Appendix: Related Comments and Concerns of M-NCPPC

In addition to the seminal reasons upon which M-NCCPC has based its decision not to concur with the proposed ARDS, the M-NCPPC has compiled the comments included in this appendix ("Appendix") in response to SHA's request for comments and concerns.

1. The ARDS do not take into account local planning needs.

The access plan for the Managed Lanes does not provide any rationale for the locations selected except for a statement at the IAWG that it is to reduce impact. The access plan must also take into account existing and future origin-destination patterns, planned land use, economic development considerations, social equity, access to emergency services, and safe and efficient access to major transit centers. These considerations are clearly lacking as evidenced by the large gaps between access locations, including:

- I-270 between Gude Drive and Montrose Road. This 3.4-mile gap creates a challenge for drivers originating or terminating in Rockville to use the Managed Lanes. A vehicle accessing I-270 at either MD-28 or MD-198 would only be able to access the Managed Lanes at River Road on the Outer Loop of I-495, or at Old Georgetown Road on the I-270 Eastern Spur for drivers headed to the Inner Loop of I-495.

- I-495 between MD-185 (Connecticut Avenue) and US-29 (Colesville Road). This 2.7-mile gap omits an access location at MD-97 (Georgia Avenue). Access location "O" as identified on page 18 of the ARDS paper, Figure 3, is located on I-495 just east of the I-495 bridges over Jones Mill Road. This access point would be used by traffic headed from Virginia, Bethesda/Potomac, and the I-270 corridor to reach Silver Spring and Wheaton. Given existing congestion levels and the vertical and horizontal geometry on this section of I-495, it is difficult to understand how traffic will take this access slip ramp from the Managed Lanes into the general purpose lanes in the Inner Loop direction, and then merge over to exit at MD-97, a distance of one-half mile before the start of the MD-97 off ramp and one mile total before the exit. The projected level of service in this weaving section with the addition of this access location compared to No-Build conditions is likely to reach failing status, be unsafe, and result in significant weaving congestion solely to accommodate Managed Lane traffic demands.

- I-495 between US-29 (Colesville Road) and I-95. This 3.6-mile gap omits access locations at MD-193 (University Boulevard) and MD-650 (New Hampshire Avenue). MD-650 provides primary access for the FDA White Oak facility located one mile north of I-495, which will be substantially expanded in the next decade and lead to approximately 8,000 new jobs. Without access to the Managed Lanes from MD-650, drivers on I-495 destined for FDA would likely enter and exit the Managed Lanes at US-29 and drive through the Four Corners area in eastern Montgomery County, creating a significant shift in local transportation patterns. When this issue was raised at the IAWG, the response was that MD-650 is located too close to I-95; however, US-1 is even closer to I-95 than MD-650 and has an access location proposed. Managed Lane access at MD-650 should be prioritized to support a major Montgomery County economic development initiative.

- I-495 between US-50 and Ritchie-Marlboro Road. This 5.5-mile gap omits access to MD-202 (Landover Road), Arena Drive, and MD-214 (Central Avenue). The MD-202 and Arena Drive exits represent some of the most significant and impactful planned development in Prince George's County – including residential, commercial and institutional facilities.

These gaps in access to and from the Managed Lanes also fail to account for the need for reliable travel times for emergency services to Holy Cross Hospital in Silver Spring and the University of Maryland Capital Region Medical Center in Largo, which will be the second largest shock trauma center in the state. Direct access from US-50 to the New Carrollton Transit Center also creates an inefficient and unsafe merge. Both New Carrollton and Largo Town Center have been identified as Downtowns as they are planned to be economic engines of Prince George's County.

By not considering the major traffic origin-destination pairs and major traffic generators that the Managed Lane system is designed to serve, the access plan proves deficient. Similarly, by not considering access needed to accommodate existing and planned commercial centers in the project area, the access plan has glaring shortcomings. The access plan as proposed seems to focus on the through traffic, longer-distance travel pairs rather than shorter distance commuting needs, or simply addresses the necessary albeit limited focus on reducing physical impacts to the surrounding land.

The ARDS states: "Direct access at or near major transit centers is proposed at the following Metro Stations: Silver Spring Metro (US-29), Shady Grove (I-370), Greenbelt Metro (Cherrywood Lane), New Carrolton Metro (US-50), Branch Avenue Metro (MD-5)." The same unsafe merge as outlined above is expected to occur at the US-50 exit to access the New Carrollton Transit Station due to insufficient distance between the Managed Lanes exit and the Transit Station entry, thereby requiring drivers to overshoot the Transit Station entrance and enter by MD-450. No access is provided at MD- 450, which is the most efficient entry point for that transit station. Had SHA consulted with the local transportation planners at an early stage in the planning level design, a more feasible plan and better assessment of probable impacts would have been developed.

2. The ARDS recommendations do not include an Environmental Justice analysis as required by NEPA.

None of the materials released to the public address how equity and environmental justice will be achieved in both the construction and operations of the Managed Lanes and their interchanges.

The Managed Lane access locations proposed are inconsistent with the provision of an equitable transportation network. An overlay of the Metropolitan Washington Council of Governments' Equity Emphasis Areas ("EEAs") with these access locations makes it abundantly clear that no equity analysis was undertaken to develop or refine these access locations. The project should address social equity as required under NEPA[1] in various ways, none of which was done. First,

[1] *See* 40 C.F.R. § 1508.8 (defining "effects" or "impacts" to include "ecological…aesthetic, historic, cultural, economic, *social* or health, whether direct, indirect or cumulative") (emphasis added); *Sierra Club v. FERC*, 867 F.3d 1357, 1368 (D.C. Cir. 2017) (NEPA requires agencies to take a "hard look" at environmental justice issues); Final Environmental Justice Guidance Under the National Environmental Policy Act, Council on

the access plan should be revised to allow easy access to the Managed Lanes from the EEAs. Second, the project should include a public transit element as an integral part of the Preferred Alternative (see further discussion below). Finally, discussion on equity in the development of tolling strategies with a consideration of equity mitigation or accommodations, including reduced fare EZ-pass programs or tax rebates, would go a long way to address these concerns. As indicated in comment #1, Staff reviewed the proposed access points (new interchanges) for the HOT /ETL lanes across the ARDS and compared them to MWCOG's EEAs, which are small geographic areas that have significant concentrations of low-income and minority populations, or both. The purpose of the EEAs is to aid planning agencies throughout the region to evaluate how future transportation projects could benefit low-income and minority communities. Staff determined that out of a total 17 access points, about half are located within EEAs.

Interstate	Recommended Interchange for HOT/ETL Lanes	Equity Emphasis Area
I-270	I-370	Yes
	Gude Drive	No
	Montrose Road	No
	Westlake Terrace	No
	Democracy Boulevard	No
I-495	I-270/I-495 Spur (both)	No
	Old Georgetown Road	No
	Connecticut Avenue	No
	Colesville Road	Yes
	I-95	Yes
	Baltimore Avenue	Yes
	Cherrywood Lane	Yes
	Baltimore/Washington Parkway	No
	US 50	Yes

Envtl. Quality, at 8-9 (Dec. 10, 1997) (setting forth general principles for agencies to identify and address environmental justice issues in NEPA analyses); Exec. Order No. 12898, 59 Fed. Reg. 7629 (1994) ("each Federal agency shall analyze the environmental effects, including human health, *economic and social effects*, of Federal actions, including effects on minority communities and low-income communities…") (emphasis added).

	Ritchie Marlboro Road	No
	Pennsylvania Avenue	Yes
	Branch Avenue	Yes

Another issue with the proposed interchange locations is their spacing. While there appears to be a fairly even split between the two counties, the distance between HOT/ETL interchanges in Prince George's County are significantly further apart than those in Montgomery County— in some cases as far as 5 miles. Thus, drivers in Prince George's County will experience substantially less access to the Managed Lanes. SHA should review the interactive mapping tool[2] created by the Metropolitan Washington Council of Governments and identify locations for interchanges within equity emphasis areas in both Montgomery and Prince George's Counties. Additionally, applying origin and destination data when deciding where to locate interchanges would not only improve the likelihood of success of the project, it would also be a more defensible and equitable approach over impacts and costs.

Another significant equity issue is the tolling component of each of the Build Alternatives. Based on a review of the materials provided to date, it appears the only motorists who will benefit from the project will be those who can afford to pay the tolls. To address issues of equity, the project should include information as to how the costs of tolling can be discounted or offset for low-income populations, so they can also make use of the Managed Lanes. Some potential operational strategies could include:

- Rebates for tolls paid by motorists of a qualifying income;
- Tax deductions for tolls paid by motorists of a qualifying income; and
- An EZ-Pass device that waives or charges a lower fee for motorists of a qualifying income.

3. Parkland impacts have been underestimated.

M-NCPPC is reviewing existing land records to identify any discrepancies between existing rights-of-way ("ROW") identified by SHA and what M-NCPPC understands to be parkland along the Study corridor. Any discrepancies confirmed as parkland will likely alter the proposed parkland impact acres presented in the ARDS Paper. It is critical that SHA and M-NCPPC reach a mutual understanding of property ownership and acceptable highway improvements within existing perpetual easement areas before the Preferred Alternative is selected and any parkland impact and the strategies to address the impacts is determined. Moreover, even beyond the expected onsite impacts to public park assets associated with any construction of the project within the ROW, the ARDS and EIS must take into proper account the relative impacts expected from offsite mitigation projects anticipated for M-NCPPC parkland.

[2] Metropolitan Washington Council of Governments, Maps & GIS, https://www.mwcog.org/transportation/data-and-tools/maps-and-gis/.

In the Purpose and Need Statement, SHA "recognizes the need to plan and design this project in an environmentally responsible manner;" however, all of the Build Alternatives that SHA has proposed have very similar, almost indistinguishable (and significant) impacts to natural resources. A major component of the NEPA process is to identify environmental impacts and to utilize the environmental information to inform the selection of an Alternative that avoids and minimizes the impacts that any Build Alternative would create.[3] By only providing ARDS that have similarly significant resource impacts, SHA is effectively removing any environmental consideration from future evaluation of the Build Alternatives. In other words, SHA cannot reasonably address both the traffic management goals of the Purpose and Need and adequately protect parkland with the ARDS with which SHA has chosen to move forward. Thus, by narrowing the ARDS to those SHA has chosen, the agency has failed to consider the differential impacts from its proposed alternatives in violation of NEPA's mandate to "consider fully the environmental effects" of the proposed action.[4] Instead, the weight of environmental impact against the other criteria must be appropriately balanced due to the highly developed nature of the Study Area, where the remaining environmental resources are finite and, in many cases, irreplaceable. Any reduction in environmental impact must be weighed heavily in narrowing the Alternatives to be studied and eventual selection of the Preferred Alternative.

The considerable environmental impacts described in the ARDS will result in irreparable impacts to natural resources along multiple reaches of the Study Area. For example, all the Build Alternatives propose impacting at least 9.4 acres just in Rock Creek Stream Valley Park Unit 2 in Montgomery County. Those impacts are not comprehensive to the entirety of the Rock Creek Stream Valley Park and include loss of floodplain forest and the need for substantial relocation of the stream channel, which would also have follow-on impacts to recreational resources. Suitable mitigation in the vicinity of these impacts simply does not exist, and any Build Alternative selected will result in a permanent loss of forest, stream, wetland, and recreational resources for this portion of Montgomery County, an area already constrained by development. Several parkland resources in Prince George's County are also of critical concern, including Cherry Hill Road Community Park, Southwest Branch Stream Valley Park, Douglas Patterson Park, and Andrews Manor Park.

SHA should seriously consider the implications of these staggering impacts on natural resources and the loss of recreational opportunities before selecting a Preferred Alternative by considering

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[3] *See* 40 C.F.R. § 1505.2 ("each agency shall…[s]tate whether all practicable means to avoid or minimize environmental harm from the alternative selected have been adopted, and if not, why they were not."); *Pub. Employees for Envtl. Responsibility v. Beaudreu*, 25 F. Supp. 3d 67, 130 (D.D.C. 2014) (U.S. Fish & Wildlife Service did not make an independent determination about whether a feathering operational adjustment was a reasonable and prudent measure necessary or appropriate to minimize a wind project's impact on listed species); *Cowpasture River Pres. Ass'n v. Forest Serv.*, 911 F.3d 150, 176, 183 (4th Cir. 2018) (U.S. Forest Service "abdicated its responsibility to preserve national forest resources" in part by reversing its decision on whether mitigation measures would effectively minimize environmental impacts to groundwater and surface waters).

[4] *Theodore Roosevelt Conservation P'ship v. Salazar*, 616 F.3d 497, 503 (2010) (D.C. Cir. 2010); *see also Matthews v. United States Dep't of Transp.*, 527 F. Supp. 1055, 1057 (W.D.N.C. 1981) (agencies cannot "eliminate from discussion or consideration a whole range of alternatives, merely because they would achieve only some of the purpose of a multipurpose project"). Although "the range of alternatives an agency must consider and discuss under NEPA" is within the agency's discretion, the agency's choice of alternatives should be "evaluated in light of its reasonably identified and defined objectives." *Ctr. for Food Safety v. Salazar*, 898 F. Supp. 2d 130, 146 (D.D.C. 2012).

additional alternatives with differential impacts on protected parkland and the broader environment. In fact, SHA can do so at this stage in the NEPA process, which serves as an initial step toward the development of the EIS.[5] If a Build Alternative is selected and approved, SHA must "strive to avoid and minimize community, natural, cultural, and other environmental impacts, and mitigate for these unavoidable impacts at an equal or greater value," as SHA committed to in the Purpose and Need document. M-NCPPC will work with SHA to employ techniques to achieve this goal with any ARDS that are moved forward in this process.

4. Stormwater management along the entire Study corridor must be considered as part of the selection of the Preferred Alternative.

The vast majority of the existing network of I-495 and I-270 is absent of any stormwater management controls, contributing significant amounts of pollutants to local streams and waterways. The ARDS references a "Stormwater Management Report" that was used to develop the preliminary design for on-site stormwater management. SHA has indicated that this report will not be available until after the ARDS are finalized. SHA's commitment to simply follow MDE requirements for new and redeveloped impervious surfaces does not adequately address the statement that "[a]ny build alternatives will adequately offset unavoidable impacts while prioritizing and coordinating comprehensive mitigation measures near the study area which are meaningful to the environment and the community," unless the Stormwater Management approach is expanded to include consideration of opportunities for treatment of all the existing conditions along these highway corridors. M-NCPPC cannot adequately determine the scope of the proposed stormwater improvements until this Report is provided for review.

5. Public transportation must be considered as an integral element in design of the Preferred Alternative.

M-NCPPC has previously commented that public transportation elements should be included as integral components of the Preferred Alternative and should be studied as part of each of the Alternatives identified in the ARDS. The I-66 Transform project is one local example where transit is included—public transit infrastructure and operations are being subsidized by the toll revenue. The citizens and local agencies have strongly advocated for public transit to be included in this project, and the rationalizations not to address public transit as part of this project are road-centric and not responsive to community desires that are profoundly reasonable. Simply allowing buses to use the Managed Lanes is not enough to address a NEPA required and publicly desired multimodal solution. Any transportation system, including the Preferred Alternative, should be designed to incorporate transit as an integral element to allow transportation choices and efficiently move people through the region.

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[5] *See Sierra Club v. Watkins*, 808 F. Supp. 852, 871 (D.D.C. 1991) (steps prior to the filing of an EIS, including the seeking of alternatives, are "initial step[s]" toward an EIS); *see also Welcome to the Public Workshop for the I-495 & I-270 Managed Lanes Study*, U.S. DOT FED. HIGHWAY ADMIN. AND MARYLAND DEPT. OF TRANSP. STATE HIGHWAY ADMIN. 4, https://495-270-p3.com/wp-content/uploads/2019/04/I-495_I-270_Workshop_Handout_2019_4_10_Low_Res_FINAL.pdf (setting timeline for drafting an EIS for "Early 2020").

6. Evaluation of property impacts should address whether partial takings result in nonconforming uses under current environmental and zoning laws.

SHA should provide more specific criteria and explanation regarding its determination whether a taking results in a "displacement" versus a partial taking. For example, the Build Alternatives eliminate the Silver Spring YMCA indoor and outdoor pool facilities (east of US-29), yet this parcel is not identified as a "displacement." In addition, property owned by the Prince George's County Board of Education located east of Knollwood Park may not be available for the Managed Lanes project because it was previously identified for a new school in the Board of Education's master plan. Many other properties in both counties will be similarly affected, resulting in underestimated impacts.

Closer scrutiny is needed for the interchange at MD-450 and the CSX Railroad crossing to account for any of the Build Alternatives. The existing condition features two separated piers supporting the highway over the tracks and would not accommodate additional width without reconstructing the bridge and access ramps. As such, the proposed ROW as shown on the SHA Map is insufficient.

With respect to individual property owners, the ARDS identified only 34 residential property displacements, yet between 1,457 and 1,496 properties were identified where ROW takings would be needed. More detail is needed to identify the specific impacts. For example, it is unclear whether the ROW takings include space needed for noise barriers or conformance for environmental impact or zoning restrictions.

7. The impacts from any of the Build Alternatives will be incomplete without a local road system/interchange analysis.

The increased capacity of any Build Alternative will likely lead to significant traffic increases on the roads that feed onto and off of both I-495 and I-270, particularly where access locations to the Managed Lanes are proposed. Without a comprehensive local road system analysis, SHA's reporting is incomplete and misleading. The impacts of any Build Alternative to the local road network must be clearly analyzed, and in particular:

- Interchange traffic flows and intersection, ramp, merge/diverge, and weaving areas during peak hours should be evaluated for all interchanges within the Study area on I-495 and I-270. This evaluation will inform the need for interchange reconfiguration or the addition of direct access ramps.

- Traffic flows on parallel streets and intersection operations during the morning and evening peak hours (at a minimum) should be conducted for roads projected to experience significant traffic volume increases. The placement of selected access locations for the Managed Lanes will result in diverted trips on the surrounding roadway network and change the traffic patterns considered in local land use recommendations. Whether these roads can handle these traffic shifts and still provide acceptable traffic operations must be determined. No mitigation factors have been proposed to address these conditions.

Given the current complications in stormwater control at many existing interchanges, SHA has failed to identify how it will address this ongoing problem that will clearly be exacerbated with the additional impervious surfaces of the Managed Lane roadways.

8. Commitment to the Corridor Cities Transitway

During Secretary Rahn's briefing to the Montgomery County Council in April 2019, the Corridor Cities Transitway (CCT) was specifically identified as an element of this project. M-NCPPC was informed by SHA at the May 2019 IAWG meeting that this inclusion was in error and that the CCT is not part of the I-495/I-270 Managed Lanes Study. Rather, funding for the CCT would be considered only if there are sufficient revenues coming from the private partner. This is another example of a public commitment from high-level administration officials that is later retracted by technical staff. The CCT should be included as part of the public transit element for this Study, whether as part of the I-495 and I- 270 Managed Lanes Study or combined with the Phase 2A expansion of the Managed Lanes on I-270 up to Frederick. Simply suggesting that some funding may be available is not sufficient. Providing better transportation solutions for citizens in Upcounty Montgomery County should include public transit solutions, as currently Upcounty residents have few options.

9. The Interactive ArcGIS Mapping Tool needs enhancements and improvements.

The ArcGIS mapping tool provided by SHA (SHA Map) needs refinements to assist property owners in locating their properties, and, more particularly, to measure the impacts to their homes as a result of proposed ROW encroachments, including projected noise receptor impacts. The addition of a measuring tool would facilitate this effort. In addition, the M-NCPPC has parcel layers available to access information particular to each parcel of property for both Montgomery County and Prince George's County. SHA should add this GIS layer to its SHA Map. Additionally, the SHA Map uses solid black lines to denote revised interchange geometry at existing interchanges. It is unclear whether these modifications are assumed only for the Build Alternatives; what improvements, in addition to the I-270 ICM project were assumed for No-Build conditions at these locations; and whether the traffic impacts of these proposed interchange modifications have been evaluated and incorporated into the traffic operations analysis for this project.

10. Travel demand assumptions and methodology are necessary to properly evaluate the ARDS selections.

The transportation results presented in the ARDS are summaries of the model results and omit any detail about how the Managed Lanes were simulated and modeled. Technical information should be provided on how the toll rate structure was developed and how it varies based on general purpose lane congestion. References to state of practice tolling on similar facilities, including I-495 and I-66 in Virginia, would be useful to compare against what was assumed for this project, whether there is a maximum toll rate or cap proposed, and whether the toll rates change on the HOT versus ETL Alternatives (this was discussed generally during the IAWG meeting, however, no details were provided).

11. More detail is needed on the noise impact evaluation process, including mitigation measures to address project impacts.

While the Interactive Mapping Tool includes a 66dB contour line, there is no discussion on the noise analysis in the ARDS, including whether the 66dB contour line includes existing noise measurement, existing noise modeling estimates, or future noise estimates with or without the Alternatives. Information should be provided that discusses how the noise analysis was conducted, and when noise mitigation is required per state or Federal law. The ARDS includes a summary of sensitive receptors impacted, but no proposed action/mitigation. SHA should explain why the noise 66dB contour line disappears in the following locations, and, if other innovative approaches are proposed here, provide examples of such approaches:

- I-270 between I-370 and Shady Grove Road (east side);
- I-270 Western Spur between Democracy Boulevard and I-270 split/Tuckerman Lane:
- I-270 Eastern Spur between I-270 split and Old Georgetown Road (west side),
- I-270 Eastern Spur between I-495 and Grosvenor Lane (west side),
- I-495 between Linden Lane and Seminary Road (outer loop side),
- I-495 in the Greenbelt Metro vicinity (inner and outer loop sides),
- I-495 between Annapolis Road and Ardwick Ardmore Road (inner loop side),
- I-495 between Evarts Street and Continental Place (inner loop side)
- I-495 between Evarts Street and Hampton Overlook (outer loop side)
- I-495 between Castlewood Drive and Fernwood Drive (outer loop side),
- I-495 between Richie Station Court and Robert M Bond Drive (outer loop side),
- I-495 at the MD-4 Interchange (inner loop side) along Marlboro Pike, and
- I-495 between MD-5 and Temple Hill Road (inner loop side).

12. <u>The elimination of local/express lanes on I-270 was not sufficiently evaluated.</u>

Although M-NCPPC asked that elimination of the collector-distributor ("C/D") lane system be considered with the ARDS, a bias toward the Build Alternatives has been created without an independent analysis of the transportation benefits. The Build Alternatives were <u>all</u> modified due to this elimination, which hides the actual benefit of simply eliminating the C/D Lane system. SHA should conduct a supplemental analysis on I-270 with the elimination of the C/D lane system without Managed Lane improvements over what exists today (one-lane HOV lanes). This alternative (C/D Lane system elimination) should have been included as a reasonable Preliminary Alternative. Without independent evaluation, it is unclear whether the Managed Lanes are addressing congestion that was artificially created by elimination of the C/D Lanes system. SHA should also explain how stormwater management systems will be designed to address the elimination of the C/D Lane system.

13. Traffic Operations Evaluation provided no detail as to how the existing traffic congestion was calibrated on connecting roads and on I-495 and I-270.

The ARDS fails to explain how existing traffic congestion has been simulated and calibrated at key interchanges and intersecting cross streets that now experience extremely congested conditions, including I-495 at MD-355, MD-185, MD-97, MD-650, I-95, US-50, MD-4, and MD-5. In particular, existing congestion in the vicinity of the Bethesda BRAC facility results in significant backups on MD-355, MD-185, and Jones Bridge Road that impacts I-495 interchanges today. Congestion on the I-495 Inner Loop at MD-450, MD-202, MD-4, MD-337 and MD-5 is also severe during the evening peak hour, often resulting in backups onto I-495. How and whether these have existing congestion chokepoints been evaluated and mitigated is sorely lacking. During the IAWG meeting, it was mentioned that an online app or website would be provided to allow users to select start and end points and determine travel time savings with the Managed Lanes. Although this tool was available during the Public Workshops, it has not been made available as part of SHA's website, which would provide some information to the public in real time.

14. The project phasing plan, preliminary capital cost estimates, and detailed breakdowns by construction items must be included.

On March 19, 2019, SHA briefed the Montgomery County Council about the status of the Study in anticipation of releasing the ARDS to the public and holding public workshops. During that presentation, the project phasing was shown with Phase 1 – I-495 from the George Washington Parkway in Virginia, including improvement of the American Legion Bridge, to I-95, and Phase 2A – I-270 from I-495 to north of I-370. Secretary Rahn indicated that the rationale for the phasing was that Phase 2A was financially dependent on the revenues to be collected from Phase 1. Since financial viability is one of the criteria for selection of the ARDS, the ARDS studies must include the financial analysis that supports the project phasing as suggested. Additionally, more information is needed on the components of the preliminary capital cost estimates with a complete breakdown by roadway segments and by general cost type. There is no discussion on what these estimates include or do not include. The breakdown should include new bridge costs, bridge reconstruction costs (as needed), paving costs, traffic management costs, environmental costs including all environmental mitigation, noise walls or other noise mitigation, and stormwater management improvements.

15. Design of the American Legion Bridge should provide designated space for transit and walking and bicycling.

All means of public transit in the Preliminary Alternatives, except allowing buses to access the Managed Lanes, were eliminated from the ARDS. The American Legion Bridge does not appear to accommodate either a pedestrian/bicycle connection or a future heavy/light rail connection on the structure. More detailed information on the planned components of the proposed American Legion Bridge are necessary to determine a Preferred Alternative from the ARDS. As this screening process is intended to be a conservative assessment for environmental and feasibility purposes, a maximum bridge footprint should be assumed. Specifically, M-NCPPC expects that the design of the American Legion Bridge will include multimodal elements similar to the Woodrow Wilson Bridge, where space has been reserved/designed into the structure for a future

heavy rail line and where a pedestrian and bicycle trail now spans the Potomac River connecting the City of Alexandria to National Harbor. The American Legion Bridge Trail should be a minimum of 14 feet wide and connect to the two National Parks on each side of the Potomac River, the MacArthur Blvd Sidepath and the C&O Canal Trail.

16. Tie-in from the eastern terminus south of MD-5 across the Woodrow Wilson Bridge merits more information and should accommodate future transit and bicycle/pedestrian connections.

The ARDS document omits any discussion of transition between the existing I-495 local and through lanes from the Woodrow Wilson Bridge and the terminus of the Managed Lanes south of MD-5. M-NCCPC staff has requested this information on several occasions and have not received any meaningful response. According to statements made by Secretary Rahn, the Virginia Department of Transportation (VDOT) will determine the design of this transition at some point in the future. The State of Maryland apparently intends to rely upon the Commonwealth of Virginia to design and implement a segment of I-495 that provides access to the most significant economic assets in Prince George's County. It is unclear what incentive the Commonwealth of Virginia has to ensure safe, accessible and reliable travel to and from the MGM casino-hotel and the adjacent commercial/recreation/entertainment complex at National Harbor. It is also unclear what interim condition that segment of I-495 will experience between the completion of improvements terminating south of MD-5 and the implementation of a design Alternative determined by VDOT.

17. Bicycle and pedestrian connections should be included to provide safe and efficient crossings of the corridors.

There was no information provided on how bicycle and pedestrian travel will be accommodated or enhanced with any of the Build Alternatives. I-495 and I-270 are significant barriers to bicycle and pedestrian connectivity. When Managed Lane access is proposed within existing interchanges, and when existing interchanges are modified to accommodate a wider interstate, it is critical that the connecting street be improved for both vehicular traffic operations and for bicycle and pedestrian accommodations.

The project should include an evaluation of safe and direct pedestrian and bicycle crossings at the following locations:

- New interchanges that are expected to be constructed as part of the project;
- Existing interchanges that are expected to be modified as part of the project;
- State and local roads that cross I-495 and I-270 outside of an interchange (such as Ardwick Ardmore Road and Bradley Boulevard); and
- Independent master-planned bicycle and pedestrian infrastructure alignments identified in the Montgomery County Bicycle Master Plan and other master plans (such as I-495 Bike/Ped overpass east of US-29).

Safe and direct pedestrian and bicycle crossings must include:

- Grade-separated or signalized crossings of interstate ramps;
- Two-way separated bike lanes, sidepaths, and trails with a minimum effective width of 11 feet, plus two-foot-wide offsets from vertical elements;
- Sidewalks with a minimum effective width of 5 feet, plus two-foot-wide offsets from vertical elements;
- Buffers between roads and two-way separated bike lanes/sidepaths/trails/sidewalks with a minimum width of six feet.

The following is a list of key recommendations from the Montgomery County Bicycle Master Plans that should be included in the I-495 phases of this project:

- American Legion Bridge across the Potomac River – off-street trail;
- Persimmon Tree Road – sidepath on west side of the road;
- Seven Locks Road – sidepath on east side of the road and bikeable shoulders on both sides of the road;
- River Road – sidepaths on both sides of the road;
- Bradley Boulevard – sidepath on north side and bikeable shoulders on both sides of the road;
- Fernwood Road – sidepath on one side of the road;
- Old Georgetown Road – sidepath on east side of the road;
- MD-355 – sidepath on east side of the road;
- Cedar Lane – sidepath on the west side of the road;
- Kensington Parkway – sidepath on east side of the road;
- Jones Mill Road – bikeable shoulders on both sides of the road;
- Seminary Road – striped bike lanes on both sides of the road;
- I-495 Bike/Ped Overpass east of MD-97 – off-street trail on east side of MD-97 crossing I-495;
- I-495 Bike/Ped overpass east of US-29 – off-street trail connecting Fairway Avenue with US-29;
- MD-193 – sidepaths on both sides of the road; and

- MD-650 – sidepaths on both sides of the road.

The Strategic Trails Plan, endorsed by the Prince George's County Planning Board in November 2018, identified a number of major barriers to development of a countywide trail network; primary among them is I-495. The Strategic Trails Plan identified specific locations along I-495 where bicycle, pedestrian and trail crossing accommodations are needed to support Prince George's County's plans for a connected network of trails and set of roadways that will support the trail system.

Regardless of which Alternative is selected, modification or replacement of the many existing culverts, bridges and underpasses at crossings and interchanges will provide opportunities to design and install new and appropriate types of bicycle and pedestrian infrastructure that will greatly reduce the barrier effect of this major highway and allow communities an opportunity to grow in a unified way on both sides of this important artery.

18. Four-Hour analysis periods are inadequate given the seven to ten hours of congestion identified in the Purpose and Need Statement.

The selection of a four-hour analysis period is inadequate to fully evaluate the extent of congestion on I-270 and I-495 when the Purpose and Need document clearly states that both roads are typically congested for seven to ten hours each day. The four-hour period was used to simulate and analyze the two commuter peak periods. A supplemental analysis is necessary to qualitatively assess the impact of each of the ARDS alternatives on all congested hours. This study could be performed using more qualitative assessment tools than the VISSIM multi-modal traffic flow simulation software package. Peak hour freeway Levels of Service, Delay, Density, and Speed can all be calculated using the Highway Capacity Manual methods. This is particularly critical to evaluate the impact of losing a lane of general-purpose travel on I-270 when the off-peak HOV lane use is eliminated, which is proposed in Alternatives 5, 8, 9 and 13B. Considering that the HOV lane is now enforced for only 3 hours per day, it is clear that the off-peak use of this HOV lane is at or near capacity for more than one additional hour per day per direction. Peak-hour congestion in these sections where the existing HOV lane is proposed to be eliminated must not suffer increased congestion as a result of transferring the off-peak capacity the Managed Lanes System. Managed Lanes can address congestion but should not do so by artificially creating more congestion.

19. An evaluation is needed of the metrics that were recommended in our review of the Purpose and Need Statement.

In submitted comments concerning the Purpose and Need Statement, M-NCPPC recommended that the Study team "develop more rigorous objectives that better differentiate among Alternatives to appropriately address the needs of the project." As part of those comments, M-NCPPC committed to identify objectives and metrics for the team's consideration. These objectives and metrics were submitted on February 6, 2019, and they draw heavily from the analysis that was conducted for the Intercounty Connector (MD-200) project.

This analysis was not conducted as part of the ARDS Study. Therefore, M-NCPPC has insufficient information to make well-reasoned and informed decisions with regard to the use of

its parkland that is clearly needed to implement a Preferred Alternative, regardless of which of the ARDS is selected.