DEPARTMENT OF THE ARMY PERMIT

Application Name and Permit Number: CENAB-OP-RMS(MD SHA & MTA/INTERCOUNTY CONNECTOR)05-60011-1

Issuing Office:

U.S. Army Engineer District, Baltimore
Corps of Engineers
P.O. Box 1715
Baltimore, MD 21203

NOTE: The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers having jurisdiction over the permitted activity or the appropriate official of that office acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below.

Project Description: To discharge fill that will permanently impact 43,705 linear feet of jurisdictional perennial, intermittent, and ephemeral streams, 44.5 acres of jurisdictional wetlands, and 1.8 acres of jurisdictional ponds; and to discharge fill that will temporarily impact 671 linear feet of jurisdictional streams and 3.01 acres of jurisdictional wetlands for the purpose of constructing the Intercounty Connector. The Selected Alternative consists of Corridor 1 with Rock Creek Option C with Olde Mill Run Grade Separation, Northwest Branch Option A with Layhill Road interchange, and a terminus at US Route 1. The project extends approximately 18 miles from existing I-370 near the Shady Grove Metro Station to US Route 1, and includes approximately two miles of widening on I-95. The project consists of a controlled-access highway with electronic toll collection. Interchanges are to be constructed at MD 355, Shady Grove Metro Access/Shady Grove Road, MD 97, MD 182, MD 650, US 29/Briggs Chaney Road, I-95, and Virginia Manor Road. An at-grade, signalized intersection is to be constructed at US Route 1. There will be three lanes of traffic in each direction between I-370 and I-95. East of I-95, there will be two lanes in each direction. The median width will vary from 26 to 50 feet, with the majority of the corridor having a 36-foot median width. A 50-foot median width will be used in the North Branch Rock Creek and Paint Branch watersheds to provide sufficient room for construction of filtration structures in the median. A 26-foot median is being used through the Winters Run community to minimize impacts to residences along both sides of the highway. In addition, 7.5 miles of hiker/biker path will be constructed along portions of the highway.

All work is to be completed in accordance with the attached plan(s).

Project Location: In the drainage basins of Muddy Branch, Rock Creek, North Branch Rock Creek, Northwest Branch, Paint Branch, Little Paint Branch, Bear Branch, and Indian Creek, in Montgomery and Prince George's Counties, MD.

Permit Conditions:

General Conditions:

1. The time limit for completing the work authorized ends on December 31, 2014. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.

2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.

3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.

Your signature below, as permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.

(PERMITTEE) 13 June 06 (DATE)

(PERMITTEE) 06/13/06 (DATE)

This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.

Janet M. Vine
Chief, Regulatory Branch

June 13, 2006
Date

When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and the liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

(TRANSFEREE) (DATE)

SPECIAL CONDITIONS

Conditions Pertaining to Avoidance and Minimization

1. To the extent practicable, the Permittee shall further avoid and minimize impacts to jurisdictional wetlands and streams in the development of final design plans and during construction. This permit conveys authorization to impact wetlands and streams within the limit of disturbance as shown on the attached permit drawings, titled "ICC Corridor 1" dated 1 May 2006, by SHA, with the caveat that temporary and permanent stream impacts are limited to no more than 25 feet from the ends of culverts and rip-rapped pipe outlets. The limit of disturbance includes the total project area extending to 25 feet beyond the grading limits, and 25 feet beyond each parapet of any proposed bridge. This area could be disturbed for ditches, silt fence, construction equipment access roads, haul roads, noise walls, bike paths, etc. Because this area will be extensively altered, it has been included in the quantification of permanent impacts, and requires mitigation. Jurisdictional wetlands and streams within the right-of-way bump-outs designated on the attached permit drawings for erosion and sediment control and/or stormwater management facilities are also authorized herein as permanent impacts. Jurisdictional resources beneath bridge decks, that will be needed for an equipment access road, are considered to be impacted and have been quantified in the permit as a temporary wetland/stream impact that is to be restored in place rather than offset through mitigation. The mitigation package provides sufficient compensatory mitigation to offset all the impacts that have been characterized as permanent. The Permittee may submit documentation showing restoration of impacted areas within the limit of disturbance and, if approved, may deduct those amounts from the permitted impacts that have to be mitigated. The Permittee may also submit documentation showing impact areas that have been successfully avoided or reduced and, if approved, may deduct those amounts from the permitted impacts that have to be mitigated. Should the need for authorization of any additional jurisdictional wetland and stream impacts be identified as the design and construction progresses, the Permittee shall request Corps authorization for the additional impacts. Any request for authorization of additional jurisdictional wetland and stream impacts not authorized herein, shall be returned incomplete unless accompanied by documentation to demonstrate that there is no practicable alternative.

2. Culverts will be designed to accommodate deer passage at the following locations:

Station 152 (tributary to Mill Creek),
Station 174 (tributary to Mill Creek),
Station 277 (the 42-inch gas lines crossed by Rock Creek Option C), and
Station 312 (tributary to North Branch Rock Creek).

All culverts lengths designed for deer passage will be as short as possible, but in no case shall they exceed 280 feet in length (high headwalls or other measures will be needed to satisfy this specification at some locations). Because these culverts are being constructed specifically to accommodate deer passage, the interior dimensions will be 12-foot by 12-foot or larger. Upon completion, there shall be a minimum of 6 inches of earth on the culvert floor. If located in a

floodplain, they shall be set at an elevation that will result in no more than a two-foot thickness of natural sediment deposition to allow for a minimum clearance of 10 feet. There shall be no riprap in either the bottom of the culvert or on the approaches to the culvert that would make the culvert inaccessible by deer, unless the riprap is buried. The deer cells will not be used to convey the base flow of the stream. The deer can be conveyed through the dry cell of a two-cell culvert, provided it meets the above specifications. If other than a rectangular shape is used, the cross section of the alternative-shaped culvert shall be large enough that a 12-foot by 12-foot square could fit inside it.

Chain-link wildlife exclusion fencing shall be used to funnel deer and other wildlife to the wildlife crossings. The top of the chain-link fencing shall be a minimum of 8 feet above the ground elevation, and the fence mesh shall penetrate the ground to a depth of one foot. A three-foot high fence, constructed of 0.25" x 0.25" square wire mesh hardware cloth material shall be attached to the outside of the chain-link fencing where the fencing is adjacent to forested areas, stream valleys and SWM ponds, and buried to a depth of at least 6 inches, to form an impenetrable barrier to reptiles and amphibians. The wildlife exclusion fencing shall extend along the highway approximately one-half mile in each direction from each wildlife passage culvert or bridge, except where noise barriers or retaining walls are present and sufficient to exclude wildlife from the highway. Interchanges will be fenced to the best extent practicable.

The culvert at Station 174 shall accommodate flood flows, deer passage, and pedestrian passage. High headwalls will be employed at Station 174 to limit the maximum length of the pedestrian culvert to 195 feet. The Permittee will design and construct measures to maintain groundwater seepage at Station 174. The Permittee, through coordination with M-NCPPC, will consider establishing vernal pools in the vicinity.

Culverts at the following locations shall be designed to accommodate small mammal passage through the culverts:

In the I-370 interchange, at all crossings of the tributary of Mill Creek connecting wetland 1AF to wetland 1AG,
Station 301 (tributary to North Branch Rock Creek),
Station 360 (tributary to North Branch Rock Creek),
Station 655 (tributary to Northwest Branch), and
Station 978 (tributary to Indian Creek).

The objective is to have a non-submerged area within the culvert for small mammals to maneuver through the culvert on a natural bottom. This objective could be met by constructing a two-foot wide "shelf" alongside the waterway, which would not be submerged during normal base flow conditions. Alternatively, a second culvert cell, with natural bottom material, could be constructed alongside, or in proximity to, the culvert that carries the primary stream flow. To promote amphibian passage, the substrate inside culverts will be kept moist by natural means.

3. Culverts conveying the stream base flow, and required by MDE to pass aquatic life, will be

depressed per MDE's requirements so that a natural substrate will accumulate in the culvert. The Permittee shall design culverts to address the specific geomorphic characteristics of the stream to avoid downstream scour and channel degradation, and to maintain ecological functions such as aquatic habitat, flood attenuation, sediment transport, and stream channel stability.

4. Bridges will be constructed at the major stream crossings listed below. No bridge piers will be constructed in any stream. The bridges will be constructed to the dimensions discussed below. All references below to a prohibition on the discharge of permanent fill in wetlands and floodplains are not intended to prohibit the construction of bridge piers in wetlands and floodplains. All vertical dimensions referenced below will be permitted to vary by as much as plus or minus two feet without further coordination with the Corps.

a. On Rock Creek Option C, the bridge over Rock Creek shall be constructed such that the profile grade line (PGL) at centerline Station 239+50 is 54 feet above the elevation of the floodplain floor immediately below, and shall be an arch design. The length of the bridge shall be approximately 300 feet.

b. The bridge over North Branch Rock Creek shall be constructed such that the PGL at centerline Station 318+80 is 28 feet above the elevation of the floodplain floor immediately below, shall be approximately 285 feet long, and shall minimize permanent fill being placed on the floor of the 100-year floodplain, or in wetland 1W, as shown on the attached permit drawings.

c. The bridge over the Tributary to North Branch Rock Creek shall be constructed such that the PGL at centerline Station 328+05 is 16 feet above the elevation of the floodplain floor immediately below, and shall be approximately 135 feet long (measured along the highway centerline) or approximately 84 feet measured perpendicularly between the abutment faces. This will require a relocation of the stream beneath the structure. Retaining walls or wing walls will be needed to ensure that the structure and fill are no closer than 20 feet to any streambank, and will be constructed to limit the encroachment of fill material into wetlands 1Z , 1ZA, or 1W as shown on the attached permit drawings. If riprap is required to be placed on the floodplain floor, it shall be buried so as not to impede wildlife passage. An example of what the Corps would find acceptable in this regard can be observed at the bridge on Norbeck Road Extended over Bryant's Nursery Tributary. During design, the need for channel stability measures will be investigated for the portion of the tributary between the ICC and the confluence with North Branch Rock Creek. If channel stability measures are needed, a permit modification will be coordinated with this office.

d. The westernmost bridge over Northwest Branch shall be constructed such that the PGL at centerline Station 532+30 and the PGL at centerline Station 535+00 are 44 feet and 39 feet, respectively, above the elevation of the floodplain floor immediately below. The bridge shall be approximately 575 feet long, and shall result in no permanent fill in wetland 2R, and no permanent fill in the channel of the tributary that enters the floodplain on the west side of the stream, south of the highway.

e. The bridge over Bonifant Road and Northwest Branch shall be constructed such that the PGL at centerline Station 560+00 is 46 feet above the elevation of the floodplain floor immediately below, shall be approximately 885 feet long, and shall result in no permanent fill within 30 feet of the top of the streambank.

f. The easternmost bridge over Northwest Branch shall be constructed such that the PGL at centerline Station 594+00 is 48 feet above the elevation of the floodplain floor immediately below, shall be approximately 1140 feet long, and, utilizing retaining walls, shall result in no permanent fill within 30 feet of the top of the streambank of Northwest Branch or the Rolling Stone Tributary, and shall avoid discharge of permanent fill in the stream channel of the tributary coming from Mills Avenue. This requirement shall not apply to fill associated with potential wetland or stream restoration efforts in this area to correct significant head cuts eroding into the floodplain.

g. The bridge over Good Hope Tributary shall be constructed such that the PGL at centerline Station 690+50 is 66 feet above the elevation of the floodplain floor immediately below, shall be approximately 590 feet long, and, utilizing retaining walls, shall result in no permanent fill within 30 feet of the top of either streambank. This profile is designed to comply with Special Condition #15 below, which prohibits directing the discharge of runoff into Good Hope and Gum Springs Tributaries. If the Permittee should determine, and the Corps approve, an alternative means of ensuring that the highway runoff can be collected, treated, and discharged to the Paint Branch mainstem, with no runoff directed to the Good Hope or Gum Springs Tributaries, the vertical under clearance (from the bottom of superstructure steel to floodplain floor) could be as low as 45 feet, in which case the bridge length shall be sufficient to maintain a bottom opening on the ground of 380 feet, measured between the toes of fill, directly beneath the highway centerline.

h. The bridge over Gum Springs Tributary and Paint Branch mainstem shall be constructed such that the PGL at centerline Station 742+00 and the PGL at centerline Station 749+00 are 43 feet and 38 feet, respectively, above the elevation of the floodplain floor immediately below. The bridge shall be approximately 1280 feet long to result in the toe of fill for the east abutment being placed generally at the 100-year floodplain limit, as shown on the attached permit drawings. Also, retaining walls will be utilized, if necessary, to limit the impact at wetland 3M to 0.05 acres of permanent fill, and to avoid highway embankment being placed permanently in the stream channel of tributary 3M, which is the stream located to the rear of the homes on Creek Side Dr.

i. The bridge over Little Paint Branch shall be constructed such that the PGL at centerline Station 880+00 is 40 feet above the elevation of the floodplain floor immediately below, shall be approximately 530 feet long, and shall result in no permanent fill within 30 feet of the top of any streambank.

5. There will be no grubbing of vegetation that grows beneath the proposed bridges over Rock Creek, North Branch Rock Creek, Northwest Branch, Good Hope Tributary, Gum Springs

Tributary, Paint Branch Mainstem, or Little Paint Branch except, in consultation with the Corps, the minimum needed to construct project components such as foundations, haul roads, slope protection, and utilities.

6. If riprap is determined necessary on the floodplain floor under any bridges, the riprap will be buried with material that is easily traversable by wildlife, preferably soil. Likewise, the use of slope protection under bridges will be minimized to retain as much of the natural terrain as possible for wildlife movement, and to minimize the disturbance of earthwork in the vicinity of streams.

7. If riprap is needed in a stream channel for energy dissipation at either end of a stream culvert, or to protect a buried utility, riprap and stream substrate material shall be placed together, to establish a stream invert that will not impede fish passage during low flows.

8. Prior to making a decision to place fill in the following areas, the Permittee shall evaluate, and the Corps shall approve, whether it is practicable to avoid stream channels (or, to relocate, if it is not possible to avoid) in the following areas where streams are expected to be impacted by the highway construction:

Ramp B Station 200-216 Right (Plate 2)
Station 434-442 Left (Plate 15)
Station 601 to 624 Left (Plate 20)

As part of evaluating these streams, consideration will be given to whether a relocated channel would receive sufficient overland flow or groundwater contribution to sustain a stream ecosystem. If a stream is to be relocated, the Corps will be provided plans for approval, prior to proceeding.

9. Although this authorization approves the discharge of fill in wetland 3C located south of the Montgomery County DPWT maintenance depot (Sta. 673), the Permittee shall design and construct measures to maintain groundwater seepage at this location.

10. The new in-stream sediment basin that is being provided immediately upstream of the I-95 interchange to replace the existing facility will be constructed so that most of the pond is situated to one side of the current location of the stream channel. The objective is to facilitate relocation of the stream around the basin at some point in the future, by others, when it is no longer needed. This new basin shall be functional before the 35-foot high dam (in the southwest quadrant of the I-95 interchange) is modified.

11. The limit of fill shall be no closer to wetland 8C than is shown on the attached permit drawings (Plate numbers 33 and 36), and shall be accomplished either by using a retaining wall (as shown) or alternative measure that has been reviewed and approved by this office. Protection of Aitcheson Bog is critical. Special precautions shall be undertaken, consistent with MDE requirements, to control erosion during any modification of the 35-foot high earthen dam in the

southwest quadrant of the I-95 interchange, including ensuring that the sediment behind the dewatered dam is contained so as not to exceed MDE water quality standards during storm events. Prior to proceeding to remove the dam, the Corps shall be consulted regarding the Permittee's proposed removal method and sequence, to determine whether the operation could result in a discharge of fill, necessitating further authorization from this office.

12. Using a permanent deed restriction or conservation easement, the Permittee will protect approximately 19.9 acres encompassing wetland 6J and a 100-foot upland buffer around wetland 6J, north of the ICC, in order to protect the habitat of the state-endangered rough-leaved aster and halberd-leaved greenbrier. The instrument will prohibit any cutting, clearing, grading, draining, dumping, filling, and construction within this wetland and any forested portion of the 100-foot buffer, with the exception of construction of stormwater management pond outfalls. However, construction of stormwater management ponds shall be permitted on lands within the 100-foot buffer that are not forested on the date of this permit issuance. Treated stormwater may be directed to wetland 6J, provided suitable velocity dissipation is provided in accordance with MDE requirements. The draft instrument must be submitted to this office for approval prior to recordation, and a copy of the recorded instrument provided to this office.

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Conditions on Stormwater Management

Many of the following conditions 13 through 20 impose requirements that are more stringent than the MDE 2000 Maryland Stormwater Design Manual. The Permittee has offered, and the Corps has accepted, these measures, and relied on them in making a determination that the project will not result in significant degradation of waters of the U.S. Therefore, any material changes in these conditions, or failure to implement and enforce these requirements, will be grounds for modifying, suspending, or revoking this permit. Following construction, the Permittee, or the designated owner of the stormwater facilities, shall be responsible for incorporating these stormwater facilities into their inspection and maintenance program for stormwater management facilities.

13. In the Indian Creek watershed and the portions of Little Paint Branch in Prince George's County, the overbank flood protection volume will be managed for the 10-year storm, as per MDE's 2000 Maryland Stormwater Design Manual.

14. To manage runoff that is being discharged to any Use III stream (i.e., Paint Branch mainstem or North Branch Rock Creek drainage basin), the runoff from the first 1.5 inches of rainfall will be treated in sand filtration basins located beneath the median or the shoulders. Elsewhere on the project, the runoff from the first 1.5 inches of rainfall will be managed in accordance with the MDE 2000 Maryland Stormwater Design Manual. Within parkland, underground detention basins will be used to treat the channel protection volume (i.e., the runoff from the one-year, 24-hour storm, which in Montgomery County equates to 2.6 inches of rainfall) to minimize encroachment into parkland. Underground detention basins will also be used outside parklands

to manage discharge to the Paint Branch mainstem. Everywhere else, the channel protection volume may be managed in surface detention ponds. In Use III and Use IV watersheds, channel protection volume designs will not exceed 12-hour storage. Where both filtration and underground management are being used, the system will operate within the following parameters. The runoff from the first 1.5 inches of rainfall will be directed to sand filters. Beneath the sand filters will be a drainage system for collecting the filtered water and conveying it to the underground detention chambers. Inlets will be provided at the road surface to collect the rainfall that exceeds the capacity of the filtration structures (i.e., rainfall in excess of the first 1.5 inches). The surface inlets will direct their unfiltered water also to the underground detention chambers, which will have the capacity to manage the runoff from the first 2.6 inches of rainfall. The water that is collected beneath the sand filters will be the first flush, and during summer months, this water will be warmer than the runoff that will accumulate later in the storm event (which will be coming from the inlets). The two inputs into the underground detention chambers shall be designed so that, as the chamber fills to capacity, the cooler water coming from the inlets will not flush-out the warmer water coming from the sand filters.

15. The outfall from the stormwater management structures in the Paint Branch watershed will be directed either to Northwest Branch or the Paint Branch mainstem. Directing the stormwater to outlet into Good Hope or Gum Springs Tributaries is prohibited. Stormwater runoff from all bridge decks in the Paint Branch watershed will be captured and managed for quality and quantity prior to discharging the runoff.

16. The sediment pond outfall at Station 782 shall not have an outlet ditch or pipe through the existing wetland that is downslope of the pond.

17. The Permittee agrees that no ancillary facilities such as park-and-ride lots, maintenance depots, or any other facility that adds impervious surface to the watershed of the Paint Branch Special Protection Area (SPA) will be added to this construction project without first undergoing coordination with the public, environmental resource agencies, and permit agencies regarding the natural environmental impacts of the proposal and the proposal for managing the stormwater runoff. This coordination will address the manner in which runoff from such additional impervious surfaces will be managed to comply with the more stringent stormwater requirements imposed for this project in the Paint Branch SPA.

18. The runoff from the first one-inch of rainfall from the existing stormwater management facility at the Montgomery County DPW&T Maintenance Depot shall be redirected to the Northwest Branch watershed.

19. Infiltration practices (structural and non-structural) will be employed in the Paint Branch watershed to treat the computed recharge volume, in accordance with MDE's 2000 Maryland Stormwater Management Regulations. The design of infiltration structures shall be based on field infiltration tests rather than sieve analysis. To preclude sediment from entering the infiltration structures during construction, they shall either be sealed with plastic, or their construction deferred until the contributory drainage area is stabilized. Infiltration basins shall not be used as

sediment traps. Infiltration basins shall not be put into service until all of the contributing drainage area is stabilized. In the Paint Branch watershed, infiltration structures will be constructed at the base of the highway slopes adjacent to the eastbound lanes between the Good Hope and Gum Springs bridges. Infiltration in the Paint Branch watershed may also be supplemented using bottomless inlets and/or manholes.

20. Except as shown on the attached permit drawings, no stormwater management pond or erosion and sediment control basin shall be constructed in any wetland. Where the drawings show a right-of-way bump-out for a stormwater management pond or erosion and sediment control basin in the vicinity of a stream, the pond or basin shall be constructed in a manner that does not impound the stream (except at the location authorized by Condition #10 above if necessary, and stream WMM at Southbound I-95 Station 900 Left). For any stormwater management pond constructed in the vicinity of a stream, the pond shall be located a sufficient distance from the stream to maintain a 15-foot wide cleared area beyond the toe of any berms surrounding the pond, plus an additional 30-foot wide, or larger, vegetated buffer along the stream. Stormwater pond outfalls may be constructed across the 30-foot vegetated buffer area.

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Conditions on Construction Activities

21. The Permittee shall comply with all conditions of the Section 401 Water Quality Certification issued by MDE. The terms and conditions of the Water Quality Certification are conditions of this permit.

22. This permit does not include authorization of any jurisdictional wetland and stream impacts that may be required in order to construct, or to provide access to, mitigation or environmental stewardship sites, including wetland creation, stream restoration, stormwater retrofit sites, fish passage projects, reforestation projects, or any other components of the project that are outside the limits of the proposed improvements shown on the attached permit drawings. A request for Corps authorization of any additional impacts required for mitigation or environmental stewardship sites shall be submitted by the Permittee, as such impacts become known.

23. This authorization does not include any impacts for utility relocations/installations or stream channel improvements outside the limits of disturbance shown on the permit drawings. A request for Corps authorization of any additional aquatic impacts required for such work shall be submitted by the Permittee, as such impacts become known.

24. Because all jurisdictional wetlands and streams within the limit of disturbance have been included in the authorized impacts, temporary stream crossings, temporary stream diversions, temporary stream relocations, and utility installations affecting jurisdictional wetlands and streams within the limit of disturbance are authorized herein. However, requests for authorization of impacts for such features that are outside the permitted limit of disturbance must be submitted to the Corps for approval. Construction work within stream channels shall deploy a

stream diversion device to limit turbidity increases. Earthen materials shall not be used in the deployment of temporary stream diversions, stream crossings, or cofferdams, due to the potential for washout during storm events. Any temporary stream crossings will be completely removed when no longer needed and the streambanks restored by planting native woody vegetation.

25. Any temporary crossings of wetlands (i.e., crossings that will not remain permanently), such as wetland crossings required for temporary haul roads, temporary access roads, and utility installations, will be accomplished in a manner that will achieve the following objectives:

a. Where temporary aggregate is placed in a wetland, the objective is to ensure that the aggregate does not become embedded in the soil and can be completely removed when the temporary road is no longer needed. A physical separation of the existing wetland soil and the discharged aggregate shall be provided, in accordance with MDE requirements. The discharge of aggregates can be avoided altogether by using timber mats where the soil is too wet or too soft to support construction equipment.

b. When the temporary crossing is located where it could be subjected to flood flows, any temporary earthen road material will be stabilized, and any other appropriate measures taken consistent with MDE requirements, to ensure the road will withstand expected flood flows and be controlled to prevent any erosion into wetlands and streams.

c. When the temporary crossing is no longer needed, the objective is to restore any impacted wetlands to a functioning wetland consistent with the Corps' 1987 Wetland Delineation Manual. The temporary fill material will be removed, the compacted topsoil will be scarified, the wetland planted with native plantings or reseeded with a wetland seed mix, and any exposed soil will be mulched. The Permittee will ensure that sufficient wetland hydrology is re-established.

26. Every effort shall be made to avoid disturbance to riparian vegetation, particularly within 30 feet of stream banks. Any pre-existing vegetation that is grubbed within a temporarily-disturbed area within 30 feet of a stream bank, will be replanted with native riparian vegetation after the removal of the temporary disturbance, with the exception of utility corridors.

27. Temporary stream crossings are hereby authorized, within the limit of disturbance shown on the attached permit drawings, for the purpose of constructing either an access road for construction equipment or a haul road. There shall be no more than one temporary stream crossing constructed on any stream at each bridge or culvert location. At the following streams, temporary stream crossings associated with this authorization shall be accomplished using bridges that completely span the stream (i.e., no piers in the stream), and no other type of temporary crossing shall be permitted:

Rock Creek, Sta 240
North Branch Rock Creek, Sta 319
Tributary to North Branch Rock Creek, Sta 328
Northwest Branch, all three crossings, excluding the channel at Sta 599

Good Hope Tributary, Sta 690
Gum Springs Tributary, Sta 740
Paint Branch Mainstem, Sta 748
Little Paint Branch, Sta 880

In the floodplain of Northwest Branch, between Sta 593 and 601, there are numerous shallow channels that convey water only when the floodplain is inundated. These channels shall be piped under any temporary road that might be constructed across this floodplain.

28. To reduce fish mortality, the Permittee shall relocate fish prior to dewatering work areas, and release the fish downstream.

29. No stockpiling or storage of equipment, materials, or structural steel; no staging areas; and no installation of ancillary facilities such as concrete or asphalt plants or construction trailers shall be permitted within any wetland or stream. No construction materials, aggregates, or earth shall be stockpiled or stored in a manner that would affect wetlands or streams, and such stockpiles shall have erosion and sediment controls approved by MDE.

30. No concrete trucks shall be washed off in a manner that would allow the cement-laden wash water to enter a stream or wetland.

31. In order to preclude accidental encroachment into wetlands that are beyond the permitted limit of disturbance (LOD), orange plastic fencing and signage shall be installed along the LOD adjacent to the following wetlands. The LOD will be established as per special condition #1. The installation of fencing shall be accomplished immediately after stakeout of the LOD and prior to installation of erosion and sediment controls. The following specific locations will require orange plastic fencing (station numbers are approximate, but the entire edge of the wetland that is adjacent to the LOD shall be protected):

Station 105 Right, wetland RP7
Station 113 Left, wetland 1AF
Ramp F Station 803 Right, wetland 1AG
Station 152 Left and Right, wetland 1D
Station 173 Left, wetland 1FA
Station 175 Right, wetland 1H
Station 277 Left, wetland 1MD
Station 277 Right, wetland 1Q
Station 283 Left, wetland 1MDA
MD 115 Station 15 Right, wetland 1MDA
Station 313 Right, wetland 1T
Station 320 Left, wetland 1W
Station 327 Left, wetland 1ZA
Station 328 Right, wetland 1Z
Station 361 to 366 Left, wetland 1DD

MD 97 Station 197 to 202 Left, wetland 1EE
Station 419 Left, wetland 4A5
Station 420 Right, wetland 4A5
Station 534 Left, wetland 2R
Station 559 Right, wetland 2X
Station 577 Left, Wetland 2BB
Station 595 Left, wetland 2DD
Station 600 Left, wetland 2HH
Station 600 Right, wetland 2HH
Station 743 Left, wetland 3K
Station 743 Right, wetland 3K
Station 746 Right, wetland 3MA
Station 750 Left, wetland 3M
Station 749 Right, wetland 3M
Station 756 Right, wetland 3O
Station 774 Right, wetland 3P
US 29 interchange Ramp ES Station 202-205 Right, wetland 3QA
US 29 interchange Ramp SW Station 83 Right, wetland 3QD
Station 864 Right, wetland 3TA
Station 881 Left and Right, wetland 3X
I-95 interchange Ramp I-A, from Ramp Station 6 to SB I-95 Sta 771, wetland 8C
SB I-95 Sta 757 Left, wetland 8C
I-95 Ramp NB-CD, Station 616 Left, wetland 8D
Station 978 Left and Right, wetland 6J

32. Where utility lines pass through or along the boundaries of wetland areas, measures must be taken to prevent the porous bedding and backfill material from acting as a French drain that would drain the wetland. Examples of acceptable measures would be clay collars or trench plugs installed, at a minimum, every 100 feet, with a collar located at the entrance point and exit point of the utility lines into and out of the wetland area.

33. The Permittee shall pay careful attention to any cut slopes or ditching adjacent to wetlands that are to remain. The objective is to ensure that the cut face does not result in the draining of the wetland. An example of an appropriate measure for preventing a wetland from being drained in such circumstances is to construct a bentonite-filled trench along the top of cut, and at a minimum along the extent of the wetland.

34. Disposal areas for excess excavation will not impact wetlands or streams without prior authorization from the Corps. The Permittee shall track the disposal of all excess excavation to ensure that there is no unauthorized discharge of fill in regulated wetlands or streams. If the Permittee proposes to discharge fill at locations outside the permitted project limits, it is the Permittee's responsibility to ensure that all required federal, state, and local permits have been acquired for the disposal operation. If the disposal operation requires a modification to this permit, a request for permit modification will be submitted to the Corps, at

least 30 days in advance of the Permittee's target date for disposal. Such request shall include an alternatives analysis if the proposed impact to regulated wetlands and streams is more than minimal. Any costs to acquire the disposal site shall not be a consideration in the Corps' review of the request. No disposal may begin until any necessary Corps authorization has been received.

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Conditions on Erosion and Sediment Control - The Permittee has offered, and the Corps accepted, the following conditions 35 through 39, and relied on them in making a determination that the project will not result in significant degradation of waters of the U.S. as a result of construction activities. Therefore, any material changes in these conditions, or failure to implement and enforce these requirements, will be grounds for modifying, suspending, or revoking this permit. The measures described in permit conditions 35 through 39 will be monitored for compliance by the contractor's quality assurance staff, the Independent Environmental Monitor, and the Permittee's project environmental management staff during the construction of the project.

35. SHA will utilize their new erosion and sediment control program on this project. The new program incorporates the following features:

a. An incentive/disincentive program to encourage compliance with the erosion and sediment control plan. This program will involve random, surprise inspections of the contractor's erosion and sediment control devices. Periodic incentives will be provided for maintaining an average rating of 85 with no D or F ratings.

b. A rating of D or F will result in shutdown of all earthwork activities except erosion and sediment control maintenance, and will result in assessment of a financial penalty on the contractor.

c. The contractor will have 72 hours to upgrade his sediment control if a C rating is reported. Failure to upgrade to a B rating within 72 hours will result in a D rating, requiring shutdown of all earthwork activities except erosion and sediment control maintenance.

d. Ratings of C and lower will be reported to the principals of the contracting company. Two F ratings will result in dismissal of the contractor's erosion and sediment control manager and construction manager for a period of 6 months. Both positions must be filled by people who have received SHA certification in erosion and sediment control.

e. SHA will contribute to the cost of re-setting and maintaining erosion and sediment control features in the case of a "severe storm event" that exceeds a designated rainfall threshold.

f. The erosion and sediment control measures will be monitored and maintained during weekends and holidays.

36. In the Paint Branch watershed (i.e., between MD 650 and Old Columbia Pike) and the North Branch Rock Creek watershed (i.e., from MD 115 to MD 97), the Permittee shall employ redundant controls where the sediment is generated, as well as redundant controls at the locations where sediment-laden runoff is contained and treated before being discharged.

37. No flocculants will be used in sediment ponds until the health effects of such flocculants on aquatic and terrestrial fauna have been determined by the Permittee, and approved for use by MDE.

38. Super silt fence will be employed near streams and wetlands. Erosion and sediment controls shall be applied to haul roads and construction access roads, in accordance with MDE standards.

39. The Permittee shall evaluate opportunities to convert sediment pond locations, which are no longer needed, to permanent vernal pools, particularly within parklands, and will coordinate this effort with M-NCPPC.

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Conditions on Compensatory Mitigation

40. Compensatory mitigation for impacts to streams and wetlands shall be constructed using the locations designated in the Compensatory Mitigation Package attached to this permit, which was agreed to by the Interagency Working Group and which provides sufficient improvements to mitigate the authorized impacts. If any new sites are subsequently determined necessary or preferable, the Permittee shall obtain approval of the new site(s) from the Corps and MDE after consultation with the Interagency Working Group. Stream impacts are being mitigated at a 1:1 ratio, with the exception of the restoration in Northwest Branch mainstem which, due to the magnitude of the restoration effort, will offset 3 linear feet of impact for every one linear foot within the restored reach. Fish passage projects are considered to offset 500 linear feet of stream impact. Forested and scrub shrub wetlands are being mitigated at a 2:1 ratio, and emergent and wash pond wetlands are being mitigated at a 1:1 ratio. In addition, five water quality improvements are being constructed.

41. Within 180 days of permit issuance, the Permittee shall submit a Compensatory Mitigation and Monitoring Plan (CMMP) for Corps approval which shall designate a schedule for design and construction of the approved compensatory mitigation sites. The Plan shall discuss the design goals and performance standards for the compensatory mitigation wetland or stream sites, including proposed ecological functions, opportunities to re-connect streams to their floodplains or to expand floodplains, proposed vegetative community and areal coverage, proposed manipulations of earthwork, proposed sources of hydrology and consecutive days and depth of saturation, proposed soil amendments, any proposed buffers, proposed habitat features, control of browsing by deer, voles, and beaver, invasive species control, signage, and proposed construction access points. The Corps shall be provided final design plans for each of the approved compensatory mitigation sites for review and approval prior to commencing construction. With

the exception of post-construction monitoring, all compensatory mitigation shall be completed by the time that the highway construction is complete.

42. Wetland mitigation projects will be monitored in accordance with the most recent guidelines developed by the Permittee with the Corps and MDE, and the CMMP developed in accordance with Condition #41. The Permittee shall monitor the wetland creation and stream restoration sites for a period of five consecutive growing seasons, and submit monitoring reports annually to the Corps. The reports shall contain the information required by the "New SHA Mitigation Monitoring Protocols for Wetland and Stream Restoration (effective 2006 monitoring season)." Year #1 of the 5-year monitoring period shall commence with the first spring season following completion of construction and planting of the wetland mitigation site. If wetland creation or restoration is not considered successful by the Corps within five years, the reasons for the failure shall be determined by the Permittee and any areas not successfully established shall be remediated, or the Permittee shall locate an alternative site, in consultation with the Corps, and construct the required replacement wetland acreage. Monitoring reports shall be submitted annually to the Corps by 31 December of each year, for five years. If there is any doubt by the Corps that adequate wetland hydrology has been established to satisfy the hydrology performance criterion, the Corps may direct the installation of groundwater monitoring wells. If any remediation was needed during the initial five-year monitoring period, the Corps may require that monitoring and reporting be extended as much as five additional years beyond the date of the last remediation, depending upon the nature of the remediation.

43. With the exception of mitigation constructed on M-NCPPC property, wetland mitigation sites shall be protected in perpetuity with a conservation easement or deed restriction. The instrument shall be in the form of a covenant running with the land and recorded with the deed, conveyance, or transfer. All prospective purchasers of all, or portions, of the wetland mitigation site shall receive notice of the instrument, and the prohibitions shall be referred to in every deed, conveyance, or transfer of all, or portions, of the mitigation site. The covenant shall include prohibitions against cutting, mowing, clearing, grading, draining, construction of roads or structures, dumping, filling, and erecting billboards or commercial signs, on the mitigation site as displayed on the plat map which describes the property being conveyed, granted, or transferred, except as required to establish and maintain the mitigation site as authorized by the U.S. Army Corps of Engineers or other Federal agency having authority to do so. The draft instrument must be submitted to this office for review and approval prior to final recordation in the land records of the appropriate county. Following review and approval of the draft instrument, the Permittee shall record the final instrument, and shall submit a copy of the fully executed and recorded instrument, with liber and folio number stamped thereon, to the Baltimore District, as part of the annual monitoring report following the second growing season.

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Conditions on Monitoring Project Impacts

44. The Permittee shall provide an Independent Environmental Monitor who shall report directly to MDE and the Corps, notifying them and the Permittee of any reported or observed violations or non-compliance.

45. The Permittee shall provide a qualified, professionally certified, multi-disciplinary, Environmental Management Team, independent from the construction contractors, to review the design and construction for compliance with all permit conditions, to conduct Quality Assurance and performance ratings, and to track the completion of compensatory mitigation and monitor its success. An Environmental Manager shall ensure that the Permittee has requested Corps approval for any changes involving impacts to regulated aquatic resources and shall keep records of the impact totals, ensuring that appropriate mitigation is constructed for all impacts. The Environmental Manager will make recommendations throughout construction for further avoidance and minimization of impacts. The Environmental Manager will notify the Corps, the resource agencies, and the Independent Environmental Monitor by email of all violations of, and non-compliance with, this permit. The Environmental Manager will make recommendations for bringing the project into compliance with permit conditions, and provide the Corps and resource agencies copies of all reports dealing with resolution of violations and non-compliance. The Environmental Manager will conduct agency coordination meetings throughout design and construction. These meetings will occur on a monthly basis, until such time as it is determined that less frequent meetings are appropriate.

46. Prior to the construction closeout meeting, a project inspection shall be conducted of the wetlands listed in permit condition #31 above, and the wash pond wetlands (systems 8CA and 10E) by the Permittee with the permit agencies. This inspection shall assess the condition of the remaining portion of those wetlands which were partially impacted (i.e., the portion shown as outside the limit of disturbance), as well as any temporarily-impacted wetlands, to determine whether they continue to function as wetlands. Particular attention shall be given to wetlands that are adjacent to cut slopes or ditches, for example, the following wetlands:

Station 283 Left, wetland 1MDA
MD 115 Station 15 Right, wetland 1MDA
Station 420 Right, wetland 4A5
Station 756 Right, wetland 3O
US 29 interchange Ramp ES Station 202-205 Right, wetland 3QA

If the inspection reveals that the wetlands beyond the limit of disturbance have ceased to satisfy any of the three parameters for determining wetland jurisdiction, as per the Corps' 1987 Wetland Delineation Manual, the Permittee shall be obligated to either restore these wetlands or provide additional mitigation at the approved ratios. This site visit will also be used to verify the successful restoration of any temporarily-impacted wetlands. If restoration efforts have failed, subsequent monitoring will be required for three years, or remediation may be undertaken to restore the wetland. If remediation efforts fail, or if the Permittee chooses not to remediate, the

Permittee shall mitigate for the lost resource. In addition, this site visit will be used to verify any wetlands that were authorized to be impacted but were subsequently avoided, in order to deduct these from the mitigation obligation.

Compensatory Mitigation Package

Site ID	Watershed/ County	Potential Restoration Units[1]	Compensatory Mitigation Concept – Aquatic Resources	Number and Type of Parcel (Public or Private)
Stream Restoration Sites				
IC-59	Indian Creek/ Prince George's	1,100	IC-59 and IC-62 are located on the mainstem of Indian Creek just upstream and downstream of the Powder Mill Road crossing. The concept for IC-59 and IC-62 includes stream restoration efforts (gabion removal, berm removal, bank stabilization, floodplain creation, fish blockage removal, riparian buffer enhancement, and habitat enhancement).	IC-59 (5-private, 1-public) IC-62 (1-public)
IC-62	Indian Creek/ Prince George's	1,900		
NW-160	Northwest Branch/ Montgomery	11,000	This site includes the mainstem of Northwest Branch from Bonifant Road downstream to Indian Springs Golf Course. A portion of Rolling Stone tributary that joins Northwest Branch within the project site would also be included. The concept for NWB includes the following stream restoration efforts: floodplain creation to provide energy dissipation of erosive flood flows, reduce erosive shear stresses, reduce channel incision, and increase infiltration and groundwater recharge; bank stabilization to provide energy dissipation of erosive flood flows, reduce erosive shear stresses, and reduce bank erosion and instream sedimentation; enhancing the riparian buffer; installation of woody debris and other types of instream cover and gravel channel material to enhance the benthic and fish habitats and communities.	1-private 1-public
PB-12B	Paint Branch/ Montgomery	4,500	PB-12B is located on Hollywood Branch and flows southeasterly from where the stream goes under Laurie Drive to the confluence with Paint Branch in the Fairview Estates community. The concept for PB-12B includes stream restoration efforts (bank stabilization, floodplain creation, utility conflict resolution, fish blockage removal, and riparian buffer enhancement).	1-public
PB-119	Paint Branch/Prince George's	1,000	Site PB-119 is located on the mainstem of Good Hope tributary to Paint Branch. The limits for this site extend from approximately 300 feet upstream to 700 feet downstream of the Good Hope Road crossing of this stream. The concept for PB-119 includes the following stream restoration efforts: floodplain creation to provide energy dissipation of erosive flood flows, reduce erosive shear stresses, reduce channel incision, bank stabilization to provide energy dissipation of erosive flood flows, reduce erosive shear stresses, and reduce bank erosion and instream sedimentation; and installation of woody debris and other types of instream cover and gravel channel material to enhance the benthic and fish habitats and communities.	1-public
PB-8	Paint Branch/ Montgomery	1200	PB-8 is located in the Left Fork subwatershed of the Upper Paint Branch watershed. PB-8 is made up of two reaches. The western reach is located entirely within Upper Paint Branch Park. The concept for PB-8 includes stream restoration efforts (bank stabilization, floodplain creation, riparian buffer enhancement, fish blockage removal, and habitat enhancement).	PB-8 (5-private, 2-public)

Compensatory Mitigation Package

Site ID	Watershed/ County	Potential Restoration Units[1]	Compensatory Mitigation Concept – Aquatic Resources	Number and Type of Parcel (Public or Private)
Fish Passage Sites				
PB-93A	Paint Branch/Prince George's	500	This is a fish passage site located at an exposed sewer line between US 1 and the College Park Airport. The blockage can be seen from the footbridge located approximately 1,000 feet upstream of the confluence of Paint Branch with Indian Creek. The drop at this site is about 1.5 feet and at lower flows is a complete blockage to upstream fish passage.	1-public
RC-131	Rock Creek/ Montgomery	500	RC-131 is located east of the intersection of Beach Drive and Pinehurst Parkway on the mainstem of Rock Creek within Rock Creek Park. The blockage is an exposed utility crossing that has a vertical drop of approximately one foot causing a depth of flow of approximately two inches at normal flow.	1-public
RC-131A	Rock Creek/ Montgomery	500	RC-131A is located east of Beach Drive in the Candy Cane Park section of Rock Creek Park. This is a partial fish blockage caused by a concrete sewer encasement that is exposed at lower flow conditions. In addition to restoring fish passage over the blockage, other improvements slated for this site include streambank stabilization and riparian buffer improvement to improve stream habitat.	1-public
Wetland Creation Sites				
MR-5	Monocacy River/ Montgomery	19	This site is an active cow pasture located at the intersection of Bethesda Church Road and Clarksburg Road within the floodplain of Bennett Creek.	1-private
SC-2	Seneca Creek/ Montgomery	21	This site is located at the corner of Huntmaster Road and Brink Road within the floodplain of Goshen Branch. This site is also located across from the existing Hawkins wetlands creation site. The created wetlands could be hydrologically connected to the emergent wetlands on site and provide a riparian buffer to the stream.	1-public
NW-128	Northwest Branch/ Montgomery	3	NW-128 is currently a ball field located in Northwest Branch Recreational Park. The site would be excavated 2'-3' to tap into groundwater or divert flows from Northwest Branch into the site. The ball field would be converted to a wetland/floodplain condition by removing the fill from the site.	1-public
PB-1	Paint Branch/ Montgomery	12	PB-1 is located on the south side of Spencerville Road and east of Peach Orchard Road along a tributary to Paint Branch. The site begins as a farm pond located on the south side of the stream. The concept for this site is to create forested wetlands on the south side of the stream by excavating less than five feet to hydrologically connect to the stream and existing groundwater. The north side of the stream could be reforested with a mix of wetland and upland tree species. The pond would be removed as part of this concept to reduce thermal impacts to the stream.	1-private
SC-19	Seneca Creek/ Montgomery	19	This site is located east and west of Woodfield Road at the Great Seneca crossing. This site is situated in the floodplain of Great Seneca Creek and receives both surface water input and bank overflows that could support the hydrology of a created wetland.	1-private

Compensatory Mitigation Package

Site ID	Watershed/ County	Potential Restoration Units[1]	Compensatory Mitigation Concept – Aquatic Resources	Number and Type of Parcel (Public or Private)
SC-21	Seneca Creek/ Montgomery	6	This site is located on the north side of Brink Road at the Great Seneca Creek crossing along the east bank of the stream. The hydrology for the created wetland would be supported by groundwater and the hydric soils that are mapped within the stream valley. Wildcat Branch, a tributary to Great Seneca Creek, is located just upstream of this site and is classified as Class III trout waters.	1-public
NW-69	Northwest Branch/ Montgomery	3	NW-69 is located on the north side of Batchellors Forest Road across from Trotters Glen Golf Course in the headwaters of Batchellors Run. The concept for NW-69 includes the following efforts: grading and planting to create a forested wetland and spraying to eradicate multiflora rose. The concept for this site is to extend the existing wetland along the east side of the stream and plant the site with forested wetland species such as sycamore, spicebush and arrow-wood.	1-private
Water Quality Mitigation Sites				
PB-33	Paint Branch/ Montgomery	80	This site is located in the Great Hope Manor community, adjacent to the Right Fork at Good Hope Road and Good Hope Drive The concept includes cleaning up debris, adding infiltration trench and /or bioretention cells to the extent possible, retrofit of the existing riser to provide extended detention, expansion of the existing SWM pond next to the community center to provide extended detetention and stabilization of an	1-private
PB-43	Paint Branch/ Montgomery	40	Unvegetated outfall channel east of Timberlake Drive and Seibel Drive. The concept includes retrofitting existing outfall channel with grass swale, biofilter, or infiltration trench.	1-private
PB-46A	Paint Branch/ Montgomery	22	Existing dry pond at west end of Perrywood Road. The concept is to convert a dry extended detention pond to attenuate flows without raising temperatures, including planting the riparian buffer and pond. Pond may need to expand into adjacent parkland to capture runoff for entire drainage area.	1-private
PB-114A	Paint Branch/ Montgomery	70	Degraded stream channel at the south end of Eastway Drive in Peachwood Park. The concept includes evaluating alternatives previously developed by MCDEP and MWCOG to plan and construct an off-line extended detention facility to address one of the few remaining uncontrolled drainage areas contributing to Good Hope Tributary.	1-private
PB-49	Paint Branch/ Montgomery	134	Uncontrolled runoff from tributary north of Rainbow Drive, east of Wembrough Street and west of Langside Street. The concept includes constructing a new dry extended detention pond to attenuate flows without raising temperatures and planting the riparian buffer and pond.	1-public