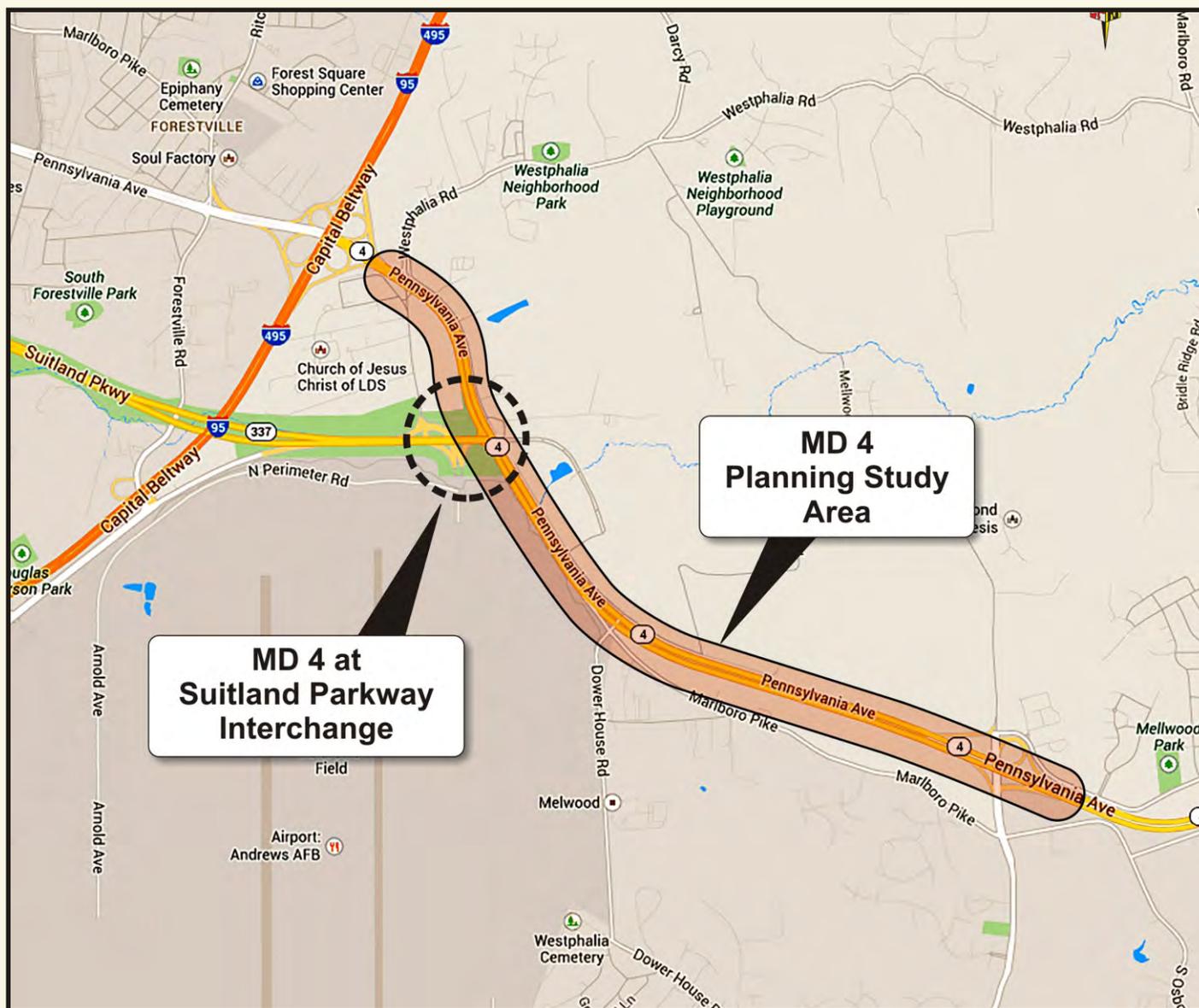




National Capital Parks - East Suitland Parkway

MD 4 AT SUTTLAND PARKWAY INTERCHANGE CONSTRUCTION ENVIRONMENTAL ASSESSMENT

National Capital Parks - East Suitland Parkway



**MD 4 AT SUTLAND PARKWAY INTERCHANGE CONSTRUCTION
ENVIRONMENTAL ASSESSMENT
REVIEW DRAFT – June 2014**

PROJECT SUMMARY

INTRODUCTION

The Maryland State Highway Administration (SHA) is proposing transportation improvements to the existing intersection of MD 4 and Suitland Parkway. Suitland Parkway is owned by the United States Government and under the jurisdiction of the National Park Service (NPS) National Capital Parks-East. As such, construction activities tied to the proposed improvements would require temporary occupancy of NPS lands through issuance of a Special Use Permit. Additionally, improvements at this intersection would require a transfer of NPS land to SHA at the eastern terminus of the Suitland Parkway to accommodate the expanded footprint of the proposal. The project area is located immediately northeast of Joint Base Andrews Naval Air Facility Washington (JBA), approximately one mile south of the Capital Beltway (I-95/I-495).

PURPOSE OF AND NEED FOR THE ACTION

The purpose of the action is to facilitate transportation improvements at the intersection of MD 4 and Suitland Parkway. This action would increase roadway capacity to meet existing and projected travel demands along the MD 4 corridor and address safety concerns. The action is needed because the corridor currently experiences excessive traffic congestion, which is projected to increase as future development brings more commuters to the area.

OVERVIEW OF THE ALTERNATIVES

This Environmental Assessment (EA) analyzes the no action alternative (Alternative 1) along with two action alternatives (Alternatives 2 and 3) for the MD 4 at Suitland Parkway Interchange Construction Permit Authorization. In addition to the permit authorization, either action alternative requires a permanent land transfer to facilitate the proposed transportation improvements. Alternative 2 would construct a diamond roundabout interchange, requiring approximately nine acres of permanent land transfer. The Federal Highway Administration (FHWA) issued a Finding of No Significant Impact (FONSI) for this alternative in May 2000. Alternative 3 would be a signalized diamond interchange requiring approximately seven acres of permanent land transfer. The interchange would be grade-separated and consist of a signalized diamond interchange with a two-lane directional ramp from northbound MD 4 to westbound Suitland Parkway. The centerline of MD 4 would be shifted approximately 75 feet east to reduce impacts to Suitland Parkway. The SHA has determined that Alternative 3 is the Preferred Alternative because it would best meet the project purpose and needs. Through continued coordination with SHA and FHWA, the NPS agrees that Alternative 3 is the Preferred Alternative.

PROJECT SUMMARY

Impacts of the proposed alternatives were assessed in accordance with the National Environmental Policy Act (NEPA) and the NPS’s Director’s Order 12 (DO-12): Conservation Planning, Environmental Impact Analysis, and Decision-making, which requires impacts to park resources, be analyzed in terms of their context, duration, and intensity (NPS 2001). Several impact topics have been dismissed from further analysis because the proposed action alternatives would result in negligible to no effects to those resources. No major impacts are anticipated as a result of this project.

Note to Reviewers and Respondents:

If you wish to comment on this EA, you may mail the comments directly or submit them electronically to NPS. Before including your address, phone number, e-mail address, or other personal identifying information in your comment, you should be aware that your entire comment – including your personal identifying information – may be made publicly available at any time. While you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

Mailed comments can be sent to:

Superintendent, National Capital Parks - East
MD 4 at Suitland Parkway Interchange Construction EA
1900 Anacostia Drive S.E.
Washington, DC 20020

Comments can also be submitted on-line by following the appropriate links at:

<http://parkplanning.nps.gov/md4>

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- Appendix C: Draft Memorandum of Agreement
- Appendix D: Draft Section 4(f) Evaluation

CHAPTER 1: PURPOSE AND NEED

1.1 INTRODUCTION

The Maryland State Highway Administration (SHA) is proposing roadway improvements that would upgrade the existing four-lane, three-mile section of MD 4 (Pennsylvania Avenue) from east of the Capital Beltway (I-95/I-495) to west of MD 223 to a multi-lane, fully access-controlled highway (**Figure 1**). SHA's proposal includes three grade-separated interchanges along the three-mile study area where MD 4 currently intersects with Westphalia Road, Suitland Parkway, and Dower House Road. Upgrades to the MD 4/Suitland Parkway intersection would require a Special Use Permit from the National Park Service (NPS) for temporary occupancy of NPS lands during construction. Construction of the proposed improvements would also require a land transfer from NPS to SHA to accommodate the expanded footprint of the proposed improvements. The focus of this Environmental Assessment (EA) is the proposed improvements at the existing MD 4/Suitland Parkway intersection. The NPS is undertaking this environmental review of SHA's proposal to evaluate impacts to Suitland Parkway's natural and cultural resources that would occur as a result of the proposed project, as required by the National Environmental Policy Act (NEPA: 1969, as amended) and other legal mandates. Compliance with the National Historic Preservation Act (NHPA: 1966, as amended) and Section 4(f) is being completed as a separate consultation process, parallel to the completion of this EA.

Suitland Parkway, under the jurisdiction of NPS National Capital Parks-East (NACE), is a four-lane divided limited-access roadway that connects Joint Base Andrews Naval Air Facility Washington (JBA) in Prince George's County, Maryland with the Anacostia River in southeast Washington, D.C. Suitland Parkway was constructed in 1944 and is listed on the National Register of Historic Places (NRHP).

This EA analyzes the potential impacts of three alternatives at the intersection of MD 4 and Suitland Parkway: the no action alternative (Alternative 1), a roundabout diamond interchange design (Alternative 2) and a signalized diamond interchange design with a directional ramp (Alternative 3). A detailed description of these alternatives follows in **Chapter 2**. Alternatives 2 and 3 would include the aforementioned land transfer; however, the acreage required differs between the alternatives.

This document has been prepared in accordance with NEPA and the associated implementing regulations, 40 Code of Federal Regulations (CFR) 1500-1508, and the NPS Director's Order 12 (DO-12) and Handbook (Conservation Planning, Environmental Impact Analysis, and Decision-making [NPS 2001]). Compliance with Section 106 of the NHPA has been conducted concurrently with the NEPA process and documentation is also presented in this EA.

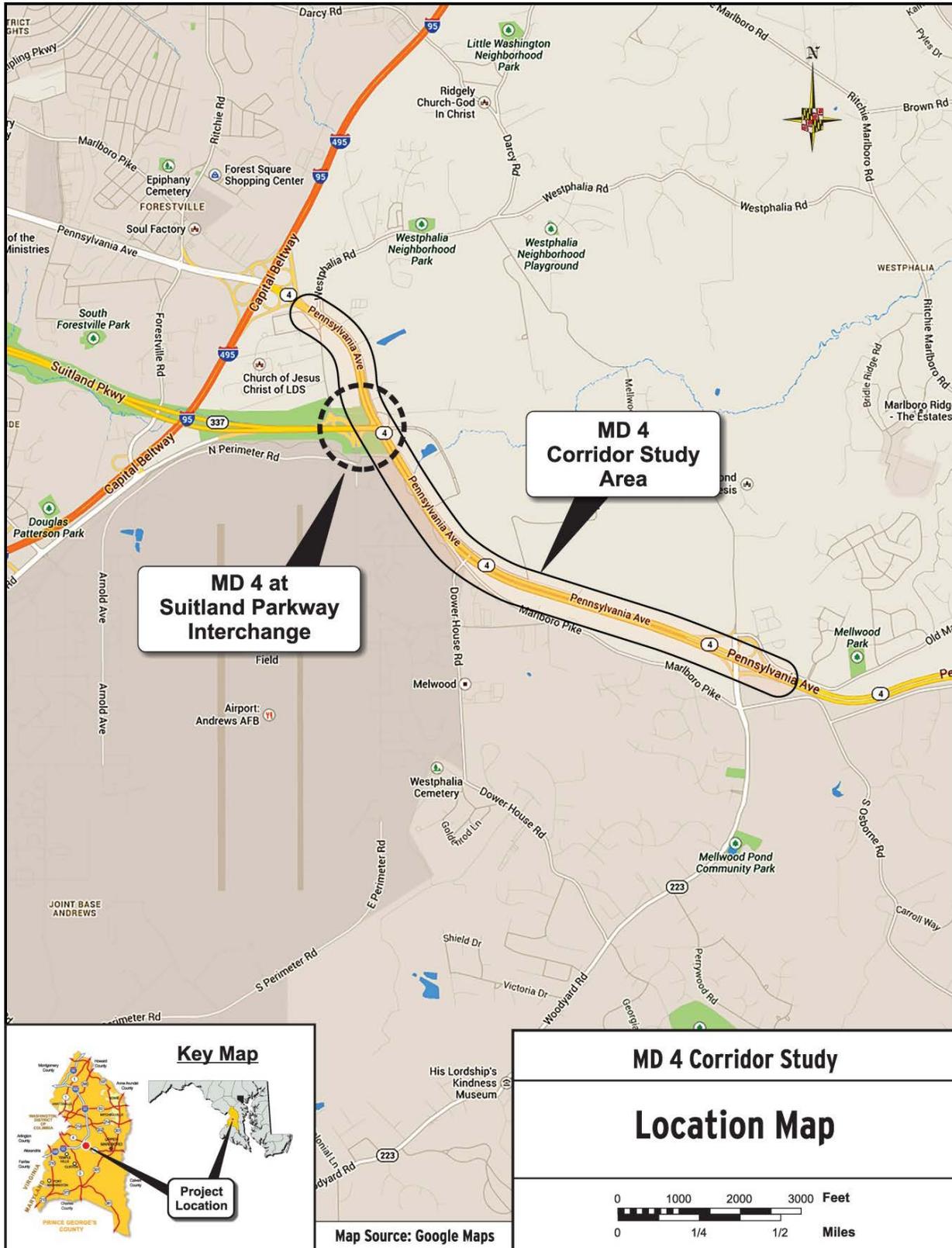


Figure 1: MD 4/Suitland Parkway Location Map

1.2 PURPOSE OF AND NEED FOR THE ACTION

The purpose of the action is to facilitate transportation improvements at the intersection of MD 4 and Suitland Parkway. This action would increase roadway capacity to meet existing and projected travel demands along the MD 4 corridor. The action is needed because the corridor currently experiences excessive traffic congestion, which is projected to increase as future development brings more traffic to the area. In order to facilitate the proposed improvement, construction activities would require temporary occupancy of NPS lands through issuance of a Special Use Permit. An exchange of lands between NPS and SHA would be required to accommodate the expanded footprint of the proposal.

The *2005 Westphalia Comprehensive Concept Plan* (Prince George's County 2005) promotes construction of a high-density, mixed-use development core northeast of MD 4 to Ritchie Marlboro Road and from the Rural Gateway to the Capital Beltway. This plan calls for 6,000 total acres of development, including approximately 15,000 new residential units, up to 4.6 million square feet of employment space, and an estimated 700,000 square feet of retail space. Seven new schools, and new police, fire and rescue, library, and health facilities are also expected. The *2007 Approved Westphalia Sector Plan and Sectional Map Amendment* (Prince George's County 2007) supports and guides this development concept.

The JBA consists of approximately 4,300 acres within the study area and is a major employment center in Prince George's County. The *Joint Land Use Study* estimated the 2008 Base population at approximately 17,000, which includes active duty military, civilian employees, and dependents; an additional 2,400 personnel are expected to come from the closure of other bases under the Base Realignment and Closure (BRAC) Program (JBA 2009).

Level of Service (LOS) on expressways and freeways, with uninterrupted flow conditions, is ranked from Level A (free traffic flows at high speeds with low volume) to Level F (total breakdown of traffic flow with frequent delays at high traffic volumes). Traffic congestion occurs along the MD 4 corridor as a result of ongoing development and growth in commuter traffic from Anne Arundel County, Calvert County, and Southern Prince George's County to Washington, D.C. A 2011 traffic analysis indicated that MD 4 at Suitland Parkway had an average Annual Daily Traffic (ADT) of 60,500 vehicles and operated at a LOS of F during peak hours in the morning and evening. Eight percent of the existing and future volumes are comprised of truck traffic. By 2030, ADT at the MD 4/Suitland Parkway intersection is projected to reach 84,450 vehicles, which would impact roadway congestion and travel time. The 2030 projected volumes indicate peak volumes on northbound MD 4 to westbound Suitland Parkway with morning volumes exceeding 2,100 vehicles per hour. The volume from eastbound Suitland Parkway to southbound MD 4 is expected to exceed 1,900 vehicles per hour.

Crash data were collected for MD 4 from Dower House Road to I-95 from January 2010 to December 2012. Within the study period, the MD 4 corridor had a total of 171 reported crashes. There were no fatal crashes, 64 injury-related crashes, and 107 property-damages. The overall crash rate (123.7 crashes/100 million vehicle miles (mvm)) for the corridor is comparable to the statewide average rate (125.9 crashes/100 mvm) for similar state-maintained highways. Of the crash types, the study area's "Other Cause" crash rate (11.6 crashes/100 mvm) is higher than the statewide average rate (1.9 crashes/100 mvm). Rear-end collisions occur at a higher rate (60 crashes/100 mvm compared to the statewide average of 54.6 crashes/100 mvm), but were not found to be significantly different. Sideswipe

and angle crashes were the second and third leading types of crashes. Key factors contributing to the high crash rates are the high volume of vehicles at intersections, weave movements, the high number of conflict points, and the lack of access controls.

The number of crashes in the vicinity of the MD 4 intersection at Suitland Parkway (within 0.5 miles) was 22 crashes in 2010, 26 in 2011, and 13 in 2012. Approximately half of the crashes along the study corridor occurred at this intersection. Rear-end crashes were the predominant intersection crash type. “Following too closely” and “failing to obey the traffic signal” were the cause for most of the crashes. Almost half of the crashes occurred at night.

1.3 PROJECT BACKGROUND

On May 19, 2000, the Federal Highway Administration (FHWA) approved the MD 4 Planning Study Finding of No Significant Impact/Section 4(f) Evaluation (FONSI). The Selected Alternative included the construction of a diamond roundabout interchange (Alternative 2) at the intersection of Suitland Parkway and MD 4 (SHA 2000). The Selected Alternative would have required approximately nine acres of permanent land transfer from NPS to SHA. A Value Engineering (VE) study, conducted in October 2004, found that changes in zoning by Prince George’s County for the area surrounding the intersection of Suitland Parkway and MD 4 required revisions of the traffic forecasts used to design the FONSI Selected Alternative diamond roundabout interchange. Based on updated traffic projections, the VE study team concluded that the two-lane roundabout interchange design would, upon opening, operate at a failing level of service during the morning and evening peak hours. The VE study recommended design changes to better accommodate capacity needs. The recommendations are reflected in the signalized diamond interchange with a directional ramp (Alternative 3) to convey traffic from northbound MD 4 to westbound Suitland Parkway (SHA 2004). Detailed descriptions of Alternatives 2 and 3 are provided in **Chapter 2**.

1.4 SITE DESCRIPTION

The project area is located approximately 10 miles southeast of Washington D.C., about one mile east of the Capital Beltway at the eastern terminus of Suitland Parkway.

This section of MD 4 is the only portion of the roadway between the Capital Beltway and US 301 that is not fully access-controlled. The existing MD 4 typical section from the Capital Beltway east to Dower House Road is four lanes, two lanes in each direction. Outside shoulder use is permitted in the northbound direction during the morning peak hours, when commuter traffic is heaviest. A variable width grass median is provided throughout the project limits. The intersection of MD 4 and Suitland Parkway is currently a four-legged, at-grade, signalized intersection. MD 4 forms the northern and southern legs of the intersection; Suitland Parkway approaches from the west; and Presidential Parkway approaches from the east. The intersection includes two left-turn lanes at both the northbound approach of MD 4 and the westbound approach of Presidential Parkway. A right-turn lane from MD 4 northbound provides access to Armstrong Lane and Westphalia Center Court North approximately 300 feet north of the Suitland Parkway intersection. Additionally, Suitland Parkway provides access to the JBA North Gate via a trumpet interchange approximately 0.3 mile west of the MD 4 intersection. A sidewalk along the west side of Presidential Parkway provides pedestrian access between businesses along this route and

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connects to the service road that runs parallel to MD 4; however, no cross-walks or other pedestrian facilities exist at the intersection of MD 4 and Suitland Parkway/Presidential Parkway.

The Suitland Parkway spans 9.2 miles (2.8 miles in Washington, D.C. and 6.4 miles in Maryland) and runs from the I-295 and South Capitol Street Interchange to the intersection with MD 4 (just northeast of JBA). It passes through a 418.9 acre corridor managed by NPS. The NPS boundary for Suitland Parkway terminates immediately west of the MD 4 intersection. The JBA is located immediately southwest of the project area. Businesses lie to the northwest and southeast of the project area. Industrial and commercial properties are located northeast of the intersection.

1.5 SIGNIFICANCE OF SUTLAND PARKWAY

Suitland Parkway was conceived by the National Capital Park and Planning Commission, now the Maryland-National Capital Park and Planning Commission (M-NCPPC), in 1937. It was one of several parkways built in the Washington, D.C. area. The Suitland Parkway links JBA to Washington D.C. and was constructed during World War II to improve transportation for defense industry employees. It opened to traffic on December 9, 1944.

The Parkway corridor is extensively landscaped with larger trees in the medians, grassy areas, and developments screened where necessary to present a rural-like setting. It has hosted both triumphal and mournful processions of public officials, including presidents returning from diplomatic endeavors to the funeral procession of President John F. Kennedy. Presently, it serves commuters and local traffic (NPS 1995).

The Suitland Parkway is a historic district listed in the NRHP. It is part of the multiple property submission for the “Parkways of the National Capital Region, 1913-1965”, under both Criterion A for its association with events that have made a significant contribution to the broad patterns of our history and Criterion C for its embodiment of the distinctive characteristics of a type, period, or method of construction, or representation of the work of a master, or possession of high artistic value, or representation of a significant and distinguishable entity whose components may lack individual distinction (NPS 1995).

The Suitland Parkway is a nationally significant resource eligible for the NRHP for transportation and landscape architecture related to the parkway system developed during the first half of the twentieth century. The parkways of the national capital reflect the culmination of several national trends after the turn of the twentieth century: the City Beautiful movements' emphasis on integrated urban green space; automobiles and the rapid development of road systems; and the decline in the quality of city living and resulting popularity of outdoor recreation. Suitland Parkway represents a utilitarian roadway with design features intended to move traffic expeditiously, but with elements of design intended to convey a scenic driving experience characteristic of earlier parkways (NPS 1995).

Suitland Parkway is also historically significant because it is associated with key historical figures that played important roles in planning and design, including Gilmore D. Clarke and Jay Downer, principal designers of the Westchester County and Virginia parkways. The M-NCPPC Chairman Frederick Delano

and Thomas Jeffers of the M-NCPPC also had substantial roles in the origins of the Parkway, especially when funding sources seemed exhausted because of the Great Depression and World War II (NPS 1995).

The Suitland Parkway Bridge over the entrance ramp to JBA North Gate is a contributing element of the NRHP-listing. It is one of the seven bridges that the Public Roads Administration contracted and constructed on the alignment of the Suitland Parkway in 1944. These bridges consist of double reinforced concrete rigid frame arches that have stone-faced wing wall and spandrels, trimmed with granite dimensioned masonry (NPS 1995).

The NPS currently uses their 1984 Park Road Standards to define the purpose and guidelines of their roadways. The Suitland Parkway is defined as a Class VII Urban Parkway meaning, “these facilities serve high volumes of park and non-park related traffic and are restricted, limited-access facilities in an urban area. This category of roads primarily encompasses the major parkways which serve as gateways to our nation’s capital. They serve as attractive, landscaped gateways and share many of the high-speed, high-volume traffic characteristics of expressways of the state and Federal highway network. Traffic safety must also be considered as well as the protection and enhancement of landscape, aesthetic, environmental, and cultural characteristics. These parkways are intended to blend high-volume traffic safety with the values of the NPS (NPS 1984).”

1.6 RELATIONSHIP TO LAWS, EXECUTIVE ORDERS, POLICIES, AND OTHER PLANS

The NPS is governed by laws, regulations, and management plans applicable to the alternatives involved in this NEPA analysis.

1.6.1 Applicable Federal Laws, Executive Orders, and Regulations

National Environmental Policy Act of 1969, as Amended

The NEPA was passed by Congress in 1969 and took effect on January 1, 1970. It was signed in response to an overwhelming national sentiment that federal agencies should take a lead in providing greater protection to the environment. The NEPA establishes environmental policy for the nation, provides an interdisciplinary framework for federal agencies as they assess and disclose environmental impacts, and contains “action-forcing” procedures to ensure that federal agency decision-makers take environmental factors into account. It also established a Council on Environmental Quality (CEQ) (42 U.S. Code 4321).

U.S. Department of Transportation Act of 1966, as Amended

Section 4(f) of the U.S Department of Transportation Act states that the FHWA and other Department of Transportation (DOT) agencies cannot approve the use of land from publicly owned parks, recreational areas, wildlife and waterfowl refuges, or public and private historical sites unless there is no feasible and prudent alternative to the use of the land and the action includes all possible planning to minimize harm to the property resulting from the use (49 U.S. Code 303, 23 U.S. Code 138). Compliance with Section 4(f) is being completed as a separate process, parallel to the completion of this EA.

Energy Independence and Security Act of 2007

This Act was intended to move the United States towards greater energy independence and security; to increase production of renewable fuels; to protect consumers; to increase the efficiency of products,

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buildings, and vehicles; to promote research on and deploy greenhouse gas capture and storage options; and to improve the energy performance of the Federal Government (42 U.S. Code Ch. 152). Section 1101(c) of this Act requires an evaluation the impact of the potential fuel efficiency savings and clean air impacts of major transportation projects.

National Park Service Organic Act of 1916

This Act established the NP S within the Department of the Interior “to conserve the scenery and the natural and historic objects and wildlife therein and to provide for the enjoyment of the same in such a manner and by such a means as will leave them unimpaired for the enjoyment of future generations” (16 U.S. Code 1).

Capper-Cramton Act of May 29, 1930

This Act authorized funding for the acquisition of lands in the District of Columbia, Maryland, and Virginia for the park and parkway system of the national capital (40 U.S. Code 8701).

National Parks Omnibus Management Act of 1998

This Act was established to more effectively achieve the mission of the NPS by: “enhancing management and protection of national park resources; ensuring appropriate documentation of resource conditions in the National Park System; encouraging other to use the National Park System for study to the benefit of park management as well as broader scientific value; and encouraging the publication and dissemination of information derived from studies in the National Park System” (16 U.S. Code Chapter 79).

Endangered Species Act of 1973

This Act is administered by the U.S. Fish and Wildlife Service and the National Marine Fisheries Service to “provide for the protection of wildlife, fish, and plants that have been identified as in danger of becoming extinct including habitats that have been identified as critical to their survival” (16 U.S. Code 1531).

National Historic Preservation Act of 1966

The NHPA protects buildings, sites, districts, structures, and objects that have significant scientific, historical, and/or cultural value. It is the responsibility of federal agencies to preserve historic and prehistoric resources. Planning and operations must take into account the effects on properties that are listed or eligible for the NR HP (16 U.S. Code 470). Generally, Section 106 of the NHPA requires all federal agencies to consider the effects of their actions on cultural resources listed and/or determined eligible for listing in the NRHP. Compliance with Section 106 of this Act is being completed as a separate process, parallel to the completion of this EA.

Redwood National Park Expansion Act of 1978, as Amended

This Act “reestablishes the provisions set forth in the NPS Organic Act of 1916 and directs the NPS to manage park lands in a manner that would not degrade park values” (P.L. 92 Statute 163).

Clean Water Act of 1972, as Amended

This Act establishes “the basic structure for the regulation of the discharge of pollutants into waters of the U.S. and quality standards for surface waters. Under this Act, it is against the law to discharge any pollutant from a point source into navigable waters without a permit” (33 U.S. Code 1251).

Clean Air Act of 1970, as Amended

This Act regulates air emissions from stationary and mobile sources and authorizes the Environmental Protection Agency (EPA) to establish National Ambient Air Quality Standards (NAAQS) in order to protect public health and welfare and regulate emissions of hazardous air pollutants (42 U.S. Code 7401).

1.6.2 Applicable State and Local Laws, Regulations, Policies, and Plans

Westphalia Comprehensive Concept Plan (2005)

The purpose of this plan is to supplement M-NCPPC planning for the 6,000-acre Westphalia area, Councilman District 6. This plan refines policies established by the 2002 General Plan and the 1994 Melwood-Westphalia plan. The major goal is to provide an updated vision and coordination and detailed guidance for several major developments that have begun to create the long planned Westphalia Community Center.

Westphalia Sector Plan and Sectional Map Amendment (2007)

This plan envisions the development of a unified, well-planned community focused on a high-density, transit- and pedestrian-oriented urban town center with ample public spaces suitable for community events. Improvements at the MD 4 and Suitland Parkway intersection are part of a strategy to develop gateways at key intersections that define Westphalia as an inviting and safe place.

Prince George’s County Approved General Plan (2002)

“The purpose of the General Plan is to provide broad guidance for future growth and development of Prince George’s County while providing for environmental protection and preservation of important land” (M-NCPPC 2002).

Plan Prince George’s 2035 Adopted General Plan (2014)

“The purpose of this plan is to make Prince George’s County a competitive force in the regional economy, a leader in sustainable growth, a community of strong neighborhoods and municipalities, and a place where residents are healthy and engaged” (M-NCPPC, 2014).

1.6.3 National Park Service Executive Orders and Director’s Orders

Director’s Order 12: Conservation Planning, Environmental Impact Analysis, and Decision-Making and Handbook

DO-12 establishes the policies and procedures under which the NPS would fulfill its responsibilities under NEPA. It provides the necessary direction for using interdisciplinary teams, incorporating scientific and technical information, and establishing a solid administrative record of actions (NPS 2001a).

Director’s Order 77-1: Wetland Protection

DO-77-1 establishes the policies, requirements, and standards to implement Executive Order (EO) 11990: Protection of Wetlands (NPS 2012).

Director’s Order 28: Cultural Resources Management

DO-28 states that the NPS shall operate in accordance with the NPS *Management Policies* to protect and manage the cultural resources in its custody through effective research, planning, and stewardship (NPS 1998).

Director’s Order 25: Land Protection

DO-25 provides the framework for land protection and the process for the acquisition of land and interests in land, within the authorized boundaries of units of the national park system (NPS 2001b).

Director’s Order 52C: Park Signs

DO-52C, along with the Sign Standards Reference Manual, establishes and implements standards for the planning, design, fabrication, installation, inventory, and maintenance of outdoor signs for national parks. The signs subject to these standards include motorist guidance signs both in, and leading to parks; traffic regulatory signs, park and facility identification signs; and other signs relating to safety, wayfinding, resource protection, interpretation, and general park information (NPS 2003).

Director’s Order 87A: Park Road Standards (1984)

DO-87A provides guidance for the construction and maintenance of NPS roads taking into consideration the need for the NPS to protect and preserve the natural and historical resources of the parks (NPS 1984).

Executive Order 11990: Protection of Wetlands

EO 11990 is intended to minimize the destruction, loss, or degradation of wetlands and to preserve and enhance the natural and beneficial value of wetlands. When plans are being made, EO 11990 requires federal agencies to consider alternatives to wetland sites and limit potential damage of activities affecting wetlands.

Executive Order 13287: Preserve America

EO 13287 states that “it is the policy of the Federal Government to provide leadership in preserving America’s heritage by actively advancing the protection, enhancement, and contemporary use of the historic properties owned by the Federal Government, and by promoting intergovernmental cooperation and partnerships for the preservation and use of historic properties.”

1.6.4 National Park Service Management Policies

The NPS *Management Policies* (NPS 2006) is the basic NPS-wide policy document, adherence to which is mandatory unless specifically waived or modified by the NPS director or certain departmental officials, including the U.S. Secretary of Interior. Actions under this EA are in part guided by these management policies:

- Section 4: Natural Resource Management
- Section 5: Cultural Resource Management
- Section 9: Park Facilities

1.7 SCOPING PROCESS AND PUBLIC PARTICIPATION

Per CEQ Regulations for Implementing NEPA Part 1501.7, “There shall be an early and open process for determining the scope of issues to be addressed and for identifying the significant issues related to a proposed action.” Scoping is the effort to involve agencies and the general public in determining the issues to be addressed in the environmental document. Among other tasks, scoping determines important issues; eliminates issues that are not important; allocates assignments among the interdisciplinary team members and/or other participating agencies; identifies related projects and associated documents; and identifies other permits, surveys, consultations, etc., required by other agencies.

The project team held an internal scoping meeting on December 12, 2013. During the meeting, the following topics were discussed: project schedule, project purpose and need, environmental issues and impacts topics, and conceptual alternatives.

Agency scoping was conducted at an Interagency Review Meeting facilitated by SHA on February 19, 2014. NPS and SHA project team members presented the project, including the Purpose and Need and Conceptual Alternatives. Agencies with representatives in attendance included the U.S. Army Corps of Engineers (USACE), Maryland Department of the Environment (MDE), Maryland Department of Planning (MDP), U.S. Fish and Wildlife Service (USFWS), the EPA, and the Maryland Department of Natural Resources (DNR). During the scoping meeting, the MDE representative suggested that NPS and SHA consider cumulative impacts to water resources as a result of JBA redevelopment projects.

In addition to internal and agency scoping, public scoping for this EA began on February 26, 2014 and concluded March 26, 2014. Notice of the public scoping period was posted on the NPS Planning, Environment, and Public Comment website (PEPC) (<http://parkplanning.nps.gov/NACE>). NPS also sent email notices of the meeting to individuals and organizations.

During the 30-day public comment period, comments were received from two individuals. One of the commenters cited concerns for traffic within the project area, specifically citing the need for improvements to southbound MD 4 from eastbound Suitland Parkway, as well as improvements to the MD 4 mainline between Dower House Road and Suitland Parkway in order to increase roadway capacity. The other commenter expressed interest in the project and requested to be included on the project mailing list.

1.8 IMPACT TOPICS

1.8.1 Impact Topics Analyzed in this Environmental Assessment

The following impact topics are discussed in **Chapter 3** (“Affected Environment”) and analyzed in **Chapter 4** (“Environmental Consequences”). The topics are resources of concern that could be beneficially or adversely affected by the actions proposed under each alternative and were developed to ensure that the alternatives are evaluated and compared based on the most relevant resource topics. These impact topics were identified based on issues raised during scoping, federal laws, regulations, executive orders, NPS 2006 Management Policies, and NPS knowledge of limited or easily impacted resources. A brief rationale for the selection of each impact topic is given below, as well as the rationale for dismissing specific topics from further consideration.

Topography and Soils

Improvements at the MD 4 and Suitland Parkway intersection would disturb the topography and soils in the project area. Grading, excavation, and removal of soils would be part of the construction activities. Therefore, impacts to the topography and soils will be further assessed.

Wetlands and Surface Waters

The NPS wetland management policy (DO-77-1) is to support “no net loss of wetlands” as directed by EO 11990. To define wetlands, the NPS uses the Cowardin Classification System, as outlined in *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin 1979). A wetland delineation of the project area identified multiple wetlands and stream resources. The wetlands are identified as forested, emergent, and scrub/shrub types. Due to the presence of wetlands and surface waters in the project area, possible impacts will be further assessed.

Vegetation

Suitland Parkway is bordered by trees that are a defining characteristic of the historic landscape. Improvements to the MD 4 and Suitland Parkway intersection would require clearing of some forested areas. Therefore, impacts to vegetation will be further assessed.

Wildlife Including Rare, Threatened, and Endangered Species

There are a variety of wildlife species that are common in the project area. Improvements to the MD 4 and Suitland Parkway intersection may disrupt and displace wildlife species and/or alter habitat. In a letter dated May 2, 2012 from the DNR, and online certification dated April 2, 2012 by USFWS, no federal or state listed species of concern were identified within the project area (**Appendix A**). Rare, threatened, or endangered species would not be affected by the project. However, impacts to vegetation and construction activity could impact wildlife. Therefore, impacts to wildlife will be further assessed.

Historic Structures and Districts

The Suitland Parkway is listed in the NRHP. The property is a nationally significant resource eligible under Criterion A for transportation and C for landscape architecture related to the parkway system developed during the first half of the twentieth century. Improvements to the MD 4 and Suitland Parkway intersection would impact the Suitland Parkway Historic District. Therefore, impacts to the district will be further assessed.

Cultural Landscapes

The Suitland Parkway is listed in the NR HP and changes to the intersection may impact the cultural landscape of the Parkway. Therefore, impacts to the cultural landscape will be further assessed.

Visitor Use and Experience

Suitland Parkway is a utilitarian roadway designed with features intended to move traffic expediently, but also designed to convey a scenic driving experience characteristic of the early parkways. The protection and enhancement of the landscape, aesthetic and viewshed, environmental, and cultural characteristics is a critical component of use and experience. Improvements to the MD 4 and Suitland Parkway intersection would impact these components. Therefore, impacts to visitor use and experience will be further assessed.

Transportation

MD 4 and Suitland Parkway is currently an at-grade, four-way, signalized intersection. The action alternatives propose to redesign this intersection as a grade separated interchange. The action alternatives would modify access within the project area, affecting the transportation network. Additionally, construction impacts would have temporary effects of transportation within the project area. Therefore, effects on traffic and transportation will be fully analyzed in this EA.

1.8.2 Impact Topics Dismissed from Further Analysis

The following impact topics were eliminated from further analysis in this EA. A brief rationale for dismissal is provided for each topic. Potential impacts to these resources would be negligible and localized.

Geology or Geologic Hazards

The action alternatives call for a redesign of the MD 4 and Suitland Parkway intersection. The action alternatives will require grading for construction, but the geology is not expected to be disrupted. In addition, there are no known geologic hazards in the project area. Therefore, these topics are dismissed from further analysis.

Water Quality

The action activities may affect water quality through temporary exposure of soils, an increase in impervious surface, and proposed stormwater management (SWM). Sediment erosion and sediment control (SE/SC) plans would be prepared in accordance with the MDE *2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control*. Typical mitigation measures of an SE/SC plan include permanent measures such as the establishment of temporary or permanent vegetative cover, slope protection structures, channel stabilization of open channels and existing streams or ditches, sediment barriers across or at the toe of slopes, and protection of storm sewer line inlets to intercept and retain sediment. In addition, temporary best management practices (BMPs), such as installation of silt fence and sediment trapping or filtering, would be utilized during construction to minimize erosion and sedimentation from ground-disturbing activities that expose bare soil. Temporary BMPs would be used only during construction and would be removed once the disturbed area has been permanently stabilized, if applicable. Implementation of such measures during construction would minimize sediment runoff. Stormwater management for the action alternative would be prepared and implemented in accordance with the *2000 Maryland Stormwater Design Manual, Volumes I & II* (MDE 2000), addressing long-term stormwater runoff. As a result of these measures, impacts on water quality would be negligible. Therefore, impacts to water quality are dismissed from further analysis.

Floodplains

EO 11988 (Floodplain Management) requires that the impacts to floodplains be examined as well as the potential risk involved in placing facilities within floodplains. The project site is not located within either a 100- or 500-year floodplain. Therefore, this impact topic is dismissed from further analysis in this EA.

Noise

A temporary increase in noise levels would result from the action alternatives and interchange construction would result in a slight increase in future traffic volumes for the build condition relative to the no-build condition. Suitland Parkway is primarily a transportation corridor for personal vehicles. No truck traffic, which would result in a higher level of noise, is permitted on Suitland Parkway. No residences or businesses are located within the project area, nor are there any approved development plans or other planned noise sensitive receivers (e.g., churches, schools, etc.) in the study area. Therefore, noise has been dismissed as an impact topic in this EA.

Air Quality

The project area is located in the Metropolitan Washington Air Quality Control Region. The USEPA has designated particulate matter less than 10 micrometers (PM₁₀), sulfur dioxide (SO₂), nitrogen dioxide (NO₂), and lead (Pb) as in attainment of the NAAQS. The EPA has designated Washington D.C. as a moderate non-attainment area for the criteria pollutant ozone (O₃) and as a non-attainment area for particulate matter less than 2.5 micrometers (PM_{2.5}). This airshed is in maintenance for carbon monoxide (CO).

The SHA completed an Air Quality Analysis as part of the environmental studies for the MD 4 corridor study in October 2013. The Air Quality Analysis determined that the proposed improvements of MD 4 at the Suitland Parkway intersection in Prince George's County would meet the Clean Air Act and 40 CFR 93.109 requirements for PM_{2.5} and CO. A more detailed hot-spot analysis is not required because the project was not found to be a *project of air quality concern* as defined under 40 CFR 93.123(b)(1). The project would not cause or contribute to a new violation of the PM_{2.5} or CO State and NAAQS, or increase the frequency or severity of an existing violation. This project has been determined to generate minimal air quality impacts for Clean Air Act CAA criteria pollutants and has not been linked with any special mobile source air toxics (MSAT) concerns. As such, this project would not result in changes in traffic volumes, vehicle mix, basic project location, or any other factor that would cause an increase in MSAT impacts of the project compared to that of the no-build alternative.

In November 2013, the Interagency Consultation Group, consisting of FHWA, EPA, MDE and the Metropolitan Planning Organization, concurred with this determination. The report was posted on SHA's website for public comment in December 2013. No comments were received. Based on these findings, the action alternatives would have negligible effects on air quality. Therefore, this impact topic has been dismissed from further detailed analysis in this EA.

Archeology

Based on the results of previous archaeological investigations in the survey area, and the extensive disturbance documented throughout the archaeological survey area, the undertaking would not impact significant archaeological sites. No further archaeological investigations are warranted, as concurred upon by the Maryland Historical Trust (MHT) through a consultation letter dated March 31, 2010. Therefore, this topic is dismissed from further analysis.

Museum Collections

There are no museum collections associated with the project. Therefore, this topic is dismissed from further analysis.

Ethnography

There are no sites, structures, objects, landscape features, or natural resource features that have any assigned traditional legendary, religious, subsistence, or other significance in the cultural system of a group traditionally associated with it. Therefore, this topic is dismissed from further analysis.

American Indian Traditional Cultural Properties

There are no American Indian Traditional Cultural Properties associated with the study area. Therefore, this topic is dismissed from further analysis.

Human Health and Safety

The project would not present a potential safety hazard to the public. Transportation improvements would result in increased safety for travelers on Suitland Parkway and MD 4. Therefore, this topic is dismissed from further analysis.

Land Use

The action alternatives include reconstruction of an existing roadway intersection. Though SHA is acquiring land from NPS, the land is currently being used to facilitate transportation and would continue with the same purpose. As a result, the overall lands use is not expected to change. Therefore, this topic is dismissed from further analysis.

Park Operations and Management

The action alternatives include a land transfer that would result in a minor reduction of the maintenance area of NPS staff. No adverse impacts to park operations or management would occur. As a result this topic is not analyzed in this EA.

Socioeconomics

The action alternatives would result in two business displacements, both located on the eastern portion of the proposed interchange. Displacements include an Exxon service station and the Presidential Corporate Center Visitor's Pavilion. The Exxon station was previously acquired by SHA and has since been demolished. SHA is presently in negotiation with Presidential Corporate Center for the acquisition of the Visitor's Pavilion. The action alternatives may provide a temporary benefit to the local economy with the hiring of construction workers and an increase in local revenue generated by the construction workers and activities. The transportation benefits, including improved mobility and efficiency of the area transportation network to move traffic volumes, would provide a minor economic benefit to the project area. No adverse impact to the socioeconomic environment would occur; therefore, this topic is dismissed from further analysis.

Environmental Justice

EO 12898, General Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, requires all federal agencies to incorporate environmental justice into their missions by

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identifying and addressing the disproportionately high and/or adverse human health or environmental effects of their programs and policies on minorities and low-income populations and communities.

According to the EPA, environmental justice is the:

“...fair treatment and meaningful involvement of all people, regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations and policies. Fair treatment means that no group of people, including a racial, ethnic, or socioeconomic group, should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies.”

The goal of ‘fair treatment’ is not to shift risks among populations, but to identify potentially disproportionately high and adverse effects and identify alternatives that may mitigate these impacts. Both minority and low-income populations are present near Suitland Parkway. The action alternatives require no residential relocations. Environmental justice is dismissed as an impact topic for the following reasons:

- The planning team actively solicited public participation as part of the planning process and gave equal consideration to all input from persons regardless of age, race, income status, or other socioeconomic or demographic factors.
- Implementation of the proposed alternatives would not result in any identifiable adverse human health effects. Therefore, there would be no direct or indirect adverse effects on any minority or low-income population.
- The impacts associated with implementation of the proposed alternatives would not have a disproportionate effect any minority or low-income population or community.
- Implementation of the proposed alternatives would not result in any identified effects that would be specific to any minority or low-income community.
- Any impacts to the socioeconomic environment would not appreciably alter the physical and social structure of the nearby communities.

The project has no potential to cause disproportionately high, or adverse impacts, to minority or low income populations; therefore, this topic dismissed from further analysis.

Energy Requirements and Conservation Potential

The project would not result in any adverse impacts relating to energy use, availability, or conservation. Therefore, this topic is dismissed from further analysis.

Climate Change

Based on traffic analysis completed by SHA in 2011, the existing average ADT volume for the MD 4 and Suitland Parkway intersection is 60,500. This volume is projected to increase to an ADT of 84,450 vehicles in 2030, the design year for the project. Construction activities related to the action alternatives would temporarily increase greenhouse gas emissions. However, the action alternatives would reduce current congestion allowing vehicles to travel at more fuel efficient speeds and result in an overall decrease of greenhouse gas emissions. An increase in fuel efficient technology and more stringent

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standards would decrease greenhouse gas emissions overall. The project would not be a contributing factor to climate change. Therefore, this topic is dismissed from further analysis.

CHAPTER 2: ALTERNATIVES

2.1 INTRODUCTION

This EA evaluates three alternatives for transportation improvements at the existing MD 4/Suitland Parkway intersection. These include the No Action (Alternative 1), and two action alternatives: a diamond roundabout interchange (Alternative 2) and a signalized diamond interchange with directional ramps (Alternative 3). Pursuant to DO-12 and the DO-12 Handbook, the NPS is required to identify the preferred alternative if one is known. The SHA has determined that Alternative 3 is the Preferred Alternative because it would best meet the project purpose and needs. Through continued coordination with SHA and FHWA, the NPS agrees that Alternative 3 is the Preferred Alternative. The environmentally preferred alternative has been identified as Alternative 1.

2.2 DESCRIPTION OF ALTERNATIVES

2.2.1 Alternative 1: No Action

The No Action Alternative describes the action of continuing the present transportation conditions. If the No Action Alternative were to be selected, the existing at-grade intersection would remain. The intersection of MD 4 and Suitland Parkway would continue to operate at a LOS F and congestion would remain an issue at the intersection.

2.2.2 Elements Common to Action Alternatives

The following design elements would be common to the implementation of Alternative 2 (diamond roundabout interchange) or Alternative 3 (signalized diamond interchange with directional ramp):

- MD 4 would be lowered and Suitland Parkway would be raised to an overpass, providing a grade separated interchange design;
- The existing loop ramp access from Old Marlboro Pike to westbound Suitland Parkway would be removed;
- Access to southbound MD 4 from Old Marlboro Pike and access to Old Marlboro Pike from southbound MD 4 would be provided via a newly constructed ramp from the realigned Old Marlboro Pike terminus, located immediately north of the Suitland Parkway boundary;
- Utility relocations would occur, including the relocation of an existing high pressure fuel line that runs parallel to the westbound lanes of Suitland Parkway and crosses under Suitland Parkway about 350 feet west of the intersection with MD 4, as detailed below;
- A bike/multi-use path connecting Presidential Parkway and developments north of the project with Old Marlboro Pike parallel to the westbound lanes of Suitland Parkway would be constructed;
- An NPS construction permit would be required to authorize interchange construction and requisite utility relocations; and
- A permanent transfer of land from NPS to SHA via a land exchange.

The relocation of the high pressure fuel line would include the removal of 3,250 linear feet of the existing fuel line from a tie-in location adjacent to the westbound lanes of Suitland Parkway to the existing JBA perimeter fence crossing, which is located adjacent to southbound MD 4. A 355 linear foot segment of fuel line would be abandoned in place as it travels along the rock walls paralleling the westbound lanes of

Suitland Parkway and under the existing Suitland Parkway Bridge over the entrance ramp to the JBA North Gate. 2,100 linear feet of new fuel line would be laid between the tie-in location and a new crossing under the JBA perimeter fence, resulting in a reduction of 1,150 linear feet of fuel line within this area. The new fuel line would extend south under existing Suitland Parkway, approximately 2,450 linear feet west of the existing intersection with MD 4. The fuel line would continue parallel to the eastbound lanes of Suitland Parkway until turning south to the new JBA perimeter fence crossing, located approximately 1,200 linear feet west of the existing intersection with MD 4. An easement dedicated to the relocated fuel line would be included in the aforementioned land transfer.

2.2.3 Alternative 2: Diamond Roundabout Interchange

Alternative 2 would construct a diamond roundabout at the existing MD 4/Suitland Parkway intersection (**Figure 2**). This alternative was identified in the 2000 FONSI by FHWA and SHA. The interchange would consist of two roundabouts constructed on either side of the MD 4 overpass of Suitland Parkway, at the terminus of the MD 4 on- off-ramps. All traffic traversing the intersection would circumnavigate the two roundabouts located at the ramp terminals of the interchange. Access to the JBA North Gate would not be modified. A short directional ramp would be constructed from the JBA North Gate to MD 4 southbound. This alternative would require a land transfer of 10.9 acres from NPS to SHA to facilitate the improvement and expansion of the intersection MD 4 and Suitland Parkway.

This alternative was identified by FHWA in the 2000 FONSI as the selected alternative and is the subject of a Memorandum of Agreement (MOA) executed in 1999 between the FHWA, NPS, MHT, the Advisory Council on Historic Preservation (ACHP), and SHA.

2.2.4 Alternative 3: Signalized Diamond Interchange with Directional Ramp

Alternative 3 would construct a grade-separated, signalized diamond interchange with a directional ramp at the intersection of MD 4 and Suitland Parkway/Presidential Parkway (**Figure 3**). The centerline of MD 4 would be shifted approximately 75 feet east to reduce impacts to Suitland Parkway. A four-way signalized intersection would be constructed with Suitland Parkway west of MD 4 to control traffic from the southbound MD 4 on- and off-ramps. The eastern leg of the interchange (existing Presidential Parkway) would be extended east as outlined in Prince George's County approved developer plans for the area. The extended east-west route would be renamed Central Park Drive. Presidential Parkway would be realigned to connect with Central Park Drive at an intersection east of the intersection with northbound MD 4 on- and off-ramps.

In addition to raising the profile of Suitland Parkway, it would be widened as it approaches MD 4. In the proposed typical section, the two 12-foot westbound lanes of Suitland Parkway would remain unaltered; however, in the eastbound direction, the two existing 12-foot lanes would be widened to four 12-foot lanes. This lane widening would result in the reconstruction of the south side of the Suitland Parkway Bridge over the entrance ramp to the JBA North Gate. The four lanes would include two through lanes, a combined through right-turn lane, and an exclusive right-turn lane that would proceed onto southbound MD 4 via a channelized right-turn ramp.

From the northbound MD 4 off-ramp, a two-lane directional ramp would be constructed to facilitate a free-flow movement from northbound MD 4 to westbound Suitland Parkway, crossing over existing

Presidential Parkway then curving west to cross over MD 4, descending to a tie-in with westbound Suitland Parkway immediately west of the existing ramp from Old Marlboro Pike and the JBA North Gate.

The existing ramp from Old Marlboro Pike to westbound Suitland Parkway would be removed. Alternative 3 would also remove the existing loop ramp from westbound Suitland Parkway to the JBA North Gate. Access to the JBA North Gate would be provided via a newly constructed road extending from the Old Marlboro Pike access road south, under the directional ramp and the Suitland Parkway Bridge over the entrance ramp to JBA North Gate. The existing ramp from JBA North Gate to southbound MD 4 via Suitland Parkway would be removed. Access to southbound MD 4 would be provided via the aforementioned access road providing a connection to Old Marlboro Pike. By way of this road, drivers would have the option to continue, via a right-hand turn, onto southbound MD 4. The access ramp from JBA North Gate to westbound Suitland Parkway would be reconstructed to align with the directional ramp tie-in to westbound Suitland Parkway.

Alternative 3 would require the permanent transfer of 6.9 acres of Suitland Parkway from NPS to SHA. Areas identified for permanent transfer include:

- The land that would be occupied by the directional ramp from MD 4 northbound to Suitland Parkway westbound as it traverses Suitland Parkway property, north of the Suitland Parkway mainline;
- Suitland Parkway approaches to the proposed interchange from immediately east of the bridge over the entrance ramp to JBA to the existing SHA ROW; and
- The land that would be occupied by the directional ramp connecting eastbound Suitland Parkway with southbound MD 4.

The aforementioned construction permit would be issued for an additional 18-acre easement area, required to facilitate construction including: staging areas, areas for grading and drainage, the resurfacing and reconstruction of the approach roadways, construction of the bike/multi-use path, areas for re-vegetation, and post-construction vegetation monitoring and invasive species management. There would be no permanent change in the ownership of the easement area.

2.3 CONSTRUCTION AND STAGING

For the action alternatives, construction staging would be identified by a Design-Build contractor prior to construction. The staging areas would be selected to minimize resource impacts and meet the needs of the contractor based on the construction phasing plan.

Construction of either action alternative would occur in phases. Drivers of MD 4 and Suitland Parkway and users of the JBA North Gate would be notified in advance of any closures or detours required for construction. Notifications could include electronic signage, postings to the NPS and SHA websites and social network pages, and email blasts to interested parties identified during the planning process.

Construction would begin with clearing and grubbing focused on the east side of MD 4. Activities would include minor grading work and subsequent soil stabilization. Individual utility relocations would occur with the next phase of construction. Once the utilities are in place, the project would be constructed in

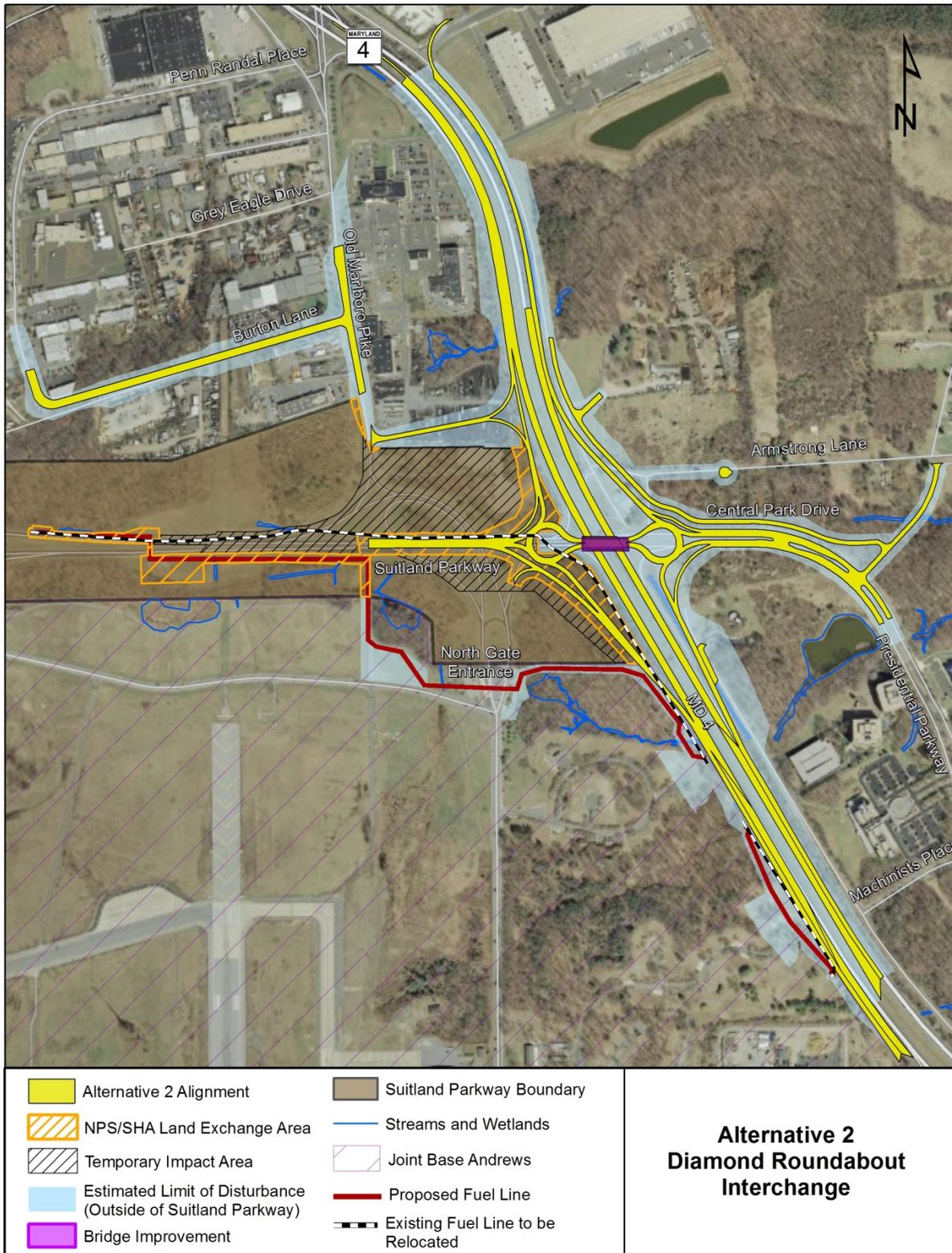


Figure 2: Alternative 2 (Diamond Roundabout Interchange)

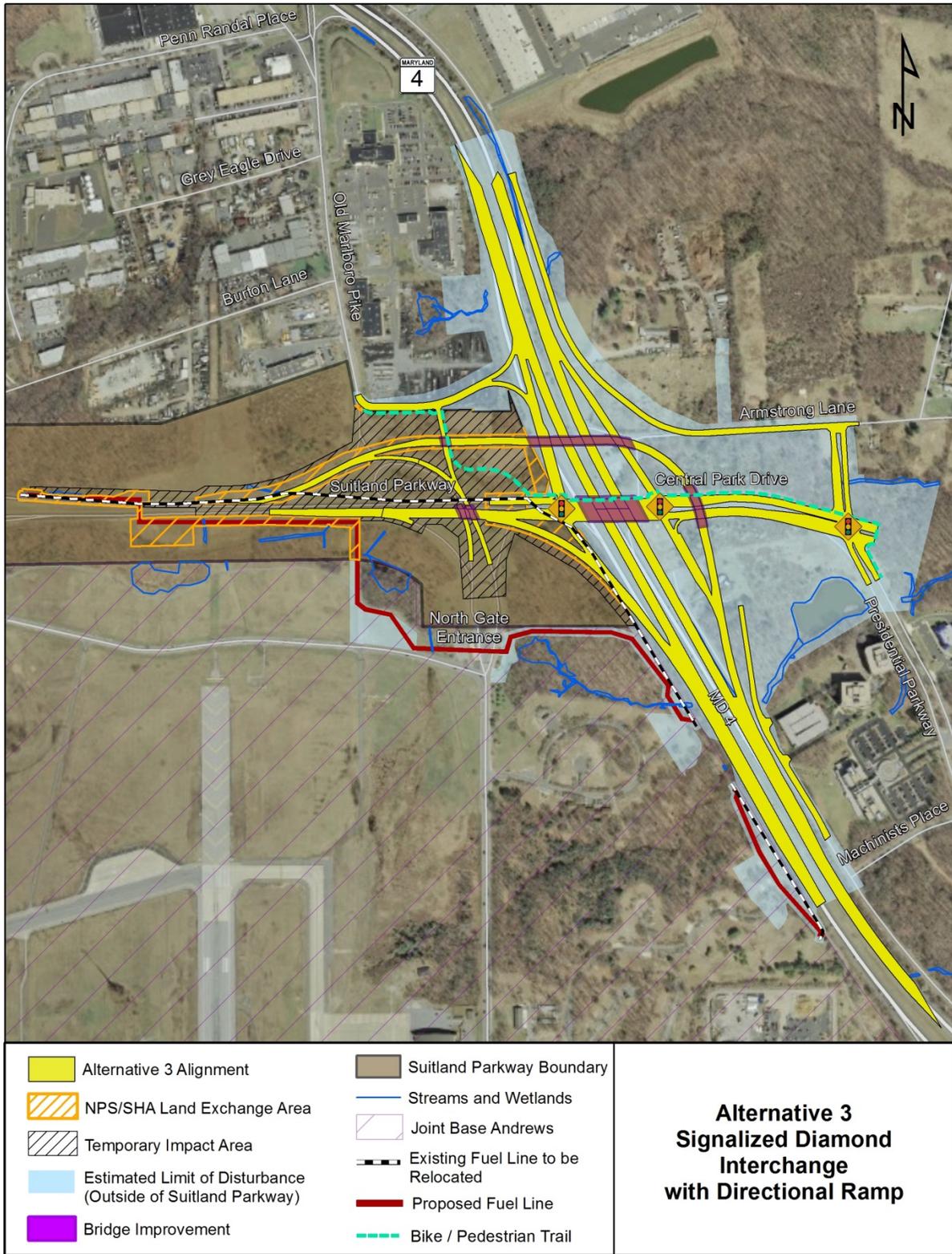


Figure 3: Alternative 3 (Signalized Diamond Interchange with Directional Ramp)

multiple phases. The construction of the project is anticipated to last approximately four construction seasons (years).

2.4 MITIGATION MEASURES OF THE ACTION ALTERNATIVES

The NPS places a strong emphasis on avoiding, minimizing, and mitigating potential adverse environmental impacts. The SHA would ensure all appropriate regulations are implemented to assure compliance during the construction phase of the selected alternative. The NPS would implement an appropriate level of monitoring throughout the construction process to help ensure that protective measures would be properly implemented to achieve their intended results.

2.4.1 Topography and Soils

The SE/SC plans would be prepared in accordance with MDE *2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control*. Typically an SE/SC plan would include permanent mitigation measures such as the establishment of temporary or permanent vegetative cover, slope protection structures, channel stabilization of open channels and existing streams or ditches, sediment barriers across or at the toe of slopes, and protection of storm sewer line inlets to intercept and retain sediment. Implementation of such measures during construction would minimize sediment runoff. In addition, temporary BMPs, such as installation of silt fence and sediment trapping or filtering would be utilized during construction to minimize erosion and sedimentation from ground disturbing activities that expose bare soil. Temporary BMPs would be used only during construction and would be removed once the disturbed area has been permanently stabilized, if applicable.

2.4.2 Wetlands and Surface Waters

Implementation of erosion and sediment control practices, such as installation of a silt fence, sediment trapping or filtering, and other BMPs, would minimize temporary impacts to water quality and wetlands during construction. Per DNR correspondence dated April 29, 2014, no instream work is permitted in Use I streams from March 1 through June 15, inclusive, during any year. Existing riparian vegetation in the area of stream channels would be preserved as much as possible to maintain aquatic habitat and provide shading to the stream. Areas designated for access of equipment and for the removal or disposal of material would avoid impacts to the stream and associated riparian vegetation to the extent feasible. Any temporarily disturbed areas would be restored and re-vegetated (**Appendix A**).

The SHA has coordinated mitigation for stream impacts associated with the action alternatives by providing stream stabilization at Marbury Drive in District Heights, Maryland. In August 2013, SHA confirmed agency support of the proposed mitigation. The proposed stream stabilization would consist of placement/creation of structures such as imbricated riprap, sills and rock vanes, and plunge pools. A stream buffer would also be established through the planting of native plants and the discontinuation of mowing within the stream banks. As outlined by Code of Maryland Regulations (COMAR) 26.23.03.01, MDE does not require mitigation for permanent wetland impacts less than 5,000 square feet. Wetland impacts resulting from the action alternatives would be less than this threshold; therefore, MDE requires no wetland mitigation.

Stormwater management for the action alternative would be prepared and implemented in accordance with the *2000 Maryland Stormwater Design Manual, Volumes I & II* (MDE 2000), addressing long-term

stormwater runoff. Two large SWM facilities, to be located along Presidential Parkway, have been designed to address the requirements. The SHA would construct a new SWM pond just north of Citizens Way, and would expand and enhance an existing pond that is owned by Prince George's County, south of Citizens Way. The two facilities would have a combined capacity of 16 acre-feet, providing both qualitative and quantitative SWM. The SWM design has been reviewed by MDE. Approval is anticipated in Summer 2014.

2.4.3 Vegetation

Protection measures and BMPs would be implemented to avoid impacts to park vegetation to the extent possible. Vegetative protection measures would be detailed in the design phase of the project and may include, but would not be limited to: evaluation of large trees and development of a tree save plan by an arborist or licensed tree expert; installation of tree protection fencing; root pruning for trees whose critical root zones (CRZs) lie within proposed construction area; minimizing tree cutting to the extent possible; and staging construction equipment to avoid damage to park vegetation. The MD Forest Conservation Act requires 1:1 replacement of impacted woodlands (DNR 1991). A landscaping plan would be developed in coordination with the NPS and MHT. The landscaping plan would incorporate grading and planting trees, shrubbery and other plants that are visually and historically compatible with the existing historic landscape of the Suitland Parkway. As part of vegetative maintenance, SHA would, in consultation with NPS and MHT, develop and implement an invasive plant removal plan for the area within the MD 4/Suitland Parkway project limits, including the former NPS storage yard.

2.4.4 Wildlife

Following construction, re-vegetation in accordance with the aforementioned landscaping plan would incorporate native vegetation that, upon maturity, would provide food and shelter for wildlife species displaced by habitat removal during construction.

2.4.5 Historic Structures and Districts

Suitland Parkway is a historic district listed on the NRHP. Each of the action alternatives would require a land exchange that would include the transfer of Suitland Parkway land to SHA. Both of the alternatives would have an *adverse effect* on Suitland Parkway, pursuant to Section 106 (36 CFR 800.5) (**Appendix B**). An MOA was signed and completed on August 20, 1999 that proposed measures to mitigate the impacts to Suitland Parkway based on Alternative 2 (diamond roundabout interchange). Some of these mitigation measures include: an interchange design commensurate with a symbolic entrance to Washington D.C.; construction of low stone walls; a distinctive bridge design, including dressings of stone or with stone abutments; appropriate landscaping including reforestation; timber or stone guardrails; and signage compatible with the NPS standards for size and color (SHA 2000).

Commensurate with the development of Alternative 3 (signalized diamond interchange with directional ramps), a new MOA is being developed (**Appendix C**). Some of the measures to minimize effects to Suitland Parkway include: salvaging and reusing the historic stone cladding from the Suitland Parkway Bridge over the JBA North Gate entrance; matching the color and texture of the mortar used on the south side of the bridge to the original; using a mason with at least five years of experience repointing historic masonry bridges; and using a stone and mortar bonding pattern on the exterior of the parapets and abutments of the directional ramp that is similar to the pattern on the Suitland Parkway Bridge. As

mitigation for the land transfer, SHA has acquired 12.8 acres of land adjacent to Fort Foote. Fort Foote is situated on the northern bank of the Potomac River, located in southeast Prince George's County, in Fort Washington, Maryland. Like Suitland Parkway, Fort Foote is managed by NPS NACE. The SHA is proposing to transfer this land to NPS as mitigation for impacts to Suitland Parkway. This land would provide a natural buffer between Fort Foote and the surrounding residential area.

As outlined in the draft MOA, should construction unearth previously undiscovered archeological resources, work will be stopped in the area of any discovery and consultation with the State Historic Preservation Officer (SHPO)/Tribal Historic Preservation Officer and the ACHP will be needed as necessary (36 CFR 800.13). In the unlikely event that human remains are discovered during construction, provisions outlined in the Native American Graves Protection and Repatriation Act of 1990 will be followed as appropriate.

2.4.6 Cultural Landscapes

Design considerations of the action alternatives that would minimize harm to Suitland Parkway include carrying Suitland Parkway over MD 4, thus reducing the visual effect to the cultural landscape. Alternative 3 shifts the MD 4 alignment 75 feet east of its current alignment, minimizing the ROW required from NPS. In addition, the two-lane directional ramp reduces to a single-lane prior to tie in with westbound Suitland Parkway, thus reducing the visual impact to the landscape.

A landscaping plan is being developed in coordination with the NPS and MHT. The landscaping plan will incorporate grading as well as planting trees, shrubbery, and other plants that are visually and historically compatible with the cultural landscape of Suitland Parkway. Through consultation with NPS and MHT, SHA has developed signage, lighting and surface treatments for the action alternatives that would be compatible with the cultural landscape.

2.4.7 Visitor Use and Experience

Suitland Parkway users would be notified of changes in traffic patterns as well as road closures by public notification including: detour signage, NPS and SHA websites, social media, email, and listserv notices. Construction equipment would be placed in a manner that causes the least disruption and visual disturbance to Parkway users. Per the draft MOA, appropriate design and landscaping techniques will be utilized to maintain the parkway experience for visitors.

2.4.8 Transportation

All work would be performed in accordance to the SHA work zone traffic control management strategies (SHA 2006). Construction of the interchange will cause changes in traffic patterns as well as road closures. A plan will be developed to maintain traffic and minimize impacts to commuters. The minimization tactics include; electronic notification, detour signage, NPS and SHA websites, social media, emails, and listserv notices.

2.5 ALTERNATIVES CONSIDERED BUT DISMISSED

The FHWA and SHA completed a draft Section 4(f) Evaluation in accordance with 23 CFR Part 774 and 49 U.S.C. 303 to evaluate options that avoid or minimize impacts to Suitland Parkway (**Appendix D**). The alternatives evaluated do not meet the project purpose and need, or would have severe additional

impacts compared to the action alternatives; therefore, these alternatives were not retained for detailed evaluation in this EA. Each of the alternatives described in the Section 4(f) Evaluation is summarized in **Table 1**.

Table 1: Alternatives Considered but Dismissed

ALTERNATIVE	DESCRIPTION	REASONS DISMISSED
Upgraded At-Grade MD 4 and Suitland Parkway Intersection East of Existing Intersection	The entire intersection would be expanded in order to accommodate existing and future traffic volumes as well as be realigned to the east. This would allow for the intersection upgrades and avoid impacts to Suitland Parkway property. The expansion of the intersection would be limited to adding a left-turn lane from MD 4 northbound to Suitland Parkway westbound resulting in three left-turn lanes. Additionally, two channelized right-turn lanes from eastbound Suitland Parkway to southbound MD 4 could be constructed without impacting Suitland Parkway property.	This alternative would provide some increase in capacity at the intersection; however, these minor improvements would not address the substantial increase in traffic volumes. The intersection would also maintain the same number of conflict points. The addition of turn lanes would exacerbate the existing difficulties for pedestrians and bicyclists navigating across MD 4.
Shift Signalized Diamond Interchange with Directional Ramp East	The alignment of MD 4 would be shifted east and an interchange would be constructed with the signalized diamond and directional ramp design. This shift of the alignment would require the realignment of Presidential Parkway, which would intersect with Central Park Drive at an at-grade intersection east of the directional ramp.	This alternative would displace four office buildings and the Prince George's County storm water management pond would need to be reconstructed.
Extend Presidential Parkway to Connect to an Expanded Dower House Road Interchange	Suitland Parkway, after bridging over MD 4, would tie into Central Park Drive and Presidential Parkway. Presidential Parkway would be extended south to connect with MD 4 at a proposed interchange with Dower House Road. There would be no access provided between MD 4 and Suitland Parkway.	The projected increase in traffic from this alternative on Presidential Parkway would substantially exceed the functional classification of this roadway. Increased traffic volumes would increase conflict points and present a condition inconsistent with driver expectations coming off of Suitland Parkway. Traffic volume would result in operational failure at the intersections on either side of the interchange. Impacts to existing and planned developments east of MD 4 would result in severe economic impacts.
Single-Point Urban Interchange	Retaining walls would be constructed to allow the placement of MD 4 on- and off- ramps closer to MD 4. Access at the north and southbound on- and off-ramps would be controlled through a single signalized intersection.	This alternative would not provide adequate capacity for the peak hour movement from northbound MD 4 to westbound Suitland Parkway. A large pavement area in the middle of the intersection would present challenges for bikes attempting to get through the entire intersection before the signal changes. This design would not be compatible with pedestrian or bike access.
Diverging Diamond Interchange	The MD 4 on-and off- ramps would converge with the Suitland Parkway/Central Park Drive main route at signalized intersections on either side of the MD 4 overpass. This interchange design would require traffic on the Suitland Parkway/Central Park Drive overpass to drive on the left side of the road. Signals on either side of the overpass would control this movement. This would allow vehicles from the MD 4 off-ramps continuous flow turn lanes in both directions onto Suitland Parkway.	This alternative would require extensive driver education to familiarize users with the operations of this interchange, which would present potential safety concerns. Additional signage, lighting, and pavement would be needed, beyond those typical of a standard diamond interchange. Safety concerns would arise from the complicated pedestrian route for crossing the bridge.
Urban Diamond Interchange	Retaining walls would be used between each MD 4 on- and off-ramp and the MD 4 mainline in order to place the interchange ramps closer to MD 4. The ramps would meet at signalized intersections located above, and on either side of, MD 4.	The signals at the interchange ramps termini would not accommodate the existing and future traffic volumes for this movement, resulting in lengthy intersection queues along the ramp from northbound MD 4.

ALTERNATIVE	DESCRIPTION	REASONS DISMISSED
Table Roundabout Interchange	The configuration of the intersection would include a large roundabout at the center of the MD 4 and Suitland Parkway interchange that would address all turning movements. A direct ramp from Suitland Parkway eastbound to MD 4 southbound would be provided. The roundabout would be constructed at an elevated grade over MD 4 requiring the construction of two bridges spanning MD 4.	This alternative would result in operational breakdown due to the high volume of traffic entering the roundabout. There would also be pedestrian and bike safety concerns through or around the roundabout from multiple conflict points.
Partial Cloverleaf Interchange	Under this alternative, the MD 4 mainline would be shifted 75 feet east of its existing alignment. Loop ramps would be constructed in both the north and south quadrants on the west side of MD 4. It would also require three separate bridges in addition to numerous access ramps.	This alternative would not provide adequate capacity for the volume of traffic circumnavigating the interchange from northbound MD 4 to westbound Suitland Parkway. The weaving areas compromise the operations of this design.
Folded Diamond Interchange	Double ramps in both the northeast and southwest quadrants of the interchange would be constructed. The approaches of Suitland Parkway and Presidential Parkway would each be widened to ten lanes in order to allow for adequate navigation of the ramps on either side of MD 4.	This alternative would allow adequate traffic capacity and improve safety for vehicles, bikes, and pedestrians; however the Suitland Parkway Bridge over the entrance ramp to JBA North Gate would undergo full reconstruction. The wide roadway, complex design, and numerous ramps would reduce the area of impact to Suitland Parkway, but would cause greater harm to the character of the Parkway.
Eliminate Northbound MD 4 to Suitland Parkway Directional Ramp	A traditional diamond interchange would be constructed without the directional ramp to facilitate travel from northbound MD 4 to Suitland Parkway. This alternative would require all traffic from northbound MD 4 onto westbound Suitland Parkway make a left-turn at the signalized intersection located on the east side of the interchange.	This alternative would not accommodate existing and future traffic volumes, resulting in lengthy intersection queues along the ramp from MD 4.
Eliminate Channelized Right-Turn Ramp	Under this alternative, the channelized right-turn ramp from Suitland Parkway to southbound MD 4 would be eliminated. All traffic traveling from eastbound Suitland Parkway to southbound MD 4 would need to turn right at the signalized intersection on the west side of MD 4.	This alternative would not accommodate existing and future traffic volumes, resulting in lengthy intersection queues along Suitland Parkway.

2.6 PREFERRED ALTERNATIVE

The SHA has identified Alternative 3 as the alternative which best meets the purpose and need for improvements at the MD 4/Suitland Parkway intersection. The elimination of an at-grade intersection in favor of a grade-separated interchange would remove a major conflict point caused by the signal on MD 4, and would separate through traffic on MD 4 from Suitland Parkway. In addition, providing separated free flow lanes for the main movements – from northbound MD 4 to westbound Suitland Parkway and from eastbound Suitland Parkway to southbound MD 4 – would substantially improve operations at the interchange. The left-turns at the ramp terminal signalized intersections on the overpass would have fewer opposing vehicles, compared to the existing signal on MD 4, because of the grade separation from MD 4.

The SHA Value Engineering Study completed in 2004 found that proposed development in Prince Georges, Anne Arundel, and Calvert Counties, would cause a substantial increase in traffic at the MD 4/Suitland Parkway intersection. The traffic volumes would be particularly high for northbound MD 4 to westbound Suitland Parkway, and for eastbound Suitland Parkway to southbound MD 4. To address these conditions, Alternative 3 provides unsignalized directional ramps for both of these movements. Alternative 3 also provides improvements to the JBA North Gate entrance roadways that would better serve the traffic entering and exiting the base.

As detailed in **Chapter 2.5**, FHWA and SHA prepared a draft Section 4(f) Evaluation that further evaluated numerous alternatives to Alternative 3 that would avoid or minimize impacts to Suitland Parkway.

The roundabout interchange design of Alternative 2 would have failing traffic operations upon opening, resulting in lengthy queues along the ramp from northbound MD 4. Moreover, the east-west movement along Suitland Parkway through the interchange would be affected as the volume of traffic entering from the peak flow legs would consume the available capacity of the roundabout and prevent other traffic from entering the roundabout. The interchange would also operate with less efficient weave conditions for traffic leaving JBA toward southbound MD 4, creating additional potential conflict points and reducing the effective management of congestion for this movement. The roundabout design would be difficult for pedestrians and bicycles to navigate safely.

Based on the findings of the SHA Value Engineering Study, the draft Section 4(f) Evaluation, and the analysis in this EA, SHA has determined that Alternative 3 would better accommodate the increased traffic compared to Alternative 2. Therefore, Alternative 3: Signalized Diamond with Direction Ramp is the Preferred Alternative because it would best meet the project purpose and need. Through continued coordination with SHA and FHWA, the NPS agrees that Alternative 3 is the Preferred Alternative.

2.7 ENVIRONMENTALLY PREFERABLE ALTERNATIVE

The NPS is required to identify the “environmentally preferable alternative” in its NEPA documents for public review and comment. The NPS, in accordance with the Department of the Interior policies contained in the Departmental Manual (516 DM 4.10) and CEQ's NEPA's Forty Most Asked Questions, defines the environmentally preferable alternative (or alternatives) as the alternative that best promotes the national environmental policy expressed in NEPA (Section 101(b) (516 DM 4.10). In their Forty Most Asked Questions, CEQ further clarifies the identification of the environmentally preferable alternative, stating “Ordinarily, this means the alternative that causes the least damage to the biological and physical environment; it also means the alternative which best protects, preserves, and enhances historic, cultural, and natural resources” (Q6a).

As evaluated against the CEQ regulations, Alternative 1: the No Action Alternative is the Environmentally Preferable Alternative as it would have minimal environmental impacts. Alternative 1 would result in impacts to transportation as traffic volumes increase. Lengthy queues and delays would continue along Suitland Parkway and MD 4. However, there would be no impacts to soils, vegetation, wetlands, wildlife, and cultural resources from Alternative 1. Implementation of either of the action alternatives would improve traffic conditions in the project area; however, the impacts to soils, vegetation, wetlands, wildlife, and cultural resources within the project area would far exceed those impacts that would occur under Alternative 1: the No Action Alternative. A summary of environmental consequences for each alternative is provided in **Table 2**.

Table 2: Summary of Environmental Consequences

AFFECTED RESOURCE	ALTERNATIVE 1: NO ACTION	ALTERNATIVE 2: DIAMOND ROUNDABOUT INTERCHANGE	ALTERNATIVE 3: SIGNALIZED DIAMOND INTERCHANGE WITH DIRECTIONAL RAMP
Topography and Soils	The No Action Alternative would have no impacts on soils or topography.	There would be short- and long-term minor adverse impacts from 18.2 acres of temporary and 7.7 acres of permanent earth disturbance. Alternative 2 would contribute a long-term minor adverse cumulative impact within the project area and watershed.	There would be short- and long-term minor adverse impacts from 20.7 acres of temporary and 6.0 acres of permanent earth disturbance. Alternative 3 would contribute a long-term minor adverse cumulative impact within the project area and watershed.
Wetlands	The No Action Alternative would have no impacts on wetlands.	There would be short- and long-term minor adverse impacts from less than 0.1 acre of temporary and less than 0.1 acre of permanent wetland disturbance. Alternative 2 would contribute a long-term minor adverse cumulative impact within the project area and watershed.	There would be short- and long-term minor adverse impacts from less than 0.1 acre of temporary and less than 0.1 acre of permanent wetland disturbance. Alternative 3 would contribute a long-term minor adverse cumulative impact within the project area and watershed.
Vegetation	The No Action Alternative would have no impacts on vegetation.	There would be short- and long-term moderate adverse impacts from 20.0 acres of permanent vegetation disturbance, including 5.6 acres of forest disturbance. Alternative 2 would contribute a long-term moderate adverse cumulative impact within the project area and watershed.	There would be short- and long-term moderate adverse impacts from 20.7 acres of permanent vegetation disturbance, including 4.7 acres of forest disturbance. Alternative 3 would contribute a long-term moderate adverse cumulative impact within the project area and watershed.
Wildlife	The No Action Alternative would have no impacts on wildlife.	There would be short- and long-term minor adverse impacts from the permanent disturbance of 5.6 acres of forested habitat and less than 0.1 acre of wetland habitat. Alternative 2 would contribute a long-term minor adverse cumulative impact within the project area.	There would be short- and long-term minor adverse impacts from the permanent disturbance of 4.7 acres of forested habitat and less than 0.1 acre of wetland habitat. Alternative 3 would contribute a long-term minor adverse cumulative impact within the project area.
Historic Structures and Districts	The No Action Alternative would have no impacts on historic structures and districts.	There would be long-term moderate adverse impacts from construction, including the transfer of 10.9 acres of NPS lands to SHA. Alternative 2 would have no contribution to cumulative impacts.	There would be long-term moderate adverse impacts from construction, including the transfer of 6.9 acres of NPS lands to SHA. Alternative 3 would have no contribution to cumulative impacts.
Cultural Landscapes	The No Action Alternative would have long-term negligible adverse impacts. Alternative 1 would have no contribution to cumulative impacts.	There would be long-term moderate adverse impacts. Alternative 2 would have no contribution to cumulative impacts.	There would be long-term moderate adverse impacts. Alternative 3 would have no contribution to cumulative impacts.

ALTERNATIVES

AFFECTED RESOURCE	ALTERNATIVE 1: NO ACTION	ALTERNATIVE 2: DIAMOND ROUNDABOUT INTERCHANGE	ALTERNATIVE 3: SIGNALIZED DIAMOND INTERCHANGE WITH DIRECTIONAL RAMP
Visitor Use and Experience	The No Action Alternative would have a long-term moderate adverse impacts. Alternative 1 would have no contribution to cumulative impacts.	There would be short- and long-term minor adverse impacts. Alternative 2 would have no contribution to cumulative impacts.	There would be short-term minor adverse impacts and long-term benefits. Alternative 3 would have no contribution to cumulative impacts.
Transportation	The No Action Alternative would have long-term moderate adverse impacts. Alternative 1 would contribute a long-term major adverse cumulative impact within the project area.	There would be short-term minor adverse impacts and long-term moderate adverse impacts. Alternative 2 would contribute a long-term moderate adverse cumulative impact within the project area.	There would be short-term minor adverse impacts and long-term benefits. Alternative 3 would contribute a long-term cumulative benefit within the project area.

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CHAPTER 3: AFFECTED ENVIRONMENT

This chapter of the EA describes the existing environmental conditions in the area potentially impacted by the alternatives evaluated in this study. The project area is geographically defined in the Purpose and Need as the NPS property between the MD 4 and Suitland Parkway Interchange and where Allentown Road merges with Suitland Parkway. The historic district, cultural resources, and visitor use/experience take into account Suitland Parkway in its entirety.

3.1 TOPOGRAPHY AND SOILS

The project area topography is generally flat to gently rolling, which is characteristic of the Atlantic Coastal Plain Physiographic Province. Elevations range from 280 to 240 feet within the project area.

There are 13 soil types found in the project area, as described in **Table 3** and mapped in **Figure 4**.

Table 3: Mapped Soils in the Project Area

MAP SYMBOL	SOIL MAPPING UNIT	FARMLAND CLASSIFICATION	HYDRIC SOIL (Yes/No)
Px	Potomac-Issue complex	Not Prime Farmland	Yes
UdbD	Udorthents, loamy, 5-15% slopes	Not Prime Farmland	No
MoB	Marr-Dodon-Urban land complex, 0-5% slopes	Prime Farmland Soil	No
MnC	Marr-Dodon complex, 5-10% slopes	Statewide Important	No
SnD	Sassafras-Urban land complex, 5-15% slopes	Not Prime Farmland	No
DfA	Dodon fine sandy loam, 0-2% slopes	Prime Farmland Soil	No
SnB	Sassafras-Urban land complex, 0-5% slopes	Not Prime Farmland	No
BaB	Beltsville silt loam, 2-5% slopes	Prime Farmland Soil	Yes
BuB	Beltsville-Urban land complex, 0-5% slopes	Not Prime Farmland	Yes
GgC	Grosstown gravelly silt loam, 5-10% slopes	Statewide Important	No
UdaF	Udorthents, highway, 0-65% slopes	Not Prime Farmland	No
UrmB	Urban-land-Marr-Dodon complex, 0-5% slopes	Not Prime Farmland	No
WoC	Woodstown sandy loam, 5-10% slopes	Statewide Important	No

Of the 13 soil types within the project area, three are Prime Farmland Soils and three are Statewide Important Farmland Soils. The three Prime Farmland Soils include Marr-Dodon-Urban land complex (MoB), Dodon fine sandy loam (DfA), and Beltsville silt loam (BaB). The three Statewide Important Farmland Soils include Marr-Dodon complex (MnC), Grosstown gravelly silt loam (GgC), and Woodstown sandy loam (WoC) (USDA 2014). However, none of these areas are actively farmed lands.

Predominant soil types are Udorthents, Marr, and Beltsville. Udorthents are soils that have been previously used for refuse or disposal, meaning that the original soil composition has been forever altered and now consists of the original soil (unknown), refuse disposal, and imported fill material. The Marr series consists of deep, well drained soils that are often used for farming, and is formed in a loose layer of unconsolidated, sandy sediments. The Beltsville series consists of very deep, moderately well drained soils that are typically used for woodlands, croplands, and urban development (USDA 2014).



Figure 4: Existing Environmental Features of the Project Area

3.2 WETLANDS AND SURFACE WATERS

Wetlands are areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions (USACE 1987). As such, the USACE requires that areas be dominated by hydrophytic vegetation, contain hydric soils, and display indicators of hydrology to be considered a wetland. The NPS definition of wetlands is similar to that of the EPA and the USACE; however, it is broader than the USACE 404 permit program definition and therefore covers a broader range of wetland habitat types. The NPS classifies wetlands based on the USFWS *Classification of Wetlands and Deepwater Habitats of the United States*, also called the Cowardin classification system (Cowardin et al. 1979). Based on this classification system, a wetland must only have one or more of the following attributes:

- The habitat at least periodically supports predominantly hydrophytic (wetland) vegetation;
- The substrate is predominantly undrained hydric soil; or
- The substrate is nonsoil and saturated with water, or is covered by shallow water at some time during the growing season (Cowardin et al. 1979).

In 1977, President Carter issued EO 11990: Protection of Wetlands. In response to EO 11990, the NPS issued DO-77-1: *Wetland Protection* (NPS 2012). This order directed the NPS to use the USFWS definition and methodology as the standard for identifying, classifying, and inventorying wetlands when NPS actions have the potential to adversely impact wetlands. The NPS must also comply with Section 404 of the Clean Water Act (CWA) when those actions involve the discharge of dredged or fill materials in wetlands or other waters of the United States. As required by DO-77-1, the NPS must avoid adverse impacts on wetlands to the extent practicable, must minimize any impacts that cannot be avoided, and must compensate for any remaining unavoidable adverse impacts on wetlands. Wetlands within the project area were delineated in accordance with the DO-77-1 Procedural Manual (NPS 2012).

There are two watersheds located within the project area. The project area lies on the border of the Middle Potomac-Anacostia-Occoquan watershed to the west and the Patuxent watershed to the east. Stream resources identified within the project area (described below as WL048B and WL064) are unnamed tributaries of Cabin Branch, a classified Use I water and associate wetlands, per coordination with DNR dated April 29, 2013 (**Appendix A**). MDE defines a Use Class I water as designated for water contact recreation, fishing, agricultural water supply, industrial water supply, and protection of nontidal warmwater aquatic life. Generally, no instream work is permitted in Use I streams during the period of March 1 through June 15, inclusive, during any year.

The SHA staff conducted a field review to identify resources within the project area in January, 2014. Water resources identified within the project area are depicted on **Figure 4**. A brief description of each resource is provided in the text that follows.

3.2.1 WL048A/B

WL048A/B was originally identified by SHA consultants in 2006. WL048A/B is a perennial stream located north of the JBA security fence on NPS property. It is located west of the North Gate within the project limits. WL048B is fed by discharge from WL064 and a wetland located outside of the project area, and is then culverted beneath an abandoned access road. The stream reemerges as WL048A and

continues to flow westward outside of the study area. The stream appears to be in good condition and provides nutrient transport from other wetlands.

3.2.2 WL064

WL064 is an intermittent stream located adjacent to eastbound Suitland Parkway on NPS property. The stream is fed by a stormwater outfall and flows southwest into WL048B. The stream is in fair condition due to trash from the road within its banks. The stream provides stormwater flow and transports water and sediment into WL048B.

3.2.3 WP049

WP049 is a wetland located within a drainage channel constructed in uplands along eastbound Suitland Parkway on NPS property, within the project limits. The wetland was originally delineated by SHA in 2006 as a palustrine shrub-scrub (PSS1C) wetland. However, in 2014, the limit of this wetland was extended north to connect with the pipe outfall that feeds the wetland. It appears that the previously identified shrubs have been removed. At the time, the wetland was observed to be dominated by common reed (*Phragmites sp.*) and has been reclassified as a palustrine emergent (PEM1C) wetland. The wetland was determined to be in poor condition due to dominance by invasive species and presence of trash from the roadway. The wetland provides water storage and sediment and toxicant retention.

3.2.4 WP062

WP062 is a palustrine scrub-shrub (PSS1A) wetland delineated along eastbound Suitland Parkway on NPS property, within the estimated project limits. The wetland is located in a drainage channel constructed in uplands, which carries flow from WP063 (located on the north side of Suitland Parkway) south into WUS048A. The wetland is dominated by common reed (*Phragmites sp.*) and sweetgum (*Liquidambar styraciflua*) shrubs, and is in fair condition due to the presence of invasive species. The wetland provides sediment and toxicant retention.

3.2.5 WP063

WP063 is a palustrine emergent (PEM1B) wetland delineated along westbound Suitland Parkway on NPS property. The wetland is located within a swale that drains the uplands of the approach to the JBA landing strip. The wetland drains to a culvert beneath Suitland Parkway, which feeds WP062 and WL048A. The wetland is dominated by soft rush. There is only minor presence of invasive species and trash in this wetland, is if therefore considered to be in good condition. The wetland provides nutrient export and groundwater discharge/recharge.

3.2.6 WP065

WPO65 is a marginal, isolated wetland located at the toe of the road embankment along westbound Suitland Parkway on NPS property, within the proposed project limits. The wetland's source of hydrology is runoff from the roadway. WP065 is located mostly beneath the forest canopy, but since few trees are located within the wetland, the wetland was classified as a palustrine emergent (PEM1A) wetland. WP065 is dominated by poison ivy and greenbrier. It is in poor condition due to the marginal nature of the wetland and presence of trash and debris from the road within the wetland. The wetland provides sediment and toxicant retention.

3.3 VEGETATION

A tree survey of the project area was conducted in November 2011 and May 2012 (SHA 2012). On the north side of Suitland Parkway 233 trees were identified and assessed. The most common trees identified were Callery pear (*Pyrus calleryana*), chestnut oak (*Quercus prinus*), sweetgum (*Liquidambar styraciflua*), and Virginia pine (*Pinus virginiana*). The condition of trees in this area was a mix of good, fair, and poor; fair to poor conditions occurred more commonly in forest fragments and along edges. On the south side of Suitland Parkway, two individual 1/10th acre sample plots were evaluated; a total of 70 trees were identified and assessed. The most common trees identified were sweetgum, willow oak (*Quercus phellos*), and red maple (*Acer rubrum*). Generally, these trees were in good to poor condition.

3.4 WILDLIFE

Wetlands within the project area are principally palustrine wetlands associated with the non-tidal tributaries to Cabin Branch. These wetlands, along with isolated trees and forested areas, provide wildlife habitat within the project area. Typical wildlife that can be found in the area includes white-tailed deer (*Odocoileus virginianus*), raccoon (*Procyon lotor*), grey squirrel (*Sciurus carolinensis*), red fox (*Vulpes vulpes*), Eastern cottontail (*Sylvilagus floridanus*), striped skunk (*Mephitis mephitis*), muskrat (*Ondatra zibethicus*), various small mammal species, and various herptile and avian species.

3.5 CULTURAL RESOURCES

For the purposes of this EA, cultural resource impact topics include historic structures and districts, and cultural landscapes. Historic and prehistoric archeological sites, American Indian traditional cultural properties, ethnographic resources, and museum objects were dismissed as impact topics. Compliance with NHPA (1966, as amended), including Section 106, is being completed as a separate process, parallel to the completion of this EA.

3.5.1 Historic Structures and Districts

In letters dated March 6, 1998 and March 31, 2010 (**Appendix B**), SHA contacted MHT regarding the proposed MD 4/Suitland Parkway Interchange project. The SHA considered possible physical, visual, atmospheric, and audible impacts to historic properties in determining the Area of Potential Effects (APE) for the project. Based on research to identify potentially significant architectural resources, SHA identified the Suitland Parkway (PG:76A-22/NR-1175) as the only historic property within the APE of the project.

Suitland Parkway spans 9.18 miles through a 418.9 acre corridor, managed by NPS. The entirety is a historic district listed in the NRHP as part of a multiple property submission for the “Parkways of the National Capital Region, 1913-1965,” under both Criterion A for transportation, and Criterion C for landscape architecture related to the parkway system developed during the first half of the twentieth century (NPS 1995).

Bridges, culverts, curbing, ditches and drop inlets define the contributing resources within the historic district. The Public Roads Administration was contracted for the construction of nine concrete arch bridges with stone facing and generous parapets. The design of these bridges closely followed designs initially used on the Westchester parkways, Mount Vernon Memorial Highway, and Blue Ridge Parkway.

The contributing bridges consist of double reinforced concrete rigid frame arches that have stone-faced wing wall and spandrels, trimmed with granite dimensioned masonry. Seven of these bridges were completed in 1944; two additional bridges were constructed to carry I-95 over Suitland Parkway in 1963. One of these is located within the project area, the Suitland Parkway Bridge over the entrance ramp to JBA North Gate. Additionally, 38 culverts are located along the parkway, 39 drop inlets, 0.14 miles of stone-lined ditches, and 2.89 miles of concrete curbing. None of these features are located within the project area (NPS 1995).

As with other parkways in the Washington, D.C. area, Suitland Parkway is historically significant because it is associated with key historical figures that played important roles in planning and design, including Gilmore D. Clarke and Jay Downer, principal designers of the Westchester County and Virginia parkways. M-NCPPC Chairman Frederick Delano and Thomas Jeffers of the M-NCPPC also had substantial roles in the origins of the Parkway, especially when funding sources seemed exhausted because of the Great Depression and World War II (NPS 1995).

3.5.2 Cultural Landscapes

Cultural landscapes, as defined by the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes, consist of "a geographic area (including both cultural and natural resources and the wildlife or domestic animals therein) associated with a historic event, activity, or person or exhibiting other cultural or aesthetic values." A cultural landscape inventory (CLI) identifies and documents the characteristics of a cultural landscape that make it significant and worthy of preservation. Though no CLI has been completed for Suitland Parkway, structures identified as contributing resources to the historic district along with the landscape elements, described herein, culminate in the cultural landscape that defines Suitland Parkway and makes it significant and worthy of preservation.

The Suitland Parkway is a culmination of popular trends at the beginning of the 20th century. These trends included the City Beautiful movements' emphasis on urban green space, rapid development of road systems for automobiles, decline in the quality of city life, and increase in popularity of outdoor recreation. Suitland Parkway features a gently rolling topography that crosses or follows creek drainages along its length. It is extensively landscaped, with larger trees in the medians, grassy mown areas, and developments screened where necessary to present a rural and park-like setting. Meanwhile the curved design and cloverleaves of the Parkway along with the 55-60 miles per hour design speed allow for a steady drive pace along the corridor. Suitland Parkway represents a utilitarian roadway with design features intended to move traffic expeditiously, but with elements of design intended to convey a scenic driving experience characteristic of earlier parkways (NPS 1995).

3.6 VISITOR USE AND EXPERIENCE

Suitland Parkway is open year round. It serves as an attractive, landscaped gateway to the Capital region; however, it shares many of the high-speed, high-volume traffic characteristics of expressways of the state and Federal highway network. Suitland Parkway services a volume of 32,000 ADT (SHA, 2011). Drivers include commuters as well as visitors to the Capital region. The rural, park-like setting of the Parkway, with its wide medians, large trees, and heavy vegetative screening conveys a driving experience that differs greatly from that of other non-parkway routes in the region. A viewshed is defined as the

geographic area visible to an observer from a specific location. The wide vegetated median, mature trees, stone structures, and rustic timber guardrails combine with views to areas outside of Suitland Parkway as components that together form the viewshed along Suitland Parkway. The viewshed quality directly affects the visitor experience. Protection and enhancement of landscape, viewshed, aesthetic, environmental, and cultural characteristics of Suitland Parkway must be considered along with transportation features as part of the visitor experience.

3.7 TRANSPORTATION

Suitland Parkway is a principal route of travel between Prince George’s County, Maryland, and Washington, D.C. It also serves as the primary route of travel from Washington, D.C. to JBA. The western terminus of the Suitland Parkway begins almost immediately upon crossing the Frederick Douglas Memorial Bridge in Washington, D.C. Shortly thereafter, Suitland Parkway intersects with the Baltimore-Washington Parkway. Proceeding east on Suitland Parkway, it intersects with MD 5 providing access to Charles County and St. Mary’s County, Maryland. The Parkway intersects with Suitland Road and provides access to the surrounding neighborhoods. Suitland Parkway continues on to intersect with Forestville Road. This road provides access to the Capital Beltway as well as the Forestville neighborhood to the north. Prior to Suitland Parkway’s intersection with MD 4, there is an intersection that provides access to the JBA North Gate Entrance as well as Old Marlboro Pike. The eastern terminus of the Suitland Parkway is its intersection with MD 4. MD 4 northbound intersects with Westphalia Road and the Capital Beltway approximately one mile north and continues into Washington D.C. as Pennsylvania Avenue. MD 4 southbound intersects with Dower House Road and proceeds to Upper Marlboro, MD. It then travels south into Anne Arundel County and Calvert County in Maryland.

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CHAPTER 4: ENVIRONMENTAL CONSEQUENCES

This chapter analyzes both beneficial and adverse impacts that would result from implementing any of the alternatives considered in this EA. This chapter also includes definitions of impact thresholds (e.g., negligible, minor, moderate, and major), methods used to analyze impacts, and the analysis methods used for determining cumulative impacts. As required by the CEQ regulations implementing NEPA, a summary of the environmental consequences for each alternative is provided in **Table 2**, which can be found in **Chapter 2** (“Alternatives”). The impact topics presented in this chapter, and the organization of the topics, correspond to the resource discussions contained in **Chapter 3** (“Affected Environment”).

4.1 GENERAL METHODOLOGY FOR ESTABLISHING IMPACT THRESHOLDS AND MEASURING EFFECTS BY RESOURCE

The general approach for establishing impact thresholds and measuring the effects of the alternatives on each resource category includes the following elements:

- General analysis methods as described in guiding regulations for each resource
- Basic assumptions used to formulate the specific methods used in this analysis
- Thresholds used to define the level of impact resulting from each alternative
- Methods used to evaluate the cumulative effects of each alternative in combination with unrelated factors or actions affecting park resources

4.1.1 General Analysis Methods

The impacts analysis follows the guidelines and procedures set forth by the CEQ and DO-12 (NPS 2001). It incorporates the best available knowledge of the region and setting, resources being analyzed, and actions being considered in the alternatives. The applicable analysis method is discussed for each impact topic addressed in this chapter including assumptions and impact intensity thresholds.

4.1.2 Impact Thresholds

The potential impacts of the alternatives are described in terms of type (beneficial or adverse); context; duration (short or long-term); and intensity (negligible, minor, moderate, or major). Definitions of these descriptors are provided below.

Beneficial: A positive change in the condition or appearance of the resource or a change that moves the resource towards a desired condition.

Adverse: A change that declines, degrades, and/or moves the resource away from a desired condition or detracts from its appearance or condition.

Context: The affected environment within which an impact would occur, such as local, parkwide, regional, global, affected interests, society as a whole, or any combination. Context is variable and depends on circumstances involved with each impact topic. As such, the impact analysis determines the context, not vice versa.

Duration: The duration of the impact is described as short-term or long-term. Duration is variable with each impact topic; therefore, definitions related to each impact topic are provided in the specific impact analysis narrative.

Intensity: Because definitions of impact intensity (negligible, minor, moderate, and major) vary by impact topic, intensity definitions are provided separately for each impact topic analyzed.

4.1.3 Cumulative Impacts Analysis Method

The CEQ regulations to implement NEPA require the assessment of cumulative impacts in the decision-making process for federal projects. Cumulative impacts are defined as “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or nonfederal) or person undertakes such other actions” (40 CFR 1508.7). As stated in the CEQ handbook, “Consider Cumulative Effects” (CEQ 1997), cumulative impacts need to be analyzed in terms of the specific resource, ecosystem, and human community being affected and should focus on effects that are truly meaningful. Cumulative impacts are considered for all alternatives, including Alternative 1, the No Action Alternative.

Cumulative impacts were determined by combining the impacts of the alternative being considered with other past, present, and reasonably foreseeable future actions. Therefore, it was necessary to identify other ongoing or reasonably foreseeable future projects and plans at Suitland Parkway, and if applicable, the surrounding area. **Table 4** summarizes these actions that could affect the various resources at the parkway, along with the plans and policies of both the NPS and surrounding jurisdictions, which were discussed in **Chapter 1**.

The analysis of cumulative impacts was performed according to the following four steps:

Step 1 – Identify Resources Affected: Fully identify resources affected by any of the alternatives. These include the resources addressed as impact topics in **Chapters 3** and **4** of this document.

Step 2 – Set Boundaries: Identify an appropriate spatial and temporal boundary for each resource.

Step 3 – Identify Cumulative Action Scenario: Determine which past, present, and reasonably foreseeable future actions to include with each resource. These are described in **Table 4**.

Step 4 – Cumulative Impact Analysis: Summarize impacts of these other actions (x) plus impacts of the proposed action (y), to arrive at the total cumulative impact (z). This analysis is included for each resource in **Chapter 4**.

Table 4: Cumulative Impact Scenarios

IMPACT TOPIC	TIME FRAME	STUDY AREA	PAST ACTIONS	CURRENT ACTIONS	FUTURE ACTIONS
Topography and Soils	1970 – 2030 Past: Based on population growth and development that occurred in the area following World War II. Future: 2030, the design year of the project. Most of	Potomac River-Upper Tidal watershed and Patuxent River – Western Branch watershed	Construction of Suitland Parkway. Past county, state, and Federal developments.	Ongoing development as identified in the Westphalia Sector Plan and Sectional Map Amendment (2007), and the JBA 25-Year Strategic Plan.	MD 4 corridor improvements at Westphalia and Dower House Roads. Development of the Westphalia Town Center and Implementation of the JBA 25-Year Strategic Plan.
Surface Waters		Suitland Parkway Boundary	Previous surface widening of the Suitland Parkway Bridge and the JBA North Gate entrance.	None identified	None identified
Vegetation			None identified	The MD 4 project is listed in the MDOT Consolidated Transportation Program (CTP) for FY 2012 to 2017, with only the Suitland Parkway interchange funded beyond the planning phase.	The Prince George's County FY 2014-2019 Proposed Capital Improvement Program identifies additional improvements slated to occur as funding becomes available.
Wildlife			MD 4 corridor	SHA and Prince George's County Transportation Projects	
Historic Structures and Districts					
Cultural Landscapes					
Visitor Use and Experience					
Transportation					

4.2 TOPOGRAPHY AND SOILS

4.2.1 Methodology and Assumptions

Potential impacts to topography and soils are assessed based on the extent of disturbance to natural topographic resources, natural undisturbed soils, and the potential for soil erosion resulting from disturbance. The analysis of possible impacts was based on a review of the Web Soil Survey (NRCS 2014) and topographic maps. The impacts are calculated based on the estimated area of impact required to construct the interchange.

Study Area

The study area for soils and topography is the NPS property between the MD 4 and Suitland Parkway intersection and where Allentown Road merges into Suitland Parkway.

Impact Thresholds

Negligible: The impacts to soil and topography would be at or below the lower levels of detection. Any impacts to soil and topography would be slight.

Minor: The impacts to soil and topography would be detectable. Impacts to undisturbed areas would be small. Mitigation required to offset adverse impacts would be relatively simple to implement and would likely be successful.

Moderate: The impacts to soil and topography would be readily apparent and result in a change to the soil and topographic character over a relatively wide area. Mitigation measures would be necessary to offset adverse impacts and would likely be successful.

Major: The impacts to soil and topography would be readily apparent and substantially change the soil and topographic character over a large area both in and out of the project area. Mitigation measures to offset adverse impacts would be needed, would be extensive, and their success would not be guaranteed.

Duration: Short-term impacts occur in a timeframe equal to or less than the duration of construction for the alternative and long-term impacts would continue to occur following the completion of construction of the alternative.

4.2.2 Impacts of Alternative 1: No Action

Under the No Action Alternative, there would be no change to existing topographical or soil conditions within the Suitland Parkway boundary. No excavation, grading, or removal of soils would occur. This alternative would result in no short- or long-term impacts on soils or topography.

Cumulative Impacts

Alternative 1 would have no impacts to soils or topography; therefore, this alternative would contribute no cumulative impact to soils and topography.

Conclusion

The implementation of the No Action Alternative would result in no short- or long-term direct or cumulative impacts to topography or soils.

4.2.3 Impacts of Alternative 2: Diamond Roundabout Interchange

Construction activities associated with Alternative 2 would result in the temporary earth disturbance of approximately 18.2 acres caused by grading and excavating due to construction activities. Any construction activities would require preparation of an erosion and sediment control plan, in accordance with the MDE 2011 *Maryland Standards and Specifications for Soil Erosion and Sediment Control*. During construction BMPs would be utilized to minimize soil erosion and prevent soils from leaving the project area.

Grading and excavation would permanently impact an area of 7.7 acres, modifying the topography within the project area to accommodate ramps, new roadways, and the bike/multi-use path. Soils impacted by the proposed grading would primarily be Udorthents, or those whose original soil composition was previously altered for the construction of Suitland Parkway and MD 4. Following construction of Alternative 2, re-vegetation in accordance with an approved landscaping plan would ensure the long-term stability of soils within the project area.

Construction of Alternative 2, including the required BMPs and re-vegetation, would have short- and long-term minor adverse impacts to topography and soils.

Cumulative Impacts

The project would contribute to long-term minor adverse cumulative effects to topography and soils that would be expected as a result of past, present, and reasonably foreseeable actions occurring within the park, the Potomac River-Upper Tidal watershed, and the Patuxent River – Western Branch watershed. Planned construction activities include the development of 6,000 acres immediately east of the project area associated with Westphalia and the redevelopment of 600 acres of JBA lands. Additionally, SHA and Prince George's County have planned improvements to the MD 4 Corridor, including construction of interchanges at Westphalia Road and Dower House Road. However, SE/SC plans and BMPs would minimize the long-term reasonably foreseeable actions occurring within the project area and surrounding watershed areas, and thus would result in long-term minor adverse cumulative effects to topography and soils. These effects, in combination with long-term minor adverse impacts of Alternative 2, would contribute to a long-term minor adverse cumulative impact on topography and soils.

Conclusion

Construction of Alternative 2 would result in short- and long-term minor adverse impacts to topography and soils within the project area. When combined with the cumulative effect of past, present, and reasonably foreseeable actions, the long-term minor adverse impacts of Alternative 2 would contribute to a long-term minor adverse cumulative impact to topography and soils.

4.2.4 Impacts of Alternative 3: Signalized Diamond Interchange with Directional Ramp

Construction activities associated with Alternative 3 would result in the temporary earth disturbance of approximately 20.7 acres caused by grading and excavating. Similar to Alternative 2, any construction activities would require preparation of an erosion and sediment control plan, in accordance with the MDE *2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control*. BMPs would be utilized to minimize soil erosion and prevent soils from leaving project area.

Grading and excavation would permanently impact an area of 6.9 acres. This would include modifying the topography within the project area to accommodate ramps, new roadways, and the bike/multi-use path. Soils impacted by the proposed grading would primarily be Udorthents, or those whose original soil composition was previously altered for the construction of Suitland Parkway and MD 4. Following construction of Alternative 3, re-vegetation in accordance with an approved landscaping plan would ensure the long-term stability of soils within the project area.

Alternatives 3, in consideration of the necessary construction impacts, BMPs, and re-vegetation as described herein, would have short- and long-term minor adverse impacts on topography and soils.

Cumulative Impacts

Past, present, and reasonably foreseeable actions occurring within the park and surrounding watershed areas would result in a long-term minor adverse cumulative effects on topography and soils. These effects, in combination with the long-term minor adverse impacts of Alternative 3, would contribute to a long-term minor adverse cumulative impact on topography and soils.

Conclusion

Construction of Alternative 3 would result in short- and long-term minor adverse impacts on topography and soils within the project area. When combined with the cumulative effect of past, present, and reasonably foreseeable actions, the long-term minor adverse impacts of Alternative 3 would contribute to a long-term minor adverse cumulative impact on topography and soils.

4.3 WETLANDS AND SURFACE WATERS

4.3.1 Methodology and Assumptions

The NPS has adopted a “no net loss” of wetlands policy. EO 11990, “Protection of Wetlands,” states that federal agencies are to avoid to the extent possible long-term and short-term impacts associated with the destruction or modification of wetlands and avoid direct and indirect support of new construction in wetlands whenever practical alternatives exist. The USACE regulates development in wetland areas pursuant to Section 404 of the CWA (33 CFR 320–330). NPS DO-77-1: *Wetland Protection* and Procedural Manual 77-1: *Wetland Protection* (NPS 2012) provide NPS policies and procedures for complying with EO 11990 (1977). As stated therein,

Actions proposed by the NPS that have the potential to have adverse impacts on wetlands will be addressed in an EA or an Environmental Impact Statement (EIS). If the preferred alternative in an EA or EIS will result in adverse impacts on wetlands, a “Statement of Findings” documenting compliance with this Director’s Order and Procedural Manual #77-1 will be completed. Actions that may be excepted from the Statement of Findings requirement are identified in the Procedural Manual (NPR 2008a).

This project is exempted from the statement of findings requirement because it includes a small area of impact and thus is an “excepted action” under DO-77-1. The total wetland impact from fill placement of either action alternative would be less than 0.1 acre. The impact analysis and the conclusions for possible impacts on wetlands were based on a review of existing literature and studies and information provided by park staff and other agencies.

Study Area

The geographic study area for wetlands is the NPS property between the MD 4 and Suitland Parkway intersection and where Allentown Road merges into Suitland Parkway. Either action alternative would result in impacts to wetlands and surface waters outside of the Suitland Parkway boundary; however, these impacts and their mitigation are being coordinated separately with USACE and MDE, as appropriate.

Impact Thresholds

Negligible: A change in wetland or surface water size, integrity, or continuity could occur, but would be barely measureable or perceptible.

Minor: A small change in wetland or surface water size, integrity, or continuity could occur due to impacts such as construction-related runoff and the impact would be easily measurable or perceptible. The overall viability of the resource would not be impacted.

Moderate: Impacts to the wetland or surface water would be sufficient to cause a measurable change in the size, integrity, or continuity or would result in a small, permanent loss of wetland acreage.

Major: The impact would cause a measurable change in wetland or surface water size, integrity, and continuity, or a permanent loss of large wetland areas that would be substantial and highly noticeable.

Duration: Short-term impacts occur in a timeframe equal to or less than the duration of construction for the alternative and long-term impacts would continue to occur following the completion of construction of the alternative.

4.3.2 Impacts of Alternative 1: No Action

Under the No Action Alternative, there would be no change to the MD 4/Suitland Parkway intersection; therefore, no wetland or surface water impacts would occur. Alternative 1 would result in no short- or long-term impacts to wetlands or surface waters.

Cumulative Impacts

Alternative 1 would have no short- or long-term impacts to wetlands or surface waters; therefore, this alternative would have no contribution to cumulative impacts to wetlands and surface waters.

Conclusion

The implementation of the No Action Alternative would have no short- or long-term impacts to wetlands or surface waters, and would therefore not contribute to cumulative impacts.

4.3.3 Impacts of Alternative 2: Diamond Roundabout Interchange

Temporary wetland impacts would be less than 0.1 acre. During construction, implementation of erosion and sediment control practices, such as installation of silt fence, sediment trapping or filtering, and other BMPs, would minimize temporary impacts to water quality, wetlands and surface waters. Alternative 2 would result in the addition of 1.6 acres of impervious surface within the boundary of Suitland Parkway. Stormwater quality and quantity would be treated as described in **Chapter 2**.

Construction activities would require grading and excavating of less than 0.1 acre of wetlands within the boundary of Suitland Parkway. No stream impacts would occur. Long-term impacts to the water quality of wetlands and surface waters would be addressed by the implementation of an MDE-approved SWM plan. The sum of activities comprising Alternative 2 would have short- and long-term minor adverse impacts to wetlands.

Cumulative Impacts

The project would contribute to long-term minor adverse cumulative effects to wetlands that would be expected as a result of past, present, and reasonably foreseeable actions occurring within the park and the Potomac River-Upper Tidal watershed and the Patuxent River – Western Branch watershed. Planned construction activities include the development of 6,000 acres immediately east of the project area associated with Westphalia and the planned redevelopment of 600 acres of JBA lands. Additionally, SHA and Prince George's County have planned MD 4 corridor improvements, including the construction of interchanges along MD 4 at Westphalia Road and Dower House Road. However, SE/SC plans, BMPs,

mitigation practices, and adherence to MDE SWM regulations would limit the disturbance to wetlands and surface waters within the watershed. Past, present, and reasonably foreseeable actions occurring within the project area and surrounding watershed areas would result in long-term minor adverse cumulative effects to wetlands and surface waters. These effects, in combination with long-term minor adverse impacts of Alternative 2, would contribute a long-term minor adverse cumulative impact on wetlands and surface waters within the watershed.

Conclusion

Construction of Alternative 2 would result in short- and long-term minor adverse impacts to wetlands and surface waters within the project area. When combined with the effect of other past, present, and reasonably foreseeable actions, the long-term minor adverse impacts of Alternative 2 would contribute to a long-term minor adverse cumulative impact on wetlands

4.3.4 Impacts of Alternative 3: Signalized Diamond Interchange with Directional Ramp

Similar to Alternative 2, during construction implementation of erosion and sediment control practices, such as installation of silt fence, sediment trapping or filtering, and other BMPs would minimize temporary impacts to water quality and wetlands. Construction activities associated with Alternative 3 would result in the temporary disturbance of less than 0.1 acre of wetlands. Alternative 3 would result in the addition of 2.9 acres of impervious surface within the boundary of Suitland Parkway. Stormwater quality and quantity would be treated as described in **Chapter 2**.

Similar to Alternative 2, any construction activities would require grading and excavation, impacting less than 0.1 acres of wetlands. No stream impacts would occur. MDE SWM regulations would be used to prepare and implement a plan to address long-term stormwater runoff. The sum of activities comprising Alternative 3 would have short- and long-term minor adverse impacts to wetlands.

Cumulative Impacts

As described under Alternative 2, past, present, and reasonably foreseeable actions occurring within the park and surrounding watershed areas would result in long-term minor adverse cumulative effects to wetlands. These effects, in combination with long-term minor adverse impacts of Alternative 3, would contribute a long-term minor adverse cumulative impact on wetlands.

Conclusion

Construction of Alternative 3 would result in short- and long-term minor adverse impacts to wetlands within the project area. When combined with the cumulative effect of past, present, and reasonably foreseeable actions, the long-term minor adverse impacts of Alternative 3 would contribute a long-term minor adverse cumulative impact on wetlands.

4.4 VEGETATION

4.4.1 Methodology and Assumptions

Impacts to vegetation are assessed based on the change in vegetation or removal of vegetation required for each alternative.

Study Area

The study area for vegetation is the NPS property between the MD 4 and Suitland Parkway intersection and where Allentown Road merges with Suitland Parkway.

Impact Thresholds

Negligible: There would be no impacts to native vegetation or some individual native plants could be impacted as a result of the alternative, but there would be no impact on native species population. The impacts would be on a small scale and imperceptible. No species of special concern would be impacted.

Minor: There would be some impact to individual native plants and a relatively minor portion of the species' population. Mitigation measures to offset adverse impacts, including special measures to avoid impacting species of special concern, could be required and would be effective.

Moderate: There would be some impact to individual native plants and a sizeable segment of the species' population over a relatively large area. Mitigation measures to offset adverse impacts could be extensive, but would likely be successful. There could be impacts to some species of special concern.

Major: There would be considerable impact on individual native plants, including species of special concern, and impact a relatively large area in and out of the project area. Mitigation measures to offset adverse impacts would be required and extensive, and success of the mitigation measures would not be guaranteed.

Duration: Short-term impacts occur in a timeframe equal to or less than the duration of construction for the alternative and long-term impacts would continue to occur following the completion of construction of the alternative.

4.4.2 Impacts of Alternative 1: No Action

Under the No Action Alternative, there would be no change to the MD 4/Suitland Parkway intersection; therefore, no change to natural vegetation within the Suitland Parkway boundary would occur. Alternative 1 would have no short-term or long-term impacts on vegetation.

Cumulative Impacts

Alternative 1 would have no direct impacts to vegetation; therefore, the alternative would have no contribution to cumulative impacts.

Conclusion

The No Action Alternative would result in no short-term or long-term impacts to vegetation within the project area. There also would be no cumulative impacts to vegetation.

4.4.3 Impacts of Alternative 2: Diamond Roundabout Interchange

Grading and excavation associated with Alternative 2 would result in the clearing of approximately 20.0 acres of vegetation, including grasses, shrubs, and 5.6 acres of forested area. During construction, protection measures and BMPs would be implemented to avoid impacts to park vegetation to the maximum extent possible.

The Maryland Forest Conservation Act requires a 1:1 replacement of impacted woodlands (DNR 1991); however, mitigation for forest impacts within the boundary of Suitland Parkway would exceed this threshold. Mitigation for forest impacts would occur through a landscaping plan to be developed for this alternative for approval by NPS and in consultation with MHT. The landscape plan would be implemented following construction of Alternative 2 and would guide re-vegetation of the construction area not occupied by roadway facilities (up to 18.4 acres). The landscape plan would also include the management of invasive species. The sum of activities comprising Alternative 2 would have short- and long-term moderate adverse impacts to vegetation.

Cumulative Impacts

Long-term moderate adverse cumulative effects to vegetation would be expected as a result of other past, present, and reasonably foreseeable actions occurring in conjunction with Alternative 2. Other planned construction activities include the development of 6,000 acres immediately east of the project area associated with Westphalia, and the planned redevelopment of 600 acres of JBA. Additionally, SHA and Prince George's County have planned improvements to the MD 4 corridor at the MD 4 intersections with Dower House Road and Westphalia Road. BMPs, vegetation protection measures, tree save plans, and adherence to the Maryland Forest Conservation Act requiring a 1:1 replacement of impacted woodlands would limit the loss of vegetated areas within the Potomac River-Upper Tidal watershed and the Patuxent River – Western Branch watershed. Therefore, impacts to vegetation resulting from past, present, and future actions, in combination with the long-term moderate adverse impacts of Alternative 2, would contribute a long-term moderate adverse cumulative impact to vegetation within the watershed.

Conclusion

Construction of Alternative 2 would result in short- and long-term moderate adverse impacts to vegetation. When combined with the cumulative effects of past, present, and reasonably foreseeable actions, the long-term moderate adverse impacts of Alternative 2 would contribute a long-term moderate adverse cumulative impact on vegetation.

4.4.4 Impacts of Alternative 3: Signalized Diamond Interchange with Directional Ramp

Similar to Alternative 2, grading and excavation associated with Alternative 3 would result in the clearing of approximately 20.7 acres of vegetation, including grasses, shrubs, and approximately 4.7 acres of forested area. Protection measures and BMPs would be implemented during construction to avoid impacts to park vegetation to the maximum extent possible.

The Maryland Forest Conservation Act requires a 1:1 replacement of impacted woodlands (DNR 1991); however, mitigation for forest impacts within the boundary of Suitland Parkway would exceed this threshold. Mitigation for forest impacts would occur through a landscaping plan to be developed for this alternative for approval by NPS and in consultation with MHT. The landscape plan would be implemented following construction of Alternative 3 and would guide re-vegetation of the construction area not occupied by pavement (17.8 acres). A draft landscape plan for this alternative was submitted to NPS staff for review in May 7, 2014. Under this plan, 5.5 acres of afforestation and reforestation would occur on NPS lands. The landscape plan would also include the management of invasive species. The

sum of activities comprising Alternative 3 would have short- and long-term moderate adverse impacts to vegetation.

Cumulative Impacts

Past, present, and reasonably foreseeable actions occurring within the park and watershed would result in long-term minor adverse cumulative effects to vegetation. These effects, in combination with the long-term minor adverse impacts of Alternative 3, would contribute a long-term minor adverse cumulative impact on vegetation.

Conclusion

Construction of Alternative 3 would result in short- and long-term minor adverse impacts to vegetation within the project area. When combined with the cumulative effects of past, present, and reasonably foreseeable actions; the long-term minor adverse impacts of Alternative 3 would contribute a long-term minor adverse cumulative impact on vegetation.

4.5 WILDLIFE

4.5.1 Methodology and Assumptions

Potential wildlife impacts are based on the likelihood for species to use the area near the alternative improvements, and the loss of habitat associated with construction of the alternatives.

Study Area

The study area for wildlife is the NPS property between the MD 4 and Suitland Parkway intersection and where Allentown Road merges with Suitland Parkway. The impacts are calculated from the land required to implement the alternatives.

Impact Thresholds

Negligible: There would be no observable or detectable impacts to native species, their habitats, or the natural processes sustaining them, and they would be well within the natural range of variability.

Minor: There would be detectable impacts to native species, their habitats, or the natural processes sustaining them, but they would not be outside the natural range of variability. Any needed mitigation measures to offset adverse impacts would be simple and successful.

Moderate: There would be detectable impacts to native species, their habitats, or the natural processes sustaining them, and they could be outside the natural range of variability. Animals of concern and in vulnerable life stages (migration or juvenile stages) are present. Interference with activities necessary for survival may occasionally occur, but it is not expected to threaten the existence of the species in the project area. Any needed mitigation measures to offset adverse impacts would be extensive and likely successful.

Major: There would be detectable impacts to native species, their habitats, or the natural processes sustaining them, and they would be outside the natural range of variability. Variability of some native species could be affected by loss of habitat and some key ecosystem processes could be disrupted.

Extensive mitigation measures would be needed to offset any adverse impacts and their success would not be guaranteed.

Duration: Short-term impacts occur in a timeframe equal to or less than the duration of construction for the alternative and long-term impacts would continue to occur following the completion of construction of the alternative.

4.5.2 Impacts of Alternative 1: No Action

Under the No Action Alternative, there would be no change to existing factors that impact wildlife within the Suitland Parkway boundary. There would be no improvements to the MD 4/Suitland Parkway intersection, and therefore no wildlife impacts would occur from loss of habitat. This alternative would result in no additional impacts to wildlife.

Cumulative Impacts

Alternative 1 would have no direct impacts to vegetation; therefore, there would be no contribution to cumulative impacts.

Conclusion

The No Action Alternative would result in no short- or long-term impacts to wildlife, and would not contribute to cumulative effects to wildlife.

4.5.3 Impacts of Alternative 2: Diamond Roundabout Interchange

Temporary disturbances during construction of Alternative 2 would have short-term impacts on terrestrial species and their habitat. The temporary construction-related disturbances could cause species to relocate to similar suitable habitats in the area. Alternative 2 would also result in the permanent disturbance of 5.6 acres of forested habitat and less than 0.1 acre of wetland habitat. Species inhabiting the areas of permanent disturbance would be permanently displaced, but given the relatively small area of disturbance, would likely reestablish themselves following construction in adjacent areas of sufficient habitat. Additionally, re-vegetation in accordance with approved landscape plans would, upon maturity, provide sufficient food and shelter for the reestablishment of some species within the project area. Therefore, Alternative 2 would have short- and long-term minor adverse impacts to wildlife.

Cumulative Impacts

Long-term minor adverse cumulative effects to wildlife would be expected as a result of other past, present, and reasonably foreseeable actions occurring in conjunction with Alternative 2. Other planned construction activities, which could affect wildlife, include the development of 6,000 acres immediately east of the project area associated with Westphalia and the planned redevelopment of 600 acres of JBA. Additionally, SHA and Prince George's County have planned improvements to the MD 4 Corridor. These improvements would occur at the MD 4 intersections with Westphalia Road and Dower House Road. Particularly for the planned Westphalia development, construction activities would likely result in permanent displacement of wildlife from their habitats. Although some species would relocate and reestablish populations in other nearby habitat, the permanent loss of habitat associated with Westphalia would be much larger than disturbance associated with the MD 4/Suitland Parkway improvements.

Therefore the project would have a long-term minor adverse cumulative effect to wildlife habitat, when considered in combination with other past, present, and reasonably foreseeable actions.

Conclusion

Alternative 2 would result in short- and long-term minor adverse impacts to wildlife within the project area. When combined with the cumulative effect of past, present, and reasonably foreseeable actions, the long-term minor adverse impacts of Alternative 2 would contribute a long-term minor adverse cumulative impact on wildlife.

4.5.4 Impacts of Alternative 3: Signalized Diamond Interchange with Directional Ramp

Temporary disturbances during construction of Alternative 3 would have short-term impacts on terrestrial species and their habitat. The temporary construction-related disturbances could cause species to relocate to similar suitable habitats in the area. Alternative 3 would also result in the disturbance of 4.7 acres of forested habitat and less than 0.1 acre of wetland habitat. Species inhabiting the areas of permanent disturbance would be permanently displaced, but given the relatively small area of disturbance, would likely reestablish themselves following construction in adjacent areas of sufficient habitat. Additionally, re-vegetation in accordance with approved landscape plans would, upon maturity, provide sufficient food and shelter for the reestablishment of some species within the project area. Therefore, Alternative 3 would have short- and long-term minor adverse impacts to wildlife.

Cumulative Impacts

As described under Alternative 2, past, present, and reasonably foreseeable actions occurring within the park and surrounding areas would result in long-term minor adverse cumulative effects to wildlife. Therefore, Alternative 3 would have a long-term minor adverse cumulative effect to wildlife habitat, when considered in combination with other past, present, and reasonably foreseeable actions.

Conclusion

Construction of Alternative 3 would result in short- and long-term minor adverse impacts to wildlife within the project area. When combined with the cumulative effect of past, present, and reasonably foreseeable actions, the long-term minor adverse impacts of Alternative 3 would contribute a long-term minor adverse cumulative impact on wildlife.

4.6 HISTORIC STRUCTURES AND DISTRICTS

Federal actions that have the potential to affect cultural resources are subject to a variety of laws and regulations. The NHPA is the principal legislation for managing cultural resources associated with NPS projects. Generally, Section 106 of the NHPA requires all federal agencies to consider the effects of their actions on cultural resources listed and/or determined eligible for listing in the NRHP. Such resources are termed “historic properties”. If the federal agency, in consultation with the SHPO and additional consulting parties, determines that an undertaking will have an adverse effect, then agreement on mitigation of the adverse effects is sought through further consultation. Section 110 of the NHPA also charges federal agencies with responsibility for establishing preservation programs for the identification, evaluation, and nomination of historic properties to the NRHP. Compliance with the NHPA Section 106 is being completed as a separate process, parallel to the completion of this EA.

The NPS is charged with the protection and management of cultural resources in its custody. This is furthered through the implementation of DO-28 (NPS 1998), *NPS Management Policies*, and the 1995 Servicewide Programmatic Agreement with the ACHP and the National Conference of State Historic Preservation Officers. These documents charge NPS managers with avoiding, or minimizing to the greatest degree practicable, adverse impacts on park resources and values.

The term “historic resources” refers to buildings, structures, objects, above-ground sites, and districts listed on, or eligible for, listing on the NRHP. In order for a historic resource to be listed on the NRHP, it must be associated with an important historic context. In other words, it must possess significance — the meaning or value ascribed to the historic resource — *and* retain the integrity of those character-defining features necessary to convey its significance (i.e., location, design, setting, workmanship, materials, feeling, and association; see National Register Bulletin #15, *How to Apply the National Register Criteria for Evaluation*; NPS 1995a). Impact analyses under NEPA and Section 106 examine the manner and degree to which the proposed alternatives impact or affect the qualities and integrity of the individual historic resource’s character-defining features, significance, and NRHP eligibility.

4.6.1 Methodology and Assumptions

Impacts to historic properties are being considered under a separate process pursuant to Section 106 of the NHPA. Under that process, a determination of either *adverse effect* or *no adverse effect* must be made for affected historic properties. An adverse effect occurs whenever an impact alters, directly or indirectly, any characteristic of a cultural resource that qualifies it for inclusion in the NRHP (for example, diminishing the integrity of the resource’s location, design, setting, materials, workmanship, feeling, or association). Adverse effects also include reasonably foreseeable effects caused by the proposed alternative that would occur later in time, be farther removed in distance, or be cumulative (36 CFR 800.5). A determination of *no adverse effect* means there is either no effect or the effect would not diminish, in any way, the characteristics of the cultural resource that qualify it for inclusion in the NRHP. Results of the Section 106 process are referenced and summarized in this EA.

The CEQ regulations and NPS DO-12 also call for a discussion of the appropriateness of mitigation, as well as an analysis of how effective the mitigation would be in reducing the intensity of a potential impact, e.g. reducing the intensity of an impact from major to moderate or minor. Any resultant reduction in intensity of impact due to mitigation, however, is an estimate of the effectiveness of mitigation under NEPA only. Cultural resources are non-renewable resources and adverse effects generally consume, diminish, or destroy the original historic materials or form, resulting in a loss in the integrity of the resource that can never be recovered. Therefore, although actions determined to have an adverse effect under Section 106 may be mitigated, the effect remains adverse.

The NPS guidance for evaluating impacts, DO-12 (NPS 2001a), requires that impact assessment be scientific, accurate, and quantified to the extent possible. For cultural resources, it is seldom possible to measure impacts in quantifiable terms; therefore, impact thresholds must rely heavily on the professional judgment of resource experts.

Study Area

An APE was identified in consultation with MHT. The APE is the defined study area for the analysis of impacts to historic properties.

Impact Thresholds

Negligible: The impact is at the lowest level of detection with neither adverse nor beneficial consequences.

Minor: Alteration of pattern(s) or feature(s) of a historic property listed in, or eligible for, the NRHP would not diminish the integrity of a character-defining feature(s) or the overall integrity of the historic property.

Moderate: The impact would alter a character-defining feature(s) of a historic district or structure, but would not diminish the integrity of the resource to the extent that its NRHP eligibility would be jeopardized.

Major: The impact would alter a character-defining feature(s) of the historic resource, diminishing the integrity of the resource to the extent that it may no longer be eligible for listing on the NRHP.

Duration: All impacts to historic structures and districts are considered long-term.

4.6.2 Impacts of Alternative 1: No Action

Under the No Action Alternative, there would be no improvements to the intersection of MD 4 and Suitland Parkway. No change to the eastern terminus of Suitland Parkway or its boundary would occur. The NPS and SHA would continue to complete minor roadway repairs necessary to maintain the integrity of the existing roadways and intersection, including repairs to the contributing elements of the Suitland Parkway Historic District. No short- or long-term impacts to historic structures or districts would occur.

Cumulative Impacts

No additional projects were identified that would result in other cumulative impacts to historic structures and districts. Alternative 1 would have no long-term beneficial or adverse impacts to historic structures and districts; therefore, this alternative would not contribute to beneficial or adverse cumulative impacts.

Conclusion

The No Action Alternative would result in no long-term beneficial or adverse impacts to historic structures or districts, and no beneficial or adverse cumulative impacts to historic structures or districts.

4.6.3 Impacts of Alternative 2: Diamond Roundabout Interchange

Alternative 2 would require grading and excavation to raise the profile of Suitland Parkway as it approaches MD 4. Construction would include installation of additional roadway pavement to provide ramp access to southbound MD 4 from eastbound Suitland Parkway and to westbound Suitland Parkway from southbound MD 4. Construction of these ramps, as well as the proposed roundabout to the west of the MD 4 overpass, would require a land transfer of approximately 10.9 acres from NPS to SHA. This would result in a permanent impact to the boundary of the Suitland Parkway Historic District. The MHT

concluded that this alternative would have an *adverse effect* on Suitland Parkway on March 6, 1998 (**Appendix C**) and entered into a MOA in 1999 with SHA, NPS, and FHWA to address adverse effects. Mitigation measures stipulated in the MOA include: an interchange design commensurate with a symbolic entrance to Washington D.C., roundabouts at each end of the overpass, the construction of low stone walls, a distinctive bridge design, appropriate landscaping including reforestation, timber or stone guardrails, minimal signage at the roundabouts, and signage compatible with the NPS standards for size and color.

Pursuant to Section 106, Alternative 2 would have an *adverse effect* to Suitland Parkway; however, the alternative would not result in Suitland Parkway being removed from listing on the NRHP. Impacts would occur at the eastern terminus of the 9.2 mile long Suitland Parkway. Impacts to vegetation, hardscape, and aesthetics would be mitigated for in accordance with the MOA, approved by NPS, FHWA, SHA, and MHT in 1999. Therefore, this alternative would have a long-term moderate adverse impact to the Suitland Parkway Historic District. The adverse effects would be addressed through stipulations outlined in the 1999 MOA.

Cumulative Impacts

No additional projects were identified in the project vicinity that would cause cumulative impacts to historic structures and districts. Therefore, the direct effects from Alternative 2 would not contribute to cumulative impacts.

Conclusion

The construction of the interchange under Alternative 2 would result in a long-term moderate adverse impact to the Suitland Parkway Historic District, but would have no other contribution to cumulative impacts.

4.6.4 Impacts of Alternative 3: Signalized Diamond Interchange with Directional Ramp

Alternative 3 would require grading and excavation to raise the profile of Suitland Parkway as it approaches MD 4. Construction would include installation of additional roadway pavement to provide ramp access to southbound MD 4 from eastbound Suitland Parkway and construction of a directional ramp providing access to westbound Suitland Parkway from northbound MD 4. Additionally, the profile of Suitland Parkway would be widened to four lanes as it approaches the MD 4 overpass. This widening would require the reconstruction of the south side of the Suitland Parkway Bridge over the entrance to the JBA North Gate, a contributing resource to the Suitland Parkway Historic District. Construction would require a land transfer of 6.9 acres from NPS to SHA. This would result in a permanent impact to the boundary of the Suitland Parkway Historic District. Per consultation with MHT, dated March 31, 2010, Alternative 3 would result in an *adverse effect*. Presently, a MOA is being drafted for execution by NPS, FHWA, MHT, and SHA. The draft MOA outlines measures to mitigate for adverse effects to Suitland Parkway, which include: salvaging and reusing the historic stone cladding from the North Gate Bridge; matching the color and texture of the mortar used on the south side of the bridge to the original; using a mason with at least five years of experience repointing historic masonry bridges; using a stone and mortar bonding pattern on the exterior of the parapets and abutments of the directional ramps that is similar to the pattern on the Suitland Parkway Bridge. The SHA has acquired 12.8 acres of land adjacent to Fort Foote. Following execution of the draft MOA, this land would be transferred to NPS as detailed in **Chapter 2**.

Pursuant to Section 106, Alternative 3 would have *an adverse effect* to Suitland Parkway; however, the alternative would not result in Suitland Parkway being removed from listing on the NRHP. Impacts would occur at the eastern terminus of the 9.2 mile long Suitland Parkway. Alternative 3 would require the reconstruction of the North Gate Bridge; however, reconstruction would be completed in accordance with the aforementioned draft MOA, to be approved by NPS, FHWA, MHT, and SHA. Impacts to vegetation, hardscape, and aesthetics would also be mitigated for in accordance with the draft MOA. Therefore, this alternative would have a long-term moderate adverse impact to the Suitland Parkway Historic District. The adverse effects would be addressed through stipulations outlined in the draft MOA currently being developed.

Cumulative Impacts

No additional projects were identified in the project vicinity that would cause cumulative impacts to historic structures and districts. Therefore, the direct effects from Alternative 3 would not contribute to cumulative impacts.

Conclusion

The construction of the interchange under Alternative 3 would result in a long-term moderate adverse impact to the Suitland Parkway Historic District. The direct effects from Alternative 3 would not contribute to cumulative impacts.

4.7 CULTURAL LANDSCAPES

4.7.1 Methodology and Assumptions

The impact analysis in this section was prepared pursuant to the requirements of NEPA. A cultural landscape is defined as a “geographic area (including both cultural and natural resources and the wildlife or domestic animals therein) associated with a historic event, activity, or person or exhibiting other cultural or aesthetic values” (NPS, 1992). No CLI has been completed for Suitland Parkway; however structures identified as contributing resources to the historic district along with the landscape elements, described herein, culminate in the cultural landscape that defines Suitland Parkway.

Study Area

An APE for project was identified in consultation with MHT. The APE is the defined study area for the analysis of impacts to historic properties.

Impact Thresholds

Negligible: The impact is at the lowest level of detection with neither adverse nor beneficial consequences.

Minor: The impact would not diminish the integrity of a character-defining feature(s) or the overall integrity of the cultural landscape.

Moderate: The impact would alter a character-defining feature(s) of a cultural landscape. It would also diminish the overall integrity of that feature(s) of the cultural landscape.

Major: The impact would alter a character-defining feature(s) of a cultural landscape. It would also severely diminish the integrity of that feature(s) and the overall integrity of the cultural landscape of the historic property.

Duration: All impacts to cultural landscapes are considered long-term.

4.7.2 Impacts of Alternative 1: No Action

Traffic volumes would increase as projected as a result of continued development along the MD 4 corridor and the redevelopment of JBA. Overtime, the increase in traffic volumes would decrease Suitland Parkway's utility and ability to move traffic efficiently. However, there would be no change to views or vegetation within the cultural landscape of Suitland Parkway. Further, the hardscape features of the landscape, such as walls, culverts, and bridges, would remain unchanged. Therefore, Alternative 1 would result in long-term negligible adverse impacts to the cultural landscape.

Cumulative Impacts

No additional projects were identified in the project area vicinity that would result in impacts to cultural landscapes. Therefore, although Alternative 1 would have a long-term negligible adverse impact to cultural landscapes, there would be no contribution to cumulative impacts.

Conclusion

The No Action Alternative would result in negligible impacts to the cultural landscape of Suitland Parkway. There would be no cumulative impacts.

4.7.3 Impacts of Alternative 2: Diamond Roundabout Interchange

Alternative 2 would elevate the profile of Suitland Parkway over MD 4. Construction would include ramps to southbound MD 4 from eastbound Suitland Parkway and to westbound Suitland Parkway from southbound MD 4. These ramps as well as the proposed roundabout on the west side of the MD 4 overpass would introduce new hardscape features within the cultural landscape, including new roadway pavement for the roundabout. Alternative 2 would also introduce new slopes on the approach to the MD 4 overpass, modify the median areas, and clear existing vegetation in the project area. The use of compatible materials and installation of landscaping, in accordance with an NPS- and MHT-approved landscaping plan, as coordinated through the 1999 MOA, would minimize effects on the cultural landscape. The alternative would result in long-term moderate adverse impacts to the cultural landscape of Suitland Parkway.

Cumulative Impacts

No additional projects were identified in the project vicinity that would result in impacts to cultural landscapes. Therefore, although Alternative 2 would have a long-term moderate adverse impact to cultural landscapes, there would be no contribution to cumulative impacts.

Conclusion

The construction of the interchange under Alternative 2 would result in a long-term moderate adverse impact to the cultural landscape, but would have no other contribution to cumulative impacts.

4.7.4 Impacts of Alternative 3: Signalized Diamond Interchange with Directional Ramp

Alternative 3 would widen the profile of Suitland Parkway. The westbound lanes would be widened from two to four lanes and the profile would be elevated over MD 4. Construction would include installation of additional pavement, providing ramp access to southbound MD 4 from eastbound Suitland Parkway and construction of an elevated directional ramp providing access to westbound Suitland Parkway from northbound MD 4. Alternative 3 would also introduce new slopes on the approach to the MD 4 overpass, modify the median areas, and clear existing vegetation in the project area. The new ramps and widened pavement would introduce new hardscape within the cultural landscape of Suitland Parkway. The directional ramp would affect views from Suitland Parkway east and north, as the ramp crosses over Presidential Parkway, MD 4, and the northbound access road exiting JBA North Gate. The views exiting the JBA North Gate would be impacted by the reconstruction of the Suitland Parkway Bridge over the entrance ramp to JBA North Gate; however, reconstruction as outline in the draft MOA would minimize the perception of this impact to the lay visitor. The use of compatible materials on new hardscape and installation of landscaping in accordance with an NPS- and MHT-approved landscaping plan would minimize effects on the cultural landscape. This alternative would result in long-term moderate adverse impacts to the cultural landscape of Suitland Parkway.

Cumulative Impacts

No additional projects were identified in the project area vicinity that would result in impacts to cultural landscapes. Therefore, although Alternative 3 would have a long-term moderate adverse impact to cultural landscapes, there would be no contribution to cumulative impacts.

Conclusion

Alternative 3 would result in long-term moderate adverse impacts to the cultural landscape, but would have no contribution to cumulative impacts.

4.8 VISITOR USE AND EXPERIENCE

4.8.1 Methodology and Assumptions

Potential impacts to visitor use and experience were assessed by considering the impacts of the existing conditions and the project alternatives on the experience of those who travel Suitland Parkway.

Study Area

The study area for the evaluation of potential effects to visitor use and experience encompasses the project area within the boundary of Suitland Parkway.

Impact Thresholds

Negligible: There would be no noticeable changes or the change would be below, or at the level of, detection. The visitor would be unlikely to notice any impacts.

Minor: There would be slight yet detectable changes in visitor use and/or experience. The changes would not noticeably limit or enhance critical characteristics of the visitor experience. The visitor would be aware of the impacts, but the effects would be slight.

Moderate: There would be readily apparent changes in visitor use and/or experience and few critical characteristics of the desired visitor experience would change. Visitor satisfaction would begin to either decline or increase.

Major: There would be readily apparent changes in visitor use and/or experience and multiple critical characteristics of the desired visitor experience would change. Visitor satisfaction would markedly decline or increase.

Duration: Short-term impacts occur in a timeframe equal to, or less than, the duration of construction for the alternative and long-term impacts would continue to occur following the completion of construction of the alternative.

4.8.2 Impacts of Alternative 1: No Action

Under the No Action Alternative, there would be no change to aesthetic characteristics of the current MD 4/Suitland Parkway intersection. However, because there would be no improvements to the existing MD 4/Suitland Parkway intersection, existing congestion at the intersection would continue and future projected increases in traffic volume would not be accommodated, resulting in a substantial increase in travel delays. Alternative 1 would have no short-term impacts to visitor use and experience; however, increasing congestion and travel delays as detailed in the discussion of transportation impacts (**Chapter 4.9**) would result in a long-term moderate adverse impact to the visitor use and experience.

Cumulative Impacts

In the project vicinity, Suitland Parkway is the only NPS-owned or publicly-owned property to which visitor use and experience is applicable. There are no other planned projects that would affect visitor use and experience of Suitland Parkway. Therefore, Alternative 1 would not contribute to cumulative effects.

Conclusion

The implementation of the No Action Alternative would have no short-term impacts, but would result in long-term moderate adverse impacts to visitor use and experience of Suitland Parkway. The project would not contribute to cumulative impacts on visitor use and experience.

4.8.3 Impacts of Alternative 2: Diamond Roundabout Interchange

Alternative 2 would result in the temporary disturbance of the visitor experience within Suitland Parkway. Construction activities would last approximately four years. Detours for some direction movements within the project area would be necessary. Delays caused by lane closures and detours are also likely to occur within the project area. Temporary visual impacts could result from equipment and clearing of vegetation. Suitland Parkway users would be notified of changes in traffic patterns as well as road closures by public notification, and construction equipment would be used in a manner that causes the least disturbance to Parkway users. Following construction, re-vegetation would occur in accordance with an approved landscape plan. Aesthetic treatments would include the construction of low stone walls, a distinctive bridge design, the use of timber or stone guardrails, minimal signage, and signage compatible with the NPS standards for size and color. Re-vegetation and aesthetic treatments would minimize impacts to the viewshed of Suitland Parkway and the visitor experience. However, the proposed diamond roundabout interchange would continue to operate at an unacceptable LOS and experience significant

delay as detailed in the discussion of Transportation impacts (**Chapter 4.9**), resulting in adverse effects to the utility of the Parkway. Therefore, Alternative 2 would have short- and long-term minor adverse impacts to visitor use and experience.

Cumulative Impacts

In the project vicinity, Suitland Parkway is the only NPS-owned or publicly-owned property to which visitor use and experience is applicable. There are no other planned projects that would affect visitor use and experience of Suitland Parkway. Therefore, Alternative 2 would not contribute to cumulative effects.

Conclusion

Construction of Alternative 2 would result in short- and long-term minor adverse impacts to visitor use and experience. The project would not contribute to cumulative impacts upon visitor use and experience.

4.8.4 Impacts of Alternative 3: Signalized Diamond Interchange with Directional Ramp

Alternative 3 would result in the temporary disturbance of the visitor experience within Suitland Parkway. Construction activities would last approximately four years. Detours for some directional movements within the project area would be necessary. Delays caused by lane closures and detours are also likely to occur within the project area. Temporary visual impacts could result from equipment and clearing of vegetation. Suitland Parkway users would be notified of changes in traffic patterns as well as road closures by public notification, and construction equipment would be used in a manner that causes the least disturbance to Parkway users. Following construction, re-vegetation would occur in accordance with an approved landscape plan. Aesthetic treatments would include salvaging and reusing the historic stone cladding from the North Gate Bridge; the use of stone and a mortar bonding pattern on the exterior of the parapets and abutments of the directional ramps, minimal signage, and signage compatible with the NPS standards for size and color. Re-vegetation and aesthetic treatments would minimize impacts to the viewshed of Suitland Parkway and the visitor experience. Additionally, the proposed signalized diamond interchange with directional ramp would be able to accommodate future traffic volumes, thus improving travel efficiency and preserving the Parkway utility for drivers. Therefore, Alternative 3 would have short-term minor adverse impacts to the visitor use and experience followed by a long-term benefit to visitor use and experience.

Cumulative Impacts

In the project vicinity, Suitland Parkway is the only NPS-owned or publicly-owned property to which visitor use and experience is applicable. There are no other planned projects that would affect visitor use and experience of Suitland Parkway. Therefore, Alternative 3 would not contribute to cumulative effects

Conclusion

Construction of Alternative 3 would result in short-term minor adverse impacts and long-term benefits to visitor use and experience of Suitland Parkway. Alternative 3 would not contribute to cumulative impacts.

4.9 TRANSPORTATION

4.9.1 Methodology and Assumptions

Potential impacts to transportation were assessed by considering the existing conditions and impacts of each alternative on traffic operations and ease of travel in the project area.

Study Area

The study area for the evaluation of transportation impacts includes the eastern terminus of Suitland Parkway, access roads to the JBA North Gate, Old Marlboro Pike as it accesses Suitland Parkway, and the MD 4 corridor.

Impact Thresholds

Negligible: Any change to travel time, convenience, or benefit would not be perceptible/barely perceptible to travelers in the project area.

Minor: The change to travel time, convenience, or benefit would be noticeable to a small number of travelers in the project area. However, the effect would be slight.

Moderate: The change in travel time, convenience, or benefit would be noticeable for a large number of travelers in the project area.

Major: The change in travel time, convenience, or benefit would be substantial and highly noticeable for a large number of travelers in the project area.

Duration: Short-term impacts occur in a timeframe equal to or less than the duration of construction for the alternative and long-term impacts would continue to occur following the completion of construction of the alternative.

4.9.2 Impacts of Alternative 1: No Action

Under the No Action Alternative, there would be no improvements to the intersection of MD 4 and Suitland Parkway. Transportation service would continue to deteriorate at the eastern terminus of the Suitland Parkway as traffic volumes increase as projected. Lengthy queues and delays would continue to occur along Suitland Parkway and MD 4 (**Table 5**). This alternative would have a long-term major adverse impact to transportation.

Cumulative Impacts

Long-term minor cumulative impacts to transportation would be expected as a result of past, present, and reasonably foreseeable actions occurring in the project vicinity. SHA and Prince George's County have planned other MD 4 corridor improvements, including at the MD 4 intersections with Westphalia Road and Dower House Road. The construction of these interchanges would help alleviate traffic congestion on MD 4; however, the Suitland Parkway intersection would continue to experience inefficient traffic operations and long travel delays, which would have a negative impact on the entire transportation network. Therefore, the project would have a long-term major adverse cumulative impact upon transportation when considered in conjunction with other past, present, and future actions.

Conclusion

The No Action Alternative would result in a long-term major adverse impact to transportation. Alternative 1 would also have a long-term major adverse cumulative impact when combined with other past, present, and reasonably foreseeable actions.

4.9.3 Impacts of Alternative 2: Diamond Roundabout Interchange

Construction activities associated with Alternative 2 would result in short-term minor impacts to transportation. Construction activities would last approximately four years. Detours for some directional movements within the project area would be necessary. Delays caused by lane closures and detours are also likely to occur within the project area. A plan to maintain traffic and minimize impacts to drivers during construction would be developed to mitigate these short-term adverse impacts. Drivers would be notified of changes in traffic patterns as well as road closures by public notification, and construction would be staged in a manner that would cause the least traffic disturbance reasonable.

As described in **Chapter 1.3**, a VE study conducted in October 2004 found that changes in zoning by Prince George's County for the area surrounding the intersection of Suitland Parkway and MD 4 required revisions of the traffic forecasts used to design the FONSI Selected Alternative diamond roundabout interchange (Alternative 2 in this EA). Based on updated traffic projections, the VE study team concluded that the two roundabouts that allowed traffic to move across the bridge and access the ramps and the parkways would, upon opening, operate at a failing level of service during the morning and evening peak hours. Delays on MD 4 and Suitland Parkway would be reduced on comparison to the No Action Alternative; however, they would still be lengthy and extend on to Suitland Parkway and MD 4 (**Table 5**). Therefore, Alternative 2 would have long-term moderate adverse impacts to transportation.

Cumulative Impacts

Long-term minor cumulative impacts to transportation would be expected as a result of past, present, and reasonably foreseeable actions occurring in the project vicinity. SHA and Prince George's County have planned other MD 4 corridor improvements, including at the MD 4 intersections with Westphalia Road and Dower House Road. The construction of these interchanges would help alleviate traffic congestion on MD 4; however, the Suitland Parkway interchange proposed with Alternative 2 would continue to experience inefficient traffic operations and long travel delays, which would contribute to a negative impact on the entire transportation network in the project area. Although less adverse than the No Action Alternative, the project would have a long-term minor adverse cumulative impact upon transportation when considered in conjunction with other past, present, and future actions.

Conclusion

Construction of Alternative 2 would result in short-term minor and long-term moderate adverse impacts to transportation within the project area. When combined with other past, present, and reasonably foreseeable actions, Alternative 2 would contribute to long-term minor adverse cumulative impacts on transportation.

4.9.4 Impacts of Alternative 3: Signalized Diamond Interchange with Directional Ramp

Construction activities associated with Alternative 2 would result in short-term minor impacts to transportation. Construction activities would last approximately four years. Detours for some directional

movements within the project area would be necessary. Delays caused by lane closures and detours are also likely to occur within the project area. A plan to maintain traffic and minimize impacts to drivers during construction would be developed to mitigate these short-term adverse impacts. Drivers would be notified of changes in traffic patterns as well as road closures by public notification, and construction would be staged in a manner that would cause the least traffic disturbance reasonable.

Following construction, Alternative 3 would result in a beneficial effect on transportation. Function and operation would be improved by increased mobility afforded with the channelized right-turn lane from eastbound Suitland Parkway onto southbound MD 4 and a two-lane directional ramp carrying traffic from northbound MD 4 to westbound Suitland Parkway. Delays would be greatly reduced in comparison to the No Action Alternative (**Table 5**). Additionally, pedestrian and bike mobility through and around the interchange would be greatly improved. Therefore, Alternative 3 would have short-term minor adverse impacts and a long-term benefit to transportation.

Cumulative Impacts

Long-term minor cumulative impacts to transportation would be expected as a result of past, present, and reasonably foreseeable actions occurring in the project vicinity. SHA and Prince George's County have planned other MD 4 Corridor improvements, including at the MD 4 intersections with Westphalia Road and Dower House Road. The construction of these interchanges, in conjunction with the improvements to Suitland Parkway proposed with Alternative 3, would alleviate traffic congestion on MD 4 and on Suitland Parkway. This would result in a cumulative long-term benefit to transportation.

Conclusion

Construction of Alternative 3 would result in short-term minor adverse and long-term benefits to transportation within the project area. When combined with the cumulative effects of past, present, and reasonably foreseeable actions, Alternative 3 would contribute to a long-term cumulative benefit on transportation.

Table 5: Projected 2030 Operational Analysis Results

	Morning Peak Period Delay		Evening Peak Period Delay	
	Seconds	Minutes	Seconds	Minutes
Alternative 1: No Action Alternative				
Suitland Parkway Eastbound	1,188	19.8	808	13.5
Suitland Parkway Westbound	901	15.0	1,004	16.7
MD 4 Northbound	943	15.7	565	9.4
MD 4 Southbound	761	12.7	1,040	17.3
Overall	927	15.5	868	14.5
Alternative 2: Diamond Roundabout Interchange				
Suitland Parkway at MD 4 Southbound Ramps – West Roundabout	360	6.0	255	4.3
Suitland Parkway at MD 4 Northbound Ramps - East Roundabout	314	5.1	4	< 0.1
Alternative 3: Signalized Diamond Interchange with Directional Ramp				
Suitland Parkway at MD 4 Southbound Ramps				
Eastbound	159	2.7	113	1.9
Westbound	107	1.8	121	2.0
Southbound	154	2.6	253	4.2
Overall	140	2.3	131	2.9
Suitland Parkway at MD 4 Northbound Ramps				
Eastbound	31	0.5	25	0.4
Westbound	16	0.3	137	2.3
Northbound	1	< 0.1	2	< 0.1
Overall	22	0.4	86	1.4

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CHAPTER 5: CONSULTATION AND COORDINATION

Coordination with state and federal agencies was conducted during the planning and NEPA process to identify issues and/or concerns related to natural and cultural issues potentially impacted by the undertaking.

5.1 SECTION 7 CONSULTATION

In accordance with Section 7 of the Endangered Species Act of 1973, the SHA solicited comments from the USFWS and DNR as it relates to known occurrences of rare, threatened, and endangered species within the proposed project area that would be adversely impacted by the project. A DNR letter dated May 2, 2012 and online USFWS certification dated April 2, 2012 confirmed that no federal or state listed species of concern were identified within the project area. The response letters are provided in **Appendix A**.

5.2 SECTION 106 CONSULTATION

In accordance with Section 106 of the NHPA, SHA has coordinated with MHT throughout their planning study. In a letter dated December 16, 1997, the SHA determined that the diamond roundabout interchange design (Alternative 2) would have an *adverse effect* on historic properties. MHT concurred with this determination of March 6, 1998 and an MOA to mitigate for the *adverse effect* to Suitland Parkway was executed August, 1999. In a letter dated March 31, 2010, SHA coordinated the signalized diamond interchange design (Alternative 3); efforts to determine the area of potential effects; the identification of historic properties within the area of potential effects; a determination of effects to historic properties; and minimization and mitigation measures being included in the project design. By carbon copy, Prince George's County Historic Preservation Commission, Prince George's Heritage, Inc., and the NPS were invited to provide comments and participate in the consultation process. In correspondence dated June 9, 2010, MHT concurred with SHA's finding that the project would have an *adverse effect* and requested execution of a new MOA to outline mitigation for adverse effects to historic resources. In a letter dated April 11, 2013, SHA coordinated the proposed property acquisition of 8801 Fort Foote Road with MHT. The MHT concurred that this property acquisition would not constitute an additional adverse effect on May 8, 2013. A draft MOA was submitted to MHT, NPS National Capital Region, and NPS-NACE on June 25, 2013. By letter dated July 13, 2013, FHWA notified ACHP of the project and *adverse effect* determination; by letter dated July 26, 2013, ACHP responded that their participation in the consultation to resolve adverse effects is not needed. The draft MOA was further revised and distributed MHT and NPS May 27, 2014 for final review prior to signature.

Consultation letters are provided in **Appendix B**. The current draft MOA, updated since the June 2013 submittal, is provided in **Appendix C**.

5.3 COMMENT PERIOD

This EA will be distributed for public and agency review with a comment period of 30 days. The NPS would consider the comments prior to determining the final decision document that would be sent to the Regional Director of the National Capital Region for approval and signature.

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GLOSSARY AND ACRONYMS

GLOSSARY OF TERMS

Affected Environment: The existing environment to be affected by a proposed action and alternatives.

Archeological survey: Archeological survey is the process of using explicitly specified methods to prospect for archeological sites- appropriate survey methods vary widely for different environments and archeological resource types.

Best Management Practices: Methods that have been determined to be the most effective, practical means of preventing or reducing pollution or other adverse environmental impacts.

Contributing Resource: A building, site, structure, or object that adds to the historic significance of a property or district.

Council on Environmental Quality: Established by Congress within the Executive Office of the President with passage of the *National Environmental Policy Act* of 1969. CEQ coordinates federal environmental efforts and works closely with agencies and other White House offices in the development of environmental policies and initiatives.

Cultural Landscape: Environments that include natural and cultural resources associated with a historical context.

Cultural Resources: Prehistoric and historic districts, sites, buildings, objects, or any other physical evidence of human activity considered important to a culture, subculture, or community for scientific, traditional, religious, or other reason.

Cumulative Impacts: Under NEPA regulations, the incremental environmental impact or effect of an action together with the effects of past, present, and reasonably foreseeable future actions, regardless of what agency or person undertakes such other actions (40 CFR Part 1508.7).

Endangered Species: Any species that is in danger of extinction throughout all or a significant portion of its range. The lead federal agency for the listing of a species as endangered is the U.S. Fish and Wildlife Service, and it is responsible for reviewing the status of the species on a five-year basis.

Endangered Species Act (16 U.S.C. 1531 et seq.): An Act which provides a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved and which provides a program for the conservation of such endangered species and threatened species.

Environmental Assessment: An environmental analysis prepared pursuant to the National Environmental Policy Act to determine whether a federal action would significantly affect the environment and thus require a more detailed environmental impact statement (EIS).

Environmental Impact Statement: An environmental analysis prepared pursuant to the National Environmental Policy Act that concisely describes and analyzes a proposed action which may have a significant impact on the environmental.

Executive Order: Official proclamation issued by the President that may set forth policy or direction or establish specific duties in connection with the execution of federal laws and programs.

Finding of No Significant Impact (FONSI): A document prepared by a federal agency showing why a proposed action would not have a significant impact on the environment and thus would not require preparation of an Environmental Impact Statement. A FONSI is based on the results of an Environmental Assessment.

Historic district: A geographically definable area, urban or rural, possessing a significant concentration, linkage, or continuity of sites, landscapes, structures, or objects, united by past events or aesthetically by plan or physical developments. A district may also be composed of individual elements separated geographically but linked by association or history.

National Register of Historic Places (NRHP): A register of districts, sites, buildings, structures, and objects important in American history, architecture, archeology, and culture, maintained by the Secretary of the Interior under authority of Section 2(b) of the *Historic Sites Act* of 1935 and Section 101(a)(1) of the *National Historic Preservation Act* of 1966, as amended.

Scoping: Scoping, as part of NEPA, requires examining a proposed action and its possible effects; establishing the depth of environmental analysis needed; and determining analysis procedures, data needed, and task assignments. The public is encouraged to participate and submit comments on proposed projects during the scoping period.

Topography: The physical features of a surface area including relative elevations and the position of natural and man-made features.

Section 106: Refers to Section 106 of the NHPA of 1966, which requires federal agencies to take into account the effects of their proposed undertakings on properties included or eligible for inclusion in the National Register and give the Advisory Council on Historic Preservation a reasonable opportunity to comment on the proposed undertakings.

Threatened Species: Any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

Wetlands: The USAC E and the USEPA jointly define wetlands as: Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

ACRONYMS

ACHP	Advisory Council on Historic Preservation
ADT	Average Annual Daily Traffic
APE	Area of Potential Effects
BMP	Best Management Practices
BRAC	Base Realignment and Closure
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CLI	Cultural Landscape Inventory
COMAR	Code of Maryland Regulations
DNR	Department of Natural Resources
DO	Director’s Order
EA	Environmental Assessment
EO	Executive Order
EPA	Environmental Protection Agency
FHWA	Federal Highway Administration
FONSI	Finding of No Significant Impact
JBA	Joint Base Andrews Naval Air Facility Washington
LOS	Level of Service
MDE	Maryland Department of the Environment
MDP	Maryland Department of Planning
MHT	Maryland Historical Trust
M-NCPPC	Maryland – National Capital Park and Planning Commission
MOA	Memorandum of Agreement
mvm	Million Vehicle Miles
MSAT	Mobile Source Air Toxics
NAAQS	National Ambient Air Quality Standards
NACE	National Capital Parks-East
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NPS	National Park Service
NRHP	National Register of Historic Places
PEPC	Planning, Environment, and Public Comment (NPS website)
ROW	Right-of-Way
SE/SC	Sediment Erosion/Sediment Control
SHA	Maryland State Highway Administration
SHPO	State Historic Preservation Office
SWM	Stormwater Management
USACE	United States Army Corps of Engineers
USFWS	United States Fish and Wildlife Service
VE	Value Engineering

BIBLIOGRAPHY

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe (Cowardin et al)

1979 *Classification of Wetlands and Deepwater Habitats of the United States*. U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C.

Maryland Department of the Environment (MDE)

2014 Maryland's Designated Uses/Use Class Maps.
<http://www.mde.state.md.us/programs/Water/TMDL/Water%20Quality%20Standards/Pages/DesignatedUsesMaps.aspx>. Accessed March 14, 2014.

2003 *Maryland State Wetland Conservation Plan*. June 2003. Available online:
http://www.mde.state.md.us/programs/Water/WetlandsandWaterways/MDWetlandConservationPlan/Pages/Programs/WaterPrograms/Wetlands_Waterways/wetland_conservation/index.aspx. Accessed March 2014.

2000 *2000 Maryland Stormwater Design Manual, Volumes I & II*. October 2000, Revised May 2009. Available online: http://www.mde.state.md.us/programs/Water/StormwaterManagementProgram/MarylandStormwaterDesignManual/Pages/programs/waterprograms/sedimentandstormwater/stormwater_design/index.aspx. Accessed March 2014.

Maryland Department of Natural Resources (DNR)

1991 *Maryland Forest Conservation Act*. Available online:
<http://www.dnr.state.md.us/forests/programapps/newFCA.asp>. Accessed March 2014.

Maryland State Highway Administration (SHA)

2014 *MD 4/Suitland Parkway – NuStar Fuel Line Permitting and Advancement with Joint Base Andrews*. Joint Base Andrews Coordination Meeting Minutes. February 27, 2014.

2013 *Conformity Determination: MD 4 (Pennsylvania Avenue) at Suitland Parkway Interchange Improvements*. November 14, 2013. Available online:
<http://roads.maryland.gov/open/md%204%20suitland%20parkway%20pm2.5%20conformity%20final.pdf>. Accessed March 2014.

2012 *Final Monetary Tree Value Report: Maryland Route 4/Suitland Parkway Interchange*. Prepared by Straughan Environmental, June 2012.

2007 MD 4/Suitland Parkway Improvements Value Engineering Study Report: Semi-Final Review Stage. Prepared by RK&K. December 27, 2007.

2006 *Summary of Work Zone Impact Management Strategies*. Work Zone Safety and Mobility. Available online:
<http://www.marylandroads.com/OOTS/09SummaryofWorkZoneManagementStrategies.pdf>.

BIBLIOGRAPHY

- 2004 MD 4/Suitland Parkway Interchange Value Engineering Study Report: Pre-Design Stage. Prepared by RK&K. October 29, 2004.
- 2000 *Finding of No Significant Impact/Section 4(f) Evaluation: Maryland Route 4: From East of the I-95/I-495 Interchange to West of Maryland Route 223.* May 19, 2000.
- 1998 *Environmental Assessment Draft Section 4(f) Evaluation: Maryland Route 4: From East of the I-95/I-495 Interchange to West of Maryland Route 223.* November 2, 1998.
- National Park Service (NPS)**
- 2012 *Director's Order 77-1: Wetland Protection, Procedural Manual.* Available online: http://www.nature.nps.gov/water/wetlands/assets/docs/DO_77-1_PROC_MANUAL_2012_Revision_FINAL.pdf. Accessed March 2014.
- 2008 *Director's Order 77-1: Wetland Protection.* Available online: <http://www.nps.gov/policy/DOrders/DO77-1-Reissue.html>. Accessed March 2014.
- 2006 *Management Polices 2006: A Guide to Managing the National Park System.* Available online: <http://www.nps.gov/policy/mp2006.pdf>. Accessed March 2014.
- 2003 *Director's Order 52C: Park Signs.* Available online: <http://www.nps.gov/policy/DOrders/52Cfinal.pdf>. Accessed March 2014.
- 2001 *Director's Order 12: Conservation Planning, Environmental Impact Analysis, and Decision Making and Handbook.* Available online: <http://www.nps.gov/policy/DOrders/DO-12.pdf>. Accessed March 2014.
- 2001 *Director's Order 25: Land Protection.* Available online: <http://www.nps.gov/policy/DOrders/DOrder25.htm>. Accessed March 2014.
- 1998 *Director's Order 28: Cultural Resources Management.* Available online: <http://www.nps.gov/policy/DOrders/DOrder28.html>. Accessed March 2014.
- 1996 *Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes.* Available online: http://www.nps.gov/hps/hli/landscape_guidelines/index.htm. Accessed March 2014.
- 1995 National Register of Historic Places – Registration Form: “Suitland Parkway.” by Jere L. Krakow, August 1993.
- 1992 *Secretary of the Interior's Standards for the Treatment of Historic Properties.* Available online: <http://www.nps.gov/history/hps/tps/standguide/>. Accessed March 2014.

BIBLIOGRAPHY

1984 *Park Road Standards*. Available online:
<http://www.nps.gov/policy/DOrders/ParkRoadStandards.pdf>. Accessed March 2014.

Prince George's County Council

1992 *Woodland Conservation and Tree Preservation Policy Document*. Available online:
http://lis.princegeorgescountymd.gov/lis/data/zterry/hold/2011%20%2B%20hold/Woodland%20Conservation%20Manual/Policy%20Document%20_2004%20Revisions%20per%20CB-51-2004_.pdf. Accessed March 2014.

Prince George's County Department of Planning (Prince George's County)

2014 *Plan Prince George's 2035 Adopted General Plan*. Adopted February 6, 2014. Available online:
<http://www.planpgc2035.com>. Accessed March 2014.

2010 *Prince George's County Approved Historic Sites and Districts Plan*. Approved June 2010.
Available online:
http://www.pgplanning.org/Projects/Ongoing_Plans_and_Projects/Historic_Preservation/Historic_Sites.htm. Accessed March 2014.

2007 *2007 Approved Westphalia Section Plan and Sectional Map Amendment*. Approved February 6, 2007. Available online: <http://www.pgplanning.org/page24253.aspx>. Accessed January 2014.

2005 *2005 Westphalia Comprehensive Concept Plan*. October 2005. Available online:
<http://www.pgplanning.org/Assets/Planning/Programs+and+Projects/Community+Plans/Westphalia+sector+plan+and+sectional+map+amendment/Westphalia+Comprehensive+Concept+Plan+%28WCCP%29+Study.pdf>. Accessed March 2014.

2002 *Prince George's County Approved General Plan*. Published October 2002. Available online:
http://www.pgplanning.org/Resources/Publications/General_Plan_Publication.htm. Accessed January 2014.

Unites States Army Corps of Engineers (USACE)

1987 *Corps of Engineers Wetlands Delineation Manual*. Environmental Laboratory. Vicksburg, Mississippi.

United States Department of Agriculture (USDA)

2014 *Web Soil Survey of Prince George's County, Maryland*. Natural Resources Conservation Service. Accessed on March 7, 2014.

United States Environmental Protection Agency

1999 Mid-Atlantic Superfund Sites: Air Force Base Andrews. Available online at:
<http://www.epa.gov/reg3hwmd/npl/MD0570024000.htm>. Accessed March 2014.

BIBLIOGRAPHY

1977 *Executive Order 11990: Protection of Wetlands*. Available online at:
<http://www.archives.gov/federal-register/codification/executive-order/11990.html>. Accessed
March 2014.

United States Fish and Wildlife Service

2012 *Certification Letter in Accordance with Endangered Species Act*. Chesapeake Bay Field Office.
April 2, 2012.

United States Geological Survey

2014 *Science in Your Watershed*. <http://water.usgs.gov/wsc/index.html>. Accessed March 2014.