Appendix A: Mitigation and Commitments by MDOT SHA and P3 Developer

The advancement of conceptual mitigation for unavoidable direct impacts to environmental resources throughout the NEPA process for the Study continued and has been documented in the DEIS, SDEIS and FEIS. Mitigation developed for this Study was identified to reduce and offset environmental impacts resulting from the Selected Alternative. In planning for mitigation, MDOT SHA has strived to provide meaningful benefits to resources and improve their values, services, attributes, and functions that may be compromised. Lastly, the lead agencies have worked in good faith to plan worthwhile mitigation based on identified priorities that would, at a minimum, result in no net loss with a goal of a net benefit.

Beyond mitigation for unavoidable impacts, additional commitments, such as those for transit, priority bicycle and pedestrian improvements, and environmental enhancements have been identified through extensive coordination with agencies and stakeholders. These commitments have been identified in consideration of comments received over the course of the Study and to further support elements of the Study's Purpose and Need. **Table 1** presents these commitments that have been made beyond mitigation for direct impacts. MDOT SHA is responsible for implementing all commitments and mitigation listed in Table 1. FHWA, through its stewardship and oversight responsibility will ensure that MDOT SHA implements all commitments and mitigations listed in Table 1. MDOT SHA will provide quarterly status update reports to FHWA following issuing a notice to proceed for final design and construction.

Table 1: MDOT SHA Mitigation and Commitments

ID No.	Mitigation and Commitments	Mitigation (M) or Commitment (C)	Timeframe
WETLANDS/WATERWAYS			
1.	Stream restoration (721 functional feet) along unnamed tributary to Great Seneca Creek south of Bradbury Drive in Quince Orchard Valley Neighborhood Park (Site CA-5).	M	Final Design & Construction
2.	Stream restoration (5,583 functional feet) and wetland creation/restoration (4.61 acres of credit) along Cabin Branch east and west of Montgomery Village Avenue at Montgomery Village Golf Club (Site RFP-2).	M	Final Design & Construction
3.	Purchase of 1,207 functional feet of riverine mitigation credit from approved Maryland mitigation banks.	M	Final Design & Construction
4.	Purchase of 506 linear feet of riverine mitigation credit from approved Virginia mitigation banks.	M	Final Design & Construction
5.	Design of stream stabilization and restoration to provide ecological uplift, where practicable, when relocating streams within the Preferred Alternative limits of disturbance (LOD).	C	Final Design & Construction

ID No.	Mitigation and Commitments	Mitigation (M) or Commitment (C)	Timeframe
	FOREST		
6.	Mitigate for unavoidable impacts to forests in Maryland (414.7 acres) on an acre-for-acre basis in accordance with the mitigation hierarchy described in the Maryland Reforestation Law (MD Natural Resources Code § 5-103) including: • Onsite mitigation (within the project LOD). • Off-site mitigation [at 68 sites identified in the Maryland Reforestation Law Mitigation Site Search Report prepared for the MLS, refer to Appendix T of the Natural Resources Technical Report, (**FEIS, Appendix M**). • Purchase of forest mitigation bank credits from approved forest mitigation banks in affected county and/or watershed. • Any remaining mitigation required may be fulfilled through payment into the Reforestation Fund, as approved by MDNR. • Final forest mitigation plan will be developed and implemented by the Developer in conjunction with MDOT SHA and the affected jurisdictions and landowners, including M-NCPPC and NPS, during the final design phase of the project. The Developer will track changes to the impacts and mitigation credits.	M	Final Design
7.	Commit to planting of any approved reforestation sites on MDNR property within five years of the initial Maryland Reforestation Law approval for the project. MDOT SHA has committed to providing a minimum of five years of maintenance and monitoring at reforestation mitigation plantings. All reforestation sites will need approval/concurrence from DNR, and may include up to 210.54 acres on MDNR property at the sites identified in the Maryland Reforestation Law Mitigation Site Search Report prepared for the MLS. (Refer to Appendix T of the Natural Resources Technical Report, **FEIS, Appendix M**). Coordination and determination of final mitigation sites will be conducted by the Developer in conjunction with MDOT SHA and MDNR.	M	Final Design, Construction & Post-construction
8.	Forest impacts in Virginia that require mitigation are within NPS property. Therefore, forest mitigation will follow the comprehensive ecological restoration plan outlined in #9 below. Although tree impacts occur in Virginia outside of NPS property, there is no statewide forest regulation that requires mitigation off county or state parkland. No tree impacts occur on county or state parkland in Virginia.	M	Final Design & Construction

ID No.	Mitigation and Commitments	Mitigation (M) or Commitment (C)	Timeframe
PARKLAND			
NATIONAL PARK SERVICE			
9.	Develop and implement a Comprehensive Ecological Restoration Plan and Cost Estimate for Restoring Limits of Disturbance to Preexisting Conditions for the impacted area. The plan shall include the following components: • *Forest and terrestrial vegetation restoration including:* ○ Avoiding and minimizing impacts to trees within and surrounding the LOD through a robust tree protection plan. ○ Survey impacted vegetation community prior to construction to determine existing community composition and develop replanting plan based on survey results. ○ Replanting forest (including shrub and herbaceous layers) inch-for-inch within LOD in temporary impact areas and providing non-native invasive (NNI) species control and maintenance and monitoring for 5 years within reforestation area. ○ Softening edge effects associated with disturbance by treating and removing non-native invasive species within a 50-foot buffer of the LOD and replanting native trees and shrubs in any gaps resulting from the removal of mature trees or non-native invasive species. In coordination with NPS during design, sensitive areas, such as areas of known archeological resources, within the 50-foot buffer will be excluded if ground disturbance is required. ○ Providing monetary compensation for remaining tree impacts, based on inch for inch replacement of DBH impacted. • *Rare, Threatened and Endangered plant species restoration including:* ○ Conducting a final pre-construction of rare, threatened or endangered (RTE) plant inspection. ○ Collecting seeds and/or individual RTE plant species from impact area prior to construction. ○ Cultivating plants and storing seeds/propagating plants from seed in an off-site nursery. ○ Reestablishing RTE species from stored seed and cultivated and propagated plants following construction and topsoil restoration.	M	Final Design & Construction

ID No.	Mitigation and Commitments	Mitigation (M) or Commitment (C)	Timeframe

	• *Topsoil salvage and restoration including:*
	  ○ Salvaging topsoil from impact area and storing in nearest possible stockpile location.
	  ○ Restoring subsoils and reduce compaction via ripping, discing, plowing or double-digging following construction.
	  ○ Placing salvaged topsoil in impact area following construction.
	• *Herpetofauna translocation including:*
	  ○ Conducting Herpetofauna relocation effort immediately prior to construction activities
	  ▪ Conducting a sweep through a portion of the impact area with approximately 10 biologists searching for and capturing reptiles and amphibians and logging all captures.
	  ▪ Relocating captured individuals safely away from the impact area.
	  ▪ Conducting a second sweep through the same portion of impact area, logging all captures and relocating captured individuals.
	  ▪ Conducting a third sweep and relocate effort, if the number of captured individuals is not dramatically reduced and continue sweeping the portion of the work area until the number of captured individuals is minimal.
	  ▪ Continuing the multiple sweep process until the entire work area is cleared.
	• *Downed woody debris salvage and restoration including:*
	  ○ Moving all downed woody debris from the impact area to the edge of the impact area just outside of the E&S measures as part of the clearing operation.
	  ○ Restoring downed woody debris, if appropriate, to the impact area following construction and topsoil restoration.		

10.	Create/restore 1.53 acres of wetland northwest of American Legion Bridge (Site ID CHOH-13) per the Wetland Statement of Findings.	M	Construction
11.	Install new white legend and border on brown background guide signs along I-495 for the George Washington Memorial Parkway exit.	M	Construction
12.	Shift bridge piers north of Lock 13 to the maximum extent possible while maintaining adequate vertical clearance of 12 feet, 6 inches between towpath and bottom of bridge steel to accommodate NPS equipment. Design new ALB to capture all drainage outfall using downspouts. The downspouts will be located so the water does not drop onto areas with frequent pedestrian use.	C	Final Design
13.	Complete a pre-construction condition assessment of locks, masonry walls, towpath, and canal prism throughout entire LOD and develop and implement a plan for repairs identified during condition assessment subject to NPS approval.	M	Final Design

ID No.	Mitigation and Commitments	Mitigation (M) or Commitment (C)	Timeframe
14.	Develop Interpretive product on archeological sites; Create web-based Story Map, waysides, and/or brochures.	M	Final Design & Construction
15.	Complete a pre-construction condition assessment of Potomac Heritage Trail within the LOD and develop and implement a plan to restore and improve the trail within the LOD, in consultation and agreement with NPS.	M	Final Design
16.	Prepare Visitor and Ecological Impact Study.	C	Completed
17.	Acquire James Audia property (two parcels totaling 1.4 acres) as replacement parkland for impacts to George Washington Memorial Parkway. If unavailable, acquire or convey property for replacement parkland of similar size and/or function in coordination with NPS.	M	Final Design
18.	Convey a portion of the MDOT SHA owned former Ridenour property (38.7 acres) to NPS as replacement parkland for impacts to Chesapeake and Ohio Canal National Historical Park and Clara Barton Parkway.	M	Final Design
19.	Provide monetary compensation up to $60,000 to NPS to update and refine the George Washington Memorial Parkway Climate Action Plan.	M	Final Design & Construction
20.	The Preferred Alternative will result in temporary closure of the Potomac Heritage National Scenic Trail within the LOD during construction. A detour route, if determined to be necessary, will continue to be developed by MDOT SHA and the Developer in coordination with NPS, Fairfax County, and VDOT. The segment of the trail within the LOD would be restored on a new alignment after construction is completed.	M	Final Design, Construction & Post-construction
21.	Evaluate drainage and sight distance considerations at the intersection of the shared use path and Chesapeake and Ohio Canal towpath during final design in coordination with NPS, within the LOD.	C	Final Design
22.	Design and construct, in coordination with NPS and the Washington Biologists' Field Club, slope armoring along the upstream side of Plummers Island within the LOD to mitigate for future slope erosion as a result of tree clearing with the LOD. The slope armoring could include, but is not limited to, a rip-rap slope, live staking, and brush layering or any combination of armoring that will provide a blended natural aesthetic with the topography and historic nature of the island.	C	Final Design & Construction
23.	Develop and evaluate additional options for the American Legion Bridge during final design that would further minimize or avoid physical impact to Plummers Island, in consultation with the National Park Service.	C	Final Design

ID No.	Mitigation and Commitments	Mitigation (M) or Commitment (C)	Timeframe
MARYLAND-NATIONAL CAPITAL PARK & PLANNING COMMISSION			
General			
24.	Acquire the 24.14-acre Bardon, Inc. property (Acct. no. 00402385) and convey to M-NCPPC. If unavailable, acquire or convey property as replacement parkland of similar size and/or function in coordination with M-NCPPC.	M	Final Design
25.	Acquire the 0.57-acre Bardon, Inc. property (Acct. no. 02620882) and convey to M-NCPPC. If unavailable, acquire or convey property as replacement parkland of similar size and/or function in coordination with M-NCPPC.	M	Final Design
26.	Evaluate the ability to re-convey unused property, previously owned by M-NCPPC, back to that agency post construction.	C	Post-construction
27.	Convey the MDOT SHA owned 3.15-acre right-of-way located at MD 97 and 16th Street.	M	Final Design
28.	Convey two MDOT SHA owned 15.35-acre parcels (Acct. no. 161300980570 and 161300980626) located between Northwood High School and Northwest Stream Valley Park.	M	Final Design
Cabin John Stream Valley Park Unit 2			
29.	Plan, design, and construct improvements to formalize the Cabin John Trail trailhead parking area along Seven Locks Road including: • Reconstruct the existing driveway per MD Standard No. 630.02 or applicable County standard. • Pave the existing gravel lot with full depth asphalt. Paved area measures approximately 60’ x 100’. Assume open section lot. • Optimize parking lot design to provide maximum number of spaces, including Americans with Disabilities Act (ADA)-compliant spaces (with signage) per the ADA Guidelines. Stripe new parking spaces. • Provide drainage and stormwater management (SWM) facilities as required to treat impervious area per County requirements. • Install signage prohibiting littering/dumping, replace existing trash can, and remove existing illicitly dumped material. • Relocate existing sign kiosk. Location to be determined in consultation with M-NCPPC. • Construct bicycle repair stand, with tools and pump at Cabin John Trail trailhead, in consultation with M-NCPPC.	M	Final Design & Construction

ID No.	Mitigation and Commitments	Mitigation (M) or Commitment (C)	Timeframe
30.	Stream stabilization (~1,000 linear feet) along Cabin John Creek including: • Remove all concrete structures within stream along both along existing banks and failed pieces in the stream. • Rebuild banks with rock and vegetative stabilization techniques that promote environmental functions. • Replant riparian buffer with native seed, herbaceous plugs, and native shrubs and trees. • Install instream grade control structures (such as rock sill, crossvane, riffles, etc.) to transition stream into, through, and out of the underpass area in a stable and ecologically sound way. • Protect sewer manhole and restore I-495 on-ramp outfall to Cabin John Creek with environmentally sensitive channel techniques.	M	Final Design & Construction
31.	Plan, design, and implement forest and terrestrial vegetation mitigation including: • NNI control for 7 years within 50' buffer of LOD. • Infill plantings, on park property, consisting of shrubs, understory/canopy trees and herbaceous seeding within NNI control areas (50 ft buffer from LOD).	M	Final Design & Construction
32.	Plan and design wildlife passage area under I-495 overpass of Cabin John Creek and Cabin John Parkway by lengthening new bridge structures. This will allow wildlife passage on the west side bank of Cabin John Creek while minimizing wildlife-vehicular conflicts along Cabin John Parkway by constructing wildlife exclusion fencing along the east side of the creek next to the Parkway, in coordination with M-NCPPC.	M	Final Design & Construction
Cabin John Regional Park			
33.	Plan, design, and construct a fiberglass pedestrian bridge over the outfall/tributary to Cabin John Creek at STA 3640+00 for the natural surface connector trail including: • Performing hydraulic study and determining feasibility of new crossing. • Constructing fiberglass bridge per M-NCPPC-provided Fiberglass Bridge specification or per equal to or better alternative approved by M-NCPPC.	M	Final Design & Construction
34.	Plan, design, and construct improvements for pedestrian and cycling access to the Robert C. McDonell campground access road by: • Reconstruction of existing bridge over Old Farm Creek in same location per M-NCPPC-provided specifications for Prefabricated Steel Truss Bridge (Section 401) and Helical Piles (Section 403) (hydraulically in-kind replacement). • Provide temporary crossing for pedestrians and cyclists during bridge reconstruction. • Provide stream stabilization work immediately upstream, underneath, and immediately downstream of the bridge. • Limit time of year of bridge reconstruction to window when campground access is closed.	M	Final Design & Construction

ID No.	Mitigation and Commitments	Mitigation (M) or Commitment (C)	Timeframe
	• Bridge design shall provide for ADA compliance, pedestrian access, and passage of cyclists without dismounting while incorporating a gate to prevent unauthorized access by vehicles.		
35.	Plan, design, and construct improvements to the existing parking area on Tuckerman Lane near the Robert C. McDonell Campground access road including: • Resurface the existing paved lot. (Paved area measures approximately 2500 SF. (25' x 100')). • Optimize parking lot design to provide maximum number of spaces. Stripe new parking spaces. Incorporating ADA parking, as applicable. • Provide additional landscaping in vicinity of lot, in consultation with M-NCPPC.	M	Final Design & Construction
36.	Plan, design, and construct a fiberglass pedestrian bridge over Cabin John Creek to connect the Cabin John Trail to the Kidney Bean Loop Trail, in the vicinity of Goya Drive including: • Constructing fiberglass bridge per provided Fiberglass Bridge specification or per equal to or better alternative approved by M-NCPPC. • Design and construct in-stream grade control and bank protection structures to stabilize stream in the vicinity of the new bridge.	M	Final Design & Construction
37.	Plan, design, and construct improvements for the stabilization of the Gainsborough Road stormwater outfall to Cabin John Creek *(approximately 255 linear feet)* with environmentally sensitive channel techniques. • Include a planting plan to compensate for forest impacts related to this work. • Provide treatment of invasive bamboo surrounding the channel. • Construct pedestrian trail bridge replacement over Gainsborough outfall channel.	M	Final Design & Construction
38.	Plan, design, and implement forest and terrestrial vegetation mitigation including: • Conducting forest stand delineation within 100 ft buffer of LOD and develop a 7-year non-native invasive control management plan within M-NCPPC property. • Implementing a 7-year non-native invasive control management plan within 100 feet of the LOD, on park property and within in the biodiversity area. Specific target areas and species to be determined by M-NCPPC Montgomery Parks. • Infill plantings consisting of shrubs, understory/canopy trees and herbaceous seeding within NNI control areas (100 ft buffer from LOD on park property).	M	Final Design & Construction
Tilden Woods Stream Valley Park, Old Farm Neighborhood Conservation Area, and Cabin John Stream Valley Park Unit 6			
39.	Plan, design, and construct improvements for the stabilization of the Greentree Road stormwater outfall from the pipe to a natural surface trail just south of Cabin John Creek *(approximately 310 linear feet)* with environmentally sensitive channel techniques. Include a planting plan to compensate for forest impacts related to this work.	M	Final Design & Construction

ID No.	Mitigation and Commitments	Mitigation (M) or Commitment (C)	Timeframe
40.	Plan, design, and implement forest and terrestrial vegetation mitigation including: • NNI control for 7 years within 50' buffer of LOD on park property. • Infill plantings consisting of shrubs, understory/canopy trees and herbaceous seeding within NNI control areas (50 ft buffer from LOD) on park property.	M	Final Design & Construction
41.	Plan, design, and construct a single bridge structure with a clear span of Tuckerman Lane (including the associated pedestrian and bicycle facilities) and a clear span over Old Farm Creek (including the restored floodplain and a wildlife passage): • Provide wildlife passage area on northern bank per M-NCPPC specifications • Provide fish passage under Old Farm Creek overpass by restoring the stream to a natural channel and tie into the existing stream restoration immediately upstream • Stream span must maximize floodplain cross-sectional area	M	Final Design & Construction
CITY OF GAITHERSBURG			
42.	Convey the 4.03-acre MDOT SHA-owned, property (Acct. no. 09-02213932) to City of Gaithersburg.	M	Final Design
CITY OF ROCKVILLE			
43.	Convey the 1.25-acre MDOT SHA-owned Millennium Garden Park (former Vernie Smith properties (Acct. nos. 16-0400205281 and 16-0400205270)) to City of Rockville.	M	Final Design
44.	Acquire the 1.32-acre Betty B. Casey Property (on Fleet Street) (Acct. no 160400144125) and convey to the City of Rockville	M	Final Design
45.	Acquire the 0.42-acre Lodging Partners LLC Property (41 Maryland Avenue) (Acct. no. 160403198603) and convey to the City of Rockville	M	Final Design
46.	Acquire the 4.23-acre Cynthia Robertson Property (Potomac Woods) (Acct. no. 160401523951) and convey to the City of Rockville	M	Final Design
47.	Continue to consult on context sensitive solutions, during the design phase, to the four existing parks (Bullards Park and Rose Hill Stream valley Park, Rockmead, Woottons Mill, and Rockville Senior Center). The consultation will be constrained to context sensitive solutions that are both compensatory to the impacts to Section 4(f) resources and a justifiable expenditure of public funds. For example, plantings and context sensitive stormwater management facility design.	C	Final Design
48.	Design the improvements along Gude Drive to accommodate the proposed new entrance to the Rockville Senior Center at Piccard Drive proposed by the City of Rockville. Coordination will occur with the City of Rockville in final design to ensure compatibility with the City's planned improvements.	C	Final Design

ID No.	Mitigation and Commitments	Mitigation (M) or Commitment (C)	Timeframe
CULTURAL RESOURCES (SECTION 106)			
49.	Provide monetary compensation not to exceed $250,000 for a Cultural Landscape Report for Clara Barton Parkway (historical narrative; updated existing conditions, analysis, and evaluation; and treatment guidelines for management of character defining features).	M	Final Design
50.	Prepare National Register Nomination for Dead Run Ridges Archaeological District in coordination with NPS and submit to Virginia SHPO.	M	Final Design
51.	Complete Phase III Archaeological Data Recovery at 44FX0374, 44FX0379 and 44FX0389 (George Washington Memorial Parkway) and develop associated public interpretation materials.	M	Final Design
52.	Complete Phase III Archaeological Data Recovery at 18MO749 and 18MO751 (Chesapeake and Ohio Canal) and develop associated public interpretation materials.	M	Final Design
53.	Prepare a draft National Register Nomination for the Washington Biologists' Field Club on Plummers Island to NPS and WBFC for their review and comment prior to formal submission of the nomination to MD SHPO.	M	Final Design
54.	Place temporary fencing along the LOD within Plummers Island to delimit construction activities.	C	Construction
55.	Fund or implement a photographic survey documenting conditions before, during and post-construction on Plummers Island within the area of potential effects (APE) boundary and provide the results to Washington Biologists' Field Club and NPS.	M	Post-construction
56.	Fund or develop Graphic Information System maps to document known current and historical study locations and key natural resource features within the APE on Plummers Island to assist in documenting change over time and provide these files to Washington Biologists' Field Club and NPS.	M	Final Design
57.	Procure a sub-meter accurate GPS unit for Washington Biologists' Field Club to use in long-term monitoring of plant locations, collection sites, and other historical research features on Plummers Island.	M	Final Design
58.	Provide for digitization and cataloging of historical records, subject to any availability or rights restrictions, related to Plummers Island and the Washington Biologists' Field Club that are housed at the Smithsonian Institution that are not currently available in electronic format, and provide the files to Washington Biologists' Field Club and NPS.	M	Final Design
59.	Provide Washington Biologists' Field Club historical content related to Plummers Island as part of the above digitization effort to incorporate into their website.	M	Final Design
60.	Complete additional archaeological investigations of LOD surrounding Morningstar Tabernacle No. 88 Moses Hall and Cemetery and monitor for potential archaeological findings during construction.	C	Construction

ID No.	Mitigation and Commitments	Mitigation (M) or Commitment (C)	Timeframe
61.	Design context-sensitive treatment of noise barrier facing the Morningstar Tabernacle No. 88 Moses Hall and Cemetery which may include decorative elements appropriate to the historic property and/or such elements as memorial plaques or signage. MDOT SHA will provide consulting parties and MD SHPO comment opportunity for project elements, specifically noise barrier, within the APE adjacent to the cemetery at a draft level of design and a second opportunity prior to finalization of design; for each review there will be a minimum 30-day review period.	C	Final Design & Construction
62.	Complete additional archaeological investigations of the LOD in the general vicinity of the Montgomery County Poor Farm adjacent to I-270 near Wootton Parkway.	C	Final Design
63.	Improve the stormwater drainage on the First Agape African Methodist Episcopal (AME) Zion Church (Gibson Grove Church) by routing drainage into a new underground culvert to be installed as part of the project. MDOT SHA will ensure a parking lot identified as part of the church's restoration plan, is constructed on church property following installation of the culvert drainage design. MDOT SHA will work with the church on schedule and timing of the culvert and parking lot work to be compatible with ongoing church restoration efforts to the maximum extent practicable.	M	Final Design
NOISE[1]			
64.	Extended noise barrier (Barrier System VA-1/2) from STA 86+29 to STA 98+85 LT.	M	Final Design & Construction
65.	Construct new noise barrier (Barrier System MD-1) from STA 131+13 to STA 145+18 LT.	M	Final Design & Construction
66.	Construct new noise barrier (Barrier System MD-2) from STA 130+62 to STA 198+51 RT.	M	Final Design & Construction
67.	Relocate and extend existing noise barrier (Barrier System MD-3) from STA 158+10 to STA 211+97 LT.	M	Final Design & Construction
68.	Construct new noise barrier (Barrier System MD-4) from STA 198+13 to STA 221+68 RT.	M	Final Design & Construction
69.	Relocate and extend existing noise barrier (Barrier System MD-5) from STA 227+21 to STA 293+76 LT.	M	Final Design & Construction
70.	Relocate and extend existing noise barrier (Barrier System MD-6/6A/7) from STA 221+56to STA 293+24 RT.	M	Final Design & Construction
71.	Relocate existing noise barrier (Barrier System MD-8) from STA 294+12 to STA 319+61 RT.	M	Final Design & Construction
72.	Relocate existing noise barrier (Barrier System MD-10) from STA 337+75 to STA 355+06 LT.	M	Final Design & Construction

[1] A preliminary determination of the location and horizontal and vertical alignment for the noise barriers was made based on the latest design concept (FEIS Table 5-20); however, final determination of noise barrier feasibility, reasonableness, dimensions and locations will be made in final design.

ID No.	Mitigation and Commitments	Mitigation (M) or Commitment (C)	Timeframe
73.	Relocate and extend existing noise barrier (Barrier System MD-11) from STA 320+42 to STA 354+78 RT.	M	Final Design & Construction
74.	Partially relocate and extend existing noise barrier (Barrier System 270-05) from STA 3432+67 to STA 3490+25 LT.	M	Final Design & Construction
75.	Construct new noise barrier (Barrier System 270-06) from STA 3493+65 to STA 3538+71 LT.	M	Final Design & Construction
76.	Relocate existing noise barrier (Barrier System 270-07A) from STA 3685+15 to STA 4710+91 LT.	M	Final Design & Construction
77.	Partially relocate existing noise barrier (Barrier System 270-07B) from STA 4710+91 to STA 4748+02 LT.	M	Final Design & Construction
78.	Construct new noise barrier (Barrier System 270-08) from STA 4750+11 to STA 4804+26 LT.	M	Final Design & Construction
79.	Extended existing noise barrier (Barrier System 270-09) from STA 4751+67 to STA 4801+90 RT.	M	Final Design & Construction
80.	Extended existing noise barrier (Barrier System 270-11 (270 west spur portion)) from STA 3743+50 to STA 3778+34 LT.	M	Final Design & Construction
81.	Partially relocate and extend existing noise barrier (Barrier System 270-12) from STA 3749+46 RT to STA 294+47 LT.	M	Final Design & Construction
82.	Partially relocate and extend existing noise barrier (Barrier System 270-14) from STA 3492+05 to STA 3540+07 RT.	M	Final Design & Construction
83.	Relocate and extend existing noise barrier (Barrier System 270-15) from STA 3624+55 to STA 3684+02 LT.	M	Final Design & Construction
84.	Construct new noise barrier (Barrier System 270-18) from STA 3722+12 to STA 3727+46 RT.	M	Final Design & Construction
85.	These noise abatement commitments will not be removed from the Project as a result of value engineering and/or similar studies/activities. Any changes to these commitments will be subject to re-evaluation under NEPA and must be approved by MDOT SHA and FHWA.	C	Final Design
AQUATIC AND TERRESTRIAL MITIGATION COMMITMENTS			
86.	Implement additional water quality protection measures to prevent soil erosion and subsequent sediment influx into nearby waterways. Construction contractors are designated as co-permittees on the National Pollutant Discharge Elimination System permit to ensure compliance. This permit is issued under Maryland's General Permit for construction activities and is implemented with a regular inspection program for construction site sediment control devices that includes penalties for inadequate maintenance. To ensure compliance, onsite evaluations by a certified erosion and sediment control (E&S) inspector would occur throughout the duration of construction.	C	Construction

ID No.	Mitigation and Commitments	Mitigation (M) or Commitment (C)	Timeframe
87.	Potential water quality impacts from construction would be minimized through strict adherence to mandated E&S and SWM requirements. In particularly sensitive areas, other impact minimization activities may be considered and could include: more specialized SWM options; redundant E&S measures; monitoring of aquatic biota above and below sensitive stream crossings before and after construction to quantify any inadvertent impacts that occur at the crossing; fish relocation from dewatered work areas during construction to reduce fish mortality; and use of a qualified environmental monitor on-site to enhance E&S compliance.	C	Construction
88.	Continue coordination with MDNR and the Scenic and Wild River Advisory Board in final design.	C	Final Design
89.	Account for post-construction SWM and compliance with total maximum daily loads in the stormwater design and water quality monitoring to comply with required permits.	C	Post-Construction
90.	Develop environmental site design SWM features to maintain current infiltration rates to the greatest extent practicable.	C	Final Design
91.	Design all hydraulic structures to accommodate flood flows without causing substantial impact.	C	Final Design
92.	Design culverts and bridges to limit the increase of the regulatory flood elevation to protect structures from flooding risks and use standard hydraulic design techniques for all waterway openings where feasible to maintain current flow regimes and limit adjacent flood risk (COMAR 26.17.04).	C	Final Design
93.	Remove the existing peregrine falcon nest box on the ALB just prior to the nesting season when construction is scheduled to begin to minimize potential impacts to the currently nesting peregrine falcons as recommended by the US Fish and Wildlife Service (USFWS). Disruption for one or more nesting seasons due to long-term construction activities is anticipated. Once construction activities are nearly complete near the former nest site, USFWS recommends that the nest box be reinstalled. MDOT SHA will follow the USFWS recommended protection measures for the peregrine falcon nesting on the ALB.	C	Construction
94.	Adopt and implement construction best management practices (BMPs) to minimize incidental take of migratory birds. MDOT SHA commits to consulting with the USFWS immediately prior to construction to determine the presence/absence of bald eagle nests in the vicinity of the Preferred Alternative LOD.	C	Construction
95.	Use of bridges and depressed culverts wherever possible to maintain natural stream substrate in areas where new or replaced culverts are necessary. Channel morphology would be evaluated, and culvert extensions designed to maintain aquatic life passage by avoiding downstream scour and channel degradation. Preliminary designs do not include culvert replacements but do include	C	Final Design

ID No.	Mitigation and Commitments	Mitigation (M) or Commitment (C)	Timeframe
	augmentations resulting from installing new pipes adjacent to existing culverts to provide additional area for flow.		
96.	Comply with the stream closure period for the designated use class of the stream for all in-stream work in Maryland, including that for culvert extensions, and any potential waiver requests would require agency approval(s). In-stream work is prohibited in Use I streams from March 1 through June 15.	C	Construction
97.	Conduct a mussel survey in the Potomac River surrounding the ALB, 10-meters upstream and 25-meters downstream of the temporary project LOD, for all Maryland State-listed mussel species that are short-term and long-term brooders prior to construction and relocation of Maryland State-listed and rare species, if necessary.	C	Final Design
98.	Design causeways and trestles proposed adjacent to the existing ALB to 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.	C	Final Design
99.	Maintain access to Plummers Island for construction purposes by bridging over the oxbow of the Potomac River without placing any materials or fill within the stream channel.	C	Construction
100.	Voluntarily commit to a time of year restriction for tree clearing from May 1 through July 31 of any year within a 3-mile buffer around each of the three positive Northern Long-Eared Bat (NLEB) detection locations within the study corridors to go above and beyond what is required to protect this bat species. Note, the Study was determined to have “no effect” on the Indiana Bat and “not likely to adversely affect” the NLEB.	C	Construction
101.	Commit to a time of year restriction for tree clearing within the Virginia portion of the Preferred Alternative LOD from April 1 – October 31 of any year to avoid impact to tri-colored bat roost trees during roosting season.	C	Construction
102.	Continue coordinating with NPS and MDNR to determine a mitigation plan for RTE plant species prior to construction. This will include the use of matting along access roads to minimize soil compaction during construction, replanting of appropriate RTE plants within temporarily disturbed areas following construction, and monitoring of replanted RTE plant populations to ensure successful reestablishment.	M	Construction & Post-Construction

ID No.	Mitigation and Commitments	Mitigation (M) or Commitment (C)	Timeframe
103.	Commit to avoidance and minimization measures for the wood turtle as recommended by the Virginia Department of Wildlife Resources (VDWR): • Prior to the commencement of work all contractors associated with work at this site must be made aware of the possibility of encountering wood turtles on site and become familiar with their appearance, status and life history. • 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 VDWR. Any relocations should be reported to VDWR, and the wood turtle observation form should be completed and faxed to VDWR. • Minimize potential wildlife entanglements, resulting from use of synthetic/plastic E&S matting, by use matting made from natural/organic materials such as coir fiber, jute, and/or burlap.	C	Construction
104.	Continue coordination with National Marine Fisheries Service to determine appropriate mitigation for potential impacts to anadromous fish during construction.	C	Final Design
105.	Maintain existing or improved aquatic life passage in the culverts conveying Watts Branch and Old Farm Creek under I-270.	C	Final Design & Construction
106.	Consult 23 CFR § 650.115(a) when determining design standards for flood control measures.	C	Final Design
107.	Comply with the requirement set forth in 23 CFR § 650.111 to complete location hydraulic studies for floodplain encroachment areas during later stages of design.	C	Final Design
108.	Avoid and minimize impact to aquatic species by: • Maintaining existing or improving aquatic life passage in the primary (not overflow) culverts that are being replaced or extended and continuing to coordinate with MDNR, USFWS, the National Marine Fisheries Service (NMFS), and the Maryland Department of the Environment (MDE) regarding aquatic life passage. • Designing completely replaced culverts designated as “major stream crossing” to meet the passage criteria described by USFWS (USFWS, 2019b). • Evaluating areas where culverts are being extended or augmented for the feasibility of a natural or nature-like stream bottom, in design. • Implementing BMPs during the replacement of the ALB crossing the Potomac River such as extensive in-stream work and using coffer dams and temporary construction trestles to avoid and minimize impacts to the river and its aquatic biota.	C	Final Design & Construction

ID No.	Mitigation and Commitments	Mitigation (M) or Commitment (C)	Timeframe
109.	Consult with NMFS and MDNR when construction plans are developed for roadway crossings of the Potomac River and Cabin John Creek, the two known anadromous fish use areas, to ensure that impacts due to construction and permanent fill are minimized to the extent practicable.	C	Construction
110.	Comply with COMAR 26.17.04.11 by ensuring culvert improvements and new culvert design will not increase flood risk to adjacent properties.	C	Final Design
111.	Submit final plans to MDE for approval of structural evaluations, fill volumes, proposed grading evaluations, structural flood-proofing, and flood protection measures in compliance with FEMA requirements, US Department of Transportation Order 5650.2, Floodplain Management and Protection, and Executive Order 11988.	C	Final Design
112.	Employ BMPs within the 100-year floodplain as required by MDE permits.	C	Final Design & Construction
113.	Ensure water quantity treatment be met onsite or through waiver requests in specific areas. Every effort to meet water quality treatment requirements onsite, where practicable will be made. Where not practicable, water quality requirements would be met offsite in accordance with MDE regulations.	C	Final Design
ENVIRONMENTAL JUSTICE/EQUITY			
114.	MDOT SHA and the Developer will continue coordination with local and regional advisory groups to determine additional methods for engaging with underserved communities. This will be an ongoing effort that continues post-NEPA, through final design and construction. Local and regional advisory groups may include but are not limited to the Montgomery County Advisory Groups, City of Rockville and City of Gaithersburg.	C	Final Design & Construction
115.	Construct a new sidewalk along the west side of Seven Locks Road under I-495 to re-establish a connection between Morningstar Tabernacle No. 88 Moses Hall and Cemetery and First Agape AME Zion Church (Gibson Grove Church) in the historically African American community of Gibson Grove, see commitment ID No. 125.	C	Construction
116.	Convey a portion of existing MDOT SHA owned right-of-way located adjacent to the boundary of Morningstar Tabernacle No. 88 Moses Hall and Cemetery with an identified potential for unmarked graves to the Trustees of the Morningstar Tabernacle No. 88 Moses Hall and Cemetery.	C	Post-Construction
117.	Continue coordination with the City of Rockville, City of Gaithersburg, and Montgomery County to advance the identified priorities that were noted during EJ engagement efforts including more or improved sidewalks and bicycle facilities; better lighting on streets and sidewalks; and traffic calming	C	Final Design & Construction

ID No.	Mitigation and Commitments	Mitigation (M) or Commitment (C)	Timeframe
	measures to make streets safer. Through this continued coordination, MDOT SHA with the Developer will: Identify locations where safer pedestrian crossings on major state roadways are needed. • Identify locations where additional pedestrian improvements including adding or upgrading sidewalk, restriping for bicycle lanes, adding or upgrading ADA ramps are needed. • Identify locations along state roads with existing pedestrian facilities where more or better lighting is needed.		
TOLLING			
118.	The toll rate ranges will only apply to the high-occupancy toll (HOT) lanes; the existing free general-purpose lanes will not be tolled. In addition, the proposal will include discounts for qualifying vehicles—including HOV 3+ (including carpools and vanpools), buses and motorcycles.	C	Operations
TRANSIT			
119.	Enhance transit mobility and connectivity within the Preferred Alternative including the following elements: • Free bus transit usage of the HOT managed lanes 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 activity and economic centers. • Direct and indirect connections from the proposed HOT managed lanes to existing transit stations and planned Transit Oriented Development at the Shady Grove Metro (I-370), Twinbrook Metro and Rockville Metro (Wootton Parkway), and Westfield Montgomery Mall Transit Center (Westlake Terrace).	C	Operations
120.	Construct new bus bays at Washington Metropolitan Area Transit Authority's Shady Grove Metrorail Station.	C	Final Design and Construction
121.	Increase parking capacity at the Westfield Montgomery Mall Transit Center.	C	Final Design and Construction
122.	Design and construct the ALB such that a future capital improvement project will have one or more feasible options to achieve the full design and implementation of a transit line across the ALB. These options will be enabled by designing the northbound and southbound structures to not preclude a possible future transit line including the addition of foundation and substructure elements.	C	Final Design and Construction
PEDESTRIAN AND BICYCLE FACILITIES			

ID No.	Mitigation and Commitments	Mitigation (M) or Commitment (C)	Timeframe
123.	Replace in kind or upgrade to meet the current master plan recommended facilities for existing pedestrian and bicycle facilities impacted by the Preferred Alternative, through coordination with the local agencies having jurisdiction over and/or maintenance responsibility for these facilities.	C	Final Design & Construction
124.	Replace, upgrade, or provide new pedestrian/bicycle facilities consistent with the current master plan, where adjacent connections on either side of the bridge currently exist for facilities along crossroads where the crossroad bridge would be reconstructed. Where the I-495 and I-270 mainline or ramps cross over a roadway or pedestrian/bicycle facility and the bridge would be replaced, the mainline and ramp bridges would be lengthened to accommodate the footprint for the master plan facility under the structure.	C	Final Design & Construction
125.	Reconstruct the ALB with a new pedestrian and bicycle shared use path to provide multimodal connectivity across the Potomac River, to be located along the east side of the ALB. A direct connection of the shared use path from the ALB to the Chesapeake and Ohio Canal towpath has been incorporated into the preliminary design and is accounted for in the Preferred Alternative LOD and impact analyses. MDOT SHA and the Developer will continue to coordinate with NPS to review the condition of the existing connection(s) to the east and west of the American Legion Bridge between the Chesapeake and Ohio Canal towpath and the MacArthur Boulevard sidepath outside of the study area to ensure the existing connection(s) can handle any increased usage from the new shared use path connection to the Chesapeake and Ohio Canal towpath.	C	Final Design & Construction
126.	Widen the existing variable-width sidepath along the east side of Seven Locks Road under I-495 (Cabin John Trail), consistent with the county master plan.	C	Final Design & Construction
127.	Construct a new sidewalk along the west side of Seven Locks Road under I-495 to reestablish the historic connection between First Agape AME Zion Church (Gibson Grove Church) and Morningstar Tabernacle No. 88 Moses Hall and Cemetery.	C	Final Design & Construction
	AIR QUALITY		
128.	Implement a Diesel Emissions Reduction Program that exceeds pertinent Federal and state regulations to minimize air pollution including MSAT emissions during construction consisting of initiatives such as: • Ensuring diesel powered construction equipment to meet minimum emissions reduction requirements by engine manufacturer, or by being properly retrofitted with emissions control devices, or that clean fuels be used if necessary to meet the emissions reduction requirements. • Retrofitting equipment that is used to be on the EPA Verified Retrofit Technology List.	C	Construction

ID No.	Mitigation and Commitments	Mitigation (M) or Commitment (C)	Timeframe
	• Requiring the use of ultra-low sulfur diesel fuel in construction equipment. • Implementing a Driver Training program to provide incremental savings by more efficiently operating mobile and stationary machinery.		
129.	Implement a Truck Staging Area Plan for all construction vehicles waiting to load or unload material where emissions will have the least impact on sensitive areas and the public. These include but not limited to hospitals, schools, residences, motels, hotels, daycare facilities, elderly housing and convalescent facilities. All sources of emissions shall be located as far away as possible from fresh air intakes, air conditioners and windows.	C	Construction
130.	Implement a Greenhouse Gas Reduction Program to reduce emissions during construction including initiatives such as: • Use of alternative fuels and vehicle hybridization of construction vehicles, to the maximum extent practicable. • Maintaining existing vegetation, where possible. • Use of recycled and reclaimed materials, including use of recycled asphalt, use of industrial byproducts as cement substitutes, and recycled concrete, to the maximum extent practicable.	C	Construction
131.	Implement an Anti-Idling Policy to avoid unnecessary idling of construction equipment in order to reduce engine emissions and to provide air quality benefits to those who live and work in or adjacent to the construction sites. The plan may include, but is not limited to, limiting idling of all mobile construction equipment, including delivery trucks, to three minutes, except under certain conditions.	C	Construction
132.	Manage fugitive dust emissions during construction, by 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	M	Construction

ID No.	Mitigation and Commitments	Mitigation (M) or Commitment (C)	Timeframe
	• Temporarily stabilize disturbed areas per MDE erosion and sediment standards and approved plans		
VISUAL			
133.	Install new white legend and border on brown background guide signs along I-495 for the George Washington Memorial Parkways exit.	M	Construction
134.	Establish 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 Developer will be responsible for establishing the aesthetic and landscaping guidelines.	C	Final Design

Additional commitments have been made by the Developer (Accelerate Maryland Partners) or MDOT SHA if the project is delivered as a P3 with a Section Developer controlled by AMP using private funding. These commitments are captured separately throughout the FEIS including in **Table 2** below. These commitments are included to disclose the efforts the Developer and MDOT SHA have made to advance the project in an environmentally responsible manner taking into account input received from the public, stakeholders and local governments related to transit, community enhancements, water quality, and equity. These commitments are not mitigation for direct environmental impacts, are in addition to the NEPA-related commitments captured in **Table 1** and are tied to project delivery under a P3 contractual agreement.

Commitments listed in **Table 2** are the responsibility of MDOT SHA and the P3 Developer to implement as part of the Phase 1 South Section P3 Agreement, which will be the contractual agreement outlining the terms and conditions for the final design, construction, financing, operations, and maintenance and/or Memoranda of Understanding with applicable third parties such as local governments. MDOT SHA will provide quarterly status update reports to FHWA following financial close of a Section P3 Agreement with the Section Developer controlled by AMP.

Table 2: P3 Developer Agreement Commitments

ID No.	Commitments	Timeframe
1.	Continue to further avoid and minimize impacts to the greatest extent practicable after the NEPA Process throughout the remainder of the design process. Utilize the monetary incentives that have been added to the Developer's Technical Provisions to encourage further avoidance and minimization of impacts to wetlands, waterways, forest, and parkland.	Final Design
2.	Develop and implement an Environmental Management Plan in coordination with MDOT SHA.	Final Design
3.	Develop and implement an Environmental Compliance Plan in coordination with MDOT SHA.	Final Design
4.	Develop and implement a Sustainability Plan for the project to support community, environmental, and sustainability goals. The Sustainability Plan will include actions related to the following: • The quality of life surrounding the infrastructure asset; • Stakeholder and community engagement; • Natural resource management; • Ecosystems and biodiversity health; • Climate resilience and carbon emissions.	Final Design
5.	Make good faith efforts to achieve a Platinum Award rating or, at minimum, a Gold Award rating as recognized by the Envision™ Sustainable Infrastructure Rating System of the Institute for Sustainable Infrastructure.	Final Design
6.	Exceed the stormwater quality protection enhancements for the project by providing additional stormwater quality mitigation beyond the regulatory requirements.	Final Design
7.	Construct and equip the Metropolitan Grove Operations and Maintenance Facility including the necessary bus fleet.	Final Design through Operations
8.	After financial close of the Phase 1 South Section P3 Agreement, fund not less than $60 million from the Development Rights Fee for design and permitting of high priority transit investments in Montgomery County.	Final Design through Operations
9.	Provide not less than $300 million of additional transit investment funding inclusive of the phase developer's proposed transit investment to implement high priority transit projects in Montgomery County over the operating term of Phase 1 South.	Final Design through Operations
10.	Work with Montgomery, Frederick, & Prince George's Counties to expand transit fare subsidies for eligible low-income riders.	Final Design
11.	Fund priority bicycle and pedestrian connections to remove barriers and provide connectivity for bicyclists and pedestrians as part of the commitment to support Vision Zero, and beyond commitments identified in **Table 1** by: • Defining a neighborhood walk and cycle connectivity zone to enhance multi-model connectivity. • Facilitating the development of a facility improvement program for the installation or replacement of sidewalks, crossings, or signal modifications and formalizing trail development that has pedestrian demand, then rank projects according to safety significance (considering predictive safety analyses completed by M-NCPPC), readiness, and landowner consensus, as part of its commitment to support Vision Zero. Determine the exact investments as part of the Section P3 Agreement for Phase 1 South.	Construction through Operations