next require the agency to assess whether abatement is "feasible and reasonable" based on a series of practical engineering and performance measures. For the MLS, MDOT SHA analyzed several noise barrier scenarios, including keeping existing barriers in place, extending existing barriers and replacement of existing barriers that could be displaced by construction activities. Based on preliminary design assumptions, MDOT SHA made recommendations for the installation or replacement of noise barriers. Within the City of Rockville, a combination of new, replacement, and existing noise abatement is recommended along Northbound I-270 between Falls Road and Gude Drive, and along Southbound I-270 between West Montgomery Avenue and Falls Road. See FEIS Appendix L, Maps 13-16 for barrier locations.

This page is intentionally left blank.	MDOT SHA also analyzed air quality in compliance with the Clean Air Act and Amendments. As required by the CAA, the U.S. Environmental Protection Agency (USEPA) sets the National Ambient Air Quality Standards (NAAQS) for airborne pollutants that have adverse impacts on human health and the environment. These are referred to as "criteria pollutants" and include carbon monoxide, sulfur dioxide, ozone, particulate matter, nitrogen dioxide, and lead. USEPA also regulates Mobile Source Air Toxics (MSATs) including nine priority MSATs. An analysis of the projected emissions of MSATs from the Build Alternatives was disclosed in the DEIS and updated for the Preferred Alternative in the FEIS. The results of the updated traffic study related to the CO analysis showed that although some interchanges and intersections previously identified as being worst case in the DEIS, had different results in the updated analysis. Overall, the maximum peak hour volumes and maximum peak hour delays were less than the top three intersections and interchanges used in the DEIS analysis. For this reason, the DEIS analysis can still be assumed to have projected worst-case emissions and that the project would not cause or contribute to a violation of the CO NAAQS. The results of the updated MSAT analysis indicated that while MSAT concentrations may increase slightly in 2045 in localized areas due to an increase in vehicle miles travelled, there will be an overall significant decline (average 89.29%) in MSAT levels from existing conditions. The analysis shows GHG emissions are expected to decline in the Opening and Design years for all GHG pollutants when compared to existing conditions. Specifically, for CO2e, there is projected to be a 94,664 TPY decrease (13% reduction) in the Opening year and a 67,272 TPY decrease (9% reduction) in the Design year. These reductions occur despite projected increase in VMT on the affected network between the 2016 and 2025 and 2045 Build scenarios.

FAIRFAX COUNTY PARK AUTHORITY

FAIRFAX COUNTY PARK AUTHORITY

October 14, 2020

Lisa B. Choplin, DBIA
Director, I-495 & I-270 P3 Office
Maryland Department of Transportation State Highway Administration
707 North Calvert Street
Mail Stop P-601
Baltimore, MD 21201

Subject: I-495 & I-270 Managed Lanes Study
Draft Environmental Impact Statement/Draft Section 4(f) Evaluation

Dear Ms. Choplin,

The Fairfax County Park Authority (FCPA) has reviewed your Draft Environmental Impact Study and the Draft Section 4(f) Evaluation for the I-495 & I-270 Managed Lanes Study. This project, while predominately located in Maryland, includes a 0.4-mile segment within Fairfax County. The project limits extend to Live Oak Drive and are adjacent to the property line for the Scott's Run Nature Preserve, which is owned by FCPA. We would recommend the following mitigations to reduce any potential impacts related to lost land, vegetation and habitat, increased stormwater discharge, invasive species, and wildlife quality impacts.

#1

This project as currently planned will not directly impact FCPA property, however if the scope and/or boundaries change to create direct impacts to FCPA land, the Park Authority requires any adverse impacts to its natural resources to follow its Policy 201 for Natural Resources and the agency-wide Natural Resource Management Plan, Recommended Action 8:

- Avoid adverse impacts to natural areas, mitigate unavoidable impacts from construction and maintenance projects and require restoration and rehabilitation of impacted natural resources.
  - Minimize impacts to forests, meadows, and other natural areas from human use.
  - Protect significant natural communities and species.
  - Require restoration of impacted natural resources when use of parkland causes damage to them.

#2

Due to the proximity to parkland, staff requests that the applicant use only common native species including trees, perennials, and seed mixes to provide the greatest ecosystem benefit to this project since non-native species either do not fare as well as natives or are invasive, negatively impacting the environmental health of Park Authority property. (PFM 12-0510.4D(1)(b)). Some helpful resources include:

- Digital Atlas of Virginia Flora at http://vaplantatlas.org/
- Native Plants for Conservation, Restoration, and Landscaping at http://www.dcr.virginia.gov/natural_heritage/nativeplants.shtml

12055 Government Center Parkway
Fairfax, VA 22035-5500
www.fairfaxcounty.gov/parks
@fairfaxparks

For Inclusion and ADA Support,
call (703) 324-8563.
TTY: Va Relay 711

Response to DEIS Comment #1
The Preferred Alternative as described in the Supplemental Draft Environmental Impact Statement (SDEIS) and the Final Environmental Impact Statement (FEIS) does not directly impact Fairfax County Park Authority property.

Response to DEIS Comment #2
Native species will be used to the maximum extent practicable as part of the landscaping for the project. Non-native grass species may be incorporated into turfgrass and erosion and sediment control seed mixes, but no non-native invasive species will be planted.

Ms. Lisa B. Choplin, DBIA
I-495 & I-270 Managed Lanes Study; Draft Environmental Impact Statement
Page 2

#2 cont.

- The Invasive Plant Atlas of the United States at http://www.invasiveplantatlas.org/
- A list of invasive plant species for the state of Virginia can be found at the Virginia Department of Conservation & Recreation Division of Natural Heritage (DNH) website at http://www.dcr.virginia.gov/natural-heritage/invsppdflist

#3

Given the potential for regional populations of numerous rare bat species, mist-netting surveys should be conducted within suitable habitat to determine the presence or absence of bat maternity roosts for all three species of interest (Northern Long-eared Bat, Tricolored Bat, Little Brown Bat).

#4

Since the project requires Federal permitting and may include Federal funding, it would trigger Section 106, requiring consultation with the Virginia Department of Historic Resources by Federal Regulation. FCPA recommends any areas with ground disturbance within the Virginia project corridor that are not previously surveyed, undergo Phase I archaeological survey. If sites are found that are potentially significant to the history of Fairfax County, or potentially eligible for inclusion onto the National Register of Historic Places they should undergo Phase II archaeological testing. If sites are found significant or eligible, avoidance or Phase III data recovery is recommended.

Given the project limits do extend into Fairfax County and they are adjacent to FCPA land, staff would like to review all future documents and plans related to this project in to evaluate any potential impacts. The staff contact for this project is Elizabeth Iannetta, Trail & Infrastructure Coordinator, who can be reached at (703) 324-8725 or Elizabeth.Iannetta@fairfaxcounty.gov. We look forward to working with you as this project progresses.

Sincerely,

Stephanie Leedom, Director
Planning & Development Division

eCopy: Aimee Vosper, Deputy Director/CBD
Liz Crowell, Manager, Archaeology & Collections Branch
John Burke, Manager, Natural Resources Branch
Dan Sutherland, Manager, Grounds Management, Park Operations Division
Elizabeth Iannetta, Trails & Infrastructure Coordinator, Park Planning Branch
Cindy McNeal, Project Coordinator, Real Estate Services Branch
Alex Burdick, Senior Engineer, Real Estate Services Branch
Anna Bentley, Manager, Park Planning Branch
Andrea Dorlester, Development Review Section Chief, Park Planning Branch
Lynne Johnson, Planning Tech, Park Planning Branch
Email Comments: MLS-NEPA-P3@mdot.maryland.gov

Response to DEIS Comment #3
MDOT SHA and FHWA have coordinated with the US Fish and Wildlife Service (USFWS) and the Virginia Department of Environmental Quality (VDEQ) to ensure protection of bat species within or near the limits of disturbance of the Preferred Alternative. Mist netting was not conducted due to USFWS concerns with transmitting COVID-19 to bats, however a habitat assessment and acoustic survey were conducted in 2020 and the results were appended to the 2021 Supplemental Draft Environmental Impact Statement (SDEIS) as Appendix H. Northern Long-eared and Little Brown bats were not detected near the American Legion Bridge in the 2020 acoustic survey, however there were four acoustic detections of the Tri-Colored bat near the American Legion Bridge. Therefore, the time of year restriction for tree clearing within the Virginia portion of the Preferred Alternative LOD will be from April 1 through October 31 in any year to avoid impacts to the bat roost trees during roosting season for the tri-colored bat.

Response to DEIS Comment #4
The study is being conducted in compliance with Section 106 of the National Historic Preservation Act, and the Virginia Department of Historic Resources (VDHR) has been consulted on archaeological surveys within Virginia. Section 106 consultation is expected to be completed through a Programmatic Agreement that will include provisions for consultation with VDHR on any additional archaeological surveys in response to project changes.

FOUR CITIES COALITION – NOVEMBER 2020 LETTER

From: Douglass Barber <dbarber@newcarrolltonmd.gov>
Sent: Monday, November 9, 2020 4:54 PM
To: MLS-NEPA-P3
Subject: Letter from 4-Cities Coalition - Opposition to Proposed I-495 and I-270 Beltway Expansion
Attachments: 4-Cites Letter of Opposition Beltway Expansion 11.9.20.pdf

Attached is the 4-Cities Coalition letter of opposition to the proposed I-495 and I-270 Beltway Expansion. The letter has been signed by the Mayor of Berwyn Heights, College Park, Greenbelt, and New Carrollton.

Thanks,

Doug Barber, MMC
City Clerk
City of New Carrollton
6016 Princess Garden Parkway
New Carrollton, Maryland 20784
(301) 459-6100
dbarber@newcarrolltonmd.gov

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Four Cities Coalition

Lisa B. Choplin, DBIA
Director, I-495 & I-270 P3 Office
Maryland Department of Transportation State Highway Administration
I-495 & I-270 P3 Office
707 North Calvert Street
Mail Stop P-601
Baltimore, MD 21201

We, the municipalities of Berwyn Heights, College Park, Greenbelt, and New Carrollton, are writing to express opposition to the proposed I-495 and I-270 beltway expansion draft environmental impact statement (DEIS), and to advocate for the no-build alternative.

We oppose the project due to a variety of financial, social, and environmental factors that would impact our residents and the entire region. We encourage you to consider the comments made by each of our municipalities, which detail the particular concerns faced by our communities.

We encourage MDOT SHA to focus attention on healthy, appropriate, and relevant solutions to transit challenges and to move forward with a no build option.

Sincerely,

Amanda M. Dewey
Mayor, Berwyn Heights

Patrick Wojahn
Mayor, College Park

Colin Byrd
Mayor, Greenbelt

Phelicia Nembhard
Mayor, New Carrollton

Thank you for your comments on the DEIS. As described in the Supplemental DEIS, the Preferred Alternative was identified after coordination with resource agencies, the public, and stakeholders to respond directly to feedback received on the DEIS to avoid displacements and impacts to significant environmental resources, and to align the NEPA approval with the planned project phased delivery and permitting approach which focused on Phase 1 South only.

The Preferred Alternative includes two new, high-occupancy toll (HOT) managed lanes on I-495 in each direction from the George Washington Memorial Parkway to east of MD 187 and conversion of the one existing high-occupancy vehicle lane in each direction on I-270 to a HOT managed lane and adding one new HOT managed lane in each direction on I-270 from I-495 to north of I-370 and on the I-270 east and west spurs.

The Preferred Alternative includes no action or no improvements at this time on I-495 east of the I-270 spur to MD 5 in Prince George's County.

Your comment had been identified in the DEIS related to build alternatives that would have spanned the entire study area. Because these four municipalities (Berwyn Heights, College Park, Greenbelt, and New Carrollton) are located outside the Preferred Alternative limits of build improvements, impacts to properties and resources within these municipalities have now been completely avoided. Any future proposal for improvements to the remaining parts of I-495 within the study limits, outside of Phase 1 South, would advance separately and would be subject to additional environmental studies, analysis, and collaboration with the public, stakeholders, and agencies.

FOUR CITIES COALITION – JULY 2020 LETTER

Four Cities Coalition

July 27, 2020

Jeanette Mar
Environmental Program Manager
Federal Highway Administration, Maryland Division
George H. Fallon Federal Building
31 Hopkins Plaza, Suite 1520
Baltimore MD 21201
jeanette.mar@dot.gov

Lisa B. Choplin
Project Director
I-495 and I-270 P-3 Project Office
Maryland Department of Transportation State Highway Administration
707 North Calvert Street, Mail Stop P-601
Baltimore MD 21202
495-270-P3@sha.state.md.us

Dear Ms. Mar and Ms. Choplin:

The Cities of College Park, Greenbelt, and New Carrollton and the Town of Berwyn Heights in Prince George's County are writing to request an extension of the public comment period to 120 days or more for the Draft Environmental Impact Statement (DEIS) of the proposed I-495 & I-270 Public-Private Partnership Program.

This project to widen I-495 and I-270 by two tolled lanes in each direction is projected to have major impacts on our communities. The direct impacts include changes to our parks and increases in stormwater runoff that raise environmental justice concerns. Other impacts may be a reduction of funds for investment in improving public transit--including access to our new hospital--and a taxpayer subsidy. These issues were discussed before the Maryland-National Capital Parks and Planning Commission on July 15, 2020. Debra Borden, the lead Prince George's County planner for the project has said the DEIS lacks analysis in certain areas which makes it impossible to discuss mitigation. We are concerned about possible shortcomings with the DEIS.

Prince George's and Montgomery Counties are the two counties most impacted by the proposed 50-year $9-11 billion public-private partnership concession. The Montgomery County Transportation and Environment Committee and County Executive have already sent requests for this extension, as have Congressmen Raskin and Brown and Senators Cardin and Van Hollen and 44 environmental and community groups.

It is critical that members of our communities have an adequate opportunity to review the 18,000-page document and submit comments to ensure that appropriate

Based on requests from the public, elected officials and other stakeholders, MDOT SHA and FHWA extended the comment period on the DEIS from 90 days to 123 days. The full comment period extended from July 10, 2020 to November 9, 2020.

Four Cities Coalition

analysis is done. The current timeline, with public hearings in August, would be questionable in a normal year. In a year when all children are home, COVID-19 cases and deaths are increasing, and it is not safe to gather, the timeline is even more inappropriate.

We therefore request that the Agencies authorize as soon as possible at least an additional 30 days for public comment on the DEIS for this Project.

Thank you for your serious consideration of this time-sensitive and important request.

Respectfully,

Amanda Dewey, Mayor
Town of Berwyn Heights

Patrick L. Wojahn, Mayor
City of College Park

Colin A. Byrd, Mayor
City of Greenbelt

Phelecia E. Nembhard, Mayor
City of New Carrollton

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Montgomery County Department of Transportation - DEIS Comments

No.	Page	DEIS Section	Comments	Response
1	General	General	Included here are highlights of our most substantial comments as well as our recommendations for proceeding. Footnotes in this memo are used to reference comments in the attached detailed technical comments. Our comments are consistent with those provided throughout the development of the DEIS since early 2018. These comments also reflect input from other Montgomery County Agencies including the Department of Environmental Protection, Finance, General Services, and others.	No response needed.
2	General	General	Listening to the public testimony, the overwhelming majority of the comments opposed the project's current recommendations.[footnote:27] By prematurely eliminating TSM/TDM and Transit alternatives,[footnote: 26,29,33,44,49,54,59,68,71, 73,75,76,154] and favoring alternatives with four Managed Lanes, [footnote: 16,55,82] the State has restricted its ability to consider meaningful, lower impact, lower cost, lower risk alternatives that improve the performance of these highways.39 As a result, the larger "Build" alternatives are, falsely, the only remaining choice available if transportation is to be improved along these corridors. We are concerned that this project may exacerbate existing problems and create new impacts within our communities and our environment. Of particular concern are increased vehicle miles-traveled and carbon emissions, impacts to arterial and local roads near interchanges, poor water quality and watershed conditions, unacceptable levels of noise in our communities, and the possibility of irreparable harm to historic and community resources. As we face enormous challenges, including the need to respond to climate change, it seems that we should instead focus our investments on providing more travel options, improving transportation access to address racial and socio-economic equity. and facilitating growth in more resilient and sustainable forms. [footnote: 127]	Regarding the comment on alternatives with managed lanes, refer to Chapter 9, Section 3.1 for a response on Purpose and Need. Regarding elimination of alternatives, refer to Chapter 9, Section 3.2.B for a response to Alternatives Not Retained for Detailed Study. Regarding the comment on impacts to local traffic (Chapter 9, Section 3.4.B), water quality (Chapter 9, Section 3.4.E), noise (Chapter 9, Section 3.4.H), historic resources (Chapter 9, Section 3.4.C), and access for socio-economic equity (Chapter 9, Section 3.4.D), see responses later in the errata related to these individual elements, or refer to the Chapter 9 response reference noted after each element.
3	General	General	We urge MDOT to broaden its focus so that this project conforms, at a minimum, to the established practice in the region that new express toll facilities provide meaningful and ongoing support to transit, and that the environmental focus of this project be expanded to address the impacts of the whole facility and even improve the condition of sensitive resources along the corridors. As part of this, we believe that it is advisable to look at combinations of alternatives for different components of the project, including a more robust exploration of Transportation Systems Management (TSM) and TSM-plus strategies at specific bottlenecks on these corridors. [footnote: 9]	Regarding the comment on meaningful support for transit, refer to Chapter 9, Section 3.3.D for a response to Analysis of Alternatives Retained for Detailed Study. Regarding TSM improvements, refer to Chapter 9, Section 3.2.B for a response to Alternatives Not Retained for Detailed Study.
4	General	General	Separately from this DEIS, the State has issued transit recommendations that, at present, remain too limited to serve as a complete transit strategy for the study area, and as a complete response to the equity issues created by this project. [footnotes: 2,17,35,67]	Refer to Chapter 9, Section 3.3.D for a response to Analysis of Alternatives Retained for Detailed Study.
5	General	General	We seek complete mitigation of environmental, [footnote: 63] cultural, social, and equity problems resulting for both the existing highways and their expansion, [footnote: 67] and that the project provide master planned pedestrian and bicycle infrastructure on all reconstructed facilities, both along and crossing the corridors, with connections and transitions to logical nearby endpoints.	Refer to Chapter 9, Section 3.4 for a response on the NEPA approach, analysis and impacts.
6	General	General	**Transit & TSM/TDM Alternatives:** We recommend that the project restore consideration of transit and TSM/TDM alternatives, either as standalone alternatives, or with detailed transit and TSM/TDM strategies specifically embedded within other alternatives. Furthermore, we believe that Purpose and Need and the screening metrics do not address concerns raised by the County throughout the process. In the case that the Build alternatives prove to be commercially prohibitive for private firms, the lack of any viable option is unfortunate, as there would remain a need to address movement of users throughout the region. TSM/TDM alternatives such as Alternative 2 should be retained and improved upon as an option. [footnote: 68]	Refer to Chapter 9, Section 3.1 for a response on Purpose and Need. Refer to Chapter 9, Section 3.2.B for a response to Alternatives Not Retained for Detailed Study.

No.	Page	DEIS Section	Comments	Response
7	General	General	**Transit Discussion:** The report states "Improved connections to park-and-ride lots, Metrorail, bus, MARC, Purple Line, and Transit Oriented Development are anticipated to occur as a result of addressing congestion…", which would appear to assert that this project will address these needs, but there is little further elaboration on how, and to what extent, this will be addressed. Throughout the DEIS there are frequent references to the benefits of being able to operate transit and other HOV+ vehicles in the managed lanes. This DEIS, and certainly the FEIS, should address in detail what these benefits are, in addition to how the State plans to incorporate and implement these actions in the P3 Agreement. We seek a meaningful and continuous commitment to transit. The project plan must outline specific improvements to better connect the corridors to transit facilities rather than relying on potential, and uncertain, congestion reduction as the means to improve this access. This includes the necessary physical infrastructure, such as depots, buses, park & rides, improved access to transit facilities, [footnote: 92] and other needs still under evaluation by our DOT and Planning staff, [footnotes: 32,90,109.] This also includes constructing master planned BRT facilities along affected segments, and designing the American Legion Bridge to be capable of supporting future rail transit (as done with the Woodrow Wilson Bridge). [footnote: 36] Dedicated funding will help support continued investment and operation of equitable alternatives to the Managed Lanes. [footnote: 78]	Regarding the comment on transit, refer to Chapter 9, Section 3.3.D for a response to Analysis of Alternatives Retained for Detailed Study. Regarding the comment on transit on the American Legion Bridge, refer to Chapter 9, Section 3.3.D for a response to Analysis of Alternatives Retained for Detailed Study.
8	General	General	**Pedestrian/Bike Connections:** Include pedestrian/bike facilities across the I-270 and I-495 corridors at interchanges as well as at non-interchange crossing points. Facilities are expected to meet applicable standards, best practices, and master plans, particularly the approved Bicycle Master Plan and the Pedestrian Master Plan currently in development. [footnotes: 91,97] This project must provide a holistic, full solution to access and connectivity and cannot rely on the County and other local agencies to resolve these issues in the future. Design of the American Legion Bridge improvements is expected to provide designated space for transit, walking, cycling, and convenient connections to the existing community transportation facilities and NPS facilities near the bridge. [footnote: 36]	Refer to Chapter 9, Section 9.3.3 for a response on bicycle/pedestrian facilities and rail on the American Legion Bridge.
9	General	General	**I-270 Scope and Termini:** Phase 1 of the P3 project includes I-270 but does not include the separate effort evaluating the northern portion of I-270. Where in the DEIS is the State providing discussion on the logical termini for this project, and FHWA's approval to split the P3 project into two separate EIS efforts and Records of Decision? [footnote: 43]	There is currently only one NEPA study, the MLS, being conducted under the P3 Program. I-270 North is being studied independently from the MLS under a pre-NEPA Study. A discussion of the rationale for identifying the logical termini for the MLS which reflects the area of influence for traffic and environmental analyses, was included in the DEIS in Chapter 1, Pages 1-1 to 1-2.
10	General	General	**Development of Alternative Roadway/Interchange Configurations.** It appears that the environmental impact analysis is based on one basic concept for the managed lanes and is not adopted to the specific alternatives. Furthermore, it does not appear that technical alternatives have been developed for specific elements of the project like interchange configurations. Some of these elements are very complex and many have may a variety of design alternatives that could avoid impacts to varying extents. MDOT should describe and illustrate the range of options considered for each interchange and why the configuration included in the DEIS is the least impactful alternative that provides the minimum technical performance required. This analysis should be coupled with an assessment of local road performance as described in the following section.	The interchange configurations were modified to accommodate the widened mainline. If some of the interchange movements needed to be modified further to accommodate the future traffic, they were revised in the SDEIS and the FEIS. Additionally, MDOT SHA has continued to work with FHWA to evaluate operations and safety at all interchanges within the limits of the proposed build improvements as part of the Interstate Access Point Approval process. This evaluation included all interchanges and nearby intersections on the cross streets. MDOT SHA's Application for Interstate Access Point Approval is in Appendix B.
11	General	Traffic Considerations	**Ineffective Managed Lanes:** This project claims to improve traffic, but the analysis itself finds that in many cases the Managed Lanes barely perform better than General-Purpose Lanes, and in some spots perform even worse. [footnotes: 102,116,123,144,145]	Refer to Chapter 9, Section 3.4.B for a response to traffic modeling and analysis.
12	General	Traffic Considerations	**Worsened General Purpose Lanes:** The General-Purpose lanes worsen in many segments as compared to No Build conditions, as demonstrated by both the Travel Time and TTI metrics. This creates a massive equity problem for those who are unable to afford or otherwise access the Managed Lanes. [footnote: 2,17,67,102,117,119,120,124,163,174] Would MDOT accept degraded performance of the General-Purpose lanes in the interest of providing priced managed lanes? Penalizing current users of these roads does not seem to be consistent with the stated policy objectives of this program, and by restricting access to users it runs counter to the Purpose and Need's goal of expanding access for users. If MDOT was to indeed accept this outcome, it would be imperative that equity be considered and actions incorporated into the project to address the needs of users most adversely impacted. Additionally, this outcome might be alleviated to some extent with the inclusion of I-270 north of I-370. It is difficult to justify acceptance of poorer performance of Build alternatives under the current analysis framework.	Refer to Chapter 9, Section 3.4.B for a response to traffic modeling and analysis. Refer to Chapter 9, Section 3.4.D for a response to Environmental Justice and equity concerns.

No.	Page	DEIS Section	Comments	Response
13	General	Traffic Considerations	**Local Road Impacts:** A detailed evaluation of the interchanges and connections to the local road network has not been provided. The DEIS does not consider what will happen to roads like Gude Drive, Connecticut Avenue, or Colesville Road when more traffic is sent to them faster, and whether any time saved by the managed lanes is lost by becoming stuck in downstream congestion. [footnote: 15,62,104,107,126,129,138,175] These corridors are often already congested and travel through urban areas where automotive traffic is not the priority mode. [footnote: 3] This is unacceptable. The County provided locations of concern for study to MDOT in the early stages do the DEIS analysis.	Refer to Chapter 9, Section 3.4.B for a response to traffic modeling and analysis.
14	General	Traffic Considerations	**Transit Impacts:** The DEIS does not provide information on how each alternative affects the NADMS along various segments. Detailed information must be provided to demonstrate how the alternatives may impact existing or planned transit services. [footnote: 179] Furthermore, the study must demonstrate how these impacts will be mitigated. It should be noted that the County has established NADMS goals for most areas along these corridors as a specific policy objective to be met. The DEIS should demonstrate how the project is consistent with these pre-established and adopted transportation objectives.	The Preferred Alternative, Alternative 9 - Phase 1 South, includes HOT lanes, which promote the use of non-SOV vehicles by providing a free, reliable trip for HOV 3+ vehicles and buses. Additionally, the project includes commitments for bicycle, pedestrian, and further transit improvements. See Chapter 3, Section 3.1.4 for transit-related elements and Section 3.1.5 for pedestrian and bicycle facilities associated with the Preferred Alternative.
15	General	Traffic Considerations	**COVID:** While many of COVID's impacts may only last a few years, it appears that we are likely entering into a new and long-lasting era of increased telework. Traffic patterns have changed and will likely remain very different, dramatically increasing the risks of this project. This must be taken into greater consideration and evaluated in detail before a final determination is reached and a Record of Decision confirmed. [footnote: 23,24,25,45]	Refer to Chapter 9, Section 3.1 for a response on Purpose and Need and effects of the Pandemic.
16	General	Traffic Considerations	**270 ICM Project:** The effects of the State's innovative Congestion Management project currently under construction are unknown. Information prepared in 2017 by MDOT SHA showed particularly favorable metrics for this project; however, it is unclear how this differs from metrics evaluated and measured by the Managed Lanes project. [footnote: 46,111,112]	TSM/TDM is already being implemented along I-270 as part of the I-270 ICM project. The ICM project is designed to address existing issues and short-term needs, unlike the Managed Lanes Study, which includes addressing long-term traffic growth as part of the purpose and need. The Managed Lanes Study is compatible with the improvements implemented under the I-270 ICM project. Most of the ICM improvements will be maintained, including ramp metering, auxiliary lane improvements in multiple locations along both directions of I-270 south of I-370, and all improvements north of I-370.
17	General	Traffic Considerations	**Managed Lane ADTs:** Provide estimated Average Daily Traffic values for regular points within the Managed Lanes for each alternative. [footnote: 100]	ADT values in the managed lanes were not available at the time the DEIS was prepared because toll rate ranges had not been set. Subsequently, ADT values for the HOT lanes for the Preferred Alternative were calculated and are included in MDOT SHA's Application for Interstate Access Point Approval (FEIS, Appendix B).
18	General	Environmental/ Cultural/ Equity Considerations	**Existing Issues:** Both I-270 and I-495 already have existing environmental impacts that have not been addressed, and do not appear to be fully addressed by this project. This includes needs and impacts involving waterways, habitat, emissions, noise, and others.	The NEPA process documented in the Draft , Supplemental and Final EISs is intended to address the impacts associated with the current proposed improvements. This includes discussion of indirect and cumulative effects (FEIS Section 5.22) which accounts for the impact of the action when added to past, present, and reasonably-foreseeable future actions. However, fully addressing all past impacts (aside from potential cumulative effects) is not the purpose of the study.

No.	Page	DEIS Section	Comments	Response
19	General	Environmental/ Cultural/ Equity Considerations	**Long-Term Impacts:** From the information provided in the DEIS, this project will encourage not only more vehicles and increases in VMT, but also types of development that seem to be more costly to society, require more costly infrastructure, generate more severe impacts to habitat, and result in more significant contributions toward emissions and runoff. This will hamper the County's master planned efforts toward increasing non-auto travel and focusing growth in sustainable ways, and this also runs directly counter to the State's Climate Emergency. [footnote: 3,66,130]	See response to Comment #14 regarding the reduction in SOVs due to the HOTs and the addition of bicycle, pedestrian, and transit improvements associated with the Preferred Alternative. See Chapter 3, Section 3.1.4 for transit-related elements and Section 3.1.5 for pedestrian and bicycle facilities. Regarding increases in VMT, the MWCOG model shows that the amount of induced demand caused directly by the project would be less than 1% of the total VMT in the region in the 2045 Build condition compared to the No Build condition. MDOT's goal with this project was not to increase demand but to address current and predicted demand. Current and predicted demand in the study area could be met by adding many additional new lanes and while MDOT SHA considered adding additional general purpose lanes during the alternatives screening process, the agency ultimately recommended capacity via managed lanes. This fundamental difference is crucial to understanding why the traffic analysis shows only a very modest increase in traffic through induced demand. Most importantly, managed lanes do a better job at regulating overall travel demand, including induced demand, due to dynamic pricing. As explained in the DEIS, dynamic pricing means that as the demand for use of the managed lanes increases, the rate charged for access to the lanes also increases. This tends to regulate uses of the managed lanes in order to permit them to operate in a free-flow of traffic and at general speed of at least 45 miles per hour. The traffic analysis shows that there could be some induced demand as a result of this project, but the impact will be small (less than 1 percent increase) and those effects are fully accounted for in the regional traffic models used in the Study developed by MWCOG. Even with these effects, the proposed managed lanes would reduce regional congestion delays and significantly improve travel times along both the I-495 and I-270 in Phase 1 South limits and on local roads throughout the study area. Refer to Chapter 9, Section 9.3.4.B regarding the Traffic Modeling and Analysis.
20	General	Environmental/ Cultural/ Equity Considerations	**Social Impacts:** There are significant impacts to schools, historic properties, homes, and businesses despite repeated assertions that these impacts would not occur. [footnote: 88] There is no apparent elaboration on what efforts are being done to assist with the relocation of those displaced, accounting for their individual interests, costs, destinations, and the continued viability of affected businesses. These issues need to be addressed before a final determination is made about a preferred alternative.	The Preferred Alternative does not result in any full residential or business relocations.
21	General	Environmental/ Cultural/ Equity Considerations	**Equity:** The DEIS gives little consideration toward equity: impacts to property, noise, emissions, affordability, and other effects of historically underinvested communities. As the General-Purpose Lanes worsen: how are these communities affect? What options are provided for them? [footnote: 2,17,67,131]	Refer to Chapter 9, Section 3.4.D for a response to Environmental Justice and equity concerns.
22	General	Contracting/ Finance Considerations	**P3 Capabilities:** The whole NEPA process has been structured around a P3, but the State is currently managing a troubled P3 that is a fraction of the size contemplated here. Given the significant economic and transportation uncertainty now in place, it may make sense to consider smaller projects or more aggressive risk mitigation strategies. What is the risk to taxpayers in the event that the P3 fails, as is being experienced now with the Purple Line? How would the public be \affected if there is a need to cut costs during or after construction? [footnote: 4]	Refer to Chapter 9, Section 3.5 for a response on the P3 Program or Board of Public Works and Project Costs.

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23	General	Contracting/ Finance Considerations	**No Public Cost:** The project appears to estimate a public cost of between $482-$1,088m, despite assertions that taxpayers would incur no costs. These values do not appear to account for utility relocations, such as WSSC's statement that $2 billion in WSSC costs will be passed on to their customers. [footnote: 98] It is unclear how revenues and costs will resolve toward the end of the P3 contract. If revenues surpass costs before the end of the 50-year agreement, does this imply lost revenue to the public of $2,762m/year between that Return on Investment year & the end of the contract? Or if revenues have not yet surpassed costs at the 50th year: how will that affect the P3 agreement or the facilities operations beyond the 50th year? [footnotes: 94,99] From the information on page 3-13 we identify a project cost of approximately $3.35m per new vehicle served by the project. From the data presented it is difficult to adjust these numbers to account for travel time savings or to differentiate between public and private costs, and we suggest MDOT consider including such an analysis in the FEIS. [footnote: 127]	Refer to Chapter 9, Section 3.5 for a response on the P3 Program or Board of Public Works and Project Costs. Refer to Chapter 9, Section 4.M for a response to impacts to utilities and associated cost of repairs.
24	General	Contracting/ Finance Considerations	**Non-Compete Risks:** What guarantees will be in place toward ensuring that projects that provide other choices are not sidelined, such as BRT projects, or improvements to MARC, WMATA, the Purple Line, or buses? Or projects that seek to address problems in the General-Purpose Lanes? Or projects that provide alternatives for those unable to afford the Managed Lanes? [footnote: 5]	MDOT SHA and MDTA maintain their public interest and duty to develop projects in the best interests of the State and they do not intend to limit their ability to deliver transportation projects such as new or improved BRT, MARC, WMATA, or bus projects; the Purple Line; or highway projects on adjacent roads. The Developer will only be entitled to compensation if MDOT constructs additional free lanes to be part of I-495 or I-270 or lanes immediately adjacent to the highway right-of-way. If certain traffic, revenue, and/or other conditions are met, then MDOT SHA may still be able to add capacity on I-495 or I-270 without the need to compensate the Developer. These specific conditions will be included in the Section P3 Agreement.
25	General	Contracting/ Finance Considerations	**Contract Selection:** It is not clear how proposals and designs from varying bidders will be vetted and selected, particularly considering construction impacts, design, and operational plans. With a project of this size and complexity, how will the State ensure the selected Concessionaire and Design/Builder provide the best-value solution and not just the most cost-efficient? It is not clear how potentially having multiple different operators and operational patterns would function, and how users will transition between systems. Will the winner of the first contract be presumed to automatically receive &/or operate the contracts for future phases? Or will the first contract otherwise establish the operating standards of those future contracts? [footnote: 43,87,96]	As described in the Supplemental DEIS, the Preferred Alternative was identified to align the NEPA approval with the planned project phased delivery and permitting approach which focused on Phase 1 South only. Any future proposal for improvements to the remaining parts of I-495 within the study limits, outside of Phase 1 South, would advance separately and would be subject to additional environmental studies, analysis, and collaboration with the public, stakeholders, and agencies.
26	General	Contracting/ Finance Considerations	**P3 Responsibilities and Risks to the Public:** It remains unclear under what terms the concessionaire would operate the facility. More information is needed as to various responsibilities, terms and conditions, and other protections for the public that are contemplated for the P3 agreement. The proposed business terms may have a direct impact on the performance and environmental impacts of the project and should be evaluated as part of this NEPA study. [footnote: 37,41,93,112,156]	Refer to Chapter 9, Section 3.5 for a response on the P3 Program or Board of Public Works and Project Costs.
27	General	Contracting/ Finance Considerations	**Inflation:** We did not see a discussion of key financial cost estimating assumptions. For instance, was an inflation rate assumed in the labor or construction estimates or was everything estimated in current dollars? This speaks to the total cost estimates and the per mile toll estimates. [footnote: 11]	The cost estimates for the Build Alternatives were discussed in DEIS Appendix B, Chapter 8, Preliminary Cost Estimates. The preliminary cost estimates for purposes of comparison between alternatives were developed in 2019 dollars and included a 25 percent contingency. It is common practice in planning projects to provide a cost in current year dollars, rather than attempting to project a construction year and future inflation.

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28	General	Contracting/ Finance Considerations	**Financial Viability / Transit:** How will "financially viable" be defined with respect to the inclusion of transit components within the P3 contract? Transit may include costs for capital, operating, maintenance, etc. that will vary significantly based on levels of service, and users of transit would be doing so in lieu of a toll. How will these be considered in determining rates of return on the contract? [footnote: 63]	As part of the Managed Lanes Study, MDOT SHA has made a commitment to certain regional transit improvements to enhance existing and planned transit and support new opportunities for regional transit service. Refer to FEIS Chapter 3, Section 3.1.4 and Section 3.2.1 and Chapter 9, Section 3.3.D. Additional transit opportunities have been identified outside of NEPA through the approved P3 Agreement. On August 11, 2021, MDOT and the Maryland Transportation Authority (MDTA) received approval from the Maryland Board of Public Works to award the Phase 1 P3 Predevelopment Agreement to the Developer. In accordance with the terms and conditions of the Phase 1 P3 Agreement, MDOT and the Developer will further advance predevelopment work on Phase 1 South. The Developer has proposed an estimated $300 million for transit services in Montgomery County over the operating term of Phase 1 South. MDOT SHA has committed to fund not less than $60 million (upon financial close of the Section P3 Agreement for Phase 1 South) for design and permitting of high priority transit investments in Montgomery County, such as Phase I of the Corridor Cities Transitway, Bus Rapid Transit in the MD 355 Corridor, or other high priority projects, and to construct and equip the Metropolitan Grove Bus Operations and Maintenance Facility.
29	General	General	There are many comments beginning with "[comment has been made during previous reviews]" These are issues that have been persisting at least since the ARDS, though in many cases they date back to or even before the Purpose & Need. Despite it's 20,000 pages, this DEIS still misses, ignores, or excludes critically important information.	The Study fulfills the requirement to thoroughly evaluate potential impacts and allowed the agency decision-makers and the public to understand the various advantages and disadvantages of a range of reasonable alternatives. As required by the CEQ NEPA regulations, the DEIS summarized the reasonably foreseeable social, cultural, and natural environmental effects of the alternatives retained for detailed study to a comparable level of detail and the SDEIS summarized the environmental effects of the Preferred Alternative. These analyses directly contributed to MDOT SHA's evaluation of the alternatives and to recommendations for a full suite of potential measures to avoid and minimize impacts, as well as comprehensive mitigation proposals where impacts could not be avoided.
30			[comment has been made during previous reviews] The DEIS gives little consideration toward equity: impacts to property, noise, emissions, affordability, and other effects on historically underinvested communities. There is no consideration of accessibility of the Managed Lanes to low-income populations, nor how communities are affected by worsening General Purpose Lanes if users are unable to afford or otherwise access the managed lanes. There is no elaboration of what options are provided for them.	See responses to Comment #20 and #21.
31			[comment has been made during previous reviews] By focusing explicitly on expanding capacity for auto modes, this will directly hamper our master planned efforts toward increasing non-auto travel and focusing growth in sustainable ways. This also runs counter to the State's declared Climate Emergency.	See response to Comment #14 regarding the reduction in SOVs due to the HOTs and the addition of bicycle, pedestrian, and transit improvements associated with the Preferred Alternative. See Chapter 3, Section 3.1.4 for transit-related elements and Section 3.1.5 for pedestrian and bicycle facilities. MDOT acknowledges concerns about climate change and Maryland is committed to reducing GHG emissions and to prepare our State for the impacts of climate change. The Maryland Commission on Climate Change (MCCC) and its Mitigation Working Group (MWG) have demonstrated that commitment by working collaboratively with experts and stakeholders across State and local agencies, and environmental, non-profit, and academic institutions. The resulting body of work quantifies baseline GHG emissions by sector to understand the impacts that specific plans, policies, and programs will have on future emissions economy-wide. Statewide analyses indicate that the Study will not impede Maryland's ability to meet its GHG emission reduction goals. Refer to Chapter 9, Section 3.4.G for a response to climate change considerations.

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32			[comment has been made during previous reviews] The whole NEPA process has been structured around a P3, but the State has not demonstrated its ability to manage a P3 that is a fraction of the size contemplated here. Decisions about the environmental impacts of this project depend on knowing the details of the P3 now: What is the risk to taxpayers in the event that the P3 fails, as is being seen now with the Purple Line? How would the public be affected if there is a need to cut costs during or after construction?	See response to Comment #22.
33			[comment has been made during previous reviews] What guarantees will be in place toward ensuring that projects that provide other choices are not sidelined, such as BRT projects, or improvements to MARC, WMATA, the Purple Line, or buses? Or even anything that seeks to address problems in the General Purpose Lanes? Or to provide alternatives for those unable to afford the Managed Lanes?	See response to Comment #24.
34			[comment has been made during previous reviews] How will the proposals, designs, and operational plans from varying bidders be vetted and selected?	Refer to Chapter 9, Section 5.B for a response on the P3 process and Board of Public Works (BPW).
35			The DEIS documents were created in such a way as to prevent the copying of text from the document. This hampers the ease with which the public can review and comment on the document, requiring data sets to be manually reentered in order to provide an independent evaluation, and making it harder to quote segments of the document in comments. This is a setting that must be deliberately activated for this to occur, and is unclear for what purpose the State would choose to do this.	The PDFs of the project files posted on the website are protected PDFs. The PDFs can be printed but not copied and pasted. This is to ensure that the text can not be altered and to maintain the formatting and federal and state 508 compliance requirements.
36	General	Executive Summary	Our understanding is that an Executive Summary should answer the basics of who, what, when, where, why, and how. It is not until page E-7 that the goals of the study are stated. Even then, in our opinion, it doesn't specifically say what the "what" is in this study, however, it does allude to Appendix A for a "full purpose and need statement", but we were expecting to see it more clearly stated in the ES. For example, the very first question of the Study Overview was "What is the I-495 & I-270 Managed Lanes Study? There is no mention of the goals of the study. Should the goals be right up front here?	The purpose of the Executive Summary is to provide an abbreviated overview of the entire DEIS. MDOT SHA followed standard NEPA protocols when preparing the summary and it provides a high level discussion of the critical points from the document.
37	General	Executive Summary	Greater emphasis should be placed on the fact that a new or replacement American Legion Bridge must be planned now and built to preclude a lapse in traffic service to the area. Isn't this the real WHY this needs to be done? There is no mention of the economic impact of the American Legion Bridge on the Washington Metropolitan Area or on MoCo if this bridge isn't available and/or if it's traffic capacity is diminished. Traffic is a quality of life issue that can encourage people to migrate to an area that has less traffic. Granted it is only one of many factors influencing where people live and work, but recently there has been evidence of migration out of urban areas. (article attached Fitch Ratings) This transportation project is needed for the region to maintain its quality of life, keep its population base and therefore maintain its economic viability.	The replacement of the American Legion Bridge is an important element of the Preferred Alternative. Regardless, the existing bridge is nearly 60 years old and would need to be replaced regardless of the outcome of this Study. MDOT SHA evaluated how to reconstruct the bridge with as little impact to the adjacent land uses and traveling public as possible. See FEIS Chapter 3, Section 3.1.8 for the American Legion Bridge Construction Evaluation. Additionally, FEIS Chapter 3, Section 3.4 discusses the economic benefits of the managed lanes and the Preferred Alternative.
38	General	Executive Summary	The Purple Line was able to obtain significant levels of Federal Grant funding. We may have missed it but we didn't see mention made of application for and/or any anticipation of Federal funding for this project and how that might impact the project.	The I-495 & I-270 P3 Program would not be eligible for the Federal Transit Administration grant funding received by the Purple Line as that is solely eligible for certain types of transit projects. However, the project expects to apply for a Federal TIFIA loan, which would allow the State to leverage the federal cost of capital to bring value to the project. At this time, there is limited federal discretionary grant funding for which highway and managed lanes projects are eligible. If and when the federal government announces such programs, MDOT will seek to identify whether this project would be eligible and apply for these grants, if possible.
39	General	Executive Summary	We didn't see in the Executive Summary a discussion of key financial cost estimating assumptions. For instance, was an inflation rate assumed in the labor and construction estimates or was everything estimated in current dollars? This speaks to the total cost estimates and the per mile toll estimates.	See response to Comment #27.
40	General	Executive Summary	Add a list of all acronyms and their descriptions in one place. (E.g., MLS, DEIS, NEPA, ARDS, HOT, HOV, ETL, ROD, etc.)	A list of Abbreviations and Acronyms was included on pages xii through xvi in the DEIS, following the List of Appendices. A similar list has been included in the FEIS.
41	General	Executive Summary	The design study year 2040 may be too short. It will take xx years (at least 2 years) to complete planning and select the final alternative and the P3 partner. Another 3-years to complete design and secure all permits. It will take 3 years, if not more, to complete construction.	The design year was updated to 2045 following publication of the DEIS.
42	General	Executive Summary	The estimated opening year of 2025 is unrealistic.	The SDEIS and FEIS now provide an estimated opening year of 2027.

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43	General	Chapter 1	[comment has been made during previous reviews] The traffic considerations appear limited only to the interstates. This does not consider what will happen to roads like Gude Drive, Connecticut Avenue, or Colesville Road when more traffic is sent to them, faster. This effects the efficacy of the project if it gains users time in one place, only to cost them more time at later points even less able to handle increased traffic.	Refer to Chapter 9, Section 3.4.B for a response to traffic modeling and analysis.
44	General	Chapter 1	[comment has been made during previous reviews] The movement of vehicles is an ineffective metric and inherently biases the analysis against HOV facilities and transit. We have repeatedly requested replacing vehicle throughput metrics with person throughput, reflecting best practices for optimizing the efficacy of transportation infrastructure.	Person-throughput was evaluated and was included in Table 5-16 of DEIS, Appendix C. However, the metric of vehicle-throughput was reported here because it is a direct output of the VISSIM model. MDOT SHA expects that the project will lead to higher vehicle occupancy by providing opportunities for buses to use the HOT lanes and by permitting HOV 3+ to use the lanes for free. However, it is difficult to quantify this increase in vehicle occupancy, and therefore vehicle-throughput was used as a proxy for person-throughput in this section (a conservative approach as to not overstate the potential benefits).
45	General	Chapter 1	[comment has been made during previous reviews] Sections on trip reliability (1.4) and roadway choice (1.5) should include caveats that these benefits are limited only to those able to afford them, and that efforts are needed to address potential inequities in any worsening (or inaction toward) the General Purpose lanes, as well as other forms of access to the managed lanes (e.g. discounted or free HOV+ access).	Trip reliability was evaluated for both the managed lanes and the general purpose lanes. One of the metrics used to evaluate reliability was TTI in the general purpose lanes (see DEIS Table 3-7 and the description on page 3-10). Alternatives that provided a more reliable trip in the general purpose lanes (that are free to use for all) rated higher for trip reliability. Access to the HOT lanes will be free for HOV 3+ vehicles and transit vehicles.
46	ES-1	Executive Summary	1st Paragraph, 2nd Sentence - Excessively long and poorly worded. Consider re-write. Might easier to state how many miles along I-495 and how many miles along I-270.	Thank you for your comment.
47	ES-1	Executive Summary	First sentence references the study as "Study", but later it is referenced as "MLS"	The terms "Study" and "MLS" are used interchangeably in the documentation. "MLS" has been added to the Abbreviations page.
48	ES-1	Executive Summary	Why doesn't the EIS include I-270 north of I-370 into Frederick County? How does this relate to the Phases 1 and 2 that are being discussed for actual construction?	See response to Comment #9.
49	ES-2	Executive Summary	Northern limits extend to connect to HOV lane. Description should clarify that it only extends to northbound HOV lane and the southbound HOV lane only begins south of I-370.	The limits of the study are described in general terms in the Executive Summary as "north of I-370."
50	ES-2	Executive Summary	What is the definition of "Notified agencies"?	The definition of Notified Agencies was provided in footnote #3 on page ES-2 as follows: "Notified Agencies have been defined for this Study to include all other agencies who could have an interest in the Study, or that have a role that is yet to be determined. These agencies would be notified of Study milestones concurrently with the public and those milestone notification points are part of the public involvement plan."
51	ES-3	Executive Summary	COVID-19. Reference is made to the need to monitor and evaluate traffic trends related to COVID but there is nothing started when this could occur and how it will be monitored and evaluated.	Refer to Chapter 9, Section 3.1 for a response on Purpose and Need and effects of the Pandemic.
52	ES-3	Executive Summary	COVID-19. The section on COVID states: "There is no definitive traffic model to predict how this unprecedented global pandemic will affect long-term future traffic projections and transit use. MDOT SHA is committed to tracking trends in travel behavior and monitoring traffic volumes over time as businesses and schools slowly begin to reopen. We will evaluate and consider all new information that becomes available to ensure the solutions will meet the needs of Marylanders now and in the future." While many of COVID's impacts may recover in coming years and by the design year of the project, all indications are that some impacts may be permanent. This particularly includes increased telework and reliance on ad-hoc and parcel delivery services. It is unclear in this statement how these will be taken under consideration, and what future analyses remain that will even be able to consider them. These impacts may affect the very need, benefit, and financial viability of this entire project.	Refer to Chapter 9, Section 3.1 for a response on Purpose and Need and effects of the Pandemic and teleworking.

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53	ES-3	Executive Summary	COVID-19. This study will be criticized based on the unknown impacts of COVID-19 as it relates to future traffic volume and commuting patterns. There is a question on page 3 that addresses the COVID-19 impact from the perspective of reducing traffic and it indicates changes will be monitored. The detractors will argue that more people will be working remotely and not commuting. It may be politically incorrect to suggest, however, for example, couldn't people also decide that to be safe they will drive by themselves rather than car pool or use public transportation? So, potentially there could be less use of public transportation and more use of individual transportation options. (car, bicycle, walk) This would then counteract potential work from home reductions in traffic. Associated with the COVID-19 traffic reduction issue is the fact that revenues for transit systems are down. (article attached from Bond Buyer) This points out that there will be volatility in any project based on vehicle usage and toll pricing. P3's push the risk to the private partner and/or share the risk. I expect this project will be criticized about this revenue issue as well as it relates to the toll costs per mile that are cited and the assumptions that were used to develop these estimates.	Refer to Chapter 9, Section 3.1 for a response on Purpose and Need and effects of the Pandemic and teleworking.
54	ES-6	Executive Summary	The Purpose & Need is too narrowly defined for this study. What are "roadway travel choices"? Why the archaic focus on just traffic and not mobility?	Refer to Chapter 9, Section 3.1 for a response on Purpose and Need.
55	ES-6	Executive Summary	Ways to Comment. [comment has been made during previous reviews] In the FEIS: provide a summary of public feedback for each public input period, including tallies of how many people weighed in on various positions / topics. Also highlight what community associations & other organizations have voted in support or in opposition toward, and the scale of representation of these organizations (clarifying how this scale is measured: leadership, membership, subscribers, etc).	MDOT SHA has responded to all public, agency, and stakeholder comments made during the formal DEIS and SDEIS comment periods. Refer to FEIS Chapter 8 (Public Involvement and Agency Coordination), which details public involvement from July 2020 through May 2022; FEIS Chapter 9 (DEIS and SDEIS Public Comments Summary), which provides responses to common comments; and Appendix T (Responses to DEIS and SDEIS Comments) for responses to specific comments and references for each individual comment.
56	ES-8	Executive Summary	Priced managed lane is defined as either HOT or Express Toll Lane. These are different versions of alternatives, but are treated equally.	The term "priced managed lanes" was only used to define HOT or Express Toll Lanes in the initial set of alternatives called the "Preliminary Range of Alternatives." As noted in footnote #7 in the DEIS Executive Summary, page ES-8, "Based on public and agency input, MDOT SHA defined priced managed lanes as High-Occupancy Toll (HOT) lanes or Express Toll Lanes (ETL) and the descriptions of the alternatives were modified accordingly." Consequently, the definitions of the Screened Alternatives were modified whereby Alternatives 5, 9, and 13B were defined as having HOT lanes and Alternatives 8, 10, and 13C were defines as having ETLs.
57	ES-8, ES-11	Executive Summary	Describe why the transit alternatives were all eliminated & how they did not meet the Purpose & Need. Why couldn't some of these be combined with highway alternatives?	Refer to Chapter 9, Section 3.2.B for a response to Alternatives Not Retained for Detailed Study.
58	ES-8	Executive Summary	The Executive Summary should include more description of the metrics that were used to screen the alternatives.	See response to Comment #36.
59	ES-11	Executive Summary	Table ES-1. What is the difference between Managed HOV lane and Managed HOT lane?	The definitions and detailed explanations of HOV and HOT lanes was provided in the DEIS on pages 2-8 and 2-9 as follows: • High-Occupancy Toll (HOT) lanes: High-Occupancy Vehicle (HOV) facilities that allow lower-occupancy vehicles, such as solo drivers, to use the facilities in return for toll payments, which could vary by time of day or level of congestion; may also charge lower-occupancy HOVs. • HOV Lanes: any preferential lane designated for exclusive use by vehicles with two or more occupants for all or part of a day, including a designated lane on a freeway, other highway or a street, or independent roadway on a separate right-of-way.

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60	ES-11	Executive Summary	How are the alternatives "accommodating direct and indirect connections to existing transit station and planned TOD"? By what means? What is an indirect connection, and how would it enhance multimodal mobility and connectivity?	An explanation of direct and indirect connections to transit stations is provided in FEIS Chapter 3, Section 3.1.4. A direct connection is where the HOT managed lanes ramps connect to an arterial at or near the location of a transit facility like at the Westfield Montgomery Mall Transit Center on Westlake Terrace. A connection is considered indirect where the transit facility is not adjacent to, but in relative close proximity to the HOT managed lanes access point, like at the Shady Grove Metro Station on I-370, and the Twinbrook and Rockville Metro Stations near Wootton Parkway.
61	ES-11	Executive Summary	Transit Components. [comment has been made during previous reviews] The section on Transit states: "While standalone transit alternatives were found to not meet the Study's Purpose and Need". We remind that throughout the IAWG process we have repeatedly expressed concerns that: (1) The limited interstate-specific study area predisposes transportation investment toward highways only, instead of a more holistic evaluation of connecting users between activity centers, and collecting users at points in between. (2) The metrics within the Purpose & Need were biased against transit, and MDOT SHA expressly refused to refine the metrics to allow for a fair comparison. (3) Transit alternatives were deliberately given negative ratings for some Purpose & Need metrics, despite their actually having positive ratings for the metrics.	Refer to Chapter 9, Section 3.1 for a response on Purpose and Need.
62	ES-11	Executive Summary	Transit Components. [comment has been made during previous reviews] Throughout the DEIS there are frequent references to the benefits of being able to operate transit and other HOV+ vehicles in the managed lanes. This DEIS should not claim these as benefits when there has not yet been demonstrated action toward implementing these statements & putting them into effect.	As described in the DEIS, SDEIS and now FEIS, buses and HOV 3+ vehicles will be able to operate toll-free in the managed lanes in the Preferred Alternative. The demonstrated action of these vehicles operating toll-free would be put into effect until the facility is constructed. These commitments have been included in the FEIS and will be stated in the Record of Decision.
63	ES-11	Executive Summary	Transit Components. The first bullet should also highlight that by providing an alternative option for navigating along the corridor, these bus services serve toward an equity component of the project.	The connection to equity benefits of transit was included in both the SDEIS and FEIS.
64	ES-12	Executive Summary	Replacement of the ALB. [comment has been made during previous reviews] The design of the American Legion Bridge improvements is expected to provide designated space for transit, pedestrians, and bicyclists. (we note that page 2-47 does identify the inclusion of pedestrian & bicycling facilities on the ALB)	The inclusion of pedestrian and bicycle facilities is included throughout the DEIS, SDEIS, FEIS, and the publicly available information regarding the ALB. The question in the DEIS was focused on whether the bridge would be part of the project wholistically.
65	ES-13	Executive Summary	How will the Toll Rates be set? [comment has been made during previous reviews] Separating the determination of the toll rate range from the rest of this process creates an additional risk to bidders. How susceptible are the bids to misjudging this range? What if the range, after its public process, is set too low for the operators to be financially viable? Could this result in the operator departing the project? Or the project experiencing cuts in capital, operations, or maintenance? Or allowing the tolls to increase beyond the initially established range?	Refer to Chapter 9, Section 3.6.B for a response to toll rate ranges and toll rate setting process.
66	ES-14		Traffic modeling only considered weekday peak periods and likely did not consider transit options. Weekend and off peak weekday periods should be tested with transit options.	Modeling was conducted to reflect the highest demand periods with the greatest need for traffic relief, which was the weekday peak periods from 6:00 AM to 10:00 AM and 3:00 PM to 7:00 PM.
67	ES-17		What could the Toll Rates be? [comment has been made during previous reviews] These Alternatives have been structured as a false choice of "All or Nothing". The Purpose and Need and associated screening metrics do not address concerns raised by the County throughout the process. In the case that the build alternatives prove to be commercially prohibitive for private firms, the lack of any viable option is unacceptable, as there would remain a need to address movement of users throughout the region. TSM/TDM alternatives such as Alternative 2 should be retained as such a potential fallback option.	Refer to Chapter 9, Section 3.1 for a response on Purpose and Need. Refer to Chapter 9, Section 3.2.B for a response to Alternatives Not Retained for Detailed Study.
68	E-17		Please briefly clarify how the system-wide delay savings shown in Table ES 2 were determined. Were they from VISSIM model output?	Yes, system-wide delay savings were calculated from system-wide delay outputs obtained from VISSIM model.

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69	ES-20		Public-Private Partnership (P3) Program. [comment has been made during previous reviews] The P3 business terms (responsibilities of the State and the Concessionaire) may impact the performance and environmental consequences of the project. These should be explicitly considered during the NEPA evaluation.	The MLS is being conducted in compliance with the National Environmental Policy Act (NEPA) and is independent from the P3 contractual terms. The MLS was initiated in 2018 prior to procurement of the Developer and prior to the execution of the P3 Agreement. Should a build alternative not be selected at the conclusion of the study, the P3 process will end. Additionally, the Developer will be required to adhere to all environmental requirements and the ROD.
70	ES-21		Phase 1 of the P3 includes I-270, but north of I-370 is not included in the DEIS but would be part of the initial P3 construction and operation. Where is the logical termini discussion and FHWA approval of splitting the P3 project into 2 separate DEIS and Record of Decision?	See response to Comment #9.
71	ES-21		How would the project be constructed? Need to clarify: if each phase will be independently bid, are there risks to having three potentially different operators for each phase? How will the recording of vehicles occur between these systems, how will revenue be allocated between varying operators, and how will users transition between systems? Will the winner of the first contract be presumed to automatically receive &/or operate the contracts for future phases? Or will the first contract otherwise establish the operating standards of those future contracts?	As described in the Supplemental DEIS, the Preferred Alternative was identified to align the NEPA approval with the planned project phased delivery and permitting approach which focused on Phase 1 South only. The Developer is responsible for the design, construction, operation and maintenance for the entirety of Phase 1 South. They have chosen to deliver the final design and construction scope under one or more subcontracts for segments they have identified as Phase South A and Phase South B. Irrespective of any subcontract arrangements, the Developer remains solely responsible to MDOT for delivering the full Phase South project scope including any interface and coordination that may be required should they choose to have multiple contractors delivering portions of the construction scope. The Phase P3 Agreement executed on August 18, 2021 with the Developer is for the delivery of the full scope of Phase 1 South and also provides MDOT the authority, if it chooses, to negotiate with the Developer to perform predevelopment work and deliver Phase 1 North, pending the NEPA study. Additional MDTA and BPW approvals would also be required before MDOT could execute an agreement with the Developer to begin predevelopment work on Phase 1 North. There is no authority for MDOT to negotiate with the Developer on any scope of work associated with any future Phases extending beyond Phase 1.
72	1-4	1.2	What happened to the "Multimodal Connectivity" performance metric?	One of the objectives of any major investment study is to identify facility improvements that also improve the linkage of the regional transportation system. Therefore, multimodal mobility and connectivity is included in the purpose of the project. The remainder of Chapter 1 discusses the needs of the study not performance metrics.
73	1-6	1.3.2	[comment has been made during previous reviews] This section gives population and employment growth, but does not appear to tie this to traffic growth. The ARDS shows that while both population and employment are increasing, traffic volumes are not increasing at a comparable rate. This reinforces that impacts to VMT should be a metric that is evaluated across each alternative. This appears to have at least been considered as it is mentioned in Chapter 4 (Environment), but is inexplicably absent in Chapter 3 (Traffic). Consideration should also be given of shifting mode shares toward non-auto travel, and especially the anticipated long-lasting effects of COVID-19 on telework.	VMT was a consideration, but was not a significant differentiator between Alternatives, and was therefore not used as one of the metrics evaluated in Chapter 3 to determine the relative merit of each Alternative. The traffic analysis shows that there could be some induced demand as a result of this project, but the impact will be small (less than 1 percent increase in vehicle miles traveled (VMT) in the region for all Alternatives. COVID-19 significantly changed travel patterns in 2020 and 2021, and the FEIS includes a detailed discussion of how conditions changed and a sensitivity analysis of the projected impacts of potential long-term changes. Refer to FEIS, Appendix C and Chapter 9, Section 3.1.
74	1-6	1.3.2	[comment has been made during previous reviews] This section does not encompass the effects of the State's Innovative Congestion Management (ICM) project along I-270. Metrics provided by the ICM project in 2017 suggested that I-270 will experience significantly improved flows, but this DEIS appears to ignore this information. [maps included]	See response to Comment #16.

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75	1-9	1.6	[comment has been made during previous reviews] There has not been any narrative supporting the need for evacuation or identifying scenarios that would call for such a response. To our knowledge, there has never been an evacuation of the DC region nor are there any likely weather events that would warrant such a large-scale evacuation apart from an apocalyptic event. Evacuations arising from manmade events are unlikely to be desirable, particularly as an important focus of Nuclear / Biological / Chemical events is containment; not spreading contaminants. The risks of war or insurrection would seem unlikely to factor into the justification of a major multi-billion highway project.	Refer to the DEIS Appendix A, Purpose and Need for the explanation of homeland security as a screening criteria.
76	1-9	1.6	[comment has been made during previous reviews] There is not any narrative toward how well a system would function during the extreme demand loadings of an evacuation and where any potential bottlenecks or other failures points would be (e.g. the lane drops along northbound I-270).	See response to Comment #75.
77	1-9	1.6	[comment has been made during previous reviews] The Homeland Security metric was used as a negative trait of transit, despite transit's demonstrated and efficient capability of moving large amounts of people rapidly -- including those without personal auto access, which is a large share of the DC Metropolitan Region.	As the focus of the Study is on I-495 and I-270, congestion on these roadways would be exacerbated in the event of an emergency evacuation and/or homeland security event, therefore, this was considered as a need for the Study. Alternatives that included additional roadway capacity would meet this need better than a standalone transit option. The standalone transit options failed to address all the major areas of concern identified and had major engineering and operational challenges associated with them. Based upon the analysis conducted and presented and input from agencies and public, FHWA and MDOT determined they would not adequately address long-term traffic growth, address trip reliability, roadway choices, and none of them accommodated homeland security and freight movement needs. The additional capacity and improvements proposed with the Preferred Alternative will best accommodate existing traffic and long-term traffic growth, enhance trip reliability, provide additional roadway travel choices, accommodate homeland security, and improve the emergency response access and accommodate population evacuation in Phase 1 South should an event related to homeland security occur.
78	1-10	1.7	[comment has been made during previous reviews] How are the managed lanes anticipated to operate with regards to freight (e.g. will trucks be allowed to use them)? How are trucks considered as a part of this evaluation criterion?	Trucks will be allowed to use the HOT Managed Lanes and were modeled as such in the VISSIM model.
79	1-10	1.7	[comment has been made during previous reviews] What truck-specific considerations have been made in these evaluations, such as variable Lane Use Factors to reflect trucks' tendencies to keep toward the right?	Truck traffic was coded using standard driving behaviors from the VISSIM model.
80	1-10	1.7	Has there been any evaluation of freight movements, patterns, and needs to support this performance metric? Where are freight trips coming from & destined to? Are their yards, distribution centers, major warehousing facilities, etc. that are key focal points, or that are key needs to serve freight movements? How does the Managed Lanes project reflect and serve these needs and patterns?	Freight-dependent industries, including goods transportation services, raw materials/intermediate products transportation services, and retail/consumer outlets, account for 19 percent of the National Capital Region's Gross Domestic Product (GDP), which totaled $464 billion in 2013 (National Capital Region Transportation Planning Board, National Capital Region Freight Plan, July 2016). Among these industries within the National Capital Region, the truck transportation mode accounts for 86 percent of the total weight and 79 percent of the total value of freight moved. Reliable travel times are critical to the movement of freight trucks and, therefore, the economy of the National Capital Region. Trucks will be permitted to use the HOT lanes in Maryland. I-495 and I-270 currently serve a large amount of regional freight traffic and it is reasonable to assume that the demonstrated benefits experienced by all vehicles would also apply to trucks.
81	1-10	1.7	[comment has been made during previous reviews] The movement of trucks is itself an ineffective metric. A more functional metric should be considered, perhaps considering net tonnage moved instead of vehicles, or a metric reflecting local access to goods & services.	Thank you for the suggestion, MDOT SHA believes the metrics used, which were concurred upon during the development of the Purpose & Need, are effective measures.

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82	1-10	1.7	[comment has been made during previous reviews] The Movement of Goods and Services metric was used as a negative trait of transit, despite transit's demonstrated and efficient capability of moving large amounts of both cargo and passengers cheaply and efficiently. The parallel rail line to I-270 is literally owned by a freight company, and leased to two passenger rail companies -- one of which is part of MDOT. Section 1.7.1 only talks about trucking without any reference at all to the movement of goods by CSX, and Section 1.7.2 excludes any mention of Amtrak or MARC. Especially with 3rd tracking of the CSX corridor as well-established need to serve an existing freight bottleneck, it is unfathomable that rail was considered unable to move goods and services other than to deliberately exclude the transit alternatives.	The focus of the Study is on I-495 and I-270. Therefore the need to improve the movement of goods and services has 2 parts: 1) movement of freight goods as freight truck contribute to and rely on daily traffic conditions on I-495 and I-270, and 2) employers and employees that rely on I-495 and I-270 to access jobs. Severe congestion on I-495 and I-270 adversely affects the regional and local roadway network, especially in and around the interchanges and arterial roads in the study area. The congestion on these corridors also has negative effects on access to and usage of other transportation modes. The Preferred Alternative includes transit elements such as Improved direct and indirect connections to park and ride lots, Metrorail, bus and other transit facilities and bus transit usages of the HOT managed lanes for free to provide an increase in speed of travel, assurance of a reliable trip, and connection to local bus service/systems on arterials that directly connect to urban and suburban activity centers; thus providing a system of systems approach to addressing overall transportation needs in the National Capital Region.
83	General	Chapter 2	[comment has been made during previous reviews] The movement of vehicles is an ineffective metric and inherently biases the analysis against HOV facilities and transit. We have repeatedly requested replacing vehicle throughput metrics with person throughput, reflecting best practices for optimizing the efficacy of transportation infrastructure.	See response to Comment #44.
84	General	Chapter 2	Prefer Dynamic tolling/ETL options. Long term - most vehicles will be more efficient HOV type vehicles. Escalating ETL cost during peak demand will encourage carpools over single occcupancy users.	As identified in the SDEIS and the FEIS, the Preferred Alternative chosen by the Lead agencies included HOT lanes. MDOT SHA's rationale supporting identification of Alternative 9 as the Recommended Preferred Alternative are focused on HOT advantages: • The HOT lanes will allow HOV 3+ vehicles to travel free, providing for a more reliable trip in managed lanes, which will reduce dependence on single occupancy vehicles. • The HOT lanes will create new opportunities for ride sharing and car/van pooling and support regional planning efforts to expand HOT/HOV lane usage. • The HOT lanes will provide new equitable opportunities because the option for free travel on the managed lanes benefits also extends to HOV 3+ car/van pools and buses. Additionally, many stakeholders expressed a preference for the Preferred Alternative to be properly coordinated with existing and currently planned managed lane projects in Northern Virginia, up to approaches to the ALB. The selection of HOT lanes would be the most operationally compatible with the existing and proposed I-495 Express (HOT) Lanes in Virginia. While specific business rules may vary between the two toll systems, the general concept of toll-paying, single-occupancy users and free or reduced HOV users would make the use of the managed lane systems for trips between Maryland and Virginia less complex than if a significantly different approach between the systems, such as ETL in Maryland, was used. Further, the existing Virginia system provides two HOT lanes in each direction and the Preferred Alternative would match this operational approach and would avoid the potential operational issues at the interface of the two systems.

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85	2-5	2.2.2	[comment has been made during previous reviews] There has not been any narrative supporting the need for evacuation or identifying scenarios that would call for such a response. To our knowledge, there has never been an evacuation of the DC region nor are there any likely weather events that would warrant such a large-scale evacuation apart from an apocalyptic event. Evacuations arising from manmade events are unlikely to be desirable, particularly as an important focus of Nuclear / Biological / Chemical events is containment; not spreading contaminants. The risks of war or insurrection would seem unlikely to factor into the justification of a major multi-billion highway project.	See response to Comment #75.
86	2-5	2.2.2	[comment has been made during previous reviews] There is not any narrative toward how well a system would function during the extreme demand loadings of an evacuation and where any potential bottlenecks or other failures points would be (e.g. the lane drops along northbound I-270).	See response to Comment #76.
87	2-5	2.2.2	[comment has been made during previous reviews] The Homeland Security metric was used as a negative trait of transit, despite transit's demonstrated and efficient capability of moving large amounts of people rapidly -- including those without personal auto access, which is a large share of the DC Metropolitan Region.	See response to Comment #77.
88	2-5	2.2.3	Has there been any evaluation of freight movements, patterns, and needs to support this performance metric? Where are freight trips coming from & destined to? Are their yards, distribution centers, major warehousing facilities, etc. that are key focal points, or that are key needs to serve freight movements? How does the Managed Lanes project reflect and serve these needs and patterns?	See response to Comment #80.
89	2-5	2.2.3	[comment has been made during previous reviews] Notwithstanding that vehicle throughput is an outdated metric and should be person throughput, this metric makes more sense for the traffic flow criteria. This gives no consideration at all of issues and needs specific to the movement of goods nor services.	Several of the metrics could be applied to different criteria. An Alternative that serves more vehicles would increase the movement of goods and services along the corridor.
90	2-5	2.2.3	[comment has been made during previous reviews] This evaluation appears to average together the impacts to all local streets across all times of day, which is a completely useless metric. Some corridors are likely to benefit, such as MD 355 outside of the Beltway, MD 192, MD 547, and potentially MD 586. Conversely, the radial corridors inside the Beltway are more likely to experience significant adverse impacts, particularly during the AM peak as more traffic is enabled to arrive at these centralized points faster, and in greater volume (as demonstrated with the Vehicle Throughput results on page 3-14). These corridors are often already congested and travel through urban areas where automotive traffic is not the priority mode. And averaging the impacts into daily values erases the effects of peak periods in peak directions. Delays, speeds, and travel time information for the Local Network is extremely important information that needs to be known at this stage. That this study does not give this level of information on the impacts to the local road network is a complete aberration from what is expected out of a traffic analyses at this stage of the project.	Refer to Chapter 9, Section 3.4.B for a response to traffic modeling and analysis.
91	2-6	2.2.5	[comment has been made during previous reviews] As stated in an earlier comment: How will need to "financially viable" be defined with respect to the inclusion of transit components within the P3 contract? Transit may include costs for capital, operating, maintenance, etc. that will vary significantly based on levels of service, and users of transit would be doing so in lieu of a toll. How will these be considered in determining rates of return on the contract?	See response to Comment #28.

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92	2-6	2.2.5	[comment has been made during previous reviews] Ensure that financial viability does not introduce an excessive bias toward alternatives that could exceed or distort considerations of technical merits. The goal should not necessarily be zero cost to the public, but rather something that optimizes technical merits for resource availability.	The purpose of considering financial viability is to evaluate alternatives that would have a reasonable ability to be funded and constructed. Alternatives with tolls would collect and provide funds for transportation improvements throughout the corridor that would not otherwise be funded or fundable due to the high cost. In Maryland, typical roadway infrastructure improvements are funded through use of Maryland's Transportation Trust Fund. However, the State's traditional funding sources, including the Trust Fund, are unable to effectively finance, construct, operate, and maintain highway systems of the magnitude required to enhance trip reliability in the study corridors. For these sorts of large projects—such as the Study—revenue sources that provide adequate funding are needed to support more immediate capacity improvements. The use of alternative funding approaches, such as pricing, tolling, or fares, provides the potential to address needed large-scale improvements decades earlier than would otherwise be realized using traditional funding. Put simply, the State of Maryland does not have the funds to construct improvements of this magnitude, which have an estimated cost of approximately $3 billion to $3.5 billion. If MDOT SHA were to fund the construction of one general purpose lane per direction for the limits of the Study and re-allocate its entire budget for capital plan expansion ($1.4 billion over the next six years), it would take more than a decade to deliver this alternative. This approach would also leave ***no additional funding*** available for other MDOT SHA capital projects across the State of Maryland during that entire timeframe. General purpose lanes are susceptible to congestion as traffic volumes increase. Once the traffic volume reaches a certain threshold, traffic operations slow, remaining congested until traffic volumes decrease. Managed lanes remedy this issue by combining two highway management tools: (1) Congestion Pricing and (2) Lane Management. Refer to FEIS Chapter 9, Section 9.3.6 for a response on managed lanes.
93	2-6	2.2.5	It seems that the statement, "alternatives with more managed lanes would result in higher revenue and those with only toll users (Express Toll Lanes) would have higher revenue than those with a mix of tolled and nontolled users (High-Occupancy Toll Lanes)," would only be true if the presence of non-tolled users reduced the number of tolled users that entered the managed lanes. If there is excess capacity expected in the managed lanes after accounting for all tolled drivers, non-tolled drivers would not be expected to take away from the actual revenue collected on the facility. I would suggest that HOT lanes not be disqualified, all else being equal, because of the presence of non-tolled vehicles, unless it can be demonstrated that their presence would significantly impact the financial viability of the alternative.	MDOT SHA agrees with MCDOT's comments and has identified two new HOT managed lanes for the Preferred Alternative, on I-495 in each direction from the George Washington Memorial Parkway to west of MD 187, and conversion of the one existing high-occupancy vehicle lane in each direction on I-270 to a HOT managed lane and adding one new HOT managed lane in each direction on I-270 from I-495 to north of I-370 and on the I-270 east and west spurs.
94	2-7	2.2.6	[comment has been made during previous reviews] As stated in an earlier comment: the Governor has declared a Climate Crisis. In this context, it is not adequate to simply meet environmental standards; this project should demonstrate excellence at evaluating environmental impacts and meeting sustainability goals. This project must fully vet the impacts of its alternatives and identify means of mitigating and improving upon environmental effects. On this topic we note that this section does not appear to provide any information on Climate Change impacts (such as any evaluation of emissions from vehicles, the enabling of increased growth in more distant and environmentally-sensitive areas, or impacts to VMT).	See response to Comment #31.
95	2-7	2.2.6	[comment has been made during previous reviews] Equity is of high public concern with projects involving priced facilities (hence the term often thrown at them: "Lexus Lanes"). Mitigating the effects of equity and improving upon these conditions is important for the alternatives to evaluate and incorporate. It is important to note that disproportionate benefits can themselves be considered to be a form of inequity.	Refer to Chapter 9, Section 3.4.D for a response to Environmental Justice and equity concerns.

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96	2-11	2.5.2.a	[comment has been made during previous reviews] These Alternatives have been structured as a false choice of "All or Nothing". The Purpose and Need and associated screening metrics do not address concerns raised by the County throughout the process. In the case that the build alternatives prove to be commercially prohibitive for private firms, the lack of any viable option is unacceptable, as there would remain a need to address movement of users throughout the region. TSM/TDM alternatives such as Alternative 2 should be retained as such a potential fallback option. TSM/TDM Alternative 2 is eliminated because it would not provide traffic relief in 2040. As with the Express Toll Lanes, TDM is also a Visualize 2045 initiative and should be retained. In addition, the lack of 2040 traffic condition improvement is partly based on the definition of the limits of the project - stopping the I-270 limits at I-370. One of the most significant TDM/TSM improvement is the extension of the HOV lane for southbound traffic from the terminus at I-370 northward to at least MD 118 Germantown Road to accommodate southbound Ride On and Commuter Bus travel.	Refer to Chapter 9, Section 3.2.B for a response to Alternatives Not Retained for Detailed Study.
97	2-12	Chapter 2	Alternative 4/7. HOV alternatives dropped because current lanes only being used at 75% and could not support long term growth support. At issue is not that HOV lanes are not performing now, the issue is that the HOV lanes along I-270 do not connect to I-495 HOV lanes and there is a lack of direct ramp connections that would make use more convenient and would increase HOV travel time savings. A network of HOV lanes would improve long term performance.	Refer to Chapter 9, Section 3.2.B for a response to Alternatives Not Retained for Detailed Study.
98	2-13	Chapter 2	Alternative 14C is dropped from consideration because in part the regional analysis of BRT did not reduce sufficient traffic along I-495 to be effective. However, the DEIS does not indicated this analysis related to I-495. In addition, the reference is for the entire region's impact from the regional BRT network and there are no calculations for I-495 referenced. The Montgomery County BRT projects listed in the DEIS are all in the constrained long range plan and should be constructed regardless of the I-495 managed lane alternative chosen. The BRT projects should already be in the baseline 2040 network.	Refer to Chapter 9, Section 3.2.B for a response to Alternatives Not Retained for Detailed Study. Refer to Chapter 9, Section 3.4.B for a response to traffic modeling and analysis.
99	2-13	2.5.2.f	[comment has been made during previous reviews] We remind that throughout the IAWG process we have repeatedly expressed concerns that: (1) The limited interstate-specific study area predisposes transportation investment toward highways only, instead of a more holistic evaluation of connecting users between activity centers, and collecting users at points in between. (2) The metrics within the Purpose & Need were biased against transit, and MDOT SHA expressly refused to refine the metrics to allow for a fair comparison. (3) Transit alternatives were deliberately given negative ratings for some Purpose & Need metrics, despite their actually having positive ratings for the metrics.	Respectfully disagree. Refer to Chapter 9, Section 3.1 for a response on the Purpose and Need.
100	2-14	Chapter 2	Alternative 5 with one managed lane in each direction along I-495 and converting the existing HOV lane on I-270 to a managed lane closely resembles the County Master Plan from ALB to the west leg of I270 to the I-370 project limits. The County Master Plan does not have HOV/HOT lanes on I-495 east of I-270 connector. Any alternative other than Alternative 5 and TSM/TDM require a Master Plan amendment.	The Preferred Alternative included two new, HOT managed lanes for the Preferred Alternative, on I-495 in each direction from the George Washington Memorial Parkway to west of MD 187 and conversion of the one existing high-occupancy vehicle lane in each direction on I-270 to a HOT managed lane and adding one new HOT managed lane in each direction on I-270 from I-495 to north of I-370 and on the I-270 east and west spurs. Therefore, a Master Plan amendment will be required to match the Preferred Alternative.
101	2-14	2.5.2.f	[comment has been made during previous reviews] The paragraph discussing future plans for MARC should highlight the planned third tracking, difficulties in operating MARC service on a CSX-owned line, and also identify the existing freight bottleneck.	Thank you for your comment. Although the additional information could be added, this section of the DEIS was not republished in the SDEIS nor the FEIS, so this addition was not included.
102	2-14	2.5.2.f	[comment has been made during previous reviews] This section should include at least some reference as to the presence of the Amtrak Capital Limited service.	This section of the DEIS was not republished in the SDEIS nor the FEIS, so this addition was not included. The information has been noted and considered.

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103	2-14	2.5.2.f	[comment has been made during previous reviews] The dropping of the light rail alternative because of the Purple Line has absolutely no nexus with any consideration of rail transit along I-270.	MDOT SHA acknowledges that the Purple Line does not offer transit opportunities for motorists specifically along I-270; however, the Metrorail Red Line runs parallel to I-270 from I-370 to I-495. The Purple Line will link to the Red Line at the Bethesda Station and provide a continuous transit route for motorists coming down the I-270 corridor and heading circumferentially across Montgomery County to Prince George's County. Additionally, the standalone transit options failed to address all the major areas of need identified and had major engineering and operational challenges associated with them. As one example, the Purple Line FEIS and Purple Line Travel Forecasts Results Report evaluated the impact of transit alternatives on overall automobile usage by presenting the vehicle miles traveled (VMT) in the region. The results showed that in 2040, under the Purple Line Preferred Alternative, there would be a negligible reduction in VMT on I-495 versus the 2040 Purple Line No Build Alternative. Based upon the analysis conducted and presented and input from agencies and public, FHWA and MDOT determined they would not adequately address long-term traffic growth, address trip reliability, roadway choices, and none of them accommodated homeland security and freight movement needs. For these reasons, those standalone transit alternatives were dropped from further consideration. Refer to DEIS, Chapter 2, Section 2.5.2. Also see Chapter 9, Section 3.1 and 3.2 for additional Purple Line references.
104	2-14, 2-16	2.5.2.f	[comment has been made during previous reviews] Due to the tailoring of the Purpose & Need against transit, there was no significant analysis to demonstrate any of the reasons given for excluding Heavy/Light Rail Transit and Bus Rapid Transit are actually true. One good example of this is stating that rail transit alternatives will not provide alternative roadways travel choices. Of course they wouldn't: they are literally not roadways. But that does not mean they don't move people or freight. With proper planning and investment: transit connections could serve large volumes of people, could provide alternative travel choices, and can be extremely reliable; to say this is not the case is an outright false statement.	Refer to Chapter 9, Section 3.1 for a response on the Purpose and Need.
105	2-15	Chapter 2	I-200 Diversion Alternative scope includes adding managed lanes to I-95 from I-200 to I-495. The local officials' alternative description did not include these additional managed lanes that has environmental and capital cost implications. The I-200 diversion alternative has no residential property takes, and minimal parks, wetlands, and capital costs that would be further reduced if the I-95 managed lanes from I-200 to I-495 segment were removed from the alternative.	Refer to Chapter 9, Section 3.2.B for a response to Alternatives Not Retained for Detailed Study.
106	2-16	Chapter 2	Toll rates are to be set by MDTA and are required to manage traffic to average 45 mph speed. However, Board of Public Works (BPW) condition on the P3 program is to fund specific transit improvements/services in both Montgomery County and Prince George's County (and Frederick County though not specifically mentioned). The required transit elements may increase the toll, change managed lane demand and financing. The transit provisions should be studied in the DEIS.	Since the DEIS was published, the toll rate range setting process was completed by the Maryland Transportation Authority between May and November 2021. Detailed overview of the process and the approved toll rate ranges are provided in SDEIS Chapter 2, Section 2.3.6 and FEIS Chapter 3, Section 3.1.9. As noted by the analysis, standalone transit alternatives are not anticipated to provide sufficient reduction to VMT to meet the Purpose and Need criteria including not adequately addressing long-term traffic growth, address trip reliability, roadway choices, and none of them accommodated homeland security and freight movement needs. However, the Preferred Alternative includes multiple elements to enhance transit mobility and multi-modal connectivity in furtherance of the established Purpose and Need and in response to public and agency comments supporting such elements. Refer to FEIS Chapter 3, Section 3.1.4 and Section 3.2.1 for more detail on specific transit elements in the Preferred Alternative. Also refer to FEIS Chapter 9, Section 3.3.D.
107	2-16	2.5.2.f	I concur with the removal of Alternative 15 (Dedicated Bus Managed Lanes).	No response needed.

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108	2-17	2.5.2.f	The DEIS/FEIS should include the transit TDM elements.	Refer to Chapter 9, Section 3.2.B for a response to Alternatives Not Retained for Detailed Study.
109	2-18	Chapter 2	Reference to the WMATA Bus Transformation Study is not appropriate since the region was not endorsed the entire report.	The WMATA Bus Transformation Study was referenced (on page 2-45 not page 2-18) because of the public survey and the responses regarding barriers to bus ridership. The DEIS noted that the Study could provide an opportunity to address some of the identified barriers -- it was not endorsing nor rejecting the full study or the action plan.
110	2-19	Chapter 2	Phase 1 will only proceed with either HOT lanes or ETL as preferred alternative. This statement biases the DEIS process by predetermining the outcome.	MDOT SHA could not find the noted sentence on page 2-19. However, there was a statement on page 2-47 that said "In the event that HOT or ETL managed lanes are not part of the Preferred Alternative in the Study FEIS or the Selected Alternative in the ROD, the solicitation for Phase 1 will not proceed." If this is the intended reference, it states that the ***solicitation*** for Phase 1 would not proceed, not that the project would not proceed.
111	2-19	2.5.3.b	The discussion regarding the MD 200 Diversion Alternative, the challenges it would face in adequately addressing long-term growth and trip reliability, and its inadequate performance compared to the operational screening metrics. The DEIS should have explored ways to overcome these challenges	Refer to Chapter 9, Section 3.2.B for a response to Alternatives Not Retained for Detailed Study.
112	2-20	2.5.3.a	Is the text supposed to say, "the same diversion route could occur in the opposite direction heading from Virginia to points north of the *I-95 and MD 200 interchange* "? It currently just says "north of I-95," which is a bit unclear.	Yes, the text for the diversion route in the opposite direction could also have said points north of the I-95 and MD 200 interchange.
113	2-21	2.5.3	Please clarify why there would be a 15% decrease in speed along the I-495 Inner Loop during the morning peak period, compared to No-Build. This seems counterintuitive if there is a diversion of some vehicles away from the top side of I-495. Also, please clarify why the HOT lanes would not be able to achieve 45mph.	This section is summarizing the results presented in the MD 200 Diversion Alternative Analysis Results Paper. Refer to DEIS Appendix B, the Alternatives Technical Report, specifically to Appendix A within that Technical Report for more detail.
114	2-25	2.6.1	Do the No-Build and Build alternatives assume the construction and operation of a BRT network in Montgomery County? BRT is mentioned as included in the CLRP, but it is a bit unclear if it was included in the analysis of alternatives. Please clarify.	Yes, the No Build and Build Alternatives assumed the background projects listed on page 3-4 of the DEIS were part of the travel demand model, including several BRT projects.
115	2-28	2.6.4	For Alternative 9M (and for all alternatives where managed lanes will need to transition to fewer or greater number of managed lanes), has consideration been given to the user/driver ability to safely navigate these transition zones? Are there expected to be significant operational impacts in these transition zones? If so, it may be good to briefly mention this here.	The operational impacts of the transition zones are included in the traffic sections in each respective environmental documents (DEIS, SDEIS, and FEIS). The design and signing of any transition zones would meet the safety requirements of interstate design criteria defined by FHWA and MDOT SHA.
116	2-31	2.6	We note the estimates between 25-34 residential displacements and 4 business displacements versus the longstanding State assertion that the project would have zero displacements.	The Preferred Alternative was identified after extensive coordination with resource agencies, the public, and stakeholders to respond directly to feedback received on the DEIS to avoid or minimize residential and business displacements and impacts to significant environmental resources. The Preferred Alternative includes two new, HOT managed lanes on I-495 in each direction from the George Washington Memorial Parkway to west of MD 187 and conversion of the one existing high-occupancy vehicle lane in each direction on I-270 to a HOT managed lane and adding one new HOT managed lane in each direction on I-270 from I-495 to north of I-370 and on the I-270 east and west spurs. The Preferred Alternative includes no action or no improvements at this time on I-495 east of the I-270 spur to MD 5 in Prince George's County, including the elimination of the 25 to 34 residential displacements and 4 business displacements. Consequently, the Preferred Alternative does not result in any full acquisitions or residential or business displacements. Any future proposal for improvements to the remaining parts of I-495 within the study limits, outside of Phase 1 South, would advance separately and would be subject to additional environmental studies, analysis, and collaboration with the public, stakeholders, and agencies.

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117	2-31	2.6	Need to identify each residential & business displacement / relocation, and identify what is being done to assist with their relocation regarding their individual interests, costs, destinations, and for businesses: their continued viability.	See response to Comment #116.
118	2-32	2.7.1	[comment has been made during previous reviews] Where BRT facilities are master planned: include BRT facilities across the 270 and 495 corridors at interchanges.	The North Bethesda Transitway identified in the Countywide Transit Corridors Functional Master Plan is the only BRT facility corridor that crosses the interstates with the Phase 1 South limits. Other BRT corridors cross I-495 within the study limits, but outside of the improvement limits. The segment of the North Bethesda Transitway that crosses the I-270 east spur and I-270 west spur along MD 187 and Westlake Terrace includes dedicated lanes for BRT; however, specific treatment for dedicated lanes has not been designated. The bridge was not build to accommodate the master planned dedicated BRT lanes because the BRT study would need to go through a full planning study before that potential typical section configuration is confirmed. The bridge will be built to not preclude widening to accommodate the potential future BRT lanes.
119	2-32	2.7.1	[comment has been made during previous reviews] Include ped/bike facilities across the 270 and 495 corridors at interchanges as well as at non-interchange crossing points. Facilities are expected to meet applicable standards, best practices, and master plans, particularly the approved Bicycle Master Plan and the Pedestrian Master Plan currently in development. Replacing-in-kind (as stated on page 2-47) is NOT acceptable. Note that the Bike Master Plan calls for grade separated crossings across free-flow ramps. We also remind that while our Bicycle Master Plan includes prioritization for bikeways, it also states that any bikeways where other projects are occurring are to be considered the highest priority for purposes of implementation with those projects.	Refer to Chapter 9, Section 3.3.D for a response to Analysis of Alternatives Retained for Detailed Study.
120	2-34	2.7.1	[comment has been made during previous reviews] The lack of any access to the Forest Glen Metro Station directly conflicts with statements on pages such as ES-11 and 2-13 which emphasize the benefits of the project at connecting to facilities such as Metro stations. Even if there is not a full interchange, with the high volume of and potential for Kiss & Ride use at this location: there is a need for some form of Kiss & Ride access served by the Managed Lanes. This could potentially be an in-line Kiss & Ride facility, noting the presence of the Metro Station running beneath the Beltway.	As described in the Supplemental DEIS, the Preferred Alternative was identified after coordination with resource agencies, the public, and stakeholders to respond directly to feedback received on the DEIS to avoid displacements and impacts to significant environmental resources, and to align the NEPA approval with the planned project phased delivery and permitting approach which focused on Phase 1 South only. The Preferred Alternative includes no action or no improvements at this time on I-495 east of the I-270 spur to MD 5 in Prince George's County. Your comment had been identified in the DEIS related to build alternatives that would have spanned the entire study area. Because the Forest Glen Metro is located outside the Preferred Alternative limits of build improvements, those impacts have now been completely avoided. Any future proposal for improvements to the remaining parts of I-495 within the study limits, outside of Phase 1 South, would advance separately and would be subject to additional environmental studies, analysis, and collaboration with the public, stakeholders, and agencies.
121	2-42	2.7.5.b	[comment has been made during previous reviews] Separating the determination of the toll rate range from the rest of this process creates an additional risk to bidders. How susceptible are the bids to misjudging this range? What if the range, after its public process, is set too low for the operators to be financially viable? Could this result in the operator departing the project? Or the project experiencing cuts in capital, operations, or maintenance? Or allowing the tolls to increase beyond the initially established range?	Since the DEIS was published, MDOT and MDTA received approval from the MD Board of Public Works to award the Phase 1 P3 Agreement to the Selected Proposer. Additionally, the toll rate range setting process was completed by the Maryland Transportation Authority (MDTA) between May and November 2021. Detailed overview of the process and the approved toll rate ranges are provided in SDEIS Chapter 2, Section 2.3.6 and FEIS Chapter 3, Section 3.1.9. Additional information can also be found on their website: https://mdta.maryland.gov/ALB270TollSetting/TollRateRangeSettingProcessAndApprovedTollRateRanges

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122	2-42	2.7.5.b	[comment has been made during previous reviews] Based on the toll assumptions presented on page ES-13: what is the anticipated revenue of these roll rates, and how do they compare to the cost of each alternative? How many years are estimated before each alternative would generate enough revenue as to surpass its costs? Comparing these per mile toll estimates with anticipated traffic volumes, it appears this would amount to approximately $130-145m/yr, and based only on the capital costs on page ES-17, it would take between 65-80 years until revenue matches costs (not accounting for operations & maintenance). How does this compare to the 50 year P3 agreement anticipated per page 2-6? Does this toll range conform to estimates from bidders and their expectations of the project?	Since the DEIS was published, MDOT and MDTA received approval from the MD Board of Public Works to award the Phase 1 P3 Agreement to the Selected Proposer for a 50-year agreement. The Selected Proposer completed their own evaluation of the cost-effectiveness of the project prior to submitting their proposal.
123	2-44	2.7.5	On this page it is affirmed that is presently assumed HOV 3+ would have free access to the managed lanes. We concur with this assumptions and welcome its inclusion.	No response needed.
124	2-44	2.7.5	[comment has been made during previous reviews] Are there any other cases where continuous toll facilities such as this have transitioned between jurisdictions & business rules? It may be helpful to share with a future IAWG how such cases have been addressed. Items of interest would include physical infrastructure (such as exchange ramps) and informational awareness (how to explain the change of business rules to users-on-the-go, help them make decisions, and then guide them through their decisions). We reiterate our urging that the pricing reflect the same pricing system (e.g. HOV allowances, discounts, exclusions) as in Virginia, and/or that comparable HOV allowances be maintained within any Priced Managed lanes to achieve equity obligations and also as per our comments dating to the Purpose and Need.	There is an example in Dallas, Texas, where there are adjacent facilities that will have different business rules - it is at the east end of I-635 called the LBJ Expressway. There are no locations where facilities cross state lines, because most major metropolitan areas are wholly within one state. In Dallas, there is a HOT lane that offers reduced costs to HOV and motorcycles and it currently connects to an HOV-only lane. The HOV lane is being converted to a HOT lanes and it will be open in 2024. Because the managed lanes in Maryland and Virginia are being managed by different states with different legal tolling requirements, the business rules will be different. The two states are cooperating to align the rules where feasible, but not all toll rates and business rules will be consistent. Signage as necessary will be included.
125	2-47	2.7.7	[comment has been made during previous reviews] Include ped/bike facilities across the 270 and 495 corridors at interchanges as well as at non-interchange crossing points. Facilities are expected to meet applicable standards, best practices, and master plans, particularly the approved Bicycle Master Plan and the Pedestrian Master Plan currently in development. Replacing-in-kind (as stated on page 2-47) is NOT acceptable. Note that the Bike Master Plan calls for grade separated crossings across free-flow ramps. We also remind that while our Bicycle Master Plan includes prioritization for bikeways, it also states that any bikeways where other projects are occurring are to be considered the highest priority for purposes of implementation with those projects.	See response to Comment #119.
126	2-50	2.8	While we have long recognized that a public cost may be associated with this project, and that is not itself a bad thing, we note the estimates of between $482-1088m of public subsidy given in this section versus the longstanding State assertion that the project would have a zero cost to taxpayers. These values also do not appear to include some (or potentially all?) utility relocations, as per our understanding that WSSC efforts would be at their cost and, subsequently, amount to approximately $2b passed onto their customers.	See response to Comment #23.

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127	2-50	2.8	How do these cash flow scenarios affect the estimated time for revenues to surpass costs for the project, and how do these compare to the 50-year P3 agreement? What if this timeframe is longer than 50 years? How will that affect the P3 agreement or the facilities operations beyond the 50th year? What if this timeframe is shorter than 50 years? Does this imply a cost to taxpayers of upwards of $2,762m per year between the Return On Investment year and the P3's sunset? With the Statewide CTP estimating $13,400m for the 2021-2026 program, meaning an average of $2,233m per year of capital transportation projects throughout the State ... is it correct to view this potential annual subsidy as greater than the entire capital budget for transportation?	The cash flow scenarios in the DEIS represented the estimated net funding position assuming an indicative toll revenue concession P3 with a 50-year term. As such, they are indicative of the scenario mentioned in the question. It is reasonable to assume that an alternative with a higher net funding position would have total revenue exceeding total costs earlier than an alternative with lower net funding position as all other assumptions have been held the same across alternatives for the purposes of the analysis. A term longer than 50 years would increase the net funding position of the analysis for all build alternatives retained for detailed study (i.e. Alternatives 5, 8, 9, 10, 13B, 13C). However, it would be expected that the relative net funding positions of the build alternatives would be the same (i.e. the ranking of alternatives and relative cashflows). In a P3 agreement, there would be handback provisions requiring the Developer to return the facility to the state in a certain acceptable condition at the end of the term. If the term were extended, we would expect those handback provisions to be the same, resulting in no difference to facility operations beyond the 50th year. A term shorter than 50 years would reduce the net funding position of each build alternative. The $2,762m figure is not an annual amount. Rather, it represents the sum of cash flows over the entire 50 years. Under the P3 delivery approach, this scenario with a positive net funding position would mean value flows to the state/taxpayers; it is not a subsidy from the state to the project. Subsidy amounts are represented by negative numbers. Negative numbers indicate a subsidy requirement over the projected 50 year term of a P3 delivery model, not an annual requirement. As such, it is not appropriate to multiply these amounts to compare to capital budgets.
128	General	Chapter 3	What are the ADTs for the managed lanes, at various points in the system? This information is needed for our own evaluations of the EIS and would seem to be a rather fundamental metric. It may also be helpful information for potential bidders.	See response to Comment #17.
129	General	Chapter 3	[comment has been made during previous reviews] Provide an O-D Matrix of travel times for both the Managed and General Purpose lanes for each access point along I-270 and I-495 (with accompanying narrative, as needed). This will help better understand flows, identify specifically failing pairings, and better tailor responses to these needs. This is especially important considering it is our understanding that many/most trips along these facilities are relatively short in nature, using the interstate for only a few interchanges. Therefore longer & larger systemic effects may be of less utility to actual users.	The origin-destination travel time matrix has been included in the Final Traffic Analysis Report, FEIS Appendix A.
130	General	Chapter 3	This project claims to improve traffic, but the project's analysis finds that in many cases the Managed Lanes barely perform better than the General Purpose Lanes, and in some segments they perform even worse. In numerous cases the General Purpose lanes worsen significantly as compared to No Build conditions. Would MDOT accept degraded performance of the General Purpose lanes in the interest of providing priced managed lanes? Penalizing current users of these roads does not seem to be consistent with the stated policy objectives of this program. If MDOT does indeed accept this outcome, it is imperative that equity be considered, and actions be incorporated into the project, to address the needs of users most adversely impacted. The project's Purpose & Need includes creating new options for users, but the Build alternatives instead appear to reduce options available to users unable to afford or otherwise access the managed lanes. Based on this traffic information, none of these Build alternatives should be considered to satisfy this metric of the Purpose & Need.	See response to Comment #12. The intent is to provide improved operations in both the managed lanes and the general purpose lanes throughout the project area. In situations where the general purpose lanes do not appear to operate as well as the No Build condition, it may be due to the No Build metering traffic. For other situations, the project team is evaluating design refinements to address the issue.
131	General	Chapter 3	Practices, assumptions, locations, and methodology seem typical	No response needed.

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132	General	Chapter 3	Did the operational analysis of each of the Build alternatives account for the congestion/operational/queuing issues that existing along many of the arterials interchanging with I-495 and I-270? This is important to take into account and review, since additional throughput along the freeways may exacerbate some of the operational issues that already exist along these arterials, and could affect operations on the freeways more than if just the ramps/ramp terminal intersection impacts are modeled.	The model used for the DEIS included the ramp terminals and cross streets, and the results presented in the DEIS account for the interaction between the freeway and the interchange junctions. Additional modeling and evaluation of cross streets and adjacent intersections was conducted for the Preferred Alternative as part of MDOT SHA's Application for Interstate Access Point Approval. Refer to FEIS, Appendix B.
133	3-1	3.1.1	Please clarify how peak period demand was determined for the study corridor. Simply using traffic count volumes at a location may not reflect true demand; upstream unconstrained volumes should be considered.	Raw count data was adjusted to reflect demand, where appropriate. This is addressed in the Traffic Technical Report (DEIS Appendix C) in Section 2.7.
134	3-1	3.1.1	It is good that hourly speed data was collected to assist with calibration of the base VISSIM operational models. Was field data such a queuing (both on freeways and adjacent interchange ramp terminals/cross street intersections) considered and reasonably in the base modeling?	Yes, queuing was considered. Refer to the VISSIM Calibration Memo included with DEIS Appendix C (Appendix D within the Traffic Technical Report).
135	3-1	3.1.1	Please clarfiy the extent to which interchange cross streets were modeled in VISSIM. Were just the ramps and ramp terminal intersections modeled, or did the model continue on either side of the interchange to get a clearer representation of these cross street operations in the vincinities of interchanges?	The models used to evaluate Alternatives in the DEIS included the ramp terminal intersections and adjacent intersections in locations where the cross street operations could impact freeway operations. Additional operational analysis focusing on the interchange ramps, ramp terminal intersections, and adjacent cross street intersections was completed as part of MDOT SHA's Application for Interstate Access Point Approval, and the results are included in FEIS Appendix B.
136	3-3	Figure 3-1	The Figure shows the Watkins Mill Road interchange as future, but it is now currently in operation. Please update as necessary.	The figure was updated in the SDEIS and FEIS.
137	3-4	3.1.3	Given that the CCT is assumed to be part of the base network, is the State indicating a renewed willingness to fund and implement the project, or perhaps to include it as part of the P3 project?	As part of the Managed Lanes Study, MDOT SHA has made a commitment to certain regional transit improvements to enhance existing and planned transit and support new opportunities for regional transit service. One of the commitments related to the Corridor Cities Transitway, includes an agreement to fund not less than $60 million (upon financial close of the Section P3 Agreement for Phase 1 South) for design and permitting of high priority transit investments in Montgomery County and committed to deliver the Metropolitan Grove Bus Operations and Maintenance Facility including the necessary bus fleet. Refer to FEIS Chapter 3, Section 3.1.4 and Section 3.2.1.
138	3-4	3.1.3	Corridor Cities Transitway and US 29 BRT are assumed as completed transit projects in year 2040. What assumptions were made for how they would operate?	These projects were coded into the MWCOG regional forecasting model, prior to MDOT SHA receiving the model. The assumptions for how these projects would operate were coordinated between MWCOG and the local jurisdictions, therefore, including Montgomery County.
139	3-4	3.1.3	Exit points from the managed lanes? Same as entry points?	Yes, the locations listed serve both entry and exit from the Managed Lanes, unless specified otherwise.
140	3-5	3.1.3	The final paragraph discusses tolling rates assumed per mile (for planning purposes), with a range from $0.20 to $1.36 per mile. What is the likelihood that these rates are insufficient to maintain a maximum of 1,700 vehicles per hour per lane and minimum 45 mph operating speeds? If this does occur, is it addressed through raising tolls until the demand recedes? I could envision a negative public reaction if toll ranges are announced, and they need to be raised above that range frequently, so it is important to establish expectations early. Also, once a vehicle is within the managed lane system, are the toll rates per mile "locked in" until the vehicle exits the system? Or will the rates rise and fall as the vehicle traverses different segments with different demands? This again goes back to expectations, so a motorist is not surprised by a sudden surge in toll costs (and is given an opportunity to exit the system if the toll becomes too high). It also could affect operations on the general purpose lanes.	Since the DEIS was published, the toll rate range setting process was completed by the Maryland Transportation Authority between May and November 2021. Detailed overview of the process and the approved toll rate ranges are provided in SDEIS Chapter 2, Section 2.3.6 and FEIS Chapter 3, Section 3.1.9. Additional information can also be found on their website: https://mdta.maryland.gov/ALB270TollSetting/TollRateRangeSettingProcessAndApprovedTollRateRanges
141	3-6	3.2	I think it would be helpful to provide a figure here mapping out the congested and severly congested segments of I-495 and I-270 during the peaks, based on TTI values. It could help give a scope of the congestion.	Similar figures were included elsewhere in the document, including Figures 3-9 and 3-10 in the Traffic Technical Report (DEIS, Appendix C).

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142	3-8	3.3	Table 3-3 shows 2040 Build Traffic. The Build alternatives show ADTs that are higher than No-Build. It may be helpful to discuss this growth in the context of increased person-throughput, improved travel times, and travel reliability in this section (even though subsequent sections discuss some of these topics). Also, it may be helpful to clarify if this traffic growth has any significant impact on loss of trips via Metro, BRT, etc.	Text was added above FEIS Chapter 4, Table 4-2 that notes "Locations that add capacity to I-270 and I-495 under the Preferred Alternative would be projected to see an increase in daily traffic volumes served compared to the No Build Alternative because the freeways would be able to accommodate latent demand that would otherwise use the local roadway network to avoid congestion."
143	3-8, 3-9	3.3.1	While this section alludes to more detailed travel speed information in Appendix C, it may be helpful to provide a general note highlighting any significant speed benefits experienced on a segment level, which may be watered down by taking an average of a much longer corridor.	Chapter 4 of the FEIS includes a discussion of notable speed benefits/impedances. Comprehensive speed data is included in FEIS Appendix A.
144	3-9	3.3.1	[comment has been made during previous reviews] We note that for Alternative 13B: along northbound I-270 between I-495 and I-370, during the PM peak, the average speed of the General Purpose lanes (43 MPH) is faster than the Managed Lanes (40 MPH). The narrative should elaborate on why this is.	The intent of Chapter 3 was to provide an overview of the relative benefits of each Alternative. The speed issue was likely caused by congestion backing into the Managed Lanes under Alternative 13B and would have been vetted further if this Alternative was carried forward.
145	3-9	3.3.1	[comment has been made during previous reviews] The General Purpose lanes operate more slowly than No Build conditions under the following scenarios: - AM peak, NB 270 between 495 and 370, all alternatives (3% reduction) - AM peak, SB 270 between 370 and 495, alternative 5 (3% reduction) - AM peak, SB 270 between 370 and 495, alternative 10 (16% reduction) - AM peak, SB 270 between 370 and 495, alternative 13C (34% reduction) - PM peak, NB 270 between 495 and 370, alternatives 5 (26% reduction) - PM peak, NB 270 between 495 and 370, alternatives 8 (4% reduction) - PM peak, NB 270 between 495 and 370, alternatives 9 (17% reduction) - PM peak, NB 270 between 495 and 370, alternatives 9M (23% reduction) - PM peak, NB 270 between 495 and 370, alternatives 10 (34% reduction) - PM peak, NB 270 between 495 and 370, alternatives 13B (19% reduction) - PM peak, NB 270 between 495 and 370, alternatives 13C (15% reduction) - PM peak, SB 270 between 370 and 495, alternatives 5 (70% reduction) - PM peak, SB 270 between 370 and 495, alternatives 8 (46% reduction) - PM peak, SB 270 between 370 and 495, alternatives 9 (18% reduction) - PM peak, SB 270 between 370 and 495, alternatives 9M (64% reduction) - PM peak, SB 270 between 370 and 495, alternatives 10 (16% reduction) - PM peak, SB 270 between 370 and 495, alternatives 13B (58% reduction) - PM peak, SB 270 between 370 and 495, alternatives 13C (20% reduction)	The results presented in the DEIS were preliminary and conservative. The noted issues referenced here were investigated during development of the SDEIS and FEIS, and the updated results no longer show a reduction in GP lane speeds in these areas for the Preferred Alternative compared to the No Build. Refer to FEIS Chapter 4 and FEIS Appendix A for detailed traffic analysis results.
146	3-10	3.3.2	[comment has been made during previous reviews] The Delay metrics appear to combine both General Purpose and Managed Lanes. As such, this is not a particularly useful metric. The aggregate nature of this metric may allow the effects of the managed lanes or the general purpose lanes to be overrepresentative, and we urge that this metric separate these for managed lanes and general purpose lanes, individually.	Some metrics, like system-wide delay, use aggregate results, while others (such as TTI and average speed) look specifically at the GP lanes.

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147	3-10	3.3.3	[comment has been made during previous reviews] The General Purpose lanes have a higher TTI than No Build conditions under the following scenarios: - AM peak, 495 Outer Loop between 270 and VA 193, alternative 5 (42% worse) - AM peak, 495 Outer Loop between 270 and VA 193, alternative 8 (8% worse) - AM peak, 495 Outer Loop between 270 and VA 193, alternative 9 (42% worse) - AM peak, 495 Outer Loop between 270 and VA 193, alternative 9M (42% worse) - AM peak, 495 Outer Loop between 270 and VA 193, alternative 10 (42% worse) - AM peak, 495 Outer Loop between 270 and VA 193, alternative 13B (42% worse) - AM peak, 495 Outer Loop between 270 and VA 193, alternative 13C (33% worse) - AM peak, 495 Inner Loop between 270 and 95, alternative 5 (50% worse) - AM peak, 495 Inner Loop between 270 and 95, alternative 8 (20% worse) - AM peak, 495 Inner Loop between 270 and 95, alternative 9 (30% worse) - AM peak, 495 Inner Loop between 270 and 95, alternative 9M (50% worse) - AM peak, 495 Inner Loop between 270 and 95, alternative 10 (20% worse) - AM peak, 495 Inner Loop between 270 and 95, alternative 13B (20% worse) - AM peak, 495 Inner Loop between 270 and 95, alternative 13C (20% worse) - AM peak, SB 270 between 370 and 495, alternative 10 (13% worse) - AM peak, SB 270 between 370 and 495, alternative 13C (47% worse & now failing)	The revised results in the FEIS are based on the updated design and only show one location with higher TTI in the Preferred Alternative compared to the No Build - I-495 Inner Loop from VA 193 to I-270. This is due to traffic being metered from reaching this location under the No Build condition due to congestion in Virginia approaching the American Legion Bridge.
148	3-10	3.3.3	[comment has been made during previous reviews] The General Purpose lanes have a higher TTI than No Build conditions under the following scenarios: - PM peak, NB 270 from 495 to 370, alternative 5 (40% worse) - PM peak, NB 270 from 495 to 370, alternative 8 (10% worse) - PM peak, NB 270 from 495 to 370, alternative 9 (30% worse) - PM peak, NB 270 from 495 to 370, alternative 9M (30% worse) - PM peak, NB 270 from 495 to 370, alternative 10 (60% worse) - PM peak, NB 270 from 495 to 370, alternative 13B (30% worse) - PM peak, NB 270 from 495 to 370, alternative 13C (20% worse) - PM peak, SB 270 from 370 to 495, alternative 5 (236% worse & now failing) - PM peak, SB 270 from 370 to 495, alternative 8 (82% worse & now failing) - PM peak, SB 270 from 370 to 495, alternative 9 (18% worse) - PM peak, SB 270 from 370 to 495, alternative 9M (182% worse & now failing) - PM peak, SB 270 from 370 to 495, alternative 10 (18% worse) - PM peak, SB 270 from 370 to 495, alternative 13B (136% worse & now failing) - PM peak, SB 270 from 370 to 495, alternative 13C (27% worse)	See response to Comment #147.
149	3-10	3.3.3	[comment has been made during previous reviews] In addition to the TTI information it would be helpful to compare the mean and standard deviation of travel times in each direction of the General Purpose lanes.	The average travel time for each direction of the General Purpose Lanes in each direction was provided in the DEIS Appendix C, Traffic Technical Report.
150	3-10	3.3.3	Please clarify what "weighted Average TTI" means in this section	This value reflects the average of the 16 TTI segment values for each Alternative in DEIS Table 3-8, weighted based on segment length.
151	3-11	3.3.3	[comment has been made during previous reviews] The focus only on the General Purpose lanes ignores that Managed Lanes users using sliplanes will also be affected by the General Purpose lane's congestion. Given the increased delays in the General Purpose lanes, in cases where managed lanes users must use atgrade sliplanes to enter or exit the sliplanes: clarify whether there are any O-D pairings whereby the additional time spent in the General Purpose lanes is such that a Managed Lane user's net travel time is worse than the same trip under No Build conditions.	This level of detailed analysis is included in MDOT SHA's Application for Interstate Access Point Approval in the FEIS Appendix B.

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152	3-11	Table 3-8	Based on Table 3-8, the segment of I-495 Inner Loop from I-270 to I-95 continues to experience severe congestion in the PM peak, even under all Build alternatives. Can there be some brief discussion here about why that is, and what would be necessary to bring the TTI down below the severe threshold (if it is even feasible)?	As described in the Supplemental DEIS, the Preferred Alternative was identified after coordination with resource agencies, the public, and stakeholders to respond directly to feedback received on the DEIS to avoid displacements and impacts to significant environmental resources, and to align the NEPA approval with the planned project phased delivery and permitting approach which focused on Phase 1 South only. The Preferred Alternative includes no action or no improvements at this time on I-495 east of the I-270 spur to MD 5 in Prince George's County. Your comment had been identified in the DEIS related to build alternatives that would have spanned the entire study area. Because the segment of I-495 from I-270 to I-95 is located outside the Preferred Alternative limits of build improvements, those impacts have now been completely avoided. Any future proposal for improvements to the remaining parts of I-495 within the study limits, outside of Phase 1 South, would advance separately and would be subject to additional environmental studies, analysis, and collaboration with the public, stakeholders, and agencies.
153	3-12	3.3.4	The Level of Service metrics appear to combine both General Purpose and Managed Lanes. As such, this is not a particularly useful metric. The aggregate nature of this metric may allow the effects of the managed lanes or the general purpose lanes to be overrepresentative, and we urge that this metric separate these for managed lanes and general purpose lanes, individually.	The metrics evaluated in the FEIS are the same as were evaluated in the DEIS and SDEIS. Some metrics, like LOS, use aggregate results, while others (such as TTI and average speed) look specifically at the GP lanes.
154	3-12	3.3.4	For this section and in general, has any operational analysis been performed for the interchange ramps and ramp terminal intersections on the interchange cross streets? Section 3.3.6 provides information about overall network delay to the local roadway network, but there is language about some increased delays around managed lane entrance points on the cross streets. We want to be sure that operational benefits to the freeway system do not result in operational failures or safety concerns on the ramps or cross streets, so it would be beneficial to have an idea of any localized issues as well.	See response to Comment #135.
155	3-13	3.3.5	At the cost of each alternative, and comparing to this vehicle throughput, this yields a cost per new vehicle upwards of: - Alt 5 - $5.7 mil/vehicle - Alt 8 - $2.9 mil/vehicle - Alt 9 - $2.6 mil/vehicle - Alt 9M - $3.9 mil/vehicle - Alt 10 - $2.4 mil/vehicle - Alt 13B - $3.4 mil/vehicle - Alt 13C - $2.6 mil/vehicle These cost rates seem extremely high. From the data presented it is difficult to adjust these numbers to account for travel time savings or to differentiate between public and private costs, and we suggest MDOT consider including such an analysis in the FEIS.	See response to Comment #140.
156	3-13	3.3.5	I suggest provided person throughput values for the key locations identified in this section as well. That way, if there is a desire to compare throughput to that of transit, it is more easily comparable here. Also, with the presence of the managed lanes, it would be beneficial to be in an HOV, since this would increase person throughput without a comparable increase in vehicles. Any benefit would be more clearly reflected by providing the person throughput metric alongside vehicle throughout.	Person-throughput was evaluated and was included in Table 5-16 of DEIS, Appendix C. However, the metric of vehicle-throughput was reported here because it is a direct output of the VISSIM model. MDOT SHA expects that the project will lead to higher vehicle occupancy by providing opportunities for buses to use the HOT lanes and by permitting HOV 3+ to use the lanes for free. However, it is difficult to quantify this increase in vehicle occupancy, and therefore vehicle-throughput was used as a proxy for person-throughput in this section (a conservative approach as to not overstate the potential benefits).

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157	3-15	3.3.6	[comment has been made during previous reviews] This evaluation appears to average together the impacts to all local streets across all times of day, which is a completely useless metric. Some corridors are likely to benefit, such as MD 355 outside of the Beltway, MD 192, MD 547, and potentially MD 586. Conversely, the radial corridors inside the Beltway are more likely to experience significant adverse impacts, particularly during the AM peak as more traffic is enabled to arrive at these centralized points faster, and in greater volume (as demonstrated with the Vehicle Throughput results on page 3-14). These corridors are often already congested and travel through urban areas where automotive traffic is not the priority mode. And averaging the impacts into daily values erases the effects of peak periods in peak directions. Delays, speeds, and travel time information for the Local Network is extremely important information that needs to be known at this stage. That this study does not give this level of information on the impacts to the local road network is a complete aberration from what is expected out of a traffic analyses at this stage of the project.	See response to Comment #90.
158	4-62	4.8.3	It is noted here that each Build alternative increases VMT, which is directly counter to the County's vision, master plans, and efforts.	See response to Comment #14.
159	4-129	4.21.3.C.g	The results of these demographic surveys would appear to demonstrate that inadequate effort has been made in reaching out to disadvantaged communities. Survey respondents were 87% white, 43% over age 65, and 92% over age 40. Multiple other important metrics do not appear to have been considered.	It is MDOT SHA policy to offer a standard demographic survey to voluntarily complete for attendees of MDOT SHA public meetings. Survey results from attendees of the DEIS Virtual and In-Person Public Hearings and SDEIS Virtual Public Hearing are provided in Chapter 4, Section 4.21 of the DEIS and Chapter 5, Section 4.4 of the Community Effects Assessment and Environmental Justice Analysis Technical Report (FEIS Appendix F). Survey respondents generally tended to be older white persons. However, due to the voluntary nature of the survey and the small sample size, the results of the survey may not accurately represent the demographics of all the Virtual Public Hearing attendees. MDOT SHA implemented a robust plan to meet and exceed federal policies and best practices for outreach to and engagement with EJ communities within and adjacent to the study area. In addition to the overall efforts to encourage public participation in the Study documented in FEIS Appendix R, MDOT SHA implemented a comprehensive strategy to ensure complete access to information to the broadest scope of identified EJ communities in the study area. Refer to FEIS Chapter 5 Section 5.21.5 and Appendix H of FEIS Appendix F for EJ-focused outreach efforts conducted for publication of the DEIS, SDEIS, and FEIS. Refer to Chapter 9, Section 3.4.D for a response to general Environmental Justice and equity concerns.
160	General	General	Chapters A&B - Alternative 9M Has there been a general discussion of how each of the Build Alternatives affects induced demand versus latent demand in this Attachment? The ability to increase throughput is desirable if it assists more with latent demand and reduction of congestion on the shoulder hours. It is less beneficial if it comes more from induced demand, which draws trips away from transit and other travel modes, without improving congestion significantly. I think it is important to clarify this difference, and indicate how the Build Alternatives perform.	Induced and latent demand is discussed in the Traffic Analysis Technical Report (DEIS, Appendix C and updated in FEIS, Appendix A). In general, all Alternatives resulted in higher throughputs, lower delays on the freeways, lower delays on the local network, and minimal increase in regional VMT (less than 1% increase for all Alternatives). While induced and latent demand were not evaluated specifically for each Alternative, the relative difference in throughput and delay was used to determine the anticipated impacts on latent demand.
161	8	Section C.2	This section discusses the weighted average speed for the study area by alternative. The results for Alternative 9M show an average weighted speed of 38 mph, which on the surface, appears to only by slightly less than the weighted average speeds of other Screened Alternatives. It is important to distinguish/emphasize that because the speeds are weighted for every single vehicle on every single segment in the study area, any significant benefits or disbenefits on more critical segments may be diluted. If this is the case when comparing Alternative 9M to others, please clarify that minor differences in weighted average speeds does not necessarily mean that the operational performances between alternatives are minor; different metrics need to also be considered to get an overall perspective.	Agreed. Weighted average speed is just one data point used for evaluating Alternatives.

No.	Page	DEIS Section	Comments	Response
162	11	Section 6	Chapters A&B - Alternative 9M This section states that traffic congestion on local roadways would be higher under Alternative 9M because the overflow of vehicles that could not be accommodated in the single managed lane would shift to the general purpose lanes or local arterials. Is this shift assumed to occur because the toll rates on the top side of I-495 would need to be raised to the point that demand in the managed lane is lowered? Wasn't the assumption for volumes in the managed lanes an iterative process, such that 45 mph is the minimum speed maintained (regardless of whether there is a single managed lane or two managed lanes? Why would vehicles be overflowing out of the managed lanes if this constraint was assumed to be in place? Please clarify.	Under Alt 9M, the highest demand segment (top side of I-495) only has about half the capacity in the HOT lanes as the other segments (which have 2 HOT lanes per direction). This makes it difficult to control the demand using dynamic pricing. The result is that either the 2 lane segments are underutilized or the 1 lane segments overflow.
163	General	General	Chapters A&B - MD 200 Diversion Alternative Analysis Results - More detailed exploration of this alternative is warranted.	Refer to Chapter 9, Section 3.2.B for a response to Alternatives Not Retained for Detailed Study.
164	12	Section III	Chapters A&B - MD 200 Diversion Alt - As a point of clarity, under Travel Forecasting Summary and Findings, are you actually talking about traffic volume demand, rather than actual traffic volumes? For example, it is stated that in the PM peak, volumes on I-495 between I-270 and I-95 will grow by about 3%. This growth is said to be possibly attributed to traffic from the managed lanes on I-495 and I-270 reaching the top side faster. It would seem like actual traffic volumes would be maxing out in this section already, given the capacity constraints. I think it is important to distinguish that in these situations, you may not see an actual increase in volumes, but the demand will increase, contributing to a "peak spreading" effect (which lengthens the period of congestion and can lower reliability). It should be noted that in Section 4 on Page 19, there is language that says the top side appears to operate better in the MD 200 Alternative because of an upstream bottleneck that meters the flow of traffic into this segment. Such language would imply that peak hour volumes are lower in the top side segment (which would appear to contradict the language on page 12), making it important to distinguish between demand and actual volumes observed.	Yes, the estimated peak hour demand is higher, but the actual throughput volume is lower due to traffic being metered.
165	12	Section III	Chapters A&B - MD 200 Diversion Alt Please clarify why the VISSIM models did not include modeling MD 200 or I-95 from MD 200 to I-495? Was this meant to maintain apples to apples comparisons of Measures of Effectiveness with the other Build alternatives? If MD 200 and I-95 were to be modeled in VISSIM, would the operational analysis results be expected to be significantly different from the current models? Why or why not?	The same modeling area was used for the MD 200 Diversion Alternative as the other Alternatives to provide an even comparison.
166	20	Effect on Local Roadways	Chapters A&B - MD 200 Diversion Alt - This section states that the MWCOG regional model outputs were used to calculate total vehicle hours of delay of all arterials in Montgomery County (and other counties). This is a fairly high level/general metric that may not account for significant operational issues that exist on cross street arterials in the vicinity of I-495 and I-270 interchanges. As commented before, a major question is whether any increase throughput on these freeways in the MD 200 Diversion Alternative and other Build Alternatives exacerbates the significant operational issues that are already expected to occur on various arterials. Has an operational analysis (using VISSIM) been conducted for these cross street arterials to determine if any of the Build alternatives create such an issue, and if there is a need for operational improvements on these arterials or interchange ramps? While this analysis may not have been a primary focus, it is still important to consider, as having additional operational failure on arterials creates more localized issues, which could have an unexpectedly adverse effect on the freeway system too.	This level of analysis of cross street arterials was completed for the Preferred Alternative, and the results are included in the FEIS Appendix B, MDOT SHA's Application for Interstate Access Point Approval.
167	General	Section II.B	Chapters A&B - MD 200 Diversion Alt - TSM/TDM. This section discusses adaptive ramp metering and traffic signal timing optimization along the top side I-495 interchanges between I-270 and I-95. Was consideration given to pedestrian needs while crossing over/through these interchanges along the cross street arterials? For example, do signal splits account for the time needed for pedestrians to cross through intersections or over ramps? Also, when looking to limit queues onto the arterials, what thresholds/factors were used when determining if a queue was unacceptable?	For this evaluation, signal timings were optimized to provide additional green time for movements with an expected increase in traffic volumes, while minimum pedestrian clearance intervals were maintained.
168		Conclusion	Chapters A&B - MD 200 Diversion Alt - The MDOT 200 Diversion Alternative needs more exploration to determine how this alternative could work, rather than an effort to provide that it does not work.	Refer to Chapter 9, Section 3.2.B for a response to Alternatives Not Retained for Detailed Study.
169	47	Attachment A/PDF	Chapters A&B - MD 200 Diversion Alt - The labels for ramps 7 and 8 at the I-495/US 29 interchange appear to be flipped, based on the volumes each ramp is projected to carry during the AM peak period in the Future Diversion Alternative. Ramp 8 would be expected to carry the larger traffic volumes than Ramp 7 in the AM peak. Please verify (for this interchange and others in this appendix), and revise as necessary. It should also be noted that Ramp 8 volumes in this attachment appear to be lower than volumes developed by MCDOT for its US 29 BRT Feasibility Study. The differences are largely based on available counts that were used for volume balancing.	Noted. This change would not have affected the decision to drop this alternative.

No.	Page	DEIS Section	Comments	Response
170	General	Attachment A General	Chapters A&B - MD 200 Diversion Alt -The I-495 volumes in Attachment A are referenced in some places as NB and SB, and in others as EB and WB. Consider labeling the directions as IL and OL (Inner Loop and Outer Loop), or IL and OL as a complement to the existing directional convention being used, for consistency and to avoid confusion with cross streets that may have the name directionality.	Noted. This change would not have affected the decision to drop this alternative.
171	85	Attachment B/ Travel Demand Table	Chapters A&B - MD 200 Diversion Alt - Is there any context in the document that discusses the purpose of the travel demand table in Attachment B? Is this data the raw output from the MWCOG Travel Demand Model, or has some level of post-processing been applied to constrain the demand?	Attachment B contains the same information as Attachment A (balanced, post-processed demand volumes), just in a different format. This information was included to be consistent with the information provided for the other Alternatives in the Traffic Technical Report.
172	88	Attachment C Speed Maps	Chapters A&B - MD 200 Diversion Alt - Please explain why the 2040 No-Build condition is showing relatively fast speeds for the I-495 IL between the ALB and I-95, but all other alternatives show a major degradation in speeds from roughly I-270 to MD 97, and on the approach to MD 650? This seems a bit counterintuitive. Has this been addresses in the main report?	The No Build meters traffic getting to the area south of the ALB.
173	92	Attachment C Speed Maps	Chapters A&B - MD 200 Diversion Alt - Please explain why the Build conditions in 2040 do not appear to be showing much of a benefit in the PM for I-270 NB, as compared to the No-Build? This seems a bit counterintuitive. Has this been addressed in the main report?	This is addressed in the Traffic Technical report, DEIS Appendix A. Bottlenecks will remain north of the project limits at MD 118 and north of MD 121, which limit the effectiveness of the Build Alternatives. Those locations will need improvement with or without the Managed Lanes Study, and improvements are being evaluated as part of a separate NEPA Study.
174	87-88	Attachment C Speed Maps	Chapters A&B - MD 200 Diversion Alt - The legend for the Speed Color Scale is difficult to read on pages 87 and 88. Please revise to improve readability (it is implicitly understood that this scale is the same as the legends on subsequent pages).	The graphics have been updated for the SDEIS and FEIS.
175	87-92	Attachment C Speed Maps	Chapters A&B - MD 200 Diversion Alt - Please clarify if the speeds pertain to only the general purpose lanes or not (even if it has been stated in the main body of the report).	The graphics have been updated for the SDEIS and FEIS.
176	94-97	Attachment D Travel Time Matricies	Chapters A&B - MD 200 Diversion Alt - Please indicate the time units used for travel time. Based on the values, it is implied that they are in minutes.	The attachment was updated in the FEIS.
177	106-117	Attachment F Link Evaluation	Chapters A&B - MD 200 Diversion Alt - Several of the Exit labels are missing in the figures for the top side of I-495, making it unclear where speeds, densities, and LOSs start to degrade or improve in the AM and PM peaks. Please include these labels for clarity.	The labeling was updated in the FEIS.
178	106-117	Attachment F Link Evaluation	Chapters A&B - MD 200 Diversion Alt - Is the data presented in Attachment F pertaining to the worst peak hour of the AM and PM peak, period, or is it an average of each peak period? Also, please clarify if the data shown is for general purpose lanes only, and if it is for the "Express" or "Local" lanes. Is there a significant difference between performance in the Express (not ETL) and Local lanes?	Yes. The data presented in Attachment F is representative of the worst peak hour of the AM and PM peak period. The labelling was updated in the FEIS.
179	122-123	Attachment H Percent Demand Met	Chapters A&B - MD 200 Diversion Alt - It is acknowledged that the MD 200 Diversion Alternative may not fully resolve congestion issues in the network to the same extent as more impactful build alternatives. The analysis should explore what additional measures can be taken to improve this alternative's performance as an impact avoidance approach that provides transportation system improvement.	Ultimately, MDOT SHA selected Alternative 9 - Phase 1 South as the Preferred Alternative, and included additional measures to improve performance, as suggested.
180	244-245	Attachment H Percent Demand Met	Chapters A&B - Alternative 9M - It is acknowledged that the MD 200 Diversion Alternative may not fully resolve congestion issues in the network to the same extent as more impactful build alternatives. The analysis should explore what additional measures can be taken to improve this alternative's performance as an impact avoidance approach that provides transportation system improvement.	See response to Comment #179.
181	General	General	Chapter B - Alternatives Technical Report - General concurrence - see Chapter 2 comment.	No response needed.
182	50	Section 4.4.18	Chapter B - Alternatives Technical Report - It is stated that Alternative 14A may enhance trip reliability for existing or future transit users, overall, it would not improve trip reliability along I-495 or I-270. Is this implying that there would not be a significant mode shift from auto trips to transit trips, thus having limited operational benefit to I-495/I-270 itself?	Yes, the text is implying that there would not be enough drivers who would shift from automobiles to transit to make a significant enough reduction in vehicles on the interstate to improve the LOS and delays to reduce the congestion.

No.	Page	DEIS Section	Comments	Response
183	62	Section 5.1	Chapter B - Alternatives Technical Report - Pylons were selected as the preferred method of separation between the GP lanes and Managed lanes. While there are sevral benefits to using pylons, are there any specific maintenance concerns associated with using plylons (such as pylons being struck, blocking part of the managed lanes/GP lanes, creating a potential safety concern)? Has Virginia experienced such issues, and if so, how is this addressed/mitigated?	The potential disadvantages attributed to the use of pylons include the maintenance cost for repair/replacement of the pylons, potential obstacles in snow-plowing and road-sweeping operations, and exposure of maintenance staff and contractors to moving traffic during maintenance activities. Additionally, a crash that occurs on the managed lane facility could affect traffic in both the managed lanes and the general purpose lanes. Through coordination with VDOT, the agency has not expressed specific concern about the use of pylon separation on their HOT facilities.
184	72	Figure 5-6	Chapter B - Alternatives Technical Report - Figure 5-6 shows the proposed managed lanes access locations. It appears that at grade access locations are fairly limited throughout the I-495 corridor, and do not exist in the I-270 corridor. If access to/from these managed lanes will mostly be provided via direct interchange ramps, will there be opportunities to alert motorists to the travel times (and toll prices) via managed lane vs GP lane prior to them entering the freeway? This way, motorists don't get "locked out" of using the managed lanes if they miss entering at the limited number of at grade locations or at the interchanges. Also, if toll rates for motorists are not "locked in" once they enter the managed lane system, what happens if a motorist does not want to pay a higher toll, wishes to exit the managed lane system, and complete the rest of their trip in the GP lanes? In other words, is there going to be a situation where the motorist enters the system thinking the tolls are one rate, but then the tolls increase due to demand, and the motorist is trapped in the system with no opportunity to exit (unless exiting to an interchange that is not their actual destination)?	Current toll rates will be posted on dynamic toll rate signs on the approach to all access points including at-grade and direct access ramps. The managed lanes are intended to operate at near free-flow speeds at all periods. Motorists will have to make a decision about using the managed lanes prior to the access point. The toll rate at the point of entry will be locked in within each specific toll zone when the motorist enters the managed lanes. In general, motorists will not have the choice to enter or exit the managed lanes between toll zones via at-grade access points.
185	72	Figure 5-6	Chapter B - Alternatives Technical Report - There are several interchanges that do not appear to provide direct access or at grade access to the managed lanes (such as I-495 at MD 97). Has the traffic operational analysis accounted for the impact of diverted trips to adjacent interchanges in an effort to reach the managed lanes?	Yes, the travel forecasting and VISSIM model take into consideration the origin and destination of motorists and the access points that they need to use to enter the interstate.
186	124	Section 6.3.5	Chapter B - Alternatives Technical Report - For Alternative 13B, this section mentions that no NB HOT lanes would be available on I-270 in the AM peak, thus precluding travelers along I-495 from using the HOT lanes if they were also destined for NB I-270. This would reduce the potential demand on I-495 HOT lanes approaching I-270, and increase demand on the overcapacity GP lanes. Has consideration been given to allowing an at grade exit from the HOT lanes to the GP on I-495, prior to I-270, to alleviate this HOT underutilization concern? Would such a change make Alternative 13B perform significantly better, or would any potential benefits be offset by additional friction/merging in the I-495/I-270 Spur area?	This scenario was not evaluated because the same assumptions regarding direct access locations were assumed for all Alternatives for consistency. MDOT SHA identified several interchanges including the I-495/I-270 West Spur interchange where direct access ramps for managed lanes were proposed based on traffic demand. Preliminary operational analyses indicated that slip ramps would generally result in added friction along I-495 if introduced in the locations suggested as part of Alternative 13B, which would likely offset any benefits.
187	General	General	Chapter C - Traffic Technical Report - [comment has been made during previous reviews] It is unclear whether the traffic models assume uniform lane use between general purpose lanes, or if they more realistically evaluate lane use variations in response to peoples' tendencies to keep right, positioning for interchanges & slip-ramps, etc., and the impedances these variations create. It is also unclear if there adjustments for the impedances caused by price-displaying Variable Message Signs in advance of managed lanes decisions points.	Positioning distance relative to a vehicle's desired trip path is factored into the VISSIM modeling. Details on signing locations are not determined during NEPA and planning and are not in the VISSIM model.
188	General	General	Chapter C - Traffic Technical Report - Reviewed	No response needed.
189	10	Section 2.1.B	Chapter C - Traffic Technical Report - The I-270 west spur HOV lane actually begins on I-495 IL, north of the MD 190 interchange, not at Democracy Blvd as is stated here.	The text has been updated in the Final Traffic Analysis Report in FEIS, Appendix A.
190	12	Table 2-1	Chapter C - Traffic Technical Report - The I-495 IL transitions from 5 to 6 travel lanes between MD 190 and I-270 Spur (an HOV lane forms about 3/4 mile north of the MD 190 interchange ramps). Was this HOV lane modeled in VISSIM? This segment is significantly congested, particularly in the PM peak (and to a lesser degree in the AM peak), so modeling this lane would be important.	Yes. The I-495 Inner loop transition from 5 lanes to 6 lanes between MD 190 and I-270 Spur was included in the model and the results reflect this geometry with HOV lane starting 3/4th of a mile north of MD 190 interchange.
191	31	Figure 2-16 to 2-19	Chapter C - Traffic Technical Report - These figures show speeds on I-495 and I-270, by direction, as a whole. Is the purpose of these figures to get a general metric of speeds for the entire roadways for system wide purposes? If not, please note that these average speeds may mask areas on both corridors that experience significantly worse (lower) speeds during certain hours of the day.	Figures 2-16 through 2-19 show the average 5th/95th percentile speeds along the I-495 and I-270 corridors throughout the day to demonstrate the variability of the corridor's average speeds, as explained in the text.

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192	36-37	Figure 2-24 to 2-25	Chapter C - traffic Technical Report - Is there a summary of speeds on I-270 for the off-peak directions in the NB and SB directions for comparison purposes?	The requested off-peak direction speed summaries have been added to the Final Traffic Analysis Report in FEIS, Appendix A.
193	54	Section 2.12.E	Chapter C - Traffic Technical Report - Please clarify why there is a difference in speed calibration thresholds between the AM and PM peak period. Also, please briefly explain how the specific threshold values were determined.	Calibration was completed per MDOT SHA guidelines. Additional details are included in the VISSIM Calibration Memo DEIS Appendix C (Appendix D within the Traffic Technical Report).
194	57-58	Table 2-9 and 2-10	Chapter C - Traffic Technical Report - The total length of roadway segments meeting the volume calibration criteria appear to be quite low, which seems to contradict the discussion in the text earlier about how a much higher percentage of roadway miles meet calibration thresholds. Also, the "Total Length of Segments meeting both volume and speed criteria" appears to be higher than either the individual volume or speed criteria percentages in adjacent columns. Please explain/clarify, and confirm if the VISSIM modeling reasonably represents existing operational conditions.	See response to Comment #193.
195	67	Table 3-1 and 3-2	Chapter C - Traffic Technical Report - How was existing travel demand determined for the existing study corridors if such large segments of these corridors have their demand constrained for several hours of each day? Were counts at uncongested upstream or interchange locations carried through to the congested segments? Please clarify. Also, Table 3-2 shows some throughput volumes that are greater than the travel demand volumes in Table 3-1. In theory, throughput should not be greater than travel demand. Please clarify this.	This was addressed in the Traffic Technical Report (DEIS Appendix C) in Section 2.7. Raw count data was adjusted to reflect demand where count data was lower than demand due to upstream congestion and bottlenecks, where appropriate. Throughput may be higher than hourly demand for hours following periods of unmet demand.
196	80	Section 4.3	Chapter C - Traffic Technical Report - Why did the second round of travel demand analysis using MWCOG V.2.3.71 no longer include the BW Pkwy, I-695, or 1-270 north of I-370. For clarity, would their removal result in a significant different in future travel demand within the study network?	To clarify, these road segments were included in the model, but they were no longer assumed to include managed lanes. The original "Traffic Relief Plan" assumed managed lanes along the BW Parkway, I-695, and I-270 to Frederick. The MWCOG V.2.3.71 runs narrowed the focus to the MLS Study limits.
197	86	Figure 4-2	Chapter C - Traffic Technical Report - Are the AAWDT's shown for each screenline the cumulative total of all roadways crossing the screenline? The values appear too high to only be AAWDTs for I-495 or I-270 alone. Please clarify.	Yes, the reported numbers are the sum of all corridors crossing the screenline.
198	95	Figures 5-11, 5-12, and others	Chapter C - Traffic Technical Report - Shady Grove Road is mistakenly listed as "Shady Grove Dr" in the figures. Please correct where appropriate.	References to Shady Grove Road have been updated in FEIS Appendix A, the Final Traffic Analysis Report.
199	111	Section 5-2	The first paragraph states that end to end travel times on I-270 are projected to improve under Alternative 1/No-Build prior to 2025, due to the ICM improvements, but that congestion MAY return by 2040. Is there a significant possibility that congestion does not return to the corridor by 2040 under Alternative 1/No-Build? The way this is phrased, it seems like this is an uncertainty. Please clarify this language, especially if the intent is to say that congestion is likely to be present.	This language has been removed from the updated Final Traffic Analysis Report in FEIS, Appendix A, to avoid confusion.
200	111	Section 5-2	Chapter C - Traffic Technical Report - The last paragraph says that travel times along I-270 SB are projected to remain unchanged between 2017 and 2040 due to the ICM improvements, while I-270 NB travel times will increase by 10 minutes. For clarity, it may be helpful to note that no increase/a relatively minor increase in travel times on I-270, as compared to existing conditions, would still result in significant congestion and delays, as existing operational conditions on I-270 in the peak direction is fairly poor.	The text lists the total increase (10 minutes) and the percent increase (20%), while Table 5-4 shows the raw data and Figure 5-56 show the data graphically compared to the free flow condition, which is sufficient to explain the situation.
201	118-121	Tables 5-1 through 5-4/Pages 118-121	Chapter C - Traffic Technical Report - Are the travel times listed in all of these tables representative of each hour within the peak period, an average of each hour in the peak period, or the peak hour? Please clarify, as the corridor has some variability in travel times, depending on what hour within the peak period is being considered.	The travel times reported are representative of a single peak hour within the peak period that is 7-8AM in the AM peak and 4-5PM in the PM peak period.
202	123	Table 5-6	Chapter C - Traffic Technical Report - Please explain why Alt 10 shows a travel time disbenefit (AM and PM) in the general purpose lanes for I-270 NB, when compared to Alt 1/No-Build. Alt 10 provides two new ETLs in each direction on I-270. While the number of general purpose lanes doesn't change, the ETLs would be expected to provide additional capacity, thus freeing up some capacity in the adjacent general purpose lanes. Is there additional throughput, or a bottleneck above the I-370 interchange that is causing the slower performance in Alt 10?	The issue is a bottleneck north of I-370 that spills back into the Study area under Alternative 10 due to the additional throughput.

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203	148	Section 5-9	Chapter C - Traffic Technical Report - This section states that the 2040 MWCOG results specific to MD 185, MD 97, US 29, MD 193, and MD 650 indicate that additional daily volumes would be expected on MD 185 and US 29, but less volume would be expected on MD 97, MD 193, and MD 650 (when comparing the 2 managed lane alts with Alt 1/No-Build). First, please clarify why less volume would be expected on 3 of these corridors, considering that 2 are radial routes, I-495 is a circumferential route, and there is projected to be an increase in volumes on I-495. Second, was analysis completed on all of these 5 arterial routes beyond the immediate interchange ramps/intersections to account for the impacts of congestion and queuing that already are present under existing conditions? Several of these corridors have significant queue spillback onto I-495 already, often due to downstream intersections in the arterial corridors (not explicitly due to the ramp terminal intersections/ramp merges). What happens to the performance in the managed lanes and general purpose lanes on I-495 if this queue spillback continues to exist?	As described in the Supplemental DEIS, the Preferred Alternative was identified after coordination with resource agencies, the public, and stakeholders to respond directly to feedback received on the DEIS to avoid displacements and impacts to significant environmental resources, and to align the NEPA approval with the planned project phased delivery and permitting approach which focused on Phase 1 South only. The Preferred Alternative includes no action or no improvements at this time on I-495 east of the I-270 spur to MD 5 in Prince George's County. Your comment had been identified in the DEIS related to build alternatives that would have spanned the entire study area. Because MD 185, MD 97, US 29, MD 193, and MD 650 are located outside the Preferred Alternative limits of build improvements, those impacts have now been completely avoided. Any future proposal for improvements to the remaining parts of I-495 within the study limits, outside of Phase 1 South, would advance separately and would be subject to additional environmental studies, analysis, and collaboration with the public, stakeholders, and agencies.
204	151	Section 6	Chapter C - Traffic Technical Report - It is mentioned that congestion reduction could be expected to reduce congestion related crashes in the study corridors. Are there other features of the alternatives that would also be expected to reduce crashes (e.g. removing the C-D lanes on I-270, and thus removing the frequent slip ramp merges and diverges, barrier separated managed lanes)? If so, please discuss.	Supplemental crash data was obtained and reviewed for the Study as part of the IAPA process, including predictive safety analysis of 2045 No Build conditions and the Preferred Alternative. Refer to the MDOT SHA's Application for Interstate Access Point Approval in FEIS, Appendix B.
205	153	Figure 6-1 and 6-2	Chapter C - Traffic Technical Report - Please list the units used for crash rates in the figures (i.e. crashes per Million Vehicle Miles).	Units have been added to these figures in the Final Traffic Analysis Technical Report in FEIS, Appendix A.
206	General	General	Chapter J - Noise Analysis Technical Report - As far as noise modeling and noise impact mitigation is concerned, the various "widening" alternatives presented in the DEIS are basically the same, because the number of lanes created and their orientation is also basically the same. While one alternative may show that, for example, 86 NSA (noise sensitive areas) are impacted vs. 84 in another, we find that this really is not a basis or justifiable reason to pick one alternative over the other. In other words, the alternatives' impacts and mitigation strategies are very similar, and therefore should not be a factor in choosing one alternative over the other. The methodology and modeling are based on FHWA guidelines and SHA's current policy, which are appropriate. From a noise analysis and mitigation perspective the document is organized and well-written, considering the size and complexity of the project. It seems that for a few NSA's along I-270 the evaluation is punting to final design; we look forward to reviewing the final geometric design and the corresponding noise modeling and mitigation measures for these locations and others in the project.	No response needed.
207	General	General	Provide information on how each alternative affects the NADMS along various segments. We have concerns as to how the alternatives may impact existing or planned transit services.	See response to Comment #14.

MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION

Marc Elrich
County Executive

Christopher R. Conklin
Director

DEPARTMENT OF TRANSPORTATION

MEMORANDUM

November 9, 2020

TO: Lisa B. Choplin, Project Director
Maryland State Highway Administration

FROM: Christopher Conklin, P.E., Director
Department of Transportation

SUBJECT: I-495 and I-270 Managed Lane Study
Comments on the Draft Environmental Impact Statement (DEIS)

Thank you for the opportunity to provide input on the Draft Environmental Impact Statement (DEIS) for the I-495 and I-270 Managed Lanes Study. Included here are highlights of our most substantial comments as well as our recommendations for proceeding. Footnotes in this memo are used to reference comments in the attached detailed technical comments. Our comments are consistent with those provided throughout the development of the DEIS since early 2018. These comments also reflect input from other Montgomery County Agencies including the Department of Environmental Protection, Finance, General Services, and others.

Listening to the public testimony, the overwhelming majority of the comments opposed the project's current recommendations.[27] By prematurely eliminating TSM/TDM and Transit alternatives,[26,29,33,44,49,54,59,68,71,73,75,76,154] and favoring alternatives with four Managed Lanes,[16,55,82] the State has restricted its ability to consider meaningful, lower impact, lower cost, lower risk alternatives that improve the performance of these highways.[39] As a result, the larger "Build" alternatives are, falsely, the only remaining choice available if transportation is to be improved along these corridors. We are concerned that this project may exacerbate existing problems and create new impacts within our communities and our environment. Of particular concern are increased vehicle-miles-traveled and carbon emissions, impacts to arterial and local roads near interchanges, poor water quality and watershed conditions, unacceptable levels of noise in our communities, and the possibility of irreparable harm to historic and community resources. As we face enormous challenges, including the need to respond to climate change, it seems that we should instead focus our investments on providing more travel options, improving transportation access to address racial and socio-economic equity. and facilitating growth in more resilient and sustainable forms.[127]

We urge MDOT to broaden its focus so that this project conforms, at a minimum, to the established practice in the region that new express toll facilities provide meaningful and ongoing support to transit, and that the environmental focus of this project be expanded to address the impacts of the whole facility and even improve the condition of sensitive resources along the corridors. As part of this, we believe that it is advisable to look at combinations of alternatives for different components of the project, including a more robust exploration of Transportation Systems Management (TSM) and TSM-plus strategies at specific bottlenecks on these corridors.[9]

Separately from this DEIS, the State has issued transit recommendations that, at present, remain too limited to serve as a complete transit strategy for the study area, and as a complete response to the equity issues created by this project.[2,17,35,67]

We seek complete mitigation of environmental,[63] cultural, social, and equity problems resulting for both the existing highways and their expansion,[67] and that the project provide master planned pedestrian and bicycle infrastructure on all reconstructed facilities, both along and crossing the corridors, with connections and transitions to logical nearby endpoints.

The remainder of our comments focus on technical issues identified in the DEIS:

GENERAL CONSIDERATIONS

1) **Transit & TSM/TDM Alternatives:** We recommend that the project restore consideration of transit and TSM/TDM alternatives, either as standalone alternatives, or with detailed transit and TSM/TDM strategies specifically embedded within other alternatives. Furthermore, we believe that Purpose and Need and the screening metrics do not address concerns raised by the County throughout the process. In the case that the Build alternatives prove to be commercially prohibitive for private firms, the lack of any viable option is unfortunate, as there would remain a need to address movement of users throughout the region. TSM/TDM alternatives such as Alternative 2 should be retained and improved upon as an option.[68]

2) **Transit Discussion:** The report states "Improved connections to park-and-ride lots, Metrorail, bus, MARC, Purple Line, and Transit Oriented Development are anticipated to occur as a result of addressing congestion…", which would appear to assert that this project will address these needs, but there is little further elaboration on how, and to what extent, this will be addressed.

   Throughout the DEIS there are frequent references to the benefits of being able to operate transit and other HOV+ vehicles in the managed lanes. This DEIS, and certainly the FEIS, should address in detail what these benefits are, in addition to how the State plans to incorporate and implement these actions in the P3 Agreement.

   We seek a meaningful and continuous commitment to transit. The project plan must outline specific improvements to better connect the corridors to transit facilities rather

than relying on potential, and uncertain, congestion reduction as the means to improve this access.

This includes the necessary physical infrastructure, such as depots, buses, park & rides, improved access to transit facilities,[92] and other needs still under evaluation by our DOT and Planning staff,[32,90,109]. This also includes constructing master planned BRT facilities along affected segments, and designing the American Legion Bridge to be capable of supporting future rail transit (as done with the Woodrow Wilson Bridge).[36] Dedicated funding will help support continued investment and operation of equitable alternatives to the Managed Lanes.[78]

3) **Pedestrian/Bike Connections:** Include pedestrian/bike facilities across the I-270 and I-495 corridors at interchanges as well as at non-interchange crossing points. Facilities are expected to meet applicable standards, best practices, and master plans, particularly the approved Bicycle Master Plan and the Pedestrian Master Plan currently in development.[91,97] This project must provide a holistic, full solution to access and connectivity and cannot rely on the County and other local agencies to resolve these issues in the future.

   Design of the American Legion Bridge improvements is expected to provide designated space for transit, walking, cycling, and convenient connections to the existing community transportation facilities and NPS facilities near the bridge.[36]

4) **I-270 Scope and Termini:** Phase 1 of the P3 project includes I-270 but does not include the separate effort evaluating the northern portion of I-270. Where in the DEIS is the State providing discussion on the logical termini for this project, and FHWA's approval to split the P3 project into two separate EIS efforts and Records of Decision? [43]

5) **Development of Alternative Roadway/Interchange Configurations.** It appears that the environmental impact analysis is based on one basic concept for the managed lanes and is not adopted to the specific alternatives. Furthermore, it does not appear that technical alternatives have been developed for specific elements of the project like interchange configurations. Some of these elements are very complex and many have may a variety of design alternatives that could avoid impacts to varying extents. MDOT should describe and illustrate the range of options considered for each interchange and why the configuration included in the DEIS is the least impactful alternative that provides the minimum technical performance required. This analysis should be coupled with an assessment of local road performance as described in the following section.

TRAFFIC CONSIDERATIONS

6) **Ineffective Managed Lanes:** This project claims to improve traffic, but the analysis itself finds that in many cases the Managed Lanes barely perform better than the General-Purpose Lanes, and in some spots perform even worse.[102,116,123,144,145]

7) **Worsened General Purpose Lanes:** The General-Purpose lanes worsen in many segments as compared to No Build conditions, as demonstrated by both the Travel Time and TTI metrics. This creates a massive equity problem for those who are unable to afford or otherwise access the Managed Lanes.[2,17,67,102,117,119,120,124,163,174]

   Would MDOT accept degraded performance of the General-Purpose lanes in the interest of providing priced managed lanes? Penalizing current users of these roads does not seem to be consistent with the stated policy objectives of this program, and by restricting access to users it runs counter to the Purpose and Need's goal of expanding access for users.

   If MDOT was to indeed accept this outcome, it would be imperative that equity be considered and actions incorporated into the project to address the needs of users most adversely impacted.

   Additionally, this outcome might be alleviated to some extent with the inclusion of I-270 north of I-370. It is difficult to justify acceptance of poorer performance of Build alternatives under the current analysis framework.

8) **Local Road Impacts:** A detailed evaluation of the interchanges and connections to the local road network has not been provided. The DEIS does not consider what will happen to roads like Gude Drive, Connecticut Avenue, or Colesville Road when more traffic is sent to them faster, and whether any time saved by the managed lanes is lost by becoming stuck in downstream congestion.[15,62,104,107,126,129,138,175] These corridors are often already congested and travel through urban areas where automotive traffic is not the priority mode.3 This is unacceptable. The County provided locations of concern for study to MDOT in the early stages do the DEIS analysis.

9) **Transit Impacts:** The DEIS does not provide information on how each alternative affects the NADMS along various segments. Detailed information must be provided to demonstrate how the alternatives may impact existing or planned transit services.[179] Furthermore, the study must demonstrate how these impacts will be mitigated. It should be noted that the County has established NADMS goals for most areas along these corridors as a specific policy objective to be met. The DEIS should demonstrate how the project is consistent with these pre-established and adopted transportation objectives.

10) **COVID:** While many of COVID's impacts may only last a few years, it appears that we are likely entering into a new and long-lasting era of increased telework. Traffic patterns have changed and will likely remain very different, dramatically increasing the risks of this project. This must be taken into greater consideration and evaluated in detail before a final determination is reached and a Record of Decision confirmed.[23,24,25,45]

11) **270 ICM Project:** The effects of the State's Innovative Congestion Management project currently under construction are unknown. Information prepared in 2017 by MDOT SHA showed particularly favorable metrics for this project; however, it is unclear how this differs from metrics evaluated and measured by the Managed Lanes project.[46,111,112]

12) **Managed Lane ADTs:** Provide estimated Average Daily Traffic values for regular points within the Managed Lanes for each alternative.[100]

ENVIROMENTAL / CULTURAL / EQUITY CONSIDERATIONS

13) **Existing Issues:** Both I-270 and I-495 already have existing environmental impacts that have not been addressed, and do not appear to be fully addressed by this project. This includes needs and impacts involving waterways, habitat, emissions, noise, and others.

14) **Long-Term Impacts:** From the information provided in the DEIS, this project will encourage not only more vehicles and increases in VMT, but also types of development that seem to be more costly to society, require more costly infrastructure, generate more severe impacts to habitat, and result in more significant contributions toward emissions and runoff. This will hamper the County's master planned efforts toward increasing non-auto travel and focusing growth in sustainable ways, and this also runs directly counter to the State's Climate Emergency.[3,66,130]

15) **Social Impacts:** There are significant impacts to schools, historic properties, homes, and businesses despite repeated assertions that these impacts would not occur.[88] There is no apparent elaboration on what efforts are being done to assist with the relocation of those displaced, accounting for their individual interests, costs, destinations, and the continued viability of affected businesses. These issues need to be addressed before a final determination is made about a preferred alternative.

16) **Equity:** The DEIS gives little consideration toward equity: impacts to property, noise, emissions, affordability, and other effects on historically underinvested communities. As the General-Purpose Lanes worsen: how are these communities affected? What options are provided for them? [2,17,67,131]

CONTRACTING / FINANCING CONSIDERATIONS

17) **P3 Capabilities:** The whole NEPA process has been structured around a P3, but the State is currently managing a troubled P3 that is a fraction of the size contemplated here. Given the significant economic and transportation uncertainty now in place, it may make sense to consider smaller projects or more aggressive risk mitigation strategies. What is the risk to taxpayers in the event that the P3 fails, as is being experienced now with the Purple Line? How would the public be affected if there is a need to cut costs during or after construction? [4]

18) **No Public Cost:** The project appears to estimate a public cost of between $482-$1,088m, despite assertions that taxpayers would incur no costs. These values do not appear to account for utility relocations, such as WSSC's statement that $2 billion in WSSC costs will be passed on to their customers.[98]

    It is unclear how revenues and costs will resolve toward the end of the P3 contract. If revenues surpass costs before the end of the 50-year agreement, does this imply lost revenue to the public of $2,762m/year between that Return on Investment year & the end of the contract? Or if revenues have not yet surpassed costs at the 50th year: how will that affect the P3 agreement or the facilities operations beyond the 50th year? [94,99]

    From the information on page 3-13 we identify a project cost of approximately $3.35m per new vehicle served by the project. From the data presented it is difficult to adjust these numbers to account for travel time savings or to differentiate between public and private costs, and we suggest MDOT consider including such an analysis in the FEIS.[127]

19) **Non-Compete Risks:** What guarantees will be in place toward ensuring that projects that provide other choices are not sidelined, such as BRT projects, or improvements to MARC, WMATA, the Purple Line, or buses? Or projects that seek to address problems in the General-Purpose Lanes? Or projects that provide alternatives for those unable to afford the Managed Lanes? [5]

20) **Contract Selection:** It is not clear how proposals and designs from varying bidders will be vetted and selected, particularly considering construction impacts, design, and operational plans.[6] With a project of this size and complexity, how will the State ensure the selected Concessionaire and Design/Builder provide the best-value solution and not just the most cost-efficient? It is not clear how potentially having multiple different operators and operational patterns would function, and how users will transition between systems. Will the winner of the

first contract be presumed to automatically receive &/or operate the contracts for future phases? Or will the first contract otherwise establish the operating standards of those future contracts? [43,87,96]

21) **P3 Responsibilities and Risks to the Public:** It remains unclear under what terms the concessionaire would operate the facility. More information is needed as to various responsibilities, terms and conditions, and other protections for the public that are contemplated for the P3 agreement. The proposed business terms may have a direct impact on the performance and environmental impacts of the project and should be evaluated as part of this NEPA study.[37,41,93,112,156]

22) **Inflation:** We did not see a discussion of key financial cost estimating assumptions. For instance, was an inflation rate assumed in the labor and construction estimates or was everything estimated in current dollars? This speaks to the total cost estimates and the per mile toll estimates.[11]

23) **Financial Viability / Transit:** How will "financially viable" be defined with respect to the inclusion of transit components within the P3 contract? Transit may include costs for capital, operating, maintenance, etc. that will vary significantly based on levels of service, and users of transit would be doing so in lieu of a toll. How will these be considered in determining rates of return on the contract? [63]

Should you have any questions regarding our comments on the plan, please feel free to contact me or Mr. Andrew Bossi, Senior Engineer, at andrew.bossi@montgomerycountymd.gov.

Attachments: Detailed Comments Spreadsheet

CC:AB

cc: Meredith Wellington, CEX
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0	Document	Section	Page	Comment
1	General	General	General	There are many comments beginning with "[comment has been made during previous reviews]" These are issues that have been persisting at least since the ARDS, though in many cases they date back to or even before the Purpose & Need. Despite it's 20,000 pages, this DEIS still misses, ignores, or excludes critically important information.
2	General	General	General	[comment has been made during previous reviews] The DEIS gives little consideration toward equity: impacts to property, noise, emissions, affordability, and other effects on historically underinvested communities. There is no consideration of accessibility of the Managed Lanes to low-income populations, nor how communties are affected by worsening General Purpose Lanes if users are unable to afford or otherwise access the managed lanes. There is no elaboration of what options are provided for them.
3	General	General	General	[comment has been made during previous reviews] By focusing explicitly on expanding capacity for auto modes, this will directly hamper our master planned efforts toward increasing non-auto travel and focusing growth in sustainable ways. This also runs counter to the State's declared Climate Emergency.
4	General	General	General	[comment has been made during previous reviews] The whole NEPA process has been structured around a P3, but the State has not demonstrated its ability to manage a P3 that is a fraction of the size contemplated here. Decisions about the environmental impacts of this project depend on knowing the details of the P3 now: What is the risk to taxpayers in the event that the P3 fails, as is being seen now with the Purple Line? How would the public be affected if there is a need to cut costs during or after construction?
5	General	General	General	[comment has been made during previous reviews] What guarantees will be in place toward ensuring that projects that provide other choices are not sidelined, such as BRT projects, or improvements to MARC, WMATA, the Purple Line, or buses? Or even anything that seeks to address problems in the General Purpose Lanes? Or to provide alternatives for those unable to afford the Managed Lanes?
6	General	General	General	[comment has been made during previous reviews] How will the proposals, designs, and operational plans from varying bidders be vetted and selected?
7	General	General	General	The DEIS documents were created in such a way as to prevent the copying of text from the document. This hampers the ease with which the public can review and comment on the document, requiring data sets to be manually reentered in order to provide an independent evaluation, and making it harder to quote segments of the document in comments. This is a setting that must be deliberately activated for this to occur, and is unclear for what purpose the State would choose to do this.
8	Executive Summary	General	General	Our understanding is that an Executive Summary should answer the basics of who, what, when, where, why, and how. It is not until page E-7 that the goals of the study are stated. Even then, in our opinion, it doesn't specifically say what the "what" is in this study, however, it does allude to Appendix A for a "full purpose and need statement", but we were expecting to see it more clearly stated in the ES. For example, the very first question of the Study Overview was "What is the I-495 & I-270 Managed Lanes Study? There is no mention of the goals of the study. Should the goals be right up front here?
9	Executive Summary	General	General	Greater emphasis should be placed on the fact that a new or replacement American Legion Bridge must be planned now and built to preclude a lapse in traffic service to the area. Isn't this the real WHY this needs to be done? There is no mention of the economic impact of the American Legion Bridge on the Washington Metropolitan Area or on MoCo if this bridge isn't available and/or if it's traffic capacity is diminished. Traffic is a quality of life issue that can encourage people to migrate to an area that has less traffic. Granted it is only one of many factors influencing where people live and work, but recently there has been evidence of migration out of urban areas. (article attached Fitch Ratings) This transportation project is needed for the region to maintain its quality of life, keep its population base and therefore maintain its economic viability.

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10	Executive Summary	General	General	The Purple Line was able to obtain significant levels of Federal Grant funding. We may have missed it but we didn't see mention made of application for and/or any anticipation of Federal funding for this project and how that might impact the project.
11	Executive Summary	General	General	We didn't see in the Executive Summary a discussion of key financial cost estimating assumptions. For instance, was an inflation rate assumed in the labor and construction estimates or was everything estimated in current dollars? This speaks to the total cost estimates and the per mile toll estimates.
12	Executive Summary	General	General	Add a list of all acronyms and their descriptions in one place. (E.g., MLS, DEIS, NEPA, ARDS, HOT, HOV, ETL, ROD, etc.)
13	Executive Summary	General	General	The design study year 2040 may be too short. It will take xx years (at least 2 years) to complete planning and select the final alternative and the P3 partner. Another 3-years to complete design and secure all permits. It will take 3 years, if not more, to complete construction.
14	Executive Summary	General	General	The estimated opening year of 2025 is unrealistic.
15	Chapter 1	General	General	[comment has been made during previous reviews] The traffic considerations appear limited only to the interstates. This does not consider what will happen to roads like Gude Drive, Connecticut Avenue, or Colesville Road when more traffic is sent to them, faster. This effects the efficacy of the project if it gains users time in one place, only to cost them more time at later points even less able to handle increased traffic.
16	Chapter 1	General	General	[comment has been made during previous reviews] The movement of vehicles is an ineffective metric and inherently biases the analysis against HOV facilities and transit. We have repeatedly requested replacing vehicle throughput metrics with person throughput, reflecting best practices for optimizing the efficacy of transportation infrastructure.
17	Chapter 1	General	General	[comment has been made during previous reviews] Sections on trip reliability (1.4) and roadway choice (1.5) should include caveats that these benefits are limited only to those able to afford them, and that efforts are needed to address potential inequities in any worsening (or inaction toward) the General Purpose lanes, as well as other forms of access to the managed lanes (e.g. discounted or free HOV+ access).
18	Executive Summary		ES-1	1st Paragraph, 2nd Sentence - Excessively long and poorly worded. Consider re-write. Might be easier to state how many miles along I-495 and how many miles along I-270.
19	Executive Summary		ES-1	First sentence references the study as "Study", but later it is referenced as "MLS"
20	Executive Summary		ES-1	Why doesn't the EIS include I-270 north of I-370 into Frederick County? How does this relate to the Phases 1 and 2 that are being discussed for actual construction?
21	Executive Summary		ES-2	Northern limits extends to connect to HOV lane. Description should clarify that it only extends to northbound HOV lane and the southbound HOV lane only begins south of I-370.
22	Executive Summary		ES-2	What is the definition of "Notified agencies"?
23	Executive Summary	COVID-19	ES-3	Reference is made to the need to monitor and evaluate traffic trends related to COVID but there is nothing stated when this could occur and how it will be monitored and evaluated.
24	Executive Summary	COVID-19	ES-3	The section on COVID states: "There is no definitive traffic model to predict how this unprecedented global pandemic will affect long-term future traffic projections and transit use. MDOT SHA is committed to tracking trends in travel behavior and monitoring traffic volumes over time as businesses and schools slowly begin to reopen. We will evaluate and consider all new information that becomes available to ensure the solutions will meet the needs of Marylanders now and in the future." While many of COVID's impacts may recover in coming years and by the design year of the project, all indications are that some impacts may be permanent. This particularly includes increased telework and reliance on ad-hoc and parcel delivery services. It is unclear in this statement how these will be taken under consideration, and what future analyses remain that will even be able to consider them. These impacts may affect the very need, benefit, and financial viability of this entire project.

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25	Executive Summary	COVID-19	ES-3	This study will be criticized based on the unknown impacts of COVID-19 as it relates to future traffic volume and commuting patterns. There is a question on page 3 that addresses the COVID-19 impact from the perspective of reducing traffic and it indicates changes will be monitored. The detractors will argue that more people will be working remotely and not commuting. It may be politically incorrect to suggest, however, for example, couldn't people also decide that to be safe they will drive by themselves rather than car pool or use public transportation? So, potentially there could be less use of public transportation and more use of individual transportation options. (car, bicycle, walk) This would then counteract potential work from home reductions in traffic. Associated with the COVID-19 traffic reduction issue is the fact that revenues for transit systems are down. (article attached from Bond Buyer) This points out that there will be volatility in any project based on vehicle usage and toll pricing. P3's push the risk to the private partner and/or share the risk. I expect this project will be criticized about this revenue issue as well as it relates to the toll costs per mile that are cited and the assumptions that were used to develop these estimates.
26	Executive Summary		ES-6	The Purpose & Need is too narrowly defined for this study. What are "roadway travel choices"? Why the archaic focus on just traffic and not mobility?
27	Executive Summary	Ways to Comment	ES-6	[comment has been made during previous reviews] In the FEIS: provide a summary of public feedback for each public input period, including tallies of how many people weighed in on various positions / topics. Also highlight what community associations & other organizations have voted in support or in opposition toward, and the scale of representation of these organizations (clarifying how this scale is measured: leadership, membership, subscribers, etc).
28	Executive Summary		ES-8	Priced managed lane is defined as either HOT or Express Toll Lane. These are different versions of alternatives, but are treated equally.
29	Executive Summary		ES-8, ES-11	Describe why the transit alternatives were all eliminated & how they did not meet the Purpose & Need. Why couldn't some of these be combined with highway alternatives?
30	Executive Summary		ES-8	The Executive Summary should include more description of the metrics that were used to screen the alternatives
31	Executive Summary	Table ES-1	ES-11	What is the difference between Managed HOV lane and Managed HOT lane?
32	Executive Summary		ES-11	How are the alternatives "accommodating direct and indirect connections to existing transit station and planned TOD"? By what means? What is an indirect connection, and how would it enhance multimodal mobility and connectivity?
33	Executive Summary	Transit Components	ES-11	[comment has been made during previous reviews] The section on Transit states: "While standalone transit alternatives were found to not meet the Study's Purpose and Need". We remind that throughout the IAWG process we have repeatedly expressed concerns that: (1) The limited interstate-specific study area predisposes transportation investment toward highways only, instead of a more holistic evaluation of connecting users between activity centers, and collecting users at points in between. (2) The metrics within the Purpose & Need were biased against transit, and MDOT SHA expressly refused to refine the metrics to allow for a fair comparison. (3) Transit alternatives were deliberately given negative ratings for some Purpose & Need metrics, despite their actually having positive ratings for the metrics.
34	Executive Summary	Transit Components	ES-11	[comment has been made during previous reviews] Throughout the DEIS there are frequent references to the benefits of being able to operate transit and other HOV+ vehicles in the managed lanes. This DEIS should not claim these as benefits when there has not yet been demonstrated action toward implementing these statements & putting them into effect.
35	Executive Summary	Transit Components	ES-11	The first bullet should also highlight that by providing an alternative option for navigating along the corridor, these bus services serve toward an equity component of the project.
36	Executive Summary	Replacement of the ALB	ES-12	[comment has been made during previous reviews] The design of the American Legion Bridge improvements is expected to provide designated space for transit, pedestrians, and bicyclists. (we note that page 2-47 does identify the inclusion of pedestrian & bicycling facilities on the ALB)

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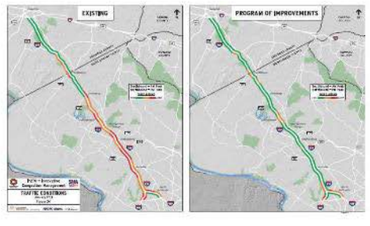
37	Executive Summary	How Will the Toll Rates Be Set?	ES-13	[comment has been made during previous reviews] Separating the determination of the toll rate range from the rest of this process creates an additional risk to bidders. How susceptible are the bids to misjudging this range? What if the range, after its public process, is set too low for the operators to be financially viable? Could this result in the operator departing the project? Or the project experiencing cuts in capital, operations, or maintenance? Or allowing the tolls to increase beyond the initially established range?
38	Executive Summary		ES-14	Traffic modeling only considered weekday peak periods and likely did not consider transit options. Weekend and off peak weekday periods should be tested with transit options.
39	Executive Summary	What Could the Toll Rates Be?	ES-17	[comment has been made during previous reviews] These Alternatives have been structured as a false choice of "All or Nothing". The Purpose and Need and associated screening metrics do not address concerns raised by the County throughout the process. In the case that the build alternatives prove to be commercially prohibitive for private firms, the lack of any viable option is unacceptable, as there would remain a need to address movement of users throughout the region. TSM/TDM alternatives such as Alternative 2 should be retained as such a potential fallback option.
40	Executive Summary		ES-17	Please briefly clarify how the system-wide delay savings shown in Table ES 2 were determined. Were they from VISSIM model output?
41	Executive Summary	Public-Private Partnership (P3) Program	ES-20	[comment has been made during previous reviews] The P3 business terms (responsibilities of the State and the Concessionaire) may impact the performance and environmental consequences of the project. These should be explicitly considered during the NEPA evaluation.
42	Executive Summary		ES-21	Phase 1 of the P3 includes I-270, but north of I-370 is is not included in the DEIS but would be part of the initial P3 construction and operation. Where is the logical termini discussion and FHWA approval of splitting the P3 project into 2 separate DEIS and Record of Decision?
43	Executive Summary	How Would the Project Be Constructed?	ES-21	Need to clarify: if each phase will be independently bid, are there risks to having three potentially different operators for each phase? How will the recording of vehicles occur between these systems, how will revenue be allocated between varying operators, and how will users transition between systems? Will the winner of the first contract be presumed to automatically receive &/or operate the contracts for future phases? Or will the first contract otherwise establish the operating standards of those future contracts?
44	Chapter 1	1.2	1-4	What happened to the "Multimodal Connectivity" performance metric?
45	Chapter 1	1.3.2	1-6	[comment has been made during previous reviews] This section gives population and employment growth, but does not appear to tie this to traffic growth. The ARDS shows that while both population and employment are increasing, traffic volumes are not increasing at a comparable rate. This reinforces that impacts to VMT should be a metric that is evaluated across each alternative. This appears to have at least been considered as it is mentioned in Chapter 4 (Environment), but is inexplicably absent in Chapter 3 (Traffic). Consideration should also be given of shifting mode shares toward non-auto travel, and especially the anticipated long-lasting effects of COVID-19 on telework.
46	Chapter 1	1.3.2	1-6	[comment has been made during previous reviews] This section does not encompass the effects of the State's Innovative Congestion Management (ICM) project along I-270. Metrics provided by the ICM project in 2017 suggested that I-270 will experience significantly improved flows, but this DEIS appears to ignore this information. 

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47	Chapter 1	1.6	1-9	[comment has been made during previous reviews] There has not been any narrative supporting the need for evacuation or identifying scenarios that would call for such a response. To our knowledge, there has never been an evacuation of the DC region nor are there any likely weather events that would warrant such a large-scale evacuation apart from an apocalyptic event. Evacuations arising from manmade events are unlikely to be desirable, particularly as an important focus of Nuclear / Biological / Chemical events is containment; not spreading contaminants. The risks of war or insurrection would seem unlikely to factor into the justification of a major multi-billion highway project.
48	Chapter 1	1.6	1-9	[comment has been made during previous reviews] There is not any narrative toward how well a system would function during the extreme demand loadings of an evacuation and where any potential bottlenecks or other failures points would be (e.g. the lane drops along northbound I-270).
49	Chapter 1	1.6	1-9	[comment has been made during previous reviews] The Homeland Security metric was used as a negative trait of transit, despite transit's demonstrated and efficient capability of moving large amounts of people rapidly -- including those without personal auto access, which is a large share of the DC Metropolitan Region.
50	Chapter 1	1.7	1-10	[comment has been made during previous reviews] How are the managed lanes anticipated to operate with regards to freight (e.g. will trucks be allowed to use them)? How are trucks considered as a part of this evaluation criterion?
51	Chapter 1	1.7	1-10	[comment has been made during previous reviews] What truck-specific considerations have been made in these evaluations, such as variable Lane Use Factors to reflect trucks' tendencies to keep toward the right?
52	Chapter 1	1.7	1-10	Has there been any evaluation of freight movements, patterns, and needs to support this performance metric? Where are freight trips coming from & destined to? Are their yards, distribution centers, major warehousing facilities, etc. that are key focal points, or that are key needs to serve freight movements? How does the Managed Lanes project reflect and serve these needs and patterns?
53	Chapter 1	1.7	1-10	[comment has been made during previous reviews] The movement of trucks is itself an ineffective metric. A more functional metric should be considered, perhaps considering net tonnage moved instead of vehicles, or a metric reflecting local access to goods & services.
54	Chapter 1	1.7	1-10	[comment has been made during previous reviews] The Movement of Goods and Services metric was used as a negative trait of transit, despite transit's demonstrated and efficient capability of moving large amounts of both cargo and passengers cheaply and efficiently. The parallel rail line to I-270 is literally owned by a freight company, and leased to two passenger rail companies -- one of which is part of MDOT. Section 1.7.1 only talks about trucking without any reference at all to the movement of goods by CSX, and Section 1.7.2 excludes any mention of Amtrak or MARC. Especially with 3rd tracking of the CSX corridor as well-established need to serve an existing freight bottleneck, it is unfathomable that rail was considered unable to move goods and services other than to deliberately exclude the transit alternatives.
55	Chapter 2	General	General	[comment has been made during previous reviews] The movement of vehicles is an ineffective metric and inherently biases the analysis against HOV facilities and transit. We have repeatedly requested replacing vehicle throughput metrics with person throughput, reflecting best practices for optimizing the efficacy of transportation infrastructure.
56	Chapter 2	General	General	Prefer Dynamic tolling/ETL options. Long term - most vehicles will be more efficient HOV type vehicles. Escalating ETL cost during peak demand will encourage carpools over single occupancy users.
57	Chapter 2	2.2.2	2-5	[comment has been made during previous reviews] There has not been any narrative supporting the need for evacuation or identifying scenarios that would call for such a response. To our knowledge, there has never been an evacuation of the DC region nor are there any likely weather events that would warrant such a large-scale evacuation apart from an apocalyptic event. Evacuations arising from manmade events are unlikely to be desirable, particularly as an important focus of Nuclear / Biological / Chemical events is containment; not spreading contaminants. The risks of war or insurrection would seem unlikely to factor into the justification of a major multi-billion highway project.

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58	Chapter 2	2.2.2	2-5	[comment has been made during previous reviews] There is not any narrative toward how well a system would function during the extreme demand loadings of an evacuation and where any potential bottlenecks or other failures points would be (e.g. the lane drops along northbound I-270).
59	Chapter 2	2.2.2	2-5	[comment has been made during previous reviews] The Homeland Security metric was used as a negative trait of transit, despite transit's demonstrated and efficient capability of moving large amounts of people rapidly -- including those without personal auto access, which is a large share of the DC Metropolitan Region.
60	Chapter 2	2.2.3	2-5	Has there been any evaluation of freight movements, patterns, and needs to support this performance metric? Where are freight trips coming from & destined to? Are their yards, distribution centers, major warehousing facilities, etc. that are key focal points, or that are key needs to serve freight movements? How does the Managed Lanes project reflect and serve these needs and patterns?
61	Chapter 2	2.2.3	2-5	[comment has been made during previous reviews] Notwithstanding that vehicle throughput is an outdated metric and should be person throughput, this metric makes more sense for the traffic flow criteria. This gives no consideration at all of issues and needs specific to the movement of goods nor services.
62	Chapter 2	2.2.3	2-5	[comment has been made during previous reviews] This evaluation appears to average together the impacts to all local streets across all times of day, which is a completely useless metric. Some corridors are likely to benefit, such as MD 355 outside of the Beltway, MD 192, MD 547, and potentially MD 586. Conversely, the radial corridors inside the Beltway are more likely to experience significant adverse impacts, particularly during the AM peak as more traffic is enabled to arrive at these centralized points faster, and in greater volume (as demonstrated with the Vehicle Throughput results on page 3-14). These corridors are often already congested and travel through urban areas where automotive traffic is not the priority mode. And averaging the impacts into daily values erases the effects of peak periods in peak directions. Delays, speeds, and travel time information for the Local Network is extremely important information that needs to be known at this stage. That this study does not give this level of information on the impacts to the local road network is a complete aberration from what is expected out of a traffic analyses at this stage of the project.
63	Chapter 2	2.2.5	2-6	[comment has been made during previous reviews] As stated in an earlier comment: How will need to "financially viable" be defined with respect to the inclusion of transit components within the P3 contract? Transit may include costs for capital, operating, maintenance, etc. that will vary significantly based on levels of service, and users of transit would be doing so in lieu of a toll. How will these be considered in determining rates of return on the contract?
64	Chapter 2	2.2.5	2-6	[comment has been made during previous reviews] Ensure that financial viability does not introduce an excessive bias toward alternatives that could exceed or distort considerations of technical merits. The goal should not necessarily be zero cost to the public, but rather something that optimizes technical merits for resource availability.
65	Chapter 2	2.2.5	2-6	It seems that the statement, "alternatives with more managed lanes would result in higher revenue and those with only toll users (Express Toll Lanes) would have higher revenue than those with a mix of tolled and non-tolled users (High-Occupancy Toll Lanes)," would only be true if the presence of non-tolled users reduced the number of tolled users that entered the managed lanes. If there is excess capacity expected in the managed lanes after accounting for all tolled drivers, non-tolled drivers would not be expected to take away from the actual revenue collected on the facility. I would suggest that HOT lanes not be disqualified, all else being equal, because of the presence of non-tolled vehicles, unless it can be demonstrated that their presence would significantly impact the financial viability of the alternative.

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66	Chapter 2	2.2.6	2-7	[comment has been made during previous reviews] As stated in an earlier comment: the Governor has declared a Climate Crisis. In this context, it is not adequate to simply meet environmental standards; this project should demonstrate excellence at evaluating environmental impacts and meeting sustainability goals. This project must fully vet the impacts of its alternatives and identify means of mitigating and improving upon environmental effects. On this topic we note that this section does not appear to provide any information on Climate Change impacts (such as any evaluation of emissions from vehicles, the enabling of increased growth in more distant and environmentally-sensitive areas, or impacts to VMT).
67	Chapter 2	2.2.6	2-7	[comment has been made during previous reviews] Equity is of high public concern with projects involving priced facilities (hence the term often thrown at them: "Lexus Lanes"). Mitigating the effects of equity and improving upon these conditions is important for the alternatives to evaluate and incorporate. It is important to note that disproportionate benefits can themselves be considered to be a form of inequity.
68	Chapter 2	2.5.2.a	2-11	[comment has been made during previous reviews] These Alternatives have been structured as a false choice of "All or Nothing". The Purpose and Need and associated screening metrics do not address concerns raised by the County throughout the process. In the case that the build alternatives prove to be commercially prohibitive for private firms, the lack of any viable option is unacceptable, as there would remain a need to address movement of users throughout the region. TSM/TDM alternatives such as Alternative 2 should be retained as such a potential fallback option. TSM/TDM Alternative 2 is eliminated because it would not provide traffic relief in 2040. As with the Express Toll Lanes, TDM is also a Visualize 2045 initiative and should be retained. In addition, the lack of 2040 traffic condition improvement is partly based on the definition of the limits of the project - stopping the I-270 limits at I-370. One of the most significant TDM/TSM improvement is the extension of the HOV lane for southbound traffic from the terminus at I-370 northward to at least MD 118 Germantown Road to accommodate southbound Ride On and Commuter Bus travel.
69	Chapter 2		2-12	Alternative 4/7. HOV alternatives dropped because current lanes only being used at 75% and could not support long term growth support. At issue is not that HOV lanes are not performing now, the issue is that the HOV lanes along I-270 do not connect to I-495 HOV lanes and there is a lack of direct ramp connections that would make use more convenient and would increase HOV travel time savings. A network of HOV lanes would improve long term performance.
70	Chapter 2		2-13	Alternative 14C is dropped from consideration because in part the regional analysis of BRT did not reduce sufficient traffic along I-495 to be effective. However, the DEIS does not indicated this analysis related to I-495. In addition, the reference is for the entire region's impact from the regional BRT network and there are no calculations for I-495 referenced. The Montgomery County BRT projects listed in the DEIS are all in the constrained long range plan and should be constructed regardless of the I-495 managed lane alternative chosen. The BRT projects should already be in the baseline 2040 network.
71	Chapter 2	2.5.2.f	2-13	[comment has been made during previous reviews] We remind that throughout the IAWG process we have repeatedly expressed concerns that: (1) The limited interstate-specific study area predisposes transportation investment toward highways only, instead of a more holistic evaluation of connecting users between activity centers, and collecting users at points in between. (2) The metrics within the Purpose & Need were biased against transit, and MDOT SHA expressly refused to refine the metrics to allow for a fair comparison. (3) Transit alternatives were deliberately given negative ratings for some Purpose & Need metrics, despite their actually having positive ratings for the metrics.
72	Chapter 2		2-14	Alternative 5 with one managed lane in each direction along I-495 and converting the existing HOV lane on I-270 to a managed lane closely resembles the County Master Plan from ALB to the west leg of I270 to the I-370 project limits. The County Master Plan does not have HOV/HOT lanes on I-495 east of I-270 connector. Any alternative other than Alternative 5 and TSM/TDM require a Master Plan amendment.
73	Chapter 2	2.5.2.f	2-14	[comment has been made during previous reviews] The paragraph discussing future plans for MARC should highlight the planned third tracking, difficulties in operating MARC service on a CSX-owned line, and also identify the existing freight bottleneck.

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74	Chapter 2	2.5.2.f	2-14	[comment has been made during previous reviews] This section should include at least some reference as to the presence of the Amtrak Capital Limited service.
75	Chapter 2	2.5.2.f	2-14	[comment has been made during previous reviews] The dropping of the light rail alternative because of the Purple Line has absolutely no nexus with any consideration of rail transit along I-270.
76	Chapter 2	2.5.2.f	2-14, 2-16	[comment has been made during previous reviews] Due to the tailoring of the Purpose & Need against transit, there was no significant analysis to demonstrate any of the reasons given for excluding Heavy/Light Rail Transit and Bus Rapid Transit are actually true. One good example of this is stating that rail transit alternatives will not provide alternative roadways travel choices. Of course they wouldn't: they are literally not roadways. But that does not mean they don't move people or freight. With proper planning and investment: transit connections could serve large volumes of people, could provide alternative travel choices, and can be extremely reliable; to say this is not the case is an outright false statement.
77	Chapter 2		2-15	I-200 Diversion Alternative scope includes adding managed lanes to I-95 from I-200 to I-495. The local officials' alternative description did not include these additional managed lanes that has environmental and capital cost implications. The I-200 diversion alternative has no residential property takes, and minimal parks, wetlands, and capital costs that would be further reduced if the I-95 managed lanes from I-200 to I-495 segment were removed from the alternative.
78	Chapter 2		2-16	Toll rates are to be set by MDTA and are required to manage traffic to average 45 mph speed. However, Board of Public Works (BPW) condition on the P3 program is to fund specific transit improvements/services in both Montgomery County and Prince George's County (and Frederick County though not specifically mentioned). The required transit elements may increase the toll, change managed lane demand and financing. The transit provisions should be studied in the DEIS.
79	Chapter 2	2.5.2.f	2-16	I concur with the removal of Alternative 15 (Dedicated Bus Managed Lane)
80	Chapter 2		2-17	The DEIS/FEIS should include the transit TDM elements.
81	Chapter 2		2-18	Reference to the WMATA Bus Transformation Study is not appropriate since the region has not endorsed the entire report.
82	Chapter 2		2-19	Phase 1 will only proceed with either HOT lanes or ETL as preferred alternative. This statement biases the DEIS process by predetermining the outcome.
83	Chapter 2	2.5.3.b	2-19	The discussion regarding the MD 200 Diversion Alternative, the challenges it would face in adequately addressing long-term growth and trip reliability, and its inadequate performance compared to the operational screening metrics. The DEIS should have explored ways to overcome these challenges
84	Chapter 2	2.5.3.a	2-20	Is the text supposed to say, "the same diversion route could occur in the opposite direction heading from Virginia to points north of the *I-95 and MD 200 interchange* "? It currently just says "north of I-95," which is a bit unclear.
85	Chapter 2	2.5.3	2-21	Please clarify why there would be a 15% decrease in speed along the I-495 Inner Loop during the morning peak period, compared to No-Build. This seems counterintuitive if there is a diversion of some vehicles away from the top side of I-495. Also, please clarify why the HOT lanes would not be able to achieve 45mph.
86	Chapter 2	2.6.1	2-25	Do the No-Build and Build alternatives assume the construction and operation of a BRT network in Montgomery County? BRT is mentioned as included in the CLRP, but it is a bit unclear if it was included in the analysis of alternatives. Please clarify.
87	Chapter 2	2.6.4	2-28	For Alternative 9M (and for all alternatives where managed lanes will need to transition to fewer or greater number of managed lanes), has consideration been given to the user/driver ability to safely navigate these transition zones? Are there expected to be significant operational impacts in these transition zones? If so, it may be good to briefly mention this here.
88	Chapter 2	2.6	2-31	We note the estimates of between 25-34 residential displacements and 4 business displacements versus the longstanding State assertion that the project would have a zero displacements.
89	Chapter 2	2.6	2-31	Need to identify each residential & business displacement / relocation, and identify what is being done to assist with their relocation regarding their individual interests, costs, destinations, and for businesses: their continued viability.
90	Chapter 2	2.7.1	2-32	[comment has been made during previous reviews] Where BRT facilities are master planned: include BRT facilities across the 270 and 495 corridors at interchanges.

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91	Chapter 2	2.7.1	2-32	[comment has been made during previous reviews] Include ped/bike facilities across the 270 and 495 corridors at interchanges as well as at non-interchange crossing points. Facilities are expected to meet applicable standards, best practices, and master plans, particularly the approved Bicycle Master Plan and the Pedestrian Master Plan currently in development. Replacing-in-kind (as stated on page 2-47) is NOT acceptable. Note that the Bike Master Plan calls for grade separated crossings across free-flow ramps. We also remind that while our Bicycle Master Plan includes prioritization for bikeways, it also states that any bikeways where other projects are occurring are to be considered the highest priority for purposes of implementation with those projects.
92	Chapter 2	2.7.1	2-34	[comment has been made during previous reviews] The lack of any access to the Forest Glen Metro Station directly conflicts with statements on pages such as ES-11 and 2-13 which emphasize the benefits of the project at connecting to facilities such as Metro stations. Even if there is not a full interchange, with the high volume of and potential for Kiss & Ride use at this location: there is a need for some form of Kiss & Ride access served by the Managed Lanes. This could potentially be an in-line Kiss & Ride facility, noting the presence of the Metro Station running beneath the Beltway.
93	Chapter 2	2.7.5.b	2-42	[comment has been made during previous reviews] Separating the determination of the toll rate range from the rest of this process creates an additional risk to bidders. How susceptible are the bids to misjudging this range? What if the range, after its public process, is set too low for the operators to be financially viable? Could this result in the operator departing the project? Or the project experiencing cuts in capital, operations, or maintenance? Or allowing the tolls to increase beyond the initially established range?
94	Chapter 2	2.7.5.b	2-42	[comment has been made during previous reviews] Based on the toll assumptions presented on page ES-13: what is the anticipated revenue of these roll rates, and how do they compare to the cost of each alternative? How many years are estimated before each alternative would generate enough revenue as to surpass its costs? Comparing these per mile toll estimates with anticipated traffic volumes, it appears this would amount to approximately $130-145m/yr, and based only on the capital costs on page ES-17, it would take between 65-80 years until revenue matches costs (not accounting for operations & maintenance). How does this compare to the 50 year P3 agreement anticipated per page 2-6? Does this toll range conform to estimates from bidders and their expectations of the project?
95	Chapter 2	2.7.5	2-44	On this page it is affirmed that it is presently assumed HOV 3+ would have free access to the managed lanes. We concur with this assumption and welcome its inclusion.
96	Chapter 2	2.7.5	2-44	[comment has been made during previous reviews] Are there any other cases where continuous toll facilities such as this have transitioned between jurisdictions & business rules? It may be helpful to share with a future IAWG how such cases have been addressed. Items of interest would include physical infrastructure (such as exchange ramps) and informational awareness (how to explain the change of business rules to users-on-the-go, help them make decisions, and then guide them through their decisions). We reiterate our urging that the pricing reflect the same pricing system (e.g. HOV allowances, discounts, exclusions) as in Virginia, and/or that comparable HOV allowances be maintained within any Priced Managed lanes to achieve equity obligations and also as per our comments dating to the Purpose and Need.
97	Chapter 2	2.7.7	2-47	[comment has been made during previous reviews] Include ped/bike facilities across the 270 and 495 corridors at interchanges as well as at non-interchange crossing points. Facilities are expected to meet applicable standards, best practices, and master plans, particularly the approved Bicycle Master Plan and the Pedestrian Master Plan currently in development. Replacing-in-kind (as stated on page 2-47) is NOT acceptable. Note that the Bike Master Plan calls for grade separated crossings across free-flow ramps. We also remind that while our Bicycle Master Plan includes prioritization for bikeways, it also states that any bikeways where other projects are occurring are to be considered the highest priority for purposes of implementation with those projects.

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98	Chapter 2	2.8	2-50	While we have long recognized that a public cost may be associated with this project, and that is not itself a bad thing, we note the estimates of between $482-1088m of public subsidy given in this section versus the longstanding State assertion that the project would have a zero cost to taxpayers. These values also do not appear to include some (or potentially all?) utility relocations, as per our understanding that WSSC efforts would be at their cost and, subsequently, amount to approximately $2b passed onto their customers.
99	Chapter 2	2.8	2-50	How do these cash flow scenarios affect the estimated time for revenues to surpass costs for the project, and how do these compare to the 50-year P3 agreement? What if this timeframe is longer than 50 years? How will that affect the P3 agreement or the facilities operations beyond the 50th year? What if this timeframe is shorter than 50 years? Does this imply a cost to taxpayers of upwards of $2,762m per year between the Return On Investment year and the P3's sunset? With the Statewide CTP estimating $13,400m for the 2021-2026 program, meaning an average of $2,233m per year of capital transportation projects throughout the State … is it correct to view this potential annual subsidy as greater than the entire capital budget for transportation?
100	Chapter 3	General	General	What are the ADTs for the managed lanes, at various points in the system? This information is needed for our own evaluations of the EIS and would seem to be a rather fundamental metric. It may also be helpful information for potential bidders.
101	Chapter 3	General	General	[comment has been made during previous reviews] Provide an O-D Matrix of travel times for both the Managed and General Purpose lanes for each access point along I-270 and I-495 (with accompanying narrative, as needed). This will help better understand flows, identify specifically failing pairings, and better tailor responses to these needs. This is especially important considering it is our understanding that many/most trips along these facilities are relatively short in nature, using the interstate for only a few interchanges. Therefore longer & larger systemic effects may be of less utility to actual users.
102	Chapter 3	General	General	This project claims to improve traffic, but the project's analysis finds that in many cases the Managed Lanes barely perform better than the General Purpose Lanes, and in some segments they perform even worse. In numerous cases the General Purpose lanes worsen significantly as compared to No Build conditions. Would MDOT accept degraded performance of the General Purpose lanes in the interest of providing priced managed lanes? Penalizing current users of these roads does not seem to be consistent with the stated policy objectives of this program. If MDOT does indeed accept this outcome, it is imperative that equity be considered, and actions be incorporated into the project, to address the needs of users most adversely impacted. The project's Purpose & Need includes creating new options for users, but the Build alternatives instead appear to reduce options available to users unable to afford or otherwise access the managed lanes. Based on this traffic information, none of these Build alternatives should be considered to satisfy this metric of the Purpose & Need.
103	Chapter 3	General	General	Practices, assumptions, locations, and methodology seem typical
104	Chapter 3	General	General	Did the operational analysis of each of the Build alternatives account for the congestion/operational/queuing issues that existing along many of the arterials interchanging with I-495 and I-270? This is important to take into account and review, since additional throughput along the freeways may exacerbate some of the operational issues that already exist along these arterials, and could affect operations on the freeways more than if just the ramps/ramp terminal intersection impacts are modeled.
105	Chapter 3	3.1.1	3-1	Please clarify how peak period demand was determined for the study corridor. Simply using traffic count volumes at a location may not reflect true demand; upstream unconstrained volumes should be considered.
106	Chapter 3	3.1.1	3-1	It is good that hourly speed data was collected to assist with calibration of the base VISSIM operational models. Was field data such as queuing (both on the freeways and adjacent interchange ramp terminals/cross street intersections) considered and reasonably reflected in the base modeling?

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107	Chapter 3	3.1.1	3-1	Please clarify the extent to which interchange cross streets were modeled in VISSIM. Were just the ramps and ramp terminal intersections modeled, or did the model continue on either side of the interchange to get a clearer representation of these cross street operations in the vicinities of interchanges?
108	Chapter 3	Figure 3-1	3-3	The Figure shows the Watkins Mill Road interchange as future, but it is now currently in operation. Please update as necessary.
109	Chapter 3	3.1.3	3-4	Given that the CCT is assumed to be part of the base network, is the State indicating a renewed willingness to fund and implement the project, or perhaps to include it as part of the P3 project?
110	Chapter 3	3.1.3	3-4	Corridor Cities Transitway and US 29 BRT are assumed as completed transit projects in year 2040. What assumptions were made for how they would operate?
111	Chapter 3	3.1.3	3-4	Exit points from the managed lanes? Same as entry points?
112	Chapter 3	3.1.3	3-5	The final paragraph discusses tolling rates assumed per mile (for planning purposes), with a range from $0.20 to $1.36 per mile. What is the likelihood that these rates are insufficient to maintain a maximum of 1,700 vehicles per hour per lane and minimum 45 mph operating speeds? If this does occur, is it addressed through raising tolls until the demand recedes? I could envision a negative public reaction if toll ranges are announced, and they need to be raised above that range frequently, so it is important to establish expectations early. Also, once a vehicle is within the managed lane system, are the toll rates per mile "locked in" until the vehicle exits the system? Or will the rates rise and fall as the vehicle traverses different segments with different demands? This again goes back to expectations, so a motorist is not surprised by a sudden surge in toll costs (and is given an opportunity to exit the system if the toll becomes too high). It also could affect operations on the general purpose lanes.
113	Chapter 3	3.2	3-6	I think it would be helpful to provide a figure here mapping out the congested and severely congested segments of I-495 and I-270 during the peaks, based on TTI values. It could help give a scope of the congestion.
114	Chapter 3	3.3	3-8	Table 3-3 shows 2040 Build Traffic. The Build alternatives show ADTs that are higher than No-Build. It may be helpful to discuss this growth in the context of increased person-throughput, improved travel times, and travel reliability in this section (even though subsequent sections discuss some of these topics). Also, it may be helpful to clarify if this traffic growth has any significant impact on loss of trips via Metro, BRT, etc.
115	Chapter 3	3.3.1	3-8, 3-9	While this section alludes to more detailed travel speed information in Appendix C, it may be helpful to provide a general note highlighting any significant speed benefits experienced on a segment level, which may be watered down by taking an average of a much longer corridor.
116	Chapter 3	3.3.1	3-9	[comment has been made during previous reviews] We note that for Alternative 13B: along northbound I-270 between I-495 and I-370, during the PM peak, the average speed of the General Purpose lanes (43 MPH) is faster than the Managed Lanes (40 MPH). The narrative should elaborate on why this is.
117	Chapter 3	3.3.1	3-9	[comment has been made during previous reviews] The General Purpose lanes operate more slowly than No Build conditions under the following scenarios: - AM peak, NB 270 between 495 and 370, all alternatives (3% reduction) - AM peak, SB 270 between 370 and 495, alternative 5 (3% reduction) - AM peak, SB 270 between 370 and 495, alternative 10 (16% reduction) - AM peak, SB 270 between 370 and 495, alternative 13C (34% reduction) - PM peak, NB 270 between 495 and 370, alternatives 5 (26% reduction) - PM peak, NB 270 between 495 and 370, alternatives 8 (4% reduction) - PM peak, NB 270 between 495 and 370, alternatives 9 (17% reduction) - PM peak, NB 270 between 495 and 370, alternatives 9M (23% reduction) - PM peak, NB 270 between 495 and 370, alternatives 10 (34% reduction) - PM peak, NB 270 between 495 and 370, alternatives 13B (19% reduction) - PM peak, NB 270 between 495 and 370, alternatives 13C (15% reduction) - PM peak, SB 270 between 370 and 495, alternatives 5 (70% reduction) - PM peak, SB 270 between 370 and 495, alternatives 8 (46% reduction) - PM peak, SB 270 between 370 and 495, alternatives 9 (18% reduction) - PM peak, SB 270 between 370 and 495, alternatives 9M (64% reduction) - PM peak, SB 270 between 370 and 495, alternatives 10 (16% reduction) - PM peak, SB 270 between 370 and 495, alternatives 13B (58% reduction) - PM peak, SB 270 between 370 and 495, alternatives 13C (20% reduction)

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118	Chapter 3	3.3.2	3-10	[comment has been made during previous reviews] The Delay metrics appear to combine both General Purpose and Managed Lanes. As such, this is not a particularly useful metric. The aggregate nature of this metric may allow the effects of the managed lanes or the general purpose lanes to be overrepresentative, and we urge that this metric separate these for managed lanes and general purpose lanes, individually.
119	Chapter 3	3.3.3	3-10	[comment has been made during previous reviews] The General Purpose lanes have a higher TTI than No Build conditions under the following scenarios: - AM peak, 495 Outer Loop between 270 and VA 193, alternative 5 (42% worse) - AM peak, 495 Outer Loop between 270 and VA 193, alternative 8 (8% worse) - AM peak, 495 Outer Loop between 270 and VA 193, alternative 9 (42% worse) - AM peak, 495 Outer Loop between 270 and VA 193, alternative 9M (42% worse) - AM peak, 495 Outer Loop between 270 and VA 193, alternative 10 (42% worse) - AM peak, 495 Outer Loop between 270 and VA 193, alternative 13B (42% worse) - AM peak, 495 Outer Loop between 270 and VA 193, alternative 13C (33% worse) - AM peak, 495 Inner Loop between 270 and 95, alternative 5 (50% worse) - AM peak, 495 Inner Loop between 270 and 95, alternative 8 (20% worse) - AM peak, 495 Inner Loop between 270 and 95, alternative 9 (30% worse) - AM peak, 495 Inner Loop between 270 and 95, alternative 9M (50% worse) - AM peak, 495 Inner Loop between 270 and 95, alternative 10 (20% worse) - AM peak, 495 Inner Loop between 270 and 95, alternative 13B (20% worse) - AM peak, 495 Inner Loop between 270 and 95, alternative 13C (20% worse) - AM peak, SB 270 between 370 and 495, alternative 10 (13% worse) - AM peak, SB 270 between 370 and 495, alternative 13C (47% worse & now failing)
120	Chapter 3	3.3.3	3-10	[comment has been made during previous reviews] The General Purpose lanes have a higher TTI than No Build conditions under the following scenarios: - PM peak, NB 270 from 495 to 370, alternative 5 (40% worse) - PM peak, NB 270 from 495 to 370, alternative 8 (10% worse) - PM peak, NB 270 from 495 to 370, alternative 9 (30% worse) - PM peak, NB 270 from 495 to 370, alternative 9M (30% worse) - PM peak, NB 270 from 495 to 370, alternative 10 (60% worse) - PM peak, NB 270 from 495 to 370, alternative 13B (30% worse) - PM peak, NB 270 from 495 to 370, alternative 13C (20% worse) - PM peak, SB 270 from 370 to 495, alternative 5 (236% worse & now failing) - PM peak, SB 270 from 370 to 495, alternative 8 (82% worse & now failing) - PM peak, SB 270 from 370 to 495, alternative 9 (18% worse) - PM peak, SB 270 from 370 to 495, alternative 9M (182% worse & now failing) - PM peak, SB 270 from 370 to 495, alternative 10 (18% worse) - PM peak, SB 270 from 370 to 495, alternative 13B (136% worse & now failing) - PM peak, SB 270 from 370 to 495, alternative 13C (27% worse)
121	Chapter 3	3.3.3	3-10	[comment has been made during previous reviews] In addition to the TTI information it would be helpful to compare the mean and standard deviation of travel times in each direction of the General Purpose lanes.
122	Chapter 3	3.3.3	3-10	Please clarify what "Weighted Average TTI" means in this section.
123	Chapter 3	3.3.3	3-11	[comment has been made during previous reviews] The focus only on the General Purpose lanes ignores that Managed Lanes users using sliplanes will also be affected by the General Purpose lane's congestion. Given the increased delays in the General Purpose lanes, in cases where managed lanes users must use at-grade sliplanes to enter or exit the sliplanes: clarify whether there are any O-D pairings whereby the additional time spent in the General Purpose lanes is such that a Managed Lane user's net travel time is worse than the same trip under No Build conditions.

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124	Chapter 3	Table 3-8	3-11	Based on Table 3-8, the segment of I-495 Inner Loop from I-270 to I-95 continues to experience severe congestion in the PM peak, even under all Build alternatives. Can there be some brief discussion here about why that is, and what would be necessary to bring the TTI down below the severe threshold (if it is even feasible)?
125	Chapter 3	3.3.4	3-12	The Level of Service metrics appear to combine both General Purpose and Managed Lanes. As such, this is not a particularly useful metric. The aggregate nature of this metric may allow the effects of the managed lanes or the general purpose lanes to be overrepresentative, and we urge that this metric separate these for managed lanes and general purpose lanes, individually.
126	Chapter 3	3.3.4	3-12	For this section and in general, has any operational analysis been performed for the interchange ramps and ramp terminal intersections on the interchange cross streets? Section 3.3.6 provides information about overall network delay to the local roadway network, but there is language about some increased delays around managed lane entrance points on the cross streets. We want to be sure that operational benefits to the freeway system do not result in operational failures or safety concerns on the ramps or cross streets, so it would be beneficial to have an idea of any localized issues as well.
127	Chapter 3	3.3.5	3-13	At the cost of each alternative, and comparing to this vehicle throughput, this yields a cost per new vehicle upwards of: - Alt 5 - $5.7 mil/vehicle - Alt 8 - $2.9 mil/vehicle - Alt 9 - $2.6 mil/vehicle - Alt 9M - $3.9 mil/vehicle - Alt 10 - $2.4 mil/vehicle - Alt 13B - $3.4 mil/vehicle - Alt 13C - $2.6 mil/vehicle These cost rates seem extremely high. From the data presented it is difficult to adjust these numbers to account for travel time savings or to differentiate between public and private costs, and we suggest MDOT consider including such an analysis in the FEIS.
128	Chapter 3	3.3.5	3-13	I suggest providing person throughput values for the key locations identified in this section as well. That way, if there is a desire to compare throughput to that of transit, it is more easily comparable here. Also, with the presence of the managed lanes, it would beneficial to be in an HOV, since this would increase person throughput without a comparable increase in vehicles. Any benefit would be more clearly reflected by providing the person throughput metric alongside vehicle throughout.
129	Chapter 3	3.3.6	3-15	[comment has been made during previous reviews] This evaluation appears to average together the impacts to all local streets across all times of day, which is a completely useless metric. Some corridors are likely to benefit, such as MD 355 outside of the Beltway, MD 192, MD 547, and potentially MD 586. Conversely, the radial corridors inside the Beltway are more likely to experience significant adverse impacts, particularly during the AM peak as more traffic is enabled to arrive at these centralized points faster, and in greater volume (as demonstrated with the Vehicle Throughput results on page 3-14). These corridors are often already congested and travel through urban areas where automotive traffic is not the priority mode. And averaging the impacts into daily values erases the effects of peak periods in peak directions. Delays, speeds, and travel time information for the Local Network is extremely important information that needs to be known at this stage. That this study does not give this level of information on the impacts to the local road network is a complete aberration from what is expected out of a traffic analyses at this stage of the project.
130	Chapter 4	4.8.3	4-62	It is noted here that each Build alternative increases VMT, which is directly counter to the County's vision, master plans, and efforts.
131	Chapter 4	4.21.3.C.g	4-129	The results of these demographic surveys would appear to demonstrate that inadequate effort has been made in reaching out to disadvantaged communities. Survey respondents were 87% white, 43% over age 65, and 92% over age 40. Multiple other important metrics do not appear to have been considered.

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132	Chapters A&B - Alternative 9M	General	General	Has there been a general discussion of how each of the Build Alternatives affects induced demand versus latent demand in this Attachment? The ability to increase throughput is desirable if it assists more with latent demand and reduction of congestion on the shoulder hours. It is less beneficial if it comes more from induced demand, which draws trips away from transit and other travel modes, without improving congestion significantly. I think it is important to clarify this difference, and indicate how the Build Alternatives perform.
133	Chapters A&B - Alternative 9M	Section C.2	8	This section discusses the weighted average speed for the study area by alternative. The results for Alternative 9M show an average weighted speed of 38 mph, which on the surface, appears to only by slightly less than the weighted average speeds of other Screened Alternatives. It is important to distinguish/emphasize that because the speeds are weighted for every single vehicle on every single segment in the study area, any significant benefits or disbenefits on more critical segments may be diluted. If this is the case when comparing Alternative 9M to others, please clarify that minor differences in weighted average speeds does not necessarily mean that the operational performances between alternatives are minor; different metrics need to also be considered to get an overall perspective.
134	Chapters A&B - Alternative 9M	Section 6	11	This section states that traffic congestion on local roadways would be higher under Alternative 9M because the overflow of vehicles that could not be accommodated in the single managed lane would shift to the general purpose lanes or local arterials. Is this shift assumed to occur because the toll rates on the top side of I-495 would need to be raised to the point that demand in the managed lane is lowered? Wasn't the assumption for volumes in the managed lanes an iterative process, such that 45 mph is the minimum speed maintained (regardless of whether there is a single managed lane or two managed lanes? Why would vehicles be overflowing out of the managed lanes if this constraint was assumed to be in place? Please clarify.
135	Chapters A&B - MD 200 Diversion Alternative Analysis Results			More detailed exploration of this alternative is warranted.
136	Chapters A&B - MD 200 Diversion Alt	Section III	12	As a point of clarity, under Travel Forecasting Summary and Findings, are you actually talking about traffic volume demand, rather than actual traffic volumes? For example, it is stated that in the PM peak, volumes on I-495 between I-270 and I-95 will grow by about 3%. This growth is said to be possibly attributed to traffic from the managed lanes on I-495 and I-270 reaching the top side faster. It would seem like actual traffic volumes would be maxing out in this section already, given the capacity constraints. I think it is important to distinguish that in these situations, you may not see an actual increase in volumes, but the demand will increase, contributing to a "peak spreading" effect (which lengthens the period of congestion and can lower reliability). It should be noted that in Section 4 on Page 19, there is language that says the top side appears to operate better in the MD 200 Alternative because of an upstream bottleneck that meters the flow of traffic into this segment. Such language would imply that peak hour volumes are lower in the top side segment (which would appear to contradict the language on page 12), making it important to distinguish between demand and actual volumes observed.
137	Chapters A&B - MD 200 Diversion Alt	Section III	12	Please clarify why the VISSIM models did not include modeling MD 200 or I-95 from MD 200 to I-495? Was this meant to maintain apples to apples comparisons of Measures of Effectiveness with the other Build alternatives? If MD 200 and I-95 were to be modeled in VISSIM, would the operational analysis results be expected to be significantly different from the current models? Why or why not?

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138	Chapters A&B - MD 200 Diversion Alt	Effect on Local Roadways	20	This section states that the MWCOG regional model outputs were used to calculate total vehicle hours of delay of all arterials in Montgomery County (and other counties). This is a fairly high level/general metric that may not account for significant operational issues that exist on cross street arterials in the vicinity of I-495 and I-270 interchanges. As commented before, a major question is whether any increase throughput on these freeways in the MD 200 Diversion Alternative and other Build Alternatives exacerbates the significant operational issues that are already expected to occur on various arterials. Has an operational analysis (using VISSIM) been conducted for these cross street arterials to determine if any of the Build alternatives create such an issue, and if there is a need for operational improvements on these arterials or interchange ramps? While this analysis may not have been a primary focus, it is still important to consider, as having additional operational failure on arterials creates more localized issues, which could have an unexpectedly adverse effect on the freeway system too.
139	Chapters A&B - MD 200 Diversion Alt	Section II.B		TSM/TDM. This section discusses adaptive ramp metering and traffic signal timing optimization along the top side I-495 interchanges between I-270 and I-95. Was consideration given to pedestrian needs while crossing over/through these interchanges along the cross street arterials? For example, do signal splits account for the time needed for pedestrians to cross through intersections or over ramps? Also, when looking to limit queues onto the arterials, what thresholds/factors were used when determining if a queue was unacceptable?
140	Chapters A&B - MD 200 Diversion Alt	Conclusion		The MDOT 200 Divserion Alterntive needs more exploration to determine how this alternative could work, rather than an effort to provide that it does not work.
141	Chapters A&B - MD 200 Diversion Alt	Attachment A/PDF	47	The labels for ramps 7 and 8 at the I-495/US 29 interchange appear to be flipped, based on the volumes each ramp is projected to carry during the AM peak period in the Future Diversion Alternative. Ramp 8 would be expected to carry the larger traffic volumes than Ramp 7 in the AM peak. Please verify (for this interchange and others in this appendix), and revise as necessary. It should also be noted that Ramp 8 volumes in this attachment appear to be lower than volumes developed by MCDOT for its US 29 BRT Feasibility Study. The differences are largely based on available counts that were used for volume balancing.
142	Chapters A&B - MD 200 Diversion Alt	Attachment A General		The I-495 volumes in Attachment A are referenced in some places as NB and SB, and in others as EB and WB. Consider labeling the directions as IL and OL (Inner Loop and Outer Loop), or IL and OL as a complement to the existing directional convention being used, for consistency and to avoid confusion with cross streets that may have the name directionality.
143	Chapters A&B - MD 200 Diversion Alt	Attachment B/Travel Demand Table	85	Is there any context in the document that discusses the purpose of the travel demand table in Attachment B? Is this data the raw output from the MWCOG Travel Demand Model, or has some level of post-processing been applied to constrain the demand?
144	Chapters A&B - MD 200 Diversion Alt	Attachment C Speed Maps	88	Please explain why the 2040 No-Build condition is showing relatively fast speeds for the I-495 IL between the ALB and I-95, but all other alternatives show a major degradation in speeds from roughly I-270 to MD 97, and on the approach to MD 650? This seems a bit counterintuitive. Has this been addressed in the main report?
145	Chapters A&B - MD 200 Diversion Alt	Attachment C Speed Maps	92	Please explain why the Build conditions in 2040 do not appear to be showing much of a benefit in the PM for I-270 NB, as compared to No-Build? This seems a bit counterintuitive. Has this been addressed in the main report?
146	Chapters A&B - MD 200 Diversion Alt	Attachment C Speed Maps	87-88	The legend for the Speed Color Scale is difficult to read on pages 87 and 88. Please revise to improve readability (it is implicitly understood that this scale is the same as the legends on subsequent pages).
147	Chapters A&B - MD 200 Diversion Alt	Attachment C Speed Maps	87-92	Please clarify if the speeds pertain to only the general purpose lanes or not (even if it has been stated in the main body of the report).

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148	Chapters A&B - MD 200 Diversion Alt	Attachment D Travel Time Matrices	94-97	Please indicate the time units used for travel time. Based on the values, it is implied that they are in minutes.
149	Chapters A&B - MD 200 Diversion Alt	Attachment F Link Evaluation	106-117	Several of the Exit labels are missing in the figures for the top side of I-495, making it unclear where speeds, densities, and LOSs start to degrade or improve in the AM and PM peaks. Please include these labels for clarity.
150	Chapters A&B - MD 200 Diversion Alt	Attachment F Link Evaluation	106-117	Is the data presented in Attachment F pertaining to the worst peak hour of the AM and PM peak period, or is it an average of each peak period? Also, please clarify if the data shown is for general purpose lanes only, and if it is for the "Express" or "Local" lanes. Is there a significant difference between performance in the Express (not ETL) and Local lanes?
151	Chapters A&B - MD 200 Diversion Alt	Attachment H Percent Demand Met	122-123	It is acknowledged that the MD 200 Diversion Alternative may not fully resolve congestion issues in the network to the same extent as more impactful build alternatives. The analysis should explore what additional measures can be taken to improve this alternative's performance as an impact avoidance approach that provides transportation system improvement.
152	Chapters A&B - Alternative 9M	Attachment H Percent Demand Met	244-245	It is acknowledged that the MD 200 Diversion Alternative may not fully resolve congestion issues in the network to the same extent as more impactful build alternatives. The analysis should explore what additional measures can be taken to improve this alternative's performance as an impact avoidance approach that provides transportation system improvement.
153	Chapter B - Alternatives Technical Report	General	General	General concurrence - see Chapter 2 comment.
154	Chapter B - Alternatives Technical Report	Section 4.4.18	50	It is stated that Alternative 14A may enhance trip reliability for existing or future transit users, overall, it would not improve trip reliability along I-495 or I-270. Is this implying that there would not be a significant mode shift from auto trips to transit trips, thus having limited operational benefit to I-495/I-270 itself?
155	Chapter B - Alternatives Technical Report	Section 5.1	62	Pylons were selected as the preferred method of separation between the GP lanes and Managed lanes. While there are several benefits to using pylons, are there any specific maintenance concerns associated with using pylons (such as pylons being struck, blocking part of the managed lanes/GP lanes, creating a potential safety concern)? Has Virginia experienced such issues, and if so, how is this addressed/mitigated?
156	Chapter B - Alternatives Technical Report	Figure 5-6	72	Figure 5-6 shows the proposed managed lanes access locations. It appears that at grade access locations are fairly limited throughout the I-495 corridor, and do not exist in the I-270 corridor. If access to/from these managed lanes will mostly be provided via direct interchange ramps, will there be opportunities to alert motorists to the travel times (and toll prices) via managed lane vs GP lane prior to them entering the freeway? This way, motorists don't get "locked out" of using the managed lanes if they miss entering at the limited number of at grade locations or at the interchanges. Also, if toll rates for motorists are not "locked in" once they enter the managed lane system, what happens if a motorist does not want to pay a higher toll, wishes to exit the managed lane system, and complete the rest of their trip in the GP lanes? In other words, is there going to be a situation where the motorist enters the system thinking the tolls are one rate, but then the tolls increase due to demand, and the motorist is trapped in the system with no opportunity to exit (unless exiting to an interchange that is not their actual destination)?
157	Chapter B - Alternatives Technical Report	Figure 5-6	72	There are several interchanges that do not appear to provide direct access or at grade access to the managed lanes (such as I-495 at MD 97). Has the traffic operational analysis accounted for the impact of diverted trips to adjacent interchanges in an effort to reach the managed lanes?

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158	Chapter B - Alternatives Technical Report	Section 6.3.5	124	For Alternative 13B, this section mentions that no NB HOT lanes would be available on I-270 in the AM peak, thus precluding travelers along I-495 from using the HOT lanes if they were also destined for NB I-270. This would reduce the potential demand on I-495 HOT lanes approaching I-270, and increase demand on the over-capacity GP lanes. Has consideration been given to allowing an at grade exit from the HOT lanes to the GP on I-495, prior to I-270, to alleviate this HOT underutilization concern? Would such a change make Alternative 13B perform significantly better, or would any potential benefits be offset by additional friction/merging in the I-495/I-270 Spur area?
159	Chapter C - Traffic Technical Report	General	General	[comment has been made during previous reviews] It is unclear whether the traffic models assume uniform lane use between general purpose lanes, or if they more realistically evaluate lane use variations in response to peoples' tendencies to keep right, positioning for interchanges & slip-ramps, etc., and the impedances these variations create. It is also unclear if there adjustments for the impedances caused by price-displaying Variable Message Signs in advance of managed lanes decisions points.
160	Chapter C - Traffic Technical Report	General	General	Reviewed.
161	Chapter C - Traffic Technical Report	Section 2.1.B	10	The I-270 west spur HOV lane actually begins on I-495 IL, north of the MD 190 interchange, not at Democracy Blvd as is stated here.
162	Chapter C - Traffic Technical Report	Table 2-1	12	The I-495 IL transitions from 5 to 6 travel lanes between MD 190 and I-270 Spur (an HOV lane forms about 3/4 mile north of the MD 190 interchange ramps). Was this HOV lane modeled in VISSIM? This segment is significantly congested, particularly in the PM peak (and to a lesser degree in the AM peak), so modeling this lane would be important.
163	Chapter C - Traffic Technical Report	Figures 2-16 to 2-19	31	These figures show speeds on I-495 and I-270, by direction, as a whole. Is the purpose of these figures to get a general metric of speeds for the entire roadways for system wide purposes? If not, please note that these average speeds may mask areas on both corridors that experience significantly worse (lower) speeds during certain hours of the day.
164	Chapter C - Traffic Technical Report	Figures 2-24 to 2-25	36-37	Is there a summary of speeds on I-270 for the off-peak directions in the NB and SB directions for comparison purposes?
165	Chapter C - Traffic Technical Report	Section 2.12.E	54	Please clarify why there is a difference in speed calibration thresholds between the AM and PM peak periods. Also, please briefly explain how the specific threshold values were determined.
166	Chapter C - Traffic Technical Report	Table 2-9 and 2-10	57-58	The total length of roadway segments meeting the volume calibration criteria appear to be quite low, which seems to contradict the discussion in the text earlier about how a much higher percentage of roadway miles meet calibration thresholds. Also, the "Total Length of Segments meeting both volume and speed criteria" appears to be higher than either the individual volume or speed criteria percentages in adjacent columns. Please explain/clarify, and confirm if the VISSIM modeling reasonably represents existing operational conditions.
167	Chapter C - Traffic Technical Report	Table 3-1 and 3-2	67	How was existing travel demand determined for the existing study corridors if such large segments of these corridors have their demand constrained for several hours of each day? Were counts at uncongested upstream or interchange locations carried through to the congested segments? Please clarify. Also, Table 3-2 shows some throughput volumes that are greater than the travel demand volumes in Table 3-1. In theory, throughput should not be greater than travel demand. Please clarify this.
168	Chapter C - Traffic Technical Report	Section 4.3	80	Why did the second round of travel demand analysis using MWCOG V.2.3.71 no longer include the BW Pkwy, I-695, or I-270 north of I-370. For clarity, would their removal result in a significant difference in future travel demand within the study network?
169	Chapter C - Traffic Technical Report	Figure 4-2	86	Are the AAWDT's shown for each screenline the cumulative total of all roadways crossing the screenline? The values appear too high to only be AAWDTs for I-495 or I-270 alone. Please clarify.

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170	Chapter C - Traffic Technical Report	Figures 5-11, 5-12, and others	95	Shady Grove Road is mistakenly listed as "Shady Grove Dr" in the figures. Please correct where appropriate.
171	Chapter C - Traffic Technical Report	Section 5-2	111	The first paragraph states that end to end travel times on I-270 are projected to improve under Alternative 1/No-Build prior to 2025, due to the ICM improvements, but that congestion MAY return by 2040. Is there a significant possibility that congestion does not return to the corridor by 2040 under Alternative 1/No-Build? The way this is phrased, it seems like this is an uncertainty. Please clarify this language, especially if the intent is to say that congestion is likely to be present.
172	Chapter C - Traffic Technical Report	Section 5-2	111	The last paragraph says that travel times along I-270 SB are projected to remain unchanged between 2017 and 2040 due to the ICM improvements, while I-270 NB travel times will increase by 10 minutes. For clarity, it may be helpful to note that no increase/a relatively minor increase in travel times on I-270, as compared to existing conditions, would still result in significant congestion and delays, as existing operational conditions on I-270 in the peak direction is fairly poor.
173	Chapter C - Traffic Technical Report	Tables 5-1 through 5-4/Pages 118-121	118-121	Are the travel times listed in all of these tables representative of each hour within the peak period, an average of each hour in the peak period, or the peak hour? Please clarify, as the corridor has some variability in travel times, depending on what hour within the peak period is being considered.
174	Chapter C - Traffic Technical Report	Table 5-6	123	Please explain why Alt 10 shows a travel time disbenefit (AM and PM) in the general purpose lanes for I-270 NB, when compared to Alt 1/No-Build. Alt 10 provides two new ETLs in each direction on I-270. While the number of general purpose lanes doesn't change, the ETLs would be expected to provide additional capacity, thus freeing up some capacity in the adjacent general purpose lanes. Is there additional throughput, or a bottleneck above the I-370 interchange that is causing the slower performance in Alt 10?
175	Chapter C - Traffic Technical Report	Section 5-9	148	This section states that the 2040 MWCOG results specific to MD 185, MD 97, US 29, MD 193, and MD 650 indicate that additional daily volumes would be expected on MD 185 and US 29, but less volume would be expected on MD 97, MD 193, and MD 650 (when comparing the 2 managed lane alts with Alt 1/No-Build). First, please clarify why less volume would be expected on 3 of these corridors, considering that 2 are radial routes, I-495 is a circumferential route, and there is projected to be an increase in volumes on I-495. Second, was analysis completed on all of these 5 arterial routes beyond the immediate interchange ramps/intersections to account for the impacts of congestion and queuing that already are present under existing conditions? Several of these corridors have significant queue spillback onto I-495 already, often due to downstream intersections in the arterial corridors (not explicitly due to the ramp terminal intersections/ramp merges). What happens to the performance in the managed lanes and general purpose lanes on I-495 if this queue spillback continues to exist?
176	Chapter C - Traffic Technical Report	Section 6	151	It is mentioned that congestion reduction could be expected to reduce congestion related crashes in the study corridors. Are there other features of the alternatives that would also be expected to reduce crashes (e.g. removing the C-D lanes on I-270, and thus removing the frequent slip ramp merges and diverges, barrier separated managed lanes)? If so, please discuss.
177	Chapter C - Traffic Technical Report	Figure 6-1 and 6-2	153	Please list the units used for crash rates in the figures (i.e. crashes per Million Vehicle Miles).
178	Chapter J - Noise Analysis Technical Report	General		As far as noise modeling and noise impact mitigation is concerned, the various "widening" alternatives presented in the DEIS are basically the same, because the number of lanes created and their orientation is also basically the same. While one alternative may show that, for example, 86 NSA (noise sensitive areas) are impacted vs. 84 in another, we find that this really is not a basis or justifiable reason to pick one alternative over the other. In other words, the alternatives' impacts and mitigation strategies are very similar, and therefore should not be a factor in choosing one alternative over the other. The methodology and modeling are based on FHWA guidelines and SHA's current policy, which are appropriate. From a noise analysis and mitigation perspective the document is organized and well-written, considering the size and complexity of the project. It seems that for a few NSA's along I-270 the evaluation is punting to final design; we look forward to reviewing the final geometric design and the corresponding noise modeling and mitigation measures for these locations and others in the project.

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179	General	General	General	Provide information on how each alternative affects the NADMS along various segments. We have concerns as to how the alternatives may impact existing or planned transit services

MARYLAND COMMISSION ON INDIAN AFFAIRS

From: Rico Newman <rico.newman@gmail.com>
Sent: Tuesday, July 21, 2020 1:10 PM
To: Caryn Brookman (Consultant) <CBrookman.consultant@mdot.maryland.gov>
Subject: Re: I-495 & I-270 Managed Lanes Study- Draft Environmental Impact Statement and Draft Section 4(f) Evaluation Notice of Availability

#1 thank you for the message.
Please keep me informed on any findings that come from this project that reflect on native material culture or human remains.
V/R
Rico Newman

On Thu, Jul 9, 2020 at 4:46 PM Caryn Brookman (Consultant) <CBrookman.consultant@mdot.maryland.gov> wrote:

> Good afternoon,
>
> The Federal Highway Administration (FHWA) and the Maryland Department of Transportation State Highway Administration (MDOT SHA) have completed the Draft Environmental Impact Statement (DEIS) and Draft Section 4(f) Evaluation for the I-495 & I-270 Managed Lanes Study in Montgomery and Prince George's Counties, Maryland and Fairfax County, Virginia, with the ***Notice of Availability to be published in the Federal Register, tomorrow, July 10, 2020***. The DEIS includes traffic, environmental, engineering and financial analyses of the Build Alternatives and the No Build Alternative. The DEIS provides an opportunity for the public, stakeholders and agencies to review and provide comment on the proposed federal action and the adverse and beneficial environmental impacts and proposed mitigation for unavoidable impacts.
>
> ***The DEIS, Draft Section 4(f) Evaluation and Joint Federal/State Application (JPA) for the Alteration of Any Floodplain, Waterway, Tidal or Nontidal Wetland in Maryland with supporting information will be available online for viewing and downloading at 495-270-p3.com/DEIS starting tomorrow***. Hard copies will be available starting Friday, July 10th for public review at 21 locations in Montgomery and Prince George's Counties, as well as Fairfax County, Virginia and the District of Columbia. The complete list of locations and times can be found online at 495-270-p3.com/DEIS.
>
> ***Public and agency comments on the DEIS and JPA will be accepted between July 10 and October 8, 2020.***

Response to DEIS Comment #1
Thank you for your comment on the DEIS. MDOT SHA will keep all stakeholders informed regarding impacts to native material culture or human remains.

Maryland Department of Natural Resources - DEIS Comments

No.	Page	DEIS Section	Comment	Response
1	General	General	Comments provided June 2, July 10, November 4 and November 6 by DNR to MDE on the proposed project impacts and the stream and wetland mitigation sites should be considered as part of the project.	Comments received on June 2, July 10, November 4, and November 6, 2020, have been considered as the study has progressed. Impacts to wetlands and waterways were significantly reduced since the DEIS and the final mitigation for unavoidable impacts has been identified in close coordination with MDE and USACE. The Final Compensatory Mitigation for wetland and stream impacts was submitted with the revised Joint Permit Application to MDE and USACE in April 2022.
2	General	General	The project should be designed to maintain or enhance aquatic passage through the project area where new or widened road crossings will occur. Stream crossings, including culvert pipes and instream riprap, should not result in the blockage of passage for aquatic life. At least one culvert should be depressed at least one foot below stream invert, and a low flow channel should be provided through riprap structures.	Most of the stream crossings in the Preferred Alternative are existing crossings. At new crossings or relocated ramps , the Developer and MDOT SHA will evaluate different construction methods to eliminate or reduce impacts to fish passage. It is recognized that culverts in the project area pose a barrier for aquatic organism passage and the project will be extending culverts greater than 150 feet in length. Through use of DNR's Chesapeake Bay Fish Passage Tool as well as continuing coordination with DNR, MDOT SHA will work to identify the highest priority culverts and evaluate design and construction methods in final design to reduce or eliminate impacts to aquatic organism passage.
3	General	General	To minimize solar heating of surface waters, the Department of Natural Resources encourages that infiltration, vegetation, or other design elements that encourage temperature regulation be incorporated into stormwater facility designs located in Use III and Use IV watersheds.	The Preferred Alternative, Alternative 9-Phase 1 South, is no longer located in Use III or Use IV watersheds.
4	General	General	To minimize impact to water quality, DNR requests that runoff from bridge scuppers be diverted and possibly treated to not directly enter the waterway.	Runoff from bridges will be diverted and treated prior to discharge, where practicable. However, in some instances diversion and treatment may not be possible.
5	General	General	Existing riparian vegetation and forests in the project area should be preserved as much as possible to maintain aquatic habitat and provide shading to the stream. Areas designated for the access of equipment and for the removal or disposal of material should avoid impacts to the stream and associated riparian vegetation. Any temporarily disturbed areas should be restored and re-vegetated.	Riparian areas within the Preferred Alternative LOD will be preserved as much as practicable and temporarily disturbed areas will be restored and revegetated.
6	General	General	To assure impacts are minimized to the greatest extent possible and that habitat is conserved, the following conditions should be incorporated into the plans for proposed stream relocations to the extent possible: - The relocated stream channel should be designed to replicate naturalized habitat conditions, including but not limited to natural bank stabilization techniques, meanders, pool and riffle areas, and naturalized channel bottom. - Riparian corridors should be vegetated with native forest species. - Temporarily disturbed areas should be restored to original contours and revegetated. - Excavated materials should be stockpiled outside of the stream floodplain in an upland areas.	MDOT SHA commits to requiring the use of natural channel design techniques where possible. This analysis cannot be completed until final design. Native species restoration of temporarily disturbed areas is included in the FEIS.
7	General	General	The use of concrete or grouting should be managed (i.e. diversions installed) to assure that runoff from curing processes do not impact streams.	The Developer is required to comply with all applicable laws, regulations, and best practices in the course of constructing the project. Further, the Developer must submit, implement and comply with its approved Quality Management Plan.

No.	Page	DEIS Section	Comment	Response
8	General	General	The proposed project will be visible from the Potomac River in Montgomery County, Anacostia River, Patuxent River, and their tributaries; these are Maryland Scenic and Wild Rivers. DNR appreciates SHA's coordination regarding this status. Please continue to coordinate with DNR regarding Scenic and Wild River impacts.	MDOT SHA will notify Andrew Mengel, the DNR contact for Scenic and Wild Rivers, of any previous coordination with or comments from NPS related to park viewshed, visual impacts, and aesthetics and include him in all coordination moving forward.
9	General	General	DNR appreciates SHA's attempts to avoid and minimize impacts to natural resources. Efforts to avoid and minimize impacts to all wetlands, forests, and streams should continue throughout the design process, regardless of each resource's functional values.	MDOT SHA has made significant efforts to avoid and minimize impacts to natural resources for the Preferred Alternative. Efforts to avoid and minimize impacts to all wetlands, forests, and streams will continue throughout the final design process.
10		1.3.2	SHA has informed the IAWG that changes to traffic analyses from COVID will be addressed in the final EIS. DNR encourages these updates to clarify the Purpose and Need for the project.	Refer to Chapter 9, Section 3.1 for a response on Purpose and Need and effects of the Pandemic.
11		2.5.3	DNR appreciates the study team incorporating new alternatives in response to agency comments and public feedback, and the retention of Alternative 5 for comparison. It is important that the effects of Alternative 5, 9M, the ICC diversions and all of the alternatives are thoroughly documented in the final report, as well as the rationale for not selecting alternatives that are not moving forward.	Refer to Chapter 9, Section 3.2.B for a response to Alternatives Not Retained for Detailed Study.
12		2.7.2	DNR encourages the following practices for stormwater management: - Use infiltration BMPs wherever possible, especially in Use III and IV watersheds; - no wet ponds in Use III and IV watersheds; - no stormwater BMP placement in wetlands; and - please consider potential technologies for road salt treatment.	MDOT SHA will consider these practices when designing SWM facilities for the project.
13		2.7.2c	Aquatic passage should be enhanced or maintained at all altered or new stream crossings.	See response to Comment #2.
14		4.4	There are no direct impacts to lands managed by the Maryland Park Service (MPS) from the proposed project construction.	Noted.
15		4.4	Consideration of recreational river use (kayaking, etc.) and boater safety should be a particular consideration when developing plans for American Legion Bridge construction. Small boat passage should be maintained or a portage area provided.	The Developer is required to comply with all applicable laws and regulations, including MOSH and OSHA, while constructing the project. Further, the Developer must submit, implement, and comply with its approved Safety Plan which must incorporate best practices to address the various types of traffic throughout the project.
16	4-21 & 4-25	4.4.3 - Table 4-5 & Table 4-7	Because alternative 9M was developed to avoid resources along the northern part of the alignment this section should fully explain why this reduction in impacts doesn't seem apparent in the total acres of impact on these tables. Additional explanation for the reason for this may be helpful.	Alternative 9M resulted in a reduction in impacts over Alternatives 8, 9, 10, 13B, and 13C because for a short segment on the top side of the beltway, it included one managed lane in each direction of I-495, whereas the other build alternatives include two managed lanes in each direction on I-495 for the full 48 miles. Outside of the short segment on the topside of I-495 (approximately 9 miles long), Alternative 9M was two lanes in each direction for the remaining 39 miles. Reducing the widening from two lanes to one lane marginally reduced the impacts because width is still needed for the shoulders and the roadside grading. Additionally, Alternative 9M included two managed lanes in each direction on I-95 from I-495 to MD 200, which was a section of managed lanes that were not considered with other alternatives. Therefore, the impacts with Alternative 9 did not show as significant a decrease in environmental impacts compared to the other two-lane alternatives along the 48 miles.

No.	Page	DEIS Section	Comment	Response
17		4.12	Vernal pools are an important and unique habitat. Any impacts to vernal pools should be mitigated at 3:1 in kind. Since vernal pools are difficult to recreate and may take years to develop the wildlife that the habitat provides, it is highly recommended that the pool be avoided. Hydrologic and other types of impacts from features and design of the project, such as draining the pool, should be avoided.	MDOT SHA identified all vernal pools located within the corridor study boundary and reviewed them in the field with USACE and MDE. The Preferred Alternative avoids all impacts to vernal pools.
18		4.13.3	DNR encourages riparian buffer preservation and impact avoidance whenever possible, instead of simply replanting after disturbance. Re-planting disturbed areas delays the benefits gained by having mature trees in the riparian zone.	MDOT SHA will continue to avoid and minimize impacts to forests, including riparian forests, throughout the design process and any unavoidable impact will be mitigated in compliance with Maryland's Reforestation Act.
19		4.13.3	Sediment erosion control BMPs associated with construction should focus on preventing sediment releases. Additionally construction activities should be managed so that curing grout and concrete do not make contact with runoff or surface waters. Stream diversions, pump around practices, and other best management practices should be used as necessary.	The Developer is required to comply with all applicable laws, regulations, and best practices in the course of constructing and maintaining sediment and erosion control measures for the project prior to earth disturbing activities. Further, the Developer must submit, implement, and comply with its approved Quality Management Plan and will be monitored for non-compliance.
20		4.13	Scenic and Wild Rivers coordination is required as noted in the DEIS. Thank you for acknowledging the ongoing coordination with DNR regarding these resources. As the property owner/ adjacent property owner, it is anticipated that National Park Service will be heavily involved in the consultation associated with American Legion Bridge and Potomac River / Scenic River impacts.	See response to Comment #8.
21		4.16	The Forest Conservation Act requires that any project, on areas 40,000 square feet or greater, that is applying for a grading or sediment control permit shall have an approved Forest Conservation Plan and Forest Stand Delineation (Nat. Res. Art. 5-1601–5-16122, Annotated Code of Maryland). Projects proposed by a state or federal agency on state or federal land need to be submitted to the Maryland Department of Natural Resources Forest Service for review. Projects proposed for private land should be submitted to the local planning and zoning authority for review. Any tree that originates within a public road right-of-way is considered a roadside tree under the Maryland Roadside Tree Care Law (NRA 5-406) and Regulations (COMAR 08.07.02) and any plans to remove, trim, or plant trees within the public right-of-way are required to obtain a Roadside Tree Permit from the Maryland Department of Natural Resources Forest Service. For all of the above, please contact: Marian Honeczy, MD DNR Forest Service.	MDOT SHA will continue to coordinate with DNR Forest Service regarding forest impacts and mitigation will continue to be coordinated. Since this project is a state funded highway project with over one acre of forest impact, the project, including any associated off-site environmental mitigation required, will be reviewed under Maryland Reforestation Law (MD Nat Res Code § 5-103 (2019)), rather than the Forest Conservation Act or Maryland Roadside Tree Care Law. The P3 Developer will be responsible for Maryland Reforestation Law compliance.
22		4.16	DNR encourages conservation of Forest Interior Dwelling Bird habitat. Populations of many Forest Interior Dwelling Bird Species (FIDS) are declining in Maryland and throughout the eastern United States. The conservation of FIDS habitat is strongly encouraged by the Department of Natural Resources.	FIDS habitat is mapped in the MLS Natural Resources Technical Report and has been avoided and minimized by MDOT SHA to the greatest extent practicable.
23		4.16	Maryland Park Service managed lands are being examined for potential mitigation opportunities (reforestation primarily), please note that the mitigation must be consistent with the Mitigation on State Lands policy, which is available from DNR. Depending upon which sites are chosen and when they are needed, some additional arrangements may be necessary to provide guarantees that the land will be available for such uses. DNR is still reviewing the Reforestation Mitigation Site Search Report Draft and will provide comments at a later time.	Thank you for this information. MDOT SHA will continue to coordinate with the DNR Forestry Service to ensure that all MPS and DNR policies are adhered to in the mitigation process.
24		4.17	DNR concurs with the Time of Year Restriction (TOYR) management practices described in this section for the peregrine falcon at the American Legion Bridge.	Noted.

No.	Page	DEIS Section	Comment	Response
25		4.17 & Appendix L, Natural Resources Technical Report	DNR had previously commented on the re-calculation of FIDS acreage in the NRTS report (comment 53 on the errata); disagreeing because re-calculating FIDS habitat areas based on current tree cover may not address remnant areas of higher quality forest and cumulative impacts of deforestation in the project area. DNR appreciates that part of the NRTS report was revised to include both original FIDS acreage as provided in State mapping as well as updated acreage calculations performed by the SHA project team. Table 4-27 in the EIS and Table 2.8-1 in the NRTS uses one set of FIDS habitat calculations, and it is not clear which set of calculations is used. The EIS should clearly state which calculations are presented in the table, and DNR believes that the State data should be included in the discussion of impacts; this older data can be used as a comparison if not the primary source.	MDOT SHA clarified the source of FIDS habitat in the SDEIS and FEIS.
26		4.18.1	Please note that the Magnuson Stevens Fishery Conservation and Management Act and DNR Fishery Management Plans do not apply to all species of fish and shellfish.	MDOT SHA added a clarifying statement to FEIS Section 5.18 to clarify that not all species of fish and shellfish are included in the MSFSMA.
27		Table 4-29	Alternative 9M appears to be missing from Table 4-29. Reduced impervious surface from this alternative is important to impacts analysis and the purpose for including this alternative. All alternatives carried forward should be subject to equal analysis.	MDOT SHA analyzed all Build Alternative to the same extent in the DEIS. Also see response to Comment #16. The FEIS focuses on the Preferred Alternative and does not include Alternative 9M.
28		4.18.3 & 4.18.4	Aquatic passage is a priority for DNR. DNR encourages exploring aquatic passage options as both mitigation opportunities and maintaining or enhancing fish passage at crossings that will be affected by the proposed project.	See response to Comment #2.
29		4.18.4	Culvert and pipe extensions could adversely impact aquatic passage. The project should be designed to maintain or enhance fish passage through the project area, particularly during low flow periods.	See response to Comment #2.
30		4.18	Mussel conservation is a priority at DNR. - Impacts to mussels and habitat continue to be evaluated by DNR and further coordination may be needed. - Mussel habitat exists throughout the Potomac River, including around Plummers Island and the American Legion Bridge. Please continue coordinating with DNR as design and construction plans progress to minimize or mitigate impacts. - Some of the proposed stream mitigation sites are in areas of known or potential mussel habitat. A list of these sites has been provided to MDE and USACE as part of the Joint Permit Application comments.	MDOT SHA will continue to coordinate with DNR as design and construction plans progress to minimize or mitigate impacts to mussels.
31		4.18	DNR concurs with the in stream work Time of Year Restrictions (TOYR) provided in the DEIS. The following was provided in coordination with the project team, MDE, and USACE: - Generally, no instream work is permitted in Use I streams during the period of March 1 through June 15, inclusive, during any year. This applies to all areas except where otherwise noted. - Where presence of yellow perch has been documented in the vicinity of an instream project area, generally no instream work is permitted in Use I waters during the period of February 15 through June 15, inclusive, during any year (Bald Hill Branch and Western Branch of Patuxent). - Generally, no instream work is permitted in Use III streams during the period of October 1 through April 30, inclusive, during any year (Paint Branch). - Generally, no instream work is permitted in Use IV streams during the period of March 1 through May 31, inclusive, during any year (Northwest Branch Anacostia).	MDOT SHA agrees to meet the instream work time of year restrictions for Use I streams. As described in the Supplemental DEIS, the Preferred Alternative includes no action or no improvements at this time on I-495 east of the I-270 spur to MD 5 in Prince George's County. Your comment had been identified in the DEIS related to build alternatives that would have spanned the entire study area. Because the Bald Hill Branch, Western Branch of Patuxent, Paint Branch, and Northwest Branch Anacostia are located outside the Preferred Alternative limits of build improvements, those impacts have now been completely avoided. Any future proposal for improvements to the remaining parts of I-495 within the study limits, outside of Phase 1 South, would advance separately and would be subject to additional environmental studies, analysis, and collaboration with the public, stakeholders, and agencies.

No.	Page	DEIS Section	Comment	Response
32		4.19	Below is a list of extant RT&E species from a Plummers Island survey that was recently provided to DNR Wildlife and Heritage Service (WHS). These species could potentially occur within the Study Area If suitable habitat is present. WHS would like to add these species to the list of potential RT&E plants that should be considered in the continued review of this project: - Flat-spiked Sedge (Carex planispicata) - Needle-leaf Panic Grass (Dichanthelium aciculare) - Open-flower Panic Grass (Dichanthelium laxiflorum) - Leatherwood (Dirca palustris) - Ostrich Fern (Matteuccia struthiopteris) - Smooth Wild-petunia (Ruellia strepens) - Sticky Goldenrod (Solidago racemosa) - Pink Valerian (Valeriana pauciflora)	MDOT SHA included *Solidago racemosa* and *Valeriana pauciflora* in the MLS 2020 RTE Plant Survey. MDOT SHA commits to including *Carex planispicata, Dichanthelium aciculare, Dichanthelium laxiflorum, Dirca palustris, Matteuccia struthiopteris,* and *Ruellia strepens* in any future RTE plant surveys within the Potomac Gorge, the relevant area of the Preferred Alternative, prior to construction.
33	66-67	Appendix O, Indirect and Cumulative Effects Technical Report	The report states that, "A habitat assessment is pending on federal lands within the Chesapeake and Ohio Canal National Historical Park to determine whether suitable habitat for the state-listed plant species exists. If suitable habitat is found, a targeted species survey will be conducted within the suitable habitat to document presence/absence of the listed species. If populations of the listed species are found, an assessment of potential effects to the species from any of the Screened Alternatives will be conducted. Therefore, until this work is completed, and potential presence of such species can be evaluated in more depth, there are no anticipated effects to RTE species from any of the proposed I-495 & I-270 Managed Lanes Study Screened Alternatives." DNR WHS suggests that the conclusion of this paragraph is misleading and should state that until this survey is completed, it is not possible to fully assess potential impacts to RTE species. Stating that there are no anticipated effects is not accurate.	MDOT acknowledges that the sentence could be misleading. As noted in the SDEIS, the specific species habitat surveys have been completed and the results were shared with DNR. The RTE species surveys identify RTE plant species within the Preferred Alternative LOD that would be impacted. The FEIS and the Final ICE Technical Report have been updated to reflect the final results and impacts.
34	67	4.19 & Appendix O, Indirect and Cumulative Effects Technical Report, page 67, b. Cumulative Impacts	It should be noted that DNR is awaiting the final 2020 plant survey report to review. The section in Appendix O states that "Though no federal- or state-listed species are known to occur within the corridor study boundary..." However, text should reference the fact that surveys for rare species are ongoing, and that while results to date have not documented the presence of listed rare species within the corridor, a conclusive assessment of cumulative impacts is not possible until these surveys are completed.	As noted in the SDEIS and included in SDEIS, Appendix H, the 2020 Plant Survey has been completed and the results were shared with DNR. The FEIS and the Final ICE Technical Report have been updated to reflect the final results and impacts.
35		4.19	Regarding bat protection best management practices-- DNR would like to recommend that the tree-clearing time of year restriction is extended to be April 15 to August 31 rather than May 1 to July 31 for the following reasons: Results of the acoustic and bridge surveys failed to identify the presence of Indiana bats or Eastern small-footed bats, but did detect the presence of Northern long-eared bats at three locations. Due to Covid transmission concerns, mist netting and telemetry fieldwork was cancelled, eliminating the opportunity to identify specific NLEB roost trees that would enable protections under the 4d rule. In the absence of these data, and while we support the USFWS position to request a Time Of Year tree cutting restriction (May 1 to July 1) to buffer a 3 mile radius from each NLEB call location as a precaution to protect pre-volant young present in maternity roosts, we suggest extending this TOY restriction to April 15 to August 31 in order to more fully incorporate those individuals that reproduce early and late (i.e. the tails of the curve). Given the rarity of the species in Maryland and the fact that recent data suggests that central MD/DC area has become an important refugium for this White Nose Syndrome ravaged species, this precaution to protect the species seems prudent.	MDOT SHA and FHWA voluntarily agreed upon the time of year restriction for tree clearing of May 1 to July 31, which goes above and beyond what was required to protect the Northern Long-eared Bat. MDOT SHA and FHWA do not commit to further TOYR.

No.	Page	DEIS Section	Comment	Response
36		4.22	Thank you for recognizing the impacts that historical growth and development has had on cumulative impacts to natural spaces in the ICE corridor. This project is occurring in a region that is heavily developed, and natural areas (streams, wetlands, forests) that remain are valuable because of their scarcity in an urban/ suburban environment. DNR considers displacement of resources that have already been historically reduced by development to be an important cumulative impact of this project. Examples include: - Valuation of higher versus lower value wetlands as part of the avoidance and minimization procedures described in Section 4.12. A wetland or stream in a highly developed area may be scored as a low or a moderate value as per the worksheet, but its value may actually be higher due to its scarcity. - The loss of forest that can be defined as FIDS is an important example of cumulative impacts, and calculations regarding this loss are discussed earlier in the DEIS. - Appropriately addressing stormwater runoff to minimize water quality effects. Additional application of road salt may be a consideration here. - Lengthening or enlarging pipes and culverts without the mitigation practices described in Section 4.18 is likely to convert a partial blockage to a complete blockage and further inhibit aquatic passage throughout already impacted watersheds. Cumulative effects to aquatic passage are not addressed in Table 4-41.	The direct, indirect, and cumulative impacts have continued to be refined since the DEIS. The Preferred Alternative presented in the SDEIS was refined based on additional survey information, an assessment of constructability, and permanent and temporary impacts, as well as avoidance and minimization efforts resulting from interagency coordination. The SDEIS presented updated information based on the Preferred Alternative (Alternative 9-Phase 1 South) and additional coordination that occurred in the 10 months following publication of the DEIS. The FEIS reflects further design refinements and details, including final mitigation and commitments of the Preferred Alternative, many of which directly responded to public comments. The FEIS presents an updated discussion of the direct, indirect, and cumulative effects for wetlands, waterways, forest, stormwater, and culvert augmentation.
37	General	General	DNR requests to review updated project designs as they are available. DNR is particularly interested in continued coordination regarding rare, threatened, and endangered species; the American Legion Bridge replacement; stormwater facilities; and mitigation sites.	MDOT SHA and the Developer will hold interagency update meetings during design and construction to continue coordination with DNR.

MARYLAND DEPARTMENT OF NATURAL RESOURCES

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Larry Hogan, Governor
Boyd Rutherford, Lt. Governor
Jeannie Haddaway-Riccio, Secretary

Caryn J. G. Brookman
Environmental Program Manager
I-495 & I-270 P3 Office
707 North Calvert Street, P-601
Baltimore MD 21202

Re: Maryland Department of Natural Resources comments to the I495 & I270 Managed Lane Study Draft Environmental Impact Statement and Draft Section 4(f) Evaluation

The Department of Natural Resources (DNR) is a cooperating agency for the I495 & I270 Managed Lane Study. DNR has reviewed the Draft Environmental Impact Statement and Draft Section 4(f) Evaluation and is providing the comments below. DNR has also reviewed the Joint Federal/ State Application for the Alteration of any Floodplain, Waterway, Tidal or Nontidal Wetland in Maryland (JPA #202060469) and has provided comments (June 2, 2020; July 10, 2020; November 4, 2020; November 6, 2020) to Maryland Department of Environment on the proposed project impacts and the stream and wetland mitigation sites; these comments should also be considered as part of this project.

DNR encourages the following best management practices for all construction, stormwater, and mitigation projects:

- The project should be designed to maintain or enhance aquatic passage through the project area where new or widened road crossings will occur. Stream crossings, including culvert pipes and instream riprap, should not result in the blockage of passage for aquatic life. At least one culvert should be depressed at least one foot below stream invert, and a low flow channel should be provided through riprap structures.
- To minimize solar heating of surface waters, the Department of Natural Resources encourages that infiltration, vegetation, or other design elements that encourage temperature regulation be incorporated into stormwater facility designs located in Use III and Use IV watersheds.
- To minimize impact to water quality, DNR requests that runoff from bridge scuppers be diverted and possibly treated to not directly enter the waterway.
- Existing riparian vegetation and forests in the project area should be preserved as much as possible to maintain aquatic habitat and provide shading to the stream. Areas designated for the access of equipment and for the removal or disposal of material should avoid impacts to the stream and associated riparian vegetation. Any temporarily disturbed areas should be restored and re-vegetated.
- To assure impacts are minimized to the greatest extent possible and that habitat is conserved, the following conditions should be incorporated into the plans for proposed stream relocations to the extent possible:
  - The relocated stream channel should be designed to replicate naturalized habitat conditions, including but not limited to natural bank stabilization techniques, meanders, pool and riffle areas, and naturalized channel bottom.
  - Riparian corridors should be vegetated with native forest species.
  - Temporarily disturbed areas should be restored to original contours and revegetated.
  - Excavated materials should be stockpiled outside of the stream floodplain in an upland areas.
- The use of concrete or grouting should be managed (i.e. diversions installed) to assure that runoff from curing processes do not impact streams.
- The proposed project will be visible from the Potomac River in Montgomery County, Anacostia River, Patuxent River, and their tributaries; these are Maryland Scenic and Wild Rivers. DNR appreciates SHA's coordination regarding this status. Please continue to coordinate with DNR regarding Scenic and Wild River impacts.
- DNR appreciates SHA's attempts to avoid and minimize impacts to natural resources. Efforts to avoid and minimize impacts to all wetlands, forests, and streams should continue throughout the design process, regardless of each resource's functional values.

DNR is providing the following comments regarding the DEIS document and study process:

Page and Section	Comment
Section 1.3.2	SHA has informed the IAWG that changes to traffic analyses from COVID will be addressed in the final EIS. DNR encourages these updates to clarify the Purpose and Need for the project.
Section 2.5.3	DNR appreciates the study team incorporating new alternatives in response to agency comments and public feedback, and the retention of Alternative 5 for comparison. It is important that the effects of Alternative 5, 9M, the ICC diversions and all of the alternatives are thoroughly documented in the final report, as well as the rationale for not selecting alternatives that are not moving forward.
Section 2.7.2	DNR encourages the following practices for stormwater management: • Use infiltration BMPs wherever possible, especially in Use III and IV watersheds; • no wet ponds in Use III and IV watersheds; • no stormwater BMP placement in wetlands; and • please consider potential technologies for road salt treatment.
Section 2.7.2.c	Aquatic passage should be enhanced or maintained at all altered or new stream crossings.
Section 4.4	There are no direct impacts to lands managed by the Maryland Park Service (MPS) from the proposed project construction.
Section 4.4	Consideration of recreational river use (kayaking, etc.) and boater safety should be a particular consideration when developing plans for American Legion Bridge construction. Small boat passage should be maintained or a portage area provided.
Section 4.4.3 - Page 4-21, Table 4-5 & Page 4-25, Table 4-7	Because alternative 9M was developed to avoid resources along the northern part of the alignment this section should fully explain why this reduction in impacts doesn't seem apparent in the total acres of impact on these tables. Additional explanation for the reason for this may be helpful.
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Section 4.17 and Appendix L, Natural Resources Technical Report	DNR had previously commented on the re-calculation of FIDS acreage in the NRTS report (comment 53 on the errata); disagreeing because re-calculating FIDS habitat areas based on current tree cover may not address remnant areas of higher quality forest and cumulative impacts of deforestation in the project area. DNR appreciates that part of the NRTS report was revised to include both original FIDS acreage as provided in State mapping as well as updated acreage calculations performed by the SHA project team. Table 4-27 in the EIS and Table 2.8-1 in the NRTS uses one set of FIDS habitat calculations, and it is not clear which set of calculations is used. The EIS should clearly state which calculations are presented in the table, and DNR believes that the State data should be included in the discussion of impacts; this older data can be used as a comparison if not the primary source.
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Appendix O, Indirect and Cumulative Effects Technical Report, pages 66-67	The report states that, "A habitat assessment is pending on federal lands within the Chesapeake and Ohio Canal National Historical Park to determine whether suitable habitat for the state-listed plant species exists. If suitable habitat is found, a targeted species survey will be conducted within the suitable habitat to document presence/absence of the listed species. If populations of the listed species are found, an assessment of potential effects to the species from any of the Screened Alternatives will be conducted. Therefore, until this work is completed, and potential presence of such species can be evaluated in more depth, there are no anticipated effects to RTE species from any of the proposed I-495 & I-270 Managed Lanes Study Screened Alternatives." DNR WHS suggests that the conclusion of this paragraph is misleading and should state that until this survey is completed, it is not possible to fully assess potential impacts to RTE species. Stating that there are no anticipated effects is not accurate.
Section 4.19 & Appendix O, Indirect and Cumulative Effects Technical Report, page 67, b. Cumulative Impacts	It should be noted that DNR is awaiting the final 2020 plant survey report to review. The section in Appendix O states that "Though no federal- or state-listed species are known to occur within the corridor study boundary..." However, text should reference the fact that surveys for rare species are ongoing, and that while results to date have not documented the presence of listed rare species within the corridor, a conclusive assessment of cumulative impacts is not possible until these surveys are completed.

Section 4.19	Regarding bat protection best management practices-- DNR would like to recommend that the tree-clearing time of year restriction is extended to be April 15 to August 31 rather than May 1 to July 31 for the following reasons: Results of the acoustic and bridge surveys failed to identify the presence of Indiana bats or Eastern small-footed bats, but did detect the presence of Northern long-eared bats at three locations. Due to Covid transmission concerns, mist netting and telemetry fieldwork was cancelled, eliminating the opportunity to identify specific NLEB roost trees that would enable protections under the 4d rule. In the absence of these data, and while we support the USFWS position to request a Time Of Year tree cutting restriction (May 1 to July 1) to buffer a 3 mile radius from each NLEB call location as a precaution to protect pre-volant young present in maternity roosts, we suggest extending this TOY restriction to April 15 to August 31 in order to more fully incorporate those individuals that reproduce early and late (i.e. the tails of the curve). Given the rarity of the species in Maryland and the fact that recent data suggests that central MD/DC area has become an important refugium for this White Nose Syndrome ravaged species, this precaution to protect the species seems prudent.
Section 4.22	Thank you for recognizing the impacts that historical growth and development has had on cumulative impacts to natural spaces in the ICE corridor. This project is occurring in a region that is heavily developed, and natural areas (streams, wetlands, forests) that remain are valuable because of their scarcity in an urban/ suburban environment. DNR considers displacement of resources that have already been historically reduced by development to be an important cumulative impact of this project. Examples include: • Valuation of higher versus lower value wetlands as part of the avoidance and minimization procedures described in Section 4.12. A wetland or stream in a highly developed area may be scored as a low or a moderate value as per the worksheet, but its value may actually be higher due to its scarcity. • The loss of forest that can be defined as FIDS is an important example of cumulative impacts, and calculations regarding this loss are discussed earlier in the DEIS. • Appropriately addressing stormwater runoff to minimize water quality effects. Additional application of road salt may be a consideration here. • Lengthening or enlarging pipes and culverts without the mitigation practices described in Section 4.18 is likely to convert a partial blockage to a complete blockage and further inhibit aquatic passage throughout already impacted watersheds. Cumulative effects to aquatic passage are not addressed in Table 4-41.

Thank you for the opportunity to review and comment on this project. DNR requests to review updated project designs as they are available. DNR is particularly interested in continued coordination regarding rare, threatened, and endangered species; the American Legion Bridge replacement; stormwater facilities; and mitigation sites.

Sincerely,

Tony Redman
Director, Environmental Review Program
Department of Natural Resources
Tawes State Office Building, B-3
Annapolis, MD 21401

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MARYLAND DEPARTMENT OF PLANNING STATE CLEARINGHOUSE

Larry Hogan, Governor
Boyd Rutherford, Lt. Governor

Robert S. McCord, Secretary
Sandy Schrader, Deputy Secretary

Maryland
DEPARTMENT OF PLANNING

August 18, 2020

Ms. Lisa Choplin, Director
I-495 & I-270 P3 Office
Maryland Department of Transportation/State Highway Administration
601 N Calvert Street
Baltimore, MD 21202

SUMMARY OF FINDINGS

State Application Identifier: MD20200708-0587
Applicant: Maryland Department of Transportation/State Highway Administration **and** Maryland Department of Transportation/State Highway Administration
Project Description: Federal Highway Administration (FHWA) and Maryland Department of Transportation/State Highway Administration (MDOT/SHA) Draft Environmental Impact Statement and Draft Section 4(f) Determination for the I-495 & I-270 Managed Lanes Study
Project Address: I-495 & I-270
Project Location: County(ies) of Montgomery and Prince George's; Municipality(ies) of Montgomery-City of Gaithersburg, Montgomery-City of Rockville, Montgomery-Town of Kensington, Montgomery-Village of North Chevy Chase, Prince George's-City of College Park, Prince George's-City of District Heights, Prince George's-City of Glenarden, Prince George's-City of Greenbelt, Prince George's-City of New Carrollton, Prince George's-Town of Berwyn Heights and Prince George's-Town of Morningside
Approving Authority: U.S. Department of Transportation DOT/FHWA

Dear Ms. Choplin:

In accordance with Presidential Executive Order 12372 and Code of Maryland Regulation 34.02.01.04-.06, the State Clearinghouse has coordinated the intergovernmental review of the referenced project. This letter, with attachments, constitutes the Summary of Findings. This Summary of Findings is valid for a period of three years from the date of this letter.

Review comments were requested from the Maryland Department(s) of Natural Resources, the Environment; Montgomery County, Prince George's County; and the Maryland Department of Planning, including the Maryland Historical Trust. To date, Prince George's County has not provided comments. Montgomery County is in the process of collecting information for decision makers to come up with a position on this project.

Our Department (Planning) found this project to be consistent with their plans, programs, and objectives.

Planning "will provide review comments on the Draft Environmental Impact Statement (DEIS) to MDOT SHA directly through the project study process. Planning participates in the I-495 & I-270 Managed Lanes Project Study.

301 West Preston Street - Suite 1101 - Baltimore - Maryland - 21201
Tel: 410.767.4500 - Toll Free: 1.877.767.6272 - TTY users: Maryland Relay - Planning.Maryland.gov

Thank you for your comments.

Ms. Lisa Choplin
August 18, 2020
Page 2
State Application Identifier: **MD20200708-0587**

Planning attends interagency coordination meetings and provides MDOT SHA with comments at every milestone phase of the project study including the review of the DEIS. Planning's transportation and regional planners are coordinating the review of the DEIS and will attend public hearings scheduled in August and September and submit comments prior to the October 8, 2020 deadline. For the Priority Funding Area (PFA) law compliance review purpose, please note that the entire I-495 & I-270 Managed Lanes Project is in PFAs."

The Maryland Department of Environment found this project to be generally consistent with their plans, programs, and objectives, but included certain qualifying comments summarized in the attached comments.

The Maryland Departments of Natural Resources and the Maryland Historical Trust stated that their findings of consistency are contingent upon the applicant taking the action(s) summarized below.

The Maryland Department of Natural Resources (DNR) has and will continue to coordinate and comment on this project directly with SHA.

The Maryland Historical Trust (MHT) stated that their finding of consistency is contingent upon the FHWA and the Maryland Department of Transportation, State Highway Administration (MDOT/SHA) completing the project's historic preservation review in consultation with MHT and other consulting parties pursuant to Section 106 of the National Historic Preservation Act.

Any statement of consideration given to the comments should be submitted to the approving authority, with a copy to the State Clearinghouse. The State Application Identifier Number must be placed on any correspondence pertaining to this project. The State Clearinghouse must be kept informed if the approving authority cannot accommodate the Summary of Findings.

Please remember, you must comply with all applicable state and local laws and regulations. If you need assistance or have questions, contact the State Clearinghouse staff person noted above at 410-767-4490 or through e-mail at myra.barnes@maryland.gov. **Also please complete the attached form and return it to the State Clearinghouse as soon as the status of the project is known.** ***Any substitutions of this form must include the State Application Identifier Number.*** **This will ensure that our files are complete.** Thank you for your cooperation with the MIRC process.

Sincerely,

Myra Barnes, Lead Clearinghouse Coordinator

MB:MB
Enclosure(s)
cc: Ian Beam - MDOT
Beth Cole - MHT
Amanda Redmiles - MDE
Tony Redman - DNR
Erron Ramsey
Kathleen Herbert - PGEO
Greg Ossont - MTGM
Caryn Brookman
Bihui Xu - MDPI-T
Joseph Griffiths – MDPL
20-0587_CRR.CLS.docx

MDOT SHA appreciates the continued coordination, exchange of information and participation of the state agencies and will ensure compliance with the State Clearinghouse process.

Larry Hogan, Governor
Boyd Rutherford, Lt. Governor

Robert S. McCord, Secretary
Sandy Schrader, Deputy Secretary

Maryland
DEPARTMENT OF PLANNING

PROJECT STATUS FORM

Please complete this form and return it to the State Clearinghouse upon receipt of notification that the project has been approved or not approved by the approving authority.

TO: **Maryland State Clearinghouse**
Maryland Department of Planning
301 West Preston Street
Room 1104
Baltimore, MD 21201-2305

DATE: _____
(Please fill in the date form completed)

FROM: _____
(Name of person completing this form.)

PHONE: _____-____-_____
(Area Code & Phone number)

RE: **State Application Identifier:** **MD20200708-0587**
Project Description: Federal Highway Administration (FHWA) and Maryland Department of Transportation/State Highway Administration (MDOT/SHA) Draft Environmental Impact Statement and Draft Section 4(f) Determination for the I-495 & I-270 Managed Lanes Study

PROJECT APPROVAL		
This project/plan was: ☐ **Approved**	☐ **Approved with Modification**	☐ **Disapproved**
Name of Approving Authority: _____		**Date Approved:** _____

FUNDING APPROVAL			
The funding (if applicable) has been approved for the period of: _____, 201____ to _____, 201____ as follows:			
Federal $: _____	**Local $:** _____	**State $:** _____	**Other $:** _____

OTHER
☐ *Further comment or explanation is attached*

Maryland Department of Planning • 301 West Preston Street, Suite 1101 • Baltimore • Maryland • 21201

Tel: 410.767.4500 • Toll Free: 1.877.767.6272 • TTY users: Maryland Relay • Planning.Maryland.gov

MDPCH-1F

Thank you for providing the Project Status Form. MDOT SHA will complete this form after the Record of Decision is published.

Ms. Lisa Choplin
Director, I-495 & I-270 P3 Office
Maryland Department of Transportation/State Highway Administration
601 N Calvert Street

Baltimore, MD 21202

Ms. Caryn Brookman
Environmental Program Manager, I-495 & I-270 P3 Office
Maryland Department of Transportation/State Highway Administration
601 N. Calvert Street
Baltimore, MD 21202

Ian Beam - MDOT Erron Ramsey

Caryn Brookman

U.S. Department of Transportation (DOT/FHWA)
----MD

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Construction Stormwater Antidegradation Checklist – Version 1.1

This checklist is intended to be used as guidance for evaluating any portion of your construction site that is located with a watershed that is identified by the Department[1] or the EPA, as a Tier II for antidegradation purposes. This Checklist [2]is acceptable for use in documenting your antidegradation review and ensuring protection of Tier II resources during construction. This form, or other appropriate written evaluation, may be uploaded with your NOI or provided to the Industrial Stormwater Permits Division at the Maryland Department of the Environment. The information provided to the Department addresssing the antidegredation review shall be clearly marked on the erosion and sediment control (E&SC) plan and approved by the appropriate approval authority pursuant to COMAR 26.17.01.

Project Name: _____

General Permit Number (MD):_____ **OR, if not available,**

County or State ESC Plan Identifier: _____

County:_____ **Site Map #**_____ **Parcel #**_____

Applicant Signature: _____ **Date Complete:** _____

Do all Tier II watersheds impacted by the proposed activity have assimilative capacity(1)? If the proposed activity is to a stream segment which doesn't have assimilative capacity, you will need to consult with the Department's Tier II staff on available options and list the findings here. Comments: _____ _____ _____ _____	**Yes/No**
Were any waivers granted by the Approval Authority for stormwater controls for this project? For projects in Tier II watersheds, waivers need to be fully justified in light of the potential to impact water quality. A waiver that was granted that could lead to degradation would require modeling or other evidence that the lack of stormwater controls will not impact the receiving waters.	**Yes/No**
Verify whether you will meet the following minimum Stabilization Criteria. After initial soil disturbance or redisturbance, permanent (2011 ESC Handbook Section B-4-5) or temporary (2011 ESC Handbook Section B-4-4) stabilization is required within: i. Three (3) calendar days as to the surface of all perimeter controls, dikes, swales, ditches, perimeter slopes, and all slopes steeper than 3 horizontal to 1 vertical (3:1); and ii. Seven (7) calendar days as to all other disturbed areas on the project site except for those areas under active grading.	**Yes/No**

[1] Use the interactive Tier II webmap located at: https://mde.maryland.gov/programs/Water/TMDL/WaterQualityStandards/Pages/HighQualityWatersMap.aspx to assist you. On the map, Tier II watersheds colored orange have NO assimilative capacity.

[2] Alternative forms may be approved by the Department, if they contain the information in this checklist.

Thank you for providing the Construction Stormwater Antidegradation Checklist. MDOT SHA will complete this checklist after the Record of Decision is published.

Verify Increased Inspection Frequency for activity within Tier II Watershed. For any portion of the site that discharges to a water that is identified by the Department as Tier II for antidegradation purposes, more frequent inspections are beneficial. Will you inspect at least once every four (4) calendar days?	**Yes/No**
Verify Piles are located outside the Stream Protection Zone. For stockpiles or land clearing debris piles composed, in whole or in part, of sediment and/or soil (2011 ESC Handbook Section B-4-8), locate the piles outside of any Stream Protection Zones.	**Yes/No**
Were there any E&SC exemptions to the requirements for Protections in the Stream Protection Zone below? Note: The list of potential exemptions are listed at the end of this checklist. If exemptions were applicable make sure to include them in the plan. Comments: _____	**Yes/No**
Have you Verified your Stream Protection Zone Considerations below? All additional controls selected in Compliance Alternative 2, to meet the Stream Protection Zone Considerations below shall be clearly marked on the erosion and sediment control (E&SC) plan and approved by the appropriate approval authority pursuant to COMAR 26.17.01. You are required to document in your E&SC plan where the natural buffer width that is retained (where you are implementing alternative 1 below) and you must document the reduced width of the buffer you will be retaining and document the additional erosion and sediment controls you will use (where you will be implementing alternative 2 below). Comments: _____	**Yes/No**
Stream Protection Zone Alternative 1: Provide and maintain an undisturbed natural buffer within the Stream Protection Zone (an average of 100 feet from edge of stream). Comments: _____	**Yes/No**
Stream Protection Zone Alternative 2: Provide and maintain an undisturbed natural buffer that is less than an average of 100 feet and is supplemented by additional erosion and sediment controls. The acceptable additional erosion and sediment controls include, but are not limited to, those listed in the 2011 ESC Handbook. Those controls are accelerated stabilization, redundant controls, upgraded controls, passive or active chemical treatment, or a reduction in the size of the grading unit. These options are provided below, which are the controls that must be considered and, once selected, implemented when construction activity occurs within these Stream Protection Zones. The local approval authorities may provide additional options that provide similar protection. Check each that apply below. Comments: _____	**Yes/No**

Thank you for providing the Construction Stormwater Antidegradation Checklist. MDOT SHA will complete this checklist after the Record of Decision is published.

Antidegradation Checklist – Version 1.1 5/19/2020

Appendix C: Page **3** of **4**

□ ***a: Accelerated Stabilization Requirements***

Earth disturbance must be stabilized as soon as possible and as dictated by the approved plan (e.g., seed and mulch, soil stabilization matting, rip rap, sod, pavement):

- At a minimum, all perimeter controls (e.g., earth dikes, sediment traps) and slopes steeper than 3:1 require stabilization within three calendar days and all other disturbed areas within seven calendar days
- Accelerated stabilization (e.g., same day stabilization) may be required based on site characteristics or as specified by the approval authority

Comments: _____

_____

□ ***b: Redundant Controls***

Runoff must pass through two sediment control devices in series. The following are examples of possible combinations:

- When dewatering sump areas or sediment traps or basins, discharge sediment laden water first to a portable sediment tank and then a filter bag
- Install parallel rows of a perimeter filtering control or a combination thereof of silt fence, super silt fence, and filter logs (e.g., two rows of parallel silt fence or a row of filter log parallel to a row of super silt fence)

Comments: _____

_____

□ ***c: Upgrade Controls***

The following are examples of possible upgrades:

- Upgrade from silt fence to super silt fence
- Upgrade from temporary stone outlet structure to temporary gabion outlet structure
- Upgrade all sediment traps and basins to control additional storage volume; increase the required storage volume from 3,600 cubic feet/acre to 5,400 cubic feet/acre
- Upgrade standard inlet protection type A to type B and at grade inlet protection to gabion inlet protection

Comments: _____

_____

□ ***d: Passive or Active Chemical Treatment***

The use of chemical additives requires permit coverage and considerations related to potential aquatic toxicity. https://mdewwp.page.link/ChemAddReview.

Comments: _____

_____

Thank you for providing the Construction Stormwater Antidegradation Checklist. MDOT SHA will complete this checklist after the Record of Decision is published.

Antidegradation Checklist – Version 1.1 5/19/2020

Appendix C: Page 4 of 4

☐ ***e: Reduction in the Size of the Grading Unit***

- Require grading unit limitations to 10 acres of earth disturbance inside the Stream Protection Zone
- Require grading unit limitations to 20 acres for any earth disturbance that is adjacent to and contiguous with earth disturbances inside the Stream Protection Zone

Comments: _____

☐ ***f: Prerogative of Approval Authorities***

The additional controls described above for projects in Stream Protection Zones are examples of accelerated stabilization, redundant controls, upgraded controls, passive or active chemical treatment, or a reduction in the size of the grading unit. Approval authorities may use these examples as a guide when approving projects, but may also apply further erosion and sediment control measures based on local site conditions and best professional judgement.

Comments: _____

Exemptions to the requirements for Protections in the Stream Protection Zone:

- The following disturbances within the Stream Protection Zone are exempt from the requirements this guidance:- Construction approved under a CWA Section 404 permit; or- Construction of a water-dependent structure or water access areas (e.g., pier, boat ramp, trail).

- If there is no discharge of stormwater to Waters of this State through the area between the disturbed portions of the site and receiving waters, you are not required to comply with the requirements in this guidance. This includes situations where you have implemented controls measures, such as a berm or other barrier, which will prevent such discharges.

- Where no natural buffer exists due to preexisting development disturbances (e.g., structures, impervious surfaces) that occurred prior to the initiation of planning for the current development of the site, you are not required to comply with the requirements in this guidance.

  Where some natural buffer exists but portions of the area within the Stream Protection Zone are occupied by preexisting development disturbances, you <u>are</u> required to comply with the requirements in this guidance. Clarity about how to implement the compliance alternatives for these situations is provided upon request from the Department.

- For "linear construction sites" , you are not required to comply with this requirement if site constraints (e.g., limited right-of-way) make it infeasible to implement one of the above compliance alternatives, provided that, to the extent feasible, you limit disturbances within Stream Protection Zone. You must also document in the Checklist your rationale for why it is infeasible for you to implement one of the above compliance alternatives, and describe any buffer width retained and supplemental erosion and sediment controls installed.

Thank you for providing the Construction Stormwater Antidegradation Checklist. MDOT SHA will complete this checklist after the Record of Decision is published.

Comment on Tier II High Quality Water Catchment

(FHWA) and Maryland Department of Transportation/State Highway Administration
(MDOT/SHA) Draft Environmental Impact Statement and Draft Section 4(f) Determination
for the I-495 & I-270 Managed Lanes Study
Maryland Department of the Environment – WSA/IWPP

REVIEW FINDING: **R1 Consistent with Qualifying Comments**
(MD20200708-0587)

Please be aware that two portions of the study area (I-495 & Route 50, I-495 & Route 450) appear to interest a Tier II High Quality Water catchment. In the event that construction occurs there are special protections for high-quality waters in the local vicinity, which are identified pursuant to Maryland's anti-degradation policy.

Anti-degradation of Water Quality: Maryland requires special protections for waters of very high quality (Tier II waters). The policies and procedures that govern these special waters are commonly called "anti-degradation policies." This policy states that "proposed amendments to county plans or discharge permits for discharge to Tier II waters that will result in a new, or an increased, permitted annual discharge of pollutants and a potential impact to water quality, shall evaluate alternatives to eliminate or reduce discharges or impacts." Satisfactory completion of the Tier II Antidegradation Review is required to receive numerous State permits, such as those for wastewater treatment, nontidal wetlands disturbance, waterways construction, and coverage under the general construction permit.

The Tier II review is applicable to all portions of the whole and complete project within the Tier II watershed Bald Hill Branch 1. The review is, at a minimum, a two-step alternatives analysis process. The initial analysis considers if the activity can avoid any impacts to Tier II waters (alternative site or potentially by strategic design). The second analysis considers minimization alternatives to limit associated water quality degradation. This includes BMP considerations for erosion and sediment controls, mitigation for net loss of vital resources such as forest cover, and justification for unavoidable impacts. Under certain circumstances, MDE may require a third analysis which justifies the project based on social or economic rationale.

MDE is revising the overall Tier II review procedures by creating or updating forms to assist with the no-discharge alternatives analysis, minimization analysis, temporary impacts, and social and economic justification. Completion of these forms is required for permitting and other approvals.

Response for Tier II High Quality Water Catchment:
As described in the Supplemental DEIS, the Preferred Alternative was identified after coordination with resource agencies, the public, and stakeholders to respond directly to feedback received on the DEIS to avoid displacements and impacts to significant environmental resources, and to align the NEPA approval with the planned project phased delivery and permitting approach which focused on Phase 1 South only.

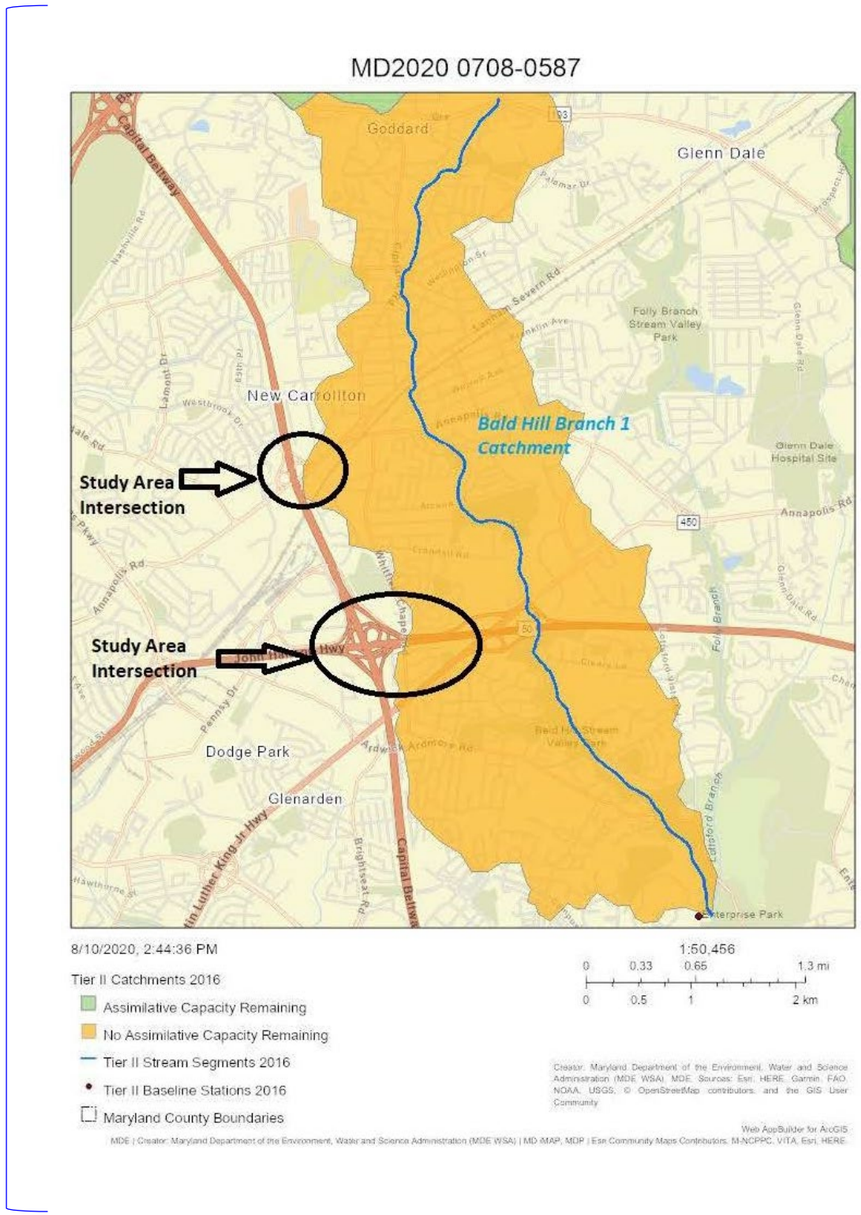
The Preferred Alternative includes two new, high-occupancy toll (HOT) managed lanes on I-495 in each direction from the George Washington Memorial Parkway to east of MD 187 and conversion of the one existing high-occupancy vehicle lane in each direction on I-270 to a HOT managed lane and adding one new HOT managed lane in each direction on I-270 from I-495 to north of I-370 and on the I-270 east and west spurs.

Your comment had been identified in the DEIS related to build alternatives that would have spanned the entire study area. Because I-495 and Route 50 and I-495 and Route 450 are located outside the Preferred Alternative limits of build improvements, impacts to Tier II catchments have now been completely avoided. Any future proposal for improvements to the remaining parts of I-495 within the study limits, outside of Phase 1 South, would advance separately and would be subject to additional environmental studies, analysis, and collaboration with the public, stakeholders, and agencies.

Comment on Tier II High Quality Water Catchment	Tier II No-Discharge Analysis Form V1.2:[1] 1. Code of Maryland Regulations (COMAR) 26.08.02.04-1 (G(1)) states that "If a Tier II antidegradation review is required, the applicant shall provide an analysis of reasonable alternatives that do not require direct discharge to a Tier II water body (no-discharge alternative). The analysis shall include cost data and estimates to determine the cost effectiveness of the alternatives". 2. For land disturbing projects that result in permanent land use change, this 'no discharge' analysis specifically evaluates the reasonability of other sites or alternate routes which could be developed to meet the project purpose, but are located *outside* of the Tier II watershed. Reasonability considerations, as applicable, may take into account property availability, site constraints, natural resource concerns, size, accessibility, and cost to make the property suitable for the project. 3. This analysis shall be performed regardless of whether or not the applicant has ownership or lease agreements to a preferred property or route. Tier II Minimization Alternative Analysis Form V1.1:[2] 1. Code of Maryland Regulations (COMAR) 26.08.02.04-1 (G(3)) states that "If the Department determines that the alternatives that do not require direct discharge to a Tier II water body are not cost effective, the applicant shall: (a) Provide the Department with plans to configure or structure the discharge to minimize the use of the assimilative capacity of the water body". 2. This form helps to ensure that water quality impacts due to the proposed project are comprehensively identified, minimized, mitigated, and justified. 3. To demonstrate that appropriate minimization practices have been considered and implemented, applicants must identify any minimization practices used when developing the project, calculate major Tier II resource impacts, consider alternatives for impacts, and adequately justify unavoidable impacts. Further water quality impact minimization such as mitigation or out-of-kind offsets may be required. Construction Stormwater Antidegradation Checklist - Version 1.1 :[3] 1. This form replaces the Tier II checklist, *Enhanced Best Management Practices for Tier II Waters*, distributed in the past. [1] https://mde.maryland.gov/programs/Water/TMDL/WaterQualityStandards/Documents/Tier-II-Forms/TierII_NoDischargeAnalysis_Form_1.2.pdf [2] https://mde.maryland.gov/programs/Water/TMDL/WaterQualityStandards/Documents/Tier-II-Forms/TierII_Minimization_Form_1.1.pdf [3] https://mde.maryland.gov/programs/Water/TMDL/WaterQualityStandards/Documents/Tier-II-Forms/AntiDegradation%20Checklist%20V1.1.pdf	**See previous response.**

Comment on Tier II High Quality Water Catchment	2. To complete the checklist, applicants are required to coordinate with the County or appropriate approval authority when developing construction plans and stormwater management plans. 3. Applicants are required to provide this form when seeking a NOI/DOI for coverage under the general construction permit. Other forms and documentation materials shall also be uploaded to the general construction permit site at this time. **Bald Hill Branch 1which is located within the vicinity of the Project, has been designated as a Tier II stream. The Project is within the Catchment (watershed) of the segment. (See attached map).** Currently, there is no assimilative capacity in this watershed. This means that recent data indicates that sometime after designation, the Tier II stream segment has degraded. Therefore, additional social and economic justification is needed. The SEJ is primarily a narrative that justifies the unavoidable impacts to water quality identified by the minimization alternatives analysis. A general outline of information required to complete the SEJ has been provided. Planners should be aware of legal obligations related to Tier II waters described in the Code of Maryland Regulations (COMAR) 26.08.02.04 with respect to current and future land use plans. Information on Tier II waters can be obtained online at: http://www.dsd.state.md.us/comar/comarhtml/26/26.08.02.04.htm and policy implementation procedures are located at http://www.dsd.state.md.us/comar/comarhtml/26/26.08.02.04-1.htm Planners should also note as described in the Code of Maryland Regulations (COMAR) 26.08.02.04-1(C), "Compilation and Maintenance of the List of High Quality Waters", states that "When the water quality of a water body is better than that required by water quality standards to support the existing and designated uses, the Department shall list the water body as a Tier II water body. *All readily available information may be considered to determine a listing. The Department shall compile and maintain a public list of the waters identified as Tier II waters.*" The public list is available in PDF from the following MDE website: http://mde.maryland.gov/programs/Water/TMDL/WaterQualityStandards/Documents/Tier_II_Updates/Antidegradation-Tier-II-Data-Table.pdf. The interactive Tier II webmap is located at the following website: (https://mdewin64.mde.state.md.us/WSA/TierIIWQ/index.html). Direct any questions regarding the Antidegradation Review to Angel Valdez via email at angel.valdez@maryland.gov, or by phone at 410-537-3606.	**See previous response.**

Comment on Tier II High Quality Water Catchment	**ADDITIONAL COMMENTS** **<u>Stormwater</u>** Planners should consider all Maryland Stormwater Management Controls and during Site Design the planner should consider all Environmental Site Design to the Maximum Extent Practicable and "Green Building" Alternatives. Designs that reduce impervious surface and BMPs that increase runoff infiltration are highly encouraged. Further Information: http://www.mde.state.md.us/programs/water/StormwaterManagementProgram/Pages/swm2007.aspx Environmental Site Design (Chapter 5): http://www.mde.state.md.us/programs/water/StormwaterManagementProgram/Documents/www.mde.state.md.us/assets/document/Design%20Manual%20Chapter%205%2003%2024%202009.pdf Redevelopment Regulations: http://www.dsd.state.md.us/comar/comarhtml/26/26.17.02.05.htm	**See previous response.**

Comment on Tier II High Quality Water Catchment		**See previous response.**

LAND AND MATERIALS ADMINISTRATION
RESPONSE TO CLEARINGHOUSE PROJECTS

Project Assigned To	**Jennifer Hopper**
Project Review SAI#	MD20200708-0587
County/Location	Montgomery County & Prince George's County
Received in LMA	7/15/2020 I-495 & I-270 Managed Lane Study
Due Date to OC	8/11/2020
PLEASE NOTE:	☐ COPY ☐ CIRCULATED THRU ADMINI.'S ☐ DUE ASAP

(Check if Applies): C1____ R1_X____ R2____ R3____ R4____

_X_ [1]Any above ground or underground petroleum storage tanks, which may be utilized, must be installed and maintained in accordance with applicable State and federal laws and regulations. Underground storage tanks must be registered and the installation must be conducted and performed by a contractor certified to install underground storage tanks by the Land and Materials Administration in accordance with COMAR 26.10. Contact the Oil Control Program at (410) 537-3442 for additional information.

_X_ [2]If the proposed project involves demolition – Any above ground or underground petroleum storage tanks that may be on site must have contents and tanks along with any contamination removed. Please contact the Oil Control Program at (410) 537-3442 for additional information.

_X_ [3]Any solid waste including construction, demolition and land clearing debris, generated from the subject project, must be properly disposed of at a permitted solid waste acceptance facility, or recycled if possible. Contact the Solid Waste Program at (410) 537-3315 for additional information regarding solid waste activities and contact the Resource Management Program at (410) 537-3314 for additional information regarding recycling activities.

___ [4]The proposed project is located near land on which sewage sludge was stored, land applied, or disposed under a sewage sludge utilization permit issued by the Land and Materials Administration. Specific questions regarding this site should be directed to the Sewage Sludge Division at (410) 537-3314.

_X_ [5]The Resource Management Program should be contacted directly at (410) 537-3314 by those facilities which generate or propose to generate or handle hazardous wastes to ensure these activities are being conducted in compliance with applicable State and federal laws and regulations. The Program should also be contacted prior to construction activities to ensure that the treatment, storage or disposal of hazardous wastes and low-level radioactive wastes at the facility will be conducted in compliance with applicable State and federal laws and regulations.

___ [6]CERCLA listed site MD-#_____, (name)_____, (Address)_____, is located within approximately___miles of (Site/Project being reviewed)_____. Contact the Land Restoration Program at (410) 537-3437 for more information.

_X_ [7]Any contract specifying "lead paint abatement" must comply with Code of Maryland

During final design, a Phase II Environmental Site Investigation will be conducted to characterize the soils within the limits of disturbance. As the project advances, the responses provided in the checklist will be adhered to during final design and construction, as applicable.

Regulations (COMAR) 26.16.01 - Accreditation and Training for Lead Paint Abatement Services. If a property was built before 1978 and will be used as rental housing, then compliance with COMAR 26.16.02 - Reduction of Lead Risk in Housing; and Environment Article Title 6, Subtitle 8, is required. Additional guidance regarding projects where lead paint may be encountered can be obtained by contacting the Environmental Lead Division at (410) 537-3825.

___ **[8]MDE requests that efforts be made to prevent contamination of the surface and ground water of the State of Maryland during any proposed construction and renovation activities. In the event that spills or other releases of petroleum or hazardous materials occurs from the proposed operations which may potentially impact State waters, MDE requests prompt notification at 1-866-633-4686 (toll free).**

_X_ **[9]The proposed project may involve rehabilitation, redevelopment, revitalization, or property acquisition of commercial, industrial property. Accordingly, MDE's Brownfields Site Assessment and Voluntary Cleanup Programs (VCP) may provide valuable assistance to you in this project. These programs involve environmental site assessment in accordance with accepted industry and financial institution standards for property transfer. For specific information about these programs and eligibility, please Land Restoration Program at (410) 537-3437.**

___ **[10]The project may cause contaminated runoff from an animal feeding operation (AFO). Please contact the AFO Division at (410) 537-4423 to determine if this AFO will require registration under the General Discharge Permit for Animal Feeding Operations.**

___ **[11]The project will result in increased numbers of confined animals at this animal feeding operation (AFO) and therefore necessitate registration under the General Discharge Permit for Animal Feeding Operations. Please contact the AFO Division at (410) 537-4423 to determine if this AFO will require registration under this permit.**

_X_ **[12]Borrow areas used to provide clean earth back fill material may require a surface mine permit. Disposal of excess cut material at a surface mine may requires site approval. Contact the Mining Program at (410) 537-3557 for further details.**

___ **[13]Any project that will remove coal from the site as part of the exaction will require review by the Department. Contact the Mining Program at (410) 537-3557 for further detail.**

Additional Specific Comments:

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Maryland

Amanda Redmiles -MDE- <amanda.redmiles@maryland.gov>

Re: New Clearinghouse Project Review: MD20200708-0587 - DUE 8/11

1 message

Karl Munder -MDE- <karl.munder@maryland.gov> Wed, Aug 12, 2020 at 1:08 PM
To: Amanda Redmiles -MDE- <amanda.redmiles@maryland.gov>

R1

#1 1. 1. If the applicant suspects that asbestos is present in any portion of the structure that will be renovated/demolished, then the applicant should contact the Community Environmental Services Program, Air and Radiation Management Administration at (410) 537-3215 to learn about the State's requirements for asbestos handling.

2. Construction, renovation and/or demolition of buildings and roadways must be performed in conformance with State regulations pertaining to "Particulate Matter from Materials Handling and Construction" (COMAR 26.11.06.03D), requiring that during any construction and/or demolition work, reasonable precaution must be taken to prevent particulate matter, such as fugitive dust, from becoming airborne.

#2 3. During the duration of the project, soil excavation/grading/site work will be performed; there is a potential for encountering soil contamination. If soil contamination is present, a permit for soil remediation is required from MDE's Air and Radiation Management Administration. Please contact the New Source Permits Division, Air and Radiation Management Administration at (410) 537-3230 to learn about the State's requirements for these permits.

4. If a project receives federal funding, approvals and/or permits, and will be located in a nonattainment area or maintenance area for ozone or carbon monoxide, the applicant should determine whether emissions from the project will exceed the thresholds identified in the federal rule on general conformity. If the project emissions will be greater than 25 tons per year, contact Brian Hug, Air and Radiation Management Administration, at (410) 537-4125 for further information regarding threshold limits.

CHANGING Maryland FOR THE BETTER

Karl Munder
Natural Resource Planner
Air and Radiation Administration
Maryland Department of the Environment
1800 Washington Boulevard
Baltimore, Maryland 21230
karl.munder@maryland.gov
410-537-3257 (O)

Website | Facebook | Twitter

Click here to complete a three question customer experience survey.

On Wed, Jul 15, 2020 at 1:37 PM Amanda Redmiles -MDE- <amanda.redmiles@maryland.gov> wrote:

> Clearinghouse has received the following project which you are requested to review and submit comments on or before 08/11/2020. A summary of information appears below. A link (**http://apps.planning.maryland.gov/EMIRC_Files/MD20200708-0587.zip**) to an electronic version of the project is available for your review. This is a 3 GB file. No hard copy will be sent.
>
> **Applicant(s):** (1) Maryland Department of Transportation/State Highway Administration and (2) Maryland Department of Transportation/State Highway Administration
>
> **Project Description:** Federal Highway Administration (FHWA) and Maryland Department of Transportation/State Highway Administration (MDOT/SHA) Draft Environmental Impact Statement and Draft Section 4(f) Determination for the I-495 & I-270 Managed Lanes Study

Response to DEIS Comment #1

As the project is a highway improvement, asbestos is not present in any of the facilities.

All required construction-related permits would be obtained from Maryland Department of Environment (MDE) prior to construction. To manage fugitive dust emissions during construction, MDOT SHA will require the contractor to use some or all of the following dust control measures, to minimize and mitigate, to the greatest extent practicable, impacts to air quality:

- Minimize land disturbance;
- Cover trucks when hauling soil, stone, and debris (MDE Law);
- Use water trucks to minimize dust;
- Use dust suppressants if environmentally acceptable;
- Stabilize or cover stockpiles;
- Construct stabilized construction entrances per construction standard specifications;
- Regularly sweep all paved areas including public roads;
- Stabilize onsite haul roads using stone; and
- Temporarily stabilize disturbed areas per MDE erosion and sediment standards.

As the project advances into final design and construction, applicable construction-related permits for air quality compliance and hazardous materials/soil contamination will be obtained from the MDE prior to construction.

Response to DEIS Comment #2

This project is not subject to general conformity requirements. The project is located in an attainment area for carbon monoxide, as such, transportation conformity no longer applies for carbon monoxide. The project is located in a non-attainment area of ozone. The project is currently included in the NCRTPB Fiscal Year (FY) 2019 – 2024 TIP [TIP ID 6432 and Agency ID AW0731 (planning activities)] and the NCRTPB Visualize 2045 Long Range Plan (CEID 1182, CEID 3281, and Appendix B page 56). This project is included in the Air Quality Conformity Analysis that accompanies the Visualize 2045 Plan. The Visualize 2045 Air Quality Analysis is based upon the most current planning assumptions available for the Washington region. The analysis used MOVES2014a, the latest emission factor model specified by EPA for use in preparation of state implementation plans and conformity assessments at the time of analysis.

As part of the conformity analysis, consultation with affected agencies such as the EPA, FHWA, FTA, and the Metropolitan Washington Air Quality Committee (MWAQC), as well as with the public was completed. 23 CFR 450.324(c) requires that the Metropolitan Planning Organization review and update the transportation plan at least every four years in air quality nonattainment and maintenance areas to confirm the transportation plan's validity and consistency with current and forecasted transportation and land use conditions and trends and to extend the forecast period to at least a 20-year planning horizon. The National Capital Region Transportation Planning Board (TPB) is currently updating the Visualize 2045 plan, to be completed in 2022. The design concept and scope for the Preferred Alternative will be included in the Air Quality Conformity analysis accompanying the update to Visualize 2045 which will be approved in 2022. As the Study is included in the currently conforming long-range plan, it is not anticipated that the updated Air Quality Conformity analysis which includes the Preferred Alternative would cause an exceedance of the NAAQS or ozone.

Location(s): Montgomery County,Prince George's County;

Thank you,
Amanda Redmiles
Clearinghouse Coordinator

Click here to complete a three question customer experience survey.

Click here to complete a three question customer experience survey.

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MDE Tier II Alternatives Analysis – Minimization Alternatives V 1.1 (7/9/2020)

Maryland Department of the Environment

Antidegradation Review Report Form

Alternatives Analysis – Minimization Alternatives

Purpose
This form is designed to help applicants assemble a complete Tier II Review report. This form specifically addresses calculating Tier II resource impacts, and evaluating alternatives that minimize water quality degradation from unavoidable impacts to Tier II watersheds and streams. This analysis is applicable to all areas of the **whole and complete project** within a Tier II watershed. The Department will use this information to determine whether or not the applicant evaluated all reasonable alternatives to minimize water quality degradation. MDE may provide additional comments, conditions, or requirements, during the course of the review.

Fill in all that apply:

1. **Project Name:** _____
2. **County ESC Plan Identifier:** _____
3. **Nontidal Wetlands & Waterways Construction Tracking Number: 20206**_ _ _ _
4. **General Permit Number:** _____
5. **Other Application Type and Number:** _____

_____

Applicant Signature: _____ **Date Complete:** _____

Background
Code of Maryland Regulations (COMAR) 26.08.02.04-1 (G(3)) states that "If the Department determines that the alternatives that do not require direct discharge to a Tier II water body are not cost effective, the applicant shall: (a) Provide the Department with plans to configure or structure the discharge to minimize the use of the assimilative capacity of the water body". To demonstrate that appropriate minimization practices have been considered and implemented, applicants must identify any minimization practices used when developing the project, calculate major Tier II resource impacts, consider alternatives for impacts, and adequately justify unavoidable impacts. Further water quality impact minimization such as mitigation or out-of-kind offsets may be required. Additionally, applicants are required to coordinate with the County or appropriate approval authority when developing construction plans, and incorporate additional practices as indicated by the guidance provided in the *Construction Stormwater Antidegradation Checklist*. This checklist, as well as the other portions of the Tier II Review Report are required prior to receiving many permits and authorizations from MDE.

As noted in the Supplemental Draft Environmental Impact Statement (SDEIS) and Final Environmental Impact Statement (FEIS), there are no delineated tributaries within the Preferred Alternative limits of disturbance that drain to Tier II waters.

NOTE: All remaining pages of this comment are pages from two forms that are not applicable to the Managed Lanes Study because there are no Tier II impacts.

Instructions and Notes

1. Review all of the information in this document carefully. Prepare a report to address all of the analysis required by this document. Submit all Tier II analysis and documentation together.
2. Do not leave any response blank. Please mark "N/A" for any questions or sections that are not applicable until you reach the end of the document.
3. Provide sufficient supporting documentation for narratives.
4. The level of analysis necessary, and amount of documentation that may be needed to determine if impacts have been adequately addressed, is dependent upon project size, scope, and scale of relative impacts to Tier II resources. Please develop responses accordingly.
5. Reports/responses shall be submitted in electronic format, as well as paper. Full plans are not required unless requested over the course of the review.
6. Direct any questions regarding this form to Angel Valdez at angel.valdez@maryland.gov, or by phone at 410-537-3606.

Minimization Alternative Analysis Final Documentation Checklist

- ☐ Signature & Date MDE Tier II Alternatives Analysis – Minimization Alternative form (page 1)
- ☐ Resource Impact Analysis (**Complete the analysis for each Tier II watershed affected**)
  - ☐ Tier II Stream Buffer Impacts
    - Impact Calculation
    - Impact Minimization
    - Impact Mitigation
    - Impact Justification
    - Stream Buffer Exhibit
  - ☐ Forest Cover Impacts
    - Impact Calculation
    - Impact Minimization
    - Impact Mitigation
    - Impact Justification
    - Forest Cover Exhibit
  - ☐ Impervious Cover
    - Impact Calculation
    - Impact Minimization
    - Impact Mitigation
    - Impact Justification
    - Impervious Cover Exhibit
  - ☐ Mitigation & Other Potential Requirements
    - Plans
    - Signature & Date (Page 8)
- ☐ Construction Stormwater Antidegradation Checklist

Tier II Resource Impacts

Sufficient riparian buffers, ample watershed forest cover, and lower levels of impervious cover are essential to maintaining high quality waters. This project may permanently reduce riparian buffers and forest cover, or increase impervious cover within Tier II watersheds leading to a decrease in water quality. Depending upon project specific impacts, MDE may require monitoring, additional BMPs, expanded buffers in Table 1, and other studies prior to approval. This analysis is applicable to all areas of the **whole and complete project** within a Tier II watershed.

MDE will use the following information to determine **permanent** impacts to Tier II watershed resources. Complete the analysis for each Tier II watershed the proposed project may impact.

A. Tier II Stream Buffers

1. Instructions:

a. If no stream buffer impacts are proposed (within 100' of stream), mark this section N/A and proceed to Section B, Forest Cover.
b. Insert the Tier II watershed name at the top of each box.
c. "Impacted" stream segments are those disrupted by road crossings, other infrastructure, construction (ex. sewer lines), or otherwise buried
d. Calculate buffer averages for 2(f) below on a stream segment-by-segment basis.
e. Explain in detail alternatives considered, and any actions taken

A. Tier II Stream Buffers - - Tier II Watershed: _____

2. Calculation of Permanent Riparian Buffer Impacts to State Regulated Waters	**Linear Feet +/-**	
	LEFT Bank	**Right Bank**
a. Combined length of on-site stream segments:		
b. Combined length of EXISTING, pre-development, impacted stream segments:		
c. Combined length of PROPOSED, post-development, impacted stream segments:		
d. Total post-development impacted stream segments 2(b) + 2(c)=		
e. Total post-development unimpacted stream segments 2(a) - 2(d) =		
f. Combined length of streams, post-development, with an average 100' buffer, based on the value in 2(e):		
g. Potential Tier II Buffer Impacts 2(e) - 2(f) =		

A. Tier II Stream Buffers - - Tier II Watershed: _____
3. Buffer Impact Minimization:
Evaluate on-site alternatives for buffer impacts for segments identified in 2(g). Examples include minimizing ROW, narrowing paths, alternate routes for walkways, roads, crossings, etc. to avoid buffer impacts.
4. Buffer Impact Mitigation:
Mitigation or offsets can occur both on and off-site. On-site, the intent is to achieve a 100' average stream buffer width. Per segment, locate areas where impacts to the 100' buffer are unavoidable. Include those impacts in the mitigation/offset alternatives analysis. Conditions under section D shall apply. a) Evaluate on-site alternatives to identify areas where buffers could be expanded beyond the minimum 100' to offset areas of unavoidable buffer width constraints. b) If there are no on-site areas, evaluate off-site areas, within the Tier II watershed, where buffers could be improved, expanded, or established.
5. Buffer Impact Justification:
If there are any remaining unavoidable impacts, provide narrative justification and supporting documentation for impacts. Reasons may include existing infrastructure, clearance necessary to comply with regulation, no alternative location for stormwater management, property boundary, etc.
6. Buffer Exhibit
Prepare a Tier II Buffer Exhibit for on-site streams. Dependent upon the number of segments, multiple sheets (8 ½" by 11") may be used. On an overview, label each segment (a, b, c…) and provide a tabular summary, per bank-segment (e.g., left bank of segment a), of average buffer width. In addition to on-site streams, the exhibit shall display the following information: • 100- foot riparian buffer. (symbolize with a line) • Areas where the post-construction stream buffer are +/- 100 feet. (symbolize with shading, hatches, or dots, etc.) • On-site areas where buffers could be maintained at a distance of greater than a 100' if there are unavoidable constraints in some locations. (symbolize with shading, hatches, or dots, etc.)

Table 1: Expanded Tier II Riparian Buffer

Adjusted Average Optimal Buffer Width Key (in Feet)				
	Slopes (%)			
Soils	0-5%	5-15%	15-25%	>25%
ab	100	130	160	190
c	120	150	180	210
d	140	170	200	230

B. Tier II Forest Cover
1. Instructions: **a. If there is no net forest cover loss within the impacted Tier II watershed, mark this section N/A and proceed to Section C, Impervious Cover.** **b. Insert the Tier II watershed name at the top of each box.** **c. "Potential Constraints" include forest loss due to ROW, property boundaries, regulatory requirements, etc.** **d. Explain in detail alternatives considered, and any actions taken**

B. Tier II Forest Cover - - Tier II Watershed: _____	
2. **Calculation of Permanent Forest Cover Impacts**	**Acres +/-**
a. Total on-site forest cover, EXISTING:	
b. Total on-site forest cover, POST-PROJECT:	
c. Total off-site reforestation or restoration, IN the Tier II Watershed listed above:	
d. Permanent forest loss due to potential constraints:	
e. *Total forest cover retained in Tier II Watershed* 2(b) + 2(c) =	
f. *Total forest cover loss in Tier II Watershed* 2(e) – 2(a) =	

B. Tier II Forest Cover - - Tier II Watershed: _____
3. Forest Cover Loss Minimization
If 2(d) is greater than 0, or if 2(f) is a negative value, evaluate on-site alternatives for forest cover impact minimization. Examples include minimizing ROW, alternate routes for roads, crossings, etc. to avoid forest cover impacts.
4. Forest Cover Loss Mitigation
To achieve no net negative impact as a result of the proposed activity, the applicant shall consider alternatives to mitigate impacts 'in-kind', for forest cover loss, to the maximum extent economically feasible. Provide additional information regarding the value in 2(c). Once those options are exhausted, applicants shall evaluate out-of-kind alternatives within the Tier II watershed that will help offset water quality impacts. These out-of-kind alternatives include impervious cover disconnection or retrofits, stream restoration, buffer enhancement, etc.
5. Forest Cover Loss Justification
If there are any remaining unavoidable impacts to forest cover, provide narrative justification and supporting documentation for impacts. Reasons may include existing infrastructure, clearance necessary to comply with regulation, no alternative location for stormwater management, property boundary, etc.
6. Forest Cover Exhibit
On an 8 ½" by 11" sheet(s), prepare an on-site Tier II Forest Cover Exhibit. Using varying symbology, show a basic site layout relative to 2(a), 2(b), and 2(d) above. Prepare a separate exhibit regarding any off-site reforestation, or out-of-kind mitigation opportunities in accordance with Section D.

C. Impervious Cover
1. Instructions: **a. If ESD is used to treat all new, on-site, post-construction stormwater, mark this section N/A and proceed to Section D, Mitigation and Other Potential Requirements.** **b. Insert the Tier II watershed name at the top of each box.** **c. Explain in detail alternatives considered, and any actions taken.**

C. Tier II Impervious Cover - - Tier II Watershed: _____	
2. Calculation of Impervious Cover Increase	**Acres +/-**
a. Total additional (new) impervious cover, POST-PROJECT:	
b. Total additional (new) impervious cover treated with ESD practices, POST PROJECT:	
c. *Total impervious cover not treated with ESD practices, POST-PROJECT:* *2(a) – 2(b) =*	

C. Tier II Impervious Cover - - Tier II Watershed: _____
3. Impervious Cover Minimization
If 2(c) is greater than 0, evaluate on-site alternatives for impervious cover impact minimization by identifying additional areas where ESD stormwater management practices can be utilized.
4. Impervious Cover Offsets
Add the area-acres of remaining unavoidable impervious cover increases (not treated with ESD) to the total targeted for mitigation under Section B(4). Increases such as these can be mitigated with forest cover restoration/afforestation, or through off-site mitigation alternatives such as impervious cover disconnection or retrofits, stream restoration, buffer enhancement, etc.
5. Impervious Cover Justification
If there is any remaining unavoidable addition of impervious surface acreage (not treated with ESD) and which is not offset, provide narrative justification and supporting documentation for impacts. Reasons may include existing infrastructure, clearance necessary to comply with regulation, no alternative location for stormwater management, property boundary, etc.
6. Impervious Cover Exhibit
On an 8 ½" by 11" sheet(s), prepare an on-site Tier II Impervious Cover Exhibit. Using varying symbology, show a basic site layout relative to 2(a), 2(b), and 2(c) above. Prepare a separate exhibit regarding any off-site reforestation, or out-of-kind mitigation opportunities in accordance with Section D.

MDE Tier II Alternatives Analysis – Minimization Alternatives V 1.1 (7/9/2020)

D. Tier II Mitigation and Other Potential Requirements
1. If mitigation is necessary: **a. In-kind mitigation shall occur at a target ratio of 1:1.** **b. In order to satisfy the requirements of the Antidegradation Review, an applicant must demonstrate that they have conducted a robust alternatives analysis, including mitigation as a means for additional minimization of unavoidable impact to Tier II resources.** **c. MDE strongly recommends pre-application meetings.** **d. Regardless of application status, prepare preliminary analysis, including:** **i. Preliminary site search for potential properties** **ii. Basic exploration of out-of-kind possibilities, such as restoration, impervious cover retrofit or removal, etc.** **e. Mitigation is required for unavoidable net forest cover loss.** **f. The greater the net loss, the higher the restoration target.**

D. Tier II Mitigation and Other Potential Requirements
2. Mitigation Plan Components
a. Statement of unavoidable impacts to Tier II waters. This is total loss calculated in Section A (2)h, Section A(2)i, Section B (2)f, and Section C (2)c. Identify values specifically associates with stream buffers, forest cover, and impervious cover. Tabular totals shall be broken according to resource type and Tier II watershed impacted. The accompanying narrative shall include a summary of why impacts are considered unavoidable. b. Preferred mitigation alternatives analysis within the impacted Tier II watershed. The order of mitigation alternatives is as follows: i. In-kind, on-site ii. In-kind, off-site iii. Out-of-kind, on-site iv. Out-of-kind, off-site c. Mitigation site alternative analysis. Establish site search criteria. All locations must be located within the affected Tier II watershed identified for each unavoidable impact calculated in 2(a). Tabular totals shall include the amount of mitigation/offset selected alternatives achieve. Include maps of each mitigation property. d. Protection Mechanism. Explain the plan proposed to ensure that all areas identified for mitigation shall be protected in perpetuity. Permittees shall be required to provide documentation in the form of covenants, landowner agreements, deed details, etc. as well as financial assurances. This shall be provided no more than 60 days after completion. e. Site Description. Provide site address, name of property if known, map and parcel number, and centroid coordinates in latitude/longitude. Include maps of each mitigation property. Maps shall include natural resources (i.e. existing forest cover, streams, wetlands, etc.), roads, railways, and any other important identifying features. Maps shall include natural resources (i.e. existing forest cover, streams, wetlands, etc.), roads, railways, and any other important identifying features. f. Planting plan: Reforestation shall incorporate optimum vegetation selection guidance provided in the *State Forest Conservation Technical Manual, 3rd edition, 1997 by Maryland Department of Natural Resources.*

D. Tier II Mitigation and Other Potential Requirements
2. Mitigation Plan Components, Continued
g. Monitoring Reports. Properties shall be monitored for a minimum of five years to ensure site success. Reports shall provide visuals of establishment progress, as well as narrative descriptions. Include any issues encountered, overcome, and potential changes that may be necessary to meet objectives.

D. Tier II Mitigation and Other Potential Requirements
3. Other Potential Requirements
a. pH Monitoring and Corrective Action Plan. Often associated with in-stream grout activities. b. Compaction Management Plan. Often associated with linear activities, such as pipelines. c. Water Quality Monitoring and Corrective Action Plan. Associated with projects with in-stream impacts. d. Biological Monitoring. Project requirement for complex projects with direct or significant impacts. e. Hydraulic Analysis. Projects may include direct or significant near-stream disturbances, such as grading, vegetative removal, watershed boundary changes, etc. f. Other requirements. To address unique impacts specific to the activity or site. g. Social and Economic Justification. Depending upon the scope of impacts to Tier II resources and streams, applicants may be required to provide additional documentation to justify the permitting of an activity that will degrade Tier II streams, on an socio-economic basis.

Applicant Signature: _____ **Date:** _____

Provide a hardcopy responses to:

Maryland Department of the Environment
Environmental Assessment and Standards Program
Antidegradation Implementation Coordinator
ATTN: Angel D. Valdez
1800 Washington Blvd
Baltimore, Maryland 21230

Provide an electronic response, by CD to the address above, or a way to download the response from secure cloud-based site, email: to Angel Valdez at angel.valdez@maryland.gov.

Maryland Department of the Environment

Antidegradation Review Report Form
Alternatives Analysis - No Discharge Alternative

Purpose
This form is designed to help applicants assemble a complete Tier II Review report. This form specifically addresses evaluating alternatives that avoid impacts to Tier II watersheds and streams. It is strongly recommended that applicants complete this analysis as early in the project planning stages as possible, during initial property site search and screening analysis of purchase and feasibility alternatives. The Department will use this information to determine whether or not an adequate alternatives analysis was conducted, and to help determine if a reasonable alternative to the proposed activity is available. MDE may provide additional comments during the course of the review.

Fill in all that apply:

1. **Project Name:** _____
2. **County ESC Plan Identifier:** _____
3. **Nontidal Wetlands & Waterways Construction Tracking Number: 20206**_ _ _ _
4. **General Permit Number:** _____
5. **Other Application Type and Number:** _____

_____

Applicant Signature: _____ **Date Complete:** _____

Background
Code of Maryland Regulations (COMAR) 26.08.02.04-1 (G(1)) states that "If a Tier II antidegradation review is required, the applicant shall provide an analysis of reasonable alternatives that do not require direct discharge to a Tier II water body (no-discharge alternative). The analysis shall include cost data and estimates to determine the cost effectiveness of the alternatives". For land disturbing projects that result in permanent land use change, this 'no discharge' analysis specifically evaluates the reasonability of other sites or alternate routes which could be developed to meet the project purpose, but are located *outside* of the Tier II watershed. Reasonability considerations, as applicable, may take into account property availability, site constraints, natural resource concerns, size, accessibility, and cost to make the property suitable for the project. This analysis shall be performed regardless of whether or not the applicant has ownership or lease agreements to a preferred property or route. Information from this analysis may be used to inform minimization analysis.

Instructions and Notes

1. Complete the analysis for each Tier II watershed impacted.
2. Review the information in this document carefully. Prepare a report to address all of the analyses required by this document. Submit all Tier II analysis and documentation at one time.
3. To help improve review efficiency and avoid delays, do not leave any response blank. Please use "N/A" for any questions or sections that are not applicable.
4. Provide sufficient supporting documentation for narratives.
5. The level of analysis necessary, and amount of documentation that may be needed to make a decision is dependent upon project size, scope, and scale of relative impacts to Tier II resources. Please develop responses accordingly.
6. Reports/responses shall be submitted in electronic format, as well as paper. Full plans are not required unless requested over the course of the review.
7. Direct any questions regarding this form to Angel Valdez at angel.valdez@maryland.gov, or by phone at 410-537-3606.

No Discharge Alternative Analysis Final Documentation Checklist

☐ Signed & Dated MDE Tier II Alternatives Analysis – No Discharge Alternative form (page 1)

☐ Qualifying Exemptions with supporting documentation

☐ General Project Purpose Statement with relevant definitions

☐ Alternative Site Reasonability Analysis
- ☐ Results of initial site search
- ☐ Map of alternatives relative to preferred site and Tier II streams/catchment
- ☐ Alternative Sites Summary Analysis Table Supplementary Information (per site)
- ☐ Detailed Narrative of Alternate Analysis Outcome

☐ Alternative Route Reasonability Analysis
- ☐ Results of initial site search
- ☐ Map of all alternatives relative to preferred route and Tier II streams/catchment
- ☐ Alternative Sites Summary Analysis Table Supplementary Information (per site)
- ☐ Detailed Narrative of Alternate Analysis Outcome

☐ Narrative rationale for final decision of reasonableness

Qualifying Exemptions

For the purposes of the no discharge analysis for land disturbing activities, extenuating circumstances may apply to projects that are developed to address a specific need, may be linked to special funding, or linked to a specific location. Supporting documentation is required before consideration. Please read the following examples and determine whether or not a given situation is applicable.

The applicant must get concurrence from MDE as to the applicability of any special circumstances prior to completing the no discharge alternatives analysis. It is at the Department's discretion to determine whether a special circumstance applies, and whether or not this applicability means that there is not a reasonable alternative that avoids the Tier II watershed.

If none of the special circumstances apply, check "**Not Applicable**".

☐ **Not Applicable**

☐ **Situation 1:** Project is linked to unique or special incentives for State, County, or Municipality

Example: County needs for 1000 units of low-income senior housing in legislative district 7. Documentation must include the request for proposals (RFP) or similar missive to meet the housing need, and unique benefits or incentives lost if the project is moved outside of legislative district 7.

Example: Project is located in a State Designated Priority Funding Area, State Designated Enterprise Zone, or similar area targeted by the State for economic growth, business development, or investment.

☐ **Situation 2:** Project has location specific limitations

Example: College campus extension. Education capital funding limits development to sites that are within 5 miles of the main campus. Documentation should include the RFP or similar documentation.

Example: Project is taking place in an existing right of way, or using an area that is currently operational. Such projects include replacing transmission lines, expanding operations on a working farm or business center.

☐ **Situation 3:** Military project (or similar) with restrictions due to national security, etc.

Example: Construct a new runway and hangar for Air Force 1. The military may identify a certain location or base where this construction shall occur due to existing facilities, support personnel, and security concerns.

☐ **Situation 4:** Project has little to no resource impacts.

Example: Repair or replacement of existing structures, road resurfacing, bridge maintenance using scaffolding, General Waterways Construction Permits, habitat restoration, rehabilitation, and stabilization.

☐ **Situation 5:** Project is a "Grandfathered" development, that meets the specifications within Chapter 1.2, in the *Maryland Model Stormwater Management Ordinance, June 2009* & *April 2010*

Administrative waivers, extension documentation, etc. are required documentation.

Note -This exemption does not apply to linear projects like roads or pipelines. Grandfathered projects are not exempt from the minimization alternatives analysis.

General Project Purpose Statement

1. Define the overall project purpose and site selection criteria. To result in a fair and meaningful analysis for the antidegradation review the site selection criteria must fall into the following parameters:
   a. The statement must not be so narrowly constructed as to limit the results to one site with no other possible alternatives, or
   b. Likewise, the statement cannot be too broadly written creating too many alternatives to effectively consider.

2. Example Statements
   a. Too Narrow: To develop a high density residential housing complex consisting of 1000 living units on a 200 acre site adjacent to the Mall of Maryland. -- The likelihood that there are multiple properties other than the desired alternative available are unlikely, and this eliminates the possibility of properties outside of the Tier II watershed.
   b. Too Broad: To develop a residential housing complex in Charles County. -- This will yield hundreds of results, creating a burdensome and unrealistic amount of work to evaluate each alternative.**
   c. Reasonable: To develop a residential housing complex near a major shopping center in Northern Charles County. -- This will reduce the number of available properties to a more manageable amount, while still meeting the overall purpose of providing housing near a retail center in a target geographic area. The applicant can further refine the statement by defining "near", "major shopping center", and "Northern Charles County".

3. The applicant must craft a statement that yields at least 3 available alternative properties for further evaluation.

4. The level of detail for the alternative analysis process should appropriately match the complexity of the project taking into consideration factors such as resource impacts to Tier II watersheds in terms of impervious cover, forest cover loss, riparian buffer impacts, public comment, etc. For example, the amount of documentation provided for 3 alternatives to place a single dwelling on one acre is expected to be significantly less than the documentation expected for a 300 acre mixed-use development.

   **Based on comments received during the review or other mitigating circumstances, the Department may require the applicant to evaluate additional alternatives, or provide a more in-depth analysis.

Table 1: Alternative Site Evaluation Summary Analysis Table

Evaluate each criteria listed in the left hand column for each alternative site. Populate each box with the appropriate conditions, i.e. either yes/no, or by listing one or more of the options provided (a, b, c...), such as types of utilities available at a given site.

	Site 1	Site 2	Site 3
Availability: a. Owned by applicant b. For sale c. Special, please explain (example: remediation required)			
Sizing appropriate: a. As is b. Purchase of adjoining property/ROW required			
Accessible Utilities: a. Electric b. Water c. Sewer d. Site access (existing road/bridge, etc.). e. None			
Development Resources: a. Existing SWM b. Existing buildings/structures c. Site cleared			
Zoning: a. Appropriate b. Waiver required			
Resource Impacts: a. Streams b. Forest c. Wetlands/wetlands buffer d. 100-yr flood plain			
Cost to Acquire is Reasonable: Yes or No			

Alternative Sites Summary Analysis Table Supplementary Information:

1. Explanation of site search criteria and rationale.
   a. Relate project requirements to the criteria in Table 1.
   b. Include any additional critical criteria not identified in the above table.

2. Results of initial site search.
   a. List the available sites for consideration before the applicant chose 3 for further evaluation.
   b. Include a brief narrative description of each site.
   c. Include a table listing basic site address, lot size, parcel and map.
   d. Include an overview map showing sites and their relative location to the preferred property.
   e. If available, include Real Property Search Data (From Maryland Department of Assessments and Taxation (http://sdat.dat.maryland.gov/RealProperty/Pages/default.aspx), or MLS (Multiple Listing Service) information.

3. Expand upon the responses in Table 1.
   a. Include a narrative that clearly explains how the applicant determined the final 3 sites for further consideration in Table 1.
   b. Provide basic information about each site, i.e. land use, land cover, unique features, on-site resources such as streams, wetlands, relevant geology and/or hydrology, etc.
   c. Discuss specific resource impacts.
      i. Include a table that further breaks down the resource impacts associated with the 3 alternative sites.
      ii. Include a narrative that further details whether resources could be avoided. For example, an on-site stream that will most likely be crossed to accommodate site access would make that site less favorable when compared to another option.

4. Justify final site decision.

MDE Tier II Alternatives Analysis – No Discharge Alternative V 1.2 (7/9/2020)

Table 1: Alternative Route Evaluation Summary Analysis Table (use for linear projects such as roads, utility lines, etc)

Evaluate each criteria listed in the left hand column for each alternative site. Populate each box with the appropriate conditions, i.e. either yes/no, or by listing one or more of the options provided (a, b, c…), such as types of utilities available at a given site.

	Site 1	Site 2	Site 3
Availability: a. ROW Owned by applicant b. ROW can be acquired or leased c. Other, please explain			
Accessible Utilities (i.e. where connecting infrastructure is required): a. Electric b. Water c. Sewer or pipeline d. Site access (existing road/bridge, etc.). e. None			
Zoning: a. Appropriate b. Waiver required			
Resource Impacts: a. Streams b. Forest c. Wetlands/wetlands buffer d. 100-yr flood plain			
Cost to Acquire is Reasonable: Yes or No			

MDE Tier II Alternatives Analysis – No Discharge Alternative V 1.2 (7/9/2020)

Alternative Route Summary Analysis Table Supplementary Information:

1. Explanation of route search criteria and rationale.
   a. Relate project requirements to the criteria in Table 1.
   b. Include any additional critical criteria not identified in the above table. For example, if the purpose of the project is to improve public safety, documentation must be provided to support this claim. For a new road this may include data on accidents, visibility issues, or geometric design issues that can complicate travel.

2. Results of initial route search.
   a. List the available routes for consideration before the applicant chose 3 for further evaluation.
   b. Include a brief narrative description of each route.
   c. Include a table listing route start and end addresses, parcel and map, land use (i.e. residential neighborhood, commercial district, etc.)
   d. Include an overview map showing results and their relative location within the impacted Tier II watershed.

3. Expand upon the responses in Table 1.
   a. Include a narrative that clearly explains how the applicant determined the final 3 sites for further consideration in Table 1.
   b. Provide basic information about each site, i.e. land use, land cover, unique features, on-site resources such as streams, wetlands, etc.
   c. Discuss specific resource impacts.
      i. Include a table that further breaks down the resource impacts associated with the 3 alternative routes. For example identify the number of streams on-site, potential forest loss for site clearing, etc.
      ii. Include a narrative that further details whether resources could be avoided. For example, an on-site stream that will most likely be crossed to accommodate site access would make that site less favorable when compared to another option. Note: In making a final decision, MDE may take into consideration whether or not the project can avoid the impact by going over it (i.e. bridge) or under it (i.e. drilling). Consider this in the resource impact evaluation. The method of crossing may be a special permit condition.

4. Justify final route decision.

Provide a hardcopy responses to:

Maryland Department of the Environment
Environmental Assessment and Standards Program
Antidegradation Implementation Coordinator
ATTN: Angel D. Valdez
1800 Washington Blvd
Baltimore, Maryland 21230

Provide an electronic response, by CD to the address above, or a way to download the response from secure cloud-based site, email: to Angel Valdez at angel.valdez@maryland.gov.

SEJ Outline – Basic V 1.0

Maryland Department of the Environment
Antidegradation Review Report Form
Social and Economic Justification – Outline for Basic Projects

MARYLAND

Purpose

This form is designed to help applicants assemble a complete social and economic justification (SEJ) to complete the Antidegradation Tier II Review when there are certain unavoidable impacts to water quality. Pursuant to COMAR 26.08.02.04-1 (J), applicants must submit an SEJ if "(a) No cost effective alternative to the discharge is available; or (b) The cumulative degradation resulting from nonpoint source pollution and any other permitted discharges would diminish water quality". Therefore, if impacts cannot be fully avoided, minimized, or mitigated, the applicant may have to provide MDE with an SEJ. The SEJ must demonstrate that an economic hardship and/or public benefit overrides the value of the ecological services or water quality benefit that the Tier II water segment provides. The applicant must also provide documentation to show that all reasonable avoidance, minimization, and mitigation alternatives have been considered, and where economically feasible, implemented.

The Department will use this information to determine whether or not the SEJ is complete, if it adequately justifies the impact to water quality, and to make a final permit determination. MDE may provide additional comments during the course of the review.

- **Introduction**
  - Project Summary
  - Impacts
  - Antidegradation Policy
  - Document purpose
- **Socioeconomic Contributions of the Project**
  - Economic Importance and Benefit
    - Economic Impacts- During Construction
    - Economic Impacts –During Operations
    - Fiscal Impacts –Development Phase
    - Fiscal Impacts –During Operations
  - Social Importance and Benefit
    - Widespread social benefits to the community affected
    - Contributions to environment
- **Socioeconomic Benefits of High Quality Waters (as applicable)**
  - Social importance and benefit
    - Impacts on property value
    - Recreation value
    - Other quality of life benefits
  - General Evaluation of Economic Impacts of Restoring Degraded Stream Resources, including impacts to resources necessary to maintain high quality waters
    - Costs of 1:1 in-kind mitigation for all net forest cover loss based on area market value
    - Estimated cost of stream restoration, per linear foot, based on area market value
- **Conclusion**
- **References & Appendices as needed**

MARYLAND DEPARTMENT OF PLANNING

From: Bihui Xu -MDP- <bihui.xu@maryland.gov>
Sent: Monday, November 2, 2020 1:26 PM
To: Caryn Brookman (Consultant) <CBrookman.consultant@mdot.maryland.gov>
Cc: Chuck Boyd <chuck.boyd@maryland.gov>; Michael Bayer -MDP- <michael.bayer1@maryland.gov>; Scott Hansen -MDP- <scott.hansen@maryland.gov>
Subject: Re: I-495 & I-270 MLS DEIS Comments from MDP

Caryn,
Attached are the comments on the I-495 & I-270 MLS DEIS from the Maryland Department of Planning.
Please do not hesitate to contact us if you have any questions.

Bihui Xu, AICP
Lead Transportation Planner
Maryland Department of Planning
301 West Preston Street, RM 1101
Baltimore, MD 21201
(443)-854-6488 (Mobile)
(410) 767- 4567 (Office)
bihui.xu@maryland.gov

Please take our customer service survey.
Planning.Maryland.gov

Thank you for your comments.

Comments on the DEIS of the I-495 & I-270 Managed Lanes Study

- Maryland Department of Planning

November 2, 2020

Staff at the Maryland Department of Planning (Planning) has reviewed the Draft Environmental Impact Statement (DEIS) and relevant technical reports for the I-495 & I-270 Managed Lanes Study (the I-495 & I-270 MLS). The review focuses on multimodal considerations and potential impacts, including beneficial effects on land uses and communities. Staff also discussed the review and comments with Planning's management team. We offer the following comments.

PFA Law/Smart Growth Consistency Review

The 1997 Priority Funding Areas (PFA) Law only applies to "growth related" projects. For transportation projects, only the construction phase (i.e., detailed engineering, property acquisition, and construction) of a major project involving state funding is subject to the PFA Law. The I-495 & I-270 MLS is part of the I-495 & I-270 Public-Private Partnership (P3) Program. Currently, it is not clear if the I-495 & I-270 MLS project will use any state funding or financial assistance; therefore, the applicability of the PFA Law to the project has not been determined.

#1

Since the I-495 & I-270 MLS project is in PFAs, the project would comply with the PFA Law, if it is determined that the law applies to the project. Otherwise, if state funding or financial assistance is not involved, the project would not be subject to the PFA Law.

The PFA Law and the 1992 Maryland Economic Growth, Resource Protection, and Planning Act (amended in 2009) are intended to encourage state investment in safe, affordable, and efficient multimodal transportation in support of existing communities and growth inside PFAs. They are further envisioned to help protect the environment and natural and land resources. Planning is pleased to see the DEIS includes an enhanced analysis of multimodal components of the project and additional information on transit, pedestrian and bicycle, and other transportation demand management (TDM) elements. These include potential toll policies for HOT lanes and direct or indirect access to transit stations/centers.

#2

The DEIS provided the comparative analysis of impacts on transportation and natural and built environments between the Alternatives Retained for Detailed Study (ARDS). Among the Build Alternatives of the ARDS, Alternative 9, Alternative 9M, and Alternative 13B would provide a system of HOT lanes on I-495 and I-270, allowing toll free travel for HOV3+ (page 2-44). This provides an additional option for non-single-occupancy-vehicle (SOV) travel, as compared to other Built Alternatives. In addition, providing HOT lanes would help mitigate the financial disadvantage of Environmental Justice (EJ) population (page 4-126).

1

Response to DEIS Comment #1

As recognized by MDP, the MLS Preferred Alternative is located entirely within PFAs. State Growth and Conservation Areas in the study limits consist primarily of established communities, as well as targeted growth and revitalization areas. Small areas of future growth, large lot development, and rural resources also exist in the study limits. The study limits have been transformed by the intensification of development in past decades and has shifted from rural to almost entirely developed suburban and urban land uses. Growth in the study area, through land use and growth policies and regulations, is directed to existing suburban and urban communities and along transportation corridors. The MLS would not change the amount of growth or land use patterns; much of the project need derives from the need to accommodate existing traffic and long-term traffic growth in the study area.

MDOT SHA has coordinated with Smart Growth Committee on the Study and has completed the Planning Policy Consistency for Major Transportation Projects (Checklist A) and the Priority Funding Area Law Compliance Checklist for Major Transportation Projects (Checklist B). The final checklists have been shared with MDP through the Smart Growth Committee and are included in the FEIS, Appendix F.

The Preferred Alternative incorporates pedestrian and bicycle improvements and supports transit elements. These transit elements will serve to address the multi-modal and connectivity need in the Purpose and Need and include the following:

- Allowing bus transit usage of the high occupancy toll (HOT) managed lanes toll free to provide an increase in speed of travel, assurance of a reliable trip, and connection to local bus service/systems on arterials that directly connect to urban and suburban activity centers
- Accommodating direct and indirect connections from the HOT managed lanes to existing transit stations and planned Transit Oriented Development at the Shady Grove Metro, Twinbrook Metro, Montgomery Mall Transit Center, and Medical Center Metro

MDOT SHA has also committed to regional transit improvements to enhance existing and planned transit and support new opportunities for regional transit service including increasing the number of new bus bays at Washington Metropolitan Area Transit Authority's (WMATA) Shady Grove Metrorail Station and increasing parking at the Westfield Montgomery Mall Transit Center.

Bicycle and pedestrian improvements have also been incorporated into the Preferred Alternative to address the need for accommodating existing and proposed multimodal connectivity and mobility. These improvements include replacing, upgrading, or providing new pedestrian/bicycle facilities consistent with current master plans where adjacent connections on either side of the bridge currently exist. Examples of pedestrian and bicycle facilities that would be constructed as part of the Preferred Alternative include the follow, refer to Chapter 3, Table 3-2 for the complete list:

- Constructing a new shared use path across the American Legion Bridge to connect facilities in Maryland and Virginia to support regional multimodal travel
- Lengthening the I-270 bridge over Tuckerman Lane to accommodate future pedestrian/bicycle facilities along Tuckerman Lane. Montgomery County would construct the master plan recommended facilities along Tuckerman Lane in the future.
- Constructing new side paths across MD 190 over I-495 and construct new bike lanes in both directions on MD 190.
- Constructing new sidewalk along west side of Seven Locks Rd under I-495 to reestablish historic connection between First Agape AME Zion Church and Morningstar Tabernacle No. 88 Moses Hall and Cemetery.

#2 Con't

Enhanced multimodal elements of the project would be consistent with and support local, regional, and state transportation, land use, and environmental (including climate change) goals and policies. Viable transit, the pedestrian and bicycle facility elements, and providing HOT lanes by Alternative 9, 9M, and 13B would also help reduce adverse land use and growth impacts that may result from increased highway capacity for SOV travel by the project.

#3

Nevertheless, while the Build Alternatives of the ARDS, along with increased highway capacity, occur within PFAs, they could likely induce growth and some of that induced growth could take place outside of PFAs. In addition, there would be likely cumulatively induced growth impacts from the future I-270 project from I-370 to I-70, which is under a pre-NEPA study. The state and affected local jurisdictions should make concerted efforts to discourage induced development outside, or between PFAs. Planning concurs with limiting the number of the proposed access points to I-495 and I-270 as identified in the DEIS (pages 2-33 through 2-36).

#4

While not part of the I-495 & I-270 MLS area, due to the improved travel times resulting from any proposed improvements along the I-270 corridor, Planning strongly recommends against consideration of new access points to the segment of I-270 in northern Montgomery County and southern Frederick County. Induced growth due to any expanded highway access would likely occur outside of PFAs.

Please note that additional specific comments and questions on the PFA Law and smart growth consistency review are provided below (See the comments under "Chapter 4" below).

Specific Comments on the DEIS and Technical Reports (Appendices)

- Executive Summary

#5

  - Page ES-3 (COVID-19 Impacts): Considering the potential benefits of telework/telecommute on traffic congestion relief and addressing climate change mitigation goals, MDOT, MDE, MPOs, and elected officials in Maryland may further promote or expand "Commuter Choice Maryland," including telework/telecommute strategies. In addition, the private sector may also permanently expand the use of telework/telecommute following COVID-19 pandemic experiences. It is likely that telework/telecommute could be here to stay and even expanded as the result of COVID-19. Planning suggests the project team consider conducting a sensitivity analysis of the likely effects of expanded telework/telecommute on future traffic projections and transit/HOT/HOV uses to assess how they may affect the project.

#6

  - Page ES-11 (Transit Components): Planning suggests the Transit Service Coordination Report be included as a supporting DEIS technical report. The DEIS may also include a brief status report on the MDOT I-270 Monorail Feasibility Study (if any) and how the monorail study may or may not affect the I-495 & I-270 MLS.

2

Response to DEIS Comment #2

The Lead agencies appreciate MDP's recognition that HOT lanes would help mitigate the financial disadvantage of EJ populations and that transit, pedestrian, bicycle elements and HOT lane alternatives would help reduce adverse land use and growth impacts from increased highway capacity.

Response to DEIS Comment #3

The Study's traffic analysis shows that there could be some induced demand as a result of this project, but the impact will be small (less than 1 percent increase in vehicle miles traveled (VMT) in the region) and those effects are fully accounted for in the regional traffic models used in the Study developed by MWCOG. Even with these effects, the proposed managed lanes would reduce regional congestion delays and significantly improve travel times along both the I-495 and I-270 in Phase 1 South limits and on local roads throughout the study area.

This relatively modest increase of induced demand can also be explained by several factors related to existing conditions in the study area. First, there is very little undeveloped land surrounding the Phase 1 South study area and, therefore, the traffic models account for the negligible anticipated land use changes. As the traffic analysis details, new housing areas and/or places of employment (usual causes of additional trip generation) are not expected to be developed as a result of the project. Because the area in and around Phase 1 South is largely built out or otherwise protected from additional development, the likelihood of additional new trips is minimized.

Second, as the existing conditions and the anticipated No Build scenarios described in the DEIS demonstrate, the highway facilities in question are already extremely congested. The anticipated future growth of traffic demand is already very high, and largely dependent on already anticipated population and economic growth in the region. Congestion on I-495 also reflects not only local trips, but a substantial regional demand for travel on that facility as a major connection for I-95. As a result, most of the travel demand for these roads already exists.

Finally, important elements of the proposed action itself will have the tendency to reduce induced demand. Specifically, there is a strong potential for the managed lanes to encourage transit usage for express buses, as well as HOV and car and/or vanpool rides. This potential should assist in managing induced demand for single-occupancy vehicles. As the DEIS, SDEIS and FEIS describe, the transit and HOV elements of the proposed action can serve more person-trips without necessarily increasing the number of vehicles (induced demand) in the system as a whole. Refer to Chapter 9, Section 3.4.B for a response to traffic modeling for additional information on induced demand.

Concerning potential indirect effects, the DEIS demonstrated that potential changes in travel patterns by way of increased capacity along existing infrastructure, especially in more rural, less-developed portions of the ICE Analysis Area and other locations where undeveloped land exists would be most likely to experience pressure for new development from improved access along the I-270 and I-495 corridors. Therefore, the Prince George's County portion of the study area was the most likely to experience indirect or project-related growth impacts because the location of the managed lanes and proposed interchanges was aimed as supporting growing areas or those that the County has planned for additional growth. However, because the Preferred Alternative would not result in any roadway improvements in Prince George's County, these potential indirect impacts would most likely not occur as a result of the proposed action.

Other portions of the study area that would not include roadway improvements as a result of the Preferred Alternative had already been assessed as unlikely to experience indirect effects due to the highly built-out and/or preserved land uses. Due to increased capacity and access to managed lanes associated with the Preferred Alternative, more rural, less developed portions of the ICE analysis area could experience more pressure for new development. However, within the Phase 1 South limits, much of the land use has already been developed and

This page is intentionally left blank.	there is a paucity of unoccupied land available for new development. Much of the unoccupied land is also designated by planning documents for preservation, further reinforcing the small likelihood of development pressure as a result of new or improved access to I-495 and I-270. Refer to Section 3.4.N for a response on Indirect and Cumulative Effects. **Response to DEIS Comment #4** Access points in northern Montgomery County and Southern Frederick County are outside of the Managed Lanes Study Limits. **Response to DEIS Comment #5** MDOT SHA notes the benefits of increased teleworking on our current travel and concurs that promoting teleworking strategies is one component in helping to address regional congestion. A sensitivity analysis of the impacts of the pandemic was conducted as part of the FEIS and the results are documented in Chapter 4, Section 4.5.3 and Appendix C. The results indicate that while sustained increases in telework would help, the capacity improvements proposed under the Preferred Alternative would still be needed and effective even if future demand changes from the pre-pandemic forecasts based on potential long-term impacts to teleworking. Refer to Chapter 9, Section 3.1 for a response on Purpose and Need, effects of the Pandemic, and impacts of teleworking/remote working. **Response to DEIS Comment #6** The Transit Service Coordination Report was referenced in the Executive Summary and Chapter 2 of the SDEIS. The Transit Service Coordination Report is available on the MDOT SHA P3 Program website at https://oplanesmd.com/transit-benefits/ Refer to Chapter 9, Section 3.2.B for a response to Screening of Preliminary Alternatives and monorail.

- Page ES-11: The project team may want to summarize the pedestrian and bicycle elements of the project in the Executive Summary.

#7

Response to DEIS Comment #7
The Pedestrian and Bicycle Considerations were provided in Chapter 2, Section 2.7.7 in the Draft Environmental Impact Statement (DEIS). The Pedestrian and Bicycle Facility Considerations were expanded based on additional work and provided in Chapter 2, Section 2.3.8 in the Supplemental DEIS (SDEIS). They are further expanded in the FEIS, Chapter 3, Section 3.1.5.

- Page ES-12 (American Legion Bridge (ALB)): The DEIS should briefly explain how a new ALB would accommodate extra managed lanes without widening the existing bridge.

#8

Response to DEIS Comment #8
As described in the DEIS (Chapter 2, Section 2.7.4), and SDEIS (Chapter 2, Section 2.3.4 C), the American Legion Bridge would be widened to accommodate the additional managed lanes under all of the Build Alternatives and the Preferred Alternatives. Refer to FEIS Chapter 3, Section 3.1.8 for more discussion on the American Legion Bridge.

- Page ES-12 (Toll Rate): Planning understands that proposed toll rates are at this time for planning purpose only and are meant to help evaluate the financial viability of the ARDS Built Alternatives. They are not the actual rates for the managed lanes, should the project be built, since toll rates would be set by the Maryland Transportation Authority (MDTA) Board in the future. However, the proposed toll rates in operating year 2025 for the study are significantly higher than the current rates for the ICC (MD 200) and other toll lanes in Maryland. For instance, future users of the managed lanes between I-370 and the American Legion Bridge, about 18 miles, would pay about $12 to $13 for an average weekday toll, while currently for a similar distance on MD 200, drivers pay about $4 during peak hours and $3 off-peak. Therefore, Planning suggests the DEIS include a brief explanation of if/how the potential toll rates for the study corridor would be viable and compatible with similar toll lanes in Maryland and Virginia.

#9

Response to DEIS Comment #9
Chapter 3, Section 3.1.9 in the FEIS includes a discussion about the toll rates. Additionally, refer to for Chapter 9, Section 3.6.B for a response to toll rate ranges and toll rate setting process. The toll rate ranges were approved by MDTA in November 2021.

- Page ES-20 (Operations and Maintenance): It is unclear whether the private sector would operate and maintain the managed lanes only, or the entire interstate segments; including the GP lanes so that the state could save $1.7 billion in maintenance costs over the next decade. The DEIS or the FEIS should clarify the scope and responsibility of the private sector on operations and maintenance.

#10

Response to DEIS Comment #10
The Developer will be responsible for operations and maintenance on the managed lanes during their concession term. Upon completion of initial construction, continued operation and maintenance of the existing general purpose lanes will be the responsibility of MDOT SHA. However, all infrastructure (e.g., bridges, pavement, noise walls, retaining walls, drainage, etc.) at the end of construction will have been replaced or rehabilitated to a "state of good repair" before being operated and maintained by MDOT SHA.

- Chapter 1-Purpose and Need
  - Page 1-1: The footnote is confusing; and it implies that only NCPC concurred on the Purpose and Need. Please clarify in the footnote that all Cooperating Agencies concurred on the Purpose and Need, except the M-NCPPC.

#11

Response to DEIS Comment #11
Thank you for your comment on the footnote. The text on page 1-1 in Chapter 1 of the DEIS states that the purpose and need was concurred upon by the Cooperating Agencies and the footnote states that M-NCPPC was the only agency that did not concur.

- Chapter 2-Alternative Development
  - Page 2-45 (2.7.6 Transit-Related Elements):
    The DEIS (page 2-46) does not include information on MDOT's commitment to "dedicate 10% of the state's portion of toll revenue sharing to fund regional transit projects" as part of the transit enhancements. Is the commitment replaced by the amendment on January 8, 2020, by the Maryland BPW that calls for including a transit service improvements MOU with localities in the P3 Agreements? Please clarify this.

#12

Response to DEIS Comment #12
Yes, the amendment made by the Maryland Board of Public Works on January 8, 2020, stands as the approved amendment. The transit commitments have been refined since the DEIS. Refer to FEIS Chapter 3, Section 3.1.4 for additional details.

#12 cont.

The DEIS should clarify whether the transit service improvements MOU with local jurisdictions will be signed prior to the release of the draft FEIS, so that the MOU information can be included in the draft FEIS for public review.

#13

- Refer to The Transit Service Coordination Report: Planning is pleased to see that MDOT/SHA worked with a group of local, regional, and state transit and transportation agencies and identified potential transit services that could utilize the managed lanes. The transit study also includes recommendations on park and ride lot improvements along managed lanes corridors to support transit services. This transit report should be included as a technical report (an appendix) in the DEIS.

#14

- As an integral part of the HOT/HOV lanes proposed for Build Alternatives, park and ride should be discussed in Chapter 2. The Transit Service Coordination Report (discussed above) includes the study of ridesharing programs and park & ride facilities for transit services (page 59-82). However, the need for park and ride to support carpool/vanpool has not been studied. The project team should assess the need for additional park & ride facilities (if any) for carpoolers/vanpoolers.

#15

- Page 2-9 and 2-10 (2.5 Screened Alternatives): We understand that the MDTA Board would eventually determine toll rates. At this time, the project team may want to consider allowing reduced or free tolls to incentivize the use of zero greenhouse gas emissions vehicles (even though they may be SOVs) to support state's climate change mitigation goals; especially for the near term where zero emission vehicles may need to be promoted by supportive public policies.

#16

- Page 2-47 (2.7.7-Pedestrian and Bicycle Considerations): Planning is pleased to see that the project would rebuild impacted pedestrian and bicycle facilities and include additional new or upgraded facilities along the project corridor. When building new and upgraded facilities, connections to origins and destinations should be considered. Planning staff also suggests that improvements in EJ or compact/high-density communities be given priority, as these communities would likely generate more pedestrian activity.

#17

- Page 2-47 (2.7.8-Construction Phasing): It would be helpful to provide a diagram illustrating the sequence and relationships among the phases of construction elements, such as the Phase 1 P3 Agreement, the FEIS/ROD for the I-495 and I-270 MLS, the FEIS/ROD for the I-270 from I-370 to I-70, etc.

• Chapter 3-Transportation and Traffic

#18

- Page 3-5 (Existing Conditions) and Page 3-7 (Future Conditions and Alternative Analysis):

Response to DEIS Comment #13
Please refer to the response to Comment #5.

Response to DEIS Comment #14
As part of the Preferred Alternative, additional transit commitments have been made to support multi-modal connectivity and mobility including increasing the number of bus bays at the WMATA Shady Grove Metrorail Station and increase parking at the Westfield Montgomery Mall Transit Center. See SDEIS pages ES-9 and 2-22 and FEIS Chapter 3, Section 3.1.4

Response to DEIS Comment #15
The toll rate ranges were approved by MDTA in November 2021 and did not include a discount for zero greenhouse gas emission vehicles. The toll discounts were included for HOV 3+, carpools, vanpools, buses, and motorcycles. Refer to Chapter 9, Section 6.B for a detailed response to the toll rate ranges and toll rate setting process. Additionally, under the Preferred Alternative, vehicles with three or more (3+) users travel toll-free, which reduces reliance on single occupancy vehicles (SOV) while encouraging high occupancy vehicles, transit buses, carpool, and vanpool vehicles.

Response to DEIS Comment #16
The Bicycle and Pedestrian improvements were and will continue to be closely coordinated with Montgomery County Department of Transportation (DOT) and Maryland-National Capital Park and Planning Commission (M-NCPPC) to ensure they consider connectivity and the current Master Plan. As a result of additional engagement within environmental justice communities, additional bicycle and pedestrian improvements have been made to support multi-mobility within the study area and are noted in the FEIS in Chapter 3, Section 3.2.2.

Response to DEIS Comment #17
As described in the Supplemental DEIS, the Preferred Alternative was identified after coordination with resource agencies, the public, and stakeholders to respond directly to feedback received on the DEIS to avoid displacements and impacts to significant environmental resources, and to align the NEPA approval with the planned project phased delivery and permitting approach which focused on Phase 1 South only. Any future proposal for improvements to the remaining parts of I-495 within the study limits, outside of Phase 1 South, would advance separately and would be subject to additional environmental studies, analysis, and collaboration with the public, stakeholders, and agencies.

Response to DEIS Comment #18
The analyses in the DEIS evaluated the overall operations of each Build Alternative to compare alternatives based on preliminary design and readily available information. Additional traffic and engineering analyses were conducted on the Preferred Alternative, and the results, including the requested information on existing and future interchange traffic conditions, are documented in the FEIS, Appendix B – MDOT SHA's Application for Interstate Access Point Approval Report.

#18 cont.

The DEIS and Appendix C do not include information on existing and future interchange traffic conditions; particularly those interchanges that would accommodate the managed lanes access. It will be helpful to have that information, if available.

#19

- Page 3-13 (3.3.6 Local Network): The traffic impact on local roadways is a major concern for communities in the study corridors. Visualizing local roadway impacts would help identify potential traffic and pedestrian/bicycle facility improvements on arterial roads for state and local transportation agencies. Planning suggests also including Appendix C's Figure 5-73, the map on "Projected 2040 Delay Change, No Build vs. Two Managed Lanes" in Chapter 3.

- Chapter 4-Environmental Resources, Consequences & Mitigation

#20

- Page 4-4 (4.1-Land Use and Zoning) and page 4-147 (4.22-Indirect & Cumulative Effects): Planning is updating the 2010 statewide land use/land cover and generalized zoning data and maps. We expect to complete that update in spring 2021. If the completion is timely, the project team may want to consider using the updated land use and zoning data and maps to enhance the land use impact analyses, including the indirect and cumulative effects (ICE) assessment for the FEIS document.

#21

- Refer to the last paragraph on page 4-4: The conclusion of "little potential for additional development" in the CEA Analysis Area may not be accurate. Although the CEA Analysis Area may not have much vacant land for development, the area has potential for significant redevelopment, especially in transit station areas and designated activity centers. The content should be revised accordingly.

#22

- Refer to the PFA Law discussion on page 4-6:
  Please revise the sentence, "Maryland's Smart Growth Priority Funding Areas Act of 1997 (Smart Growth Act) directs Maryland state infrastructure funds to areas within or connecting with county-designated and state-certified Priority Funding Areas (PFAs)," to "The Priority Funding Areas Law, the center piece of the Maryland Smart Growth and Neighborhood Conservation Act of 1997, directs state funding for growth-related infrastructure to Priority Funding Areas (PFAs)." After this revised sentence, Planning suggests adding the following language: "Currently, it is not clear if the I-495 & I-270 MLS project would use state funding; hence the project's compliance with the PFA law has yet to be determined."

  Please note that the State or the Maryland Department of Planning does not certify or designated PFAs. PFAs consist of legislatively designated areas, such as areas inside the Baltimore and Capital Beltways and locally designated PFAs, in accordance with the

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Response to DEIS Comment #19
Thank you for your suggestion on including information from Appendix C into Chapter 3 of the DEIS. Refer to Chapter 9, Section 3.4.B for a response to traffic modeling and analysis.

Response to DEIS Comment #20
According to the MDP website (checked in April 2022) the 2020 Land Use Plan is still under development.

Response to DEIS Comment #21
Property acquisitions under the proposed action would largely occur to areas immediately adjacent to the existing I-495 and I-270 roadway alignments, acquiring strips of land from undeveloped areas. The extent, pace, and location of development beyond the Preferred Alternative LOD would be influenced and controlled by the respective county land development policies and plans. The proposed improvements would accommodate future planned growth beyond the Preferred Alternative LOD; however, future growth is not dependent on these improvements. I-495 and I-270 would remain access-controlled under the Preferred Alternative LOD. The Preferred Alternative improvements would be compatible with planned and approved future development in Montgomery and Fairfax Counties, by providing additional roadway capacity to accommodate existing traffic and long-term traffic growth as well as travel choices for enhanced trip reliability and the improved movement of goods and services, consistent with the Study's Purpose and Need. Further, the Preferred Alternative is generally consistent with Comprehensive, Master or Sector Plans that call for HOV or toll facilities on I-495. Improvements would continue to make the area desirable for business and residential development. However, within the Phase 1 South limits, much of the land use has already been developed and there is a paucity of unoccupied land available for new development. Much of the unoccupied land is also designated by planning documents for preservation, further reinforcing the small likelihood of development pressure as a result of new or improved access to I-495 and I-270.

Also, the Preferred Alternative is compatible with the County Master Plan to focus growth at transit hubs and already dense urbanized areas. Transit bus systems that utilize I-495 and I-270 would be permitted to use managed lanes implemented under the Preferred Alternative toll-free; as a result of use, transit services would benefit from reduced travel times and enhanced reliability. MDOT notes redevelopment at transit station areas could encourage transit use. Refer to FEIS, Chapter 3, Section 3.1.4 for more information on transit elements of the Preferred Alternative.

Response to DEIS Comment #22
This text has been updated for the FEIS. MDOT SHA has coordinated with MDP and completed the Smart Growth Checklists. The Priority Funding Areas Law, the center piece of the Maryland Smart Growth and Neighborhood Conservation act of 1997, directs state funding for growth related infrastructure to Priority Funding Areas (PFAs). Growth-related projects include most State programs that encourage growth and development such as highways, sewer and water construction, economic development assistance, and State leases or construction of new office facilities. The Smart Growth Act legislatively designated certain areas as PFAs and established criteria for locally designated PFAs. Through the Smart Growth Act, Maryland is committed to limiting sprawl development by directing funds where they can help to revitalize older neighborhoods, and redirect growth to already developed areas, saving the state's farmland, open spaces, and natural resources (MDP, 2019). To evaluate the Study's growth implications, consistency with MDP's Planning Policy, and compliance with the Priority Funding Area Law, Smart Growth Coordination Checklists were prepared by MDOT SHA and are included in Appendix C of the Final Community Effects Assessment and Environmental Justice Technical Report (FEIS, Appendix F). Per an email on January 12, 2022, MDP concurs with the Priority Funding Act Law compliance for the I-495 & I-270 Managed lanes Study Preferred Alternative. Also, the authors of this Study are environmental and transportation professionals and do not include commercial entities with conflicts of interest.

criteria defined by the PFA Law. Planning's website includes more information on PFAs and the PFA Law.

Please revise the sentence, "As the proposed study improvements would expand existing major regional corridors……," to "As the proposed project improvements would expand existing major regional corridors in PFAs, the project improvements appear to comply with the Maryland Smart Growth and Neighborhood Conservation Act of 1997."

More information on the Maryland Smart Growth and Neighborhood Conservation Act of 1997 can be found on this link: http://mgaleg.maryland.gov/mgawebsite/search/legislation?target=/1997rs/billfile/sb0389.htm

#22 cont.

#23

- Appendix E (page 27): Please revise related sentences on page 27 of Appendix E based on the above comments regarding the PFA law, or the Maryland Smart Growth and Neighborhood Conservation Act.

#24

- Page 4-7: Please add "Visualize2045, a Long-Range Transportation Plan for the National Capital Region (2018)" to the local and regional plan list.

#25

- Page 4-62: Please clarify if the GHS emissions analysis includes the 2020 SAFE Vehicles Rule. If not, a sensitivity analysis may be conducted to estimate and document the GHG emissions effects of this new rule.

#26

- Page 4-136 (4-37) and page 4-142 (Table 4-38): It is unclear why Alternative 9M would have greater ROW property impacts in the EJ Analysis Area even though its LOD footprint is less, compared to other Build Alternatives. Please doublecheck the acres impacted by Alternative 9M.

#27

- Page 4-137: The DEIS should estimate and document the properties directly affected in the EJ Analysis Area by each Build Alternative.

#28

- Page 4-151 and 4-152: Planning suggests overlaying the PFA boundaries on Figure 4-17 and Figure 4-18 to help analyze the indirect and cumulative land use effects. PFAs are designated growth areas where local jurisdictions and the State would like to see growth and redevelopment occur, while growth outside PFAs is discouraged by localities and the State.

#29

- Page 4-153 (Table 4-40):
  The summary of the induced growth analysis, the last paragraph on page 4-153, is broad and general. Planning developed the statewide "Land Use Stability" GIS analysis, which can be used to enhance the induced growth analysis for the I-495 and I-270 MLS. The

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Response to DEIS Comment #23
The CEA/EJ Analysis and Technical Report have been updated in Chapter 5, Sections 5.3 and 5.21 of the FEIS and Appendix F to reflect the latest coordination with MDP on the PFA.

Response to DEIS Comment #24
This reference has been added in the FEIS.

Response to DEIS Comment #25
The GHG emissions analysis for the Preferred Alternative was completed using EPA's approved MOVES3 model (the latest version of MOVES). This model incorporates the impacts of the SAFE Vehicles Rule. A summary of the results is provided in the FEIS, Chapter 5, Section 5.8 for the Preferred Alternative.

Response to DEIS Comment #26
The 313.2 acres and the 29 relocations in this table were incorrect. The impacts from Alternative 9M would be less than they are for Alternatives 8 and 9 as shown in the table, because Alternative 9M only includes one managed lane between I-270 and I-95. Regardless, as described in the Supplemental DEIS, the Preferred Alternative is focused on Alternative 9 - Phase 1 South. This comment refers to property displacements that occurred along a section of I-495 that is located outside the Preferred Alternative limits of build improvements, so that potential impact has now been completely avoided. Additionally, the displacements are for an alternative that was not chosen as the Preferred Alternative, so this information is not provided in the FEIS. Any future proposal for improvements to the remaining parts of I-495 within the study limits, outside of Phase 1 South, would advance separately and would be subject to additional environmental studies, analysis, and collaboration with the public, stakeholders, and agencies.

Response to DEIS Comment #27
The property impacts by EJ Population Block Groups for the Preferred Alternative are included in the Final CEA/EJ Analysis Technical Report and FEIS, Chapter 5, Section 5.21.

Response to DEIS Comment #28
A map of the Maryland Smart Growth Priority Funding Areas in relation of the Preferred Alternative LOD and ICE Boundary as well as a narrative of the Maryland Smart Growth compliance has been added to FEIS Chapter 5, Section 5.22 and to FEIS Appendix Q Indirect and Cumulative Effects Technical Report.

Response to DEIS Comment #29
The FEIS indirect effects conclusion on induced growth includes the following: Roadway improvements, such as those proposed under the Preferred Alternative, can be an attraction to commercial or real estate development. The possibility of induced growth in the ICE Analysis Area would be lessened by the reduced Phase 1 South limits of the Preferred Alternative, the long-term presence of the existing highway, and the mature land uses and developments that have occurred in the ICE Analysis Area. As a result, the likelihood of induced commercial or residential development is reduced substantially by the built-out environment that has been in existence for many years. Moreover, much of the undeveloped land within the ICE Analysis Area is designated by comprehensive plans for preservation. See FEIS, Chapter 5, Section 5.22.

#29 cont.

Land Use Stability analysis considers local land use plans and regulations, such as zoning and water & sewer plans, past and current land development trends, and future residential development capacity. The analysis can be used to assess the likelihoods of development potential and pressures outside of designated growth areas. Planning can provide the project team with the analysis GIS database and maps. For instance, in Montgomery County, the Land Use Stability" analysis shows that in general, undeveloped lands outside of growth areas, particularly in the Agricultural Reserve Areas, are highly stable and may not be vulnerable to large lot, low density development, as compared to other rural and conservation areas in other counties.

#30

- Planning suggests revising the sentence, "Indirect impacts would be minimized by adhering to existing master plans and zoning regulations pertaining to new development." Perhaps, the new sentence could be "local and state plans and practices will be needed to focus the benefits of future growth resulting from this project to designated growth areas, such as transit station areas and regional activity/employment centers, and to counter growth pressure to take place in rural areas with improved access and mobility due to this project."

#31

- Page 4-156 (Table 4-41): The cumulative effects of the future I-270 project, from I-370 to I-70, on induced growth could be a major concern. The DEIS should discuss the cumulatively induced effects from the I-270 project and other related transportation projects.

#32

- Appendix O (page 18): The document should clarify if the area of traffic influence (ATI) is defined under the existing or the 2040 traffic conditions. The study should use the traffic data for the design year of 2040 to establish the ATI.

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Response to DEIS Comment #30
Suggested sentence has been added in the FEIS, Chapter 5, Section 5.22 and in the Final Indirect and Cumulative Effects Technical Report, Appendix Q.

Response to DEIS Comment #31
The I-270 North Study is in planning as a Pre-NEPA Study, however, the study limits are accounted for in the ICE Boundary. The general conclusion is that the proposed action, along with other reasonably foreseeable future transportation projects, would cause noise impacts, with potential cumulative effects on communities in the vicinity of improved and new roadways. Cumulative impacts to water quality could occur from stream loss and the incremental increase of impervious surfaces that may increase runoff from past, present, and future development projects. These would be minimized through the use of BMPs during construction and use of SWM facilities. The incremental effect would be minimized by the required permitting process, which would identify avoidance, minimization, and mitigation as needed to offset wetland losses.

Response to DEIS Comment #32
The Area of Traffic influence has been updated based on 2045 traffic conditions and is reflected in the Final Indirect and Cumulative Effects Technical Report in Appendix Q.

National Capital Planning Commission - DEIS Comments

No.	Page	DEIS Section	Comment	Response
1		General	As a reminder, NCPC has review authority for land that may be impacted in the Managed Lanes project based on the 1930 Capper-Cramton Act, a 1931 Memorandum of Agreement with the Maryland-National Capital Park & Planning Commission (M-NCPPC), and the 1952 National Capital Planning Act. In addition, please note that NCPC has legal approval authority over a 1.8- acre parcel of National Park Service (NPS) Clara Barton Parkway property pursuant to a 1939 Agreement near the Parkway interchange with the I-495/Beltway (see attachment).	MDOT SHA acknowledges NCPC and M-NCPPC's roles in compliance with the Capper-Cramton Act. However, based on NCPC's letter to MDOT SHA on November 10, 2021 and recent research by M-NCPPC, NCPC has acknowledged that it does not have Capper-Cramton jurisdiction over the two potentially impacted Cabin John Stream Valley Park locations in Maryland. Additionally, since the land is already owned by the State of Maryland and the project is a state-sponsored project, NCPC also acknowledged that it does not have jurisdiction over the two Cabin John land parcels under the Planning Act. Regarding NCPC's legal approval authority over NPS Clara Barton Parkway and Chesapeake and Ohio Canal property, NPS has advised NCPC of its intent to "transfer" project-related land to the State of Maryland. In the November 10, 2021 letter to MDOT SHA, NCPC acknowledged these resulting changes would negate NCPC's Capper-Crampton jurisdiction over Clara Barton Parkway land and its Planning Act jurisdiction over the Chesapeake and Ohio Canal National Historic Park lands. In the same letter, NCPC stated it has-no formal review authority over any aspect of the Preferred Alternative, Alternative 9 - Phase 1 South.
2		Maryland 200 / Intercounty Connector Alternative	The Commission reiterated several concerns during its most recent review of the study and the DEIS. Their most significant concern is the Maryland State Highway Administration's (SHA) decision to eliminate the Maryland 200/Intercounty Connector (MD200/ICC) Alternative from further analysis in the EIS.	MDOT SHA evaluated the MD 200 Diversion Alternative to the same level of detail and using the same approach for the anticipated limits of disturbance as all other Screened Alternatives. Traffic analysis was performed using the same key traffic metrics applied to all Screened Alternatives. After the comprehensive evaluation, MDOT SHA determined that the MD 200 Diversion Alternative would not address the Study's Purpose and Need of accommodating long-term traffic growth, enhancing trip reliability, or improving the movement of goods and services. In fact, the MD 200 Diversion Alternative was the worst performing of the various Build Alternatives and provided the least congestion relief benefits. Refer to Chapter 9, Section 3.2.B for a response to Alternatives Not Retained for Detailed Study, including the MD 200 Diversion Alternative.

No.	Page	DEIS Section	Comment	Response
3		Maryland 200 / Intercounty Connector Alternative	They agree with M-NCPPC's comments that SHA's previous screening did not adequately analyze and develop the MD 200/ICC Alternative to assess its true potential since the process was focused on managed lane solutions. For example, SHA assumed additional I-95 managed lanes between the I-495 Beltway and ICC in its modeling of Alternative, resulting in greater environmental impact and construction costs than without the lanes. MNCPPC staff believe that the I-95 lanes are unnecessary from a traffic operations perspective to fulfil the study's Purpose and Need. Also, changes in ICC tolling rates, allowable driving speeds, additional dynamic signing, and other possible operational adjustments may improve the Alternative's performance, yet they were not analyzed by SHA. These points are consistent with previous M-NCPPC comments to SHA. The apparent similarity in performance between the MD 200/ICC Alternative and build Alternative 13C under several modeling measures appears to show some promise with greater future use of the ICC to relieve Beltway demand. In light of these considerations, we do not believe that SHA has sufficiently demonstrated that the MD 200/ICC Alternative would not be an effective build option.	Regarding the statement that MDOT SHA should not have assumed managed lanes along I-95, the scope of the MD 200/ICC evaluation was discussed during a conference call with several agencies that supported the alternative, including NCPC and M-NCPPC, held on July 19, 2019. During that call, it was agreed that the alternative would assume managed lanes along a portion of I-95 to provide a continuous managed lane system to connect with MD 200. This is consistent with the plan that was presented by Montgomery County at the BPW meeting on June 5, 2019, which served as the impetus for this evaluation. Nevertheless, in response to this comment (and other similar comments), the project team completed supplemental analysis to determine how the MD 200 Diversion Alternative would function without the managed lanes along I-95. The results indicated that modifying the MD 200 Diversion Alternative to remove the managed lanes on I-95 would result in increased congestion in the system, more roadway segments operating over capacity, and increased demand on the local roadway network. Refer to Chapter 9, Section 3.2.B for a response to Alternatives Not Retained for Detailed Study, including the MD 200 Diversion Alternative.
4		Maryland 200 / Intercounty Connector Alternative	There is enough uncertainty in future travel demand to question SHA's original travel demand assumptions. Factors such as permanent widescale changes to commuting behavior as a result of the COVID pandemic, the disruption of Purple Line construction (which may result in significant delays), and growth in automated vehicle travel raise doubt with the reliability of SHA's original travel demand assumptions. SHA staff previously reported to the Commission (in November 2019) that the Intercounty Connector was projected to reach capacity in 2037, and this may no longer be the case. Furthermore, if some amount of teleworking is permanently adopted post-COVID (which seems likely in the future), assumptions about future Beltway congestion may be inaccurate. As such, the MD 200/ICC Alternative could be more viable than previously understood, and SHA should reassess the Alternative as a full build option. In addition, we encourage SHA to prepare a supplemental EIS as the later project phases move closer to construction and current travel demand uncertainties are better understood.	Regarding the comment on the growth of automated vehicles, the expected influx of connected and autonomous vehicles (CAVs) will impact future traffic operations on all roads in Maryland, including I-495 and I-270. MDOT SHA participates in a statewide CAV working group (https://mva.maryland.gov/safety/Pages/MarylandCAV.aspx) to stay up to date on the latest research and industry projections. However, at this time, there are too many unknowns regarding how CAVs could affect demand and capacity to include CAVs directly in the traffic forecasts. Capacity will likely increase as vehicle spacing decreases, but the magnitude of the capacity increase is difficult to quantify based on the current research. Also, the benefits of more vehicles per lane may be offset by a potential increase in demand on the transportation network for some types of auto trips, including "mobility as a service" trips (people that can't afford their own car, but could call an autonomous vehicle for a solo trip) and "deadhead" trips (trips where the autonomous vehicle is empty, traveling to a parking lot or to the next pickup point). Therefore, the traffic projections for this Study apply traditional forecasting techniques, while being cognizant of the potential CAV impacts. It is anticipated that this project will be adaptable to accommodate CAVs because the proposed managed lanes will create a controlled environment with physical separation, new pavement, and clear delineations, features that are conducive to CAV use. Refer to Chapter 9, Section 1 for a response on Purpose and Need, effects of the Pandemic, and impacts of teleworking/remote working.

No.	Page	DEIS Section	Comment	Response
5		Maryland 200 / Intercounty Connector Alternative	Full analysis of the MD 200/ICC Alternative would better serve NCPC's review of potential managed lane-related projects by creating a greater range of alternatives for our review in the final EIS. Our request to study the MD 200/ICC Alternative as a build alternative is supported by the Purpose and Need Statement, which commits to working with agency partners to meet all regulatory requirements to ensure protection of significant environmental resources. This commitment is supported by the Memorandum of Understanding for Implementing One Federal Decision Under Executive Order 13807 (MOU), signed by multiple federal agencies including the United States Department of Transportation (parent of the FHWA) on April 9, 2018. The MOU clearly states that to fulfill the needs of an agency's authority, there may be alternatives that require analysis beyond what is only necessary for the lead agency. In addition, we note that any future project submissions to NCPC would be from the Maryland-National Capital Park & Planning Commission (M-NCPPC), which also supports the study of the MD 200/ICC Alternative as a build option.	See response to Comment #2 regarding the MD 200/ICC Alternative. See response to Comment #1 regarding NCPC's statement on their review authority over any aspect of the Preferred Alternative. A full analysis of parkland impacts and mitigation have been documented in the FEIS Appendix G, Final Section 4(f) Evaluation and in FEIS Chapter 6. Refer to Chapter 9, Section 3.2.B for a response to Alternatives Not Retained for Detailed Study, including the MD 200 Diversion Alternative.
6		Alternative 9M	SHA has expanded the range of build alternatives (since November 2019) with Alternative 9M, which would result in a 13% decrease (1.5 acres) in total impacted Capper-Cramton parkland area compared to the other build alternatives. While Alternative 9M broadens the range of study alternatives, the Commission does not consider the Alternative to be an effective substitute for complete Capper-Cramton park avoidance as under the MD 200/ICC Alternative.	As described in the Supplemental DEIS, the Preferred Alternative was identified after coordination with resource agencies, the public, and stakeholders to respond directly to feedback received on the DEIS to avoid displacements and impacts to significant environmental resources, and to align the NEPA approval with the planned project phased delivery and permitting approach which focused on Phase 1 South only. The Preferred Alternative includes two new, high-occupancy toll (HOT) managed lanes on I-495 in each direction from the George Washington Memorial Parkway to east of MD 187 and conversion of the one existing high-occupancy vehicle lane in each direction on I-270 to a HOT managed lane and adding one new HOT managed lane in each direction on I-270 from I-495 to north of I-370 and on the I-270 east and west spurs. The Preferred Alternative includes no action or no improvements at this time on I-495 east of the I-270 spur to MD 5 in Prince George's County. As a result of the reduced limits of the Preferred Alternative, NCPC would not have formal review authority over any aspect of the Alternative 9 - Phase 1 South. See response to Comment #1.
7		Equal Alternative Consideration	The final EIS will include more detailed cost and benefit information for the State-selected Preferred Alternative compared to the draft EIS, which provides more general cost/benefit information for each build alternative. The final EIS should reflect the benefits of preserving Capper-Cramton land to the Region and include a consistent analysis of the mitigation costs associated with each build alternative, as well as the No Build, 9M and MD 200/ICC Alternatives.	See response to comments #1 and #6.

No.	Page	DEIS Section	Comment	Response
8		Draft Environmental Impact Statement Information	The Draft EIS documentation remains too general to enable adequate review and effective input by NCPC regarding project impacts and mitigation. We note that preliminary impact areas (within SHA-identified Limit of Disturbance boundaries) are reflected through an online mapping tool and draft materials, as well as impacted properties and resources; however, specific impact and mitigation information is not available at this time. Discussing specific mitigation for affected parkland and other areas now could lead to more efficient reviews in the future.	The I-495 & I-270 Managed Lanes Study fulfills the requirement to thoroughly evaluate potential impacts and allowed the agency decision-makers and the public to understand the various advantages and disadvantages of a range of reasonable alternatives. As required by the CEQ NEPA regulations, the DEIS and SDEIS summarize the reasonably foreseeable social, cultural, and natural environmental effects of the alternatives retained for detailed study to a comparable level of detail. This analysis directly contributed to MDOT SHA's evaluation of these alternatives and to recommendations for a full suite of potential measures to avoid and minimize impacts, as well as comprehensive mitigation proposals where impacts cannot be avoided. Final impact and mitigation information for affected parkland is presented in the FEIS in Chapter 5, Section 5.4, Parks and Recreational Facilities; Chapter 6, Final Section 4(f) Evaluation; Chapter 7, Mitigation and Commitments; and Appendix G, Final Section 4(f) Evaluation. The mitigation was determined through extensive coordination with NPS and MNCPPC.
9		Draft Environmental Impact Statement Information	In particular, the Commission expressed concern regarding impacts to the Moses Morningstar Cemetery and other cultural resources that may be impacted by the project. While NCPC does not have any review authority over the Moses Morningstar Cemetery site, they noted its importance as a cultural resource that should be avoided to the maximum extent possible. At this point, current DEIS materials do not provide sufficient evidence that this is being considered.	Since the publication of the DEIS, additional and successful avoidance and minimization efforts also involved the Morningstar Tabernacle No. 88 Moses Hall and Cemetery. Through additional investigation and survey including ground penetrating radar (GPR), MDOT SHA identified potential unmarked graves within state-owned right-of-way adjacent to I-495. The Preferred Alternative incorporates design refinements that completely avoid the cemetery property and the known area of state-owned right-of-way that has the potential for unmarked graves. Refer to Chapter 9, Section 3.4.C for a response to analyses of parklands and historic resources, including the Morningstar Tabernacle No. 88 Moses Hall and Cemetery.
10		Study Purpose and Need	The Purpose and Need Statement focuses on managed lanes solutions to accommodate travel demand within the Maryland I-495 and I-270 study area. Rather, a broader, more holistic approach that considers multi-modal improvements and encourages more efficient development would be more consistent with regional federal policies from the NCPC Comprehensive Plan. The Commission encourages SHA to redefine the study to broaden its scope so that other non-managed lane solutions such as the MD 200/ICC Alternative may be considered as full build options.	FHWA and MDOT SHA developed the Study's Purpose and Need through a collaborative process with other Federal, state and local agencies and the public that included examination of multiple transportation and regional planning studies that had been conducted over the past 20+ years. As detailed in the Purpose and Need statement, these studies demonstrated the need in the National Capital Region for a synergistic system of transportation solutions as this region is the most congested in the nation based on annual delay and congestion per auto commuter. A particular mode or facility type, such as managed lanes, can be identified through the transportation planning process and adopted in the National Environmental Policy Act (NEPA) process. The Purpose and Need for the MLS neither precluded nor prevented consideration of non-tolled lane alternatives. As further discussed, the process to establish the Purpose and Need and the manner in which the agencies considered potential alternatives in light of that Purpose and Need were conducted in accordance with well-established federal regulations. See response to Comment #2 regarding the MD 200/ICC Alternative. Refer to Chapter 9, Section 3.1 for a response on Purpose and Need and Section 3.2.B for a response to Alternatives Not Retained for Detailed Study.

No.	Page	DEIS Section	Comment	Response
11		Accessibility Improvements	We note that SHA is working with local jurisdictions and transit providers to use the project to improve future transit service, and that potential mitigation may include pedestrian and bicycle improvements along the study area. The Commission would need more information in the final EIS, ROD, and Section 4(f) Analysis related to specific Capper-Cramton park mitigation, which may include transportation/ accessibility improvements. Detailed mitigation information would need to be included in future project applications to NCPC (from M-NCPPC), and the Commission would issue a Record of Decision at the time of a final project review action(s).	Refer to response to comments #1 and #6 regarding Capper-Cramton Act park impacts. At the time the SDEIS was published, coordination between MDOT SHA and M-NCPPC related to mitigation for park impacts was still ongoing and, therefore, the specificity sought by M-NCPPC was not yet available to be included in the SDEIS as the efforts to continue to avoid and minimize through design refinements was ongoing. Coordination continued during the development of the FEIS to further minimize park impacts and identify the specific measures to be provided to mitigate the remaining unavoidable park impacts, including the identification of replacement park property. The final, detailed mitigation plan is presented in FEIS Chapter 7, Section 7.2. Refer to Chapter 9, Sections 3.3.D for a response to Analysis of Alternatives Retained for Detailed Study.
12		Maryland-National Capital Park & Planning Commission Coordination	M-NCPPC staff expressed their expectation that potential project submissions to NCPC would need to include comprehensive information on avoidance techniques, impact minimization, restoration, mitigation, and parkland replacement as reflected in final study documents and P3 Agreement. NCPC staff supports M-NCPPC expectations and comments on the draft EIS as presented in a public hearing on October 21, 2020, and we look forward to our continued coordination with M-NCPPC during development of the final EIS, Section 4(f) Analysis, and Record of Decision documents. NCPC continues to note that it will not consider issuing a Record of Decision until there is an actual project submission from M-NCPPC.	Refer to response to comment #1 regarding NCPC's Capper-Cramton Act authority. Refer to response to comment #8 regarding analysis of parkland impacts and mitigation for unavoidable impacts.

NATIONAL CAPITAL PLANNING COMMISSION

From: Weil, Michael <michael.weil@ncpc.gov>
Sent: Monday, October 26, 2020 10:20 PM
To: Caryn Brookman (Consultant) <CBrookman.consultant@mdot.maryland.gov>
Subject: NCPC Managed Lanes Study DEIS Comment Letter

Hi Caryn,

I hope you are well and staying safe. Attached please find our signed Managed Lanes Study DEIS comment letter.

Thanks.

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IN REPLY REFER TO:

NCPC File No. 7984

October 22, 2020

Ms. Lisa B. Choplin, DBIA Director
I-495 & I-270 P3 Office
Maryland Department of Transportation, State Highway Administration
707 North Calvert Street
P-601
Baltimore, Maryland 21202

Re: I-495/270 Managed Lanes Study Draft Environmental Impact Statement Comments

Dear Ms. Choplin:

Thank you for the opportunity to review the draft Environmental Impact Statement (DEIS) for the I-495/270 Managed Lanes Study. Since its release this past July, NCPC staff has reviewed the DEIS materials, culminating with an information presentation to the Commission by staff on October 1, 2020. While the Commission does not take a formal action on information presentations, several commissioners commented on different aspects of the study as reflected in the content of this letter. The presentation video is accessible for review on the NCPC website at www.ncpc.gov.

As a reminder, NCPC has review authority for land that may be impacted in the Managed Lanes project based on the 1930 Capper-Cramton Act, a 1931 Memorandum of Agreement with the Maryland-National Capital Park & Planning Commission (M-NCPPC), and the 1952 National Capital Planning Act. In addition, please note that NCPC has legal approval authority over a 1.8-acre parcel of National Park Service (NPS) Clara Barton Parkway property pursuant to a 1939 Agreement near the Parkway interchange with the I-495/Beltway (see attachment).

Maryland 200 / Intercounty Connector Alternative

The Commission reiterated several concerns during its most recent review of the study and the DEIS. Their most significant concern is the Maryland State Highway Administration's (SHA) decision to eliminate the Maryland 200/Intercounty Connector (MD200/ICC) Alternative from further analysis in the EIS. The Commission stated there are several reasons it should continue to be evaluated:

1) They agree with M-NCPPC's comments that SHA's previous screening did not adequately analyze and develop the MD 200/ICC Alternative to assess its true potential since the process was focused on managed lane solutions. For example, SHA assumed additional I-

95 managed lanes between the I-495 Beltway and ICC in its modeling of Alternative, resulting in greater environmental impact and construction costs than without the lanes. M-NCPPC staff believe that the I-95 lanes are unnecessary from a traffic operations perspective to fulfil the study's Purpose and Need. Also, changes in ICC tolling rates, allowable driving speeds, additional dynamic signing, and other possible operational adjustments may improve the Alternative's performance, yet they were not analyzed by SHA. These points are consistent with previous M-NCPPC comments to SHA. The apparent similarity in performance between the MD 200/ICC Alternative and build Alternative 13C under several modeling measures appears to show some promise with greater future use of the ICC to relieve Beltway demand. In light of these considerations, we do not believe that SHA has sufficiently demonstrated that the MD 200/ICC Alternative would not be an effective build option.

2) There is enough uncertainty in future travel demand to question SHA's original travel demand assumptions. Factors such as permanent widescale changes to commuting behavior as a result of the COVID pandemic, the disruption of Purple Line construction (which may result in significant delays), and growth in automated vehicle travel raise doubt with the reliability of SHA's original travel demand assumptions. SHA staff previously reported to the Commission (in November 2019) that the Intercounty Connector was projected to reach capacity in 2037, and this may no longer be the case. Furthermore, if some amount of teleworking is permanently adopted post-COVID (which seems likely in the future), assumptions about future Beltway congestion may be inaccurate. As such, the MD 200/ICC Alternative could be more viable than previously understood, and SHA should reassess the Alternative as a full build option. In addition, we encourage SHA to prepare a supplemental EIS as the later project phases move closer to construction and current travel demand uncertainties are better understood.

3) Full analysis of the MD 200/ICC Alternative would better serve NCPC's review of potential managed lane-related projects by creating a greater range of alternatives for our review in the final EIS. Our request to study the MD 200/ICC Alternative as a build alternative is supported by the Purpose and Need Statement, which commits to working with agency partners to meet all regulatory requirements to ensure protection of significant environmental resources. This commitment is supported by the Memorandum of Understanding for Implementing One Federal Decision Under Executive Order 13807 (MOU), signed by multiple federal agencies including the United States Department of Transportation (parent of the FHWA) on April 9, 2018. The MOU clearly states that to fulfill the needs of an agency's authority, there may be alternatives that require analysis beyond what is only necessary for the lead agency. In addition, we note that any future project submissions to NCPC would be from the Maryland-National Capital Park & Planning Commission (M-NCPPC), which also supports the study of the MD 200/ICC Alternative as a build option.

The Commission had the following additional comments regarding other aspects of the DEIS:

- **Alternative 9M:** SHA has expanded the range of build alternatives (since November 2019) with Alternative 9M, which would result in a 13% decrease (1.5 acres) in total impacted Capper-Cramton parkland area compared to the other build alternatives. While Alternative 9M broadens the range of study alternatives, the Commission does not consider the Alternative to be an effective substitute for complete Capper-Cramton park avoidance as under the MD 200/ICC Alternative.

- **Equal Alternative Consideration:** The final EIS will include more detailed cost and benefit information for the State-selected Preferred Alternative compared to the draft EIS, which provides more general cost/benefit information for each build alternative. The final EIS should reflect the benefits of preserving Capper-Cramton land to the Region and include a consistent analysis of the mitigation costs associated with each build alternative, as well as the No Build, 9M and MD 200/ICC Alternatives.

- **Draft Environmental Impact Statement Information:** The Draft EIS documentation remains too general to enable adequate review and effective input by NCPC regarding project impacts and mitigation. We note that preliminary impact areas (within SHA-identified Limit of Disturbance boundaries) are reflected through an online mapping tool and draft materials, as well as impacted properties and resources; however, specific impact and mitigation information is not available at this time. Discussing specific mitigation for affected parkland and other areas now could lead to more efficient reviews in the future. In particular, the Commission expressed concern regarding impacts to the Moses Morningstar Cemetery and other cultural resources that may be impacted by the project. While NCPC does not have any review authority over the Moses Morningstar Cemetery site, they noted its importance as a cultural resource that should be avoided to the maximum extent possible. At this point, current DEIS materials do not provide sufficient evidence that this is being considered.

- **Study Purpose and Need:** The Purpose and Need Statement focuses on managed lanes solutions to accommodate travel demand within the Maryland I-495 and I-270 study area. Rather, a broader, more holistic approach that considers multi-modal improvements and encourages more efficient development would be more consistent with regional federal policies from the NCPC Comprehensive Plan. The Commission encourages SHA to redefine the study to broaden its scope so that other non-managed lane solutions such as the MD 200/ICC Alternative may be considered as full build options.

- **Accessibility Improvements:** We note that SHA is working with local jurisdictions and transit providers to use the project to improve future transit service, and that potential mitigation may include pedestrian and bicycle improvements along the study area. The Commission would need more information in the final EIS, ROD, and Section 4(f) Analysis

related to specific Capper-Cramton park mitigation, which may include transportation/accessibility improvements. Detailed mitigation information would need to be included in future project applications to NCPC (from M-NCPPC), and the Commission would issue a Record of Decision at the time of a final project review action(s).

- **Maryland-National Capital Park & Planning Commission Coordination:** M-NCPPC staff expressed their expectation that potential project submissions to NCPC would need to include comprehensive information on avoidance techniques, impact minimization, restoration, mitigation, and parkland replacement as reflected in final study documents and P3 Agreement. NCPC staff supports M-NCPPC expectations and comments on the draft EIS as presented in a public hearing on October 21, 2020, and we look forward to our continued coordination with M-NCPPC during development of the final EIS, Section 4(f) Analysis, and Record of Decision documents. NCPC continues to note that it will not consider issuing a Record of Decision until there is an actual project submission from M-NCPPC.

We look forward to continuing our participation in this process with SHA through the interagency task force, and consulting on Capper Cramton park impacts and mitigation in conjunction with M-NCPPC. Please continue coordinating with Michael Weil at 240-575-0212 and/or michael.weil@ncpc.gov to schedule future staff meetings and/or information presentations to the Commission.

Sincerely,

Marcel Acosta
Executive Director
National Capital Planning Commission

cc: Ms. Caryn J.G. Brookman, Maryland State Highway Administration
Ms. Tammy Stidham, National Park Service
Ms. Carol Rubin, Montgomery County Planning Department
Ms. Laura Connelly, Prince George's County Planning Department
Ms. Jeanette Mar, Federal Highway Administration – Maryland Division

- MCP#990

AGREEMENT BETWEEN
THE NATIONAL CAPITAL PARK AND PLANNING COMMISSION
AND
THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION
PERTAINING TO
ACQUISITION OF LAND IN THE GEORGE WASHINGTON MEMORIAL PARKWAY

THIS AGREEMENT, made in triplicate, (each executed copy to be regarded as an original) and entered into this 15th day of September 1939, by and between the National Capital Park and Planning Commission, created by Act of Congress of April 30, 1926, (44 Stat. 374), hereinafter called the "National Commission", of the first part, and the Maryland-National Capital Park and Planning Commission, created by act of the General Assembly of the State of Maryland, known as Chapter 448 of the Laws of Maryland of 1927, hereinafter called the "Maryland Commission", of the second part, witnesseth:

(1) WHEREAS, by the provisions of paragraph or sub-section (a) Section 1 of the Act of Congress of the United States, known as Public Act No. 284, of the 71st Congress, approved May 29, 1930, (46 Stat. 482) entitled "An Act for the acquisition, establishment, and development of the George Washington Memorial Parkway along the Potomac from Mount Vernon and Fort Washington to the Great Falls, and to provide for the acquisition of lands in the District of Columbia and the States of Maryland and Virginia requisite to the comprehensive park, parkway and playground system of the National Capital", commonly called and hereinafter referred to as the "Capper-Cramton Act", the National Commission is authorized to acquire certain properties along the Potomac from Fort Washington to a point above the Great Falls in the State of Maryland, under such terms and conditions as set forth in sub-section (a) of Section 1 of said Act as follows:

"For the George Washington Memorial Parkway, to include the shores of the Potomac, and adjacent lands, from Mount Vernon to a point above the Great Falls on the Virginia side, except within the city of Alexandria, and from Fort Washington to a similar point above the Great Falls on the Maryland side except within the District of Columbia, and including the protection and preservation of the natural scenery of the Gorge and the Great Falls of the Potomac, the preservation of the historic Patowmack Canal, and the acquisition of that portion of the Chesapeake and Ohio Canal below the Point of Rocks, $7,500,000; Provided that the acquisition of any land in the Potomac River Valley for park purposes shall not debar or limit, or abridge its use for such works as Congress may in the future authorize for the improvement and the extension of navigation, including the connecting of the upper Potomac River with the Ohio River, or for flood control or irrigation or drainage, or for the development of hydroelectric power. The title to the lands acquired hereunder shall vest in the United States, and said lands, including the Mount Vernon Memorial Highway authorized by the Act approved May 23, 1928, upon its completion, shall be maintained and administered by the Director of Public Buildings and Public Parks of the National Capital, who shall exercise all the authority, power, and duties with respect to lands acquired under this section as are conferred upon him within the District of Columbia by the Act approved February 26, 1925; and said Director is authorized to incur such expenses as may be necessary for the proper administration and maintenance of said lands within the limits of the appropriations from time to time granted therefor from the Treasury of the United States, which appropriations are hereby authorized. The National Capital Park and Planning Commission is authorized to occupy such lands belonging to the United States as may be necessary for the development and protection of said parkway and to accept the donation to the United States of any other lands by it deemed desirable for inclusion in said parkway. As to any lands in Maryland or Virginia along or adjacent to the shores of the Potomac within the proposed limits of the parkway that would involve great expense for their acquisition and are held by said commission not to be essential to the proper carrying out of the project, the acquisition of said lands shall not be required, upon a finding of the commission to that effect. Said parkway shall include a highway from Fort Washington to the Great Falls on the Maryland side of the Potomac and a free bridge across the Potomac at or near Great Falls and necessary approaches to said bridge; Provided, That no money shall be expended by the United States for lands for any unit of this project until the National Capital Park and Planning Commission shall have received definite commitments from the State of Maryland or Virginia, or political subdivision thereof or from other responsible sources for one-half the cost of acquiring the lands in its judgment necessary for such unit of said project deemed by said commission sufficiently complete, other than lands now belonging to the United States or donated to the United States; Provided further, That no money shall be expended by the United

States for the construction of said highway on the Maryland side of the Potomac, except as part of the Federal-aid highway program: Provided, That in the discretion of the National Capital Park and Planning Commission, upon agreement duly entered into by the State of Maryland or Virginia or any political subdivision thereof to reimburse the United States as hereinafter provided, it may advance the full amount of the funds necessary for the acquisition of the lands and the construction of said roads in any such unit referred to in this paragraph, such agreement providing for reimbursement to the United States to the extent of one-half of the cost thereof without interest within not more than eight years from the date of any such expenditure. The appropriation of the amount necessary for such advance, in addition to the contribution by the United States, is hereby authorized from any money in the Treasury not otherwise appropriated."

(2) AND WHEREAS, the General Assembly of the State of Maryland, in Chapter 136 of the laws of Maryland of 1939, authorized and empowered the Board of County Commissioners of Montgomery County to issue and sell serial coupon bonds on the faith and credit of the said County to the amount of $150,000 par value, and Section 4 specifically provides -

"That the actual proceeds of the sale of said bonds shall be used exclusively for the following purposes, to wit: (a) The payment of the cost of engraving or printing of said bonds, and for the payment of the cost of advertising authorized by this Act and all other incidental expenses in connection with the issuance of said bonds.

(b) The remainder of the proceeds of the sale of said bonds shall be used by the County Commissioners of Montgomery County, and shall be used, expended and applied by the said Board for the following purposes, to wit:

(1) To pay over to the Maryland-National Capital Park and Planning Commission the remainder of the proceeds of the sale of said bonds or so much thereof as may be necessary, to be in turn paid over by the said Maryland-National Capital Park and Planning Commission to the National Capital Park and Planning Commission for the purpose of complying with the provisions of paragraph or sub-section (a) of Section 1 of Public Act 284 of the 71st Congress of the United States; providing, however, that the said amount hereby authorized to be paid over by the Maryland-National Capital Park and Planning Commission to the National Capital Park and Planning Commission shall be expended for acquisition of that portion of the George

Washington Memorial Parkway within that portion of the Maryland-Washington Metropolitan District located in Montgomery County, bounded by the Maryland-District of Columbia Line, the Potomac River, the Conduit Road, and the Northwest boundary of the said Maryland-Washington Metropolitan District, and under such terms and conditions as may be agreed upon between the said Maryland-National Capital Park and Planning Commission and the National Capital Park and Planning Commission, under the terms of a legal contract to be executed by the two Commissions, respectively. The Maryland-National Capital Park and Planning Commission is hereby authorized, empowered, and directed to enter into a suitable agreement with the National Capital Park and Planning Commission for the purpose of complying with the provisions of paragraph or sub-section (a) of Section 1 of said Public Act 284, and is hereby authorized, empowered and directed to do or perform any act or thing necessary to comply with the provisions of the said Act and of this Act."

(3) AND WHEREAS, the Maryland Commission has notified the National Commission that the County of Montgomery has issued and sold said bonds, and that the Maryland Commission now stands ready to deliver $150,000 of the proceeds of this sale to the National Commission to be expended for the acquisition of land in the George Washington Memorial Parkway in Montgomery County, in accordance with the provisions of the Capper-Cramton Act and Chapter 136 of the Acts of the General Assembly of Maryland 1939.

(4) AND WHEREAS, the Third Deficiency Act, Public 361, 76th Congress, approved August 9, 1939, makes the following appropriation:

"For an additional amount for each and every purpose requisite for and incident to the work of the National Capital Park and Planning Commission necessary toward carrying into effect the provisions of the Act entitled 'An Act for the acquisition, establishment, and development of the George Washington Memorial Parkway along the Potomac from Mount Vernon and Fort Washington to the Great Falls, and to provide for the acquisition of lands in the District of Columbia and the States of Maryland and Virginia requisite to the comprehensive park, parkway, and playground system of the National Capital', approved May 29, 1930; personal services, including real estate and other technical services, at rates of pay to be fixed by the Commission and not exceeding those usual for similar

services and without reference to civil service rules and the Classification Act of 1923, as amended; travel expenses; expenses of surveys and searching of titles, purchase of options, and all other costs incident to the acquisition of land; operation and maintenance of passenger-carrying vehicles for official use; fiscal year 1940, $150,000, to be expended in carrying out the provisions of section 1(a) of said Act, and to remain available until expended."

(5) AND WHEREAS, the National Commission and the Maryland Commission are desirous of carrying out the provisions of the above cited Acts and of expending the $150,000 placed at the disposal of the Maryland Commission, and the $150,000 placed at the disposal of the National Commission, as recited above, for the acquisition of lands in the George Washington Memorial Parkway in Montgomery County;

NOW, THEREFORE, THIS AGREEMENT WITNESSETH, that the said National Commission, of the first part, and the said Maryland Commission, of the second part, in consideration of the premises and the mutual agreements herein contained and for other valuable considerations moving from one to the other, receipt of which is hereby acknowledged by each, do covenant and agree to the following definite commitments, conditions, and terms of this contract:

1. That the amount of $150,000 made available to this project by Public 361, 76th Congress, approved August 9, 1939, and the amount of $150,000 made available to the Maryland Commission by sale of Montgomery County serial coupon bonds "shall be expended for acquisition of that portion of the George Washington Memorial Parkway within that portion of the Maryland-Washington Metropolitan District located in Montgomery County, bounded by the Maryland-District of Columbia line, the Potomac River, the Conduit Road, and the Northwest boundary of the said Maryland-Washington Metropolitan District", and as further shown on Plan No. 105.31-455, hereby attached to this agree-

ment and made a part hereof.

2. That the property to be acquired within said boundary shall be appraised by Curtis Walker and H. Tudor Morsell. That no property shall be acquired, except by condemnation, at a price exceeding the appraised values, except upon joint approval of the National Commission and the Maryland Commission.

3. That the Maryland Commission, and through it Montgomery County and the Washington Suburban Sanitary Commission, shall be given the following privileges in the use of said park property when it is acquired by the United States Government as to drainage, sewerage, water supply and other public utility lines, highways, and to other essentials as follows:

(a) The Maryland Commission shall have the right at all times to lay water mains or sewer lines, or other public utility lines in or through such part of the lands acquired by the National Commission for park purposes under this agreement, as may be designated by the National Commission in harmony with the use of said lands for park purposes; provided that not less than 45 days before the actual construction of any such mains or lines is to begin, the Maryland Commission shall have submitted to the National Commission construction plans for such lines or mains; and provided further that the Maryland Commission shall restore the surface and planting, including roadways or other improvements, following any such construction or repair of such lines or mains to the same condition in which the surface and planting, roadways, or other improvements were before such construction and or repair began.

(b) The National Commission shall have the right to treat the surface of any future or existing rights of way for water and sewer lines heretofore or hereafter constructed with the approval of the Maryland Commission within the park area acquired by the National Commission as the said Commission deems it advisable for park use or administration, provided that the Maryland Commission shall at all times, on written notification to the National Commission, have the right to enter on such right of way for the purpose of maintenance and repair of said water and sewer and other lines; provided further that no buildings shall be erected by the National Commission on or over or within five feet of the center line of any water main or sewer or other line without the written consent of the Maryland Commission. The Maryland Commission agrees that when practicable it will cause to be supplied water mains and sewer connections to park buildings, hydrants, or other necessary connections for park purposes to the National Commission at cost and will furnish the necessary water for drinking fountains or hydrants to the National Commission at cost, and that the rate for water used for all other park purposes shall be agreed upon by the two parties when and as the necessity for its use arises.

(c) The National Commission and the Maryland Commission agree that the development plans of said portion of the George Washington Memorial Parkway acquired under this agreement shall provide for the surface flow of storm water flowing in natural or existing drainage channels over or through such park lands; and the Maryland Commission agrees that insofar as it has power to protect public parks or park lands, banks, shrubbery and/or trees against damage or threatened damage by reason of the flow of storm water over or through any public street, road, alley, or lane, or any sewer or drain leading therefrom into such parks or upon such park lands, it will, upon notice

to it from the said National Commission that damage has been done or is threatened to such park lands, banks, shrubbery and/or trees or other improvements in such parks by the surface flow of storm water over such park lands, directly or indirectly from public improvements, streets, alleys, lanes, etc., protect to the limit of its ability said park lands and the aforesaid improvements thereon against damage by the surface flow of such storm water. The Maryland Commission shall have the right to make such limited highway or other road connection with the Parkway as may be approved by the National Commission and the Maryland Commission.

(d) Should the Maryland Commission and the National Commission or their assignees be unable to agree as to the location of water, sewer, storm sewer, and other lines and/or items referred to in sub-sections (a), (b) and (c) of this Section 3, then the matter shall be adjusted by a Board of Arbitration consisting of a representative of the Maryland Commission, a representative of the National Commission and a third impartial member chosen by these two.

(e) The National Commission shall have the right to assign any or all of its powers and duties under this Section to the National Park Service, or any other agency of the United States having jurisdiction over the property to be acquired, and the Maryland Commission shall have the right to assign any or all of its powers and duties under Section 3, Sub-sections (a), (b), (c) and (d) above to the Washington Suburban Sanitary Commission, Montgomery County, or such other agency as may be authorized by law to exercise such powers and perform such duties.

4. That when this agreement has been duly executed, the Maryland Commission will deliver to the National Commission through its Executive Officer, the $150,000 secured by the Board of County Commissioners of Montgomery County from the sale of bonds as provided in Chapter 136 of the laws of Maryland of 1939; this sum together with the sum of $150,000 appropriated for this purpose by Public 361, 76th Congress, approved August 9, 1939, totalling $300,000 will be expended by the National Commission for the purchase of lands in the George Washington Memorial Parkway in Montgomery County within the area and in the manner set forth above.

5. That in accordance with the provisions of the Capper-Cramton Act, the title to said property shall vest in the United States.

6. That except as provided in this agreement, the property shall be acquired only for park and parkway purposes and that the United States will never use the land so acquired for any other purpose except with the consent of the Maryland Commission. It is further agreed that the National Commission will use its best efforts to see that the areas acquired under this agreement are developed and maintained in a manner similar to other comparable park areas of the National Capital and environs.

IN WITNESS WHEREOF the said parties have hereunto caused these presents to be executed and their seals affixed the day, year and month aforesaid.

NATIONAL CAPITAL PARK & PLANNING COMMISSION

BY Frederic A. Delano (SEAL)

ATTEST: T. S. Settle

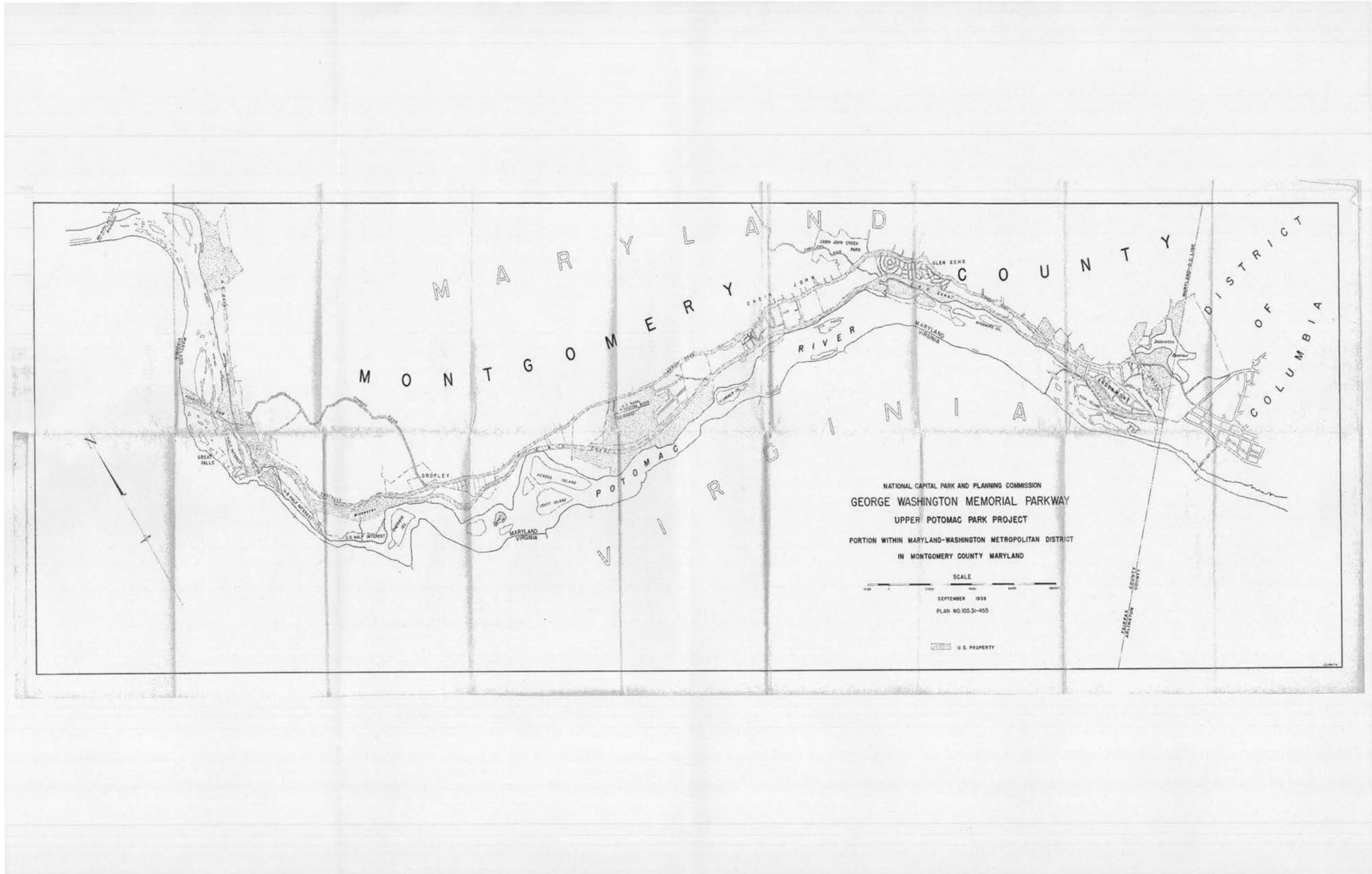
THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION

BY Geo. N. Palmer (SEAL)

ATTEST: Thos Hampton

APPROVED: Franklin D Roosevelt

President of the United States of America


MARYLAND
MONTGOMERY COUNTY
DISTRICT OF COLUMBIA
VIRGINIA
POTOMAC RIVER
GLEN ECHO
CABIN JOHN CREEK PARK
GREAT FALLS
GROPLEY
MARYLAND
VIRGINIA
U.S. HALF INTEREST
NATIONAL CAPITAL PARK AND PLANNING COMMISSION
GEORGE WASHINGTON MEMORIAL PARKWAY
UPPER POTOMAC PARK PROJECT
PORTION WITHIN MARYLAND-WASHINGTON METROPOLITAN DISTRICT
IN MONTGOMERY COUNTY MARYLAND
SCALE
SEPTEMBER 1939
PLAN NO.105.31-455
U.S. PROPERTY
FAIRFAX COUNTY

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
GREATER ATLANTIC REGIONAL FISHERIES OFFICE
55 Great Republic Drive
Gloucester, MA 01930-2276

November 5, 2020

Lisa B. Choplin, DBIA
Director, I-495 & I-270 P3 Office
Maryland Department of Transportation State Highway Administration
I-495 & I-270 P3 Office
707 North Calvert Street
Mail Stop P-601
Baltimore, MD 21201

Dear Ms. Choplin:

We have reviewed the draft Environmental Impact Statement (DEIS) and materials contained in the JPA document for the proposed I-495/I-295 Managed Lanes Study (MLS). The Federal Highways Administration (FHWA) and Maryland Department of Transportation State Highway Administration (MDOT SHA) are evaluating potential transportation improvements to approximately 48 miles of the I-495 and I-270 corridors in Montgomery and Prince George's County, Maryland and Fairfax County, Virginia. Specifically, this includes I-495 from south of the George Washington Memorial Parkway, including the American Legion Bridge (ALB) crossing over the Potomac River, to west of MD 5; and I-270 from its juncture with I-495 to I-370, including the east and west I-270 spurs north of I-495. The corridor study boundary was defined as 300 feet on either side of the centerline of the aforementioned roadways. Several alternative designs were retained for the analysis presented in the DEIS, all with similar extents of temporary and permanent impacts. The purpose of this study is to evaluate options for easing traffic congestion in these areas.

The study corridor includes areas containing wetlands and waterways under the jurisdiction of the U.S. Army Corps of Engineers and Maryland Department of the Environment. The screened alternatives evaluated in the DEIS are estimated to impact approximately 16 acres of non-tidal wetlands and approximately 44 acres of waterways across approximately 155,000 linear feet. At this stage, all impacts described are considered permanent and temporary impacts will be determined/defined at a later stage of design. A suite of mitigation options has been explored and a portfolio of sites/approaches has been identified. This is detailed in the Draft Compensatory Mitigation Plan (Draft CMP) and includes approximately 30 acres of non-tidal wetland mitigation and approximately 100,000 linear feet (approx. 19 miles) of stream mitigation. Mitigation is not proposed for approximately 52,000 linear feet of streams which currently flow beneath/through existing bridges/culverts. A variety of mitigation approaches were explored for the Draft CMP (e.g., on-site stream restoration, mitigation banking, in-lieu fee programs, and off-site permittee-responsible). Permittee-responsible mitigation sites, some of which are located on-site, were prioritized based on a variety of criteria including proximity to the study area and

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potential to demonstrate ecological uplift. Approximately 40,500 linear feet of stream mitigation credits are proposed to be fulfilled off-site. Of those, approximately 5,258 linear feet of credits are proposed to be fulfilled by the removal of a barrier to fish movement located on Paint Branch, which may benefit anadromous fish by increasing passage to potential spawning habitat.

Our primary concern is related to impacts to areas where the existing roadways cross perennial streams that provide spawning habitat and/or migration corridors for anadromous fish. The specific design of each of these crossings has yet to be determined, but a suite of avoidance/minimization approaches has been identified to offset impacts to migratory fish. These include avoiding in-water work during the period in which migratory fish are likely to be present (March 1 – June 15), maintaining adequate passage zones for aquatic life, and examining potential impacts to fish passage where the corridor crosses streams with relatively large (i.e., drainage area upstream of crossing ≥ 132 acres) streams. While these approaches do largely address concerns we previously described, we offer the following information/guidance to further ensure that impacts to these species are minimized to the extent practicable.

Fish and Wildlife Coordination Act (FWCA)
The Fish and Wildlife Coordination Act (FWCA), as amended in 1964, requires that all federal agencies, including FHWA, consult with us when proposed actions might result in modifications to a natural stream or body of water. It also requires that they consider the effects that these projects would have on fish and wildlife and must also provide for the improvement of these resources. Under this authority, we work to protect, conserve and enhance species and habitats for a wide range of aquatic resources such as shellfish, diadromous species, and other commercially and recreationally important species that are not managed by the federal fishery management councils and do not have designated essential fish habitat (EFH). As the nation's federal trustee for the conservation and management of marine, estuarine, and anadromous fishery resources, we provide the following comments and recommendations pursuant to the authority of the FWCA.

Aquatic Resources
The study corridor contains several perennial streams and rivers that provide important habitat for anadromous fish such as alewife *(Alosa pseudoharengus),* blueback herring *(A. aestivalis)* and American shad *(A. sapidissima),* which use the river including the areas in and around the proposed project site as migratory, spawning, nursery, resting, and foraging habitat. These species have complex life cycles where individuals spend most of their lives at sea then migrate great distances to return to freshwater rivers to spawn. American shad (stocks north of Cape Hatteras, N.C.), alewife, and blueback herring are believed to be repeat spawners, generally returning to their natal rivers to spawn (Collette and Klein-MacPhee 2002; Pess et al., 2014). They have also been documented to exhibit some degree of iteroparity (i.e., adults return to spawn multiple times throughout their life) in urbanized tributaries to the Chesapeake Bay (M. Ogburn, Smithsonian Environmental Research Center, pers. comm.).

Alosines are important forage for several species managed by the New England Fishery Management Council and the Mid-Atlantic Fishery Management Council as they provide trophic linkages between freshwater/estuarine and marine food webs. Buckel and Conover (1997) in Fahay et al. (1999) report that diet items of juvenile bluefish include *Alosa* species. Additionally,

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Response to DEIS Comment #1
Thank you for your comments. NOAA's information, data, and concerns have been appreciated and considered throughout the Study.

Additional information regarding anadromous and catadromous fish species supported by the rivers and streams within the limits of build improvements associated with the Preferred Alternative was added to the Natural Resources Technical Report (FEIS Appendix M) Section 2.9 Aquatic Biota.

Additional Information regarding the designation of alewife and blueback herring as Species of Concern was added to the Natural Resources Technical Report Section 2.9.1 Aquatic Biota Regulatory Context and Methods (FEIS Appendix M).

Noise impacts to aquatic biota were added to the Natural Resources Technical Report Section 2.9.3 Aquatic Biota Environmental Effects (FEIS Appendix M).

To avoid and minimize impacts to anadromous fish, MDOT SHA has committed to considering aquatic passage during bridge design and construction for the ALB, the bridge over the Potomac River, and the bridge over Cabin John Creek to protect anadromous fish species known to spawn in these waterways. MDOT SHA commits to maintaining existing or improving aquatic life passage in the culverts conveying Old Farm Creek and Watts Branch under I-270 (FEIS Chapter 5, Section 5.18.4). Additional details and commitments are found in the responses below addressing specific concerns.

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juvenile *Alosa* species have all been identified as prey species for summer flounder (*Paralichthys dentatus*) and windowpane flounder (*Scophthalmus aquosus*) in Steimle et al. (2000). As a result, actions that reduce the availability of prey species, either through direct harm or capture, or through adverse impacts to their spawning habitat may adversely impact federally managed fisheries and their EFH.

American shad, blueback herring, and alewife formerly supported the largest and most important commercial and recreational fisheries throughout their range, with fishing activities spanning across rivers (both fresh and saltwater), tributaries, estuaries, and the ocean. Commercial landings for these species have declined dramatically from historic highs (ASMFC 2018). The most recent American shad stock assessment report identified that American shad stocks are, in all likelihood, currently at all-time lows following a period of recent (i.e., within the past decade) coast-wide decline (ASMFC 2020). In the Potomac River, the recent estimate of adult mortality was described as "unsustainable", indicating that there is a net loss of adults returning to the system to spawn each year. Throughout their range, American shad stocks do not appear to be recovering (ASMFC 2007). The 2007 stock assessment concluded that new protection and restoration actions needed to be identified and applied, which led to the development of Amendment 3 to the Interstate Fishery Management Plan for Shad and River Herring (American Shad Management). Amendment 3 identified significant threats to American shad, including spawning and nursery habitat degradation or blocked access to habitat, resulting from dam construction, increased erosion and sedimentation, and losses of wetland buffers. Protecting, restoring and enhancing American shad habitat, including spawning, nursery, rearing, production, and migration areas, are necessary for preventing further declines in American shad abundance, and restoring healthy, self-sustaining, robust, and productive American shad stocks to levels that will support the desired ecological, social, and economic functions and values of a restored Atlantic Coast American shad population (ASMFC 2010).

In the Mid-Atlantic, landings of alewife and blueback herring, collectively known as river herring, have declined since the mid-1960's and have remained very low in recent years (ASMFC 2017). The 2012 river herring benchmark stock assessment found that of the 52 stocks of alewife and blueback herring assessed, 23 were depleted relative to historic levels, one was increasing, and the status of 28 stocks could not be determined due to a lack of long-term data (ASMFC 2012a). The 2017 stock assessment update indicates that river herring remain depleted at near historic lows coast-wide. The "depleted" determination was used in 2012 and 2017 instead of "overfished" to indicate factors besides fishing have contributed to the decline of these species, including habitat loss, habitat degradation and modification, and climate change (ASMFC 2017).

Because landing statistics and the number of fish observed on annual spawning runs indicate a drastic decline in alewife and blueback herring populations throughout much of their range since the mid-1960s, they have been designated as a Species of Concern by NOAA. Species of Concern are those about which we have concerns regarding their status and threats, but for which insufficient information is available to indicate a need to list the species under the Endangered Species Act (ESA). We wish to draw proactive attention and conservation actions to these species.

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The area of the proposed project is also migration, spawning, nursery, and foraging habitat for the American eel. Catadromous American eels spawn in the Sargasso Sea and transit the Chesapeake Bay then the tributaries to the Potomac River as elvers as part of their migration. They inhabit these freshwater areas until they return to the sea as adults. According to the 2012 benchmark stock assessment, the American eel population is depleted in U.S. waters. The stock is at or near historically low levels due to a combination of historical overfishing, habitat loss, food web alterations, predation, hydroelectric turbine mortality, environmental changes, exposure to toxins and contaminants, and disease (ASMFC 2012b). Actions being considered as part of the proposed project may impede the movements of these species between important freshwater habitats and the Atlantic Ocean in a number of ways including altering hydrologic conditions such as velocity and flow patterns, as well as changing water quality.

Adverse Effects to Aquatic Resources

Impacts

The JPA and DEIS documents described permanent impacts of approximately 153,000 linear feet of waterways, some of which provide spawning habitat for anadromous fish. Due to scale, spatial extent, and relative complexity of the proposed action, impacts to anadromous fish will likely occur through a variety of both direct (e.g., passage restriction, channelization) and indirect (e.g., increased impervious surface, riparian buffer disturbance) pathways. In-river construction for the project, including use of barges, cofferdams, causeways/riprap pads, and other large machinery is currently proposed to last approximately five years, encompassing several consecutive migration/spawning (February to June) and nursery seasons (July to October). Numerous adverse impacts from causeway/trestle construction, demolition of existing structures, channel realignment/armoring, culvert augmentation/replacement, dredging, pile/cofferdam installation, permanent shading, and others are discussed below.

A significant contributing factor to the dramatic declines in shad and river herring populations is decreases in water quality, channelization, dredging, and in-water construction (ASMFC 2010; ASMFC 2017). Anthropogenic-induced elevated levels of turbidity and sedimentation, above background (e.g., natural) levels, can lead to various adverse impacts on diadromous fish and their habitats. Increases in turbidity due to the resuspension of sediments into the water column during activities such as dredging can degrade water quality, lower dissolved oxygen levels, and potentially release chemical contaminants bound to the fine- grained sediments (Johnson et al. 2008). Suspended sediment can also mask pheromones used by migratory fishes to reach their spawning grounds and impede their migration, as well as smother immobile benthic organisms and demersal newly-settle juvenile fish (Auld and Schubel 1978; Breitburg 1988; Newcombe and MacDonald 1991; Burton 1993; Nelson and Wheeler 1997). Additionally, other effects from suspended sediments may include (a) lethal and non-lethal damage to body tissues, (b) physiological effects including changes in stress hormones or respiration, or (c) changes in behavior (Kjelland et al. 2015).

Noise from other construction activities, such as driving piles for trestle/pier construction, may also result in adverse effects to various fish species. Our concerns about noise effects come from an increased awareness that high-intensity sounds have the potential to adversely impact aquatic vertebrates (Fletcher and Busnel 1978; Kryter 1984; Popper 2003; Popper et al. 2004). Effects may include (a) lethal and non-lethal damage to body tissues, (b) physiological effects including

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See response on prior page.

changes in stress hormones, hearing capabilities, or sensing and navigation abilities, or (c) changes in behavior (Popper et al. 2004).

Shading from over-water structures can adversely affect migratory fish by degrading habitat quality in, and near, the shadow cast by the structure and by altering behavior and predator-prey interactions (Nightingale and Simenstad, 2001; Hanson et al., 2003). Shading results from the attenuation, interference or blocking of sunlight. For elevated bridges such as those proposed to be expanded, the primary causes of shading are superstructures (e.g., deck), though substructures (e.g., towers) can also cause shading. The shadow cast by a structure may also increase predation on species by creating a light-dark interface that allows ambush predators to remain in darkened areas and wait for prey to swim by against an illuminated background, resulting in high contrast and high visibility (Helfman, 1981). Prey species moving around the structure may be unable to see predators in the dark area under the structure or have decreased predator reaction distances and times, thus making them more susceptible to predation (Helfman, 1981; Bash et al., 2001).

American shad and river herring appear to be particularly susceptible to the shadow cast by overwater structures (Moser and Terra, 1999). American shad tend to be diurnal in their migratory habits and tend to migrate primarily during the day, while falling back to lower-velocity zones at night; adults and juveniles use side-channel and shallower areas near shorelines at day and night (Fisher, 1997; Haro and Kynard, 1997; Theiss, 1997; Sullivan, 2004). American shad are reluctant to immediately pass under darkened areas of channels, specifically under low bridges or strong shadows, or where there is a strong light transition (Haro and Castro-Santos, 2012). The extension of existing culverts will also increase the linear extent of heavily shaded areas associated with these structures. American shad school as both juveniles and adults and have a low likelihood of separating from a school in order to pass a structure or its shadow (Larinier et al., 2002). River herring require light to form schools, are most active during the day, and have difficulty avoiding obstacles at night (Blaxter and Parrish 1965; Blaxter and Batty 1985). Similarly, laboratory observations of alewives indicated that both juveniles and adults are most active during the day (Richkus and Winn, 1979). Moser and Terra (1999) performed a field study to investigate low light as an impediment to river herring migrations and found significantly higher numbers of herring passed through unshaded treatments, as compared to shaded treatments. Fish often require visual cues for orientation and exhibit faster swimming speeds at increased light levels (Pavlov et al., 1972, Katz, 1978).

Avoidance and Minimization

Steps FHWA, and MDOT SHA, have taken to avoid or minimize impacts from the proposed project include undertaking in-water work in anadromous fish use areas only from June 16 to February 28 of each year (no in-water work conducted between March 1 and June 15) and shifting roadway alignments to avoid riparian areas in the Rock Creek corridor. While we appreciate these avoidance and minimization efforts as the project is currently proposed, further avoidance and minimization appears feasible.

Recommendations

#2 As proposed, the project may prevent or reduce upstream passage of diadromous fish to important spawning habitat and degrade spawning, migration, nursery, foraging and resting habitat within, upstream and downstream of the project area for up to five spawning and nursery

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See response on prior page.

Response to DEIS Comment #2

Migratory fish data from the Chesapeake Fish Passage Prioritization database was reviewed for watersheds crossed by the Preferred Alternative to determine if these species have the potential to occur. This data is summarized by watershed in the Natural Resources Technical Report, FEIS Appendix M.

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seasons, and will result in the permanent elimination and degradation of riverine habitat. Therefore, impacts to diadromous fish from the proposed project could be significant.

Determining whether a particular road crossing will affect anadromous fish entails examining available data to determine whether they are likely to use particular areas. While the presence of diadromous fish species (e.g., American eel, sea lamprey *Petromyzon marinus*) is well described for several waterways in the DEIS Natural Resources Technical Report (Appendix L), the monitoring efforts upon which these observations are based (e.g., Maryland Biological Stream Survey) do not target anadromous fish due to the fact that these programs generally survey when those species are not present (i.e., summer). Thus, the lack of detection of these species in the survey data does not mean these species are not present and should not be used to eliminate the need to ensure anadromous fish passage, follow the appropriate time of year restrictions, or adequately mitigate for unavoidable impacts to passage. Instead, presence of anadromous fish should be inferred through use of mapping resources available in the Freshwater Network Chesapeake Region Chesapeake Fish Passage Prioritization project tool.

#3

Waterways which currently provide spawning habitat for anadromous fish, based on documented spawning activity and/or lack of impassable barriers to passage and presence of suitable habitat designated by that tool, include: Potomac River at American Legion Bridge, Cabin John Creek, Rock Creek, Southwest Branch Patuxent River, Bald Hill Branch, and Henson Creek. While barriers may exist downstream of the corridor crossing locations, at least two of these dams (i.e., Little Falls, Pierce Mill) have recently been retrofitted with fish passage structures suitable for anadromous species. Waterways that would likely provide spawning habitat to river herring if one barrier located downstream of the I-495 corridor underwent passage improvement include: Paint Branch, Little Paint Branch, and Northeast Branch. Those waterways with potential habitat and two or more barriers downstream of the I-495 corridor include: Sligo Creek, Northwest Branch, and Indian Creek. The existence of barriers downstream of a perennial stream that has been designated as potential habitat using this tool should not preclude the requirement of suitable construction approaches or final designs to accommodate migrating fish as these barriers may be removed or modified to allow fish passage in the future.

#4

During the development of project design, following the selection of a screened alternative, proposed methods of construction should be evaluated for potential impacts to anadromous fish migration corridors and spawning habitat and an analysis should detail how practicable alternatives would impact diadromous fish and their habitats. These alternatives should include, but not be limited to, using temporary work trestles in lieu of the proposed rock jetties extending from the river bank onto river bottom habitat. We are particularly concerned about impacts to spawning habitat and passage associated with the expansion of the ALB. Passage to the Potomac River above the Little Falls dam was restored after a fishway was constructed in 2000. Spawning habitat above Little Falls, including areas in the vicinity of the ALB, offers valuable spawning habitat for Alosines (Cummins, 2016). Installation of the causeways/riprap pads and cofferdams in the Potomac River at the ALB will result in changes to the hydrodynamics of the river, as water is funneled through reduced cross sections of the river. Causeway/riprap pad and cofferdam placement will likely represent a substantial reduction in the typical estimated bank-full width of the river. Increased water velocity may limit the upstream migration of fish or lead to the use of excess energy, leading to a loss of fitness. Additional effects to individuals from the

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Response to DEIS Comment #3

The Potomac River under the ALB and Cabin John Creek are the only anadromous fish spawning waterways included in the limits of disturbance for the Preferred Alternative. MDOT SHA commits to considering fish passage during bridge design over these two waterways. The impacts to anadromous fish in the Potomac River will be minimized to the greatest extent practicable during construction. Minimization measures may include, but are not limited to, the use of trestles instead of causeways to support construction activities; minimization of acoustic impacts during construction; and working inside coffer dams during pile driving. Additional details on these mitigation measures are included in the responses below.

Response to DEIS Comment #4

Causeways and trestles proposed adjacent to the existing ALB will be designed to minimize in-water fill and avoid impacting fish passage by maintaining river velocities below approximately 3 feet per second at commonly observed discharges (e.g., below 90 percentile) during the period in which anadromous fish are spawning (February 15 - June 15). Trestles or other non-fill accessways will be used in areas of deeper water (e.g., extending from the southern bank) to the extent practicable to minimize fill and associated flow restrictions.

presence of the rock jetties and other construction-related activities may include behavior modification and avoidance.

#5 Should the replacement of the ALB move ahead as generally proposed (e.g., alignment and access), the causeways/riprap pads should be eliminated entirely and replaced with other construction-facilitation methods, such as temporary work trestles, or reduced to the greatest extent practicable. Various alternatives to the currently proposed riprap placement strategy should be developed that do not constrict flows or degrade important habitat for diadromous fish. These access structures should also be designed to withstand a reasonable flood stage (e.g., 100 year) so as to avoid disturbing adjacent habitats if these structures should become destabilized. Finally, any in-water piles or sheetpiles (i.e., those not installed behind dewatered cofferdams) planned in this area should not be installed during the period in which anadromous fish are present.

#6 To avoid and minimize potential impacts to migratory fish species, we recommend that FHWA and MDOT SHA fully evaluate a suite of passage-friendly alternative alignments/designs to roadway crossings and channel relocations. Any introduction of armoring or realignment of waterways should be designed to minimize potential impacts to fish passage by maintaining suitable flows across river discharge levels. The modification of road crossings of perennial streams may result in reduced fish passage in many instances. In JPA Part 12 – Avoidance Minimization and Impacts Report, several of these stream crossings are described. It has been determined that culvert/bridge replacement will be required at several of these crossings. Because these projects are still in the preliminary design phase, it is unclear to what extent passage may be affected. We recommend that these crossings be designed to minimize potential impacts to fish passage by replacing traditional box culverts, where practicable, with bridged or oversized bottomless culverts. Where existing culverts are not currently being considered for replacement, we recommend that retrofitting existing culverts to include nature-like bottoms continue to be considered. We also recommend that any new culverts installed be countersunk according to regional regulations and designed to ensure passage during low-flow conditions.

#7 Finally, because impacts to fish passage will be largely dependent upon the final design and construction, we also request that consultation with us be reinitiated following the selection of an alternative and the initiation of project design. This will ensure that each crossing with potential impacts to anadromous fish has been properly designed and the associated construction will avoid and minimize impacts to these important habitats to the extent practicable.

#8 **Fish and Wildlife Coordination Act Recommendations**
As proposed, the project may prevent or reduce upstream passage of diadromous fish to important spawning habitat and will result in permanent elimination and degradation of riverine habitat. To avoid and minimize these impacts, we recommend the following, pursuant to the Fish and Wildlife Coordination Act (FWCA):

- Presence of anadromous fish (e.g., river herring) should be inferred through use of mapping resources available in the Freshwater Network Chesapeake Region Chesapeake Fish Passage Prioritization project tool.

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Response to DEIS Comment #5
Construction approaches that minimize the temporal extent of in-water activities in the Potomac River surrounding the American Legion Bridge will be considered to the extent practicable. Flow restriction and degradation will be avoided to the extent practicable, see response to Comment # 6. Access structures will be built to withstand the 100-year flood, as coordinated with Maryland Department of the Environment (MDE). In-water piles or sheet piles that are not installed behind a dewatered cofferdam will not be installed during the period in which anadromous fish are present, February 15 - June 15.

Response to DEIS Comment #6
Most perennial streams within the Preferred Alternative are not suitable for aquatic life passage because their existing culverts under the roadway are already too long to allow for passage. Old Farm Creek, Cabin John Creek, Watts Branch and the Potomac River have been identified as four waterways within the Preferred Alternative that will allow aquatic passage and commitments are included in the FEIS to maintain or improve the current level of aquatic passage in these waterways.

Response to DEIS Comment #7
MDOT SHA will continue consultation with NMFS when final design begins for roadway crossings in anadromous fish use areas identified by MDNR and the Chesapeake Fish Passage Prioritization database to ensure that impacts on aquatic passage from construction and permanent fill are minimized to the greatest extent practicable.

Response to DEIS Comment #8
See response to Comment #2.

#9

- In instances where an existing culverted stream crossing of a designated "major stream crossing" (i.e., drainage area > 1.5 square miles) requires complete replacement, it should be designed to meet the passage criteria described by USFWS (2019). This could be achieved by using oversized, bottomless culverts or bridges in place of existing box culverts. In areas where culverts are being extended or augmented, retrofitting with a natural or nature-like stream bottom should continue to be considered as an option.

#10

- Causeways and trestles proposed adjacent to the existing ALB should be designed to minimize in-water fill and avoid impacting fish passage by maintaining river velocities below approximately 3 feet per second at commonly observed discharges (e.g., below 90 percentile) during the period in which anadromous fish are spawning (February 15 - June 15). Trestles should be used in areas of deeper water (e.g., extending from the southern bank) to the extent practicable to minimize fill and associated flow restrictions.

#11

- Construction approaches which minimize the temporal extent of in-water activities, such as the use of dewatered cofferdams, for the installation of ALB piers should be considered to the extent practicable.

#12

- Construction of causeways/trestles at the ALB should continue to be considered a permanent impact and compensatory mitigation should be provided due to their planned installation for up to five years.

#13

- Mitigation for impacts to anadromous fish use areas (e.g., Potomac River, Cabin John Creek, Paint Branch, Northwest Branch) should benefit those species by enhancing fish passage to viable spawning habitats in the vicinity of the project area.

#14

- Re-consult with us when plans are developed for roadway crossings in anadromous fish use areas (e.g., ALB expansion) to ensure that impacts due to construction and permanent fill are minimized to the extent practicable and adequate mitigation is achieved.

Conclusion
We look forward to continued coordination with you on this project as it moves forward. If you have any questions or need additional information, please do not hesitate to contact Jonathan Watson in our Annapolis, MD field office at jonathan.watson@noaa.gov or (410) 295-3152.

Sincerely,

GREENE.KAREN.M.1365830785 Digitally signed by GREENE.KAREN.M.1365830785 Date: 2020.11.05 14:05:41 -05'00'
Karen M. Greene
Mid-Atlantic Field Office Supervisor
Habitat Conservation Division

cc: FHWA – J. Mar
USACE – J. Dinne
NPS – T. Morrison
EPA – M. Fitzgerald
FWS – C. Guy
FWS – R. Li
MDE – S Hurt
MDNR – G. Gibson

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Response to DEIS Comment #9
In instances where an existing culverted stream crossing of a designated "major stream crossing" requires complete replacement, MDOT SHA agrees to design such replaced culverts to meet the passage criteria described by USFWS (2019). In areas where culverts are being extended or augmented, retrofitting with a natural or nature-like stream bottom will continue to be considered as an option.

Response to DEIS Comment #10
See response to Comment #4.

Response to DEIS Comment #11
See response to Comment #5.

Response to DEIS Comment #12
The use of causeways will be minimized to the extent practicable. At this stage of planning and preliminary design, it is assumed that piers or pilings supporting the proposed trestle will not be placed so densely as to constitute a "fill" that would require compensatory mitigation. The USACE and MDE will review the proposed trestle design in final design and will require mitigation if it is determined that the trestle design constitutes "fill" of jurisdictional resources.

Response to DEIS Comment #13
One viable fish passage mitigation site, the AN-6 Paint Branch Fish Passage under I-495, was identified for inclusion in the Compensatory Mitigation Plan (CMP) following a MDOT SHA search of potential fish passage improvement locations in the original watersheds affected by the proposed project. However, the fish passage improvement site is not located in an affected watershed associated with the Preferred Alternative, so it is not included in the Preferred Alternative Compensatory Wetlands and Waterways Mitigation Plan.

Response to DEIS Comment #14
See response to Comment #7.

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Prince George's County Department of Public Works and Transportation - DEIS Comments

No.	Page	DEIS Section	Comment	Response
1	General	General	Pedestrian and Bicyclist Infrastructure: The DEIS states that existing sidewalks, bicycle facilities, side paths, bicycle shoulders and bikeways impacted by the Project will be replaced in kind. DPW&T requests that these facilities be replaced and **improved** to meet the needs of a broader group of pedestrians and bicyclist to include persons of all ages and abilities to improve safety, access, connectivity and comfort for all users.	As the limits of build improvements do not extend east of the I-270 east spur, there are no bicycle or pedestrian improvements proposed in Prince George's County. Bicycle and pedestrian improvements have been incorporated into the Preferred Alternative within the limits of the build improvements to address the need for accommodating existing and proposed multimodal connectivity and mobility. These improvements include replacing, upgrading or providing new pedestrian/bicycle facilities consistent with local master plans where existing facilities exist or crossroad bridges would be reconstructed due to the Preferred Alternative.
2	General	General	Woodrow Wilson Memorial Bridge: We recommend that the scope of work be extended to the Woodrow Wilson Memorial Bridge. This is a major gateway into the State of Maryland and Prince George's County.	As described in the Supplemental DEIS, the Preferred Alternative was identified after coordination with resource agencies, the public, and stakeholders to respond directly to feedback received on the DEIS to avoid displacements and impacts to significant environmental resources, and to align the NEPA approval with the planned project phased delivery and permitting approach which focused on Phase 1 South only. The Preferred Alternative includes no action or no improvements at this time on I-495 east of the I-270 spur to MD 5 in Prince George's County. Any future proposal for improvements to the remaining parts of I-495 within the study limits, outside of Phase 1 South, would advance separately and would be subject to additional environmental studies, analysis, and collaboration with the public, stakeholders, and agencies. All of your comments are appreciated and will be considered by MDOT SHA for future improvements.
3	General	General	MD 214 (Central Avenue) Interchange: A fully operational interchange with complete bicycle and pedestrian access across MD 214 is necessary at this interchange. This is critical to connecting these heavily developed communities (both commercial and residential) found on both sides of the Capital Beltway. Moreover, this will provide a logical point of connection for the Central Avenue Connector multi-use trail currently under design by (M-NCPPC).	As described in the Supplemental DEIS, the Preferred Alternative was identified after coordination with resource agencies, the public, and stakeholders to respond directly to feedback received on the DEIS to avoid displacements and impacts to significant environmental resources, and to align the NEPA approval with the planned project phased delivery and permitting approach which focused on Phase 1 South only. The Preferred Alternative includes no action or no improvements at this time on I-495 east of the I-270 spur to MD 5 in Prince George's County. Your comment had been identified in the DEIS related to build alternatives that would have spanned the entire study area. Because MD 214 is located outside the Preferred Alternative limits of build improvements, those impacts have now been completely avoided. Any future proposal for improvements to the remaining parts of I-495 within the study limits, outside of Phase 1 South, would advance separately and would be subject to additional environmental studies, analysis, and collaboration with the public, stakeholders, and agencies.

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4	General	General	MD 202 (Landover Road) Interchange: A fully operational interchange with complete bicycle and pedestrian access across MD 202 is necessary at this Interchange. This is critical to connecting communities bisected by the Capital Beltway with no real pedestrian or bicycle access across at the nearest interchange (MD 202 - Landover Road). This has not only created shortfalls in pedestrian and bicyclist connectivity but has created economic disparities between both sides of the Capital Beltway by denying the older communities inside the Capital Beltway safe, multi-modal access to the developing area just outside the Capital Beltway. Moreover, development of the Largo Town Center (east side of the Capital Beltway at the MD 202 interchange) and development of the abandoned Landover Mall (west side of the Capital Beltway at the MD 202 interchange) is reliant upon a fully functional interchange. This will also be the home of the new University of Maryland Medical Center, where speedy and reliable access may be a matter of life and death.	As described in the Supplemental DEIS, the Preferred Alternative was identified after coordination with resource agencies, the public, and stakeholders to respond directly to feedback received on the DEIS to avoid displacements and impacts to significant environmental resources, and to align the NEPA approval with the planned project phased delivery and permitting approach which focused on Phase 1 South only. The Preferred Alternative includes no action or no improvements at this time on I-495 east of the I-270 spur to MD 5 in Prince George's County. Your comment had been identified in the DEIS related to build alternatives that would have spanned the entire study area. Because MD 202 (Landover Road Interchange) is located outside the Preferred Alternative limits of build improvements, those impacts have now been completely avoided. Any future proposal for improvements to the remaining parts of I-495 within the study limits, outside of Phase 1 South, would advance separately and would be subject to additional environmental studies, analysis, and collaboration with the public, stakeholders, and agencies.
5	General	General	Evarts Street Crossing: Construction of a vehicular, but at the very least, a pedestrian bridge across the Capital Beltway is critical to connecting communities bisected by the Capital Beltway with no real pedestrian or bicycle access across at the nearest interchange (MD 202 - Landover Road). This has not only created shortfalls in pedestrian and bicyclist connectivity but has created economic disparities between both sides of the Capital Beltway by denying the older communities inside the Capital Beltway safe, multi-modal access to the developing area just outside the Capital Beltway.	As described in the Supplemental DEIS, the Preferred Alternative was identified after coordination with resource agencies, the public, and stakeholders to respond directly to feedback received on the DEIS to avoid displacements and impacts to significant environmental resources, and to align the NEPA approval with the planned project phased delivery and permitting approach which focused on Phase 1 South only. The Preferred Alternative includes no action or no improvements at this time on I-495 east of the I-270 spur to MD 5 in Prince George's County. Your comment had been identified in the DEIS related to build alternatives that would have spanned the entire study area. Because Evarts Street Crossing is located outside the Preferred Alternative limits of build improvements, those impacts have now been completely avoided. Any future proposal for improvements to the remaining parts of I-495 within the study limits, outside of Phase 1 South, would advance separately and would be subject to additional environmental studies, analysis, and collaboration with the public, stakeholders, and agencies.

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6	General	General	Cherry Hill Road Crossing: Construction of a vehicular, but at the very least a pedestrian, bridge across the Capital Beltway is critical to connecting communities bisected by the Capital Beltway with no real pedestrian or bicycle access across at the nearest interchange (MD 202 - Landover Road). This has not only created shortfalls in pedestrian and bicyclist connectivity but has created economic disparities between both sides of the Capital Beltway by denying the older communities inside the Capital Beltway safe, multi-modal access to the developing area just outside the Capital Beltway.	As described in the Supplemental DEIS, the Preferred Alternative was identified after coordination with resource agencies, the public, and stakeholders to respond directly to feedback received on the DEIS to avoid displacements and impacts to significant environmental resources, and to align the NEPA approval with the planned project phased delivery and permitting approach which focused on Phase 1 South only. The Preferred Alternative includes no action or no improvements at this time on I-495 east of the I-270 spur to MD 5 in Prince George's County. Your comment had been identified in the DEIS related to build alternatives that would have spanned the entire study area. Because the Cherry Hill Street Crossing is located outside the Preferred Alternative limits of build improvements, those impacts have now been completely avoided. Any future proposal for improvements to the remaining parts of I-495 within the study limits, outside of Phase 1 South, would advance separately and would be subject to additional environmental studies, analysis, and collaboration with the public, stakeholders, and agencies.
7	General	General	Greenbelt Metro Interchange: DPW &T appreciates the access modifications at this interchange as displayed on this web map and depicted below as completion of full access to this site is critical. This supports transit-oriented development (TOD) in this area and provides opportunities for multimodal improvements.	As described in the Supplemental DEIS, the Preferred Alternative was identified after coordination with resource agencies, the public, and stakeholders to respond directly to feedback received on the DEIS to avoid displacements and impacts to significant environmental resources, and to align the NEPA approval with the planned project phased delivery and permitting approach which focused on Phase 1 South only. The Preferred Alternative includes no action or no improvements at this time on I-495 east of the I-270 spur to MD 5 in Prince George's County. Your comment had been identified in the DEIS related to build alternatives that would have spanned the entire study area. Because the Greenbelt Metro Interchange is located outside the Preferred Alternative limits of build improvements, those impacts have now been completely avoided. Any future proposal for improvements to the remaining parts of I-495 within the study limits, outside of Phase 1 South, would advance separately and would be subject to additional environmental studies, analysis, and collaboration with the public, stakeholders, and agencies.
8	General	General	Environmental Impacts: Considered a significant oversight by DoE in the EIS scope, there are two environmental impacts neither addressed nor considered for improvement by any of the built alternatives or mentioned as part of any project mitigation measures: 1. Wildlife Passage and Community Reconnection and 2. Light Pollution	See separate responses for wildlife passage under #9 below and light pollution under #10 below.

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9	General	General	Wildlife Passage and Community Reconnection: The complexity of light pollution and wildlife passage cannot be addressed as an afterthought. Though there is some mention of aquatic life passage in the Avoidance, Minimization, and Impacts Report, there was no mention of any planned passage for terrestrial life. The project has multiple planned improvements crossing over and through wetlands, waterways and precious urban forest. Yet there is no mention of possible accommodations for terrestrial wildlife passage as part of the study. Per the Federal Highway Administration's (FHWA) own study (https://www.fhwa.dot.gov/publications/research/safety/08034/exec.cfm), "there are an estimated one to two million collisions between cars and large animals every year in the United States. This presents a real danger to human safety as well as wildlife survival. State and local transportation agencies are looking for ways to meet the needs of the traveling public, maintain human safety, and conserve wildlife." Designed in the 1950's and constructed in the 1960's, the I-495 Beltway design did not provide meaningful consideration for the long-term impacts of completely bisecting Prince George's County's stream valleys and forest corridors. Upon its completion in the 1960's, the I-495 Beltway essentially created an impassable manmade barrier essentially bisecting the County's inner and outer beltway communities' natural corridors. With each update of the 1-495 Beltway to add more lanes, this issue has never been addressed within Prince George's County. The ramifications of this bisection go beyond the natural resource impacts of literally trapping millions of terrestrial wildlife within highly urban communities. This bisection has created social inequity issues by preventing the creation of a cohesive and safe bicycle/pedestrian passage within our parkland to connect our inner and urban communities with the natural resource available to our more rural and suburban communities. The I-495 Beltway is a physical barrier which has also created unnecessary conflicts and health issues between humans and wildlife within our urban communities. From the over population of deer and other wildlife without predators unable to natural migrate towards more rural areas, Lyme disease and other vector diseases are now increasingly becoming a health issue with significant Lack of habitat has pushed urban wildlife into increasing conflicts with humans leading to millions of dollars in damage from deer browsing on urban landscapes and already fragile urban forests. Within the Beltway, vehicular safety issues from increased collisions with wildlife is now a systemic problem. The re-envisioning of I-495 and I-270 to include additional lanes to mitigate traffic must also include strategic accommodation for terrestrial wildlife passage and dedicated pedestrian/bike underpass trails. When replacing or expanding waterway conveyance structures impacted by the Project, significant and strategic opportunities exist throughout the Project where our County's stream valleys have been bisected by the 1-495 Beltway. This Project presents the opportunity to make a difference by reconnecting our County's considerable natural resources and mitigate both, environmental and social justice issues, by providing safe pedestrian, bike and wildlife passage between our inner and outer 1-495 Beltway communities without issue of roadway interaction.	While I-495 has limited wildlife passage in the Washington Metropolitan region since the 1960s when it was first built, the current build improvements will not exacerbate this problem. The build improvements associated with the Preferred Alternative include replacing existing structures over waterways to accommodate the added capacity. During construction, impacts associated with noise and vibration may deter wildlife from using the existing passages; however, these will be temporary in nature. No current passage will be cut off by the build improvements. Additionally, the I-495 bridge over Cabin John Creek will be lengthened to better accommodate wildlife passage on the west bank of the creek, as part of the mitigation package for M-NCPPC. See FEIS Chapter 7 for the full mitigation package. Regarding the bicycle and pedestrian passage, refer to Chapter 9, Section 3.3.D for a response to Analysis of Alternatives Retained for Detailed Study and FEIS Chapter 3, Section 3.1.5 and Section 3.2.3.

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10	General	General	Light Pollution: The DEIS did not appear to provide assessment/analysis of night light pollution impacts to the adjacent communities. Light pollution is not just the lights as planned for the roadway but the headlights and/or flashing lights from emergency vehicles or nighttime roadway construction. Light pollution impacts should be assessed for the following Project proposed changes and activities: a. During construction (which will be on-going for years); b. Changes or increased light pollution from additional or changes to exits or elevated ramps into communities; c. Change of location and/or addition of highway lighting and lighting signage; d. Loss of mature tree canopy currently mitigating both sound and light of communities; e. Migratory bird flight paths. Light pollution not only impacts adjacent land uses but also wildlife and migratory bird flights. Project concepts should seek to improve these aspects of the 1-495 Beltway, which were designed and constructed decades ago without consideration of the impact of light pollution on adjacent communities. Additionally, new vehicular headlight technologies provide much greater lumen with subsequent greater light pollution impacts. Given the size of the tree canopy estimated to be lost, it will take years of tree growth to provide the existing visual and environmental benefits equivalent to the approximate 1,500 acres of tree canopy proposed under any build concept. Additionally, with the ever-increasing knowledge of the impacts of climate change, the loss of the 1,500 acres of tree canopy which provide carbon sequestration and storm water management should not be ignored.	A Visual Impact Assessment (VIA) to determine the visual changes that may impact highway travelers and the surrounding neighbors was completed for the FEIS. The VIA followed FHWA's Guidance for Visual Impact Assessment of Highway Projects. Construction would require the removal of vegetation to varying degrees throughout the study corridors. Larger areas of tree removal near the American Legion Bridge on NPS property will be needed for construction and cannot be accommodated elsewhere due to the steep slopes at the edges of the river. As a result of the vegetation removal, the wider interstate, added ramps, retaining walls, and noise barriers would become more visible and prominent from both the dynamic and static views. The static views from adjacent properties, including residential properties, commercial enterprises, parkland/ open space properties, and a number of community resources would experience an impact. Construction of the Preferred Alternative would also require relocation of signage, guardrail, communications towers, and light poles due to the widening of the roadway. These ancillary features would be the same or similar in appearance as the existing interstate features. Under the Preferred Alternative they may be positioned closer to the adjacent land uses (residential areas, commercial enterprises, and community facilities). The design of all highway elements would follow aesthetic and landscaping guidelines that will be proposed by the Developer in consultation with local jurisdictions, private interest groups (private developers or companies), and local community or business associations, as well as local, state, and federal agencies. In general, impacts would be consistent with existing views along the majority of the study corridors because of the dominant presence of the existing interstate facilities, including existing interstate lighting, and the surrounding area’s urbanized nature.

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			(Comment #10 continued) It will require many years of growth before the canopy loss mitigated through saplings and nursery tree stock will be able to provide equivalent values of the tree canopy lost if not effectively provide sound and/or visual barriers, meaningful habitat, air quality benefits and carbon sequestering value until many years after construction will have been completed. Carbon emission from ongoing construction actives, concrete materials and exposed soils should also be considered as part of the DEIS but has not been included as of today.	Avoidance and minimization efforts to reduce forest impacts have occurred during development of the Preferred Alternative. Every reasonable effort was made to minimize disturbance to or removal of forest and trees by minimizing the limits of disturbance (LOD) of the Preferred Alternative. Additional avoidance and minimization efforts will continue through final design, although opportunities for additional avoidance and minimization of impacts to roadside forest and tree resources are limited due to constrained right-of-way and adjacent urban and suburban land uses. Unavoidable impacts to forest from construction of the Preferred Alternative in Maryland will be regulated by MDNR under Maryland Reforestation Law. Forest impacts must be replaced on an acre-for-acre or one-to-one basis on public lands, within two years or three growing seasons of project completion (MDNR, 1997). The Maryland Reforestation Law hierarchy for mitigation options is on-site planting, then off-site planting on public lands within the affected county and/or watershed. If planting is not feasible, there is the option to purchase credits from forest mitigation banks, or to pay into the state Reforestation Fund at a rate of ten cents per square foot or $4,356 per acre. As such, MDOT SHA would first be required to find available public land to be reforested within the affected county and/or watershed. If this is not possible, MDOT SHA could purchase credits in a forest mitigation bank or pay into the MDNR Reforestation Fund that is used by MDNR to plant replacement trees. Forest mitigation banking must be conducted in accordance with the Maryland Forest Conservation Act (Forest Conservation Act [FCA]); MD Natural Resources Code Ann. §5-1601-1613). Since the DEIS, the acreage of forest canopy has been reduced from approximately 1,500 acres to 500 acres. Mitigation for loss of forest canopy is being completing in compliance with the Maryland State Reforestation law. Refer to Chapter 9, Section 3.4.G for a response to climate change considerations.
11	25	Alts Tech Report, Appendix B	Alternatives 8, 9 and 10 that are referenced in this appendix (see below screenshot) present priced managed lanes. These are acceptable on the condition that they include transit buses at no cost to the local government transit bus operators.	Pages 2-25, 2-26, and 2-29 of the DEIS acknowledged that transit buses will be allowed to use the managed lanes toll-free in these three alternatives. Similar language is used in the FEIS in Chapter 3, Section 3.1.4.
12	ES-18	Executive Summary	(Environmental Resources, Consequences and Mitigation) Roadside Tree Law requires the Maryland Department of Natural Resources (DNR) Forest Service permits.	Forest impacts and mitigation will continue to be coordinated with the DNR Forest Service. Since this project is a state funded highway project (requirement states that only $1 in funds needs to spent by the state) with over one acre of forest impact, the project, including any associated off-site environmental mitigation required, will be reviewed under Maryland Reforestation Law (MD Nat Res Code § 5-103 (2019)), rather than the Forest Conservation Act or Maryland Roadside Tree Care Law. The Developer will be responsible for Maryland Reforestation Law compliance.
13	1-8, 1-9	1.4	The chosen language of the Purpose and Need language, which includes the term "trip reliability," automatically excludes all alternatives that do not contain "managed lanes," since it is only through managed lanes that reliability can be obtained. Therefore, the entire DEIS analysis and results were steered towards Managed Lanes only alternatives.	The U.S. Department of Transportation's (USDOT) definition of trip reliability is “the degree of certainty and predictability in travel times on the transportation system." Trip reliability can be measured for all modes of transportation, including light rail, heavy rail, and bus transit. Refer to Chapter 9, Section 3.1 for a response on Purpose and Need and Section 3.2 for Screening of Preliminary Alternatives Process.

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14	General	Chapter 2	It is important to consider breaking the DEIS into three separate studies correlated with the implementation of each respective phase given the long-time spans to advance and construct these various phases. The traffic study and proposed solutions could be divided into separate sections considering the predominant traffic movements (origin and destination), namely: o Traffic from the I-270 corridor in Maryland to Fairfax and Loudon Counties in Virginia; o Traffic between I-95 in Prince George's County and I-270 in Montgomery County; and o Traffic from I-95 in Virginia to I-95 in College Park, Maryland.	Although the Managed Lanes Study FEIS remains a document for the full 48 miles, the Preferred Alternative focuses on Phase 1 South only from the George Washington Memorial Parkway to east of MD 187, I-270 from I-495 to north of I-370, and the I-270 east and west spurs, as identified in the first bullet of this comment. These reduced limits were identified after coordination with resource agencies, the public, and stakeholders to respond directly to feedback received on the DEIS to avoid displacements and impacts to significant environmental resources, and to align the NEPA approval with the planned project phased delivery and permitting approach.
15	General	Chapter 2	Highway safety design elements, such as adequate shoulders and collector/distributor lanes, important aspects of highway design contained in the AASHTO Greenbook, have been removed in all managed lanes alternatives, therefore the proposed solutions could drastically reduce traffic safety design. Higher speeds and the absense of aqequate shoulders and C/D lanes could potentially increase crash sverity throughout the project.	As described in Chapter 5.1 of Appendix D of the DEIS, the alternatives design criteria for the width of the left and right shoulders along I-495 and I-270 is a minimum of 10 feet and meets AASHTO guidance. Access to and from the managed lanes would be provided via direct access ramps at select existing or new interchanges and at-grade auxiliary lanes where ingress to the managed lanes from the general purpose lanes or egress from the managed lanes to the general purpose lanes would be provided. The purpose of a collector-distributor (C-D) road is to eliminate weaving on the main line lanes. The ingress and egress points to and from the managed lanes would be separated. A comprehensive safety evaluation has been performed for the Study and is documented in the Interstate Access Point Approval, Appendix B of the FEIS.
16	General	Chapter 2	East-West traffic operations have been significantly improved by the construction of the ICC (MD 200); which provided relief and additional system capacity on the east-west roadway network. Therefore, future traffic growth could be accommodated within the existing east-west roadway network whose capacity was enhanced with the construction of the ICC. It should be noted that the simulated traffic in this segment is 12% higher than the observed traffic volumes (page 828 or 1556, Appendix C), in other words, the actual demand is lower than the study results.	MDOT SHA agrees that construction of the ICC provided relief on parallel east-west arterials. However, if the spare capacity on these arterials was sufficient to accommodate excess demand on I-495, motorists would use these routes under existing conditions rather than sit in congestion on the top side of the Beltway. Regarding the second paragraph of the comment, the chart referenced on page 828 of Appendix C is taken from a model validation memo prepared by MWCOG. The numbers referenced are a comparison of raw outputs from the base year 2016 travel demand model to observed 2015 counts. These are not the final demand volumes used in the study. They reflect one of the many steps involved in developing forecasts for this project. As noted on page 823 of Appendix C, any discrepancies between estimated and observed data within the base travel demand model were addressed through post-processing by SHA to obtain the projected demand volumes, which is standard practice.

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17	General	Chapter 2	The study must add managed lanes direct full access interchange to serve the University of Maryland Capital Region Medical Center and Largo Town Center regional employment district.	As described in the Supplemental DEIS, the Preferred Alternative was identified after coordination with resource agencies, the public, and stakeholders to respond directly to feedback received on the DEIS to avoid displacements and impacts to significant environmental resources, and to align the NEPA approval with the planned project phased delivery and permitting approach which focused on Phase 1 South only. The Preferred Alternative includes no action or no improvements at this time on I-495 east of the I-270 spur to MD 5 in Prince George's County. Your comment had been identified in the DEIS related to build alternatives that would have spanned the entire study area. Because the University of Maryland Capital Region Medical Center and Largo Town Center regional employment district are located outside the Preferred Alternative limits of build improvements, those impacts have now been completely avoided. Any future proposal for improvements to the remaining parts of I-495 within the study limits, outside of Phase 1 South, would advance separately and would be subject to additional environmental studies, analysis, and collaboration with the public, stakeholders, and agencies.
18	General	Chapter 2	The study should consider the feasibility of constructing a bridge to have direct access from 1-495 onto Woodmore Town Center/Costco which will extend the north south movement between Woodmore Town Center/Costco and Old Landover Mall and in turn relieve the pressure from MD 202 interchange.	As described in the Supplemental DEIS, the Preferred Alternative was identified after coordination with resource agencies, the public, and stakeholders to respond directly to feedback received on the DEIS to avoid displacements and impacts to significant environmental resources, and to align the NEPA approval with the planned project phased delivery and permitting approach which focused on Phase 1 South only. The Preferred Alternative includes no action or no improvements at this time on I-495 east of the I-270 spur to MD 5 in Prince George's County. Your comment had been identified in the DEIS related to build alternatives that would have spanned the entire study area. Because Woodmore Town Center/Costco are located outside the Preferred Alternative limits of build improvements, those impacts have now been completely avoided. Any future proposal for improvements to the remaining parts of I-495 within the study limits, outside of Phase 1 South, would advance separately and would be subject to additional environmental studies, analysis, and collaboration with the public, stakeholders, and agencies.
19	General	Chapter 2	Considering the "new normal" caused by Coronavirus Disease 2019 (Covid-19) that accelerated teleworking, it would be prudent to determine the consequences of the "new normal" prior to continuing with the DEIS, whose results may prove to be inadequate. Once riders return to transit and workers continue to telework to some degree, significant reductions in vehicular traffic may be observed.	Refer to Chapter 9, Section 3.1 for a response on Purpose and Need, effects of the Pandemic, and impacts of teleworking/remote working

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20	General	Chapter 2	The DEIS has considered future growth in 2040 and thus justified the current Alternatives Retained for Detailed Study (ARDS) options. With the advent of Electric Vehicles (EV) and connected vehicles that is likely to dominate the industry in 2040, much attention needs to be geared to evaluate all options based on connected vehicle models. The DEIS needs to compare/reflect futuristic transportation models in terms of adding EV/connected vehicle scenario.	The expected influx of connected and autonomous vehicles (CAVs) will impact future traffic operations on all roads in Maryland, including I-495 and I-270. MDOT SHA participates in a statewide CAV working group (https://mva.maryland.gov/safety/Pages/MarylandCAV.aspx) to stay up to date on the latest research and industry projections. At this time, there are too many unknowns regarding how CAVs could affect demand and capacity to include CAVs directly in the traffic forecasts. Capacity will likely increase as vehicle spacing decreases, but the magnitude of the capacity increase is difficult to quantify based on the current research. Also, the benefits of more vehicles per lane may be offset by a potential increase in demand on the transportation network for some types of auto trips, including "mobility as a service" trips (people that can't afford their own car, but could call an autonomous vehicle for a solo trip) and "deadhead" trips (trips where the autonomous vehicle is empty, traveling to a parking lot or to the next pickup point). Therefore, the traffic projections for this Study apply traditional forecasting techniques, while being cognizant of the potential CAV impacts. However, it is anticipated that this project will be adaptable to accommodate CAVs because the proposed managed lanes will create a controlled environment with physical separation, new pavement, and clear delineations, features that are conducive to CAV use.
21	2-5, 2-6	Section 2.2.4	It is a significant concern that the project Alternatives Retained for Detailed Study (ARDS) does not "enhance connectivity to and between existing transit facilities near the study area." DPW &T strongly supports inclusion of multimodality options in all substantial roadway projects. This will address public safety and congestion relief concerns by getting more vehicles off the roadway and protecting pedestrians, bikers and transit users with the construction of multimodal transportation facilities (e.g., pedestrian bridges, bike lanes, buffered bike lanes, multi-use paths, sidewalks, bus pull outs, bus stop enhancements, street and pedestrian level lighting).	Refer to Chapter 9, Sections 3.3.D for a response to Analysis of Alternatives Retained for Detailed Study.

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22	2-26	2.6.3, 2.6.4, 2.6.5	The alternatives with the best performances were **Alternatives 9 and 10** (highest average speeds, greatest reduction in delays and lowest Travel Time Indexes (TTI). Both alternatives add two priced managed lanes in each direction ofl-495 and 1-270 (whereas Alternative 10 retains the HOV lanes on 1-270). Considering that the managed lanes and general purpose lanes will function and operate independently with a true separation between them, *the general purpose and managed lanes in both alternatives would not contain sufficient and adequate width for safe shoulders as recommended in the AASHTO Green Book Chapter 8 - Pavement and Shoulders* (Managed Lanes: The usable paved width of the right shoulder should be at least 10 feet - NOT provided; and General Purpose Lanes: On freeways of six or more lanes, the usable paved width of the median (or left) shoulder should also be 10 feet- NOT provided), *thereby causing serious safety concerns for all highway users.* Whereas the typical sections of the existing facilities, shown on Figure 2-4 below, contain the necessary shoulders. The study presents the following number of fatal crashes between 2012 and 2017 along 1-495 in Prince Georges' County (pages 1394 to 1429 and pages 1490 to 15 25 of Appendix C) [Table was included]. A total of 44 fatalities occurred on 1-495/1-95 between 2012 and 2017. A design that increases speeds and does not provide proper shoulders per AASHTO Standards can be expected in increase the number of fatal crashes, rather than reduce them as envisioned in the State's and County's Vision Zero programs.	The NCHRP *Guidelines for Implementing Managed Lanes* states that "for concurrent directional lanes, shoulders should be to the left, next to the median barrier" (Chapter 3, Cross Section and Alignment). The design criteria for the width of the left shoulder along I-495 and I-270 is a minimum of 10 feet (Chapter 5.1 of Appendix D of the DEIS) and meets AASHTO guidance. As described in Chapter 5.1 of Appendix D of the DEIS (Alternatives Technical Report), the method of separation between the managed lanes and general purpose lanes was considered during development of the alternatives. Pylon separation was selected because it has the smallest footprint while still providing physical separation between the managed lanes and general purpose lanes. The separation uses pylons (i.e., flexible delineators or tubular markers) in addition to a physical buffer to separate the managed lanes from the general purpose lanes. The pylons will be placed within a four-foot wide buffer. The width of four feet is consistent with the desired buffer width presented in FHWA's *Priced Managed Lanes Guide* (2012). Additionally, a comprehensive safety evaluation has been performed for the Study and is documented in the Interstate Access Point Approval, as required by FHWA, in Appendix B of the FEIS.
23	2-39	2.7.2	In reference to statements such as, "Due to the large amount of impervious area requiring treatment ... BSD could not be met for the Build Alternatives within the study area" and "innovative technologies" will be utilized to reduce the amount of compensatory stormwater management needed and that the POI for "impacts" will be at the SHA right-of-way limits - State and local permitting authorities should accept that the POI be limited to the ROW boundary, but should require Environmental betterment/ uplift within the watershed or sub-watershed boundaries in partnership with County MS4 Permit goals. This would be applicable to other project mitigation needs for impacts proposed to WOTUS and wetlands as well.	This project will comply with the Maryland SWM requirements, which includes both water quality and water quantity requirements. A conceptual stormwater analysis based on preliminary design of the Preferred Alternative that includes both provided and required SWM on a Point-of-Investigation basis is included in the FEIS. The project will be required to control the 10-year storm event to match existing conditions and therefore downstream flooding will not worsen. In addition, the project will be required to provide detailed calculations to show that runoff that leaves the MDOT SHA ROW will be conveyed in a stable manner and not cause downstream erosion or flooding. Environmental Site Design (ESD) must be provided onsite to the maximum extent practicable. If the ESD requirements cannot be met onsite, then offsite locations are allowed to make up the difference. The offsite locations must be within the same 6-digit watershed and provide environmental betterment within the watershed by providing water quality treatment of untreated impervious area. Every effort has been made to provide the full water quality requirements onsite, however, where water quality requirements could not be met onsite, offsite water quality SWM has been identified within the same 6-digit watershed. The final stormwater plan will be submitted to the Maryland Department of Environment once final design is completed, assuming a build alternative is approved in the Record of Decision (ROD).

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24	2-47	2.7.7	There are no stated bike and pedestrian improvements mentioned relative to the portion of the Project within the County. Given the significant length that this Project occupies in the County, major pedestrian and bicycle enhancements are necessary.	As the limits of build improvements do not extend east of the I-270 east spur, there are no bicycle or pedestrian improvements proposed in Prince George's County. Bicycle and pedestrian improvements have been incorporated into the Preferred Alternative within the limits of the build improvements to address the need for accommodating existing and proposed multimodal connectivity and mobility. These improvements include replacing, upgrading or providing new pedestrian/bicycle facilities consistent with local master plans where existing facilities exist or crossroad bridges would be reconstructed due to the Preferred Alternative.
25	General	Chapter 3	For all retained and evaluated alternatives, it was assumed to have the same direct access location. Having the managed lane direct access on arterial roadways will increase the traffic and result more delay on local roadways near that access location. The impact of changing the direct access locations (except system-to-system connections) on the surrounding local roadway network might need to be evaluated as options under each selected alternative.	Refer to Chapter 9, Section 3.4.B for a response to traffic modeling and analysis.
26	General	Chapter 3	The provided Travel Time Index (TTD assumed an average value for a long section of the 1-495 (1-95 to MD 5 is about 20-miles). Within this section there are several interchanges, C-D lanes and different configuration of merge and diverge ramps. Having the average TTI will not clearly identify the congestion problems at the different section of the 1-495. As a result, we would not be sure whether the proposed alternative will solve the problems on some of the specific location of the 1-495. As such it would be better to breakdown in a form that will include section with similar problem as one segment in assessing the different MOEs.	As described in the Supplemental DEIS, the Preferred Alternative was identified after coordination with resource agencies, the public, and stakeholders to respond directly to feedback received on the DEIS to avoid displacements and impacts to significant environmental resources, and to align the NEPA approval with the planned project phased delivery and permitting approach which focused on Phase 1 South only. The Preferred Alternative includes no action or no improvements at this time on I-495 east of the I-270 spur to MD 5 in Prince George's County. Your comment had been identified in the DEIS related to build alternatives that would have spanned the entire study area. Because the segment of I-495 (I-95 to MD 5) is located outside the Preferred Alternative limits of build improvements, those impacts have now been completely avoided. Any future proposal for improvements to the remaining parts of I-495 within the study limits, outside of Phase 1 South, would advance separately and would be subject to additional environmental studies, analysis, and collaboration with the public, stakeholders, and agencies.
27	General	Chapter 3	In Appendix C, Table 5-23 (effect on local roadway network), shows for different jurisdictions have lowered the delays from no build conditions with the exception of alternative 5. For Prince George's County it ranges from 7 .3% to 7 .5%, which alternative is best for the region? It is possible some alternative may be suitable for Washington, DC, but not necessarily for other locations. There should be region-wide (including Washington, DC, Prince George's County and Montgomery County) comparison also, meaning for Washington, DC, Prince George's County and Montgomery County.	Table 3-12 in the DEIS includes the requested region-wide comparison related to the effect on the local roadway network. The results in this table showed that Alternative 9 performed the best, with an overall delay savings of 7.0% region-wide on local arterials, as described at the bottom of page 3-13 in the DEIS.

No.	Page	DEIS Section	Comment	Response
28	General	Chapter 3	Do these analyses have any impact on the proposed diverging diamond interchange (DDI) with Medical Center Drive? If so, please elaborate.	As described in the Supplemental DEIS, the Preferred Alternative was identified after coordination with resource agencies, the public, and stakeholders to respond directly to feedback received on the DEIS to avoid displacements and impacts to significant environmental resources, and to align the NEPA approval with the planned project phased delivery and permitting approach which focused on Phase 1 South only. The Preferred Alternative includes no action or no improvements at this time on I-495 east of the I-270 spur to MD 5 in Prince George's County. Your comment had been identified in the DEIS related to build alternatives that would have spanned the entire study area. Because the proposed interchange with Medical Center Drive is located outside the Preferred Alternative limits of build improvements, those impacts have now been completely avoided. Any future proposal for improvements to the remaining parts of I-495 within the study limits, outside of Phase 1 South, would advance separately and would be subject to additional environmental studies, analysis, and collaboration with the public, stakeholders, and agencies.
29	General	Chapter 3	An alternative could be considered to limiting interchange modifications by limiting improvements to specific interchanges. It is understood that there is a no-build alternative. But in the next 20 years, it is possible to have some interchange modification to address the existing traffic concerns and for instance upgrading some of the less effective ramps (from the perspective of operation, queue, speed, merge and etc.) to be replaced with higher capacity and higher storage ramps or increasing excel/decel/merge areas. For instance, upgrading the following locations: I-495 NB to US-50 EB, or MD-202 EB to I-495 NB (Ramp 9 and 3), etc.	The preliminary direct access locations were identified using the following considerations: • Providing system-to-system connections between major interstates and freeways • Providing access at interchanges with high traffic demand • Providing access throughout the Study Area for reasonable access to the managed lanes • Providing access in consideration of land use and at major transit facilities • Potential community, property, and environmental impacts resulting from providing access. As described in the Supplemental DEIS, the Preferred Alternative was identified after coordination with resource agencies, the public, and stakeholders to respond directly to feedback received on the DEIS to avoid displacements and impacts to significant environmental resources, and to align the NEPA approval with the planned project phased delivery and permitting approach which focused on Phase 1 South only. The Preferred Alternative includes no action or no improvements at this time on I-495 east of the I-270 spur to MD 5 in Prince George's County. Your comment had been identified in the DEIS related to build alternatives that would have spanned the entire study area. Because the interchanges, such as I-495 NB to US-50 EB and MD-202 EB to I-495 NB, are located outside the Preferred Alternative limits of build improvements, those impacts have now been completely avoided. Any future proposal for improvements to the remaining parts of I-495 within the study limits, outside of Phase 1 South, would advance separately and would be subject to additional environmental studies, analysis, and collaboration with the public, stakeholders, and agencies.

No.	Page	DEIS Section	Comment	Response
30	General	Chapter 3	For the current system of interchanges for Medical Center Drive, MD 202 and US 50 is served by collector distributor road. Has it been considered to eliminate the collector-distributor roads and reducing number of merges and diverges in the interchange? If so, please elaborate.	As described in the Supplemental DEIS, the Preferred Alternative was identified after coordination with resource agencies, the public, and stakeholders to respond directly to feedback received on the DEIS to avoid displacements and impacts to significant environmental resources, and to align the NEPA approval with the planned project phased delivery and permitting approach which focused on Phase 1 South only. The Preferred Alternative includes no action or no improvements at this time on I-495 east of the I-270 spur to MD 5 in Prince George's County. Your comment had been identified in the DEIS related to build alternatives that would have spanned the entire study area. Because the interchanges at Medical Center Drive is located outside the Preferred Alternative limits of build improvements, those impacts have now been completely avoided. Any future proposal for improvements to the remaining parts of I-495 within the study limits, outside of Phase 1 South, would advance separately and would be subject to additional environmental studies, analysis, and collaboration with the public, stakeholders, and agencies.
31	General	Chapter 3	The traffic volume in the Appendix C should have been shown for both peak hours in the same page for each interchange.	Traffic volumes are presented in various locations within the Traffic Technical Report (Appendix C of the DEIS). Within Appendix F and Appendix G of the Traffic Technical Report, traffic volumes are shown for all peak hours on the same page because these volumes are presented in table format. However, in Appendix A of the Traffic Technical Report, it was necessary to present the AM peak period and PM peak period volumes separately due to space constraints on the diagrams.
32	General	Chapter 3	The managed lanes will require many new exit and entry ramps from existing roads and highways. These new ramps can potentially add new locations for traffic congestion to accommodate new merge, diverge and weave locations. Has the analysis taken this into consideration? Quantitative assessment of these ramps may be an important factor for alternative comparisons.	Yes, the new exit and entry ramps were considered in the traffic analysis. The traffic operations at each proposed entry and exit ramp were tested for operational sufficiency before being incorporated into the design, and any design options that would result in failing merge, diverge, or weave segments were rejected. A quantitative assessment of these ramps was conducted for the Preferred Alternative as part of the FEIS, and the results are documented in FEIS Appendix B (Interstate Access Point Approval Report).
33	General	Chapter 3	For any of the locations where crash rates are higher than the statewide average rate is there any pattern that were observed? If so, please elaborate.	Trends are summarized in Appendix I of the Traffic Technical Report (Appendix C of the DEIS). In general, rear-end crashes were the most common crash type, which is typically associated with congested conditions. Additional details on existing and future crashes and safety impacts are included in Appendix B of the FEIS (Interstate Access Point Approval Report).

No.	Page	DEIS Section	Comment	Response
34	4-10	4.2.3	The DEIS indicates that Build Alternatives would provide additional roadway capacity to accommodate increased traffic and congestion attributed to projected increased population growth between 2010 and 2030. While Build Alternatives would provide additional roadway capacity on I-495, it is possible that traffic congestion and truck traffic may develop or increase on feeder roads to the highway. For example, communities in Temple Hills have complained about adverse impact of truck traffic on air quality and quality of life. An assessment of how changes in traffic volume and composition along feeder roads would impact communities is recommended.	As noted in Section 3.3.6 of the DEIS, the net impact of the project will be an overall reduction in congestion on the surrounding arterials, despite some localized increases in arterial traffic on the feeder roads near the managed lane access interchanges. The portions of the local road network with an anticipated increase in volumes were evaluated in more detail for the FEIS, and mitigation has been proposed where needed to maintain acceptable operations per FHWA Interstate Access Point Approval guidelines. The results are documented in FEIS Appendix B (Interstate Access Point Approval Report). Additionally, refer to Chapter 9, Section 3.4.B for a response to traffic modeling and analysis.
35	4-34	4.6.3	Regarding the following excerpt from the last two paragraphs on the page: "Larger areas of tree removal near the American Legion Bridge ... to ensure the design is context sensitive" -The study states that the overall conclusion will be only minor change in most of the overall existing viewsheds of the corridor study area given it is a pre-existing highway corridor. It appears the study does not consider the loss of existing vegetation buffer within the confines of the I-495/I-270 corridor to significantly impact the experience of driving within the DEIS corridor. Most of the nearly 1,500 acres of woodland to be lost within the confines of the roadway not only provide visual interest during the drive but serve as sound and light barriers, help with air quality, temperature moderation, provide stormwater management benefits, habitat and carbon sequestration values to help combat climate change.	The section referenced in the comment is related to the visual impacts assessment. The Supplemental EIS provided an update on the potential visual impacts associated with the Preferred Alternative, SDEIS, Chapter 4, Section 4.6. As the preliminary design has advanced on a Preferred Alternative, the visual impact assessment (VIA) has been prepared in accordance with FHWA's Guidance and summarized in the FEIS. The VIA includes renderings at the key park locations to ensure the design is context sensitive. Mitigation for tree removal will be done in accordance with the Maryland Reforestation Law and NPS and M-NCPPC agency requirements, such as on-site planting, when feasible. Mitigation for tree removal will be developed in partnership between MDOT SHA, NPS, and M-NCPPC and documented in the FEIS. Aesthetic treatments on retaining walls and noise barriers and visual barriers are mitigation features that could be considered. During final design, the Developer would develop and follow aesthetic and landscaping guidelines of all highway elements in consultation with the local jurisdictions, private interest groups (private developers or companies), local community or business associations, as well as local, state, and Federal agencies. The goal will be to design highway elements to be sensitive to the context of the surrounding land use, including historic and park resources. Further, mitigation for resource impacts would be developed in accordance with jurisdictional agency requirements, and all final mitigation is documented in the FEIS.
36	4-58	4.8	DEIS correctly indicates that Study area is a non-attainment area for ozone and in attainment area for PM 2.5 (Particulate Matter-2.5).	Comment noted

No.	Page	DEIS Section	Comment	Response
37	4-60	4.8.2	Per DEIS, air monitoring data indicates that the measured ambient air concentrations for CO and PM2.5 in the study area are below National Ambient Air Quality Standards (NAAQS). The air quality data is obtained from monitoring stations in the Washington metropolitan area. For Prince George's County, monitoring stations are in Upper Marlboro and Beltsville. No monitoring station is present near the southernmost segment of I-495 within the study area. Installation of a temporary, if not permanent, air monitoring station in this area would be beneficial in terms of assessing current air quality conditions and initial impacts of increased emissions resulting from higher traffic volumes.	As described in the Supplemental DEIS, the Preferred Alternative was identified after coordination with resource agencies, the public, and stakeholders to respond directly to feedback received on the DEIS to avoid displacements and impacts to significant environmental resources, and to align the NEPA approval with the planned project phased delivery and permitting approach which focused on Phase 1 South only. The Preferred Alternative includes no action or no improvements at this time on I-495 east of the I-270 spur to MD 5 in Prince George's County. Your comment had been identified in the DEIS related to build alternatives that would have spanned the entire study area. Because the southernmost segment of I-495 is located outside the Preferred Alternative limits of build improvements, those impacts have now been completely avoided. Any future proposal for improvements to the remaining parts of I-495 within the study limits, outside of Phase 1 South, would advance separately and would be subject to additional environmental studies, analysis, and collaboration with the public, stakeholders, and agencies.
38	4-87	4.13	Stormwater management should be provided in accordance with the Prince George's County, Stormwater Management Ordinance. Stormwater controls should be designed to handle 2.6 inches of rainfall, providing Channel Protection and Water Quality Volume. Post construction Maintenance and Inspections shall be the responsibility of the State. All design plans and computations for stormwater management devices installed shall be provided to Prince George's County Department of the Environment (DoE) for inventory tracking and local Total Maximum Daily Load (TMDL) load reduction determination. The DEIS has identified 24 communities within the County that will potentially be affected and would have environmental consequences due to the proposed Project. We need to understand the impact of the proposed Project on any completed restoration activities within the proposed area.	As described in the Supplemental DEIS, the Preferred Alternative was identified after coordination with resource agencies, the public, and stakeholders to respond directly to feedback received on the DEIS to avoid displacements and impacts to significant environmental resources, and to align the NEPA approval with the planned project phased delivery and permitting approach which focused on Phase 1 South only. The Preferred Alternative includes no action or no improvements at this time on I-495 east of the I-270 spur to MD 5 in Prince George's County. Your comment had been identified in the DEIS related to build alternatives that would have spanned the entire study area. Because Prince George's County is located outside the Preferred Alternative limits of build improvements, those impacts have now been completely avoided. Any future proposal for improvements to the remaining parts of I-495 within the study limits, outside of Phase 1 South, would advance separately and would be subject to additional environmental studies, analysis, and collaboration with the public, stakeholders, and agencies.
39	4-94	4.14	The DEIS evaluates the impacts to Groundwater Hydrology. The exact location of most private wells within the corridor study boundary cannot be determined. The environmental consequences for groundwater wells that are still in use have not been evaluated. The DEIS states that groundwater wells that are still in use are for commercial and industrial usage and not for drinking water. If private wells are present and in use, the proposed project may impact drinking water.	Based on well location data provided by MDE, impacts to private wells are not anticipated as groundwater wells in the vicinity of the corridor study boundary that are still in use are generally for commercial and industrial usage, and not for drinking water. However, the occurrence of and potential impacts to wells on private property would be assessed during right-of-way negotiations with individual property owners if a private well were to be located within the footprint of the project.

No.	Page	DEIS Section	Comment	Response
40	4-97	4.15	The Prince George's County portion of the corridor study boundary crosses the FEMA 100-year Floodplain along several watersheds to include Paint Branch, Little Paint Branch, Indian Creek, an unnamed tributary to Paint Branch, Beaverdam Creek, Bald Hill Branch, the Southwest Branch of the Western Branch of the Patuxent River, Ritchie Branch and Henson Creek. However, for the DEIS, Floodplain H & H Study has not been done and will be conducted at a later stage of design. Because hydrologic and hydraulic floodplain modeling will be part of the engineering process in later phases of design, a full analysis of potential impacts to the 100-year floodplain of the build alternatives cannot be determined at this time. GIS was used to calculate the acreage of the 100-year floodplains within the Build Alternative LODs. This presents a general overview of impacts but not a complete analysis. One overall concern for Section 4.15 Floodplains is that the DEIS provides a general description of measures that might be used to help minimize adverse impacts that cannot be avoided in the floodplain. While it is noted that the DEIS is not required to include a completed mitigation plan, the mitigation discussion should be more extensive than what is contained here in the DEIS. The Final Environmental Impact Statement must include more detailed discussion on mitigation and Hydrologic & Hydraulic Methodologies to be utilized.	As described in the Supplemental DEIS, the Preferred Alternative was identified after coordination with resource agencies, the public, and stakeholders to respond directly to feedback received on the DEIS to avoid displacements and impacts to significant environmental resources, and to align the NEPA approval with the planned project phased delivery and permitting approach which focused on Phase 1 South only. The Preferred Alternative includes no action or no improvements at this time on I-495 east of the I-270 spur to MD 5 in Prince George's County. Your comment had been identified in the DEIS related to build alternatives that would have spanned the entire study area. Because Prince George's County and its 100-year floodplain is located outside the Preferred Alternative limits of build improvements, those impacts have now been completely avoided. Any future proposal for improvements to the remaining parts of I-495 within the study limits, outside of Phase 1 South, would advance separately and would be subject to additional environmental studies, analysis, and collaboration with the public, stakeholders, and agencies.
41	94	Appendix L	Please explain the following statement as seen on page 94 of Appendix L Section 2.6.4 Avoidance, Minimization, and Mitigation, as it is not clear how it was determined that the "FEMA 100-year floodplain impacts were avoided and minimized to the greatest extent practicable while also minimizing increases to flooding levels" as the DEIS states that a detailed Hydraulic & Hydrologic Study will be prepared during final design and Floodplain analysis will be conducted at a later stage of design.	Physical disturbance and fill in the FEMA 100-year floodplain were avoided and minimized to the greatest extent practicable during the Planning Phase of the project. In addition, planning level considerations of potential flooding level increases have been included in the Preferred Alternative. Additional H&H and floodplain analysis will be conducted during final design and additional minimization measures may be possible to limit floodplain impact even further at that time. The avoidance and minimization process will continue throughout the design process.
42	4-125	4.21.2B	DEIS states that the highest density of low-income populations was in the Landover and Landover Hills EJ Analysis Area Communities and slightly less than half of the Greenbelt EJ Analysis Area Community block groups had a median household income at or below low-income limit for DC Metropolitan Area. The EPA EJ Screen Tool shows the Landover and Landover Hills areas to be in State percentile groups which vary in range between 70 and 100 for NATA cancer risk and respiratory hazard index. Higher volumes of traffic have the potential to increase emissions and exacerbate poor health conditions in the Landover and Landover Hills area. Build alternatives must be carefully and equitably evaluated to ensure that future projects will not compromise public health.	Please refer to Chapter 9, Section 3.4.D for details on the Environmental Justice analysis. As described in the Supplemental DEIS, the Preferred Alternative was identified after coordination with resource agencies, the public, and stakeholders to respond directly to feedback received on the DEIS to avoid displacements and impacts to significant environmental resources, and to align the NEPA approval with the planned project phased delivery and permitting approach which focused on Phase 1 South only. The Preferred Alternative includes no action or no improvements at this time on I-495 east of the I-270 spur to MD 5 in Prince George's County. Your comment had been identified in the DEIS related to build alternatives that would have spanned the entire study area. Because the Landover and Landover Hills EJ Analysis Area Communities are located outside the Preferred Alternative limits of build improvements, those impacts have now been completely avoided. Any future proposal for improvements to the remaining parts of I-495 within the study limits, outside of Phase 1 South, would advance separately and would be subject to additional environmental studies, analysis, and collaboration with the public, stakeholders, and agencies.

No.	Page	DEIS Section	Comment	Response
43	4-134	4.21.4B	DEIS indicates that attendance at Prince George's County events were initially low and SHA received fewer public comments compared to Montgomery County. To enhance engagement of the EJ populations and other underserved populations, it is recommended that MDOT SHA work through schools, CASA de Maryland, community sports organizations and social organizations to reach impacted communities. Underrepresented populations respond well to people with whom they are familiar.	Please refer to FEIS Chapter 5, Section 5.21 and Chapter 9, Section 3.4.D for details on the Environmental Justice analysis including the additional outreach and engagement efforts.
44	4-141	4.21.5B.j	Under Build Alternatives, Prince George's County would potentially lose one business in an EJ population within the Glenarden EJ Analysis Area Community. To varying degrees, loss of businesses is detrimental to the economic vitality of a community. For EJ communities, such loss may be more detrimental than it would be for non-EJ communities. It is recommended that MDOT SHA coordinate early with the Prince George's County Economic Development Corporation to explore ways to avoid the removal of the identified business from the EJ community.	As described in the Supplemental DEIS, the Preferred Alternative was identified after coordination with resource agencies, the public, and stakeholders to respond directly to feedback received on the DEIS to avoid displacements and impacts to significant environmental resources, and to align the NEPA approval with the planned project phased delivery and permitting approach which focused on Phase 1 South only. The Preferred Alternative includes no action or no improvements at this time on I-495 east of the I-270 spur to MD 5 in Prince George's County. Your comment had been identified in the DEIS related to build alternatives that would have spanned the entire study area. Because the Glenarden EJ Analysis Area Community is located outside the Preferred Alternative limits of build improvements, those impacts have now been completely avoided. Any future proposal for improvements to the remaining parts of I-495 within the study limits, outside of Phase 1 South, would advance separately and would be subject to additional environmental studies, analysis, and collaboration with the public, stakeholders, and agencies.
45	4-97	4.15.4	The report speaks to mitigation for impacts to increase in 100-year FEMA floodplain elevations, one option is dedication of easements for impacts. The comment is that the County's regulatory floodplain limits would need to be considered as well. And further, the better option for "mitigation" could be the consideration of 100-year peak flow reductions through implementing structural measures, where feasible, and natural storage improvements, where possible, thru environmental enhancements - overbank storage and wetland creation to filter and reduce discharge peaks. A plan for the need for additional real estate for SWM.	In general, the project will be required to meet applicable County regulations for floodplains. This would have included mitigation for impacting Prince George's County regulatory floodplains; however, the Preferred Alternative now includes no action or no improvements at this time on I-495 east of the I-270 spur to MD 5 in Prince George's County.

No.	Page	DEIS Section	Comment	Response
46	Maps	Appendix D	There are direct impacts to an estimated 69 County Inventoried Street Trees: • Map 143 (Page 144) -11 street trees in the LOD extends north and south on Cherry Ave • Map 144 (Page 145)-15-inch elm tree in LOD on Rhode Island Ave • Map 152 (Page 153) -LOD on COBB Road covers at least 26 street trees • Map 153 (Page 154) -20 street trees in the LOD on Whitefield Chapel Road • Map 154 (page 155)-13-inch red maple in LOD on Jefferson Street • Map 159 (page 160)-9 street trees along Darcy Road within LOD • Map 163 (page 164)-24-inch pin oak along Auth Road within LOD	As described in the Supplemental DEIS, the Preferred Alternative was identified after coordination with resource agencies, the public, and stakeholders to respond directly to feedback received on the DEIS to avoid displacements and impacts to significant environmental resources, and to align the NEPA approval with the planned project phased delivery and permitting approach which focused on Phase 1 South only. The Preferred Alternative includes no action or no improvements at this time on I-495 east of the I-270 spur to MD 5 in Prince George's County. Your comment had been identified in the DEIS related to build alternatives that would have spanned the entire study area. Because the County's Inventoried Street Trees are located outside the Preferred Alternative limits of build improvements, those impacts have now been completely avoided. Any future proposal for improvements to the remaining parts of I-495 within the study limits, outside of Phase 1 South, would advance separately and would be subject to additional environmental studies, analysis, and collaboration with the public, stakeholders, and agencies.
47	Maps	Appendix D	For street tree removal in the County right-of-way, DPW&T requests coordination on where to replace those trees. Those trees are expected to be replaced at a 2: 1 rate in accordance with Road Side Tree Law/Requirements. A comprehensive Street Tree and Landscape Plan should be prepared for the entire stretch of the Managed Lanes improvements. In addition, DPWT would be interested in assisting in identifying communities that would like to utilize street trees as a potential mitigation credit for reforestation before sites outside of the County are considered for reforestation.	As described in the Supplemental DEIS, the Preferred Alternative was identified after coordination with resource agencies, the public, and stakeholders to respond directly to feedback received on the DEIS to avoid displacements and impacts to significant environmental resources, and to align the NEPA approval with the planned project phased delivery and permitting approach which focused on Phase 1 South only. The Preferred Alternative includes no action or no improvements at this time on I-495 east of the I-270 spur to MD 5 in Prince George's County. Your comment had been identified in the DEIS related to build alternatives that would have spanned the entire study area. Because the County street trees are located outside the Preferred Alternative limits of build improvements, those impacts have now been completely avoided. Any future proposal for improvements to the remaining parts of I-495 within the study limits, outside of Phase 1 South, would advance separately and would be subject to additional environmental studies, analysis, and collaboration with the public, stakeholders, and agencies.

PRINCE GEORGE'S COUNTY DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION

MR. BELLAMY: All right. Good afternoon. Good evening once again.

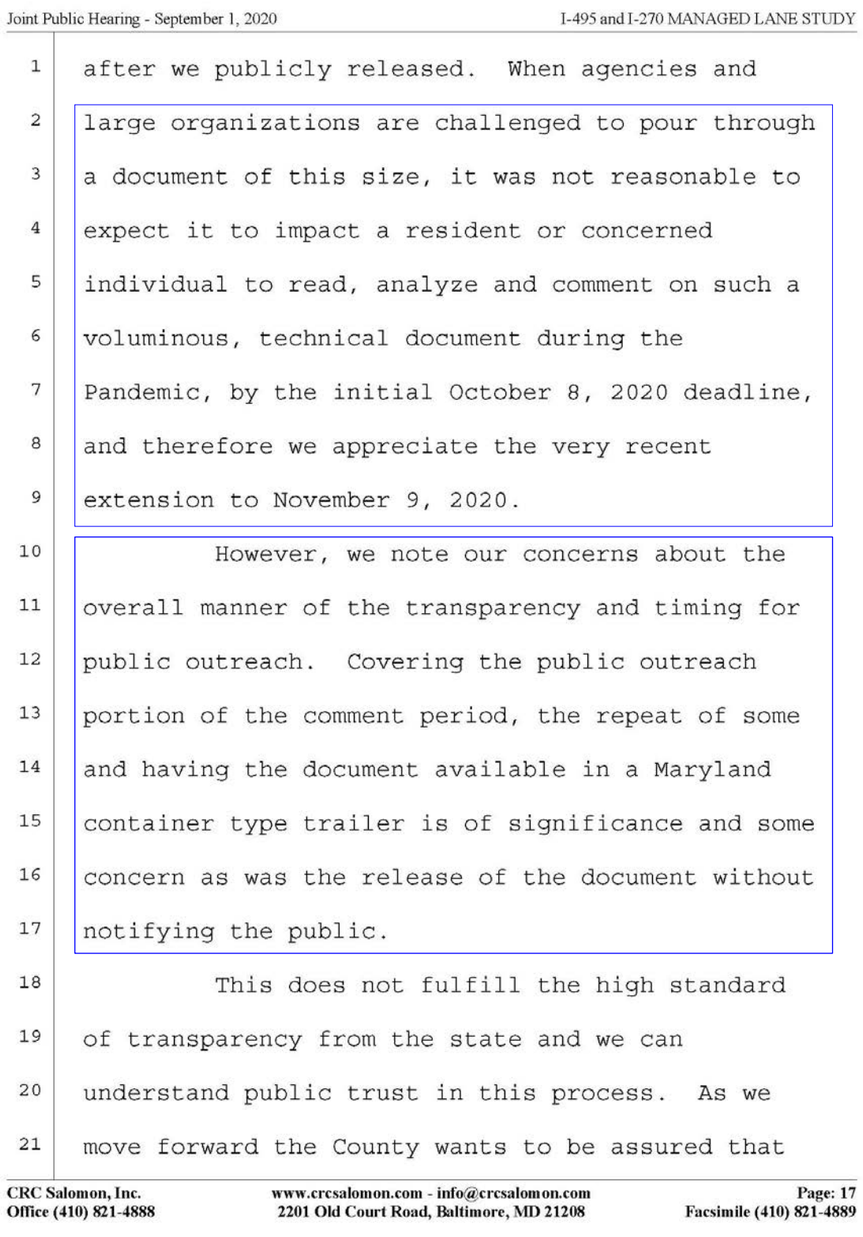
Good afternoon. Terry Bellamy, T-E-R-R-Y. B-E-L-L-A-M-Y. Director of Public Works and Transportation, Prince George's County, 9400 Peppercorn Place, Suite 300, Largo, Maryland.

Prince George's County appreciates the opportunity to speak as the I-495 and I-270 Managed Lanes Study moves toward the National Environmental Protection process and is currently open for comments on the Draft Environmental Statement.

The lengthy document is now nearing 19,000 pages, since additional elements was added

Introduction of speaker, therefore, no response needed.

#1



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after we publicly released. When agencies and large organizations are challenged to pour through a document of this size, it was not reasonable to expect it to impact a resident or concerned individual to read, analyze and comment on such a voluminous, technical document during the Pandemic, by the initial October 8, 2020 deadline, and therefore we appreciate the very recent extension to November 9, 2020.

However, we note our concerns about the overall manner of the transparency and timing for public outreach. Covering the public outreach portion of the comment period, the repeat of some and having the document available in a Maryland container type trailer is of significance and some concern as was the release of the document without notifying the public.

This does not fulfill the high standard of transparency from the state and we can understand public trust in this process. As we move forward the County wants to be assured that

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#2

Response to DEIS Comment #1

Based on requests from the public, elected officials and other stakeholders, MDOT SHA and FHWA extended the comment period on the DEIS from 90 days to 123 days. The full comment period extended from July 10, 2020 to November 9, 2020.

The entire publication with the DEIS was extensive and far more information was provided then is required under NEPA. The Executive Summary provides a short digestible summary of the DEIS and an overview of the entire environmental impact study. The DEIS is organized by chapter to allow an interested person to either comprehensively review the process and the results of the analysis or to focus on a particular area of interest. The Appendices were provided for greater transparency for those who are interested in significantly more detail regarding the analysis performed. This NEPA process and the public outreach and information shared throughout the study exceeds that required under the law.

Response to DEIS Comment #2

MDOT SHA and FHWA made the DEIS and supporting technical documents widely available and accessible in the following manner:

- On the I-495 & I-270 P3 Program webpage (https://495-270-p3.com/deis/)
- Placed copies of the DEIS at 21 locations for individuals to view a paper copy. Due to the public libraries being closed, MDOT SHA procured temporary use of other facilities, including 6 post office lobbies; MDOT SHA and MDTA maintenance offices; a VDOT district office; one storefront, and 8 large freight containers placed in library parking lots in Montgomery and Prince George's counties, as well as one in Washington, DC. The use of the freight containers allowed for broad distribution of the DEIS and supporting documents in central locations within communities near sidewalks and transit along the I-495 and I-270 corridors.

The public notification of the DEIS availability was widely published on July 10, 2020, the date the DEIS was published, in a variety of manners, to reach both a wide public audience as well as specific notice to individuals, underserved communities and elected officials in the study area, including:

- Federal Register
- MDOT SHA website and study website
- Press Release(s)
- Emails to study email list and elected officials within the study area
- Flyers
- Newspaper Print Ads
- Radio Ads
- Online Digital Ads
- Facebook and Instagram
- Targeted outreach to underserved communities

Refer to DEIS Chapter 7-Section 7.2.4.

the state is meeting the impacted individuals and provided ample and accessible notification throughout the process.

The need for a holistic approach that reduced congestion, incorporate the transit in support of balanced sustainable development. We wish to cooperate reasonably to address the American Legion Bridge and the Woodrow Wilson Bridge through this project, bringing Maryland and Virginia together on both sides of the Potomac River.

It is critical that the project is context sensitive, making a more appropriate connection to establish and plan major economic drivers as specified by the County through the I-495 corridor. And it's a project timely and just west of MD 5 Interchange. We continue to believe that additional work is needed to ensure a complete and comprehensive project.

The County has strongly advocated for connectivity from Managed Lane Project to major

#3

Response to DEIS Comment #3
As described in the Supplemental DEIS, the Preferred Alternative was identified after coordination with resource agencies, the public, and stakeholders to respond directly to feedback received on the DEIS to avoid displacements and impacts to significant environmental resources, and to align the NEPA approval with the planned project phased delivery and permitting approach which focused on Phase 1 South only.

The Preferred Alternative includes two new, high-occupancy toll (HOT) managed lanes on I-495 in each direction from the George Washington Memorial Parkway to east of MD 187 and conversion of the one existing high-occupancy vehicle lane in each direction on I-270 to a HOT managed lane and adding one new HOT managed lane in each direction on I-270 from I-495 to north of I-370 and on the I-270 east and west spurs.

The Preferred Alternative includes no action or no improvements at this time on I-495 east of the I-270 spur to MD 5 in Prince George's County.

Your comment had been identified in the DEIS related to build alternatives that would have spanned the entire study area. Prince George's County including the interchanges at MD 202, MD 214 and the Woodrow Wilson Bridge are now located outside the Preferred Alternative limits of build improvements. Any future proposal for improvements to the remaining parts of I-495 within the study limits, outside of Phase 1 South, would advance separately and would be subject to additional environmental studies, analysis, and collaboration with the public, stakeholders, and agencies including Prince George's County.

#4

Response to DEIS Comment #4
Refer to response for Comment #3.

#5

employment, activity centers, and especially downtown Largo would contain a University of Maryland Capitol Region Medical Center slated to open next year.

The new draft contained pulsar assets and points in 202 and 214, however, insufficient to address the need of the community.

MR. BING: Just a reminder. You need to wrap up. That's three minutes.

MR. BELLAMY: Aren't we doing three to five?

MR. BING: Three minutes.

MR. BELLAMY: Thank you.

Response to DEIS Comment #5
Refer to response for Comment #3.

MR. WEISSBERG: Victor Weissberg. V-I-C-T-O-R. W-E-I-S-S-B-E-R-G. Okay. The address is 9400 Peppercorn Place, Upper Marlboro, Maryland 20774.

I'm Victor Weissberg on behalf of the Prince George's County Department of Public Works and Transportation. We appreciate the opportunity to speak at this hearing on the I-495 and I-270 Managed Lanes Study and go through the National Environmental Protection Act process and is currently open for comment on the DEIS.

The lengthy document is now nearing 19,000 pages and some additional elements were added then after the initial release. While agencies and large organizations are challenged to

Introduction of speaker, therefore, no response needed.

#6

pour through a document of that size, it's an even greater burden to the average impacted resident or concerned individuals or analyzing comment on such a voluminous technical document. Especially during the Pandemic.

We do appreciate that. Some recognition has been made and that timeline has been extended from October 8th to November 9th and we do appreciate that.

#7

We do also have some concerns with some elements of the outreach process. Just the length of the document itself is just no more than what I think an average citizen can realistically be expected to sift through, and, you know, I understand that some of the documents, since buildings such as libraries and things like that were not open during the Pandemic, if there were metal containers that could get really hot that were in parking lots, that was a concern as well. We just don't think that that's up to the level of standard and transparency that we've come to

Response to DEIS Comment #6
Refer to response to Comment #1.

Response to DEIS Comment #7
Refer to response to Comment #2.

expect from the state.

So as we move forward, the County does want to be assured that the state is meeting with impacted individuals and providing ample and acceptable notification throughout the process and we really want to emphasize that point.

#8

The County does reiterate the need for a holistic approach that reduces congestion and incorporates transit and supports a balanced, sustainable development. We wish to collaborate regionally to address the American Legion Bridge and Woodrow Wilson bridge through this project, bringing Maryland and Virginia together on both sides of the Potomac River. It is critical that the project is context sensitive and will make more appropriate connections to establish major economic drivers as specified by the County throughout the 1-495 corridor and has been recognized by the state (inaudible) projects as imperative for both the County and the State. The project currently is just west of the MD 5

#9

Response to DEIS Comment #8
Refer to response for Comment #3.

Response to DEIS Comment #9
Refer to response for Comment #8. We also note your important comment that the project be designed in a context sensitive manner.

#10

Interchange, we continue to believe that additional work is needed to ensure complete and comprehensive project development.

The County has strongly advocated for connectivity through major employment and activity centers, especially downtown Largo, which contains for the University of Maryland Capitol Region Medical Center which is slated to open next year.

The most recent Draft of the DEIS does contain partial access points at MD 202 and MD 215, but not direct access at Arena Drive. The partial access is a concern because we can see it's just a ride in and a ride out, and would not actually allow for the predominant flow creating the most accessible access to downtown Largo and the Regional Hospital. (Inaudible) Interchange to serve that employment center.

#11

The County believes it is critical for this Project to be comprehensive and multimodal and appreciate extending the Public Transportation opportunity are being considered within the

Response to DEIS Comment #10
Refer to response for Comment #8.

Response to DEIS Comment #11
The purpose and need statement recognizes that "accommodating existing and proposed multimodal mobility and connectivity" is an important need to address the severe congestion on I-495 and I-270 and was added to address specific comments received during scoping. In support of this identified need, multi-modal alternatives and elements were analyzed through the alternative's development process. Several standalone transit alternatives (e.g., Alternatives 14A, 14B, 14C, and 15) were considered in the preliminary range of alternatives and were dismissed from further consideration based on a number of factors, most significantly of which was the inability of standalone transit to address long-term traffic growth. That is, no standalone transit alternative would be able to attract and carry sufficient ridership to address the severe congestion on these facilities.

Although these standalone transit alternatives were found to not meet the Study's Purpose and Need (consistent with findings of the multiple planning studies summarized above), multiple transit elements have been incorporated into the Study to address the identified multi-modal and connectivity needs in the study area as a complement to the congestion relief offered by the proposed highway improvements. These include:

- Allowing bus transit usage of the high occupancy toll (HOT) managed lanes toll free to provide an increase in speed of travel, assurance of a reliable trip, and connection to local bus service/systems on arterials that directly connect to urban and suburban activity centers;
- Accommodating direct and indirect connections from the HOT managed lanes to existing transit stations and planned Transit Oriented Development at the Shady Grove Metro, Twinbrook Metro, Montgomery Mall Transit Center, and Medical Center Metro

MDOT SHA has also committed to certain regional transit improvements to enhance existing and planned transit and support new opportunities for regional transit service including increasing the number of new bus bays at WMATA Shady Grove Metrorail Station and increasing parking at the Westfield Montgomery Mall Transit Center.

The Transit Service Coordination Report completed in coordination with the Transit Work Group was made available to the public in June 2020 on the P3 Program website (https://495-270-p3.com/transitbenefits/) and it is being used to inform affected counties and transit providers about the significant transit opportunities offered by managed lanes such as strategies to maximize the benefits of reliability and speed; provide a basis for the evaluation and prioritization of future capital and operating needs in the service area; and initiate discussions about ways to incorporate regional transit services into the P3 Program. The I-495/ALB Transit/TDM Final Report and Plan was completed in March 2021 and was posted online. (http://www.drpt.virginia.gov/media/3375/i495_alb_transittdm_study_finalreport_030521_combined.pdf)

It identified a series of potential investment packages to provide new mobility choices to service bi-state travel. Each package outlined a combination of transit service elements, technology enhancements, Commuter Assistance Programs, and parking needs. The investment packages offered options to move more people across the American Legion Bridge (ALB) in fewer vehicles.

#11 cont.

Project's framework. But we really think that needs a lot more flushing out and a lot more development.

We must ensure the transit connects key communities and economic centers without the circumference of the Capitol Beltway. While transit is mentioned in the document, greater specificity and comprehensive integration of transit is needed.

MR. BING: You have a couple seconds left.

MR. WEISSBERG: Okay.

#12

Okay. And in addition the project must enable bicycle and pedestrian connectivity along the alignment, particularly at points like the continuation of the Hansen Creek Trail, the Central Avenue Connector Trail, and the (inaudible) trail. Thank you.

On August 11, 2021, in accordance with Maryland law, MDOT and MDTA received approval from the Board of Public Works to award the Phase 1 P3 Agreement to the Selected Proposer. In accordance with the terms and conditions of the Phase 1 P3 Agreement, MDOT and the Developer will further advance predevelopment work on Phase 1 South, which includes I-495 from the vicinity of the George Washington Memorial Parkway across the American Legion Bridge to I-270 and on I-270 up to I-370. The Developer has proposed an estimated $300 million for transit services in Montgomery County over the operating term of Phase 1 South. Moreover, upon financial close of the Section P3 Agreement for Phase 1 South, MDOT has committed to fund not less than $60 million for design and permitting of high-priority transit investments in Montgomery County and committed to deliver the Metropolitan Grove Bus Operations and Maintenance facility including the necessary bus fleet. Refer to FEIS Chapter 3, Section 3.2.

Response to DEIS Comment #12

Bicycle and pedestrian improvements have also been incorporated into the Preferred Alternative to address the need for accommodating existing and proposed multimodal connectivity and mobility. These improvements include replacing, upgrading, or providing new pedestrian/bicycle facilities consistent with local master plans where existing facilities exist or crossroad bridges would be reconstructed due to the Preferred Alternative. Additional commitments as part of the Preferred Alternative that support multi modal travel options include the following:

- Constructing a new shared use path across the American Legion Bridge to connect facilities in Maryland and Virginia to support regional multimodal travel.
- Lengthening the I-270 bridge over Tuckerman Lane to accommodate future pedestrian/bicycle facilities along Tuckerman Lane. Montgomery County would construct the master plan recommended facilities along Tuckerman Lane in the future.
- Constructing new side paths across MD 190 over I-495 and construct new bike lanes in both directions on MD 190.
- Constructing a new sidewalk along the west side of Seven Locks Road under I-495 to reestablish the historic connection between the First Agape AME Zion Church and Morningstar Tabernacle No. 88 Moses Hall and Cemetery.

Constructing a new sidewalk along the west side of Seven Locks Road under I-495 to connect the First Agape AME Zion Church and Morningstar Tabernacle No. 88 Moses Hall and Cemetery. As the limits of build improvements for the Preferred Alternative do not extend east of the I-270 east spur, no bicycle or pedestrian improvements are proposed in Prince George's County.

Refer to FEIS Chapter 3, Section 3.1.5 for the pedestrian and bicycle facilities included with the Preferred Alternative.

From: Weissberg, Victor <VWeissberg@co.pg.md.us>
Sent: Monday, November 9, 2020 6:43 PM
To: MLS-NEPA-P3
Cc: Bellamy, Terry L.; Harris, Martin L.; Lasker, Andrea; Hackett, Semia L.; Mazzara, Kate; Glass, Courtney D.; Gwendolyn Clerkley
Subject: Prince George's County Technical Staff Comments
Attachments: MDOT I-495 and I-270 P3 Managed Lanes Project - Prince George's County - Comments final.pdf

Dear MDOT P3 Team,

Thank you for the opportunity to provide comments to the I-495 and I-270 P3 Managed Lanes Project DEIS. Attached please find the technical staff review and comments from Prince George's County Executive Branch Agencies (the Department of Public Works and Transportation, the Department of Permitting Inspections and Enforcement, and the Department of the Environment). These comments were also provided through the Project portal on Friday, November 6. In addition, please find the link below to the joint signature letter from County Executive Alsobrooks and County Council Chair Turner, which was approved on October 27, 2020 providing official comments/statement to the DEIS and the project itself on behalf of the County Executive and the County Council. That letter also included as an attachment, the M-NCPPC approved comments of October 21, 2020.

file:///C:/Users/VWeissberg/AppData/Local/Microsoft/Windows/INetCache/IE/1M86TJN5/I-495%20I-270%20Managed%20Lanes%20Joint%20Letter.pdf

Please let me know if you have any questions or concerns,

Sincerely,

Victor Weissberg

Major Projects Manager,
Prince George's County Department of Public Works and Transportation
240.508.9813

Responses to all comments that follow are provided in the table before the public testimony.

Review of the I-495 and I-270 P3 Managed Lanes Study
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Angela D. Alsobrooks, County Executive
Terry L. Bellamy, Director

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Terry L. Bellamy
Director

Opening Statement:

Prince George's County (the County) and the Prince George's County Department of Public Works and Transportation (DPW&T) have compiled comprehensive comments in response to the Maryland Department of Transportation I-495 and I-270 Managed Lanes Study P3 Program (the Project) Draft Environmental Impact Statement (DEIS)/Draft Section 4(f) Evaluation. The County's comments include concerns regarding transportation, permitting and environmental technical matters and issues identified led by staff at DPW&T, with input from the Department of the Environment (DOE) and the Department of Permitting, Enforcement and Inspections (DPIE). This submission also acknowledges the comprehensive comments and analysis provided by the **Maryland-National Capital Park and Planning Commission** (M-NCPPC).

General Comments:

Pedestrian and Bicyclist Infrastructure

The DEIS states that existing sidewalks, bicycle facilities, side paths, bicycle shoulders and bikeways impacted by the Project will be replaced in kind. DPW&T requests that these facilities be replaced and **improved** to meet the needs of a broader group of pedestrians and bicyclists to include persons of all ages and abilities to improve safety, access, connectivity and comfort for all users.

Woodrow Wilson Memorial Bridge

We recommend that the scope of work be extended to the Woodrow Wilson Memorial Bridge. This is a major gateway into the State of Maryland and Prince George's County.

MD 214 (Central Avenue) Interchange:

A fully operational interchange with complete bicycle and pedestrian access across MD 214 is necessary at this interchange. This is critical to connecting these heavily developed communities (both commercial and residential) found on both sides of the Capital Beltway. Moreover, this will provide a logical point of connection for the Central Avenue Connector multi-use trail currently under design by (M-NCPPC).

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MD 202 (Landover Road) Interchange:

A fully operational interchange with complete bicycle and pedestrian access across MD 202 is necessary at this Interchange. This is critical to connecting communities bisected by the Capital Beltway with no real pedestrian or bicycle access across at the nearest interchange (MD 202 – Landover Road). This has not only created shortfalls in pedestrian and bicyclist connectivity but has created economic disparities between both sides of the Capital Beltway by denying the older communities inside the Capital Beltway safe, multi-modal access to the developing area just outside the Capital Beltway. Moreover, development of the Largo Town Center (east side of the Capital Beltway at the MD 202 interchange) and development of the abandoned Landover Mall (west side of the Capital Beltway at the MD 202 interchange) is reliant upon a fully functional interchange. This will also be the home of the new University of Maryland Medical Center, where speedy and reliable access may be a matter of life and death.

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Evarts Street Crossing:

Construction of a vehicular, but at the very least, a pedestrian bridge across the Capital Beltway is critical to connecting communities bisected by the Capital Beltway with no real pedestrian or bicycle access across at the nearest interchange (MD 202 – Landover Road). This has not only created shortfalls in pedestrian and bicyclist connectivity but has created economic disparities between both sides of the Capital Beltway by denying the older communities inside the Capital Beltway safe, multi-modal access to the developing area just outside the Capital Beltway.

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Cherry Hill Road Crossing:

Construction of a vehicular, but at the very least a pedestrian, bridge across the Capital Beltway is critical to connecting communities bisected by the Capital Beltway with no real pedestrian or bicycle access across at the nearest interchange (MD 202 – Landover Road). This has not only created shortfalls in pedestrian and bicyclist connectivity but has created economic disparities between both sides of the Capital Beltway by denying the older communities inside the Capital Beltway safe, multi-modal access to the developing area just outside the Capital Beltway.

Greenbelt Metro Interchange:

DPW&T appreciates the access modifications at this interchange as displayed on this web map and depicted below as completion of full access to this site is critical. This supports transit-oriented development (TOD) in this area and provides opportunities for multimodal improvements.

Environmental Impacts

Considered a significant oversight by DoE in the EIS scope, there are two environmental impacts neither addressed nor considered for improvement by any of the built alternatives or mentioned as part of any project mitigation measures:

1. Wildlife Passage and Community Reconnection
2. Light Pollution

Wildlife Passage and Community Reconnection

The complexity of light pollution and wildlife passage cannot be addressed as an afterthought. Though there is some mention of aquatic life passage in the Avoidance, Minimization, and Impacts Report, there was no mention of any planned passage for terrestrial life. The project has multiple planned

improvements crossing over and through wetlands, waterways and precious urban forest. Yet there is no mention of possible accommodations for terrestrial wildlife passage as part of the study. Per the Federal Highway Administration's (FHWA) own study (https://www.fhwa.dot.gov/publications/research/safety/08034/exec.cfm), "there are an estimated one to two million collisions between cars and large animals every year in the United States. This presents a real danger to human safety as well as wildlife survival. State and local transportation agencies are looking for ways to meet the needs of the traveling public, maintain human safety, and conserve wildlife."

Designed in the 1950's and constructed in the 1960's, the I-495 Beltway design did not provide meaningful consideration for the long-term impacts of completely bisecting Prince George's County's stream valleys and forest corridors. Upon its completion in the 1960's, the I-495 Beltway essentially created an impassable manmade barrier essentially bisecting the County's inner and outer beltway communities' natural corridors. With each update of the I-495 Beltway to add more lanes, this issue has never been addressed within Prince George's County. The ramifications of this bisection go beyond the natural resource impacts of literally trapping millions of terrestrial wildlife within highly urban communities. This bisection has created social inequity issues by preventing the creation of a cohesive and safe bicycle/pedestrian passage within our parkland to connect our inner and urban communities with the natural resource available to our more rural and suburban communities.

The I-495 Beltway is a physical barrier which has also created unnecessary conflicts and health issues between humans and wildlife within our urban communities. From the over population of deer and other wildlife without predators unable to natural migrate towards more rural areas, Lyme disease and other vector diseases are now increasingly becoming a health issue with significant impact to our urban communities. Lack of habitat has pushed urban wildlife into increasing conflicts with humans leading to millions of dollars in damage from deer browsing on urban landscapes and already fragile urban forests. Within the Beltway, vehicular safety issues from increased collisions with wildlife is now a systemic problem.

The re-envisioning of I-495 and I-270 to include additional lanes to mitigate traffic must also include strategic accommodation for terrestrial wildlife passage and dedicated pedestrian/bike underpass trails. When replacing or expanding waterway conveyance structures impacted by the Project, significant and strategic opportunities exist throughout the Project where our County's stream valleys have been bisected by the I-495 Beltway. This Project presents the opportunity to make a difference by reconnecting our County's considerable natural resources and mitigate both, environmental and social justice issues, by providing safe pedestrian, bike and wildlife passage between our inner and outer I-495 Beltway communities without issue of roadway interaction.

Light Pollution

The DEIS did not appear to provide assessment/analysis of night light pollution impacts to the adjacent communities. Light pollution is not just the lights as planned for the roadway but the headlights and/or flashing lights from emergency vehicles or nighttime roadway construction.

Light pollution impacts should be assessed for the following Project proposed changes and activities:

a. During construction (which will be on-going for years);
b. Changes or increased light pollution from additional or changes to exits or elevated ramps into communities;
c. Change of location and/or addition of highway lighting and lighting signage;
d. Loss of mature tree canopy currently mitigating both sound and light of communities;
e. Migratory bird flight paths.

Light pollution not only impacts adjacent land uses but also wildlife and migratory bird flights. Project concepts should seek to improve these aspects of the I-495 Beltway, which were designed and constructed decades ago without consideration of the impact of light pollution on adjacent communities. Additionally, new vehicular headlight technologies provide much greater lumen with subsequent greater light pollution impacts. Given the size of the tree canopy estimated to be lost, it will take years of tree growth to provide the existing visual and environmental benefits equivalent to the approximate 1,500 acres of tree canopy proposed under any build concept.

Additionally, with the ever-increasing knowledge of the impacts of climate change, the loss of the 1,500 acres of tree canopy which provide carbon sequestration and storm water management should not be ignored. It will require many years of growth before the canopy loss mitigated through saplings and nursery tree stock will be able to provide equivalent values of the tree canopy lost if not effectively provide sound and/or visual barriers, meaningful habitat, air quality benefits and carbon sequestering value until many years after construction will have been completed. Carbon emission from ongoing construction actives, concrete materials and exposed soils should also be considered as part of the DEIS but has not been included as of today.

Mitigation measures to lessen the visual impact of the improvements would be considered as appropriate. Vegetation removal would be minimized and additional landscaping may be incorporated. Areas identified for tree removal on the National Park Service (NPS) property will be further refined as the Study progresses. Mitigation for tree removal will be done in accordance with the Maryland Reforestation Law which requires on-site planting, when feasible. Aesthetic treatments on retaining walls and noise barriers is a mitigation treatment that could be considered in final design.

The design of all highway elements would follow aesthetic and landscaping guidelines that will be developed in consultation with the design team, local jurisdictions, private interest groups (private developers or companies), local community or business associations, as well as, local, state and federal agencies. The goal will be to design highway elements to be sensitive to the context of the surrounding land use, including historic and park resources. Further, mitigation for resource impacts would be developed in accordance with jurisdictional agency requirements.

APPENDIX B, ALTERNATIVES TECHNICAL REPORT

- **Page 25, PDF-page 32 of 157**: Alternatives 8, 9 and 10 that are referenced in this appendix (see below screenshot) present priced managed lanes. These are acceptable on the condition that they include transit buses at no cost to the local government transit bus operators.

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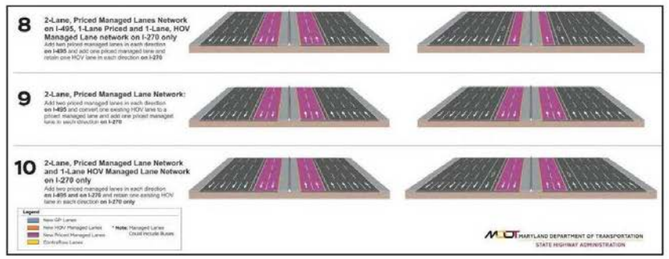

Executive Summary Comments:

Page ES-18 (Environmental Resources, Consequences and Mitigation)

Roadside Tree Law requires the Maryland Department of Natural Resources (DNR) Forest Service permits.

Chapter 1 Comments:

Pages 1-8 to 1-9 (Section 1.4 Enhance Trip Reliability)

The chosen language of the Purpose and Need language, which includes the term "trip reliability," automatically excludes all alternatives that do not contain "managed lanes," since it is only through managed lanes that reliability can be obtained. Therefore, the entire DEIS analysis and results were steered towards Managed Lanes only alternatives.

Chapter 2 Comments:

General

- It is important to consider breaking the DEIS into three separate studies correlated with the implementation of each respective phase given the long-time spans to advance and construct these various phases. The traffic study and proposed solutions could be divided into separate sections considering the predominant traffic movements (origin and destination), namely:
    - Traffic from the I-270 corridor in Maryland to Fairfax and Loudon Counties in Virginia;
    - Traffic between I-95 in Prince George's County and I-270 in Montgomery County; and
    - Traffic from I-95 in Virginia to I-95 in College Park, Maryland.
- Highway safety design elements, such as adequate shoulders and collector/distributor lanes, important aspects of highway design contained in the AASHTO Greenbook, have been removed in all managed lanes alternatives, therefore the proposed solutions could drastically reduce traffic safety design. Higher

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speeds and the absence of adequate shoulders and C/D lanes could potentially increase crash severity throughout the project.

- East-West traffic operations have been significantly improved by the construction of the ICC (MD 200); which provided relief and additional system capacity on the east-west roadway network. Therefore, future traffic growth could be accommodated within the existing east-west roadway network whose capacity was enhanced with the construction of the ICC. It should be noted that the simulated traffic in this segment is 12% higher than the observed traffic volumes (page 828 or 1556, Appendix C), in other words, the actual demand is lower than the study results.
- The study must add managed lanes direct full access interchange to serve the University of Maryland Capital Region Medical Center and Largo Town Center regional employment district.
- The study should consider the feasibility of constructing a bridge to have direct access from I-495 onto Woodmore Town Center/Costco which will extend the north south movement between Woodmore Town Center/Costco and Old Landover Mall and in turn relieve the pressure from MD 202 interchange.
- Considering the "new normal" caused by Coronavirus Disease 2019 (Covid-19) that accelerated teleworking, it would be prudent to determine the consequences of the "new normal" prior to continuing with the DEIS, whose results may prove to be inadequate. Once riders return to transit and workers continue to telework to some degree, significant reductions in vehicular traffic may be observed.
- The DEIS has considered future growth in 2040 and thus justified the current Alternatives Retained for Detailed Study (ARDS) options. With the advent of Electric Vehicles (EV) and connected vehicles that is likely to dominate the industry in 2040, much attention needs to be geared to evaluate all options based on connected vehicle models. The DEIS needs to compare/reflect futuristic transportation models in terms of adding EV/connected vehicle scenario.

Pages 2-5 and 2-6 (Section 2.2.4 Multimodal Connectivity)

It is a significant concern that the project Alternatives Retained for Detailed Study (ARDS) does not "enhance connectivity to and between existing transit facilities near the study area." DPW&T strongly supports inclusion of multimodality options in all substantial roadway projects. This will address public safety and congestion relief concerns by getting more vehicles off the roadway and protecting pedestrians, bikers and transit users with the construction of multimodal transportation facilities (e.g., pedestrian bridges, bike lanes, buffered bike lanes, multi-use paths, sidewalks, bus pull outs, bus stop enhancements, street and pedestrian level lighting).

Page 2-26 (Section 2.6.3, 2.6.4, 2.6.5)

The alternatives with the best performances were **Alternatives 9 and 10** (highest average speeds, greatest reduction in delays and lowest Travel Time Indexes (TTI). Both alternatives add two priced managed lanes in each direction of I-495 and I-270 (whereas Alternative 10 retains the HOV lanes on I-270). Considering that the managed lanes and general purpose lanes will function and operate independently with a true separation between them, ***the general purpose and managed lanes in both alternatives would not contain sufficient and adequate width for safe shoulders as recommended in the AASHTO Green Book***

Chapter 8 – Pavement and Shoulders (Managed Lanes: The usable paved width of the right shoulder should be at least 10 feet – NOT provided; and General Purpose Lanes: On freeways of six or more lanes, the usable paved width of the median (or left) shoulder should also be 10 feet – NOT provided), *thereby causing serious safety concerns for all highway users*. Whereas the typical sections of the existing facilities, shown on Figure 2-4 below, contain the necessary shoulders.

The study presents the following number of fatal crashes between 2012 and 2017 along I-495 in Prince Georges' County (pages 1394 to 1429 and pages 1490 to 1525 of Appendix C):

Segment	Fatal Crashes
MD 650 to I-95	3
MD 210 to I-295	1
MD 414 to MD 210	5
MD 5 to MD 414	3
Forestville Road to MD 5	5
MD 4 to Forestville Road	2
Marlboro Road to MD 4	3
MD 214 to Marlboro Road	6
Arena Drive to MD 214	3
MD 202 to Arena Drive	1
US 50 to MD 202	4
MD 450 to MD 50	2
MD 295 to MD 450	3
MD 201 to MD 295	0
US 1 to MD 201	2
I-495 to US 1	0
I-495 to I-95X	1
TOTAL	**44**

A total of 44 fatalities occurred on I-495/I-95 between 2012 and 2017. A design that increases speeds and does not provide proper shoulders per AASHTO Standards can be expected in increase the number of fatal crashes, rather than reduce them as envisioned in the State's and County's Vision Zero programs.

Page 2-39 (Section 2.7.2 Stormwater Management Consideration)

In reference to statements such as, "Due to the large amount of impervious area requiring treatment… ESD could not be met for the Build Alternatives within the study area" and "innovative technologies" will be utilized to reduce the amount of compensatory stormwater management needed and that the POI for "impacts" will be at the SHA right-of-way limits – State and local permitting authorities should accept that the POI be limited to the ROW boundary, but should require Environmental betterment / uplift within the watershed or sub-watershed boundaries in partnership with County MS4 Permit goals. This would be applicable to other project mitigation needs for impacts proposed to WOTUS and wetlands as well.

Page 2-47 (Section 2.7.7 Pedestrian and Bicycle Considerations)

There are no stated bike and pedestrian improvements mentioned relative to the portion of the Project within the County. Given the significant length that this Project occupies in the County, major pedestrian and bicycle enhancements are necessary.

Chapter 3 Comments:

- For all retained and evaluated alternatives, it was assumed to have the same direct access location. Having the managed lane direct access on arterial roadways will increase the traffic and result more delay on local roadways near that access location. The impact of changing the direct access locations (except system-to-system connections) on the surrounding local roadway network might need to be evaluated as options under each selected alternative.

- The provided Travel Time Index (TTI) assumed an average value for a long section of the I-495 (I-95 to MD 5 is about 20-miles). Within this section there are several interchanges, C-D lanes and different configuration of merge and diverge ramps. Having the average TTI will not clearly identify the congestion problems at the different section of the I-495. As a result, we would not be sure whether the proposed alternative will solve the problems on some of the specific location of the I-495. As such it would be better to breakdown in a form that will include section with similar problem as one segment in assessing the different MOEs.

- In Appendix C, Table 5-23 (effect on local roadway network), shows for different jurisdictions have lowered the delays from no build conditions with the exception of alternative 5. For Prince George's County it ranges from 7.3% to 7.5%, which alternative is best for the region? It is possible some alternative may be suitable for Washington, DC, but not necessarily for other locations. There should be region-wide (including Washington, DC, Prince George's County and Montgomery County) comparison also, meaning for Washington, DC, Prince George's County and Montgomery County.

- Do these analyses have any impact on the proposed diverging diamond interchange (DDI) with Medical Center Drive? If so, please elaborate.

- An alternative could be considered to limiting interchange modifications by limiting improvements to specific interchanges. It is understood that there is a no-build alternative. But in the next 20 years, it is possible to have some interchange modification to address the existing traffic concerns and for instance upgrading some of the less effective ramps (from the perspective of operation, queue, speed, merge and etc.) to be replaced with higher capacity and higher storage ramps or increasing excel/decel/merge areas. For instance, upgrading the following locations: I-495 NB to US-50 EB, or MD-202 EB to I-495 NB (Ramp 9 and 3), etc.
- For the current system of interchanges for Medical Center Drive, MD 202 and US 50 is served by collector distributor road. Has it been considered to eliminate the collector-distributor roads and reducing number of merges and diverges in the interchange? If so, please elaborate.

- The traffic volume in the Appendix C should have been shown for both peak hours in the same page for each interchange.

- The managed lanes will require many new exit and entry ramps from existing roads and highways. These new ramps can potentially add new locations for traffic congestion to accommodate new merge, diverge and weave locations. Has the analysis taken this into consideration? Quantitative assessment of these ramps may be an important factor for alternative comparisons.

- For any of the locations where crash rates are higher than the statewide average rate is there any pattern that were observed? If so, please elaborate.

Chapter 4 and Related Appendices Comments:

Page 4-10 (Section 4.2.3 Environmental Consequences)

The DEIS indicates that Build Alternatives would provide additional roadway capacity to accommodate increased traffic and congestion attributed to projected increased population growth between 2010 and 2030.

While Build Alternatives would provide additional roadway capacity on I-495, it is possible that traffic congestion and truck traffic may develop or increase on feeder roads to the highway. For example, communities in Temple Hills have complained about adverse impact of truck traffic on air quality and quality of life. An assessment of how changes in traffic volume and composition along feeder roads would impact communities is recommended.

Page 4-34 (Section 4.6.3 Environmental Consequences)

Regarding the following excerpt from the last two paragraphs on the page: "Larger areas of tree removal near the American Legion Bridge…to ensure the design is context sensitive" – The study states that the overall conclusion will be only minor change in most of the overall existing viewsheds of the corridor study area given it is a pre-existing highway corridor. It appears the study does not consider the loss of existing vegetation buffer within the confines of the I-495/I-270 corridor to significantly impact the experience of driving within the DEIS corridor. Most of the nearly 1,500 acres of woodland to be lost within the confines of the roadway not only provide visual interest during the drive but serve as sound and light barriers, help with air quality, temperature moderation, provide stormwater management benefits, habitat and carbon sequestration values to help combat climate change.

Page 4-58 (Section 4.8 Introduction and Methodology)

DEIS correctly indicates that Study area is a non-attainment area for ozone and in attainment area for $PM_{2.5}$ (Particulate Matter-2.5).

Page 4-60 (Section 4.8.2 Affected Environment)

Per DEIS, air monitoring data indicates that the measured ambient air concentrations for CO and $PM_{2.5}$ in the study area are below National Ambient Air Quality Standards (NAAQS). The air quality data is obtained from monitoring stations in the Washington metropolitan area. For Prince George's County, monitoring stations are in Upper Marlboro and Beltsville. No monitoring station is present near the southernmost segment of I-495 within the study area. Installation of a temporary, if not permanent, air monitoring station in this area would be beneficial in terms of assessing current air quality conditions and initial impacts of increased emissions resulting from higher traffic volumes.

Page 4-87 (Section 4.13 Watersheds and Surface Water Quality)

Stormwater management should be provided in accordance with the Prince George's County, Stormwater Management Ordinance. Stormwater controls should be designed to handle 2.6 inches of rainfall,

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providing Channel Protection and Water Quality Volume. Post construction Maintenance and Inspections shall be the responsibility of the State.

All design plans and computations for stormwater management devices installed shall be provided to Prince George's County Department of the Environment (DoE) for inventory tracking and local Total Maximum Daily Load (TMDL) load reduction determination.

The DEIS has identified 24 communities within the County that will potentially be affected and would have environmental consequences due to the proposed Project. We need to understand the impact of the proposed Project on any completed restoration activities within the proposed area.

Page 4-94 (Section 4.14 Groundwater Hydrology)

The DEIS evaluates the impacts to Groundwater Hydrology. The exact location of most private wells within the corridor study boundary cannot be determined. The environmental consequences for groundwater wells that are still in use have not been evaluated. The DEIS states that groundwater wells that are still in use are for commercial and industrial usage and not for drinking water. If private wells are present and in use, the proposed project may impact drinking water.

Page 4-97 (Section 4.15 Floodplains)

The Prince George's County portion of the corridor study boundary crosses the FEMA 100-year Floodplain along several watersheds to include Paint Branch, Little Paint Branch, Indian Creek, an unnamed tributary to Paint Branch, Beaverdam Creek, Bald Hill Branch, the Southwest Branch of the Western Branch of the Patuxent River, Ritchie Branch and Henson Creek. However, for the DEIS, Floodplain H & H Study has not been done and will be conducted at a later stage of design. Because hydrologic and hydraulic floodplain modeling will be part of the engineering process in later phases of design, a full analysis of potential impacts to the 100-year floodplain of the build alternatives cannot be determined at this time. GIS was used to calculate the acreage of the 100-year floodplains within the Build Alternative LODs. This presents a general overview of impacts but not a complete analysis.

One overall concern for Section 4.15 Floodplains is that the DEIS provides a general description of measures that might be used to help minimize adverse impacts that cannot be avoided in the floodplain. While it is noted that the DEIS is not required to include a completed mitigation plan, the mitigation discussion should be more extensive than what is contained here in the DEIS. The Final Environmental Impact Statement must include more detailed discussion on mitigation and Hydrologic & Hydraulic Methodologies to be utilized.

Page 94 (Appendix L)

Please explain the following statement as seen on page 94 of Appendix L Section 2.6.4 Avoidance, Minimization, and Mitigation, as it is not clear how it was determined that the "FEMA 100-year floodplain impacts were avoided and minimized to the greatest extent practicable while also minimizing increases to flooding levels" as the DEIS states that a detailed Hydraulic & Hydrologic Study will be prepared during final design and Floodplain analysis will be conducted at a later stage of design.

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Page 4-125 (Section 4.21.2B Existing Low-Income Populations)

DEIS states that the highest density of low-income populations was in the Landover and Landover Hills EJ Analysis Area Communities and slightly less than half of the Greenbelt EJ Analysis Area Community block groups had a median household income at or below low-income limit for DC Metropolitan Area. The EPA EJ Screen Tool shows the Landover and Landover Hills areas to be in State percentile groups which vary in range between 70 and 100 for NATA cancer risk and respiratory hazard index. Higher volumes of traffic have the potential to increase emissions and exacerbate poor health conditions in the Landover and Landover Hills area. Build alternatives must be carefully and equitably evaluated to ensure that future projects will not compromise public health.

Page 4-134 (Section 4.21.4B Coordinated Local Outreach and Demonstrated Engagement of Traditionally Underrepresented Populations)

DEIS indicates that attendance at Prince George's County events were initially low and SHA received fewer public comments compared to Montgomery County. To enhance engagement of the EJ populations and other underserved populations, it is recommended that MDOT SHA work through schools, CASA de Maryland, community sports organizations and social organizations to reach impacted communities. Underrepresented populations respond well to people with whom they are familiar.

Page 4-141 (Section 4.21.5B.j Identification of Beneficial and Adverse Effects to Environmental Justice Populations, Build Alternative, Community Cohesion/Isolation and Quality of Life)

Under Build Alternatives, Prince George's County would potentially lose one business in an EJ population within the Glenarden EJ Analysis Area Community. To varying degrees, loss of businesses is detrimental to the economic vitality of a community. For EJ communities, such loss may be more detrimental than it would be for non-EJ communities. It is recommended that MDOT SHA coordinate early with the Prince George's County Economic Development Corporation to explore ways to avoid the removal of the identified business from the EJ community.

Page 4-97 (Section 4.15.4 Mitigation)

The report speaks to mitigation for impacts to increase in 100-year FEMA floodplain elevations, one option is dedication of easements for impacts. The comment is that the County's regulatory floodplain limits would need to be considered as well. And further, the better option for "mitigation" could be the consideration of 100-year peak flow reductions through implementing structural measures, where feasible, and natural storage improvements, where possible, thru environmental enhancements – overbank storage and wetland creation to filter and reduce discharge peaks. A plan for the need for additional real estate for SWM.

Maps 143, 144, 152, 153, 154, 159, 163 (Appendix D Environmental Resource Mapping)

There are direct impacts to an estimated 69 County Inventoried Street Trees:

- Map 143 (Page 144) – 11 street trees in the LOD extends north and south on Cherry Ave
- Map 144 (Page 145) – 15-inch elm tree in LOD on Rhode Island Ave
- Map 152 (Page 153) – LOD on COBB Road covers at least 26 street trees
- Map 153 (Page 154) – 20 street trees in the LOD on Whitefield Chapel Road
- Map 154 (page 155) – 13-inch red maple in LOD on Jefferson Street
- Map 159 (page 160) – 9 street trees along Darcy Road within LOD

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- Map 163 (page 164) – 24-inch pin oak along Auth Road within LOD

For street tree removal in the County right-of-way, DPW&T requests coordination on where to replace those trees. Those trees are expected to be replaced at a 2:1 rate in accordance with Road Side Tree Law/Requirements. A comprehensive Street Tree and Landscape Plan should be prepared for the entire stretch of the Managed Lanes improvements. In addition, DPWT would be interested in assisting in identifying communities that would like to utilize street trees as a potential mitigation credit for reforestation before sites outside of the County are considered for reforestation.

UNITED STATES GENERAL SERVICES ADMINISTRATION

GSA NCR Review and Summary_I-495/I-270 Managed Lanes Study DEIS

	OPDQ Discipline	Next Step
	Architecture	
	Engineering	
	Historic Preservation	
X	NEPA	
X	Planning	
	Sustainability	
	Fine Arts	
	Interiors	
	Accessibility	

Project Manager please make note of the items checked in the table on the left

APPROVED		Submission is approved to proceed to next milestone.
APPROVED - With Corrections Noted	X	Make corrections noted to submission and approved to proceed to next project milestone.
REVISE and RESUBMIT		Address comments, revise, and resubmit the submission for review.
REJECTED		Submission is rejected based on our comments and requires resubmission

Comments Due Back: 2020-11-09

Submission Date:		Project Manager: MDOT (SHA)	
Completed Date:	2020-11-09	Project Title: I-495/I-270 Managed Lanes Study DEIS	
OPDQ Design Lead:	Marc Poling	Building Name: N/A	
		SOW, Phase/Submission: Draft EIS	

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ITEM	DISCIPLINE	PAGE	SECTION	COMMENT	AUTHOR	DATE	ORG
1	Planning		General	GSA is generally disappointed with the lack of exploration of BRT. An alternative that includes a bus- or transit-only lane in each direction must be introduced or kept on the table. Not doing so would miss a crucial and much needed opportunity to introduce rapid transit to the I-495/I-270 study area. There is no reason why rapid transit cannot be blended with interstate (car/truck heavy and car/truck centric) infrastructure.	T. Terrio/Marc Poling	2020-11-09	OPDQ
2	Planning		General	GSA is interested to see, in design, further detail for how to enhance regional bus services by allowing more direct bus or HOV only on/off ramps to the managed lanes.	T. Terrio	2020-11-09	OPDQ
3	Planning		General	MDOT (SHA) should coordinate expansion of 495 and 270 with GSA's future expansion of leased and owned space for federal facilities in the Region to alleviate existing road congestion and for allternative modes of travel to reduce traffic. The ICC/MD200 has room for greater capacity and it is appropriate for the study to consider utilizing the ICC/MD200 corridor to a greater extent.	Rodney Moulden/Marc Poling	2020-11-09	OPDQ
4	Planning		General	MDOT (SHA) should include GSA in the early coordination of 495/I-270 Managed Lanes Study concept development plans that are in close proximity to GSA facilities.	Rodney Moulden	2020-11-09	OPDQ
5	Planning		General	We recommend engaging with GSA's Historic Preservation Officers for a review of Sections 4.7.2 and 4.7.3 to make sure there are no historic resources belonging to GSA that will see any impacts. (Note: Tables 4-11 and 4-13 identify historic resources where adverse effects are anticipated to occur OR are unknown.)	Marc Poling	2020-11-09	OPDQ
6	Planning		General	An alternative that includes only a two-lane expansion should be kept on the table. Not only will the four-lane expansion alternatives encroach more on parkland, but will increase "induced demand" in comparison to the two-lane expansion alternatives. Current interstate-related traffic research and data has proven this.	Marc Poling	2020-11-09	OPDQ

Notes: GSA NCR has reviewed this project for regulatory compliance and quality assurance. The project manager and professional consultants performing this project are responsible for regulatory compliance and quality control.

Response to DEIS Comment #1

Based on past regional studies and public comments, MDOT SHA considered four separate stand-alone Transit Alternatives: 14A (heavy rail), 14B (light rail), 14C (fixed guideway Bus Rapid Transit, off current alignment), and 15 (dedicated Bus Managed Lanes on existing alignment). None of these options considered independently would address the existing congestion or long-term traffic growth on I-495 and I-270.

With respect to either heavy or light rail alternatives, the 2002 Capital Beltway/Purple Line Study (2002 Study) analyzed circumferential rail corridors (approximately 42 miles) along the Capital Beltway Corridor. This analysis concluded: "Congestion on the Beltway itself as well as demand on the other transportation facilities is so great that no single highway or transit improvement will provide significant relief to the long-term demand," (2002 Study, page S-17). It was also recommended that studies of the highway and transit alternatives be conducted separately because transit operates more efficiently if it serves areas where people live and work. Refer to *DEIS, Appendix B*. This analysis also stressed the basic fact that people do not live and work "on the Beltway" and that transit options generally service users by directly connecting activity (housing and work) locations.

Importantly, major stand-alone transit projects in the study area have been approved and are in the process of being constructed. For example, the US Federal Transit Administration approved the Record of Decision for the Purple Line project in 2014. The project, a 16-mile two-track light rail system, accommodates significant demand for transit within this priority corridor and offers connections between two ends of the WMATA Red Line, and to key destinations such as the downtown Silver Spring Transit Center and the University of Maryland, inside the Capital Beltway. The NEPA study for the Purple Line also considered a heavy rail option, but that alternative was dropped from detailed review because of several factors that are also present in this project: prohibitive capital costs, lack of overall cost-effectiveness due to high construction costs, as well as greater environmental impacts related to the intensity of construction of new heavy rail infrastructure.

While the MLS standalone transit alternatives were screened from detailed study, MDOT SHA retained multiple transit elements as part of the Preferred Alternative. (See Purpose and Need response.) With respect to the preliminary bus alternatives, for example, because buses will be able to use the new managed lanes, transit trips will be improved by providing a free flow condition for such service with no additional property and environmental impacts associated with a fixed guideway Bus Rapid Transit (BRT) off alignment alternative. This could help revive express bus service from Montgomery County to Tysons Corner, Virginia, two significant activity and economic centers. Moreover, this aspect of the proposed action also satisfies other Purpose and Need elements by increasing travel speed and assuring greater trip reliability for bus service.

Response to DEIS Comment #2

In total, access to and from the HOT managed lanes in Phase 1 South is proposed at nine locations (five existing interchanges, two new interchanges, and two exchange ramp locations), as well as at the termini of the HOT lanes along I-495 west of MD 187, along the I-270 east spur south of MD 187, and along I-270 north of I-370. Buses will be allowed to use the HOT managed lanes and all direct access ramps toll-free. Four of the proposed nine direct access ramp locations connect to existing transit stations including Shady Grove Metro, Twinbrook Metro, Rockville Metro, and Westfield Montgomery Mall Transit Center.

Transit elements were also considered by the multi-agency Transit Work Group and the joint I-495/American Legion Bridge Transit/Transportation Demand Management (TDM) study by the Virginia Department of Trail and Public Transit and the Maryland Department of Transportation Maryland Transit Administration. Both of these initiatives resulted in reports. The Transit Service Coordination Report completed in coordination with the Transit Work Group was made available to the public in June 2020 on the P3 Program website (https://495-270-p3.com/transitbenefits/) and it is being used to inform affected counties and transit providers about the significant transit opportunities offered by managed lanes such as strategies to maximize the benefits of reliability and speed; provide a basis for the evaluation and prioritization of future capital and operating needs in the service area; and initiate discussions about ways to incorporate regional transit services into the P3 Program.

The I-495/ALB Transit/TDM Final Report and Plan was completed in March 2021 and was posted online. (http://www.drpt.virginia.gov/media/3375/i495_alb_transittdm_study_finalreport_030521_combined.pdf) It identified a series of potential investment packages to provide new mobility choices to service bi-state travel. Each package outlined a combination of transit service elements, technology enhancements, Commuter Assistance Programs, and parking needs. The investment packages offered options to move more people across the American Legion Bridge (ALB) in fewer vehicles.

Outside of NEPA and as part of the Developer's proposal, an estimated $300 million for transit services in Montgomery County over the operating term of Phase 1 South was proposed. Moreover, MDOT has committed, upon financial close of the Section P3 Agreement for Phase 1 South, to fund not less than $60 million for design and permitting of high priority transit investments in Montgomery County and committed to deliver the Metropolitan Grove Bus Operations and Maintenance facility, including the necessary bus fleet.

Response to DEIS Comment #3

Following the Spring 2019 Public Workshops and agency meetings, several Cooperating and Participating Agencies requested that MDOT SHA evaluate an alternative that would provide an alternate route for travelers to use MD 200 (Intercounty Connector (ICC)) instead of the top side of I-495 between I-270 and I-95 to avoid or reduce impacts to significant, regulated resources, and residential relocations to that section of I-495. *Refer to DEIS, Appendix B.*

The MD 200 Diversion Alternative had several key features: (1) no widening or capacity improvements along I-495 between the I-270 West Spur and I-95; (2) consideration of Transportation System Management (TSM)/Transportation Demand Management (TDM) improvements along I-495 between the I-270 East Spur and I-95, (3) two managed lanes added in each direction on I-495 from south of George Washington Memorial Parkway to the I-270 West Spur, and in each direction on I-495 between I-95 and west of MD 5; (4) conversion of the one existing high-occupancy vehicle (HOV) lane in each direction to a HOT managed lane on I-270 and the addition of one HOT managed lane in each direction on I-270, resulting in a two-lane managed lanes network on I-270, and (5) two managed lanes added in each direction of I-95 between MD 200 and I-495. *Refer to DEIS, Appendix B.*

Importantly, this new Screened Alternative was developed and analyzed with input from the agencies to the same level of detail and using the same approach for the anticipated limits of disturbance as all other screened alternatives. Detailed traffic analyses were completed on the MD 200 Diversion Alternative to assist in evaluating its ability to meet the Study's Purpose and Need, again, using the same methodology that was used for the Screened Alternatives.

Two key underlying factors played a large role in evaluating whether the MD 200 Diversion Alternative could meet the project Purpose and Need. First, the portion of I-495 proposed to be excluded from any improvements is one of the most congested and least reliable segments of highway in Maryland. While the presumed TSM/TDM measures could slightly improve congestion there, that portion of I-495 would still experience severe congestion. Second, while MD 200 currently has adequate capacity to accommodate the potential for diverted traffic, it was anticipated that portions of MD 200 would reach capacity during peak travel periods by 2040. Therefore, the ability to handle diverted traffic would be limited in the future.

Traffic analysis was performed using the same key traffic metric applied to all Screened Alternatives (System-Wide Delay, Corridor Travel Time and Speed, Level of Service (LOS), Travel Time Index (TTI), Vehicle Throughput; and Effect on Local Roadway Network). After this comprehensive evaluation, MDOT SHA determined that the MD 200 Alternative would not address the Study's Purpose and Need of accommodating long-term traffic growth, enhancing trip reliability, or improving the movement of goods and services. In fact, the MD 200 Diversion Alternative was the worst performing of the various Build Alternatives and provided the least congestion relief benefits. *Refer to DEIS, Chapter 2 and DEIS, Appendix B*. Moreover, the preliminary financial analysis conducted for this screening process, which was the same process used for all the Screened Alternatives, showed that the MD 200 Diversion Alternative would require a payment by the state of approximately $310 million.

Therefore, even recognizing that the MD 200 Diversion Alternative would have avoided all residential displacements and all but one business displacement and would have reduced the number of parks and historic resources potentially impacted by the proposed action, MDOT SHA's final conclusion, concurred in by the FHWA, was that this alternative would not adequately meet the established Purpose and Need. Comments received on the DEIS and SDEIS questioned this conclusion on the basis that the purpose and need for the ICC Study in 2006 was to reduce congestion on I-495. However, the needs for the ICC Study were related to increasing mobility and safety, facilitating the movement of goods and services, serving existing and future development patterns, and advancing homeland security and did not include addressing congestion on I-495. Although the Preferred Alternative, as described in the SDEIS and this FEIS, also avoids improvements to the topside of I-495 and provides less improvement to traffic operations when compared to the DEIS Build Alternatives, it was chosen based, in part, in response to comments received from the public, partner agencies and stakeholders who indicated a strong preference for eliminating property and environmental impacts on the top and east sides of I-495. While MDOT SHA and FHWA recognize that congestion would be present during the afternoon peak period on I-270 southbound and the I-495 inner loop in the design year 2045 due to downstream bottlenecks outside of Phase 1 South, the Preferred Alternative would provide tangible operational benefits to the system including significantly increasing throughput across the ALB and the southern section of I-270 while reducing congestion.

Response to DEIS Comment #4

As described in the Supplemental DEIS, the Preferred Alternative was identified after coordination with resource agencies, the public, and stakeholders to respond directly to feedback received on the DEIS to avoid displacements and impacts to significant environmental resources, and to align the NEPA approval with the planned project phased delivery and permitting approach which focused on Phase 1 South only.

The Preferred Alternative includes two new, high-occupancy toll (HOT) managed lanes on I-495 in each direction from the George Washington Memorial Parkway to east of MD 187 and conversion of the one existing high-occupancy vehicle lane in each direction on I-270 to a HOT managed lane and adding one new HOT managed lane in each direction on I-270 from I-495 to north of I-370 and on the I-270 east and west spurs.

The Preferred Alternative includes no action or no improvements at this time on I-495 east of the I-270 spur to MD 5 in Prince George's County.

Your comment had been identified in the DEIS related to build alternatives that would have spanned the entire study area. Because the GSA facilities are located outside the Preferred Alternative limits of build improvements, any impacts have now been completely avoided. Any future proposal for improvements to the remaining parts of I-495 within the study limits, outside of Phase 1 South, would advance separately and would be subject to additional environmental studies, analysis, and collaboration with the public, stakeholders, and agencies.

Response to DEIS Comment #5

MDOT SHA included Nancy Witherill of GSA in early consulting party correspondence. Because the GSA facilities are located outside the Preferred Alternative limits of build improvements, per Response to DEIS Comment #4, any impacts to GSA facilities have now been completely avoided.

Response to DEIS Comment #6

The Study's Purpose and Need allowed for a robust analysis of a full range of alternative that included evaluation of non-tolled, general purpose lanes, tolled managed lanes, transit only, and a combination of highway and transit improvements. Initially a range of 15 preliminary alternatives were identified and analyzed based on previous studies and planning documents, input from the public and federal, state, and local agencies during the scoping process. Additional alternatives were identified and analyzed in direct response to public and agency comments for a total of eighteen different alternatives.

Refer to DEIS Chapter 2 and Appendix B-Alternatives Technical Report for detailed information on the alternatives screening process including the results of Alternatives 3, 4 and 5 which were considered one lane alternatives (total two lanes).

Also refer to Chapter 9, Section 3.2.B for a response to Alternatives Not Retained for Detailed Study.

Regarding induced demand, MDOT's goal was not to increase demand, but to address current and predicted demand. Current and predicted demand in the study area could be met by adding many additional new lanes and while MDOT SHA considered adding additional general purpose lanes during the alternatives screening process, the agency ultimately recommended capacity via managed lanes. This fundamental difference is crucial to understanding why the traffic analysis (in FEIS, Appendix A) shows only a very modest increase in traffic through induced demand.

Most importantly, managed lanes do a better job at regulating overall travel demand, including induced demand, due to dynamic pricing. As explained in the DEIS, dynamic pricing means that as the demand for use of the managed lanes increases, the rate charged for access to the lanes also increases. This tends to regulate uses of the managed lanes to permit them to operate in free-flow conditions and at general speed of at least 45 miles per hour. Refer to Chapter 9, Section 3.6 for more detail on the speed requirements.

The traffic analysis shows that there could be some induced demand as a result of this project, but the impact will be small (less than 1 percent increase in vehicle miles traveled (VMT) in the region) and those effects are fully accounted for in the regional traffic models used in the Study developed by MWCOG. Even with these effects, the proposed managed lanes would reduce regional congestion delays and significantly improve travel times along both the I-495 and I-270 in Phase I South limits and on local roads throughout the study area.

This relatively modest increase of induced demand can also be explained by several factors related to existing conditions in the study area. First, there is very little undeveloped land surrounding the Phase 1 South study area and, therefore, the traffic models account for the negligible anticipated land use changes. As the traffic analysis details, new housing areas and/or places of employment (usual causes of additional trip generation) are not expected to be developed as a result of the project. Because the area in and around Phase 1 South is largely built out or otherwise protected from additional development, the likelihood of additional new trips is minimized.

Second, as the existing conditions and the anticipated No Build scenarios described in the DEIS demonstrate, the highway facilities in question are already extremely congested. The anticipated future growth of traffic demand is already very high, and largely dependent on already anticipated population and economic growth in the region. Congestion on I-495 also reflects not only local trips, but a substantial regional demand for travel on that facility as a major connection for I-95. As a result, most of the travel demand for these roads already exists.

Finally, important elements of the proposed action itself will have the tendency to reduce induced demand. Specifically, there is a strong potential for the managed lanes to encourage transit usage for express buses, as well as HOV and car and/or vanpool rides. This potential should assist in managing induced demand for single-occupancy vehicles. As the DEIS, SDEIS, and FEIS describe, the transit and HOV elements of the proposed action can serve more person-trips without necessarily increasing the number of vehicles (induced demand) in the system as a whole.

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UNITED STATES NAVY, NAVAL FACILITIES ENGINEERING COMMAND (NAVFAC)

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND WASHINGTON
1314 HARWOOD STREET SE
WASHINGTON NAVY YARD DC 20374-5018

IN REPLY REFER TO
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Ser EV/053
4 Nov 2020

Ms. Lisa B. Choplin, DBIA
Director, I-495 and I-270 P3 Project Office
Maryland Department of Transportation State Highway Administration
707 North Calvert Street
Mail Stop P-601
Baltimore, MD 21201

Dear Ms. Choplin,

SUBJECT: NAVFAC WASHINGTON COMMENTS FOR I-495 AND I-270 P-3 PROJECT ENVIRONMENTAL IMPACT STATEMENT – DRAFT ENVIRONMENTAL IMPACT STATEMENT

Naval Facilities Engineering Command (NAVFAC) Washington staff members have reviewed the Draft Environmental Impact Statement (DEIS) for the above mentioned project. Based on that review, NAVFAC Washington forwards the following comments:

#1 a. On page 4-18 of the DEIS, MDOT asserts that they will acquire Navy property for the construction of the toll roads. As previously stated in multiple letters from NSA Bethesda to MDOT, the Navy will not cede any property for the construction of this toll road. Doing so would compromise Antiterrorism/Force Protection guidelines and impact the NSA Bethesda mission. The Navy requests the project remove the property acquisition from consideration in the build alternatives analysis.

#2 b. In light of the ongoing disagreement over right-of-way (ROW) and fence line impacts (see previous Navy correspondence from NSA Bethesda), the Navy finds the MDOT analysis of the construction footprint to be woefully inadequate. The information in the DEIS shows disruption to mission critical infrastructure in the NE corner of NSA Bethesda without providing any technical information on the potential size and duration of those impacts. Impacts to those facilities and infrastructure will cause an immediate degradation of installation support services to Walter Reed National Military Medical Center and mission critical construction. This is a direct contradiction to the DEIS assumption that "impacts to any individual facility would not alter access to or use of the hospital facilities."

#3 c. The project has the potential to affect the Naval Support Facility (NSF) Carderock property. Concerns include increased traffic during construction, flooding from construction outside the fence line, and potential encroachment due to storage of construction materials in close

Response to DEIS Comments #1 and #2
As described in the Supplemental DEIS (SDEIS), the Preferred Alternative was identified after coordination with resource agencies, the public, and stakeholders to respond directly to feedback received on the DEIS to avoid displacements and impacts to significant environmental resources, and to align the NEPA approval with the planned project phased delivery and permitting approach which focused on Phase 1 South only.

The Preferred Alternative includes two new, high-occupancy toll (HOT) managed lanes on I-495 in each direction from the George Washington Memorial Parkway to east of MD 187 and conversion of the one existing high-occupancy vehicle lane in each direction on I-270 to a HOT managed lane and adding one new HOT managed lane in each direction on I-270 from I-495 to north of I-370 and on the I-270 east and west spurs.

The Preferred Alternative includes no action and/or no improvements at this time on I-495 east of the I-270 spur to MD 5 in Prince George's County. Your comment had been identified in the DEIS related to build alternatives that would have spanned the entire study area. Because the US Navy, Walter Reed National Military Medical Center is located outside the Preferred Alternative limits of build improvements, those impacts have now been completely avoided. Any future proposal for improvements to the remaining parts of I-495 within the study limits, outside of Phase 1 South, would advance separately and would be subject to additional environmental studies, analysis, and collaboration with the public, stakeholders, and agencies.

Response to DEIS Comment #3
The proposed action will not have direct impacts to NSF Carderock property. However, MDOT SHA will continue to coordinate with the Navy regarding potential impacts from construction at NSF Carderock. Details about the construction timeframe, duration, and approach had not been developed at the time the DEIS was published and are not available at the time of the FEIS publication. As detailed design advances, the information will be shared with the Navy through a collaborative process whereby MDOT SHA will work to address the Navy's concerns.

Response to DEIS Comment #4
The Study's Purpose and Need allowed for a robust analysis of a full range of alternative that included evaluation of non-tolled, general purpose lanes, tolled managed lanes, transit only, and a combination of highway and transit improvements. Initially a range of 15 preliminary alternatives were identified and analyzed based on previous studies and planning documents, input from the public and federal, state, and local agencies during the scoping process. Additional alternatives were identified and analyzed in direct response to public and agency comments for a total of eighteen different alternatives, including the Preferred Alternative.

Non-highway alternatives were considered during the alternatives screening process. These included heavy rail and light rail parallel to the existing alignments (the Purple Line Light Rail was already proceeding), fixed guideway or Bus Rapid Transit along a new alignment parallel to the existing highway alignments and dedicated managed bus lanes on I-495 and I-270. Refer to DEIS, Appendix B. As with all the alternatives under the Preliminary Range of Alternatives, these non-highway options were evaluated using the various project needs, a review of available data, similar proposals that had been made over time, as well as a qualitative traffic assessment of each alternative's potential to reduce congestion on I-495 and I-270. The standalone transit options failed to address all the major areas of need identified and had major engineering and operational challenges associated with them. As one example, the Purple Line FEIS and Purple Line Travel Forecasts Results Report evaluated the impact of transit alternatives on overall automobile usage by presenting the vehicle miles traveled (VMT) in the region.

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proximity to the installation. The DEIS fails to provide technical information on the potential size and duration of impacts to the installation.

#4 d. The DEIS analysis fails to consider the impacts of recent changes to the Purple line. This document is supposed to analyze a multi-modal transportation system, yet focuses exclusively on toll roads. This analysis is not consistent with the goals of NEPA which is to analyze all reasonable alternatives which should include transit in this area.

#5 e. The DEIS transportation analysis fails to evaluate the impacts of COVID on the transportation system, both road and mass transit use. These impacts are changing commuter behavior and should be reflected this document.

Should you have any questions concerning these comments, my point of contact for this issue is NAVFAC Washington's NEPA Program Manager, Ms. Nik Tompkins-Flagg, who may be reached at (202) 685-8437 or nicole.tompkins-flag@navy.mil.

Sincerely,

LEWIS.THOMAS.P.1229317993 Digitally signed by LEWIS.THOMAS.P.1229317993 Date: 2020.11.04 15:02:39 -05'00'

THOMAS P. LEWIS
Environmental Business Line Coordinator
By direction

Copy to:
NSA Washington EV, Julie Shane

2

The results showed that in 2040, under the Purple Line Preferred Alternative, 0.07 percent less VMT would be traveled each day in the region versus the 2040 Purple Line No Build Alternative. Based upon the analysis conducted and presented and input from agencies and public, FHWA and MDOT determined they would not adequately address long-term traffic growth, address trip reliability, roadway choices, and none of them accommodated homeland security and freight movement needs. For these reasons, those standalone transit alternatives were dropped from further consideration. Refer to DEIS, Chapter 2, Section 2.5.2.

While the standalone transit alternatives were screened from detailed study, MDOT SHA retained multiple transit elements as part of the Build Alternatives in the DEIS that were ultimately incorporated into the Preferred Alternative. These transit elements were added to support the purpose and need element of enhancing multimodal connectivity and mobility and in direct response to public and agency comments received during the scoping and alternatives development process (Refer to FEIS Chapter 9, Section 9.3.1). With respect to the preliminary bus transit alternatives, for example, because buses will be able to use the new managed lanes, transit trips will be improved by providing a free flow condition for such service with no additional property and environmental impacts associated with a fixed guideway Bus Rapid Transit (BRT) off alignment alternative. This could help revive express bus service from Montgomery County to Tysons Corner, Virginia, two significant activity and economic centers. Moreover, this aspect of the proposed action also satisfies other Purpose and Need elements by increasing travel speed and assuring greater trip reliability for bus service.

Response to DEIS Comment #5

Although there is still uncertainty surrounding traffic projections resulting from the COVID-19 pandemic, transportation experts have analyzed pandemic traffic conditions and future traffic demand inputs and note that traffic volumes have continued to recover since the rollout of the vaccines in early 2021. MDOT has closely monitored changes in traffic patterns throughout the pandemic, and as of early 2022, daily traffic volumes have already recovered back to over 90 percent of pre-COVID levels. Traffic volumes are anticipated to return to pre-COVID levels before the time the HOT lanes are operational. Given the ultimate 2045 design year, the high-occupancy toll ("HOT") lanes will be required to accommodate long-term traffic.

Given the uncertainty surrounding resolution of the pandemic and how travel patterns will adjust, and over what time period, no definitive traffic model exists to predict how the global pandemic will affect long-term mobility patterns. To adapt to the ongoing and potential long-term travel impacts associated with the pandemic, MDOT SHA developed a COVID-19 Travel Analysis and Monitoring Plan. Refer to FEIS, Appendix C for a copy of the latest version of that plan. The plan included three components:

- **Monitoring**: tracked changes in roadway and transit demand during the pandemic, i.e., how travel varies in response to infection figures, vaccine distribution, unemployment rates, school closings, and policy changes;
- **Research**: reviewed historical data and projections from the Transportation Research Board and the National Capital Region Transportation Planning Board; and
- **Sensitivity Analyses**: evaluated "what if" scenarios, including potential changes in teleworking, eCommerce, and transit use on projected 2045 travel demand and operations.

The monitoring effort included tracking changes in traffic volumes and transit usage throughout the pandemic, and the corresponding impact on speeds and congestion along I-495 and I-270. The data shows a severe drop in traffic volumes in April 2020 after stay-at-home orders were issued across Maryland, with daily traffic volumes on I-270 and I-495 reducing by more than 50 percent compared to April 2019. After the stay-at-home order was replaced with a "safer at home" advisory in May 2020, traffic volumes gradually increased throughout the summer, stabilizing at approximately 15 percent less than typical conditions during Fall 2020. As cases began to surge in

This page is intentionally left blank.	November/December 2020, traffic volumes dipped again through the winter. With the rollout of vaccines in early 2021, the corresponding drop in COVID-19 cases, and the gradual reopening of schools and businesses, daily traffic volumes have continued to recover. Statewide, weekly traffic volumes were only down five (5) percent for the week of November 8, 2021 compared to the same week in 2019, per MDOT's coronavirus tracking website, linked below. (https://www.mdot.maryland.gov/tso/Pages/Index.aspx?PageId=141). Transit use has been slower to recover, with use of Maryland Transit Administration (MTA) services statewide down over 40 percent compared to pre-pandemic levels as of October 2021 (see link above). In the D.C. region, usage of Washington Metropolitan Area Transit Authority (WMATA) facilities is also down significantly compared to 2019. As of Fall 2021, WMATA rail ridership is down 73 percent on weekdays, while WMATA bus ridership is down 40 percent on weekdays, and parking at Metro facilities is down 88 percent (https://www.wmata.com/initiatives/ridership-portal/upload/October-2021-Ridership-Snapshot.pdf). While congestion decreased significantly on I-495 and I-270 at the onset of the pandemic in Spring 2020, significant congestion had returned to the study area by November 2021, approaching pre-pandemic levels. For example, average speeds on the I-495 Inner Loop crossing the ALB during the PM peak in early November (non-holiday) of 2021 were 20 mph, reflecting significant congestion, and matching the speeds during the similar period in November 2019 (also 20 mph). In the AM peak, average speeds on the I-495 Outer Loop between MD 650 and US 29 in early November 2021 were even lower - below 15 mph. While these speeds are slightly higher than those observed in that same area during the AM peak in November 2019 (10 mph), the findings indicate that there is still a lot of congestion along I-495 even though volumes have not fully rebounded to pre-pandemic levels along I-495 during the morning peak period. Along I-270, average speeds are generally 5 to 10 mph higher in November 2021 compared to November 2019 despite volumes exceeding 2019 levels at MDOT SHA's permanent count station located on I-270 South of MD 121. These improvements could be attributed to recent improvements completed by MDOT SHA along I-270, including the opening of the Watkins Mill interchange in 2020 and the implementation of ramp metering along southbound I-270 on-ramps in September 2021 as part of the Innovative Congestion Management (ICM) project. Even so, some congestion remains along I-270, with average speeds on I-270 southbound of approximately 30 mph during the AM peak period and average speeds on I-270 northbound below 40 mph during the PM peak period in November 2021. Based upon historic research of other similar dramatic societal effects on travel and the most recent data suggesting that traffic is rebounding close to pre-pandemic levels, the 2045 forecasts and results presented in FEIS, Section 4.3 using models that were developed and calibrated prior to the onset of the COVID-19 pandemic have been determined to be reasonable for use in evaluating projected 2045 conditions. However, MDOT SHA acknowledges that residual effects of some of the near-term changes in travel behavior could be carried forward into the future. Therefore, a sensitivity analysis evaluating several "what if" scenarios related to future traffic demand due to potential long-term changes to teleworking, e-commerce, and transit use was also conducted. The first part of the sensitivity analysis involved modifying input parameters in the MWCOG regional forecasting model based on observed changes in travel behavior during the pandemic to evaluate a range of potential long-term scenarios. The second part of the sensitivity analysis involved re-running the 2045 No Build and 2045 Build VISSIM models that were used to generate the operational results presented Chapter 4, Section 4.3 of this FEIS, but with reduced demand volumes to account for potential sustained impacts from the pandemic. The results of the MWCOG and VISSIM sensitivity analyses confirm that the capacity improvements proposed under the Preferred Alternative would be needed and effective even if future demand changes from the pre-pandemic forecasts based on potential long-term impacts to teleworking, e-commerce, and transit use that are not formally accounted for in the current regional forecasting models. Refer to FEIS, Appendix C.

UNITED STATES NAVY, NAVAL SUPPORT ACTIVITY BETHESDA

DEPARTMENT OF THE NAVY
NAVAL SUPPORT ACTIVITY BETHESDA
4655 TAYLOR ROAD
BETHESDA MARYLAND 20889-5639

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Ms. Lisa B. Choplin, DBIA
Director, I-495 and I-270 P3 Project Office
Maryland Department of Transportation State Highway Administration
707 North Calvert Street
Mail Stop P-601
Baltimore, MD 21201

Dear Ms. Choplin,

SUBJECT: NAVAL SUPPORT ACTIVITY BETHESDA COMMENTS FOR I-495 AND I-270 P-3 PROJECT ENVIRONMENTAL IMPACT STATEMENT – DRAFT ENVIRONMENTAL IMPACT STATEMENT

Naval Support Activity (NSA) Bethesda staff members have reviewed the Draft Environmental Impact Statement (DEIS) for the above mentioned project. Based on that review, NSA Bethesda forwards the following comments:

#1A a. On page 4-18 of the DEIS, Maryland Department of Transportation (MDOT) asserts they will acquire Navy property for the construction of the toll roads. As previously stated in multiple letters from the installation to MDOT, the Navy will not cede any property for the construction of this toll road. Doing so would compromise Antiterrorism/Force Protection guidelines and impact the NSA Bethesda mission. The Navy requests the project remove the property acquisition from consideration in the build alternatives analysis.

#2A b. In light of the ongoing disagreement over right-of-way (ROW) and fence line impacts (see previous Navy correspondence), the Navy finds the MDOT analysis of the construction footprint to be woefully inadequate. The information in the DEIS shows disruption to mission critical infrastructure in the northeast corner of the installation without providing any technical information on the potential size and duration of those impacts. Impacts to those facilities and infrastructure will cause an immediate degradation of installation support services to Walter Reed National Military Medical Center and mission critical construction. This is a direct contradiction to the DEIS assumption that "impacts to any individual facility would not alter access to or use of the hospital facilities."

#3A c. The DEIS analysis fails to consider the impacts of recent changes to the Metro Purple line. This document is supposed to analyze a multi-modal transportation system, yet focuses exclusively on toll roads.

Response to DEIS Comments #1A and #2A
See response to Comments #1 and #2 above.

Response to DEIS Comment #3A
See response to Comment #4 above.

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#4A

d. The DEIS transportation analysis fails to evaluate the impacts of COVID-19 on the transportation system, both road and mass transit use. These impacts are changing commuter behavior and should be reflected in this document.

Should you have any questions concerning these comments, my point of contact for this issue is NSA Bethesda's Installation Environmental Programs Director, Ms. Susan Paul, who may be reached at (301) 295-2482 or susan.paul@navy.mil.

Sincerely,

M. S. Seymour
Captain, Medical Service Corps
U. S. Navy
Commanding Officer

Copy to:
NAVFACENGCOM Washington DC (EV2)

2

Response to DEIS Comment #4A
See response to Comment #5 above.

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

From: Fisher, John <john.fisher@deq.virginia.gov>
Sent: Tuesday, August 18, 2020 2:47 PM
To: Caryn Brookman (Consultant) <CBrookman.consultant@mdot.maryland.gov>
Cc: Michelle Henicheck <michelle.henicheck@deq.virginia.gov>
Subject: Re: I-495 & I-270 Managed Lanes Study- Draft Environmental Impact Statement and Draft Section 4(f) Evaluation Notice of Availability

Dear Ms Brookman:

Attached is a response to the DEIS from the Office of Wetlands and Stream Protection submitted as part of Virginia's review of the document. DEQ-OWSP is unable to determine the exact amount of direct impacts to State waters for the portion of the project located in Virginia and which alternative route along with its potential impacts are associated with the western terminus portion in Virginia. Please coordinate with Michelle Henicheck (copied) on the information she seeks.

Thank you,
John

John E. Fisher
Virginia Department of Environmental Quality
Division of Environmental Enhancement
Office of Environmental Impact Review
1111 East Main Street, Suite 1400
Richmond, Virginia 23219
(804) 698-4339
john.fisher@deq.virginia.gov

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Thank you for your comments on the I-495 & I-270 Managed Lanes Study (MLS) DEIS. Responses to DEQ recommendations and requirements provided in all the following correspondence and documents are included alongside the corresponding sections of the original letter. FHWA and MDOT SHA will continue to coordinate with VDEQ.

MEMORANDUM

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER DIVISION

TO: John Fisher

FROM: Michelle Henicheck
Michelle Henicheck
Office of Wetlands and Stream Protection

DATE: August 12, 2020

SUBJECT: Draft Environmental Impact Statement
Project Sponsor: USDOT/Federal Highway Administration
Project Title: I-495 and I-270 Managed Lanes Study
Location: Fairfax County
Project Number: DEQ #20-103F

The DEQ's Office of Wetlands and Stream Protection (OWSP) has reviewed the draft Environmental Impact Statement (EIS) concerning the above-referenced project.

The 1-495 & 1-270 Managed Lanes Study (Study) is the first element of the broader 1-495 & 1-270 Public-Private Partnership (P3) Program. This Study is considering alternatives that address roadway congestion within the specific study. **A small 0.4 mile portion of this project is located in Virginia on I-495 from the George Washington Memorial Parkway interchange to the Virginia/Maryland border.** The Western Terminus on 1-495, 0.4 miles south of George Washington Memorial Parkway interchange; allows outer loop mainline improvements that are carried to the George Washington Memorial Parkway to be merged and transitioned into the existing mainline lanes without causing congestion due to lane drops and merges. The managed lanes would connect directly into the proposed extension of the Virginia Express Lanes.

A range of 15 Preliminary Alternatives was identified based on previous, relevant studies and planning documents, and input received during the NEPA scoping process from the public and from Federal, state, and local regulatory agencies.

#1

VA DEQ is unable to determine the exact amount of direct impacts to State waters for the portion located in Virginia. In addition, VA DEQ is unable to determine which alternative route along with its' potential impacts are associated with the western terminus portion in Virginia. Please provide this information in order for DEQ to provide more accurate recommendations for the project. Provide both wetland acreage along with wetland types being impacted and linear feet of stream impacts.

In addition, please provide the wetland delineation information and/or wetland desktop analysis for the western terminus portion only. NWI maps along with Virginia's wetland condition assessment tool (WetCAT) http://cmap2.vims.edu/WetCAT/WetCAT_Viewer/WetCAT_VA_2D.html are available to assist with the review of your project in the Virginia.

Page 1 of 1

Response to DEIS Comment #1
An updated impact and mitigation report for Virginia wetland and water resources including FEIS/JPA impacts, and mitigation was provided to VDEQ in May 2022. A draft of this report identifying impacts to Virginia wetland and waterway resources disclosed in the DEIS and supporting documentation was sent to the Virginia Department of Environmental Quality (VDEQ) on September 18, 2020.

From: Fulcher, Valerie <valerie.fulcher@deq.virginia.gov>
Sent: Thursday, October 1, 2020 1:21 PM
To: MLS-NEPA-P3; rr dgif-ESS Projects; Roberta Rhur; odwreview (VDH); Roger Kirchen; rr EIR Coordination; James, Denise; Bob Lazaro; Mark Eversole
Cc: John Fisher
Subject: FHWA 1-495 & I270 Managed Lanes Study, DEQ #20-103F
Attachments: 20-103F (I-495 and I-270 Managed Lanes Study-FHWA).deis.pdf

Good afternoon – attached is your file copy of the completed federal review for the following project:

Draft Environmental Impact Statement and Draft Section 4(f) Evaluation, I-495 & I270 Managed Lanes Study, Federal Highway Administration, Fairfax County (DEQ 20-103F)

If you have any questions regarding this project, please call John at 804/698-4339;
email John.Fisher@deq.virginia.gov

Valerie

--

Valerie A. Fulcher, CAP, OM, Environmental Program Specialist

Department of Environmental Quality

Environmental Enhancement - Office of Environmental Impact Review

1111 East Main Street

Richmond, VA 23219

804/698-4330

Email: Valerie.Fulcher@deq.virginia.gov

http://www.deq.virginia.gov/Programs/EnvironmentalImpactReview.aspx

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COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

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Matthew J. Strickler
Secretary of Natural Resources

David K. Paylor
Director

(804) 698-4000
1-800-592-5482

October 1, 2020

Ms. Lisa B. Choplin, DBIA
Maryland Department of Transportation
State Highway Administration
I-495 and I-270 P3 Office
707 North Calvert Street
Mail Stop P-601
Baltimore, Maryland 21202
Via email: mls-nepa-p3@mdot.maryland.gov

RE: Draft Environmental Impact Statement and Draft Section 4(f) Evaluation, I-495 & I-270 Managed Lanes Study, Federal Highway Administration, Fairfax County (DEQ 20-103F)

Dear Ms. Choplin:

The Commonwealth of Virginia has completed its review of the above-referenced document. The Department of Environmental Quality is responsible for coordinating Virginia's review of federal environmental documents submitted under the National Environmental Policy Act (NEPA) and responding to appropriate federal officials on behalf of the Commonwealth. DEQ is also responsible for coordinating Virginia's review of federal consistency documents submitted pursuant to the Coastal Zone Management Act (CZMA) and providing the state's response. This is in response to the June 2020 Draft Environment Impact Statement (DEIS) (received July 9, 2020) for the above-referenced project. The focus of this response to the 0.4-mile portion of the project in Virginia. The following agencies and locality participated in the review of this proposal:

Department of Environmental Quality
Department of Wildlife Resources
Department of Conservation and Recreation
Marine Resources Commission
Department of Health
Department of Historic Resources
Department of Transportation
Fairfax County

In addition, the Northern Virginia Regional Commission was invited to comment on the proposal.

Thank you for the information provided. Information has been considered and included, where appropriate.

I-495 & I-270 Managed Lanes Study
FHWA DEIS, DEQ 20-103F

PROJECT DESCRIPTION

The Federal Highway Administration (FHWA), as the Lead Federal Agency, and Maryland Department of Transportation State Highway Administration (MDOT-SHA), as the Local Project Sponsor, have prepared a Draft Environmental Impact Statement (DEIS) under the National Environmental Policy Act (NEPA) for the I-495 and I-270 Managed Lanes Study (Study). The Study is the first element of the broader I-495 and I-270 Public-Private Partnership (P3) Program. The Study considers alternatives to address roadway congestion within the 48-mile Study area from I-495 south of the George Washington Memorial Parkway in Fairfax County, Virginia, including improvements to the American Legion Bridge over the Potomac River, to west of Maryland (MD) Route 5, and along I-270 from I-495 to north of I-370, including the East and West I-270 Spurs. I-495 and I-270 in Maryland are the two most heavily traveled freeways in Maryland, each with an Average Annual Daily Traffic (AADT) volume up to 260,000 vehicles per day in 2018. The purpose of Study is to develop a travel demand management solution that addresses congestion, improves trip reliability, and enhances existing and planned multimodal mobility and connectivity. The DEIS provides a comparative analysis between the No Build Alternative and six Build Alternatives;

- Alternative 1: No Build.
- Alternative 8: Two-Lane, Express Toll Lane (ETL) managed Lanes Network on I-495 and One-ETL and One-Lane High Occupancy Vehicle (HOV) Managed Lane on I-270.
- Alternative 9: Two-Lane, High Occupancy Toll (HOT) Managed Lanes Network on both I-495 & I-270.
- Alternative 9 Modified (9M): Two-Lane, HOT Managed Lanes Network on west and east side of I-495 and on I-270; One-Lane HOT Managed Lane on top side of I-495.
- Alternative 10: Two-Lane, ETL Managed Lanes Network on I-495 & I-270 plus One-Lane HOV Managed Lane on I-270 only.
- Alternative 13B: Two-Lane, HOT Managed Lanes Network on I-495; HOT Managed, Reversible Lane Network on I-270.
- Alternative 13C: Two-Lane, ETL Managed Lanes Network on I-495, ETL Managed, Reversible Lane Network and One-Lane HOV Managed Lane on I-270.

The Preferred Alternative will be identified in the Final Environmental Impact Statement (FEIS) which will focus on any additional analysis and refinements of the data and will respond to substantive comments received on the DEIS.

ENVIRONMENTAL IMPACTS AND MITIGATION

1. Surface Waters and Wetlands. According to the DEIS (page 4-88), within Virginia, the corridor study boundary crosses the Middle Potomac watersheds, comprised of the Bull Neck Run, Scotts Run, Dead Run, Turkey Run, and Pimmit Run subwatersheds. All

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Build Alternatives would affect surface waters, surface water quality, and watershed characteristics in the corridor study boundary due to direct and indirect impacts to ephemeral, intermittent, and perennial stream channels and increases in impervious surface in their watersheds. Impacts associated with the use of the road after construction are mainly based on the potential for contamination of surface waters by runoff and from new impervious roadway surfaces.

On August 12, 2020, DEQ notified MDOT-SHA that is was unable to determine the extent of jurisdictional waters that would be impacted in Virginia. Supplemental information provided by MDOT-SHA on September 18, 2020, indicate that the Build Alternatives in Virginia have identical impacts. The Build Alternatives would impact a total of 0.05 acres of wetland and 3,349 linear feet of stream in Virginia. The mitigation requirement for each Build Alternative would be 0.10 acres of wetland mitigation and 729 linear feet of riverine mitigation in the Middle Potomac-Catoctin watershed. Mitigation will be met by purchasing bank credits. Bank credit purchases will be described in the Final Compensatory Mitigation Plan (CMP) to be prepared in support of the Final Environmental Impact Statement.

1(a) Agency Jurisdiction.

(i) Department of Environmental Quality

The State Water Control Board promulgates Virginia's water regulations covering a variety of permits to include the Virginia Pollutant Discharge Elimination System Permit regulating point source discharges to surface waters, Virginia Pollution Abatement Permit regulating sewage sludge, storage and land application of biosolids, industrial wastes (sludge and wastewater), municipal wastewater, and animal wastes, the Surface and Groundwater Withdrawal Permit, and the Virginia Water Protection (VWP) Permit regulating impacts to streams, wetlands, and other surface waters. The VWP permit is a state permit which governs wetlands, surface water, and surface water withdrawals and impoundments. It also serves as §401 certification of the federal Clean Water Act §404 permits for dredge and fill activities in waters of the U.S. The VWP Permit Program is under the Office of Wetlands and Stream Protection, within the DEQ Division of Water Permitting. In addition to central office staff that review and issue VWP permits for transportation and water withdrawal projects, the six DEQ regional offices perform permit application reviews and issue permits for the covered activities:

- Clean Water Act, §401;
- Section 404(b)(i) Guidelines Mitigation Memorandum of Agreement (2/90);
- State Water Control Law, Virginia Code section 62.1-44.15:20 *et seq.*; and
- State Water Control *Regulations*, 9 VAC 25-210-10.

(ii) Virginia Marine Resources Commission

The Virginia Marine Resources Commission (VMRC) regulates encroachments in, on or

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over state-owned subaqueous beds as well as tidal wetlands pursuant to Virginia Code §28.2-1200 through 1400. For nontidal waterways, VMRC states that it has been the policy of the Habitat Management Division to exert jurisdiction only over the beds of perennial streams where the upstream drainage area is 5 square miles or greater. The beds of such waterways are considered public below the ordinary high water line.

1(b) Agency Findings.

(i) Virginia Department of Environmental Quality

The VWP Permit program at the DEQ Office of Wetlands and Stream Protection (OWSP) finds that the Build Alternatives may require either VWP Individual Permit or General Permit coverage.

(ii) Virginia Marine Resources Commission

VMRC has no comments on the proposal.

1(c) Requirements. FHWA must submit a Joint Permit Application (JPA) in accordance with form instructions for further evaluation and final permit need determination by DEQ. FHWA must coordinate with DEQ-OWSP prior to the implementation of the preferred alternative. The JPA should be submitted to VMRC which serves as the clearinghouse for review by DEQ, VMRC, local wetlands board and the U.S. Army Corps of Engineers (Corps).

#2

1(d) Recommendations. DEQ offers the following recommendations:

1. Wetland and stream impacts should be avoided and minimized to the maximum extent practicable.
2. If the scope of the project changes, additional review will be necessary by one or more offices in the Commonwealth's Secretariat of Natural Resources and/or the Corps.
3. At a minimum, any required compensation for impacts to State Waters, including the compensation for permanent conversion of forested wetlands to emergent wetlands, should be in accordance with all applicable state regulations and laws. Consider mitigating impacts to forested or converted wetlands by establishing new forested wetlands within the impacted watershed.
4. Any temporary impacts to surface waters associated with this project should be restored to pre-existing conditions.
5. No activity may substantially disrupt the movement of aquatic life indigenous to the water body, including those species, which normally migrate through the area, unless the primary purpose of the activity is to impound water. Culverts placed in streams must be installed to maintain low flow conditions. No activity may cause more than minimal adverse effect on navigation.

Response to DEIS Comment #2

Wetland and stream impacts have been avoided and minimized to the maximum extent practicable within the Virginia portion of the Preferred Alternative. A Virginia Water Protection (VWP) permit from VDEQ will be applied for through Virginia Marine Resources Commission (VMRC) for any unavoidable impacts to wetlands and waterways in Virginia. However, per U.S. Army Corps of Engineers Baltimore District direction, a U.S. Army Corps of Engineers individual permit will be applied for with a Maryland Joint Permit Application submitted to the Baltimore District and Maryland Department of the Environment. We appreciate VDEQ recommendations in **Section 1(d), Recommendations**.

#2
Con't

Furthermore the activity must not impede the passage of normal or expected high flows and the structure or discharge must withstand expected high flows.

6. Erosion and sedimentation controls should be designed in accordance with the *Virginia Erosion and Sediment Control Handbook*, *Third Edition*, *1992*. These controls should be placed prior to clearing and grading and maintained in good working order to minimize impacts to state waters. These controls should remain in place until the area is stabilized and should then be removed. Any exposed slopes and streambanks should be stabilized immediately upon completion of work in each permitted area. All denuded areas should be properly stabilized in accordance with the *Virginia Erosion and Sediment Control Handbook*, *Third Edition*, *1992*.
7. No machinery may enter surface waters, unless authorized by a Virginia Water Protection individual permit, general permit, or general permit coverage.
8. Heavy equipment in temporarily impacted surface waters should be placed on mats, geotextile fabric, or other suitable material, to minimize soil disturbance to the maximum extent practicable. Equipment and materials should be removed immediately upon completion of work.
9. Activities should be conducted in accordance with any Time-of-Year restriction(s) as recommended by the Department of Wildlife Resources, the Department of Conservation and Recreation, or the Virginia Marine Resources Commission. The permittee should retain a copy of the agency correspondence concerning the Time-of-Year restriction(s), or the lack thereof, for the duration of the construction phase of the project.
10. All construction, construction access, and demolition activities associated with this project should be accomplished in a manner that minimizes construction materials or waste materials from entering surface waters, unless authorized by a VWP individual permit, general permit, or general permit coverage. Wet, excess, or waste concrete should be prohibited from entering surface waters.
11. Herbicides used in or around any surface water should be approved for aquatic use by the United States Environmental Protection Agency (EPA) or the U.S. Fish & Wildlife Service. These herbicides should be applied according to label directions by a licensed herbicide applicator. A non-petroleum based surfactant should be used in or around any surface waters.

#3

2. Erosion and Sediment Control and Stormwater Management. According to the DEIS (page 4-92), the Study will be required to adhere to erosion and sediment control requirements during construction. Water quality would be protected by implementing stringent erosion and sediment control plans with best management practices (BMPs) appropriate to protect water quality during construction activities. Post-construction stormwater management and compliance with total maximum daily loads (TMDLs) will be accounted for in the stormwater design and water quality monitoring to comply with required permits. Post-construction stormwater management and compliance with TMDLs will be accounted for in the stormwater design and water quality monitoring to comply with required permits.

Response to DEIS Comment #3

Water quality will be protected by implementing stringent erosion and sediment control measures and best management practices appropriate to protect water quality during construction activities. Post-construction stormwater management and TMDL compliance will be incorporated in the stormwater design to comply with applicable permit requirements.

#4

2(a) Agency Jurisdiction. The DEQ Office of Stormwater Management (OSWM) administers the following laws and regulations governing construction activities:

- Virginia Erosion and Sediment Control (ECS) Law (§ 62.1-44.15:51 *et seq.*) and Regulations (9 VAC 25-840);
- Virginia Stormwater Management Act (§ 62.1-44.15:24 *et seq.*);
- Virginia Stormwater Management Program (VSMP) regulation (9 VAC 25-870); and
- 2014 General Virginia Pollutant Discharge Elimination System (VPDES) Permit for Discharges of Stormwater from Construction Activities (9 VAC 25-880).

In addition, DEQ is responsible for the Virginia Stormwater Management Program (VSMP) General Permit for Stormwater Discharges from Construction Activities related to Municipal Separate Storm Sewer Systems (MS4s) and construction activities for the control of stormwater discharges from MS4s and land disturbing activities under the Virginia Stormwater Management Program (9 VAC 25-890-40).

2(b) Requirements.

(i) Erosion and Sediment Control and Stormwater Management Plans

#5

The FHWA and its authorized agents conducting regulated land-disturbing activities on private and public lands in the state must comply with *VESCL&R* and *VSWML&R*, including coverage under the general permit for stormwater discharge from construction activities, and other applicable federal nonpoint source pollution mandates (e.g. Clean Water Act-Section 313, federal consistency under the Coastal Zone Management Act). Clearing and grading activities, installation of staging areas, parking lots, roads, buildings, utilities, borrow areas, soil stockpiles, and related land-disturbing activities that result in the total land disturbance of equal to or greater than 2,500 square feet in Chesapeake Bay Preservation Area would be regulated by *VESCL&R*. Accordingly, the FHWA must prepare and implement an erosion and sediment control (ESC) plan to ensure compliance with state law and regulations. The ESC plan must be submitted to the DEQ Northern Regional Office (NRO) for review for compliance.

Land-disturbing activities that result in the total land disturbance of equal to or greater than 2,500 square feet in a Chesapeake Bay Preservation Area would be regulated by *VSWML&R*. Accordingly, the FHWA must prepare and implement a Stormwater Management (SWM) plans to ensure compliance with state law and regulations. The SWM plans must be submitted to DEQ-NRO for review for compliance.

The FHWA is ultimately responsible for achieving project compliance through oversight of on-site contractors, regular field inspection, prompt action against non-compliant sites, and other mechanisms consistent with agency policy. [Reference: VESCL 62.1-44.15 *et seq.*]

Response to DEIS Comment #4
MDOT SHA acknowledges VDEQ's jurisdiction outlined in **Section 2(a) Agency Jurisdiction** and agree to meet the Erosion and Sediment Control and Stormwater Management requirements outlined in **Section 2(b) Requirements**.

Response to DEIS Comment #5
MDOT SHA agrees to comply with applicable Erosion and Sediment Control and Stormwater Management requirements provided in **Section 2(b) Requirements**.

(ii) General VPDES Permit for Discharges of Stormwater from Construction Activities (VAR10)

The operator or owner of a construction project involving land-disturbing activities equal to or greater than one acre is required to register for coverage under the VAR10 permit and develop a project-specific stormwater pollution prevention plan. Construction activities requiring registration also include land disturbance of less than one acre of total land area that is part of a larger common plan of development or sale if the larger common plan of development will collectively disturb equal to or greater than one acre. The SWPPP must be prepared prior to submission of the registration statement for coverage under the Construction General Permit and the SWPPP must address water quality and quantity in accordance with the *VSMP Permit Regulations*. [Reference: Virginia Stormwater Management *Act* 62.1-§44.15 *et seq.*] *VSMP Permit Regulations* 9 VAC 25-870-10 *et seq.*].

#6

2(c) Recommendations. DEQ-NRO recommends the use of permeable paving for parking areas and walkways where appropriate, and denuded areas should be promptly revegetated following construction work.

3. Chesapeake Bay Preservation Areas. The DEIS does not include information and analysis of the potential impacts of the Build Alternatives on Chesapeake Bay Preservation Areas under the Virginia Chesapeake Bay Preservation Act.

#7

3(a) Agency Jurisdiction. The DEQ Office of Watersheds and Local Government Assistance Programs (OWLGAP) administers the Chesapeake Bay Preservation Act (Virginia Code §62.1-44.15:67 *et seq.*) and *Chesapeake Bay Preservation Area Designation and Management Regulations* (9 VAC 25-830-10 *et seq.*). Each Tidewater locality must adopt a program based on the Bay Act and *Regulations*. The Bay Act and *Regulations* recognize local government responsibility for land use decisions and are designed to establish a framework for compliance without dictating precisely what local programs must look like. Local governments have flexibility to develop water quality preservation programs that reflect unique local characteristics and embody other community goals. Such flexibility also facilitates innovative and creative approaches in achieving program objectives. The regulations address nonpoint source pollution by identifying and protecting certain lands called Chesapeake Bay Preservation Areas. The regulations use a resource-based approach that recognizes differences between various land forms and treats them differently.

3(b) Chesapeake Bay Preservation Areas. DEQ-OWLGAP notes that, in Fairfax County, the areas protected by the Bay Act, as locally implemented, require conformance with performance criteria. These areas include RPAs and Resource Management Areas (RMAs) as designated by the local government. RPAs include:

- tidal wetlands;

Response to DEIS Comment #6
MDOT SHA will incorporate the recommendations provided in **Section 2(c), Recommendations,** to the greatest extent practicable.

Response to DEIS Comment #7
MDOT SHA added information regarding the Chesapeake Bay Preservation Act to FEIS Sections 5.13.2 and 5.16.2 in response to DEQ's comment in **Section 3**. Although RPAs would be affected by the I-495 & I-270 Managed Lanes Study, VDEQ confirmed that the I-495 & I-270 Managed Lanes Study is exempt from this regulatory requirement because it is a project that involves "construction, installation, operation, and maintenance" of a public roadway. As a condition of this exemption, VDEQ requires the optimization of the road alignment and design to prevent or otherwise minimize (1) encroachment into locally designated Resource Protection Areas and (2) adverse effects on water quality. The I-495 & I-270 Managed Lanes Study will adhere to these conditions to prevent or minimize impacts on RPAs and water quality to the extent practicable.

- certain non-tidal wetlands;
- tidal shores; and
- a 100-foot vegetated buffer area located adjacent to and landward of these features and along both sides of any water body with perennial flow.

RMAs, which require less stringent performance criteria, include those areas of the county not included in the RPAs.

3(c) Agency Findings. DEQ-OWLGAP notes that 9 VAC-25-830-150.B.1 of the *Regulations* conditionally exempts the "construction, installation, operation, and maintenance" of public roads (in this case I-495 as it runs through Fairfax County, from the interchange with the George Washington Memorial Parkway to the Virginia-Maryland border).

3(d) Requirements. The conditions of the exemption are that the construction, installation, operation, and maintenance of public roads in Virginia must be conducted in accordance with:

- regulations promulgated pursuant to the Erosion and Sediment Control Law and the Virginia Stormwater Management Act, including the submission of an Erosion and Sediment Control Plan and a Stormwater Management Plan approved by DEQ, or local water quality protection criteria at least as stringent as the state requirements; and
- the optimization of the road alignment and design to prevent or otherwise minimize (1) encroachment into locally-designated Resource Protection Areas and (2) adverse effects on water quality.

3(e) Conclusion. DEQ-OWLGAP concludes that the Build Alternative in Fairfax County would be consistent with the Bay Act and *Regulations* provided FHWA adheres to the above requirements.

#8

Response to DEIS Comment #8
Thank you for your comments. MDOT SHA will adhere to requirements included in **Section 3(d) Requirements** to ensure that the Study is consistent with the Bay Act and Regulations.

#9

4. Air Pollution Control. The DEIS (page 4-61) finds that modelling results demonstrate that the worst-case interchanges and intersections for each Build Alternative and the No Build Alternative, using very conservative assumptions, would not cause or contribute to a violation of the carbon monoxide (CO) National Ambient Air Quality Standards (NAAQS) within the study corridor. Mobile Source Air Toxics (MSATs) emissions are expected to remain the same or slightly decrease for all Build Alternatives when compared to the No Build condition for 2040. In addition, all MSATs pollutant emissions are expected to significantly decline in the Opening Year (2025) and Design Year (2040) when compared to existing conditions. In general, greenhouse gas (GHG) emissions are expected to increase for all Build Alternatives when compared to the No Build condition for 2040. As the project's construction is not anticipated to last more than five years in any single location, construction impacts are considered to be temporary. All required construction-related permits would be obtained from the Maryland Department of the Environment (MDE) prior to construction.

Response to DEIS Comment #9
Montgomery County, Maryland and Fairfax County, Virginia are located in a non-attainment area for the 2015 8-hour ozone standard. The I-495 and I-270 Managed Lanes Study is included in the federally mandated Air Quality Conformity Analysis that accompanies the National Capital Region Transportation Planning Board (TPB) Visualize 2045 long-range plan. The results of this analysis show that the Visualize 2045 plan and FY2019-2024 TIP mobile emissions are within the mobile budgets for ozone season VOC and NO_x for all forecast years (2019, 2021, 2025, 2030, 2040, and 2045). That analysis provides a basis for a determination of conformity for the Visualize 2045 plan and the FY2019-2024 TIP.

I-495 & I-270 Managed Lanes Study
FHWA DEIS, DEQ 20-103F

4(a) Agency Jurisdiction. The DEQ Air Division, on behalf of the State Air Pollution Control Board, is responsible for developing regulations that implement Virginia's Air Pollution Control Law (Virginia Code §10.1-1300 *et seq.*). DEQ is charged with carrying out mandates of the state law and related regulations as well as Virginia's federal obligations under the Clean Air Act as amended in 1990. The objective is to protect and enhance public health and quality of life through control and mitigation of air pollution. The division ensures the safety and quality of air in Virginia by monitoring and analyzing air quality data, regulating sources of air pollution, and working with local, state and federal agencies to plan and implement strategies to protect Virginia's air quality. The appropriate DEQ regional office is directly responsible for the issuance of necessary permits to construct and operate all stationary sources in the region as well as monitoring emissions from these sources for compliance.

The Air Division regulates emissions of air pollutants from industries and facilities and implements programs designed to ensure that Virginia meets national air quality standards. The most common regulations associated with major State projects are:

- Open burning: 9 VAC 5-130 *et seq.*
- Fugitive dust control: 9 VAC 5-50-60 *et seq.*
- Permits for fuel-burning equipment: 9 VAC 5-80-1100 *et seq.*

4(b) Agency Findings. According to the DEQ Air Division, the Study in Virginia is located in a designated ozone nonattainment area and an emission control area for the control of oxides of nitrogen (NO_x) and volatile organic compounds (VOCs).

4(c) Recommendation. The FHWA should take all reasonable precautions to limit emissions of NO_x and VOCs, principally by controlling or limiting the burning of fossil fuels.

4(d) Requirements.

(i) Fugitive Dust

During construction, fugitive dust must be kept to a minimum by using control methods outlined in 9 VAC 5-50-60 *et seq.* of the *Regulations for the Control and Abatement of Air Pollution*. These precautions include, but are not limited to, the following:

- Use, where possible, of water or chemicals for dust control;
- Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty materials;
- Covering of open equipment for conveying materials; and
- Prompt removal of spilled or tracked dirt or other materials from paved streets and removal of dried sediments resulting from soil erosion.

9

#10

Response to DEIS Comment #10
MDOT SHA will continue to coordinate with VDEQ to limit fugitive dust impacts during construction and, through this coordination, will identify the appropriate precautions as outlined in 4(d)(*i*) that should be incorporated into the project.

#10 cont.

(ii) Asphalt Paving

In accordance with 9 VAC 5-45-780, there are limitations on the use of "cut-back" (liquefied asphalt cement, blended with petroleum solvents) that may apply to paving activities associated with the project. Moreover, there are time-of-year restrictions on its use during the months of April through October in VOC emission control areas.

(iii) Open Burning

If project activities include the open burning of construction material or the use of special incineration devices, this activity must meet the requirements under 9 VAC 5-130 *et seq.* of the *Regulations* for open burning, and may require a permit. The *Regulations* provide for, but do not require, the local adoption of a model ordinance concerning open burning. The applicant should contact Fairfax County fire officials to determine what local requirements, if any, exist.

5. Solid and Hazardous Wastes and Hazardous Materials. According to the DEIS (page 4-72), the environmental investigation and field reconnaissance of the hazardous materials investigation area resulted in the identification of 501 sites of concern. Prior to acquisition of right-of-way and construction, Preliminary Site Investigations (PSIs) would be conducted to further investigate properties within and in the vicinity of the final limits of disturbances (LODs) that have a high potential for mitigation contaminated materials exposed during construction activities.

5(a) Agency Jurisdiction. On behalf of the Virginia Waste Management Board, the DEQ Division of Land Protection and Revitalization (DEQ-DLPR) is responsible for carrying out the mandates of the Virginia Waste Management Act (Virginia Code §10.1-1400 *et seq.*), as well as meeting Virginia's federal obligations under the Resource Conservation and Recovery Act (RCRA) and the Comprehensive Environmental Response Compensation Liability Act (CERCLA), commonly known as Superfund. DEQ-DLPR also administers laws and regulations on behalf of the State Water Control Board governing Petroleum Storage Tanks (Virginia Code §62.1-44.34:8 *et seq.*), including Aboveground Storage Tanks (9 VAC 25-91 *et seq.*) and Underground Storage Tanks (9 VAC 25-580 *et seq.* and 9 VAC 25-580-370 *et seq.*), also known as 'Virginia Tank Regulations', and § 62.1-44.34:14 *et seq.* which covers oil spills.

Virginia:

- Virginia Waste Management Act, Virginia Code § 10.1-1400 *et seq.*
- *Virginia Solid Waste Management Regulations*, 9 VAC 20-81 (9 VAC 20-81-620 applies to asbestos-containing materials)
- *Virginia Hazardous Waste Management Regulations*, 9 VAC 20-60 (9 VAC 20-60-261 applies to lead-based paints)
- *Virginia Regulations for the Transportation of Hazardous Materials*, 9 VAC 20-110.

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#11

Federal:

- Resource Conservation and Recovery Act, 42 U.S. Code sections 6901 *et seq.*
- U.S. Department of Transportation *Rules for Transportation of Hazardous Materials*, 49 *Code of Federal Regulations*, Part 107
- Applicable rules contained in Title 40, *Code of Federal Regulations*.

5(b) Agency Findings. DEQ-DLPR conducted a search of the project area in Virginia of solid and hazardous waste databases (including petroleum releases) to identify waste sites in close proximity (200-foot radius) to the LOD. The search did not identify any waste sites within the project area which might impact the Build Alternatives.

5(c) Requirements.

(i) Solid and Hazardous Waste Management

Any soil, sediment or groundwater that is suspected of contamination or wastes that are generated must be tested and disposed of in accordance with applicable federal, state, and local laws and regulations. All construction waste must be characterized in accordance with the *Virginia Hazardous Waste Management Regulations* prior to management at an appropriate facility.

(ii) Petroleum Contamination

If evidence of a petroleum release is discovered during construction, it must be reported to DEQ-NRO in accordance with Virginia Code § 62.1-44.34.8 through 9 and 9 VAC 25-580-10 *et seq.* Petroleum-contaminated soils and groundwater that is generated during project implementation must be characterized and disposed of properly.

(iii) Petroleum Storage Tanks

The installation and operation of regulated petroleum ASTs or USTs must be conducted in accordance with 9 VAC 25-91-10 *et seq.* and/or 9 VAC 25-580-10 *et seq.* Furthermore, the installation and use of ASTs with a capacity of greater than 660 gallons for temporary fuel storage (>120 days) during construction must follow the requirements in 9 VAC 25-91-10 *et seq.*

(iv) Asbestos-Containing Materials and Lead-Based Paint

All structures being demolished or removed should be checked for asbestos-containing materials (ACM) and lead-based paint (LBP) prior to demolition. If ACM or LBP are found, in addition to the federal waste-related regulations mentioned above, State regulations 9 VAC 20-81-620 (ACM) and 9 VAC 20-60-261 (LBP) must be followed.

Response to DEIS Comment #11
MDOT SHA will adhere to applicable regulations and requirements outlined in **Section 5(c) Requirements** related to Solid and Hazardous Waste and Hazardous Materials.

Questions may be directed to at the DEQ-NRO, Richard Doucette at (703) 583-3800 or richard.doucette@deq.virginia.gov.

#12

5(d) Recommendation. DEQ encourages all construction projects and facilities to implement pollution prevention principles, including the reduction, reuse, and recycling of all solid wastes generated. All generation of hazardous wastes should be minimized and handled appropriately.

For additional questions or further information regarding waste comments, contact DEQ-DLPR, Carlos Martinez at (804) 698-4575 or carlos.martinez@deq.virginia.gov.

6. Pesticides and Herbicides. DEQ recommends that the use of herbicides or pesticides for construction or landscape maintenance should be in accordance with the principles of integrated pest management. The least toxic pesticides that are effective in controlling the target species should be used to the extent feasible. Contact the Department of Agriculture and Consumer Services at (804) 786-3501 for more information.

7. Natural Heritage Resources. According to the DEIS (page 4-115), coordination with the Virginia Department of Conservation and Recreation (DCR) indicated that the corridor study boundary overlaps the Potomac Gorge Conservation Site. The list of the natural heritage resources known to occur within the Potomac Gorge Conservation site includes several state-listed rare plant and invertebrate fauna. While not protected under state or federal laws, these species are tracked by the state because they are vulnerable to becoming state threatened or endangered. Coordination with DCR will continue and targeted plant species surveys within the corridor study boundary are planned for 2020 and the results will be presented in the Final EIS.

7(a) Agency Jurisdiction.

(i) The Virginia Department of Conservation and Recreation's (DCR) Division of Natural Heritage (DNH).

DNH's mission is conserving Virginia's biodiversity through inventory, protection and stewardship. The Virginia Natural Area Preserves Act (Virginia Code §10.1-209 through 217), authorizes DCR to maintain a statewide database for conservation planning and project review, protect land for the conservation of biodiversity, and protect and ecologically manage the natural heritage resources of Virginia (the habitats of rare, threatened and endangered species, significant natural communities, geologic sites, and other natural features).

(ii) The Virginia Department of Agriculture and Consumer Services (VDACS).

The Endangered Plant and Insect Species Act of 1979 (Virginia Code Chapter 39 §3.1-1020 through 1030) authorizes VDACS to conserve, protect and manage endangered

Response to DEIS Comment #12
MDOT SHA will consider the recommendations provided in **Section 5(d) Recommendation** and incorporate them to the greatest extent practicable.

and threatened species of plants and insects. Under a Memorandum of Agreement established between VDACS and the DCR, DCR represents VDACS in comments regarding potential impacts on state-listed threatened and endangered plant and insect species.

7(b) Agency Findings.

(i) Potomac Gorge Conservation Site

According to the information currently in DCR files, the Potomac Gorge Conservation Site is located within the Study in Virginia. The Potomac Gorge Conservation Site has been given a biodiversity significance ranking of B1, which represents a site of outstanding significance. The natural heritage resources of concern at this site are:

Maianthemum stellatum	Starry Solomon's-plume	G5/S1S2/NL/NL
Phacelia covillei	Coville's phacelia	G3/S1/NL/NL
Gomphus fraternus	Midland Clubtail	G5/S2/NL/NL
Boechera dentata	Short's rock cress	G5/S1/NL/NL
Silene nivea	Snowy Campion	G4?/S1/NL/NL
Central Appalachian/Piedmont Low-Elevation Rich Boulderfield Forest		G3G4/S2S3/NL/NL
Coastal Plain/Outer Piedmont Basic Mesic Forest		G4?/ S3/NL/NL

See DCR-DNH comments attached for more detailed information on these resources.

(ii) Additional Listed Species

DCR-DNH finds the following listed species have been historically documented within the Virginia portion of the Study:

Tall Thistle	*Cirsium altissimum*	G5/S1/NL/NL
Wild cucumber	*Echinocystis lobate*	G5/SH/NL/NL
Smartweed Dodder	*Cuscuta polygonorum*	G5/S1/NL/NL
Northern rattlesnake-master	*Eryngium yuccifolium var. yuccifolium*	G5T5/S2/NL/NL
One-sided shinleaf	*Orthilia secunda*	G5/SH/NL/NL
Pizzini's Amphipod	*Stygobromus pizzinii*	G3G4/S1S2/NL/NL

Furthermore, DCR biologists find that there is potential for the Northern Virginia Well amphipod (*Stygobromus phreaticus*, G1/S1/SOC/NL) and other *Stygobromus* amphipod species to occur within the Study area.

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(iii) Ecological Cores

DCR-DNH finds that the proposed project will fragment an Ecological Core C4 as identified in the Virginia Natural Landscape Assessment, one of a suite of tools in Virginia ConservationVision that identify and prioritize lands for conservation and protection.

Ecological Cores are areas of unfragmented natural cover with at least 100 acres of interior that provide habitat for a wide range of species, from interior-dependent forest species to habitat generalists, as well as species that utilize marsh, dune, and beach habitats. Cores also provide benefits in terms of open space, recreation, water quality (including drinking water protection and erosion prevention), and air quality (including carbon sequestration and oxygen production), along with the many associated economic benefits of these functions. The cores are ranked from C1 to C5 (C5 being the least ecologically relevant) using many prioritization criteria, such as the proportions of sensitive habitats of natural heritage resources they contain. See detailed DCR-DNH comments attached for additional information.

(iv) State-listed Plant and Insect Species

DCR-DNH finds that the activity will not affect any documented state-listed plants or insects at the site.

(v) State Natural Area Preserves

DCR files do not indicate the presence of any State Natural Area Preserves under the agency's jurisdiction in the project vicinity.

(vi) Rare, Threatened and Endangered Plant Species Surveys

DCR received the summary of rare, threatened and endangered (RTE) plant species surveys conducted to date in the Potomac River Gorge area by MDOT-SHA. DCR looks forward to reviewing the full report on the survey findings and further coordination per the DEIS (page 4-116), to minimize impacts to natural heritage resources.

7(c) Recommendations.

#13

(i) Avoidance of Natural Heritage Resources

DCR recommends avoidance of documented occurrences of natural heritage resources by limiting the project footprint as much as possible, including along the steep bluff on the eastern side in Virginia.

Response to DEIS Comment #13

Potential impacts on Natural Heritage Resources have been avoided or minimized to the greatest extent practicable at this level of design. Avoidance and minimization efforts included convening a panel of national bridge design experts to limit the LOD in the Potomac Gorge. Results included substantially reducing portions of the LOD that contain steep bluff above the Potomac River. As the Study advances, MDOT SHA would continue to evaluate the need to conduct RTE plant surveys in potential disturbance areas. Measures to minimize habitat fragmentation would be considered during the Study's detailed design phase." MDOT SHA will continue to coordinate with DCR regarding Natural Heritage Resources as the Study continues.

#13 cont.

(ii) Natural Heritage Resources Inventory

Due to the potential of the Study area in Virginia to support additional populations of natural heritage resources that are not included in a RTE plant survey, DCR recommends an inventory for these resources within areas proposed for disturbance including stormwater management ponds and equipment staging areas. With the survey results DCR can more accurately evaluate potential impacts to natural heritage resources and offer specific protection recommendations for minimizing impacts to the documented resources. DCR-DNH biologists are qualified and available to conduct inventories for rare, threatened, and endangered species.

(iii) Ecological Cores

Minimizing fragmentation is a key mitigation measure that will preserve the natural patterns and connectivity of habitats that are key components of biodiversity. DCR-DNH recommends efforts to minimize edge in remaining fragments, retain natural corridors that allow movement between fragments and designing the intervening landscape to minimize its hostility to native wildlife (natural cover versus lawns).

(iv) Natural Heritage Resources Database Update

Contact DCR-DNH to secure updated information on natural heritage resources if the scope of the project changes or six months pass before the project is implemented, since new and updated information is continually added to the Biotics Data System.

8. Wildlife Resources and Protected Species. According to the DEIS (page 4-110), the Virginia Department of Agriculture and Consumer Services (VDACS), Virginia Department of Game and Inland Fisheries, and DCR cooperate in the protection of Virginia's state- and federally-listed threatened and endangered species. Threatened and endangered wildlife species are protected under the Virginia Endangered Species Act of 1972 (Chapter 5 Wildlife and Fish Laws; Va. Code Ann., § 29.1-563 through 570).

8(a) Agency Jurisdiction. The Virginia Department of Wildlife Resources (DWR) (formerly the Department of Game and Inland Fisheries), as the Commonwealth's wildlife and freshwater fish management agency, exercises enforcement and regulatory jurisdiction over wildlife and freshwater fish, including state- or federally-listed endangered or threatened species, but excluding listed insects (Virginia Code, Title 29.1). DWR is a consulting agency under the U.S. Fish and Wildlife Coordination Act (16 U.S. Code §661 *et seq.*) and provides environmental analysis of projects or permit applications coordinated through DEQ and several other state and federal agencies. DWR determines likely impacts upon fish and wildlife resources and habitat, and recommends appropriate measures to avoid, reduce or compensate for those impacts. For more information, see the DWR website at *www.dwr.virginia.gov*.

8(b) Agency Findings. DWR documents the state-listed endangered Little brown bat

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and Tri-colored bat, and the state-listed threatened Wood turtle from the project area. Turkey Run, a tributary of the Potomac River that is located to the east of this project site and crosses George Washington Memorial Parkway, has been designated a Threatened and Endangered Species Water due to the presence the Wood turtle. In addition, the Potomac River has been designated a Confirmed Anadromous Fish Use Area.

8(c) Recommendations.

(i) Little Brown Bat and Tri-Colored Bat

#14

DWR recommends that the Final EIS consider potential impacts upon these species. In addition, FHWA should adhere to a time-of-year restriction on tree removal and timbering from April 1 through October 31 in areas of suitable roosting habitat (forest) or that such areas be assessed or surveyed for roosting sites. The assessments should be provided to DWR for further review.

(ii) Wood Turtle

DWR recommends that the Final EIS address the potential presence of the Wood turtle and its habitat within the project area. In addition, DWR recommends the following for the protection of the Wood turtle:

- Adhere to a time-of-year restriction for instream work from October 1 through March 31 of any year.
- Adhere to a time of year restriction from April 1 through September 30 of any year for work in uplands within 900 feet of a stream.
- Preserve at least 300 feet of undisturbed naturally vegetated buffer along the stream.

#15

Additional information on the Wood Turtle may be found online on the DWR website.

DWR recommends that a formal habitat assessment be performed by a qualified biologist which clearly depicts, via narrative and photographic description, all stream and upland habitats along the tributary to Stony Run. The habitat assessment should be made available to DWR for review. Upon review, DWR will make final comments regarding protection of the Wood turtle associated with this project.

DWR recommends that, prior to construction, contractors should be made aware of the possibility of encountering Wood turtle on site and become familiar with its appearance, status and life history. Attached is an appropriate information sheet/field observation form for distribution to contractors. If Wood turtles are encountered and are in jeopardy during construction, remove them from immediate harm. If there is staff on site with an appropriate Threatened and Endangered Species Scientific Collection Permit, relocate

Response to DEIS Comment #14

A bat habitat and acoustic survey documented in the *I-495 & I-270 Managed Lanes Study Threatened and Endangered Bat Habitat Assessment and Acoustic Survey Report* (SDEIS-Appendix H), which was conducted around the American Legion Bridge in Virginia, identified four instances of the tri-colored bat and no presence of the little brown bat. To protect roosting bats, MDOT SHA will commit to a time of year restriction on tree clearing in the Virginia portion of the I-495 & I-270 Managed Lanes Study Preferred LOD clearing from April 1 through October 31.

Response to DEIS Comment #15

In response to the recommendation in **Section 8(c)(ii)**, MDOT SHA completed a wood turtle survey, including a formal habitat assessment and a subsequent survey for individual wood turtles, in February 2021 within the Phase I South portion of the MLS Corridor Study Boundary in Virginia. No wood turtles were identified, and the survey report was included in SDEIS-Appendix H. MDOT SHA and FHWA will coordinate with VDWR to identify feasible project-specific measures outlined in **Section 8(c)(ii), (iii),** and **(iv)** to minimize potential wildlife impacts to the greatest extent practicable.

#15 cont.

encountered Wood turtles to suitable habitat, preferably within the nearest perennial stream. Relocations should be reported to DWR.

(iii) Potomac River

DWR recommends the implementation of the following measures for proposed instream work.

- Adhere to a time-of-year restriction from February 15 through June 30 of any year.
- Conduct instream activities during low or no-flow conditions.
- Use non-erodible cofferdams or turbidity curtains to isolate the construction area.
- Block no more than 50% of the streamflow at any given time (minimal overlap of construction footprint notwithstanding).
- Stockpile excavated material in a manner that prevents reentry into the stream.
- Restore original streambed and streambank contours.
- Revegetate barren areas with native vegetation.
- Implement strict erosion and sediment control measures.
- Designed and perform instream work in a manner that minimizes impacts upon natural streamflow and movement of resident aquatic species.
- Use a dam and pump-around for as limited a time as possible and return water to the stream free of sediment and excess turbidity.
- Use matting made from natural/organic materials such as coir fiber, jute, and/or burlap to minimize potential wildlife entanglements resulting from use of synthetic/plastic erosion and sediment control matting.
- Install concrete (e.g. Tremie method, grout bags, and poured concrete) "in the dry," allowing all concrete to harden and cure prior to contact with open water to minimize harm to the aquatic environment and organisms.
- Construct stream crossings via clear-span bridges due to the future maintenance costs associated with culverts and the loss of riparian and aquatic habitat. If this is not possible, countersink culverts below the streambed at least 6 inches or use bottomless culverts to allow passage of aquatic organisms.
- Install floodplain culverts to carry bankfull discharges.

(iv) General Protection of Wildlife Resources

DGIF offers the following recommendations to minimize overall impacts to wildlife and natural resources from the construction of linear road projects.

- Avoid and minimize impacts to undisturbed forest, wetlands, and streams to the fullest extent practicable.
- Maintain naturally vegetated buffers of at least 100 feet in width around wetlands and on both sides of perennial and intermittent streams, where practicable.
- Conduct significant tree removal and ground clearing activities outside of the

See previous page for Response to DEIS Comment #15.

#15 cont.

primary songbird nesting season of March 15 through August 15.

- Implement and maintain appropriate erosion and sediment controls throughout project construction and site restoration.
- Use matting made from natural organic materials such as coir fiber, jute, and/or burlap to minimize potential wildlife entanglements resulting from use of synthetic/plastic erosion and sediment control matting.

DWR understands that adherence to these general recommendations may be infeasible in some situations. DWR is available to work with FHWA to develop project-specific measures as necessary to minimize project impacts upon wildlife resources.

9. Historic and Archeological Resources. The DEIS (page 4-49) finds that in Virginia, the George Washington Memorial Parkway would be adversely affected by expansion of the American Legion Bridge within the park boundaries, causing increased visual and physical intrusion into the setting of the park, resulting in diminishment of setting and possibly landscape design and materials. In addition, MDOT-SHA evaluated a number of recorded precontact archaeological sites within the George Washington Memorial Parkway property in Virginia (DEIS, page 4-54). MDOT-SHA has determined that the majority of the investigated sites together constitute a NRHP-eligible archaeological district of related resources. The Virginia Department of Historic Resources (DHR) did not concur with characterizing the resources as an archaeological district and recommends four of the five sites individually eligible for listing on the NRHP (Sites 44FX0374, 44FX0379, 44FX0381 and 44FX0389). MDOT-SHA, National Park Service and DHR are continuing consultation on eligibility, treatment, and effects determinations regarding these resources.

9(a) Agency Jurisdiction. The Virginia Department of Historic Resources (DHR) conducts reviews of both federal and state projects to determine their effect on historic properties. Under the federal process, DHR is the State Historic Preservation Office, and ensures that federal undertakings-including licenses, permits, or funding-comply with Section 106 of the National Historic Preservation Act of 1966, as amended, and its implementing regulation at 36 CFR Part 800. Section 106 requires federal agencies to consider the effects of federal projects on properties that are listed or eligible for listing on the National Register of Historic Places. For state projects or activities on state lands, DHR is afforded an opportunity to review and comment on (1) the demolition of state property; (2) major state projects requiring an EIR; (3) archaeological investigations on state-controlled land; (4) projects that involve a landmark listed in the Virginia Landmarks Register; (5) the sale or lease of surplus state property; (6) exploration and recovery of underwater historic properties; and (7) excavation or removal of archaeological or historic features from caves. Please see DHR's website for more information about applicable state and federal laws and how to submit an application for review: http://www.dhr.virginia.gov/StateStewardship/Index.htm.

9(b) Agency Findings. DHR concurs that the FHWA is currently consulting with DHR on this undertaking pursuant to Section 106 of the National Historic Preservation Act, as

See previous page for Response to DEIS Comment #15.

amended, and its implementing regulation 36 CFR Part 800. DHR anticipates this consultation will continue.

#16

9(c) Requirement. FHWA must to continue to consult with DHR under Section 106.

10. Recreational Resources. According to the DEIS (page 4-98), the only forest resources within the corridor study boundary in Virginia are on NPS property and Scott's Run Nature Preserve, owned by Fairfax County Park Authority. Park Use Permits would require coordination and application with the Fairfax County Park Authority for construction within parkland, including removal of trees and vegetation. In addition, the DEIS (page 4-101) asserts that mitigation for any impacts to these forests would require specific coordination with NPS and DCR.

10(a) Agency Jurisdiction. DCR's Division of Planning and Recreational Resources (DPRR) administers the Virginia Scenic Rivers (Virginia Code § 10.1-200), Virginia Byways (Virginia Code §33.2-405 through 33.2-408), and state trails programs (Virginia Code §10.1-204) and is responsible for developing the Virginia Outdoors Plan (VOP), the state's comprehensive outdoor recreation and open space plan (Virginia Code §10.1-200). The VOP recognizes the importance of scenery to Virginians and many of the top ten activities are water based.

#17

10(b) Agency Findings. DCR-DPRR concurs that the Scotts Run Nature Preserve is adjacent to the Study corridor and could be impacted by the project. The park is protected in perpetuity under § 6(f) (3) of the Land and Water Conservation Fund (LWCF) Act. 36 CFR § 59.3 states that "§ 6 (f) (3) of the LWCF is the cornerstone of federal compliance efforts to ensure that the federal investments in LWCF assistance are being maintained in public outdoor recreation use. This section of the Act assures that once an area has been funded with LWCF assistance, it is continually maintained in public recreation use unless NPS approves substitution property of reasonably equivalent usefulness and location and of at least equal fair market value."

10(c) Requirement. No property acquired or developed with assistance under § 6(f) (3) shall be converted to other than public outdoor recreation uses without the approval of the Secretary of the Interior. Accordingly, FHWA must also coordinate with DCR-DPRR to confirm that the project will not impact Scotts Run Nature Preserve.

11. Public Water Supply. According to the DEIS (page 4-89), all Build Alternatives would affect surface waters, surface water quality, and watershed characteristics in the corridor study boundary due to direct and indirect impacts to ephemeral, intermittent, and perennial stream channels and increases in impervious surface in their watersheds. However, drinking water impacts are not anticipated (DEIS, page 4-94).

#18

11(a) Agency Jurisdiction. The Virginia Department of Health (VDH) Office of Drinking Water (ODW) reviews projects for the potential to impact public drinking water sources (groundwater wells, springs and surface water intakes). VDH administers both

Response to DEIS Comment #16
FHWA and MDOT SHA have and will continue to consult with VDHR under Section 106, as indicated in **Section 9(c) Requirement**.

Response to DEIS Comment #17
MDOT SHA acknowledges the Requirement under **Section 10(c)**. However, the Scotts Run Nature Preserve will not be impacted by the Preferred Alternative.

See the next page for the Response to DEIS Comment #18.

#18 cont.

federal and state laws governing waterworks operation.

11(b) Agency Findings. VDH-ODW concurs that in Virginia, there are no public groundwater wells within a 1-mile radius of the project site, no surface water intakes located within a 5-mile radius, and the project corridor is not within the watershed of any public surface water intakes.

11(c) Conclusion. VDH-ODW concludes that there are no apparent impacts on public drinking water sources due to this proposal.

For additional information, contact VDH-ODW, Arlene Fields Warren at (804) 864-7781 or arlene.warren@vdh.virginia.gov.

12. Floodplain Management. According to the DEIS (page 4-95), Fairfax County Floodplain Regulations are more stringent than the federal minimum requirements of the National Flood Insurance Program. Activities within their floodplains may require written approval from the Fairfax County Department of Public Works and Environmental Services, or a Special Exception approval issued by the Board of Supervisors. Floodplain approvals will be obtained by the appropriate jurisdiction. The Study will meet floodplain requirements.

12(a) Agency Jurisdiction. The DCR Division of Dam Safety and Floodplain Management (DSFM) is the lead coordinating agency for the Commonwealth's floodplain management program and the National Flood Insurance Program (Executive Oder 45). The National Flood Insurance Program (NFIP) is administered by the Federal Emergency Management Agency (FEMA), and communities who elect to participate in this voluntary program manage and enforce the program on the local level through that community's local floodplain ordinance. Each local floodplain ordinance must comply with the minimum standards of the NFIP, outlined in 44 CFR 60.3; however, local communities may adopt more restrictive requirements in their local floodplain ordinance, such as regulating the 0.2% annual chance flood zone (shaded Zone X).

#19

12(b) Requirements. All development within a Special Flood Hazard Area (SFHA) or floodplain, as shown on the locality's Flood Insurance Rate Map (FIRM), must be permitted and comply with the requirements of the local floodplain ordinance. Projects conducted by federal agencies within the SFHA must comply with federal Executive Order 11988: Floodplain Management.

DCR's Floodplain Management Program does not have regulatory authority for projects in the SFHA. The FHWA must contact the local floodplain administrator for an official floodplain determination and comply with the community's local floodplain ordinance, including receiving a local permit. Failure to comply with the local floodplain ordinance could result in enforcement action from the locality. The FHWA is encouraged to reach out to the local floodplain administrator to ensure compliance with the local floodplain ordinance.

Response to DEIS Comment #18
MDOT SHA acknowledges and agrees with VDEQ's conclusion that there are no apparent impacts on public drinking water sources due to the proposed action.

Response to DEIS Comment #19
MDOT SHA will meet applicable floodplain management requirements as outlined in **Section 12(b) Requirements** and under Executive Order 11988: Floodplain Management.

12(c) Recommendations. DCR recommends the FHWA access the Virginia Flood Risk Information System (VFRIS). Local floodplain administrator contact information may be found on DCR's Local Floodplain Management Directory.

For additional information, contact DCR-DSFM, Kristin Owen at (804) 786-2886 or kristin.owen@dcr.virginia.gov.

13. Transportation Impacts. The DEIS (page ES-2) states that the Virginia Department of Transportation is a Cooperating Agency for the Study.

13(a) Agency Jurisdiction. The Virginia Department of Transportation (VDOT) provides comments pertaining to potential impacts to existing and future transportation systems.

13(b) Agency Findings. VDOT has been closely coordinating MDOT-SHA with regard to the I-495 Northern Extension (NEXT) of the Capital Beltway Express Lanes project, to ensure that the two independent projects are properly coordinated.

For additional information, contact VDOT, Rahul Trivedi, P.E. at (703) 259-2308 or rahul.trivedi@vdot.virginia.gov.

14. Local Review.

14(a) Agency Jurisdiction. DEQ invites the chief administrative officer of every locality in which a project is proposed to be located to comment on environmental documents the Department receives. The purpose of the distribution is to enable the locality to evaluate the proposed project for environmental impact, consistency with the locality's comprehensive plan, local ordinances adopted pursuant to applicable law and to provide the locality with an opportunity to comment. DEQ distributes the reports to localities, solicits their comments and considers their responses in substantially the same manner as the department solicits and receives comments from state agencies.

14(b) Agency Findings. The Fairfax County Department of Planning and Development (DPD) notes that the DEIS includes a Community Effects Assessment (CEA) for various community areas along the study area, including portions of the McLean community. These areas were identified primarily as either residential or park properties. The CEA Analysis Area Community is bordered roughly by the Potomac River to the north; Chain Bridge and Chain Bridge Road to the east; Georgetown Pike and Old Dominion Drive (Route 738) to the south; and Georgetown Pike (Route 193) and Difficult Run to the west. This is the southwestern-most community in the project analysis area and the only community located outside of Maryland.

Within the McLean CEA analysis area, a total of 14.4 acres would be taken for highway right-of-way, including 12.2 acres of the George Washington Memorial Parkway, of

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#20

which 9.3 acres would be impacted tree canopy.

Fairfax DPD's response to the DEIS includes a summary of information previously provided to VDOT for its I-495 Express Lanes Northern Extension Environmental Assessment, and an environmental analysis that includes policy guidance addressing Roadway Design, Cultural Resources, Ecological Resources, Forest Resources, and Traffic Noise Impacts. Most sections include a comments and recommendations subsection. The information is extensive and will not be repeated here. However, see Fairfax DPD's response (attached) for details.

14(c) Recommendations. In general, Fairfax DPD notes that transportation system components are expected to be consistent with environmental, land use, social, and economic goals. Each component is to be thoughtfully designed and sensitively integrated into the community fabric. Open space, ecological resources, heritage sites, parks, trails, and stream corridors are all critical components of the community that each transportation proposal is to consider.

To address the environmental objectives of the Comprehensive Plan and avoid undue impacts to community resources, Fairfax DPD staff recommends the following:

- Avoidance or minimization of impacts to properties that are located on the National Register of Historic Places, including the George Washington Memorial Parkway and Georgetown Pike.
- Avoidance or minimization of impacts to the two properties on the Fairfax County Inventory of Historic Sites (Beaufort Park and Shiloh Baptist Church).
- Assessment, minimization, avoidance, and mitigation of the direct and indirect impacts to the three properties identified in the Virginia Outdoors Plan.
- Optimization of road alignments and designs to prevent or otherwise minimize encroachment in Resource Protection Areas (RPAs) and adverse effects on water quality.
- Strict adherence to local stormwater management requirements to the maximum extent practicable for the project, per IIM-LD-195.12.
- The use of linear stormwater controls to address water quality and quantity requirements.
- Pursuit of mitigation opportunities within the county and which rely on Fairfax County's approved watershed management plans as guides for any project mitigation. The FHWA should partner with the county to select local stream restoration and constructed wetland projects.
- An evaluation of "legacy" issues and impacts from previous highway-related work, particularly inadequacies of previous stormwater facility installations, planting efforts, and runoff impacts on local stream geomorphology, including erosion. The cumulative impacts of existing deficiencies and proposed actions should be assessed and mitigated.
- Assessment of the impacts to Dead Run, Scotts Run, and Turkey Run and the downstream impacts to the Potomac River.

Response to DEIS Comment #20

MDOT SHA and FHWA acknowledge the recommendations as outlined in **Section 14(c)** and have continued to work to avoid and minimize impacts to the extent practicable since publication of the DEIS. Avoidance and minimization measures, including to resources within Virginia, have been incorporated into the Preferred Alternative and mitigation has been developed where impacts are unavoidable. Many of the listed recommendations are addressed in the FEIS and others, as appropriate, will be addressed during final design or construction.

#20 cont.

- Performance of ecological resource surveys for each of these stream corridors, the Scotts Run Nature Preserve, and the George Washington Memorial Parkway.
- Assessment of the environmental services and the economic, social, and health benefits of the urban forest that would be lost due to the clearing associated with this project, as well as compensation for these impacts.
- Reforestation of all disturbed areas with commitments to compensation, soil rebuilding, and the restoration of native plant communities.
- Integration of invasives control throughout the project area.
- Clarification of the current status of and expectations regarding noise mitigation, to include potential barrier locations and design details.

For additional information regarding the county's comments, contact Fairfax DPD, Joseph Gorney at (703) 324-1380 or joseph.gorney@fairfaxcounty.gov.

15. Pollution Prevention. DEQ advocates that principles of pollution prevention and sustainability be used in all construction projects as well as in facility operations. Effective siting, planning, and on-site BMPs will help to ensure that environmental impacts are minimized. However, pollution prevention and sustainability techniques also include decisions related to construction materials, design, and operational procedures that will facilitate the reduction of wastes at the source.

15(a) Recommendations. We have several pollution prevention recommendations that may be helpful in the construction and operation of this project:

- Consider development of an effective Environmental Management System (EMS). An effective EMS will ensure that the proposed facility is committed to minimizing its environmental impacts, setting environmental goals, and achieving improvements in its environmental performance. DEQ offers EMS development assistance and it recognizes facilities with effective Environmental Management Systems through its Virginia Environmental Excellence Program (VEEP). VEEP provides recognition, annual permit fee discounts, and the possibility for alternative compliance methods.
- Consider environmental attributes when purchasing materials. For example, the extent of recycled material content, toxicity level, and amount of packaging should be considered and can be specified in purchasing contracts.
- Consider contractors' commitment to the environment (such as an EMS) when choosing contractors. Specifications regarding raw materials and construction practices can be included in contract documents and requests for proposals.
- Integrate pollution prevention techniques into the facility maintenance and operation. Maintenance facilities should be designed with sufficient and suitable space to allow for effective inventory control and preventative maintenance.

DEQ's Office of Pollution Prevention provides information and technical assistance relating to pollution prevention techniques and EMS. For more information, contact

#21

Response to DEIS Comment #21

MDOT SHA will meet applicable pollution prevention recommendations outlined in **Section 15(a) Recommendations** to the greatest extent practicable.

#22

DEQ's Office of Pollution Prevention, Meghann Quinn at (804) 698-4021 or meghann.quinn@deq.virginia.gov.

REGULATORY AND COORDINATION NEEDS

1. Surface Waters and Wetlands. Surface water and wetland impacts associated with the Preferred Alternative may require VWP Permit authorization from DEQ pursuant to Virginia Code §62.1-44.15:20. A Joint Permit Application may be obtained from and submitted to the VMRC which serves as a clearinghouse for the joint permitting process involving the VMRC, DEQ, Corps, and local wetlands boards. For additional information and coordination, contact DEQ-OWSP, Michelle Henicheck at (804) 698-4007 or michelle.henicheck@deq.virginia.gov.

2. Erosion and Sediment Control and Stormwater Management.

2(a) Erosion and Sediment Control and Stormwater Management. Construction in Virginia must comply with the Virginia Erosion and Sediment Control Law (Virginia Code § 62.1-44.15:61) and *Regulations* (9 VAC 25-840-30 *et seq.*) and Stormwater Management Law (Virginia Code § 62.1-44.15:31) and *Regulations* (9 VAC 25-870-210 *et seq.*) as administered by DEQ. Activities that disturb 2,500 square feet or more in CBPAs would be regulated by *VESCL&R* and *VSWML&R*. Erosion and sediment control, and stormwater management requirements should be coordinated with DEQ-NRO, Kelly Vanover at (804) 837-1073 or kelly.vanover@deq.virginia.gov.

2(b) General Permit for Stormwater Discharges from Construction Activities (VAR10). For land-disturbing activities of equal to or greater than one acre, the applicant is required to apply for registration coverage under the Virginia Stormwater Management Program General Permit for Discharges of Stormwater from Construction Activities (9 VAC 25-880-1 *et seq.*). Specific questions regarding the Stormwater Management Program requirements should be directed to DEQ-NRO, Kelly Vanover at (804) 837-1073 or kelly.vanover@deq.virginia.gov.

3. Chesapeake Bay Preservation Areas. Construction must comply with the requirements of the Bay Act (Virginia Code §§ 62.1-44.15:67 through 62.1-44.15:78) and *Regulations* (9 VAC 25-830-10 *et seq.*) as administered by DEQ. The construction, installation, operation, and maintenance of public roads in RPA are conditionally exempt under 9 VAC-25-830-150.B.1 of the *Regulations*. For additional information and coordination, contact the DEQ-OWLGAP, Daniel Moore at (804) 698-4520 or daniel.moore@deq.virginia.gov.

4. Air Quality Regulations. The Proposed Alternatives are subject to air regulations administered by DEQ. The following sections of the Code of Virginia and Virginia Administrative Code are applicable:

- asphalt paving operations (9 VAC 5-45-780 *et seq.*);

Response to DEIS Comment #22
MDOT SHA will coordinate regulatory and coordination needs with the individuals listed on pages 24 to 27 of the VDEQ comment letter.

- fugitive dust and emissions control (9 VAC 5-50-60 *et seq.*); and
- open burning restrictions (9 VAC 5-130).

Contact Fairfax County fire officials for information on any local requirements pertaining to open burning. For more information and coordination contact DEQ-NRO, Justin Wilkinson at (703) 583-3820 or justin.wilkinson@deq.virginia.gov.

5. Solid and Hazardous Wastes. All solid waste, hazardous waste, and hazardous materials must be managed in accordance with all applicable federal, state, and local environmental regulations. For additional information concerning location and availability of suitable waste management facilities in the project area or if free product, discolored soils, or other evidence of contaminated soils are encountered, contact DEQ-NRO, Richard Doucette at (703) 583-3813 or richard.doucette@deq.virginia.gov.

5(a) Asbestos-Containing Material. The owner or operator of a demolition activity, prior to the commencement of the activity, is responsible to thoroughly inspect affected structures for the presence of asbestos, including Category I and Category II nonfriable asbestos containing material (ACM). Upon classification as friable or non-friable, all waste ACM shall be disposed of in accordance with the Virginia Solid Waste Management Regulations (9 VAC 20-80-640), and transported in accordance with the Virginia regulations governing Transportation of Hazardous Materials (9 VAC 20-110-10 et seq.). Contact the DEQ-NRO, Richard Doucette at (703) 583-3813 or richard.doucette@deq.virginia.gov and the Department of Labor and Industry, Doug Wiggins (540) 562-3580 ext. 131 for additional information.

5(b) Lead-Based Paint. Construction must comply with the U.S. Department of Labor, Occupational Safety and Health Administration (OSHA) regulations, and with the Virginia Lead-Based Paint Activities Rules and Regulations. For additional information regarding these requirements contact the Department of Professional and Occupational Regulation at (804) 367-8500.

5(c) Petroleum Contamination. In accordance with Virginia Code §§ 62.1-44.34.8 through 9 and 9 VAC 25-580-10 *et seq.*, site activities involving excavation or disturbance of petroleum contaminated soils and or groundwater must be reported to DEQ-NRO, Randy Chapman at (703) 583-3816 or randy.chapman@deq.virginia.gov.

5(d) Petroleum Storage Tank Compliance and Inspection. The installation and use of an AST of greater than 660 gallons for temporary fuel storage of more than 120 days must comply with the requirements in 9 VAC 25-91-10 *et seq.* Contact DEQ-NRO, Riaz Syed at (703) 583-3915 or riaz.syed@deq.virginia.gov.

6. Natural Heritage Resources.

6(a) Natural Heritage Resources Inventory. Contact Natural Heritage Chief Biologist, Anne Chazal at (804) 786-9014 or anne.chazal@dcr.virginia.gov, to discuss conducting

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a natural heritage resources survey within areas proposed for disturbance, including stormwater management ponds and equipment staging areas. With the survey results DCR can more accurately evaluate potential impacts to natural heritage resources and offer specific protection recommendations for minimizing impacts to the documented resources.

6(b) Ecological Cores. Additional information on minimizing the deleterious effects of fragmentation of the ecological core may be obtained by contacting DCR-DNH, Rene Hypes at (804) 371-2708 or rene.hypes@dcr.virginia.gov.

6(c) Natural Heritage Resources Update. Contact DCR-DNH, Rene Hypes at (804) 371-2708 or rene.hypes@dcr.virginia.gov, to secure updated information on natural heritage resources if the scope of the project changes and/or six months pass before the project is implemented, since new and updated information is continually added to the Biotics Data System.

7. Wildlife Resources and Protected Species.

7(a) Wood Turtle. Contact DWR's Herpetologist, John (J.D.) Kleopfer at (804) 829-6703 or john.kleopfer@dwr.virginia.gov to further discuss a formal habitat assessment at all stream and upland habitats along the tributary to Stony Run. The habitat assessment should reference ESSLog#40764 and be made available to DWR for review. In addition, Wood Turtle relocations should be reported to DWR, J.D. Kleopfer, and Wood Turtle observation forms should be faxed to (804) 829-6788.

7(b) General Protection of Wildlife Resources. Contact DWR, Amy Ewing at (804) 367-2211 or amy.ewing@dwr.virginia.gov for the development of project-specific measures to minimize project impacts upon wildlife resources.

8. Historic and Archaeological Resources. The FHWA must continue to consult with DHR under Section 106 NHPA. For additional information and coordination, contact DHR, Marc Holma at (804) 482-6090 or marc.holma@dhr.virginia.gov.

9. Recreational Resources. Under § 6(f) (3) of the Land and Water Conservation Fund Act, no property acquired or developed with assistance under LWCFA shall be converted to other than public outdoor recreation uses without the approval of the Secretary of the Interior. This also includes coordination with DCR-DPRR to confirm that the project will not impact Scotts Run Nature Preserve. Contact DCR-DPRR, Kristal McKelvey at or kristal.mckelvey@dcr.virginia.gov, for further information and coordination.

10. Floodplain Management. The Preferred Alternative must be implemented in compliance with Fairfax County's local floodplain ordinance. Local floodplain administrator contact information may be found on DCR's Local Floodplain Management Directory.

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11. Federal Consistency under the CZMA. Pursuant to the Coastal Zone Management Act (CZMA) of 1972, as amended, FHWA is required to determine the consistency of its activities affecting Virginia's coastal resources or coastal uses with the Virginia Coastal Zone Management (CZM) Program (see section 307(c)(1) of the *Act* and 15 CFR Part 930, Subpart C, section 930.34). This involves an analysis of the activities in light of the enforceable policies of the Virginia CZM Program, and the submission of a consistency determination reflecting that analysis and committing the FHWA to comply with the enforceable policies. In addition, we encourage FHWA to consider the Advisory Policies of the Virginia CZM Program. Section 930.39 gives content requirements for the consistency determination, or you may also find guidance in DEQ's Federal Consistency Information Package on the agency's website.

Thank you for the opportunity to review the Draft Environmental Impact Statement for the I-495 & I-270 Managed Lanes Study in Fairfax County. Detailed comments of reviewing agencies are attached for your review. Please contact me at (804) 698-4204 or John Fisher at (804) 698-4339 for clarification of these comments.

Sincerely,

Bettina Rayfield, Program Manager
Environmental Impact Review and Long-Range Priorities

Enclosures

Ec: Amy Ewing, DWR
Robbie Rhur, DCR
Arleen Warren, VDH
Mark Eversole, VMRC
Roger Kirchen, DHR
Heather Williams, VDOT
Denise James, Fairfax County
Robert Lazaro, NVRC

Comments from the attachments after this signature page are reflected in the body of the DEIS comment letter above.

Commonwealth of Virginia

Fisher, John <john.fisher@deq.virginia.gov>

Re: NEW PROJECT FHWA I-495 and I-270 Managed Lanes Study, DEQ #20-103F
1 message

Holland, Benjamin <benjamin.holland@deq.virginia.gov> Wed, Jul 15, 2020 at 3:33 PM
To: John Fisher <John.Fisher@deq.virginia.gov>

Northern Regional Office comments regarding the draft EIR for I-495 and I-270 Managed Lane Study, *DEQ #20-103F*, are as follows:

Land Protection Division – The project manager is reminded that if any solid or hazardous waste is generated/encountered during construction, the project manager would follow applicable federal, state, and local regulations for their disposal.

Air Compliance/Permitting - The project manager is reminded that during the construction phases that occur with this project; the project is subject to the Fugitive Dust/Fugitive Emissions Rule 9 VAC 5-50-60 through 9 VAC 5-50-120. In addition, should any open burning or use of special incineration devices be employed in the disposal of land clearing debris during demolition and construction, the operation would be subject to the Open Burning Regulation 9 VAC 5-130-10 through 9 VAC 5-130-60 and 9 VAC 5-130-100.

Virginia Water Protection Permit (VWPP) Program – The project manager is reminded that a VWP permit from DEQ may be required should impacts to surface waters be necessary. DEQ VWP staff recommends that the avoidance and minimization of surface water impacts to the maximum extent practicable as well as coordination with the US Army Corps of Engineers. Upon receipt of a Joint Permit Application for the proposed surface water impacts, DEQ VWP Permit staff will review the proposed project in accordance with the VWP permit program regulations and current VWP permit program guidance. VWPP staff reserve the right to provide comment upon receipt of a permit application requesting authorization to impact state surface waters, and at such time that a wetland delineation has been conducted and associated jurisdiction determination made by the U.S. Army Corps of Engineers.

Erosion and Sediment Control, Storm Water Management – DEQ has regulatory authority for the Virginia Pollutant Discharge Elimination System (VPDES) programs related to municipal separate storm sewer systems (MS4s) and construction activities. Erosion and sediment control measures are addressed in local ordinances and State regulations. Additional information is available at http://www.deq.virginia.gov/Programs/Water/StormwaterManagement.aspx. Non-point source pollution resulting from this project should be minimized by using effective erosion and sediment control practices and structures. Consideration should also be given to using permeable paving for parking areas and walkways where appropriate, and denuded areas should be promptly revegetated following construction work. If the total land disturbance exceeds 10,000 square feet, an erosion and sediment control plan will be required. Some localities also require an E&S plan for disturbances less than 10,000 square feet. A stormwater management plan may also be required. For any land disturbing activities equal to one acre or more, you are required to apply for coverage under the VPDES General Permit for Discharges of Storm Water from Construction Activities. The Virginia Stormwater Management Permit Authority may be DEQ or the locality.

Commonwealth of Virginia

Fisher, John <john.fisher@deq.virginia.gov>

Re: NEW PROJECT FHWA I-495 and I-270 Managed Lanes Study, DEQ #20-103F
1 message

Gavan, Lawrence <larry.gavan@deq.virginia.gov> Mon, Jul 13, 2020 at 3:33 PM
To: "Fisher, John" <john.fisher@deq.virginia.gov>

(a) Agency Jurisdiction. The Department of Environmental Quality (DEQ) administers the *Virginia Erosion and Sediment Control Law and Regulations* (*VESCL&R*) and *Virginia Stormwater Management Law and Regulations* (*VSWML&R*).

(b) Erosion and Sediment Control and Stormwater Management Plans. The Applicant and its authorized agents conducting regulated land-disturbing activities on private and public lands in the state must comply with *VESCL&R* and *VSWML&R*, including coverage under the general permit for stormwater discharge from construction activities, and other applicable federal nonpoint source pollution mandates (e.g. Clean Water Act-Section 313, federal consistency under the Coastal Zone Management Act). Clearing and grading activities, installation of staging areas, parking lots, roads, buildings, utilities, borrow areas, soil stockpiles, and related land-disturbing activities that result in the total land disturbance of equal to or greater than 10,000 square feet (2,500 square feet in Chesapeake Bay Preservation Area) would be regulated by *VESCL&R*. Accordingly, the Applicant must prepare and implement an erosion and sediment control (ESC) plan to ensure compliance with state law and regulations. Land-disturbing activities that result in the total land disturbance of equal to or greater than 1 acre (2,500 square feet in Chesapeake Bay Preservation Area) would be regulated by *VSWML&R*. Accordingly, the Applicant must prepare and implement a Stormwater Management (SWM) plan to ensure compliance with state law and regulations. The ESC/SWM plan is submitted to the DEQ Regional Office that serves the area where the project is located for review for compliance. The Applicant is ultimately responsible for achieving project compliance through oversight of on-site contractors, regular field inspection, prompt action against non-compliant sites, and other mechanisms consistent with agency policy. [Reference: VESCL 62.1-44.15 et seq.]

(c) General Permit for Stormwater Discharges from Construction Activities (VAR10). DEQ is responsible for the issuance, denial, revocation, termination and enforcement of the Virginia Stormwater Management Program (VSMP) General Permit for Stormwater Discharges from Construction Activities related to municipal separate storm sewer systems (MS4s) and construction activities for the control of stormwater discharges from MS4s and land disturbing activities under the Virginia Stormwater Management Program.

The owner or operator of projects involving land-disturbing activities of equal to or greater than 1 acre is required to register for coverage under the General Permit for Discharges of Stormwater from Construction Activities and develop a project-specific Stormwater Pollution Prevention Plan. Construction activities requiring registration also include land disturbance of less than one acre of total land area that is part of a larger common plan of development or sale if the larger common plan of development will collectively disturb equal to or greater than one acre The SWPPP must be prepared prior to submission of the registration statement for coverage under the general permit and the SWPPP must address water quality and quantity in accordance with the *VSMP Permit Regulations*. General information and registration forms for the General Permit are available at: http://www.deq.virginia.gov/Programs/Water/StormwaterManagement/VSMPPermits/ConstructionGeneralPermit.aspx
[Reference: Virginia Stormwater Management Act 62.1-44.15 et seq.; VSMP Permit Regulations 9VAC25-880 *et seq.]*

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

Street address: 1111 East Main Street, Suite 1400, Richmond, VA 23219
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Matthew J. Strickler
Secretary of Natural Resources

David K. Paylor
Director

(804) 698-4000
1-800-592-5482

MEMORANDUM

TO: John Fisher, DEQ Office of Environmental Impact Review

FROM: Daniel Moore, DEQ Principal Environmental Planner

DATE: July 10, 2020

SUBJECT: DEQ #20-103F USDOT/FHWA: I-495 Managed Lanes Study – Fairfax County

We have reviewed the Draft EIS documents for the above project and offer the following comments regarding consistency with the provisions of the *Chesapeake Bay Preservation Area Designation and Management Regulations* (Regulations).

In Fairfax County, the areas protected by the Chesapeake Bay Preservation Act (CBPA), as locally implemented, require conformance with performance criteria. These areas include Resource Protection Areas (RPAs) and Resource Management Areas (RMAs) as designated by the local governments. RPAs include tidal wetlands, certain non-tidal wetlands, and tidal shores. RPAs also include a 100-foot vegetated buffer area located adjacent to and landward of these features and along both sides of any water body with perennial flow. RMAs, which require less stringent performance criteria than RPAs, include all areas of Fairfax County not included in the RPA.

Section 9VAC-25-830-150.B.1 of the Regulations exempts the "construction, installation, operation, and maintenance" of public roads (in this case I-495 as it runs through Fairfax County, from the interchange with the George Washington Memorial Parkway to the Virginia-Maryland border) provided such construction, installation, operation, and maintenance is conducted in accordance with regulations promulgated pursuant to the *Erosion and Sediment Control Law* and the *Virginia Stormwater Management Act*, including submission of an erosion and sediment control plan and a stormwater management plan approved by the Department of Environmental Quality, or local water quality protection criteria at least as stringent as the above state requirements. The exemption of public roads is further conditioned on the optimization of the road alignment and design to prevent or otherwise minimize encroachment into the RPA and adverse effects on water quality.

Provided adherence to the above requirements, that section of the proposed activity located in Fairfax County would be consistent with the *Chesapeake Bay Preservation Act* and the Regulations.

MEMORANDUM

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER DIVISION

TO: John Fisher

FROM: Michelle Henicheck
Michelle Henicheck
Office of Wetlands and Stream Protection

DATE: September 29, 2020

SUBJECT: Draft Environmental Impact Statement
Project Sponsor: USDOT/Federal Highway Administration
Project Title: I-495 and I-270 Managed Lanes Study
Location: Fairfax County
Project Number: DEQ #20-103F

The DEQ's Office of Wetlands and Stream Protection (OWSP) has reviewed the draft Environmental Impact Statement (EIS) concerning the above-referenced project.

The 1-495 & 1-270 Managed Lanes Study (MLS) is the first element of the broader 1-495 & 1-270 Public-Private Partnership (P3) Program. This Study is considering alternatives that address roadway congestion within the specific study. **A small 0.4 mile portion of this project is located in Virginia on I-495 from the George Washington Memorial Parkway interchange to the Virginia/Maryland border.** The Western Terminus on 1-495, 0.4 miles south of George Washington Memorial Parkway interchange; allows outer loop mainline improvements that are carried to the George Washington Memorial Parkway to be merged and transitioned into the existing mainline lanes without causing congestion due to lane drops and merges. The managed lanes would connect directly into the proposed extension of the Virginia Express Lanes.

A range of 15 Preliminary Alternatives was identified based on previous, relevant studies and planning documents, and input received during the NEPA scoping process from the public and from Federal, state, and local regulatory agencies.

In Virginia, the Build Alternatives (Alt8, Alt9, Alt9M, Alt10, Alt13B, and Alt13C) are identical and have identical impacts. The Build Alternatives would impact a total of 0.05 acres of wetland and 3,349 linear feet of stream. Impacts to wetlands and waterways resources in Virginia, as reported in the DEIS Appendix L – Natural Resources Technical Report, are detailed in the tables below:

Potential Wetland Impact in Virginia

Feature ID	Classification	Potential Impact (Same for all Build Alternatives: Alt8, Alt9, Alt9B, Alt10, Alt13B, Alt13C)	
		Square Feet (SF)	Acres (Ac)
22BBB	PFO	No impact	
22TT	PFO	2,021	0.05
TOTAL	PFO	2,021	0.05

Potential Waterway Impacts in Virginia

Feature ID	Classification	Impact (Same for all build alternatives: Alt8, Alt9, Alt9B, Alt10, Alt13B, Alt13C)	
		Linear Feet (LF)	Square Feet (SF)
22AAA	Perennial	339	10,664
22AAA_C	Perennial	491	981
22SS	Perennial	97	2,060
22UU	Intermittent	543	10,481
22VV	Ephemeral	371	7,102
22WW	Intermittent	64	2,703
22WW_C	Intermittent	272	1,360
22XX	Intermittent	No impact	
22ZZ	Perennial	97	2,060
22ZZ_C	Perennial	1,075	6,513
	TOTAL	3,349	43,924

In Virginia, the mitigation requirement for each Build Alternative would be 0.10 acres of wetland mitigation and 729 linear feet of riverine mitigation in the Middle Potomac-Catoctin watershed. The Virginia mitigation requirement of 0.10 wetland mitigation credits and 729 riverine mitigation credits will be met by purchasing bank credits.

Recommendations and Potential Permits

DEQ offers the following recommendations:

1. Wetland and stream impacts should be avoided and minimized to the maximum extent practicable.
2. If the scope of the project changes, additional review will be necessary by one or more offices in the Commonwealth's Secretariat of Natural Resources and/or the Corps.
3. At a minimum, any required compensation for impacts to State Waters, including the compensation for permanent conversion of forested wetlands to emergent wetlands, should be in accordance with all applicable state regulations and laws. Consider mitigating impacts to forested or converted wetlands by establishing new forested wetlands within the impacted watershed.
4. Any temporary impacts to surface waters associated with this project should be restored to pre-existing conditions.
5. No activity may substantially disrupt the movement of aquatic life indigenous to the water body, including those species, which normally migrate through the area, unless the primary purpose of

the activity is to impound water. Culverts placed in streams must be installed to maintain low flow conditions. No activity may cause more than minimal adverse effect on navigation. Furthermore the activity must not impede the passage of normal or expected high flows and the structure or discharge must withstand expected high flows.

6. Erosion and sedimentation controls should be designed in accordance with the Virginia Erosion and Sediment Control Handbook, Third Edition, 1992. These controls should be placed prior to clearing and grading and maintained in good working order to minimize impacts to state waters. These controls should remain in place until the area is stabilized and should then be removed. Any exposed slopes and streambanks should be stabilized immediately upon completion of work in each permitted area. All denuded areas should be properly stabilized in accordance with the Virginia Erosion and Sediment Control Handbook, Third Edition, 1992.
7. No machinery may enter surface waters, unless authorized by a Virginia Water Protection (VWP) individual permit, general permit, or general permit coverage.
8. Heavy equipment in temporarily impacted surface waters should be placed on mats, geotextile fabric, or other suitable material, to minimize soil disturbance to the maximum extent practicable. Equipment and materials should be removed immediately upon completion of work.
9. Activities should be conducted in accordance with any Time-of-Year restriction(s) as recommended by the Department of Game and Inland Fisheries, the Department of Conservation and Recreation, or the Virginia Marine Resources Commission. The permittee should retain a copy of the agency correspondence concerning the Time-of-Year restriction(s), or the lack thereof, for the duration of the construction phase of the project.
10. All construction, construction access, and demolition activities associated with this project should be accomplished in a manner that minimizes construction materials or waste materials from entering surface waters, unless authorized by a Virginia Water Protection (VWP) individual permit, general permit, or general permit coverage. Wet, excess, or waste concrete should be prohibited from entering surface waters.
11. Herbicides used in or around any surface water should be approved for aquatic use by the United States Environmental Protection Agency (EPA) or the U.S. Fish & Wildlife Service. These herbicides should be applied according to label directions by a licensed herbicide applicator. A non-petroleum based surfactant should be used in or around any surface waters.

Permits:

Based on DEQ's review of the supplemental information provided by Caryn Brookman with Brookman Consultants, dated September 18, 2020, the proposed project may require a Virginia Water Protection (VWP) individual permit or general permit coverage. The applicant may submit a Joint Permit Application (JPA) in accordance with form instructions for further evaluation and final permit need determination by DEQ.

DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF AIR PROGRAM COORDINATION

ENVIRONMENTAL REVIEW COMMENTS APPLICABLE TO AIR QUALITY

TO: John Fisher

We thank **OEIR** for providing DEQ-AIR an opportunity to review the following project:

Document Type: Draft Environmental Impact Statement
Project Sponsor: USDOT/Federal Highway Administration
Project Title: I-495 and I-270 Managed Lanes Study
Location: Fairfax County
Project Number: DEQ #20-103F

Accordingly, I am providing following comments for consideration.

PROJECT LOCATION: X **OZONE NON ATTAINMENT AND EMISSION CONTROL AREA FOR NOX & VOC**

REGULATORY REQUIREMENTSMAY BE APPLICABLE TO: X **CONSTRUCTION** ☐ OPERATION

STATE AIR POLLUTION CONTROL BOARD REGULATIONS THAT MAY APPLY:

1. ☐ 9 VAC 5-40-5200 C & 9 VAC 5-40-5220 E – STAGE I
2. ☐ 9 VAC 5-45-760 et seq. – Asphalt Paving operations
3. X **9 VAC 5-130 et seq. – Open Burning**
4. X **9 VAC 5-50-60 et seq. Fugitive Dust Emissions**
5. ☐ 9 VAC 5-50-130 et seq. - Odorous Emissions; Applicable to_____
6. ☐ 9 VAC 5-60-300 et seq. – Standards of Performance for Toxic Pollutants
7. ☐ 9 VAC 5-50-400 Subpart____, Standards of Performance for New Stationary Sources, designates standards of performance for the_____
8. ☐ 9 VAC 5-80-1100 et seq. of the regulations – Permits for Stationary Sources
9. ☐ 9 VAC 5-80-1605 et seq. Of the regulations – Major or Modified Sources located in PSD areas. This rule may be applicable to the _____
10. ☐ 9 VAC 5-80-2000 et seq. of the regulations – New and modified sources located in non-attainment areas
11. ☐ 9 VAC 5-80-800 et seq. Of the regulations – State Operating Permits. This rule may be applicable to _____

COMMENTS SPECIFIC TO THE PROJECT:

All precautions are necessary to restrict the emissions of volatile organic compounds (VOC) and oxides of nitrogen (NO_x) during construction.

(Kotur S. Narasimhan)
Office of Air Data Analysis **DATE: July 16, 2020**

DEQ
VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

MEMORANDUM

TO: John Fisher, DEQ/EIR Environmental Program Planner

FROM: Carlos A. Martinez, Division of Land Protection & Revitalization Review Coordinator

DATE: August 11, 2020

COPIES: Sanjay Thirunagari, Division of Land Protection & Revitalization Review Manager; file

SUBJECT: Environmental Impact Review: 20-103F I-495 and I-270 Managed Lanes Study in McLean, Virginia.

The Division of Land Protection & Revitalization (DLPR) has completed its review of the USDOT/Federal Highway Administration's July 10, 2020 EIR for I-495 and I-270 Managed Lanes Study in McLean, Virginia.

DLPR staff conducted a search (200 ft. radius) of the project area of solid and hazardous waste databases (including petroleum releases) to identify waste sites in close proximity to the project area. DLPR search did not identify any waste sites within the project area which might impact the project.

DLPR staff has reviewed the submittal and offers the following comments:

Hazardous Waste/RCRA Facilities *– none in close proximity to the project areas.*

CERCLA Sites *– none in close proximity to the project areas.*

Formerly Used Defense Sites (FUDS) *– none in close proximity to the project areas.*

Solid Waste *– none in close proximity to the project areas.*

Virginia Remediation Program (VRP) *– none in close proximity to the project areas.*

Petroleum Releases *– none in close proximity to the project areas.*

PROJECT SPECIFIC COMMENTS

None

GENERAL COMMENTS

Soil, Sediment, Groundwater, and Waste Management

Any soil, sediment or groundwater that is suspected of contamination or wastes that are generated must be tested and disposed of in accordance with applicable Federal, State, and local laws and regulations. Some of the applicable state laws and regulations are: Virginia Waste Management Act, Code of Virginia Section 10.1-1400 *et seq.*; Virginia Hazardous Waste Management Regulations (VHWMR) (9VAC 20-60); Virginia Solid Waste Management Regulations (VSWMR) (9VAC 20-81); Virginia Regulations for the Transportation of Hazardous Materials (9VAC 20-110). Some of the applicable Federal laws and regulations are: the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. Section 6901 *et seq.*, and the applicable regulations contained in Title 40 of the Code of Federal Regulations; and the U.S. Department of Transportation Rules for Transportation of Hazardous Materials, 49 CFR Part 107.

Pollution Prevention – Reuse - Recycling

Please note that DEQ encourages all construction projects and facilities to implement pollution prevention principles, including the reduction, reuse, and recycling of all solid wastes generated. All generation of hazardous wastes should be minimized and handled appropriately.

If you have any questions or need further information, please contact Carlos A. Martinez by phone at (804) 698-4575 or email carlos.martinez@deq.virginia.gov.

Commonwealth of Virginia

RE: NEW PROJECT FHWA I-495 and I-270 Managed Lanes Study, DEQ #20-103F
1 message

Mark Eversole <mark.eversole@mrc.virginia.gov> Mon, Sep 14, 2020 at 1:31 PM
To: "Fisher, John" <john.fisher@deq.virginia.gov>

No sir, not on this one.

Thanks, Mark

From: Fisher, John <john.fisher@deq.virginia.gov>
Sent: Monday, September 14, 2020 1:23 PM
To: Mark Eversole <mark.eversole@mrc.virginia.gov>
Subject: Fwd: NEW PROJECT FHWA I-495 and I-270 Managed Lanes Study, DEQ #20-103F

Hi Mark:

Any comments on this one?

John

John E. Fisher
Virginia Department of Environmental Quality
Division of Environmental Enhancement
Office of Environmental Impact Review
1111 East Main Street, Suite 1400
Richmond, Virginia 23219
(804) 698-4339
john.fisher@deq.virginia.gov

For program updates and public notices please subscribe to Constant Contact

Matthew J. Strickler
Secretary of Natural Resources

Clyde E. Cristman
Director

COMMONWEALTH of VIRGINIA
DEPARTMENT OF CONSERVATION AND RECREATION

Rochelle Altholz
Deputy Director of Administration and Finance

Russell W. Baxter
Deputy Director of Dam Safety & Floodplain Management and Soil & Water Conservation

Thomas L. Smith
Deputy Director of Operations

MEMORANDUM

DATE: August 10, 2020

TO: John Fisher, DEQ

FROM: Roberta Rhur, Environmental Impact Review Coordinator

SUBJECT: DEQ 20-103F, FHA, I-495 AND I-270 MANAGED LANES STUDY

Division of Planning and Recreation Resources

The Department of Conservation and Recreation (DCR), Division of Planning and Recreational Resources (PRR), develops the *Virginia Outdoors Plan* and coordinates a broad range of recreational and environmental programs throughout Virginia. These include the Virginia Scenic Rivers program; Trails, Greenways, and Blueways; Virginia State Park Master Planning and State Park Design and Construction.

According to the information currently in our files, Scotts Run Nature Preserve is adjacent to the project location and could be impacted by the project. This park is protected in perpetuity by section 6(f) (3) of the Land and Water Conservation Fund Act. Federal Regulations 36 CFR § 59.3 states that: "Section 6 (f) (3) of the Land & Water Conservation Fund Act is the cornerstone of Federal compliance efforts to ensure that the Federal investments in L&WCF assistance are being maintained in public outdoor recreation use. This section of the Act assures that once an area has been funded with L&WCF assistance, it is continually maintained in public recreation use unless NPS approves substitution property of reasonably equivalent usefulness and location and of at least equal fair market value." No property acquired or developed with assistance under this section shall without approval of the Secretary [of the Interior] be converted to other than public outdoor recreation uses.

Please contact Kristal McKelvey at Kristal.mckelvey@dcr.virginia.gov for further information or to confirm that the project will not impact the park.

Division of Natural Heritage

The Department of Conservation and Recreation's Division of Natural Heritage (DCR) has searched its Biotics Data System for occurrences of natural heritage resources from the area outlined on the submitted map. Natural heritage resources are defined as the habitat of rare, threatened, or endangered plant and animal species, unique or exemplary natural communities, and significant geologic formations.

According to the information currently in our files, the Potomac Gorge Conservation Site is located within the project site. Conservation sites are tools for representing key areas of the landscape that warrant further review for possible conservation action because of the natural heritage resources and habitat they support. Conservation sites are polygons built around one or more rare plant, animal, or natural

community designed to include the element and, where possible, its associated habitat, and buffer or other adjacent land thought necessary for the element's conservation. Conservation sites are given a biodiversity significance ranking based on the rarity, quality, and number of element occurrences they contain; on a scale of 1-5, 1 being most significant. The Potomac Gorge Conservation Site has been given a biodiversity significance ranking of B1, which represents a site of outstanding significance. The natural heritage resources of concern at this site are:

Maianthemum stellatum	Starry Solomon's-plume	G5/S1S2/NL/NL
Phacelia covillei	Coville's phacelia	G3/S1/NL/NL
Gomphus fraternus	Midland Clubtail	G5/S2/NL/NL
Boechera dentata	Short's rock cress	G5/S1/NL/NL
Silene nivea	Snowy Campion	G4?/S1/NL/NL
Central Appalachian / Piedmont Low-Elevation Rich Boulderfield Forest		G3G4/S2S3/NL/NL
Coastal Plain / Outer Piedmont Basic Mesic Forest		G4?/ S3/NL/NL

In addition, Tall Thistle (*Cirsium altissimum*, G5/S1/NL/NL), Wild cucumber (*Echinocystis lobata*, G5/SH/NL/NL), Smartweed Dodder (*Cuscuta polygonorum*, G5/S1/NL/NL), Northern rattlesnake-master (*Eryngium yuccifolium var. yuccifolium*, G5T5/S2/NL/NL), One-sided shinleaf (*Orthilia secunda*, G5/SH/NL/NL) and Pizzini's Amphipod (*Stygobromus pizzinii*, G3G4/S1S2/NL/NL) have been historically documented within the project site.

Furthermore, according to a DCR biologist, there is potential for the Northern Virginia Well amphipod (*Stygobromus phreaticus*, G1/S1/SOC/NL) and other *Stygobromus* amphipod species to occur within the project site.

DCR recommends avoidance of documented occurrences of natural heritage resources by limiting the project footprint as much as possible including along the steep bluff on the eastern side in Virginia.

DCR has received the summary of rare, threatened and endangered (RTE) plant species surveys conducted thus far in the Potomac River Gorge area by Maryland Department of Transportation-State Highway Administration. DCR looks forward to reviewing the full report on the survey findings and further coordination as stated on page 4-116 of the Draft Environmental Impact Statement to minimize the impact to natural heritage resources.

Due to the potential for this site to support additional populations of natural heritage resources that are not included in an RTE plant survey, DCR recommends an inventory for these resources within areas proposed for disturbance including stormwater management ponds and equipment staging areas. With the survey results we can more accurately evaluate potential impacts to natural heritage resources and offer specific protection recommendations for minimizing impacts to the documented resources. DCRDivision of Natural Heritage biologists are qualified and available to conduct inventories for rare, threatened, and endangered species. Please contact Anne Chazal, Natural Heritage Chief Biologist, at anne.chazal@dcr.virginia.gov or 804-786-9014 to discuss arrangements for fieldwork.

In addition, the proposed project will fragment an Ecological Core C4 as identified in the Virginia Natural Landscape Assessment (https://www.dcr.virginia.gov/natural-heritage/vaconvisvnla), one of a suite of tools in Virginia ConservationVision that identify and prioritize lands for conservation and protection.

Ecological Cores are areas of unfragmented natural cover with at least 100 acres of interior that provide habitat for a wide range of species, from interior-dependent forest species to habitat generalists, as well as species that utilize marsh, dune, and beach habitats. Cores also provide benefits in terms of open space, recreation, water quality (including drinking water protection and erosion prevention), and air quality (including carbon sequestration and oxygen production), along with the many associated economic benefits of these functions. The cores are ranked from C1 to C5 (C5 being the least ecologically relevant) using many prioritization criteria, such as the proportions of sensitive habitats of natural heritage resources they contain.

Fragmentation occurs when a large, contiguous block of natural cover is dissected by development, and other forms of permanent conversion, into one or more smaller patches. Habitat fragmentation results in biogeographic changes that disrupt species interactions and ecosystem processes, reducing biodiversity and habitat quality due to limited recolonization, increased predation and egg parasitism, and increased invasion by weedy species.

Therefore minimizing fragmentation is a key mitigation measure that will preserve the natural patterns and connectivity of habitats that are key components of biodiversity. The deleterious effects of fragmentation can be reduced by minimizing edge in remaining fragments; by retaining natural corridors that allow movement between fragments; and by designing the intervening landscape to minimize its hostility to native wildlife (natural cover versus lawns).

There are no State Natural Area Preserves under DCR's jurisdiction in the project vicinity.

Under a Memorandum of Agreement established between the Virginia Department of Agriculture and Consumer Services (VDACS) and the DCR, DCR represents VDACS in comments regarding potential impacts on state-listed threatened and endangered plant and insect species. The current activity will not affect any documented state-listed plants or insects.

New and updated information is continually added to Biotics. Please re-submit project information and map for an update on this natural heritage information if the scope of the project changes and/or six months has passed before it is utilized.

The Virginia Department of Wildlife Resources (VDWR) maintains a database of wildlife locations, including threatened and endangered species, trout streams, and anadromous fish waters that may contain information not documented in this letter. Their database may be accessed from https://vafwis.dgif.virginia.gov/fwis/ or contact Ernie Aschenbach at 804-367-2733 or Ernie.Aschenbach@dwr.virginia.gov.

Division of Dam Safety and Floodplain Management

Floodplain Management Program:
The National Flood Insurance Program (NFIP) is administered by the Federal Emergency Management Agency (FEMA), and communities who elect to participate in this voluntary program manage and enforce the program on the local level through that community's local floodplain ordinance. Each local floodplain ordinance must comply with the minimum standards of the NFIP, outlined in 44 CFR 60.3; however, local communities may adopt more restrictive requirements in their local floodplain ordinance, such as regulating the 0.2% annual chance flood zone (Shaded X Zone).

All development within a Special Flood Hazard Area (SFHA), as shown on the locality's Flood Insurance Rate Map (FIRM), must be permitted and comply with the requirements of the local floodplain ordinance.

a. Pursuant to 44 CFR 59.2(b), local floodplain ordinances are required as part of a locality's participation in the National Flood Insurance Program(NFIP). For localities that participate in the program, all development within a special flood hazard area must comply with the locally adopted floodplain management ordinance and be permitted by the community. NFIP participation, as well as local contact

information, for Virginia communities is available as part of the Local Floodplain Management Directory, available on DCR's website.

State Agency Projects Only
Executive Order 45, signed by Governor Northam and effective on November 15, 2019, establishes mandatory standards for development of state-owned properties in Flood-Prone Areas, which include Special Flood Hazard Areas, Shaded X Zones, and the Sea Level Rise Inundation Area. These standards shall apply to all state agencies.

1. Development in Special Flood Hazard Areas and Shaded X Zones
   A. All development, including buildings, on state-owned property shall comply with the locally-adopted floodplain management ordinance of the community in which the state-owned property is located and any flood-related standards identified in the Virginia Uniform Statewide Building Code.
   B. If any state-owned property is located in a community that does not participate in the NFIP, all development, including buildings, on such state-owned property shall comply with the NFIP requirements as defined in 44 CFR §§ 60.3, 60.4, and 60.5 and any flood-related standards identified in the Virginia Uniform Statewide Building Code.
      (1) These projects shall be submitted to the Department of General Services (DGS), for review and approval.
      (2) DGS shall not approve any project until the State NFIP Coordinator has reviewed and approved the application for NFIP compliance.
      (3) DGS shall provide a written determination on project requests to the applicant and the State NFIP Coordinator. The State NFIP Coordinator shall maintain all documentation associated with the project in perpetuity.
   C. No new state-owned buildings, or buildings constructed on state-owned property, shall be constructed, reconstructed, purchased, or acquired by the Commonwealth within a Special Flood Hazard Area or Shaded X Zone in any community unless a variance is granted by the Director of DGS, as outlined in this Order.

The following definitions are from Executive Order 45:

Development for NFIP purposes is defined in 44 CFR § 59.1 as "Any man-made change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment or materials."

The Special Flood Hazard Area may also be referred to as the 1% annual chance floodplain or the 100-year floodplain, as identified on the effective Flood Insurance Rate Map and Flood Insurance Study. This includes the following flood zones: A, AO, AH, AE, A99, AR, AR/AE, AR/AO, AR/AH, AR/A, VO, VE, or V.

The Shaded X Zone may also be referred to as the 0.2% annual chance floodplain or the 500- year floodplain, as identified on the effective Flood Insurance Rate Map and Flood Insurance Study.

The Sea Level Rise Inundation Area referenced in this Order shall be mapped based on the National Oceanic and Atmospheric Administration Intermediate-High scenario curve for 2100, last updated in 2017, and is intended to denote the maximum inland boundary of anticipated sea level rise.

"State agency" shall mean all entities in the executive branch, including agencies, offices, authorities, commissions, departments, and all institutions of higher education.

"Reconstructed" means a building that has been substantially damaged or substantially improved, as defined by the NFIP and the Virginia Uniform Statewide Building Code.

Federal Agency Projects Only
Projects conducted by federal agencies within the SFHA must comply with federal Executive Order 11988: Floodplain Management.

DCR's Floodplain Management Program does not have regulatory authority for projects in the SFHA. The applicant/developer must reach out to the local floodplain administrator for an official floodplain determination and comply with the community's local floodplain ordinance, including receiving a local permit. Failure to comply with the local floodplain ordinance could result in enforcement action from the locality. For state projects, DCR recommends that compliance documentation be provided prior to the project being funded. For federal projects, the applicant/developer is encouraged reach out to the local floodplain administrator and comply with the community's local floodplain ordinance.

To find flood zone information, use the Virginia Flood Risk Information System (VFRIS): www.dcr.virginia.gov/vfris

To find community NFIP participation and local floodplain administrator contact information, use DCR's Local Floodplain Management Directory: www.dcr.virginia.gov/dam-safety-and-floodplains/floodplain-directory

The remaining DCR divisions have no comments regarding the scope of this project. Thank you for the opportunity to comment.

Commonwealth of Virginia

Fisher, John <john.fisher@deq.virginia.gov>

ESSLog# 40764_20-103F_ManagedLanesStudy_DWR_AME20200812
1 message

Ewing, Amy <amy.ewing@dwr.virginia.gov> Wed, Aug 12, 2020 at 11:25 AM
To: John Fisher <john.fisher@deq.virginia.gov>
Cc: John Kleopfer <john.kleopfer@dwr.virginia.gov>, Richard Reynolds <rick.reynolds@dwr.virginia.gov>

John,
We have reviewed the Virginia portion of the subject project that proposes upgrades to miles of interstate in Northern Virginia and Maryland. We document state Endangered Little Brown Bats and state Endangered Tri-colored Bats from the project area. We recommend that he EIS consider potential impacts upon these species. We typically recommend adherence to a time of year restriction on tree removal and timbering from April 1 through October 31 in areas of suitable roosting habitat (forest) or that such areas be assessed or surveyed for roosting sites and that such assessments be provided to us for further review.

We also document state Threatened Wood Turtles from the project area. Turkey Run, a tributary of the Potomac River that is located to the east of this project site and crosses George Washington Memorial Parkway has been designated a Threatened and Endangered Species Water due to the presence of this species. We recommend that EIS address the potential presence of Wood Turtles and their habitats within the project area. Our typical recommendations for the protection of Wood Turtles and their habitats associated with construction activities are the following. If presence is determined, these and/or other measures may be recommended:

Standard recommendations for protection of Wood Turtles associated with construction activities:
We recommend that all instream work adhere to a time of year restriction from October 1 through March 31 of any year. We recommend that any work in uplands within 900 ft of the stream adhere to a time of year restriction from April 1 through September 30 of any year. In addition, we recommend preservation of an at least 300-ft undisturbed naturally vegetated buffer along the stream.

Habitat Assessment (formal): The habitat assessment should be performed by a qualified biologist and should clearly depict, via narrative and photographic description, all stream and upland habitats along the tributary to Stony Run located on site. This habitat assessment should be made available to Amy Ewing in DWR's Headquarters office in Henrico and John (JD) Kleopfer in DWR's Charles City office for review. The habitat assessment and associated correspondence should reference the five-digit ESSLog# in the subject line of this email. Upon review of the habitat assessment, we will make final comments regarding protection of Wood Turtles associated with this project.

Education of contractors: We recommend that prior to the commencement of work all contractors associated with work at this site be made aware of the possibility of encountering Wood Turtles on site and become familiar with their appearance, status and life history. An appropriate information sheet / field observation form to distribute to contractors and employees is attached. If any Wood Turtles are encountered and are in jeopardy during the development or construction of this project, remove them from immediate harm and call DWR's Herpetologist, John (J.D.) Kleopfer at 804-829-6703. If staff on site hold an appropriate Threatened and Endangered Species Scientific Collection Permit, this staff member may relocate Wood Turtles out of harm's way and into suitable habitat, preferably within the nearest perennial stream. Any relocations should be reported to J.D. Kleopfer and the wood turtle observation form should be completed and faxed to JD at 804-829-6788.

Further information about wood turtles can be found online at: https://www.DWR.virginia.gov/wildlife/information/wood-turtle/

The Potomac River has been designated a Confirmed Anadromous Fish Use Area. If instream work in this river is necessary, we recommend that such work adhere to a time of year restriction from February 15 through June 30 of any year.

We recommend conducting any in-stream activities during low or no-flow conditions, using non-erodible cofferdams or turbidity curtains to isolate the construction area, blocking no more than 50% of the streamflow at any given time (minimal overlap of construction footprint notwithstanding), stockpiling excavated material in a manner that prevents reentry into the stream, restoring original streambed and streambank contours, revegetating barren areas with native vegetation, and implementing strict erosion and sediment control measures. We recommend that instream work be designed and performed in a manner that minimizes impacts upon natural streamflow and movement of resident aquatic species. If a dam and pump-around must be used, we recommend it be used for as limited a time as possible and that water returned to the stream be free of sediment and excess turbidity. To minimize potential wildlife entanglements resulting from use of synthetic/plastic erosion and sediment control matting, we recommend use of matting made from natural/organic materials such as coir fiber, jute, and/or burlap. To minimize harm to the aquatic environment and its residents resulting from use of the Tremie method to install concrete, installation of grout bags, and traditional pouring of concrete, we recommend that such activities occur only in the dry, allowing all concrete to harden and cure prior to contact with open water. Due to future maintenance costs associated with culverts, and the loss of riparian and aquatic habitat, we prefer stream crossings to be constructed via clear-span bridges. However, if this is not possible, we recommend countersinking any culverts below the streambed at least 6 inches, or the use of bottomless culverts, to allow passage of aquatic organisms. We also recommend the installation of floodplain culverts to carry bankfull discharges.

To minimize the adverse impacts of linear utility/road project development on wildlife resources, we offer the following general recommendations: avoid and minimize impacts to undisturbed forest, wetlands, and streams to the fullest extent practicable; maintain naturally vegetated buffers of at least 100 feet in width around wetlands and on both sides of perennial and intermittent streams, where practicable; conduct significant tree removal and ground clearing activities outside of the primary songbird nesting season of March 15 through August 15; and, implement and maintain appropriate erosion and sediment controls throughout project construction and site restoration. To minimize potential wildlife entanglements resulting from use of synthetic/plastic erosion and sediment control matting, we recommend use of matting made from natural/organic materials such as coir fiber, jute, and/or burlap. We understand that adherence to these general recommendations may be infeasible in some situations. We are happy to work with the applicant to develop project-specific measures as necessary to minimize project impacts upon the Commonwealth's wildlife resources.

This project is located within 2 miles of a documented occurrence of a state or federal threatened or endangered plant or insect species and/or other Natural Heritage coordination species. Therefore, we recommend coordination with VDCR-DNH regarding protection of these resources.

Thanks, Amy

Amy Martin Ewing
Environmental Services Biologist
Manager, Wildlife Information
P 804.367.2211
Virginia Department of Wildlife Resources
CONSERVE. CONNECT. PROTECT.
A 7870 Villa Park Drive, P.O. Box 90778, Henrico, VA 23228
www.VirginiaWildlife.gov

2 attachments

WOTU_INfoSheet_DWR20200805.pdf
629K

WOTU_FieldObsForm_20200805.pdf
1146K

Wood Turtle: *Glyptemys insculpta*
State Threatened

Field Observation Form
August 5, 2020

Note: The Wood Turtle is a protected species in Virginia. It is unlawful to harm, collect, possess and/or disturb these animals without a permit. Wood Turtles found within a project area uplands during construction should be moved out of immediate harm's way. Only appropriately permitting staff may move Wood Turtles to locations out of the project area, within the same watershed, approximately ¼ to ½ mile downstream of their original location. To apply for a permit please contact Shirl Dressler at 804-367-6913. **If you encounter a Wood Turtle, please provide the information requested below and mail or FAX this form to:**

Virginia Department of Wildlife Resources
Attn: John Kleopfer
3801 J.T. Memorial Highway
Charles City, Virginia 23030
FAX 804-829-6788

If possible, send digital photos to: John.Kleopfer@dwr.virginia.gov

Distribution: Wood Turtles are found primarily in the northeastern United States and parts of southeastern Canada, reaching the southern limit of its range in northern Virginia. In Virginia, it has been documented in Warren, Rockingham, Shenandoah, Frederick, Loudoun, Fairfax, Clark, and Page counties.

Species Description: Wood Turtles are a semi-aquatic turtle usually found in or near streams, but not in ponds, reservoirs, or lakes. The shell length of an adult Wood Turtle can reach 9 inches. The plastron (bottom-half of the shell) is NOT hinged and the carapace (top-half of the shell) is flattened. The legs and tail are usually reddish to orange in color. Females are sometimes less colorful.

Wood Turtles may be confused with Eastern Box Turtles (*Terrapene carolina carolina*). Eastern Box Turtles are mainly terrestrial and only seldom are found in water. Eastern Box Turtles have a high domed shell with a hinged plastron which allows for it to completely enclose itself. The shell length of an adult Eastern Box Turtle is rarely over 5 inches. See the following page for images and detailed descriptions of Wood Turtles and Eastern Box Turtles.

Your name: _____

TE Collection Permit#, if applicable:_____

Your address:_____

Your phone number (optional): _____

Location of observation (GPS coordinates, nearest stream):_____

_____

Comments: _____

_____

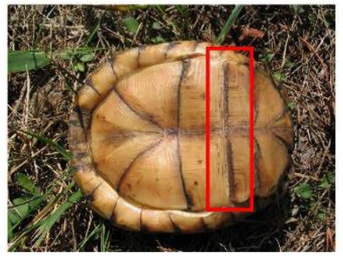
WOOD TURTLE

Note the sculptured scales of the top of shell (carapace).

Bottom view (plastron) of a male Wood Turtle. The concave plastron is characteristic of a male. Note the distinct black markings and brightly colored legs and tail.

EASTERN BOX TURTLE

Note the high domed shell and lack of sculptured scales. Males usually have an orange or yellowish face and are more brightly colored than females.



Note the hinged plastron and no markings. The concave plastron is also characteristic of male box turtles.

The plastron of Eastern Box Turtles will often turn black.

Unlike Wood Turtles, Eastern Box Turtles can completely enclose themselves within their shell.

Wood Turtle: *Glyptemys insculpta*
State Threatened

Note the sculptured scales of the top of shell (carapace).


Bottom view (plastron) of a male Wood Turtle. The concaved plastron is characteristic of a male.

Wood turtles are medium-sized (6-9" adult shell length) semi-terrestrial turtles found in streams or in riparian uplands on norther/northwestern Virginia. Their dull brown upper shell is very rough, and each section of the shell reflects growth rings that form an irregular pyramid. There is great variation in this trait, however, and the upper shell of older turtles may appear smooth. The bottom shell is yellow with black marginal blotches. Wood turtles have a black head, and dark brown extremities with characteristic yellow to burnt-orange skin patches on the neck and leg sockets.

Wood Turtles overwinter instream in deep pools with sandy bottoms and under submerged roots, branches, or logs. During warmer months, they wander the uplands mate-seeking, nesting, and foraging. In Virginia, females typically lay clutches of 7-14 eggs. Hatchlings typically emerge from June through August.

The wood turtle eats both animal and plant food items, including berries, herbs, algae, moss, fungi, grass, insects, mollusks, earthworms, dead fish, tadpoles, newborn mice and other turtles' eggs. It will forage on the ground, in the water, in herbaceous vegetation, and on logs.

If you have any questions concerning Wood Turtles, please contact John Kleopfer, Virginia Department of Wildlife Resources, at 804-829-6703 or John.Kleopfer@dwr.virginia.gov.

The Wood Turtle is a protected species in Virginia.
It is unlawful to HARM, COLLECT, OR POSSESS THESE TURTLES unless one is permitted to do so.

To apply for a permit please contact Shirl Dressler at 804-367-6913.

Commonwealth of Virginia

Fisher, John <john.fisher@deq.virginia.gov>

I-495 and I-270 Managed Lanes Study, Fairfax Co. (DHR 2018-0251/DEQ 20-103F)
1 message

Holma, Marc <marc.holma@dhr.virginia.gov> Tue, Jul 14, 2020 at 9:08 AM
To: John Fisher <john.fisher@deq.virginia.gov>

John,

Please accept this email as DHR's response to DEQ's request for our review and comment on the above referenced project. The FHWA is currently consulting with DHR on this undertaking pursuant to Section 106 of the National Historic Preservation Act, as amended, and its implementing regulation 36 CFR Part 800. We anticipate this consultation will continue and request DEQ remind FHWA of its responsibility to engage DHR on this undertaking as the SHPO.
Sincerely,
Marc

--
Marc Holma
Architectural Historian
Division of Review and Compliance
(804) 482-6090
marc.holma@dhr.virginia.gov

Commonwealth of Virginia

Fisher, John <john.fisher@deq.virginia.gov>

Re: NEW PROJECT FHWA I-495 and I-270 Managed Lanes Study, DEQ #20-103F

1 message

Warren, Arlene <arlene.warren@vdh.virginia.gov> Mon, Jul 27, 2020 at 3:00 PM
To: John Fisher <john.fisher@deq.virginia.gov>
Cc: rr Environmental Impact Review <eir@deq.virginia.gov>

Project Name: I-495 and I-270 Managed Lanes Study
Project #: 20-103 F
UPC #: N/A
Location: **Fairfax Co.**

VDH – Office of Drinking Water has reviewed the above project. Below are our comments as they relate to proximity to **public drinking water sources** (groundwater wells, springs, and surface water intakes). Potential impacts on public water distribution systems or sanitary sewage collection systems **must be verified by the local utility.**

There are no public groundwater wells within a 1-mile radius of the project site.

There are no surface water intakes located within a 5-mile radius of the project site.

The project is not within the watershed of any public surface water intakes.

There are no apparent impacts on public drinking water sources due to this project.

Virginia Department of Health – Office of Drinking Water appreciates the opportunity to provide comments. If you have any questions, please let me know.

Best Regards,

Arlene Fields Warren
GIS Program Support Technician
Office of Drinking Water
Virginia Department of Health
109 Governor Street
Richmond, VA 23219
(804) 864-7781

Commonwealth of Virginia

Fisher, John <john.fisher@deq.virginia.gov>

NEW PROJECT FHWA I-495 and I-270 Managed Lanes Study, DEQ #20-103F

1 message

Rahul Trivedi <Rahul.Trivedi@vdot.virginia.gov> Mon, Aug 17, 2020 at 10:26 AM
To: john.fisher@deq.virginia.gov
Cc: Susan Shaw <susan.shaw@vdot.virginia.gov>, Norman Whitaker <norman.whitaker@vdot.virginia.gov>, Abraham Lerner <abraham.lerner@vdot.virginia.gov>, Robert Iosco <robert.iosco@vdot.virginia.gov>

VDOT has reviewed the subject report and offers the following comments:

Thank you for providing the Virginia Department of Transportation (VDOT) with an opportunity to comment on the *I-495/I-270 Managed Lanes Study - Draft Environmental Impact Statement (DEIS) /Draft Section 4(f) Evaluation (July 2020)*. For your information, please be advised that VDOT has been closely coordinating issues for its I-495 NEXT (Northern Extension of Capital Beltway Express Lanes) project with the Maryland Department of Transportation (MDOT)/State Highway Administration (SHA) to ensure that the two independent projects are properly coordinated regardless of the outcome of their current NEPA process.

Thanks again and let me know if you have any questions.

Rahul

Rahul A. Trivedi, P.E. | Assistant Director, Transportation Planning | Virginia Department of Transportation | Office: 703.259.2308

County of Fairfax, Virginia

To protect and enrich the quality of life for the people, neighborhoods and diverse communities of Fairfax County

August 31, 2020

Virginia Department of Environmental Quality
Office of Environmental Impact Review
ATTN: Mr. John Fisher
P.O. Box 1105
Richmond, Virginia 23218
John.Fisher@deq.virginia.gov

RE: Draft Environmental Impact Statement (EIS)
I-495 and I-270 Managed Lanes Study
Fairfax County
Project Number: DEQ #20-103F
USDOT/Federal Highway Administration

Dear Mr. Fisher:

This memorandum provides comments from the Department of Planning and Development (DPD) regarding the I-495 & 1-270 Managed Lanes Study.

DESCRIPTION OF THE PROJECT

LOCATION & SCOPE
The 1-495 & 1-270 Managed Lanes Study is the first element of a broader I-495 and I-270 Public Private Partnership (P3) Program. The study is considering alternatives to address roadway congestion within the study scope of 48 miles of I-495 from south of the George Washington Memorial Parkway in Fairfax County, including the rebuilding of the American Legion Bridge over the Potomac River, to west of MD 5, and along I-270 from I-495 to north of I-370, including the East and West I-270 Spurs.

Within Fairfax County, the Study extends along I-495, beginning 0.4 miles south of George Washington Memorial Parkway, and extending to the Potomac River. The construction would incorporate mainline connections between I-495 and the George Washington Memorial Parkway. Managed lanes would connect directly into the proposed extension of the Virginia Express Lanes.

All build alternatives include the full replacement of the American Legion Bridge, which is nearly 60 years old, with a new, wider bridge. The new bridge would be constructed in phases to maintain the same number of existing lanes at all times and would be rebuilt in the same location.

PLANNING & DEVELOPMENT

Excellence * Innovation * Stewardship
Integrity * Teamwork* Public Service

Department of Planning and Development
Planning Division
12055 Government Center Parkway, Suite 730
Fairfax, Virginia 22035-5507
Phone 703-324-1380
Fax 703-653-9447
www.fairfaxcounty.gov/planning-development

ALTERNATIVES
Seven alternatives were considered in the Draft EIS:

- Alternative 1: No Build.
- Alternative 5: One High-Occupancy Toll (HOT) Managed Lane Network.
- Alternative 8: Two Express Toll Lane (ETL) Managed Lanes Network on I-495 and one ETL and one High-Occupancy Vehicle (HOV) Lane Network on I-270.
- Alternative 9: Two HOT Managed Lanes Network.
- Alternative 10: Two ETL Managed Lanes Network on I-495 and I-270 and Retain one HOV Lane on I-270 only.
- Alternative 13B: Two HOT Managed Lanes Network on I-495 and two Reversible HOT Managed Lanes Network on I-270.
- Alternative 13C: Two ETL Managed Lanes Network on I-495 and two Reversible ETL Managed Lanes Network on I-270, and retention of one HOV Lane on I-270 only.

COMMUNITY EFFECTS ASSESSMENT
The Draft EIS included a Community Effects Assessment (CEA) for various community areas along the study area, including portions of the McLean community. These areas were identified primarily as either residential or park properties. The CEA Analysis Area Community is bordered roughly by the Potomac River to the north; Chain Bridge and Chain Bridge Road to the east; Georgetown Pike and Old Dominion Drive (Route 738) to the south; and Georgetown Pike (Route 193) and Difficult Run to the west. This is the southwestern-most community in the project analysis area and the only community located outside of Maryland.

Within the McLean CEA analysis area, a total of 14.4 acres would be taken for highway right-of-way, including 12.2 acres of the George Washington Memorial Parkway, of which 9.3 acres would be impacted tree canopy.

PREVIOUSLY PROVIDED INFORMATION
Fairfax County previously provided input regarding the I-495 Express Lanes Northern Extension Environmental Assessment. The Virginia Department of Transportation is proposing to extend the I-495 Express Lanes for approximately three miles from the I-495 and Dulles Toll Road Interchange to the vicinity of the American Legion Memorial Bridge.

As was done for similar roadway projects impacting large tracts of land, the Department of Planning and Development prepared a series of maps for the entire length of the project area within Fairfax County, identifying ecological and cultural resources and other land use information for areas within 600 feet of the proposed project boundaries. Maps included:

- Fairfax County Comprehensive Plan base land use designations and Development Centers.
- Current zoning applications.
- Fairfax County Planning Geography, Inventory of Historic Sites, and Historic Overlay Districts.
- Fairfax County floodplains, Resource Protection Areas (RPAs), Agricultural and Forestal Districts, and Environmental Quality Corridors (EQCs).

- Aerial coverage of Fairfax County floodplains, RPAs, Agricultural and Forestal Districts, and EQCs.

ENVIRONMENTAL ANALYSIS

POLICY GUIDANCE FOR ROADWAY DESIGN

County transportation policies support environmental goals and policies. Transportation facilities within the county are to *"minimize community disruption and adverse environmental impacts."* More specifically, transportation facilities are to be planned and designed *"to minimize adverse impacts on Environmental Quality Corridors (EQCs), Resource Protection Areas (RPAs), other environmental resources, and heritage resources."* Additionally, transportation facilities are to be planned and designed to *"minimize and mitigate adverse impacts to residents and neighborhoods."* Recognizing the long-term effects of roadway construction and the creation of extensive amounts of impervious surfaces, county policies call for the minimization of *"adverse impacts of storm water runoff from transportation facilities and services"* and the use of *"innovative techniques and technologies to manage storm water run-off from transportation facilities."* Finally, given the importance of transportation facilities in serving our communities, *"best practices for walkable communities, pedestrian and bicycle planning, quality of life, and ecological preservation"* are to be applied to all transportation facilities. (Fairfax County Comprehensive Plan, 2017 Edition, Policy Plan, Transportation, Amended through 3-20-2018, Pages 9-10).

Specific comments regarding these policies are provided below.

CULTURAL RESOURCES

The Draft EIS, Section 4(f) of the USDOT Act of 1966, as amended (49 U.S.C. 303(c)), stipulates that the USDOT, including the FHWA, cannot approve the use of land from a publicly-owned park, recreation area, wildlife or waterfowl refuge, or public or private historic site unless the following conditions apply:

- FHWA determines that there is no feasible and prudent avoidance alternative to the use of land from the property, and the action includes all possible planning to minimize harm to the property resulting from such use (23 CFR §774.3(a)(1) and (2)); or
- FHWA determines that the use of the Section 4(f) properties, including any measures to minimize harm committed to by the applicant, will have a de minimis impact on the property (23 CFR §774.3(b)).

A total of 111 Section 4(f) properties were identified within the corridor study boundary including public parks, recreation areas, and historic sites. Of the 111 Section 4(f) properties, 68 would have a Section 4(f) use (impact).

On March 13, 2020, maps and comments were made available to the Virginia Department of Transportation by the Fairfax County Department of Planning and Development, including the previously noted maps of Fairfax County Planning Geography, Inventory of Historic Sites, and Historic Overlay Districts, related to the I-495 Express Lanes Project. In addition to these

comments and maps, the following comments discuss impacts to the following heritage resources:

- Georgetown Pike.
- The northern section of George Washington Memorial Parkway, running 9.7 miles from Arlington Memorial Bridge to the Capital Beltway in Virginia.
- Beaufort Park located at 7303 Peter Place and within a 600-foot I-495 Express Lanes project buffer.
- Shiloh Baptist Church in Dranesville, located at 8310 Turning Leaf Lane and adjacent to the 600-foot I-495 Express Lanes project buffer.

Within Fairfax County the proposed project would have substantial impacts on both the George Washington Memorial Parkway and Georgetown Pike. Both roadways are listed on the National Register of Historic Places, the Virginia Landmarks Register, and the Fairfax County Inventory of Historic Sites. In addition, both roadways are designated by the Virginia Department of Transportation as Scenic Roads.

George Washington Memorial Parkway

The northern section of the George Washington Memorial Parkway runs 9.7 miles from the Arlington Memorial Bridge to the Capital Beltway in Virginia. It was constructed from 1930-1965. A byway is patterned as *"formally or informally designed connectors within a system of predetermined destinations that include parks and monuments."*[1] Its nature as a byway encouraged a recreational motorist use, and the federal government outlined parkway design guidelines in 1935, which included:

- A limit to non-commercial, recreational traffic
- Avoidance of unsightly road developments
- Wider-than-average right-of-way to provide a buffer from abutting property
- No frontage or access rights, to encourage the preservation of natural scenery
- Preference for a new site, to avoid already congested and built-up areas
- To best access native scenery
- Elimination of major grade crossings
- Well-distanced entrance and exit points to reduce traffic interruptions and increase safety[2]

Development along the immediate roadway has been limited and has preserved the scenic, historic, and environmental aspects that characterize the significance of the highway.

Georgetown Pike

The Georgetown Pike was constructed between 1813 and 1827 to connect the Georgetown Markets in Washington, D.C. to the agricultural interests in Leesburg and further west. The roadway is significant as a transportation turnpike, but is also significant in its construction method, which was an adapted French method called "Tresaguet." This method excavated the roadbed, had two layers of compacted stones, and was crowned in the center to improve drainage

[1] George Washington Memorial Parkway National Register nomination, https://catalog.archives.gov/id/117691695.
[2] Ibid.

and wear. Resources from its construction dating from 1813 are visible and accessible and maintain their historic integrity. The original roadbed has been altered. The nomination and significance are only for the VDOT maintained right-of-way, which varies from 50-60 feet. Georgetown Pike became Virginia's first scenic and historic byway in 1973.[3]

Other Historic Sites
Two additional sites may be impacted by the proposed the I-495 project. Both sites are in proximity to the proposed I-495 project. Depending on the scope and height of modifications, the project could negatively impact the viewshed of these two properties.

Beaufort Park, identified on the Fairfax County Inventory of Historic Sites, is located at 7303 Peter Place and at tax map number 021-3 ((26)) 10. This property is located within the 600-foot project buffer associated with the I-495 Express Lanes Project and could be impacted by any alteration to the interchange at Georgetown Pike. The residence on Beaufort Park was constructed in 1940, but there was a Georgetown Pike Toll Gate and potentially a rifle pit from the Civil War located on the original property before it was subdivided in the 1980s. The property was owned by Eugene and Lille Lou Rietzke, who founded Capital Radio Engineering Institute, which was acquired by McGraw Hill.[4] Archaeology has also been conducted on the site.

Shiloh Baptist Church in Dranesville, also identified on the Fairfax County Inventory of Historic Sites, is located adjacent to the 600-foot buffer associated with the I-495 Express Lanes Project. The church is located at 8310 Turning Leaf Lane and tax map number 029-1 ((1)) 58C. The original church was constructed in 1887 and reconstructed in 1928 after a fire.[5] The church served members of the Odricks Corner, a freed black community established by Cyrus Carter and Alfred Odricks.[6]

Virginia Outdoors Plan
The Virginia Outdoors Plan (VOP), produced by the Virginia Department of Conservation and Recreation (VDCR) is the state's comprehensive plan for land conservation, outdoor recreation, and open-space planning. Prior to initiating any project, consideration is to be given to the proximity of a project site to recreational resources identified in the VOP. The George Washington Memorial Parkway (managed by the National Park Service), the Scotts Run Nature Preserve (managed by the Fairfax County Park Authority), and a private 4.6-acre property owned by the Langley Club are all identified in the VOP.

[3] "Georgetown Pike: Fairfax county Inventory of Historic Sites Report," Fairfax County Dept of Planning and Development, 2019.
[4] "Beaufort Park: Fairfax county Inventory of Historic Sites Report," Fairfax County Department of Planning and Development, 2019.
[5] "Shiloh Baptist Church (Dranesville): Fairfax county Inventory of Historic Sites Report," Fairfax County Department of Planning and Development, 2019.
[6] Netherton, Nan. Fairfax County, Virginia: A History. *Fairfax County Board of Supervisors*, 1992, 452.

Comments & Recommendations
- For the properties that are located on the National Register of Historic Places (George Washington Memorial Parkway and Georgetown Pike), negative physical or visual impacts that may result as part of the related and cumulative I-495 projects should be avoided and minimized. Any impacts must be mitigated appropriately.
- For the two properties on the Fairfax County Inventory of Historic Sites (Beaufort Park and Shiloh Baptist Church), negative physical or visual impact should also be avoided and minimized. Given that these properties have not been evaluated for eligibility for the National Register of Historic Places, staff recommends that further research be completed. Staff also recommends that the Fairfax County Park Authority Archaeological Collections Branch be consulted to analyze any archaeological impact within the cumulative study areas of the related I-495 projects.
- Direct and indirect impacts to the three properties identified in the Virginia Outdoors Plan should be assessed, minimized or avoided, and appropriately mitigated, if applicable.

ECOLOGICAL RESOURCES

County Environmental Policies
The Environment Element of the Policy Plan states that the protection and restoration of the ecological integrity of streams is expected in Fairfax County. In order to minimize the impacts that new development and redevelopment projects may have on county streams, the Comprehensive Plan encourages the protection of stream channels, buffer areas along stream channels, and commitments to the restoration of degraded stream channels and riparian buffer areas. (Fairfax County Comprehensive Plan, 2017 Edition, Policy Plan, Environment, Amended through 3-14-2017, Pages 7-9).

Additionally, policies state that stormwater design for all stormwater facilities should be closely coordinated with county staff to avoid degradation of impacted streams. The county anticipates the implementation of *"best management practices to reduce runoff pollution and other impacts. Preferred practices include: those which recharge groundwater when such recharge will not degrade groundwater quality; those which preserve as much undisturbed open space as possible; and, those which contribute to ecological diversity by the creation of wetlands or other habitat enhancing BMPs, consistent with state guidelines and regulations." (Fairfax County Comprehensive Plan, 2017 Edition, Policy Plan, Environment, Amended through 3-14-2017, Page 9).*

Draft EIS Information
The Draft EIS includes some general discussion related to water quality (DEIS, Pages 4-90 through 4-91):
- Impacts to surface water quality may occur during construction, which could include physical disturbances or alterations, accidental spills, and sediment releases.
- Large areas of soil may be exposed during construction. Soils can be severely eroded by wind and rain when the vegetation and naturally occurring soil stabilizers are removed. Erosion of these exposed soils can considerably increase the sediment load to receiving waters and adversely affect aquatic life.

- The removal of trees and other riparian buffer vegetation can greatly reduce the buffering of nutrients and other materials and allow unfiltered water to directly enter a stream channel.
- Impacts associated with the use of the road after construction are mainly based on the potential for contamination of surface waters by runoff and from new impervious roadway surfaces. The most common heavy metal contaminants are lead, aluminum, iron, cadmium, copper, manganese, titanium, nickel, zinc, and boron. Most of these contaminants are related to gasoline additives and highway maintenance. Other sources of metals include mobilization by excavation, vehicle wear, combustion of petroleum products, historical fuel additives, and catalytic-converter emissions.
- Deicing compounds that are used during the winter for highway maintenance pose a threat to water quality. Chlorides from deicing salts can cause acute and chronic toxicity in fish, macroinvertebrates, and plants.
- Organic pollutants, including dioxins and PCBs (Polychlorinated Biphenyls), have been found in higher concentrations along roadways. Sources of these compounds include runoff derived from exhaust, fuel, lubricants, and asphalt. These organic pollutants are known to accumulate in concentrations that can cause mortality and affect growth and reproduction in aquatic organisms.

Comments & Recommendations

- Streams in the area include Dead Run, Scotts Run, Turkey Run, and the Potomac River. The project analysis should assess impacts to Dead Run, Scotts Run, and Turkey Run and the downstream impacts to the Potomac River. Analysis should incorporate information from recent storm events, to include frequency, duration, and intensity of these events. Additionally, ecological resource surveys should be performed for each of these stream corridors, the Scotts Run Nature Preserve, and the George Washington Memorial Parkway. Assessment of project impacts should be considered and coordinated with impacted jurisdictions prior to the finalization of projects designs.
- Staff notes that the requirements of the Chesapeake Bay Preservation Ordinance would apply to the project. While public roads are considered "exempt," that exemption is conditioned on the optimization of the road alignment and design to prevent or otherwise minimize encroachment in Resource Protection Areas (RPAs) and adverse effects on water quality.
- Additionally, VDOT Location and Design Division Instructional and Informational Memorandum IIM-LD-195.12 (see Attachment 1) provides direction regarding stormwater management requirements for VDOT projects. Section 4.1 of this memorandum notes that, *"When requested by a locality's VSMP Authority, MOT projects located in jurisdictions that have adopted more stringent stormwater management (SWM) technical criteria than that required by the VSMP Regulations shall be designed, to the largest extent practicable, to meet the locality's more stringent criteria."*
- On March 19, 2019, the Fairfax County Board of Supervisors voted to request that all current projects under design and future VDOT projects located in Fairfax County meet the county's local stormwater management regulations. On July 17, 2019, Fairfax County formally requested the same (see Attachment 2). IIM-LD-195.12 directs that, if it is found that our more stringent local stormwater management requirements are not practicable, VDOT will implement the requirements to the maximum extent practicable and provide documentation to the county demonstrating that the technical requirements are not practicable.

- Given that the proposed project would entail the creation of extensive areas of impervious cover, a primary consideration is the impact to county streams. In light of these issues and this guidance, staff recommends strict adherence to local stormwater management requirements to the maximum extent practicable for the project, per IIM-LD-195.12.
- The use of linear stormwater controls to address water quality and quantity requirements is strongly recommended, given that control of the rainwater runoff at its source would provide the greatest water quality and stream protection results. Alternatives include dry swales, subsurface chamber storage, gravel galleries, and oversized pipes, with manufactured filtering devices at the outfall of these facilities. Such an approach would limit the project footprint, avoid heavily wooded and steep slope areas, preserve ecologically valuable land, and reduce environmental impacts to floodplains and streams.
- The purchase of off-site nutrient credits for stream and wetlands impacts would not address the intent of county polices. Off-site credits do not provide protections for streams and other water bodies within Fairfax County. Therefore, staff recommends that mitigation opportunities be pursued within the county consistent with Fairfax County's approved watershed management plans. VDOT should partner with the county to select local stream restoration and constructed wetland projects to support improved water quality and habitat in our local waterways.
- In light of existing "legacy" issues and impacts from previous related highway work, including runoff impacts, the cumulative impacts of existing deficiencies and proposed actions should be assessed and mitigated.

Overall, for all proposed facilities, staff recommends the avoidance of significant ecological resources to the maximum extent feasible; incorporation of linear stormwater controls into facility designs to address stormwater requirements while minimizing the disturbance of ecological resources and open spaces; incorporation of ecological enhancements into any stormwater facility designs to replace the ecological functionality of disturbed areas; integration of stream protection measures; minimization of adverse impacts to downstream waterways, infrastructure, and property; assessment of the cumulative impact of multiple outfalls directed into a stream in the same general vicinity; incorporation of natural channel design where applicable; incorporation of constructed wetlands as an alternative to the traditional pond designs; adherence to current pollutant removal criteria; restoration and monitoring of disturbed areas; and assessment and mitigation of previous corridor actions and associated impacts to area resources.

FOREST RESOURCES

Forest Resources Policies

The Comprehensive Plan anticipates that new development will include an urban forestry program and be designed in a manner that retains and restores meaningful amounts of tree cover, consistent with planned land use and good silvicultural practices. Good quality vegetation should be preserved and enhanced and lost vegetation restored through replanting. (Fairfax County Comprehensive Plan, 2017 Edition, Policy Plan, Environment, Amended through 3-14-2017, Pages 17-18).

Impacts to Tree Canopy
Forest resources within the corridor study area within Fairfax County include those within the National Park Service (NPS) property (George Washington Memorial Parkway) and the Scotts Run Nature Preserve. The Draft EIS states that mitigation to these forests would require coordination with the NPS and the Virginia Department of Conservation and Recreation (VDCR).

In addition to tree removal, adverse impacts to forested land would include disturbance to critical root zones (CRZ), damage to tree crowns, soil compaction, and changes to drainage patterns and soil moisture due to grading. Sunscald and windthrow could also occur along newly exposed edges of retained forested areas, as trees previously sheltered from these elements may have difficulty adjusting to sun and wind. Vegetated areas could also suffer from increased roadway runoff from expanded impervious surfaces. Increased runoff could result in additional erosion and sedimentation from areas disturbed during construction and could carry increased pollutants from roadways. Disturbed area areas are also more vulnerable to the introduction of invasive plant species. Any of these adverse impacts could result in additional tree loss beyond the clearing associated with construction activities.

Comments & Recommendations

- Ecological Services: The Draft EIS states that all affected property owners would be compensated for the fair market value of all land acquired for the construction of the preferred Build Alternative. Such an approach would not necessarily consider the environmental services and the economic, social, and health benefits of the urban forest that would be lost due to the clearing associated with this project. Loss of the services and benefits provided by these trees could reduce the property values of those properties affected by the construction and operation of the additional lanes. Environmental services can be quantified using the i-Tree software developed by the U.S. Forest Service. Additionally, an analysis of real estate values would provide insight into changes in property values within impacted areas. These considerations should be explored in the interest of more complete compensation for adverse impacts to affect properties.
- Reforestation: Unavoidable clearing of forested areas in Maryland would be subject to replacement planting under the Maryland Reforestation Law. However, in Virginia, negotiation with owners of affected lands would be necessary to address reforestation of cleared areas in order to restore cleared areas affected by the project as nearly as possible to the character existing before tree removal. Additionally, to help replace lost tree canopy, tree planting should take place in areas that were unforested prior to grading where buffering capacity and viewsheds could be improved. Compensation should be provided for the environmental services and benefits previously provided. Areas cleared for temporary uses such as material storage, staging, and stormwater and sediment control, are likely to be significantly degraded and unsuitable for planting without dedicated and comprehensive remedial actions. Tree planting should be incorporated extensively into the project design for all disturbed areas, including firm commitments to soil remediation for all planting areas. To ensure the viability of the proposed plantings, staff recommends a commitment to tree protection, to include adequate supervision during construction, to ensure that tree protection measures are implemented as planned. Additionally, staff recommends that all development plans avoid the following: significant changes to elevations (both "cut" and "fill" operations);

changes to water flow; and excavation within the critical root zones of all trees to be protected. Additionally, staff recommends a commitment to planting schemes featuring indigenous trees, shrubs, perennial grasses and grass-like plants, and forbs for each planting area. Only indigenous species should be used in seed mixes with a high percentage of warm season grasses. For all new planting areas, in which existing pavement is to be removed, and for staging areas staff recommends a commitment to soil rebuilding, which would help ensure the viability of the proposed plantings. Extended warranties should be enforced for all planting areas. Overall, forested areas should be restored, replaced, and mitigated to the fullest extent practicable.

- Invasives Control: Of significant concern is the introduction and spread of invasive species in areas disturbed by construction activities or in areas previously disturbed throughout the corridor but not properly restored. Control of invasive species should be fully integrated into all planting activities and throughout the project area. Invasive species should be suppressed and eliminated to allow the regeneration of native plant communities and the restoration of all degraded and disturbed areas, both for the considered project and for previous actions within the highway corridors.

Together, these measures would minimize impacts to property owners and ecological resources, increase the viability of the existing tree cover, increase the habitat value of the project, and promote water infiltration, consistent with the intent of the Comprehensive Plan.

TRAFFIC NOISE IMPACTS
New development is expected to protect people from unhealthful levels of transportation noise. *"New development should not expose people in their homes, or other noise sensitive environments, to noise in excess of DNL 45 dBA [decibels, A-weighted], or to noise in excess of 65 dBA in the outdoor recreation areas of homes." (Fairfax County Comprehensive Plan, 2017 Edition, Policy Plan, Environment, Amended through 3-14-2017, Pages 11-12).* Staff notes that 63 dBA is the noise level in which speech interference generally begins.

An analysis of the noise impacts of the highway construction within Virginia were not considered as part of the Draft EIS. Noise Abatement for the portion of the study area within Virginia is to be evaluated in coordination with VDOT and in compliance with the VDOT Highway Traffic Noise Impact Analysis Guidance Manual. The results of this evaluation would be included in the Final EIS.

To determine the degree of impact, VDOT has previously used the Noise Abatement Criteria (NAC) for various land use categories. The NAC for residential areas, parks, trails, playgrounds, and historic properties used by VDOT is 67 dBA. Decisions on whether to provide noise abatement along project corridors generally consider the feasibility of a design and the overall cost weighted against the benefit.

Comments and Recommendations

- Given the lack of information regarding noise impacts, staff was unable to assess the efficacy, location, and visual impacts of traffic noise mitigation measures. Staff recommends that VDOT clarify the current status and expectations regarding noise mitigation, to include potential barrier locations and design details. Staff recommends that any proposed noise

mitigation consider aesthetics, tree buffer plantings, and the efficacy of the noise abatement treatments.

SUMMARY

Transportation system components are expected to be consistent with environmental, land use, social, and economic goals. Each component is to be thoughtfully designed and sensitively integrated into the community fabric. Open space, ecological resources, heritage sites, parks, trails, and stream corridors are all critical components of the community that each transportation proposal is to consider.

To address the environmental objectives of the Comprehensive Plan and avoid undue impacts to community resources, staff recommends the following:

- Avoidance or minimization of impacts to properties that are located on the National Register of Historic Places, including the George Washington Memorial Parkway and Georgetown Pike.
- Avoidance or minimization of impacts to the two properties on the Fairfax County Inventory of Historic Sites (Beaufort Park and Shiloh Baptist Church).
- Assessment, minimization, avoidance, and mitigation of the direct and indirect impacts to the three properties identified in the Virginia Outdoors Plan.
- Optimization of road alignments and designs to prevent or otherwise minimize encroachment in Resource Protection Areas (RPAs) and adverse effects on water quality.
- Strict adherence to local stormwater management requirements to the maximum extent practicable for the project, per IIM-LD-195.12.
- The use of linear stormwater controls to address water quality and quantity requirements.
- Pursuit of mitigation opportunities within the county and which rely on Fairfax County's approved watershed management plans as guides for any project mitigation. VDOT should partner with the county to select local stream restoration and constructed wetland projects.
- An evaluation of "legacy" issues and impacts from previous highway-related work, particularly inadequacies of previous stormwater facility installations, planting efforts, and runoff impacts on local stream geomorphology, including erosion. The cumulative impacts of existing deficiencies and proposed actions should be assessed and mitigated.
- Assessment of the impacts to Dead Run, Scotts Run, and Turkey Run and the downstream impacts to the Potomac River.
- Performance of ecological resource surveys for each of these stream corridors, the Scotts Run Nature Preserve, and the George Washington Memorial Parkway.
- Assessment of the environmental services and the economic, social, and health benefits of the urban forest that would be lost due to the clearing associated with this project, as well as compensation for these impacts.
- Reforestation of all disturbed areas with commitments to compensation, soil rebuilding, and the restoration of native plant communities.
- Integration of invasives control throughout the project area.
- Clarification of the current status of and expectations regarding noise mitigation, to include potential barrier locations and design details.

Thank you for the opportunity to comment on this project. If you have any questions regarding these comments, please contact Joseph Gorney at 703-324-1380 or joseph.gorney@fairfaxcounty.gov.

Sincerely,

Leanna H O'Donnell

Leanna H. O'Donnell, AICP, Director, Planning Division
Department of Planning and Development

cc: Board of Supervisors
Bryan Hill, County Executive
Rachel Flynn, Deputy County Executive (Planning + Development)
Barbara Byron, Director, DPD
Tom Biesiadny, Director, FCDOT
Denise James, Chief, Environment & Development Review Branch (EDRB), Planning Division (PD), DPD
Laura Arseneau, Chief, Heritage Resources and Plan Development Branch, PD, DPD
Joseph Gorney, Senior Environmental Planner, EDRB, PD, DPD
Catherine Torgersen, Stormwater Planning Division, DPWES
Hugh Whitehead, Urban Forest Management Division, DPWES
Andrew Galusha, Fairfax County Park Authority

Attachments:
1. IIM-LD-195.12; Requirements for Erosion and Sediment Control and Stormwater Management Plans for VDOT Projects
2. Fairfax County Request for VDOT Projects to Meet Local Stormwater Management Requirements (July 17, 2019)

LHO: JCG

ATTACHMENT 1

VIRGINIA DEPARTMENT OF TRANSPORTATION

LOCATION AND DESIGN DIVISION

INSTRUCTIONAL AND INFORMATIONAL MEMORANDUM

GENERAL SUBJECT: Virginia Stormwater Management Program	NUMBER: IIM-LD-195.12
SPECIFIC SUBJECT: Requirements for Erosion & Sediment Control and Stormwater Management Plans for VDOT Projects	DATE: July 19, 2019
	SUPERSEDES: IIM-LD-195.11
APPROVAL:	Susan H. Keen, P.E. State Location and Design Engineer Approved July 19, 2019

Changes are shaded.

CURRENT REVISION

Renamed Scenario's 3 & 4 and revised information in Scenario 5 detail.

EFFECTIVE DATE

Unless identified otherwise within this IIM, the information contained in this IIM is effective upon receipt.

1.0 PROGRAM PURPOSE AND NEED

1.1 VDOT's Stormwater Management Program

The Virginia Stormwater Management Act, the VSMP Regulations, the Virginia Pollutant Discharge Elimination System (VPDES) General Permit for Discharges of Stormwater from Construction Activities (the Construction Permit) and the VPDES Individual Permit for Discharge of Stormwater from Municipal Separate Storm Sewer System (Permit No. VA0092975) require that VDOT implement a stormwater management (SWM) Program that protects the quality and quantity of state waters from the potential harm of unmanaged stormwater runoff resulting from land-disturbing activities. This IIM addresses the application of these regulatory requirements as they relate to development of Post-Construction Stormwater Management Plans for VDOT land- disturbing activities.

Other elements of VDOT's SWM Program are addressed by the VDOT Drainage Manual and current editions of other IIMs, including:

- IIM-LD-242 which addresses the application of the VPDES General Permit for Discharges of Stormwater from Construction Activities to VDOT (Regulated Land Disturbing Activities (RLDAs);
- IIM-LD-243 which addresses signing and sealing of plans and documents including Erosion and Sediment Control (ESC)/SWM Plans and construction record drawings;
- IIM-LD-251 which addresses the purchase of nutrient credits to address post-construction water quality reduction requirements for VDOT land-disturbing activities associated with construction projects.
- IIM-LD-258 which addresses stormwater requirements for non-VDOT projects.

2.0 PROGRAM ADMINISTRATION

2.1 Administration of VDOT's ESC and SWM Standards and Specifications

VDOT's Annual ESC and SWM Standards and Specifications shall apply to all plan design, construction and maintenance activities administered by VDOT and performed either by its internal workforce or contracted to external entities, where such activities are regulated by the VESC and VSMP Law and Regulations.

VDOT's Annual ESC and SWM Standards and Specifications are a compilation of all VDOT documents related to the design, construction, inspection and maintenance of ESC measures, Pollution Prevention (P2) practices and post-development Best Management Practices (BMP) including, but not limited to, all or a portion of the following:

- Road & Bridge Standards
- Road & Bridge Specifications, Supplemental Specifications and Special Provisions
- IIMs
- Drainage Manual
- Pollution Prevention Field Guide for Construction Activities
- Road Design Manual
- Maintenance Division's BMP Inspection and Maintenance Manuals

VDOT's Annual ESC and SWM Standards and Specifications are housed in an on-line electronic database which includes both the current and previous versions of the standards and specifications. The database is dynamic and items within the database may be added to, deleted or revised at any time to reflect changes or updates to VDOT's ESC and SWM Program.

Approval to use any portions of VDOT's Annual ESC and SWM Standards and Specifications, including this IIM, on non-VDOT projects/land-disturbing activities (e.g. Locality Administered Projects and Land Use Permit projects - see section 3.2 of this IIM for definition of non-VDOT projects/land-disturbing activities) shall be secured from the respective VESCP/VSMP Authority. For non-VDOT projects, the Authority means an authority approved by the State Water Control Board to operate a VESCP or VSMP, and can include the Virginia Department of Environmental Quality (DEQ), a locality, federal entity, another state entity, or linear projects subject to annual standards and specifications. Any approval to use portions of VDOT's Annual ESC and SWM Standards and Specifications, will presumably be part of the VSMP/VESCP Authorities overall plan approval process.

2.2 Approval of VDOT's ESC and SWM Standards and Specifications

VDOT secures an annual approval of its ESC and SWM Standards and Specifications from DEQ. By this approval, DEQ authorizes VDOT to administer its ESC and SWM Program in accordance with the Annual ESC and SWM Standards and Specifications on all regulated land disturbance activities performed by VDOT's internal workforce or contracted by VDOT to external entities.

During any inspections of VDOT land-disturbing activities by DEQ, EPA, or other such regulatory agency, compliance with VDOT's Annual ESC and SWM Standards and Specifications (and all parts thereof) will be expected.

3.0 DETERMINING A REGULATED LAND-DISTURBING ACTIVITY

3.1 VDOT Regulated Land-Disturbing Activities

The SWM and ESC requirements are applicable to all land-disturbing activities where one acre or greater (2,500 square feet or greater in a designated CBPA) of land is disturbed, unless otherwise exempted. ESC requirements apply to all project which disturb greater than or equal to 10,000 square feet (2,500 square feet or greater in a designated CBPA), unless otherwise exempted. See Section 3.3 of this IIM for discussion on the exemption for routine maintenance operations.

The VSMP Regulations and application of this IIM shall apply to all VDOT regulated land-disturbing activities, both construction and maintenance, administered by VDOT and performed either by its internal workforce or contracted to external entities, including those developed/constructed under, the Design/Build (DB) process and the Capital Outlay Program. PPTA/P3 projects are a special case and, while requiring consistency with VDOT standards and specifications, are often considered by DEQ to be "non-VDOT" projects for the purposes of permit issuance and ESC and SWM Plan review and approval. PPTA/P3 entities should consider that projects may be required to meet the local technical and administrative requirements and to secure permits from the applicable VSMP and VESCP Authorities, while at the same time maintaining consistency with the VDOT standards, specifications and contract provisions related to SWM and ESC.

Provisions for VDOT SWM Program administration including plan design, review and approval are further discussed in IIM-LD-242 and Chapter 11 of the VDOT Drainage Manual.

3.2 Non-VDOT Regulated Land-Disturbing Activities

Requirements for non-VDOT projects are referenced in IIM-LD-258.

3.3 Routine Maintenance Activities

Routine maintenance is defined as those activities performed to maintain the original line and grade, hydraulic capacity or original construction of the project.

Routine maintenance activities are exempt from the Virginia Stormwater Management Act, the attending VSMP Regulations, and the VPDES Construction General Permit requirements regardless of the amount of land disturbance. The routine maintenance exemption does not apply to the ESC Program. See Chapter 10 of the VDOT Drainage Manual for more information on ESC Plan requirements.

Operations and Maintenance Activities:

Such activities include, but are not limited to: ditch cleaning operations, pipe replacement or rehabilitation operations, bridge deck replacement and the normal operational procedures for maintaining the travel surface of unpaved/gravel roadways (i.e., dragging, blading, grading, etc.). Facilities that support the routine maintenance activity (e.g., disposal areas for surplus dirt, borrow pits, or staging areas) are not considered a part of the routine maintenance operation and, therefore, are not covered under the routine maintenance activity exemption.

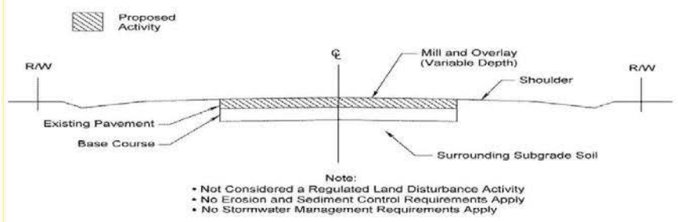
For any maintenance activity being classified as routine, proper documentation of original conditions must be kept on file at the District office. Documentation of original conditions can be in the form of old plans, photographs or other such documents depicting the original line and grade, hydraulic capacity, or original construction or purpose of the facility. Written and signed statements from those that know the history of the facility can also serve as documentation of the original conditions.

Roadway Construction and Maintenance Activities:

Scenario 1: Mill and Overlay ONLY (with no changes to geometrics)

In accordance with EPA's 2004 Q&A on the NPDES stormwater program, re-paving is not regulated under the storm water program unless one or more acres of underlying and/or surrounding soil are cleared, graded or excavated as part of the re-paving operation.

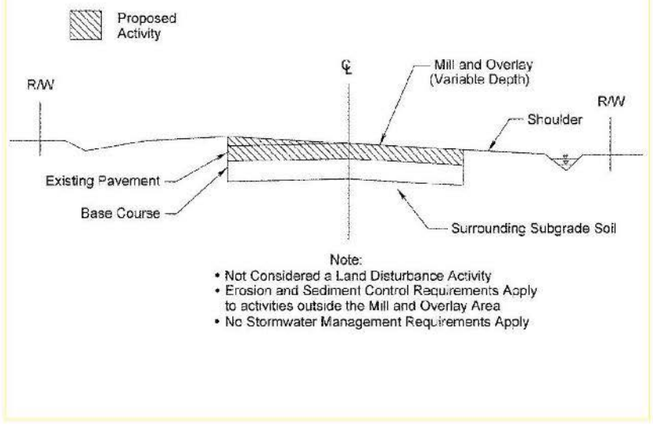
The removal and replacement of an existing pavement structure within the same footprint that DOES NOT EXPOSE the subgrade, such as mill and overlay, IS NOT a land disturbing activity under ESC or SWM. The area of such existing pavement would not be included with the other land disturbance areas of the project for the purposes of determining the applicability of the VSMP Regulations and the VPDES General Construction Permit.



Scenario 2: Mill and Overlay ONLY (with changes to geometrics)

In accordance with EPA's 2004 Q&A on the NPDES stormwater program, re-paving is not regulated under the storm water program unless one or more acres of underlying and/or surrounding soil are cleared, graded or excavated as part of the re-paving operation.

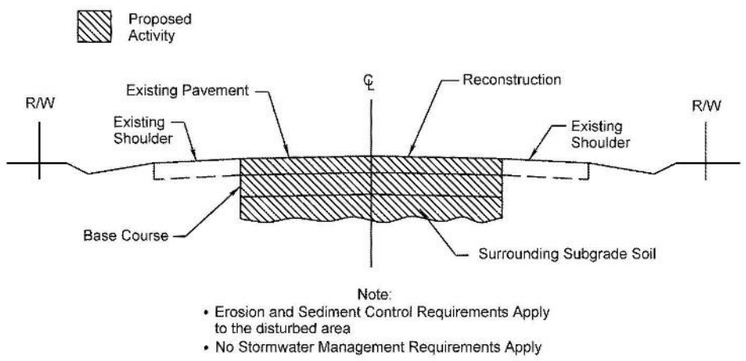
The removal and replacement of an existing pavement structure within the same footprint that DOES NOT EXPOSE the subgrade, such as mill and overlay, IS NOT a land disturbing activity under ESC or SWM. The area of such existing pavement would not be included with the other land disturbance areas of the project for the purposes of determining the applicability of the VSMP Regulations and the VPDES General Construction Permit. However, the project must take into consideration the potential changes in site hydrology for the affected conveyances, and they must be evaluated and be in accordance with the VDOT Drainage Manual.



Scenario 3: Full Depth Reconstruction of Travel Lane (within the existing footprint)

In accordance with EPA's 2004 Q&A on the NPDES stormwater program, if the surrounding soil is cleared, graded or excavated, the operation is a land disturbing activity. However, as presented in this example it meets the definition in the Virginia Stormwater Management Act's exemption for routine maintenance as defined under §62.1-44.15:34.C.7.

The removal and replacement of an existing pavement structure within the same footprint that DOES EXPOSE the subgrade IS considered a land disturbing activity; however it meets the definition of routine maintenance. Therefore, the area of such existing pavement would be included with the other land disturbance areas of the project for the purposes of determining the applicability of ESC regulations and requirements, but it would be exempt from the VSMP Regulations and the VPDES general Construction Permit.

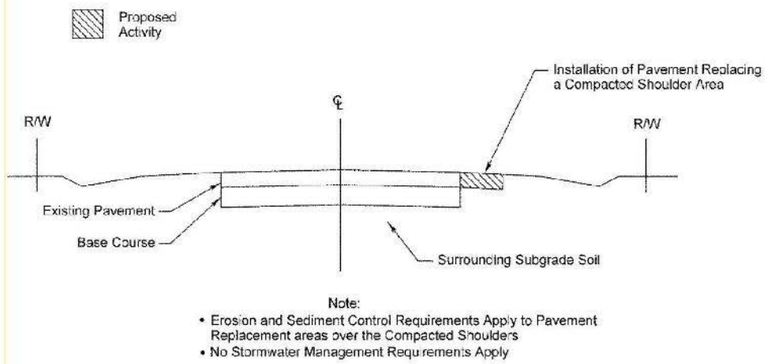


Note:
- Erosion and Sediment Control Requirements Apply to the disturbed area
- No Stormwater Management Requirements Apply

Scenario 4: Shoulder Reconstruction Within the Existing Footprint

In accordance with EPA's 2004 Q&A on the NPDES stormwater program, if the surrounding soil is cleared, graded or excavated, the operation is a land disturbing activity. However, as presented in this example it meets the definition in the Virginia Stormwater Management Act's exemption for routine maintenance as defined under §62.1-44.15:34.C.7.

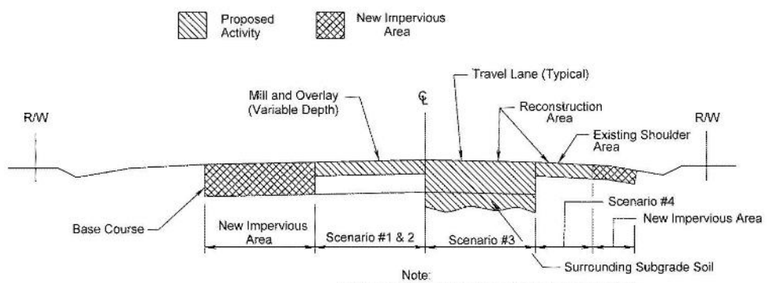
Shoulder Reconstruction Within the Existing Footprint, such as Safety Improvement Projects, that include paving of an existing shoulder with a compacted or impervious surface and reestablishment of existing associated ditches shall be deemed routine maintenance. Therefore, the area of such existing pavement would be included with the other land disturbance areas of the project for the purposes of determining the applicability of ESC regulations and requirements, but it would be exempt from the VSMP Regulations and the VPDES general Construction Permit. Note: this would not include paving an existing compacted shoulder to create an additional lane. If the paving effort includes increasing the post-development impervious acreage from the pre-development acreage, the increase should be identified as redevelopment under the VSMP regulations.



Note:
- Erosion and Sediment Control Requirements Apply to Pavement Replacement areas over the Compacted Shoulders
- No Stormwater Management Requirements Apply

Scenario 5: Combination of scenarios (i.e. combination of scenarios 1 through 4)

For projects that will have a combinations of scenarios, the DHE shall coordinate the application of such combination with the State MS4 Engineer and DEQ. The coordination shall include the necessary documentation to illustrate how the different scenarios will be addressed in each case.



Note:

Scenario #1 Mill and Overlay Only (With No Changes to Geometrics):	Not Considered a Regulated Land Disturbance Activity No Erosion and Sediment Control Requirements Apply No Stormwater Management Requirements Apply
Scenario #2 Mill and Overlay (With Changes to Geometrics):	Not Considered a Regulated Land Disturbance Activity No Erosion and Sediment Control Requirements Apply No Stormwater Management Requirements Apply
Scenario #3 Reconstruction of Travel Area:	Erosion and Sediment Control Requirements Apply No Stormwater Management Requirements Apply
Scenario #4 Reconstuction of Existing Shoulder Area:	Erosion and Sediment Control Requirements Apply No Stormwater Management Requirements Apply
New Impervious Area:	Erosion and Sediment Control Requirements Apply Stormwater Management Requirements Apply

Where there is any question as to the application of the routine maintenance definition to a land disturbing activity, the appropriate District Hydraulics Engineer should be consulted along with DEQ.

4.0 APPLICATION OF TECHNICAL CRITERIA

4.1 Applicable Technical Criteria

Part II of the VSMP Regulations (9VAC25-870-40 et. seq.) provides administrative and technical criteria for regulated land-disturbing activities.

Part IIB (9VAC25-870-62 et. seq.) contains the "new" technical criteria that include the Runoff Reduction methodology (for determining compliance with water quality requirements) and the Energy Balance Equation (for determining compliance with stream channel erosion requirements). Part IIB technical criteria are applicable to all projects unless the project qualifies for application of Part IIC.

Part IIC (9VAC25-870-93 et. seq.) contains the "old" technical criteria that include the Performance/Technology-Based methodology (for determining compliance with water quality requirements) and MS19 criteria (for determining compliance with stream channel flooding and erosion requirements). Part IIC technical criteria are only applicable if the project qualifies for grandfathering as discussed below.

Design criteria and engineering methodologies to comply with either Part IIB or IIC of the technical criteria in the VSMP Regulations can be found Chapter 11 of the VDOT Drainage Manual.

When requested by a locality's VSMP Authority, VDOT projects located in jurisdictions that have adopted more stringent SWM technical criteria than that required by the VSMP Regulations shall be designed, to the largest extent practicable, to meet the locality's more stringent criteria. For any requests to be considered, the VSMP Authority's more stringent criteria must: 1.) have been adopted pursuant to the Virginia Stormwater Management Act; 2.) the request is made in writing; and 3.) such requests are received prior to the completion of the project's plans for use in the public involvement phase of the project (or other such phase where no public involvement process is required). If it is found that the more stringent local SWM requirements are not practicable for the VDOT project, it will be the responsibility of the SWM Plan Designer to implement the requirements to the maximum extent practicable and to demonstrate to the that VSMP Authority's that the technical requirements are not practicable. Documentation shall be kept with the SWM Plan. Early coordination should occur between the SWM Plan Designer and the local VSMP Authority, in order to identify any such potential requirements or requests.

4.2 Grandfathering

Part II of the VSMP Regulations (9VAC 25-870-48) provides provisions for locality, state and federal projects to be grandfathered under Part IIC provided certain conditions are met. For the purposes of grandfathering VDOT projects, the project shall be considered grandfathered by the VSMP authority and shall be subjected to the Part IIC technical criteria provided the project that can demonstrate an obligation of local, state or federal funding, in whole or in part, prior to July 1, 2012, or the department has approved a SWM Plan prior to this date; a state VPDES permit has not been issued prior to July 1, 2014 and a land disturbance did not commence prior to July 1, 2014.

Any project that is considering utilization of the grandfathering provision shall be evaluated and documented by the District Hydraulics Engineer. The documentation shall clearly demonstrate an obligation of funds prior to July 1, 2012.

When evaluating a project for application of the Grandfathering provision, consideration should be given as to when the project will be advertised and when construction activities will begin. If the project will not begin construction activities prior to July 1, 2019, the project should be designed in accordance with the Part IIB (or the "new") technical criteria. Land disturbing activities grandfathered under subsections A and B of the regulations shall remain subject to the Part II C technical criteria for one additional state permit cycle. After such time, portions of the project not under construction shall become subject to any new technical criteria adopted by the board.

This written evaluation and determination shall be coordinated with the State MS4 Engineer and DEQ. Upon DEQ approval, the status of a project/activity with regards to the grandfathering provision shall be documented using the appropriate note(s) in Section IV of the SWPPP General Information Sheets. If multiple UPCs exist for the project, each UPC should be evaluated separately to determine the extents or segments of the project that qualify for grandfathering. Portions of a project not under construction by July 1, 2019 will become subject to the new technical criteria adopted by the board.

In cases where governmental bonding or public debt financing has been issued for a project prior to July 1, 2012 such project shall be subjected to the Part IIC technical criteria (no limit to grandfathering period specified in regulation).

Projects eligible for grandfathering may still use Part IIB of the technical criteria. However, in doing so, the design details and pollutant removal efficiency of the BMPs shall be in accordance with the information on DEQ's BMP Clearinghouse website or identified on VDOT's approved BMP Standards and Special Provisions.

4.3 Phasing of Construction Project and Associated SWPPP

This section applies to all VDOT projects which will run design and construction in tandem efforts, including D/B projects which are on an expedited delivery schedule.

Where a project will be constructed in phases, the SWPPP shall include an ESC Plan, a SWM Plan, and P2 Plan for each phase that includes the scope and extent of land-disturbing proposed for that phase. The SWPPP for the individual phases will be self-sustaining and not incur a deficit in post construction SWM design requirements requiring mitigation on successive phases. These minimum requirements must be satisfied prior to VPDES permit registration.

The initial SWPPP shall cover, at a minimum, the following items:

- Preliminary construction plans (30-50% complete) documenting the limits of construction and work to be performed;
- ESC Plan for initial phase based upon the existing conditions and work needed for clearing and grubbing, maintenance of traffic, and proposed upland grading;
- Pollution Prevention (P2) Plan for initial phase; and
- Post-Construction SWM including required documentation and calculations, location of all outfalls, identification and description with the water quantity and quality requirements, a topographical site map, and a narrative describing the existing and proposed site conditions.

The initial SWPPP shall contain all required plan content addressed in the VPDES Construction Permit, Stormwater Management Regulations and Erosion and Sediment Control Regulations.

4.4 Selection of Manufactured Treatment Devices (MTDs) and Underground BMPs

In selecting proprietary stormwater systems (MTDs or Underground BMPs), designers and VDOT should strive to design and specify the system that provides the best value to VDOT, considering a variety of factors. Designers should evaluate and compare traditional/conventional Stormwater Management Facilities ("SWM Facilities" - detention, extended detention, filtration systems and infiltration systems) and the proposed underground or manufactured systems to ascertain if the overall value to VDOT is better. This evaluation should include a comparison of capital costs (land, materials and labor), as well as anticipated long-term operation and maintenance costs over the life cycle of the MTD or underground SWM Facilities in comparison to conventional, non-proprietary SWM Facilities alternatives open to the ground surface. When the total life cycle cost for a conventional SWM Facilities alternative is less than for a MTD or underground SWM Facilities, consideration must be given to use of the conventional system, even if the capital costs are higher, unless acquisition of additional R/W or easements are expected to delay the overall project schedule.

If an MTD or underground SWM Facilities determined to be the most appropriate solution, the plans and specifications should identify the minimum performance criterion that the system is expected to meet. Performance criteria may include geometric, hydraulic, materials, operation and maintenance, and water quality characteristics. These performance criteria become the basis for specification and procurement. Specific proprietary systems should not be specified. All products should be selected from the Approved Products List (when feasible) and any water quality performance characteristics (e.g. efficiency, allowable flow rates, etc.) shall be as approved by DEQ.

5.0 EXCEPTIONS FROM TECHNICAL CRITERIA

For those land-disturbing activities where it is determined that water quality requirements cannot be totally achieved utilizing onsite BMPs and/or offsite options (see Chapter 11 of the VDOT Drainage Manual), an exception from the portions of the technical criteria unachievable (e.g., relief from the improvement factor of Energy Balance Equation) may be considered and granted by DEQ provided that VDOT coordinates with DEQ and submits a written exception request. The designer or project manager should coordinate consideration of any exceptions directly the DHE. If deemed warranted or necessary, the DHE will assist in documenting the request for exception. This effort shall be documented in accordance with VDOT's Annual Standards and Specifications, including the completion and submittal of LD-445G form, coordinated by the DHE to the State MS4 Engineer and DEQ.

The request shall include documentation of the need for the exception. The documentation shall describe all means and methods evaluated for meeting the water quality/quantity requirements and the reasons why specific means or methods were determined not feasible. The documentation shall also state
that the exception being requested is the minimum necessary to afford relief. Economic hardship alone is not sufficient reason to request an exception.

Any approved exception is to be documented and included in the SWPPP for the project/activity. The appropriate SWPPP General Information Sheet notes are to include the date the exception was approved, by whom it was approved and the nature of the exception (e.g., increased reliance on nutrient credits to ___ lbs. in exceedance of the 25% allowable off site). This same information should be noted and included with other registration information when applying for coverage under the VPDES Construction Permit.

6.0 REVIEW AND APPROVAL OF ESC PLANS

See Section 10.2.2.1 of the VDOT Drainage Manual for certification requirements and review and approval of ESC Plans.

7.0 MAINTENANCE CONSIDERATIONS

Requirements for maintenance of SWM Facilities, the schedule for inspection, maintenance operations, and the identification of persons responsible for the maintenance is addressed in the VDOT Maintenance Division's BMP Inspection and Maintenance Manuals. The long-term operations and maintenance requirements for any SWM Facility shall be considered during SWM Plan development. The applicable inspection and maintenance section of each manual shall be noted using the appropriate note(s) in Section IV of the SWPPP General Information Sheets.

8.0 RECORDKEEPING AND REPORTING

8.1 SWPPP General Information Sheets

The VPDES MS4 and Construction Permits require VDOT to annually report information to DEQ such as the location, type, acres treated and the affected receiving waters of all SWM Facilities (BMPs) installed.

8.2 LD-445D and LD-458 Submittals

BMP information is to be recorded on the SWPPP General Information Sheets and reported through the VPDES Permit Termination Notice Form LD-445D. See the current IIM-LD-242 and Chapter 10 of the VDOT Drainage Manual for additional information.
The LD-458 Surplus Tracking Form will be used to collect any additional phosphorus credit generated by a specific project that could be applied to the TMDL Action Plan in a specific watershed. This form is to be submitted to the State MS4 Engineer for coordination with the Environmental Division.

8.3 Construction Record Drawings

Construction record drawings are required for all permanent SWM Facilities, including approved shop drawings for MTDs, and shall be appropriately signed and sealed by a person registered in the Commonwealth of Virginia as a professional architect, engineer, land surveyor or landscape architect and qualified in the responsible administration of the BMP construction. Construction record documentation shall be provided for all permanent SWM Facilities. The registered professional shall certify that all SWM Facilities have been constructed and made functional in accordance with the SWM Plan. The form LD-445D shall be used to document this certification process. The official record drawings for the project include both the plan drawings and record drawing survey.

Any changes to the proposed SWM Plan or BMPs necessitated during the construction phase of the project, that affects the proposed construction details or the BMP design information shown in the construction plans or documentation, shall be coordinated by the VDOT construction manager with the appropriate VDOT District Hydraulics Engineer. If as-built documentation for permanent SWM Facilities deviates from the approved plans, the Area Construction Engineer should request a review by the District Hydraulics Engineer to determine if modifications to the facility are needed prior to acceptance. As-built documentation should be submitted as early as possible but no less than 30 days prior to expected acceptance. Significant deviation from the approved drawings may delay project acceptance. The record set of construction plans and the BMP information tables in the construction plans or documentation are to be formally revised to reflect any authorized/approved changes to the proposed SWM Plan and/or the proposed BMP construction details. All plan revisions shall be completed in accordance with the VDOT Road Design Manual and the VDOT Construction Division's IIM-CD-2013-12.01, signed and sealed in accordance with Department's sealing and signing policy IIM-LD-243 and filed with the record set of construction plans maintained in the VDOT ProjectWise Plan File Room.

Inspection forms specific to the BMP type(s) should be used to document the construction/installation process. A final inspection for SWM Facilities/BMPs shall be conducted by the VDOT construction manager, the Area Construction Engineer (ACE), the VDOT DHE, the VDOT Maintenance Division Infrastructure Manager (or designee), and the NPDES Coordinator (or their designees). The inspection shall be conducted prior to final project acceptance to identify any required corrective actions, allowing the contractor to perform these corrective actions. The final inspections should be conducted as early as practicable to allow time for corrective actions. Reinspection may be required after receipt of the as-built documentation.

8.4 Transfer of VDOT Responsibility to Others

The footprint occupied by a BMP, that is installed as part of a VDOT project and is part of VDOT's post-construction SWM Plan, may be utilized for other land use and development, provided that all VSMP requirements are transferred to another entity (e.g. developer or locality). An example project would be where a private developer intends to utilize the area occupied by the BMP for parking spaces to service a shopping center. Prior to the transfer of land and elimination of the BMP, the entity shall demonstrate certain conditions have been met:

1. The entity (e.g. developer or locality) shall provide the applicable District Hydraulics Engineer a conceptual plan of how they are going to account for VDOT's SWM requirements;

2. Upon approval from the District Hydraulics Engineer, the entity shall provide an executed agreement stating the SWM requirements are to be transferred to the entity in perpetuity. This agreement shall not preclude any requirements of the VSMP Authority including an executed maintenance agreement for the replacement BMP(s);

3. Demonstrate to the District Hydraulics Engineer that all VSMP requirements will be transferred to another entity (e.g. developer or locality) to the satisfaction of the applicable VSMP Authority. The SWM Plan and maintenance agreement that is submitted to the VSMP Authority for review and approval must include the post-construction SWM requirements that are currently being satisfied by the existing BMP;

4. Replacement BMPs have been constructed and made operational prior to removal of VDOT's BMP and transfer of land; and

5. All maintenance agreements with the applicable VSMP Authority have been executed and recorded to carry with the land.

It is important to note that the release of an existing VDOT easement requires a separate VDOT Property Management disposal process. Compensation for the release of easement rights will be required and easements will be conveyed by quitclaim deed. Easement releases should be coordinated with the Property Management Program Manager, 1401 East Broad Street, Richmond, VA. 23219.

ATTACHMENT 2

COMMONWEALTH OF VIRGINIA
County of Fairfax
BOARD OF SUPERVISORS

SHARON BULOVA
CHAIRMAN

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JUL 17 2019

Secretary Shannon Valentine
Virginia Department of Transportation
P.O. Box 1475
Richmond, VA 23218

Reference: Fairfax County Request for VDOT Projects to Meet Local Stormwater Management Requirements

Dear Secretary Valentine:

Fairfax County recognizes the critical importance of transportation projects to our community and continues to support the Commonwealth's efforts to advance multi-modal mobility in the region to improve our quality of life. We also know that transportation projects add significant impervious area to the Chesapeake Bay's and Fairfax County's watersheds and have significant negative impacts on water quality. Fairfax County would like to partner with the Virginia Department of Transportation (VDOT) to develop solutions to the stormwater management issues associated with transportation projects.

We reviewed VDOT Location and Design Division Instructional and Informational Memorandum IIM-LD-195.10 regarding stormwater management requirements for VDOT projects. Section 4.1 of this memorandum (starting on sheet 6) notes that, "*When requested by a locality's VSMP Authority, VDOT projects located in jurisdictions that have adopted more stringent stormwater management (SWM) technical criteria than that required by the VSMP Regulations shall be designed, to the largest extent practicable, to meet the locality's more stringent criteria.*"

Fairfax County's Stormwater Management Ordinance provides the technical criteria for regulated land-disturbing activities in Fairfax County. The criteria are provided in Article 5 of Chapter 124 of Fairfax County's Code of Ordinances, available at: https://library.municode.com/va/fairfax_county/codes/code_of_ordinances

We believe these criteria are more stringent than Parts II B and II C of the Virginia Stormwater Management Program (VSMP) Regulations. Therefore, on March 19, 2019, the Fairfax County Board of Supervisors voted to, and now formally requests that all current projects under design for use in the public involvement phase and future VDOT projects located in Fairfax County meet the County's local stormwater management regulations. Per IIM-LD-195.10, if it is found that our more stringent local stormwater management requirements are not attainable, VDOT should implement requirements to the maximum extent practicable and provide documentation to the County demonstrating that the technical requirements are not fully feasible. Additionally, Fairfax County requests that all stormwater management facilities designed to meet local

stormwater management regulations be constructed, inspected, and maintained by VDOT and that the state provide sufficient funding to VDOT to adequately fulfill these needs.

VDOT and Fairfax County are both municipal separate storm sewer system (MS4) permit entities and share the same stormwater management objectives. Fairfax County wishes to partner with VDOT on efforts to find innovative ways to address stormwater management within the right-of-way and directly downstream to meet our mutual MS4 and Chesapeake Bay total maximum daily load (TMDL) goals.

Sincerely,

Sharon Bulova
Chairman
Fairfax County Board of Supervisors

cc: Ann Jennings, Deputy Secretary of Natural Resources for the Chesapeake Bay
David K. Paylor, Director, Virginia Department of Environmental Quality
Bryan J. Hill, Fairfax, County Executive
Rachel Flynn, Deputy County Executive
Randolph W. Bartlett, Director, Department of Public Works and Environmental Services (DPWES)
Bill Hicks, Director, Land Development Services
Tom Biesiadny, Director, Fairfax County Department of Transportation
Craig Carinci, Director, DPWES, Stormwater Planning Division
Chad Crawford, Director, DPWES, Maintenance and Stormwater Mangement Division
Brian Keightley, Director, DPWES, Urban Forest Management Division

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