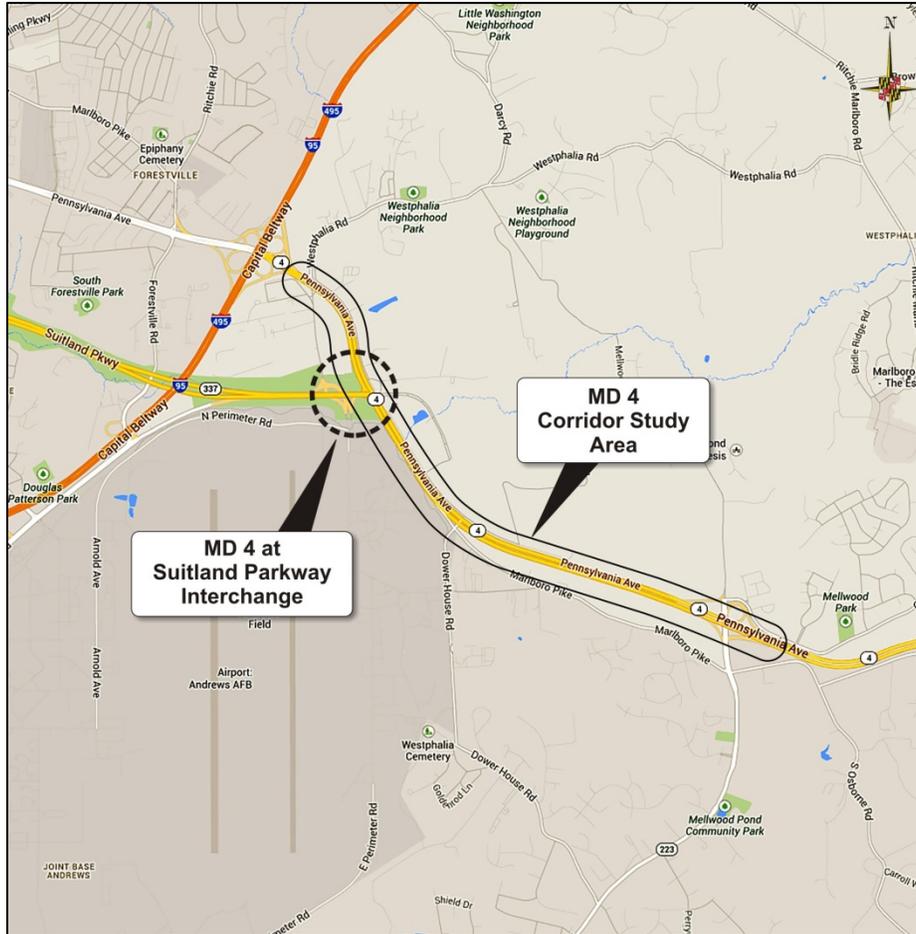


MD 4 at Suitland Parkway

Prince George's County, Maryland



Final Section 4(f) Evaluation

November 2014

Prepared for:

**U.S. Department of Transportation
Federal Highway Administration**

by

**Maryland Department of Transportation
Maryland State Highway Administration**

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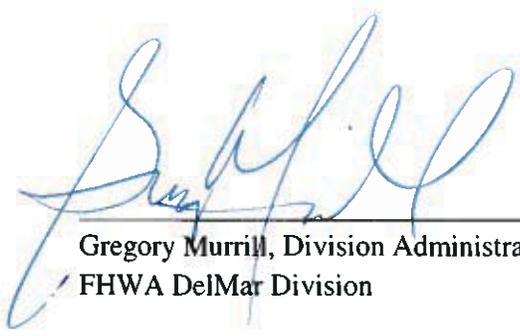

Gregory Murrill, Division Administrator
FHWA DelMar Division

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I. INTRODUCTION

Section 4(f) of the U.S. Department of Transportation Act of 1966 as amended (49 USC Section 303) stipulates that the Federal Highway Administration (FHWA) and other U.S. Department of Transportation (USDOT) agencies cannot approve the use of land from a significant publicly owned public park, recreation area, wildlife or waterfowl refuge, or any significant historic site unless the following conditions apply:

- There is no feasible and prudent avoidance alternative to the use of land from the property, and the action includes all possible planning to minimize harm to the property resulting from such use; or
- The use of the Section 4(f) properties, including any measures to minimize harm (such as avoidance, minimization, mitigation, or enhancement measures) committed to by the applicant, will have a *de minimis* impact on the property.

This Final Section 4(f) Evaluation has been prepared in accordance with 23 CFR Part 774 and 49 U.S.C. 303 to assess the likely impacts of the proposed action upon Section 4(f) resources, and evaluate options that avoid or minimize impacts to those resources resulting from the proposed action. Based on the information presented in the Draft Section 4(f) Evaluation completed in June 2014, FHWA has determined that there are no feasible and prudent alternatives to the use of Section 4(f) properties, and that the SHA and NPS Preferred Alternative, which is the proposed action that comprises a signalized diamond interchange with directional ramp, includes all possible planning to minimize harm resulting from the use of these properties.

The Maryland State Highway Administration (SHA) and FHWA are proposing roadway improvements at the intersection of MD 4 and Suitland Parkway, located approximately one mile southeast of the MD 4/Capital Beltway (I-95/I-495) interchange in Prince George's County (**Figure 1**). The MD 4/Suitland Parkway Interchange project would upgrade the existing MD 4 and Suitland Parkway/Presidential Parkway intersection to a grade-separated, signalized diamond interchange with a directional ramp. This is the first phase of the MD 4 Planning Study to receive design funding. The MD 4 Planning Study received Location Approval on May 19, 2000 when the Federal Highway Administration (FHWA) approved the Finding of No Significant Impact/Section 4(f) Evaluation (FONSI/4(f)).

The FONSI-Selected Alternative 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. The MD 4 corridor is classified as an Urban Freeway/Expressway and is included in the State Primary and National Highway System. This section of MD 4 is the only portion of MD 4 east of the Capital Beltway that is not fully access-controlled. MD 4 generally runs in a northwest-southeast direction.

This Section 4(f) Evaluation updates the Section 4(f) Evaluation completed in 2000 in consideration of recent guidance from FHWA's Final Rule on Section 4(f) (23 CFR 774) as well as more detailed project information resulting from detailed engineering. The evaluation describes Section 4(f) lands within the MD 4/Suitland Parkway interchange project area, potential use of those lands, avoidance alternatives to use of the land, identification of the alternative with the least overall harm, and a discussion of all possible planning to minimize harm.

MD 4 Corridor Study
Final Section 4(f) Evaluation

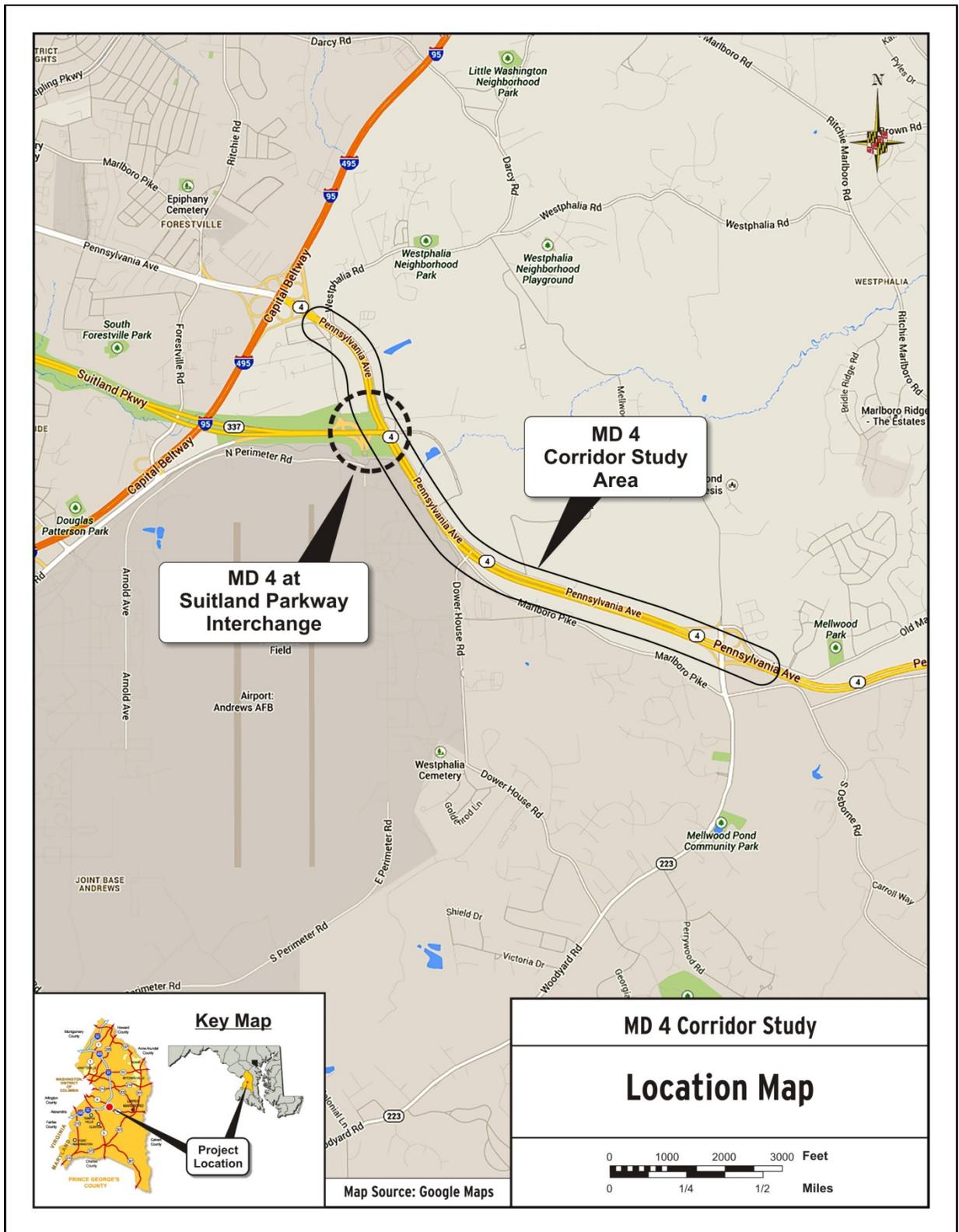


Figure 1: Location Map

II. PROPOSED ACTION

A. Description of Action

The MD 4/Suitland Parkway interchange is located approximately one mile southeast of the MD 4/Capital Beltway (I-95/I-495) interchange. Suitland Parkway intersects MD 4 in an east-west direction and is the only Section 4(f) property located within the MD 4 Planning Study project area. The proposed action is the SHA and NPS Preferred Alternative, as identified in the *MD 4 at Suitland Parkway Interchange Construction Environmental Assessment*, published by NPS – National Capital Parks East in June 2014. The proposed action includes construction of a grade-separated, signalized diamond interchange with a directional ramp at the intersection of MD 4 and Suitland Parkway/Presidential Parkway (**Figure 2**). The profile of Suitland Parkway and existing Presidential Parkway would be raised, while the profile of MD 4 would be lowered, allowing Suitland Parkway and existing Presidential Parkway to travel over MD 4. The centerline of MD 4 would be shifted approximately 75 feet east to reduce impacts to Suitland Parkway. Three four-way signalized intersections would be constructed. One signalized four-way intersection would be constructed on the west side of the MD 4 overpass to control traffic between Suitland Parkway and 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. A second four-way signalized intersection would be constructed on the east side of the MD 4 overpass to control traffic between Central Park Drive and the northbound MD 4 on- and off-ramps. Presidential Parkway would be realigned to connect with Central Park Drive via a third signalized intersection, east of the intersection with northbound MD 4 on- and off-ramps.

In addition, Suitland Parkway would be widened as it approaches MD 4. In the proposed typical section, the two existing 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 widening would result in the reconstruction of the south side of the Suitland Parkway Bridge over the entrance ramp to Joint Base Andrews Naval Air Facility Washington (JBA) North Gate. The four lanes would include two through lanes, a shared through-right turn lane, and an exclusive right turn lane which would then proceed onto southbound MD 4 via a free-flowing 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 proposed action would require utility relocations, including the relocation of approximately 8,800 linear feet of an existing high pressure fuel line crossing Suitland Parkway and serving JBA.

The proposed action includes the construction of 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. The existing ramp from Old Marlboro Pike to westbound Suitland Parkway would be removed.

MD 4 Corridor Study
 Final Section 4(f) Evaluation

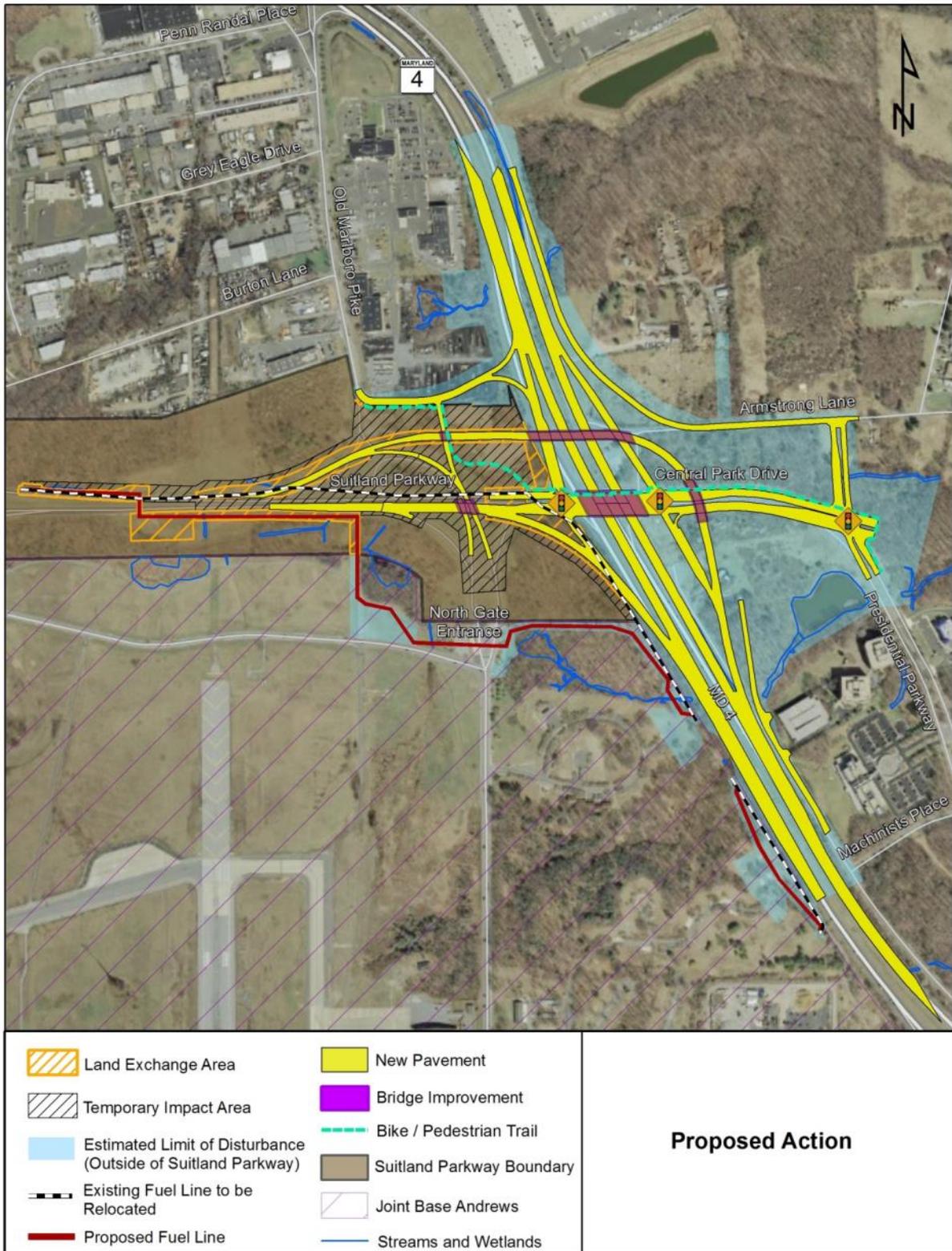


Figure 2: Proposed Action

Access between westbound Suitland Parkway and the JBA North Gate would be maintained. In addition, the existing ramp from eastbound Suitland Parkway to the JBA North Gate would be maintained. Access from the JBA North Gate to eastbound Suitland Parkway and Old Marlboro Pike would be provided via a newly constructed spur road extending from the outbound ramp (from the JBA North Gate to westbound Suitland Parkway). The spur road would connect via a “T” intersection to a newly constructed two-lane road providing an east-west connection between Old Marlboro Pike and the ramp from southbound MD 4 to Suitland Parkway. The terminus of this road at the southbound MD 4 off-ramp would occur via a right-in and right-out connection, accommodating travel to eastbound Suitland Parkway and further to southbound MD 4. Interchange construction would require the temporary and intermittent closure of access to the JBA North Gate. All closures would be coordinated with appropriate JBA personnel.

The overall right-of-way (ROW) needs for the proposed action are 44.1 acres, including: the permanent transfer of approximately seven acres of NPS lands to SHA, as detailed in **Section IV**; and two business displacements. Both of the businesses that would be displaced are located on the eastern portion of the proposed interchange. Displacements include an Exxon Service Station and the Presidential Corporate Center Visitor’s Pavilion. The proposed action would impact an estimated 2,500 linear feet of streams, less than 0.1 acre of wetlands, and 17.9 acres of forested area. Impacts to resources on NPS lands are outlined in **Section IV**. The estimated construction cost for the proposed action is \$111.8 million. ROW acquisition would be an additional \$8.7 million.

The elimination of an at-grade intersection in favor of a grade-separated interchange would reduce the conflicts and the severity of crashes on MD 4. This is due both to the elimination of the signal on MD 4 as well as the separation of through traffic on MD 4 and Suitland Parkway. Providing a separated free flow lane for the main movements – from northbound MD 4 to westbound Suitland Parkway and from eastbound Suitland Parkway to southbound MD 4 – would further reduce the opportunity for conflicts. Also, the left-turns at the ramp terminal signalized intersections on the overpass would have fewer opposing vehicles because of the grade separation from MD 4.

B. Purpose and Need

The purpose of the proposed action is to increase the roadway capacity to meet existing and 2030 projected travel demands at the intersection of MD 4 and Suitland Parkway and to address safety concerns. This action is needed because the project area currently experiences excessive traffic congestion, which is only projected to increase as future development will bring more commuters to the area.

Background

The project area is the only section of MD 4 between the Capital Beltway and US 301 without full access control. 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. A two-lane service road (Westphalia Center Court North) runs parallel to the north side of MD 4 between Armstrong Lane and Westphalia Road. This service road is used as relief for MD 4 when congestion levels are severe, especially during the morning peak hours.

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 accesses 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 connects to Westphalia Center Court North; however, no crosswalks or pedestrian friendly signage exists at the intersection of MD 4 and Suitland Parkway/Presidential Parkway.

The *2005 Westphalia Comprehensive Concept Plan* (WCCP) study promotes construction of a high-density, mixed-use development core northeast of MD 4 to Ritchie Marlboro Road, from the Rural Gateway to the Capital Beltway. Its overall Development Concept Plan calls for 6,000 total acres of development, including approximately 15,000 new residential units, up to 4.6 million employment square footage, and around 700,000 retail square footage. 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* supports and guides this development pattern concept. Because the MD 4/Suitland Parkway interchange has been included in the current Consolidated Transportation Program, the urban development in Westphalia has been approved with the assumption that the interchange project would proceed.

JBA consists of approximately 4,300 acres within the study area. The *Joint Land Use Study*, completed by JBA in 2009 estimated that the 2008 Base population included approximately 17,000 active duty military and civilian employees and military 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 is a major employment center in Prince George's County.

The area around the MD 4/Suitland Parkway intersection lacks adequate bike and pedestrian facilities to provide continuity and connections between existing and future bicycle facilities in the region. Additionally, the *Preliminary Plan Prince George's 2035* (September 2013) identifies pedestrian and bicyclist safety as a paramount concern for the county. This document goes further to explain that Prince George's County has the highest number of pedestrian deaths per 100,000 residents of any county in Maryland. While MD 4 is not identified as a bikeway, existing and planned development in the area would result in increased bike and pedestrian usage of roadways, including those bisecting MD 4.

Project Need

Level-of-Service (LOS) on expressways and freeways with uninterrupted flow conditions are ranked from LOS A (free traffic flows at high speeds with low volume) to LOS 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 volumes 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

Annual Average Daily Traffic (ADT) of 60,500 vehicles and operated at LOS F during the AM and PM peak hours; eight percent of the existing and future volumes are comprised of truck traffic. The 2011 traffic analysis considered further residential, mixed-use, and military development proximal to the study area that has been approved by Prince George's County since completion of the 2000 FONSI. Based on the 2011 traffic analysis for the MD 4/Suitland Parkway intersection, by 2030 ADT at the MD 4/Suitland Parkway intersection is projected to reach 84,450 vehicles. This traffic volume increase would increase roadway congestion and travel time. The 2030 projected volumes, which were developed in 2009, indicate that the peak hour turning movement volumes would be highest for the northbound MD 4 to westbound Suitland Parkway movement, with AM volumes exceeding 2,100 vehicles per hour; and for the eastbound Suitland Parkway to southbound MD 4 movement, with PM volumes exceeding 1,900 vehicles per hour. The intersection currently operates at LOS F during AM and PM peak hours, a condition that will be exacerbated by planned and approved growth along the project corridor.

Crash data was collected for the MD 4 corridor from Dower House Road to I-495 for the time period between January 2010 and December 2012. Within this period, the study area had a total of 171 reported crashes. There were no fatal crashes, 64 injury-related crashes, and 107 property-damaging crashes. 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 was 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 crash experience in the vicinity of the MD 4 intersection at Suitland Parkway (within 0.5 mile) 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. The predominant intersection crash type was rear end crashes and "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.

III. SECTION 4(f) PROPERTY

A. Suitland Parkway

One Section 4(f) property, Suitland Parkway, is located in the western portion of the study area along MD 4. The eastern terminus of the Parkway is located at MD 4 approximately one mile south of the MD 4/Capital Beltway interchange, near the JBA North Gate; the western terminus is located in the District of Columbia at I-295 and the northbound approach to the Frederick Douglass Memorial Bridge (South Capitol Street Bridge over the Anacostia River).

Suitland Parkway spans a total of 9.18 miles, including 6.38 miles through Prince George's County, Maryland, and 2.8 miles through the District of Columbia. The park surrounding the Suitland Parkway

corridor comprises 418.9 acres and is managed by the National Park Service (NPS). Suitland Parkway is owned by United States Government and under the jurisdiction of NPS National Capital Parks-East.

The entirety of Suitland Parkway is a historic district listed in the National Register of Historic Places (NRHP), as 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 values, or representation of a significant and distinguishable entity whose components may lack individual distinction. Per 23 CFR §774.11, Suitland Parkway’s NRHP designation as an historic property qualifies it as a Section 4(f) property subject to the Section 4(f) Evaluation process provided in this document.

Conceived by the National Capital Park and Planning Commission (NCP&PC) in 1937, the Suitland Parkway was one of several parkways built in the Washington, D.C. area. It was constructed during World War II to improve transportation for defense industry employees, and opened to traffic on December 9, 1944. The Parkway corridor is extensively landscaped, with larger trees left standing 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: from presidents returning from diplomatic achievements to the funeral procession of President John F. Kennedy. Presently it is used primarily by commuters and local traffic.

The Suitland Parkway is a nationally significant resource eligible under Criterion A for transportation and Criterion C for landscape architecture related to the parkway system developed during the first half of the twentieth century. The various 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; automobile proliferation 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.

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

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

MD 4 provides direct access to the eastern end of Suitland Parkway. Other proximal routes by which users can access Suitland Parkway include Old Marlboro Pike and the JBA North Gate within the study area, and Forestville Road which is located about a mile west of the study area. Presently, there is no designated bikeway accessing this portion of Suitland Parkway.

As previously discussed, there are similar historic parkways in the region, each owned by the United States Government and under the jurisdiction of NPS. These include the Baltimore-Washington Parkway, the George Washington Memorial Parkway, and the Rock Creek and Potomac Parkway. The Baltimore-Washington Parkway is a scenic highway that opened in 1954. It extends north-south between Baltimore, Maryland and Washington, D.C. a distance of 29 miles, and is located approximately ten miles north of the project area. The George Washington Memorial Parkway extends west-east for a distance of 25 miles through Fairfax and Arlington Counties in northern Virginia, hugging the southern shore of the Potomac River, approximately 14 miles west of the project area. The Rock Creek and Potomac Parkway is a north-south route traversing Rock Creek Park in northwest Washington, D.C. for approximately 5 miles from Beach Drive, near the National Zoological Park south to the Lincoln Memorial and Arlington Memorial Bridge; located approximately 13 miles northwest of the project area. Each of these parkways provides scenic access between major points within the National Capital Region serving regional visitors, residents, and commuters.

B. Star-Spangled Banner National Historic Trail

MD 4 at the Suitland Parkway is a segment of the Star-Spangled Banner National Historic Trail and Scenic Byway that connects the places, people, and events that led to the birth of our National Anthem during the War of 1812. The route's designation by Congress as a National Historic Trail evidences its significance to the nation, and its potential for public recreational use in combination with historical-based interpretation and appreciation. Designation of the trail as a scenic byway in the state of Maryland further confirms the significance of the historic and other intrinsic qualities associated with this travel route. In order for the Trail and Scenic Byway to be successful as a high-quality travel experience, the route needs to be considered in its entirety as a corridor, not as a set of disconnected historic and recreational sites. Through consultation with the Maryland Historical Trust (MHT), which operates as the Maryland State Historic Preservation Officer (MD SHPO) and the SHA's Office of Environmental Design it has been determined that development of the interchange will not directly affect the Trail and Scenic Byway's cultural and natural resources. MHT does not consider the trail to meet the historic property definition under 36 CFR 800.

Pursuant to 23 CFR 774.13(f), certain trails, paths, and bikeways, including National Historic Trails established under the National Trails System Act, are excepted from Section 4(f) requirements unless the affected trail section(s) are defined as historic sites. Since the trail segments near the MD 4 and Suitland Parkway interchange project are not considered historic sites, potential impacts to the Star-Spangled Banner Trail do not require Section 4(f) approval. Therefore, the Star-Spangled Banner Trail is not discussed further in this evaluation.

IV. IMPACTS TO SECTION 4(f) PROPERTY

Impacts to Suitland Parkway include the permanent transfer of NPS lands to SHA, temporary construction impacts, and impacts that would result in a change in the features and attributes of Suitland Parkway.

The proposed action (the SHA and NPS Preferred Alternative), including the interchange construction and requisite utility relocations, would require the permanent transfer of approximately seven acres from NPS to SHA. The land transfer would occur via a land exchange of fee simple ROW of NPS lands to SHA. Areas identified for 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.

In exchange for these lands SHA would transfer fee simple ROW of 12.8 acres located at 8801 Fort Foote Road to NPS – National Capital Parks East, as further discussed in **Section VII**.

An estimated 12-acre area of NPS land along the Suitland Parkway would be impacted by temporary construction activities that would span four to five years. This 12-acre area would encompass: staging areas, areas for grading and drainage, the resurfacing and reconstruction of the approach roadways, construction of the bike/multi-use path, and areas for re-vegetation. In addition, SHA would conduct vegetation monitoring and invasive species management for five years following construction within this area. Temporary use would require the issuance of a Special Use Permit by NPS. There would be no permanent change in the ownership of this area.

Access to and from the JBA North Gate would be modified, as described in Section I of this evaluation. The transportation function and operation of Suitland Parkway would be improved by the increased mobility afforded through the channelized right turn lane from eastbound Suitland Parkway onto southbound MD 4.

Construction of the directional ramp traversing the northwest quadrant of the proposed action would require clearing of the existing NPS storage area. This area would be cleared of accumulated debris and construction stockpiles to accommodate the directional ramp. A bike/multi-use path trail would be constructed along westbound Suitland Parkway from Presidential Parkway to a tie-in with Old Marlboro Pike. It is anticipated that the portions of this trail located on NPS lands could be managed and maintained by NPS following construction.

Impacts to natural resources on park property include approximately 4.7 acres of forest clearing. Waters of the U.S. located within the Suitland Parkway project area include an unnamed tributary to Henson Creek and associated wetlands west of the North Gate (**Figure 2**). Henson Creek is classified as Use I

waters (support of estuarine and marine aquatic life and shellfish harvesting) by the Maryland Department of Natural Resources. The proposed action would impact less than 0.1 acre of wetlands and water resources within the park property.

The Suitland Parkway Bridge over the entrance ramp to JBA North Gate, identified as a contributing element to the historic district, would be reconstructed as described in **Section VII**.

Views from Suitland Parkway east toward MD 4 would be permanently impacted by the widening of the roadway; furthermore, the profile of Suitland Parkway would be elevated to cross over MD 4. The directional ramp would contribute to new hardscape within the viewshed of Suitland Parkway, particularly views east and north, as the ramp crosses over Presidential Parkway, MD 4, and the northbound access road exiting the 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.

Approximately 8,800 linear feet of the high pressure fuel line traversing Suitland Parkway and serving JBA would be relocated to accommodate the interchange construction. Although the fuel line is currently located within NPS ROW, approximately one acre of the aforementioned land transfer is needed to accommodate the fuel line relocation. This property is being included in the land transfer to SHA in accordance with NPS desires and guidance.

The physical and visual impacts of the proposed action would result in an *adverse effect* to Suitland Parkway, as determined by FHWA on March 31, 2010, with the concurrence of the MD SHPO dated July 9, 2010, pursuant to Section 106 of the National Historic Preservation Act of 1966 (NHPA), as amended. Measures to mitigate the *adverse effect* are outlined in a Memorandum of Agreement (MOA) executed October 17, 2014 by NPS, FHWA, SHA, and the MD SHPO, as described in **Section VII**.

V. AVOIDANCE ANALYSIS

A *feasible and prudent avoidance alternative* avoids using a Section 4(f) property and does not cause other severe problems of a magnitude that substantially outweigh the importance of protecting the Section 4(f) property (23 CFR 774.17). In assessing the importance of protecting the Section 4(f) property, it is appropriate to consider the relative value of the resource to the preservation purpose of the statute. The preservation purpose of Section 4(f) is described in 49 U.S.C. §303(a), which states: "It is the policy of the United States Government that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites."

An alternative is not *feasible* if it cannot be built as a matter of sound engineering judgment.

An alternative is not *prudent* if:

- It compromises the project to a degree that it is unreasonable to proceed with the project in light of its stated purpose and need;
- It results in unacceptable safety or operational problems;

- It causes severe social, economic, or environmental impacts even after reasonable mitigation; severe disruption to established communities; severe disproportionate impacts to minority or low income populations; or severe impacts to environmental resources protected under other Federal statutes;
- It results in additional construction, maintenance, or operational costs of an extraordinary magnitude;
- It causes other unique problems or unusual factors; or
- It involves multiple factors above that while individually minor, cumulatively cause unique problems, or impacts of extraordinary magnitude.

Four avoidance alternatives have been developed and are discussed below. Each of these alternatives would completely avoid the Section 4(f) use of Suitland Parkway. Each is analyzed in accordance with the definition of *feasible and prudent avoidance alternative* found in 23 CFR §774.17.

A. Avoidance Alternative 1: No Build

Avoidance Alternative 1 would avoid all Section 4(f) property impacts. Under this alternative there would be no changes to the existing at-grade signalized MD 4/Suitland Parkway intersection beyond routine maintenance and repairs. Planned development along the MD 4 corridor would continue as approved by Prince George's County, as would other transportation improvements programmed by Prince George's County or the Maryland State Highway Administration.

There would be no operational improvements or increased capacity at the intersection of MD 4 and Suitland Parkway, so existing and future traffic volumes would not be accommodated at this location. Approved residential, mixed-use, and military development proximal to the study area would continue to cause increased traffic volume along MD 4, with an estimated increase of 39.6 percent between 2011 (ADT 60,500) and 2030 (ADT 84,450). The number of conflict points would remain unchanged. The intersection would continue to cause substantial difficulties for pedestrians and bicyclists navigating across MD 4. Therefore, Avoidance Alternative 1 would not address the project's purpose and need.

Although Avoidance Alternative 1 would avoid impacts to the Section 4(f) property, it is not prudent because it would 1) be unreasonable to proceed with the alternative in light of the project's stated purpose and need; and 2) result in unacceptable safety or operational problems. Avoidance Alternative 1 therefore causes other severe problems of a magnitude that substantially outweighs the importance of protecting the Section 4(f) property.

B. Avoidance Alternative 2: Upgrade Existing MD 4 and Suitland Parkway Intersection East of Existing Intersection

Under Avoidance Alternative 2 the intersection of MD 4 and Suitland Parkway would be expanded in order to accommodate existing and future traffic volumes to the extent possible while avoiding impacts to Suitland Parkway (**Figure 3**). The entire intersection would be realigned east of its current location to allow these upgrades and still avoid impacts to the Section 4(f) property. To ensure that Suitland Parkway is avoided, 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. The alignment shift would allow the three left-turn lanes to merge to two lanes prior to merging with Suitland Parkway. Additionally, two channelized right-turn lanes from eastbound Suitland Parkway to southbound MD 4 could be constructed without impacting the Section 4(f) property. The intersection alignment shift would also allow for increased weave distances between MD 4 and the JBA North Gate.

The construction cost of Avoidance Alternative 2 would be between \$19.2 and \$22.1 million. The realigned MD 4 mainline would also require an estimated 0.5 acre of ROW from at least five parcels east of existing MD 4. This area is currently zoned for mixed-use development; however the majority of these parcels are currently undeveloped. One business/commercial property displacement would be required. The cost of this additional ROW is estimated to be \$108,900. This alternative would provide some increase in capacity at the MD 4 and Suitland Parkway intersection; however, the minor intersection improvements would not address the substantial increase in traffic volumes anticipated from future development. The intersection would also maintain the same number of conflict points. The addition of turn lanes would further exacerbate the existing difficulties for pedestrians and bicyclists navigating across MD 4. Therefore, Avoidance Alternative 2 would not address the project's purpose and need.

Avoidance Alternative 2 would impact approximately 2.0 acres of forest. Stream impacts would total approximately 1,200 linear feet and wetland impacts would be less than 0.1 acre.

Although Avoidance Alternative 2 would avoid impacts to the Section 4(f) property, it is not prudent because it would 1) be unreasonable to proceed with the alternative in light of the project's stated purpose and need; and 2) result in unacceptable safety or operational problems. Avoidance Alternative 2 therefore causes other severe problems of a magnitude that substantially outweigh the importance of protecting the Section 4(f) property.

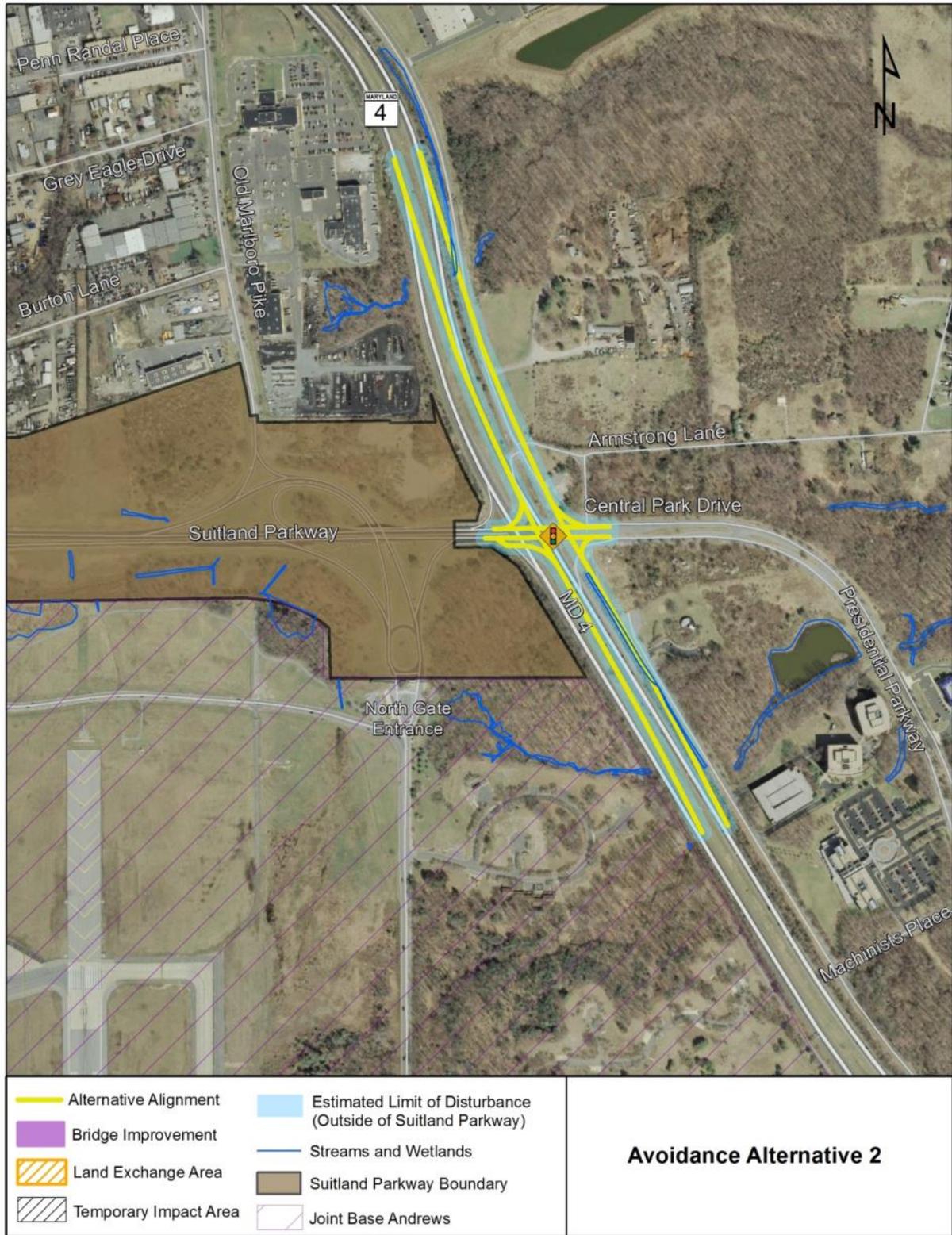


Figure 3: Avoidance Alternative 2

C. Avoidance Alternative 3: Shift Signalized Diamond Interchange with Directional Ramp East

Under Avoidance Alternative 3 the alignment of MD 4 would be shifted east and an interchange would be constructed at MD 4 and Suitland Parkway/Central Park Drive with a configuration that is similar to the proposed action (**Figure 4**). The shift in the alignment of mainline MD 4 would avoid permanent impacts to the Section 4(f) property. Shifting the alignment of the interchange east would require the realignment of Presidential Parkway, which would intersect with Central Park Drive at an at-grade intersection east of the directional ramp. Because of the re-alignment of MD 4, the construction cost of this alternative would be between \$82.2 million and \$94.5 million. Additionally, the realigned MD 4 mainline would require approximately 26.5 acres of ROW from at least 32 individual parcels east of existing MD 4, the majority of which are currently undeveloped, though the area is currently zoned for mixed-use development. The estimated cost of this additional ROW is \$5.7 million. This alternative would displace at least four office buildings, two more than the proposed action. Further, the stormwater management pond maintained by Prince George's County, southeast of Presidential Parkway would need to be reconstructed. Access to Central Park Drive, Presidential Parkway and future developments east of the existing intersection would be provided. These impacts to existing businesses and planned development would constitute a severe economic impact.

Similar to the proposed action, interchange construction with this alternative would provide capacity and operational improvements that would address the project's need to accommodate existing and future travel demand. The interchange would also eliminate a number of vehicle conflict points that exist with the current intersection. Pedestrians and bicycle safety would be improved by providing grade-separated access across MD 4. Therefore, Avoidance Alternative 3 would address the project's purpose and need.

Approximately 12.2 acres of forest clearing would occur with this alternative. Stream impacts would total an estimated 1,000 linear feet and approximately 0.4 acre of wetlands would be impacted, 0.3 acre more than the proposed action.

Although Avoidance Alternative 3 would avoid impacts to the Section 4(f) property, it is not prudent because it would have severe social, economic, and environmental impacts. Avoidance Alternative 3 therefore causes other severe problems of a magnitude that substantially outweighs the importance of protecting the Section 4(f) property.

D. Avoidance Alternative 4: Extending Presidential Parkway to Connect to an Expanded Dower House Road Interchange

Under Avoidance Alternative 4, MD 4 would be depressed similar to the proposed action and a new bridge would carry Suitland Parkway over MD 4; however, no access would be provided between MD 4 and Suitland Parkway. Suitland Parkway 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 (**Figure 5**).



Figure 4: Avoidance Alternative 3

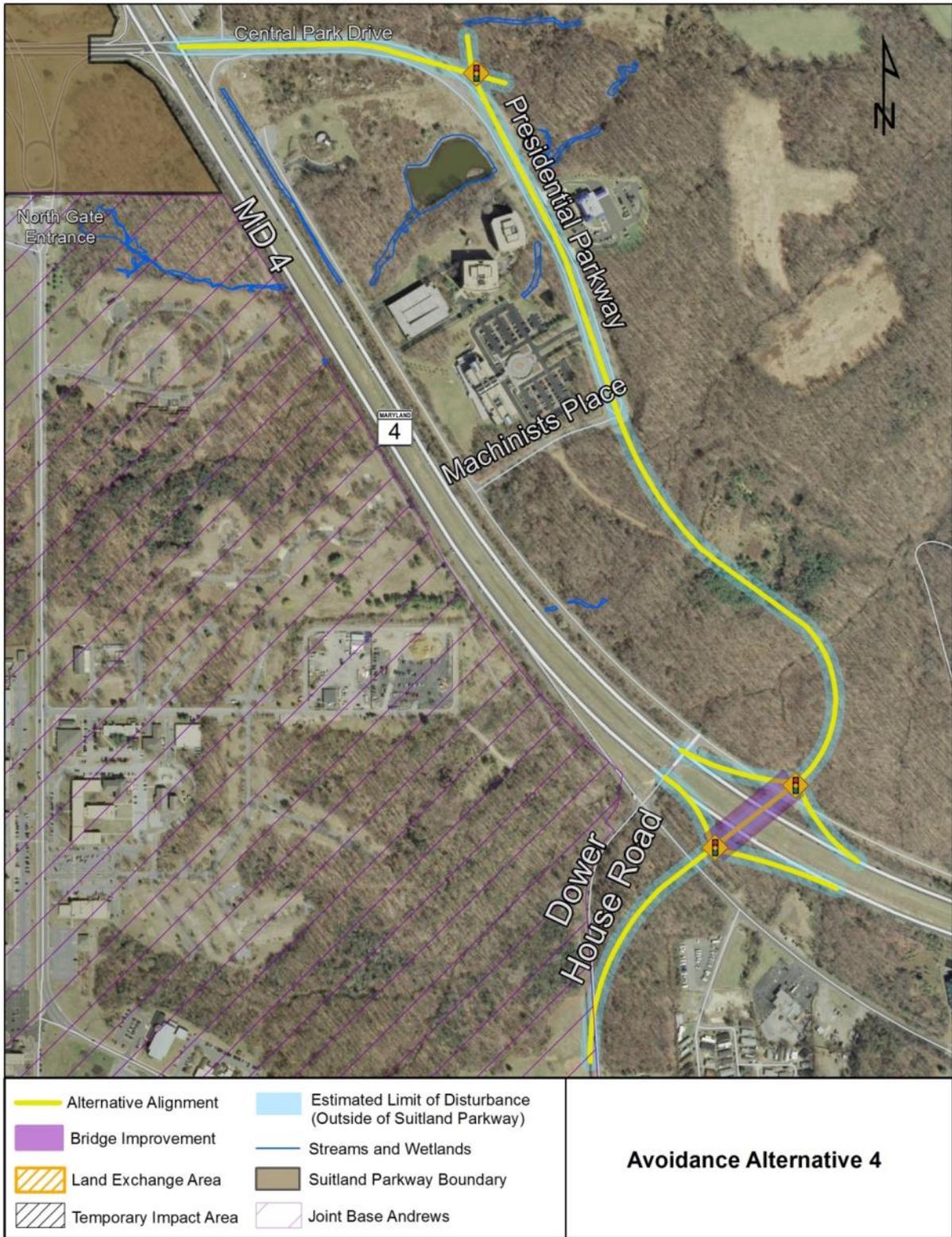


Figure 5: Avoidance Alternative 4

Under this alternative, the MD 4 and Dower House Road interchange – the design for which was identified in the 2000 FONSI – would be re-designed to accommodate existing and future travel demand for Suitland Parkway, Central Park Drive, Presidential Parkway, and Dower House Road. The interchange would eliminate a number of vehicle conflict points that exist at the current MD 4/Suitland Parkway intersection by consolidating movements from the two proposed interchanges into a single interchange. Pedestrian and bike safety would be improved at the MD 4/Suitland Parkway interchange by providing grade-separated access across MD 4.

Extending Presidential Parkway would be consistent with the *2007 Approved Westphalia Sector Plan and Section Map Amendment*, which shows an extension of this roadway southeast to connect with extension of Dower House Road. However, the alignment would be shifted to provide a direct tie-in with the Dower House Road Interchange, potentially impacting future approved mixed use development proximal to this interchange.

Because the Presidential Parkway extension would occur mostly on existing roadway alignment, the alternative would require 6.5 acres of ROW from at least 12 individual parcels east of existing MD 4, the majority of which are currently undeveloped, though the area is currently zoned for mixed-use development. This estimate does not include acquiring Presidential Parkway from Prince George's County. The estimated cost of the additional ROW is \$1.4 million. However, moving the projected traffic from Central Park Drive and Suitland Parkway onto Presidential Parkway would substantially exceed the functional classification of this roadway. Approximately 2 additional lanes in each direction would be needed along Presidential Parkway, and signalized intersections may be required at the entrances to businesses. Increased traffic volumes combined with current access to existing and proposed development would increase vehicular conflict points, as well as present a condition that is inconsistent with drivers' expectations as they travel off of the limited-access Suitland Parkway.

In addition to the existing offices and businesses to which direct access is provided via Presidential Parkway, the approved development plan identifies additional office space to be accessed by the extended Presidential Parkway. Increased capacity along the route would be inconsistent with existing and planned access to and from development.

Based on cursory traffic analysis of the interchange, access from northbound Presidential Parkway onto westbound Suitland Parkway would operate at an LOS F in the AM peak hour; similarly the movement from southbound Presidential Parkway to southbound MD 4 would operate at an LOS F in the PM peak hour. Operational failure of these intersections would cause the MD 4 corridor to become gridlocked. Therefore, Avoidance Alternative 4 would not address the project's purpose and need.

The construction cost of extending Presidential Parkway in addition to any capacity upgrades and construction of the Dower House Road interchange would be between \$59.4 million and \$68.3 million.

Based on a review of aerial imagery, approximately 7.2 acres of forest clearing would occur with this alternative. Stream impacts would total approximately 500 linear feet. It is anticipated that no wetlands would be impacted, based on a review of National Wetland Inventory (NWI) mapping.

Although Avoidance Alternative 4 would avoid impacts to the Section 4(f) property, it is not prudent because it would 1) be unreasonable to proceed with the alternative in light of the projects stated purpose and need; 2) result in unacceptable safety or operational problems; and 3) have severe social, economic, and environmental impacts. Avoidance Alternative 4 therefore causes other severe problems of a magnitude that substantially outweighs the importance of protecting the Section 4(f) property.

Conclusion of Avoidance Analysis

Based on the evaluation presented in this section, there is no feasible and prudent avoidance alternative to the use of the Section 4(f) property, the Suitland Parkway.

VI. LEAST OVERALL HARM

Pursuant to 23 CFR §774.3(c), if the avoidance analysis determines that there is no feasible and prudent avoidance alternative, then only the alternative that causes the least overall harm to Section 4(f) properties may be approved. All remaining alternatives are evaluated to determine which alternative would cause the least overall harm to the Section 4(f) property, Suitland Parkway. This chapter evaluates those alternatives, including alternatives that would avoid or reduce the use of specific contributing elements of the Suitland Parkway.

The remaining alternatives are generally similar to the proposed action, but involve either different interchange configurations for the MD 4/Suitland Parkway interchange, or modifications to the proposed action interchange design.

There are seven factors to be considered in identifying the alternative that would cause the least overall harm (see 23 CFR 774.3(c)(1)). **Table 1** presents a comparison of the alternatives by each factor in relation to the proposed action, the SHA and NPS Preferred Alternative.

A. Interchange Configuration Alternatives

The following alternatives involve variations to the MD 4/Suitland Parkway interchange configuration that have been developed to compare the relative severity of harm to Section 4(f) property. Each would minimize harm to Suitland Parkway either by reducing the area of impact or eliminating the directional ramp. Although these minimization alternatives would result in less harm pursuant to Section 4(f), they would likely result in an adverse effect to Suitland Parkway pursuant to Section 106 (36 CFR 800.5).

Minimization Alternative 1: Single-Point Urban Interchange

Minimization Alternative 1 consists of a single point urban interchange (SPUI) at the MD 4/Suitland Parkway interchange (**Figure 6**). Similar to the proposed action, MD 4 would be slightly depressed, while Suitland Parkway would be raised to cross over MD 4 via a new bridge. This alternative would reduce the footprint of the interchange by constructing retaining walls to allow the placement of the interchange ramps closer to MD 4. By lessening the distance between the north and southbound on- and off-ramps, access at these ramps would be controlled through a single signalized intersection. Relocation of the existing fuel line would be required to facilitate construction of this alternative. Based on conceptual design it is estimated that the permanent impact to the Section 4(f) property would be approximately 6.4

Table 1: Least Overall Harm Analysis

Factors for Evaluation of Least Overall Harm per 23 CFR 774.3(c)(1)								
Alternative	i. The ability to mitigate adverse impacts to each Section 4(f) property (including any measures that result in benefits to the property)	ii. The relative severity of the remaining harm, after mitigation, to the protected activities, attributes, or features that qualify each Section 4(f) property for protection	iii. The relative significance of each Section 4(f) property	iv. The views of the official(s) with jurisdiction over each Section 4(f) property	v. The degree to which each alternative meets the purpose and need for the project	vi. After reasonable mitigation, the magnitude of any adverse impacts to properties not protected by Section 4(f)*	vii. Substantial differences in costs among the alternatives	CONCLUSION
Proposed Action	Strong ability to mitigate impacts, as proposed in the current MOA, and commitment of land transfer to NPS. Refer to Section 7 of evaluation	Harm to Suitland Parkway: <ul style="list-style-type: none"> • 7 acres of permanent acquisition • Would impact historic bridge • Visual impacts from directional ramp 	Only one Section 4(f) property would be impacted	NPS – National Capital Parks East and MHT** agree that the proposed action will have an adverse effect on Section 4(f) properties A MOA was executed October 17, 2014 by NPA, FHWA, SHA, and the MD SHPO that outlines measure to mitigate the adverse effects of the proposed action to the Suitland Parkway	Meets the project purpose and need	44.1 acres of ROW 2 Businesses Displaced 2,500 lf of streams 0.1 acre of wetlands 17.9 acres of forest	Construction cost = approximately \$111.8 million Estimated additional ROW cost = \$8.7 million Total estimated cost = \$120.5 million	Meets the project purpose and need, impacts to properties not protected by Section 4(f) would be minimized, appropriate mitigation measures have been incorporated in the design and MOA to minimize harm to the Section 4(f) property; therefore, the proposed action would result in the least overall harm to Section 4(f) properties
MHT Interchange Configuration Alternatives								

MD 4 Corridor Study
Final Section 4(f) Evaluation

Factors for Evaluation of Least Overall Harm per 23 CFR 774.3(c)(1)								
Alternative	i. The ability to mitigate adverse impacts to each Section 4(f) property (including any measures that result in benefits to the property)	ii. The relative severity of the remaining harm, after mitigation, to the protected activities, attributes, or features that qualify each Section 4(f) property for protection	iii. The relative significance of each Section 4(f) property	iv. The views of the official(s) with jurisdiction over each Section 4(f) property	v. The degree to which each alternative meets the purpose and need for the project	vi. After reasonable mitigation, the magnitude of any adverse impacts to properties not protected by Section 4(f)*	vii. Substantial differences in costs among the alternatives	CONCLUSION
Minimization Alternative 1: SPUI	Similar to proposed action	Less harm to Suitland Parkway compared to the proposed action: <ul style="list-style-type: none"> • 6.4 acres of permanent acquisition • Would not impact historic bridge • No visual impacts from directional ramp 	Only one Section 4(f) property would be impacted	NPS-National Parks East identified the proposed action as their preferred alternative MHT** did not indicate a preference for any alternative; however, MHT** is party to an MOA for the proposed action	Would not provide adequate capacity, therefore, does not meet the project purpose and need	16.3 acres of ROW 1 Business Displaced 600 lf of streams <0.1 acre of wetlands 5.7 acres of forest	Construction cost = \$73.9 – 85.0 million Estimated additional ROW cost = \$3.0 million Total estimated cost = \$76.9 – 88.0 million	Would have less harm to Suitland Parkway, however, would not meet the purpose and need and would therefore, result in greater overall harm than the proposed action
Minimization Alternative 2: Diverging Diamond Interchange	Similar to proposed action	Less harm to Suitland Parkway compared to the proposed action: <ul style="list-style-type: none"> • 6.3 acres of permanent acquisition • Would not impact historic bridge • No visual impacts from directional ramp 	Only one Section 4(f) property would be impacted.	NPS-National Parks East identified the proposed action as their preferred alternative MHT** did not indicate a preference for any alternative; however, MHT** is party to an MOA for the proposed action	Would not provide adequate capacity, therefore, does not meet the project purpose and need	16.6 acres of ROW 1 Business Displaced 400 lf of streams <0.1 acre of wetlands 5.9 acres of forest	Construction cost = \$77.0 – 88.6 million Estimated additional ROW cost = \$3.6 million Total estimated cost = \$80.6 – 92.2 million	Would have less harm to Suitland Parkway, however, would not meet the purpose and need and would therefore, result in greater overall harm than the proposed action

MD 4 Corridor Study
Final Section 4(f) Evaluation

Factors for Evaluation of Least Overall Harm per 23 CFR 774.3(c)(1)								
Alternative	i. The ability to mitigate adverse impacts to each Section 4(f) property (including any measures that result in benefits to the property)	ii. The relative severity of the remaining harm, after mitigation, to the protected activities, attributes, or features that qualify each Section 4(f) property for protection	iii. The relative significance of each Section 4(f) property	iv. The views of the official(s) with jurisdiction over each Section 4(f) property	v. The degree to which each alternative meets the purpose and need for the project	vi. After reasonable mitigation, the magnitude of any adverse impacts to properties not protected by Section 4(f)*	vii. Substantial differences in costs among the alternatives	CONCLUSION
Minimization Alternative 3: Urban Diamond	Similar to proposed action	Less harm to Suitland Parkway compared to the proposed action: <ul style="list-style-type: none"> • 4.6 acres of permanent acquisition • Would impact historic bridge • No visual impacts from directional ramp 	Only one Section 4(f) property would be impacted.	NPS-National Parks East identified the proposed action as their preferred alternative MHT** did not indicate a preference for any alternative; however, MHT** is party to an MOA for the proposed action	Would not provide adequate capacity, therefore, does not meet the project purpose and need	15.7 acres of ROW 1 Business Displaced 1,300 lf of streams <0.1 acre of wetlands 6.2 acres of forest	Construction cost = \$133.8 – 153.9 million Estimated additional ROW cost = \$3.4 million Total estimated cost = \$137.2 – 157.3 million	Would have less harm to Suitland Parkway; however would not meet the purpose and need and would cost up to 30 percent more than the proposed action; therefore, would result in greater overall harm than the proposed action
Minimization Alternative 4: Table Roundabout	Similar to proposed action	Less harm to Suitland Parkway compared to the proposed action: <ul style="list-style-type: none"> • 6.4 acres of permanent acquisition • Would not impact historic bridge • No visual impacts from directional ramp 	Only one Section 4(f) property would be impacted.	NPS-National Parks East identified the proposed action as their preferred alternative MHT** did not indicate a preference for any alternative; however, MHT** is party to an MOA for the proposed action	Would not provide adequate capacity, therefore, does not meet the project purpose and need	20.3 acres of ROW 1 Business Displaced 1,300 lf of streams <0.1 acre of wetlands 9.2 acres of forest	Construction cost = \$100.2 – 115.2 million Estimated additional ROW cost = \$6.8 million Total estimated cost = \$107.0 – 122.0 million	Would have less harm to Suitland Parkway, however, would not meet the purpose and need and would therefore, result in greater overall harm than the proposed action

MD 4 Corridor Study
Final Section 4(f) Evaluation

Factors for Evaluation of Least Overall Harm per 23 CFR 774.3(c)(1)								
Alternative	i. The ability to mitigate adverse impacts to each Section 4(f) property (including any measures that result in benefits to the property)	ii. The relative severity of the remaining harm, after mitigation, to the protected activities, attributes, or features that qualify each Section 4(f) property for protection	iii. The relative significance of each Section 4(f) property	iv. The views of the official(s) with jurisdiction over each Section 4(f) property	v. The degree to which each alternative meets the purpose and need for the project	vi. After reasonable mitigation, the magnitude of any adverse impacts to properties not protected by Section 4(f)*	vii. Substantial differences in costs among the alternatives	CONCLUSION
Minimization Alternative 5: Partial Cloverleaf	Similar to proposed action	Less harm to Suitland Parkway compared to the proposed action: <ul style="list-style-type: none"> • 5.3 acres of permanent acquisition • Would not impact historic bridge • No visual impacts from directional ramp 	Only one Section 4(f) property would be impacted.	NPS-National Parks East identified the proposed action as their preferred alternative MHT** did not indicate a preference for any alternative; however, MHT** is party to an MOA for the proposed action	Would not provide adequate capacity, therefore, does not meet the project purpose and need	20.5 acres of ROW 2 Businesses Displaced 1,300 lf of streams <0.1 acre of wetlands 9.1 acres of forest	Construction cost = \$122.1 – 140.4 million Estimated additional ROW cost = \$4.5 million Total estimated cost = \$126.6 – 144.9 million	Would have less harm to Suitland Parkway; however would not meet the purpose and need and would cost up to 20 percent more than the proposed action; therefore, would result in greater overall harm than the proposed action
Minimization Alternative 6: Folded Diamond	Similar to proposed action	Less harm to Suitland Parkway compared to the proposed action: <ul style="list-style-type: none"> • 8.4 acres of permanent acquisition • Would impact historic bridge • No visual impacts from directional ramp 	Only one Section 4(f) property would be impacted.	NPS-National Parks East identified the proposed action as their preferred alternative MHT** did not indicate a preference for any alternative; however, MHT** is party to an MOA for the proposed action	Provides capacity and operation improvements to a lesser degree than the proposed action; therefore, does not fully meet the project purpose and need	23.3 acres of ROW 1 Business Displaced 1,300 lf of streams <0.1 acre of wetlands 11.4 acres of forest	Construction cost = \$93.3 – 107.3 million Estimated additional ROW cost = \$5.1 million Total estimated cost = \$98.4 – 112.4 million	Would have less harm to Suitland Parkway, however, would not meet the purpose and need and would therefore, result in greater overall harm than the proposed action
Interchange Modification Alternatives								

MD 4 Corridor Study
Final Section 4(f) Evaluation

Factors for Evaluation of Least Overall Harm per 23 CFR 774.3(c)(1)								
Alternative	i. The ability to mitigate adverse impacts to each Section 4(f) property (including any measures that result in benefits to the property)	ii. The relative severity of the remaining harm, after mitigation, to the protected activities, attributes, or features that qualify each Section 4(f) property for protection	iii. The relative significance of each Section 4(f) property	iv. The views of the official(s) with jurisdiction over each Section 4(f) property	v. The degree to which each alternative meets the purpose and need for the project	vi. After reasonable mitigation, the magnitude of any adverse impacts to properties not protected by Section 4(f)*	vii. Substantial differences in costs among the alternatives	CONCLUSION
Minimization Alternative 7: Diamond Roundabout	Similar to proposed action	Less harm to Suitland Parkway compared to the proposed action: <ul style="list-style-type: none"> • 10.9 acres of permanent acquisition • Would not impact historic bridge • No visual impacts from directional ramp 	Only one Section 4(f) property would be impacted.	NPS-National Parks East identified the proposed action as their preferred alternative MHT** did not indicate a preference for any alternative; however, MHT** is party to an MOA for the proposed action	Would not provide adequate capacity, therefore, does not meet the project purpose and need	39.0 acres of ROW 1 Business Displaced 1,900 lf of streams 0.1 acre of wetlands 18.9 acres of forest	Construction cost = \$113.8 – 130.9 million Estimated additional ROW cost = \$8.5 million Total estimated cost = \$122.3– 139.4 million	Would have less harm to Suitland Parkway; however would not meet the purpose and need and would cost up to 15 percent more than the proposed action; therefore, would result in greater overall harm than the proposed action
Minimization Alternative 8: Eliminate Directional Ramp	Similar to proposed action	Less harm to Suitland Parkway compared to the proposed action: <ul style="list-style-type: none"> • 3.4 acres of permanent acquisition. • Would impact historic bridge • No visual impacts from directional ramp 	Only one Section 4(f) property would be impacted.	NPS-National Parks East identified the proposed action as their preferred alternative MHT** did not indicate a preference for any alternative; however, MHT** is party to an MOA for the proposed action	Would not provide adequate capacity, therefore, does not meet the project purpose and need	40.6 acres of ROW 2 Businesses Displaced 2,500 lf of streams 0.1 acre of wetlands 17.3 acres of forest	Construction cost = \$107.3 million Estimated additional ROW cost = \$8.1 million Total estimated cost = \$115.4 million	Would have less harm to Suitland Parkway, however, would not meet the purpose and need and would therefore, result in greater overall harm than the proposed action

MD 4 Corridor Study
Final Section 4(f) Evaluation

Factors for Evaluation of Least Overall Harm per 23 CFR 774.3(c)(1)								
Alternative	i. The ability to mitigate adverse impacts to each Section 4(f) property (including any measures that result in benefits to the property)	ii. The relative severity of the remaining harm, after mitigation, to the protected activities, attributes, or features that qualify each Section 4(f) property for protection	iii. The relative significance of each Section 4(f) property	iv. The views of the official(s) with jurisdiction over each Section 4(f) property	v. The degree to which each alternative meets the purpose and need for the project	vi. After reasonable mitigation, the magnitude of any adverse impacts to properties not protected by Section 4(f)*	vii. Substantial differences in costs among the alternatives	CONCLUSION
Minimization Alternative 9: Eliminate Channelized Right Turn Ramp	Similar to proposed action	Less harm to Suitland Parkway compared to the proposed action: <ul style="list-style-type: none"> 5.1 acres of permanent acquisition Would not impact historic bridge 	Only one Section 4(f) property would be impacted.	NPS-National Parks East identified the proposed action as their preferred alternative MHT** did not indicate a preference for any alternative; however, MHT** is party to an MOA for the proposed action	Would not provide adequate capacity, therefore, does not meet the project purpose and need	42.3 acres of ROW 2 Businesses Displaced 2,500 lf of streams 0.1 acre of wetlands 16.5 acres of forest	Construction cost = \$111.5 million Estimated additional ROW cost = \$8.4 million Total estimated cost = \$119.9 million	Would have less harm to Suitland Parkway, however, would not meet the purpose and need and would therefore, result in greater overall harm than the proposed action
ANALYSIS RESULTS	All alternatives provide similar ability to mitigate adverse impacts	Minimization Alternative 3 would have the least impact to Suitland Parkway. Each of the remaining minimization alternatives decreases the severity of impacts to Suitland Parkway, by varying degrees.	Only one Section 4(f) property would be impacted, regardless of alternative. Suitland Parkway has a high degree of significance that is important for consideration in the alternatives evaluation.	Through review of the Draft Section 4(f) Evaluation NPS and MHT** were provided an opportunity to comment on these alternatives NPS-National Parks East identified the proposed action as their preferred alternative MHT** did not indicate a preference for any alternative; however, MHT** is party to an MOA for the proposed action	Only the proposed action fully meets the project purpose and need.	Each of the minimization alternatives offers varying degrees of fewer impacts than the proposed action.	The proposed action would be similar in cost to minimization alternatives 4, 8, and 9. Minimization alternatives 1, 2, and 6 would be less costly than the proposed action; minimization alternatives 3, 5, and 7 would be more costly than the proposed action.	The proposed action (the SHA and NPS Preferred Alternative), would best meet the project purpose and need and would cause the least overall harm to Section 4(f) properties.

* Impacts quantified here are estimated for the entire interchange construction and include impacts to resources located on NPS lands.

** The Maryland Historical Trust (MHT) acts as the Maryland State Historic Preservation Officer (MD SHPO).

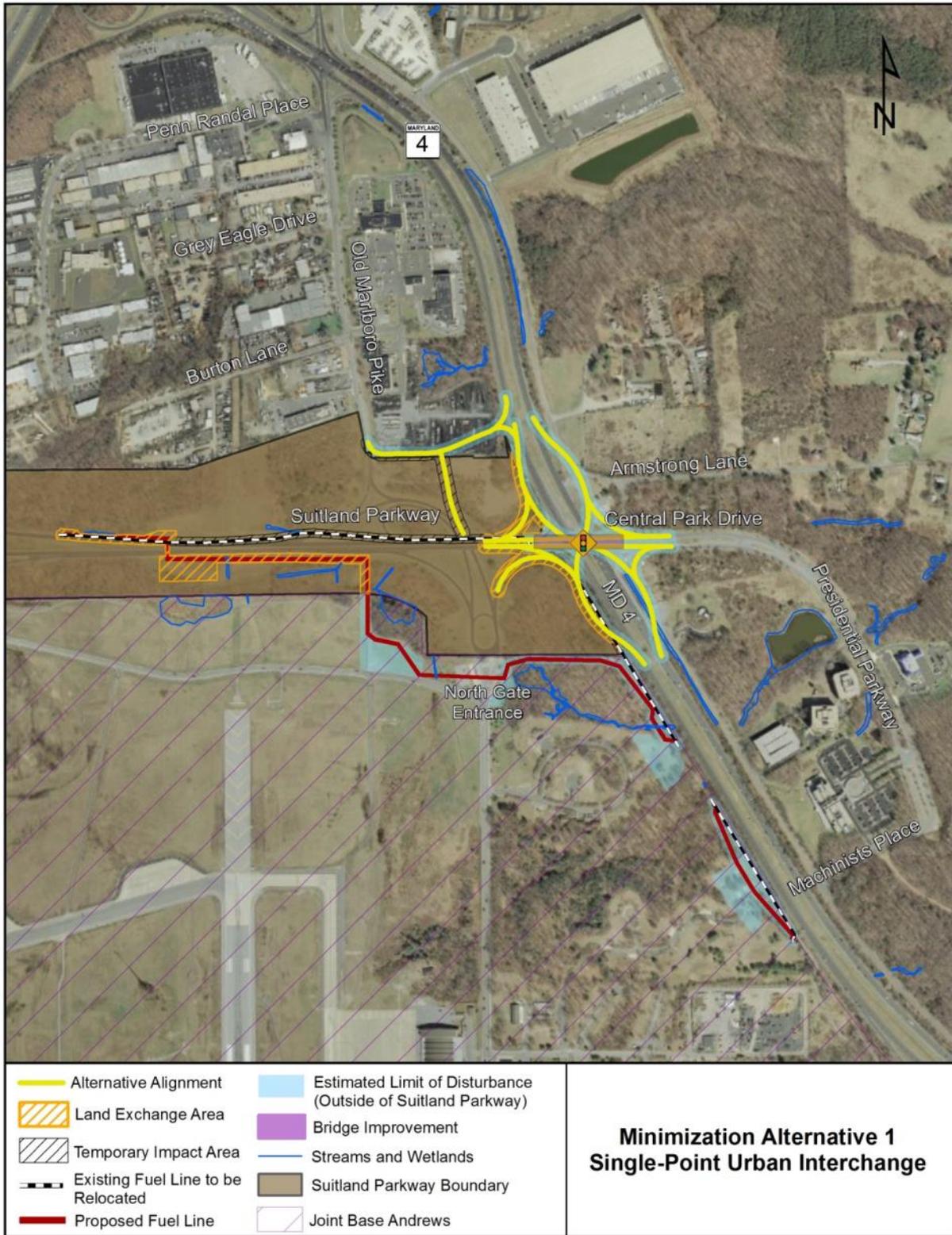


Figure 6: Minimization Alternative 1

acres. In addition to reducing the estimated area of impact within the boundary of Suitland Parkway, Minimization Alternative 1 would not require the reconstruction of the Suitland Parkway Bridge over the entrance ramp to JBA North Gate. However, the construction of concrete retaining walls would introduce hardscape that would be inconsistent with the Suitland Parkway setting. Despite the reduction from two signalized intersections to one, the SPUI design would not provide adequate capacity for the peak hour movement from northbound MD 4 to westbound Suitland Parkway. Additionally, because vehicles must be able to cross the same intersection area in six different ways, a SPUI would have a very large area of pavement in the middle of the intersection. The large pavement area offers little space for pedestrian refuge and it can take up to four cycles to walk through the entire length of a SPUI. Additionally, the large pavement area presents challenges for bikes attempting to get through the entire intersection before the signal changes. Because the traffic lights are mounted in the middle of intersection, the bicyclist cannot see when the light changes and traffic begins coming from a different direction. Therefore, the SPUI design would not be compatible with pedestrian or bike access. Minimization Alternative 1 would not address the project's purpose and need.

The overall ROW needs for the SPUI design would be reduced compared to the proposed action. It is estimated that approximately 16.3 acres of ROW would be required to construct this alternative. Access to Central Park Drive, Presidential Parkway, and proposed development east of the interchange would be provided similar to the proposed action. Minimization Alternative 1 would impact an estimated 600 linear feet of streams and 5.7 acres of forest. Based on NWI wetland mapping, wetland impacts would be less than 0.1 acre.

Cursory estimates of the conceptual design indicate that this alternative would cost between \$73.9 million and \$85.0 million to construct. The estimated ROW cost for this alternative would be an additional \$3.0 million.

Minimization Alternative 2: Diverging Diamond Interchange

Minimization Alternative 2 consists of a Diverging Diamond Interchange (DDI) at the intersection of MD 4 and Suitland Parkway (**Figure 7**). The DDI would be similar to a diamond interchange (the proposed action) in that MD 4 would be slightly depressed, while Suitland Parkway would be raised to cross over MD 4 via a new bridge. Interchange ramps would converge with the Suitland Parkway/Central Park Drive main route at signalized intersections on either side of the MD 4 overpass. The DDI 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 a continuous flow turn lane regardless of whether they are turning right or left onto Suitland Parkway/Central Park Drive. Also allowed would be two-phase operation at all signalized intersections within the interchange. Based on the location of the existing fuel line, its relocation would be required to facilitate construction of this alternative.

Based on conceptual design it is estimated that the permanent impact to the Section 4(f) property would be approximately 6.3 acres. In addition to reducing the estimated area of impact within the boundary of Suitland Parkway, Minimization Alternative 2 would not require the reconstruction of the Suitland Parkway Bridge over the entrance ramp to JBA North Gate.

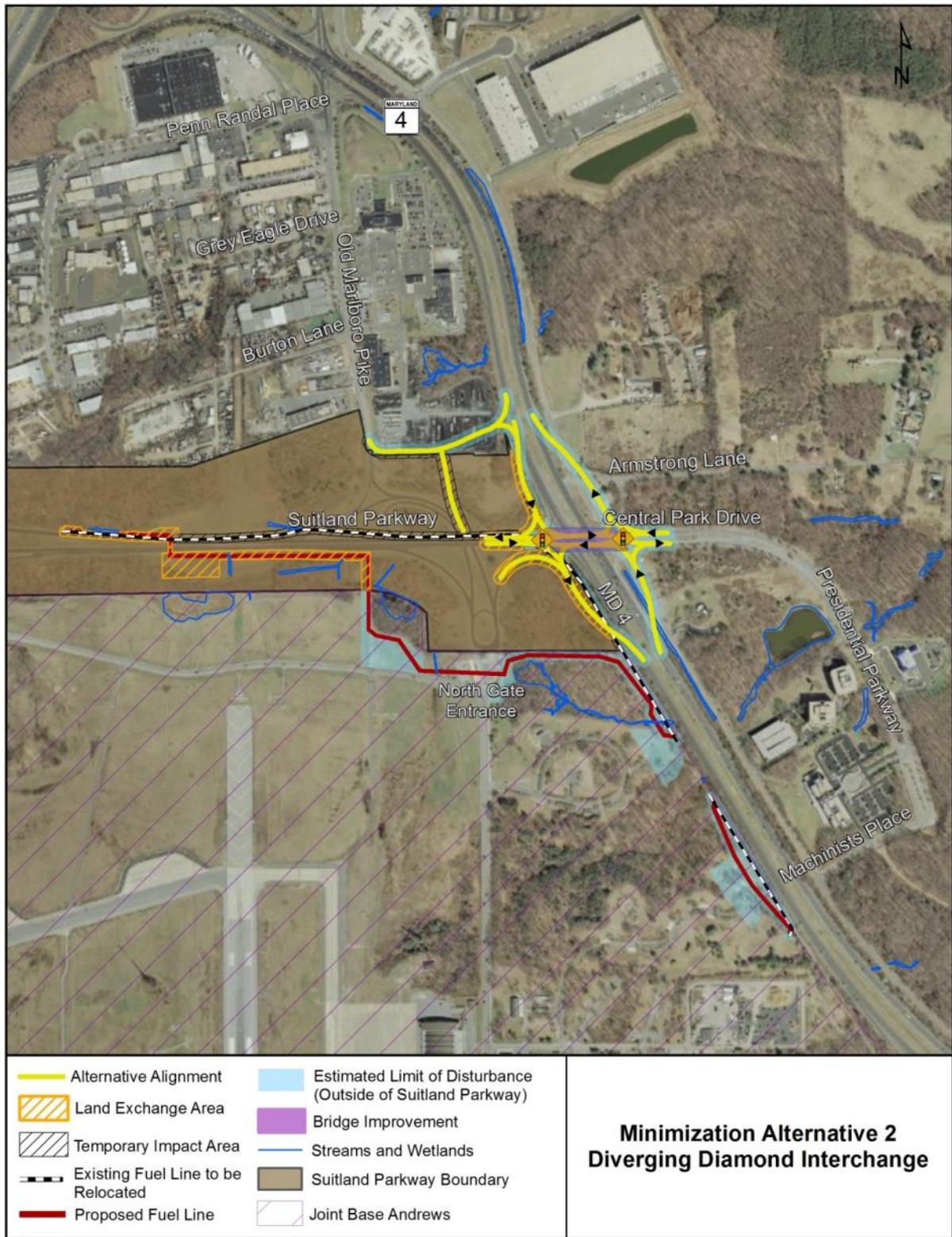


Figure 7: Minimization Alternative 2

With this interchange configuration, no left turns would be required to clear opposing traffic, which would reduce vehicular conflict points within the interchange. Additionally, this design increases the capacity of the turning movements to and from the MD 4 on- and off-ramps because each of these would be a continuous flow turn lane. However, a disadvantage of this design is that extensive driver education would be needed to familiarize users with the operations of this interchange, presenting potential safety concerns. Additional signage, lighting, and pavement would be needed, beyond those typical of a standard diamond interchange. Also, because of unfamiliarity with traffic operations of the DDI, pedestrian usage of Minimization Alternative 2 presents further potential safety concerns. Therefore, Minimization Alternative 2 would not address the project's purpose and need.

Approximately 16.6 acres of ROW would be required to construct this alternative, less than the proposed action. Access to Central Park Drive, Presidential Parkway, and proposed development east of the interchange would be provided similar to the proposed action. Minimization Alternative 2 would impact approximately 5.9 acres of forested area, 400 linear feet of streams and less than 0.1 acre of wetlands based on NWI mapping.

Cursory estimates of the conceptual design indicate that this alternative would cost between \$77.0 million and \$88.6 million to construct. The estimated ROW cost for this alternative would be an additional \$3.6 million.

Minimization Alternative 3: Urban Diamond Interchange

Minimization Alternative 3 is similar to the proposed action in that MD 4 would be slightly depressed, while Suitland Parkway would be raised to cross over MD 4 via a new bridge (**Figure 8**). This alternative would slightly reduce the footprint of the interchange as compared to the proposed action by placing the interchange ramps closer to MD 4. This would be accomplished through the use of retaining walls between each ramp and the MD 4 mainline. The ramps would meet at signalized intersections located above and on either side of MD 4. Because this alternative would not include the directional ramp as included with the proposed action, all traffic traveling from northbound MD 4 onto westbound Suitland Parkway would be required to make a left turn at the signalized intersection located on the east side of the interchange.

Based on conceptual design it is estimated that the permanent impact to the Section 4(f) property would be approximately 4.6 acres for Minimization Alternative 3. However, construction of retaining walls would introduce hardscape that would be inconsistent with the Suitland Parkway setting. Based on conceptual design, Minimization Alternative 3 would require the reconstruction of the Suitland Parkway Bridge over the entrance ramp to JBA North Gate.

The signals at the interchange ramp 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. Pedestrians and bike safety would be improved by providing grade-separated access across MD 4. Therefore, Minimization Alternative 3 would not address the project's purpose and need.

The overall ROW needs for the Urban Diamond interchange design would be less than the proposed action. It is estimated that approximately 15.7 acres of ROW would be required to construct this

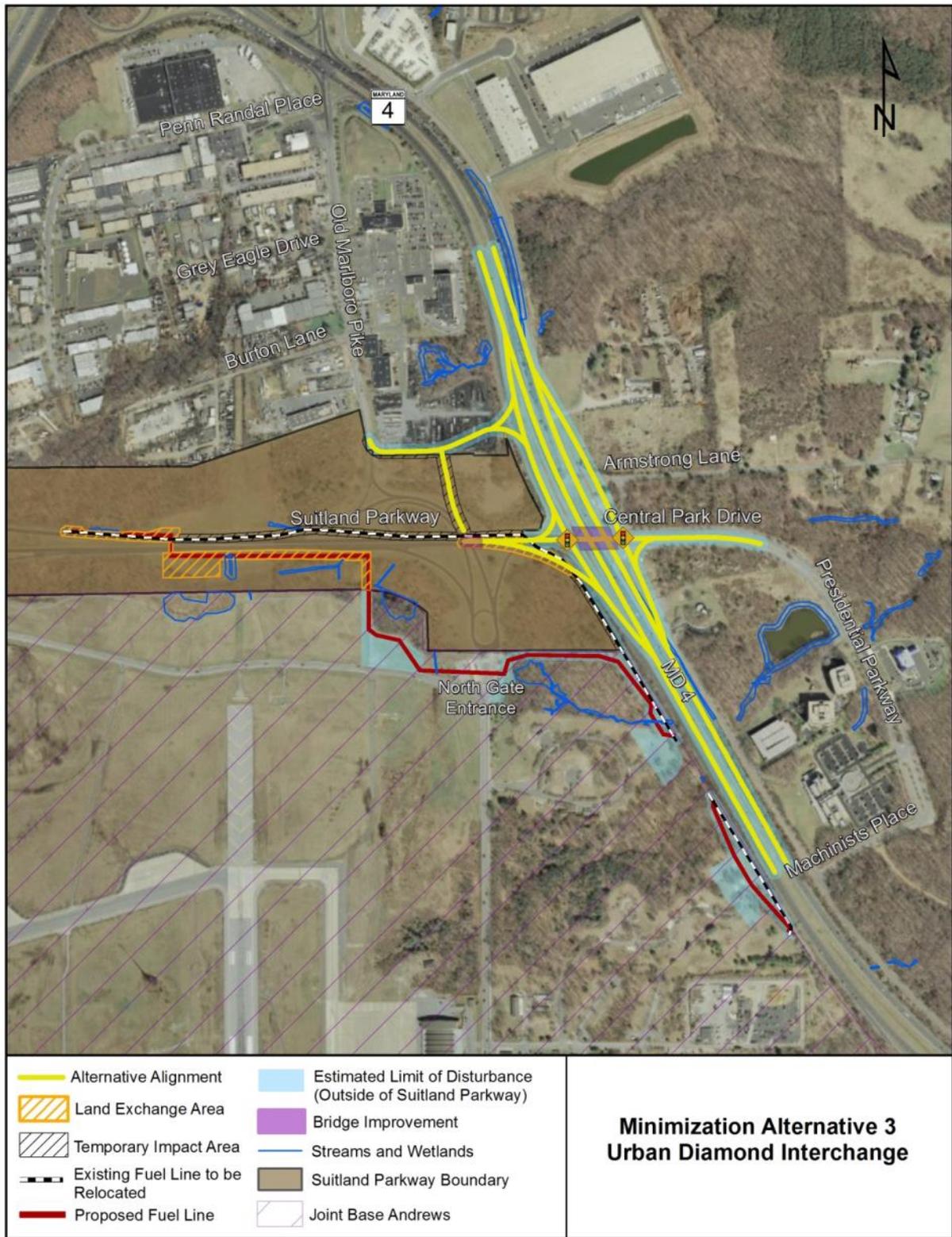


Figure 8: Minimization Alternative 3

alternative. Access to Central Park Drive, Presidential Parkway, and proposed development east of the interchange would be provided similar to the proposed action. Minimization Alternative 3 would impact an estimated 1,300 linear feet of streams, less than 0.1 acre of wetlands and 6.2 acres of forested area. Cursory estimates of the conceptual design indicate that this alternative would cost between \$133.8 million and \$153.9 million to construct. The estimated ROW cost for this alternative would be an additional \$3.4 million.

Minimization Alternative 4: Table Roundabout Interchange

This alternative was originally developed by the Federal Highway Administration Eastern Federal Lands Highway Division (EFLHD) in 2011. The configuration would include a large roundabout at the center of the MD 4/Suitland Parkway interchange that would address all turning movements (**Figure 9**). A direct ramp from Suitland Parkway eastbound to MD 4 southbound would be provided. The MD 4 mainline would be shifted approximately 75-feet east of its existing alignment and its profile would be lowered; the roundabout would be constructed at an elevated grade, over MD 4, requiring the construction of two bridges spanning MD 4.

Based on conceptual design it is estimated that the permanent impact to the Section 4(f) property would be approximately 6.4 acres. In addition to reducing the estimated area of impact within the boundary of Suitland Parkway, Minimization Alternative 4 would not require the reconstruction of the Suitland Parkway Bridge over the entrance ramp to JBA North Gate.

Based on EFLHD's review, this design would fail to meet the purpose and need for the project due to an operational breakdown as a result of the high volume of traffic entering the roundabout. Additionally, bike and pedestrian circulation through or around a roundabout presents safety concerns from the multiple conflict points. The construction of two major bridges spanning MD 4 would contribute to the cost of this alternative. In 2011 EFLHD determined that this alternative should be eliminated from further detailed study. Therefore, Minimization Alternative 4 would not address the project's purpose and need.

The overall ROW needs for the Table Roundabout design would be reduced compared to the proposed action. It is estimated that approximately 20.3 acres of ROW would be required to construct this alternative. Access to Central Park Drive, Presidential Parkway, and proposed development east of the interchange would be provided similar to the proposed action. Minimization Alternative 4 would impact an estimated 1,300 linear feet of streams, less than 0.1 acre of wetlands and 9.2 acres of forested area.

Cursory estimates of the conceptual design indicate that this alternative would cost between \$100.2 million and \$115.2 million to construct. The estimated ROW cost for this alternative would be an additional \$6.8 million.

Minimization Alternative 5: Partial Cloverleaf Interchange

Minimization Alternative 5 was also developed by the EFLHD in 2011. The partial cloverleaf design would shift the MD 4 mainline 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 (**Figure 10**).

Based on conceptual design it is estimated that the permanent impact to the Section 4(f) property would be approximately 5.3 acres. In addition to reducing the estimated area of impact within the boundary of

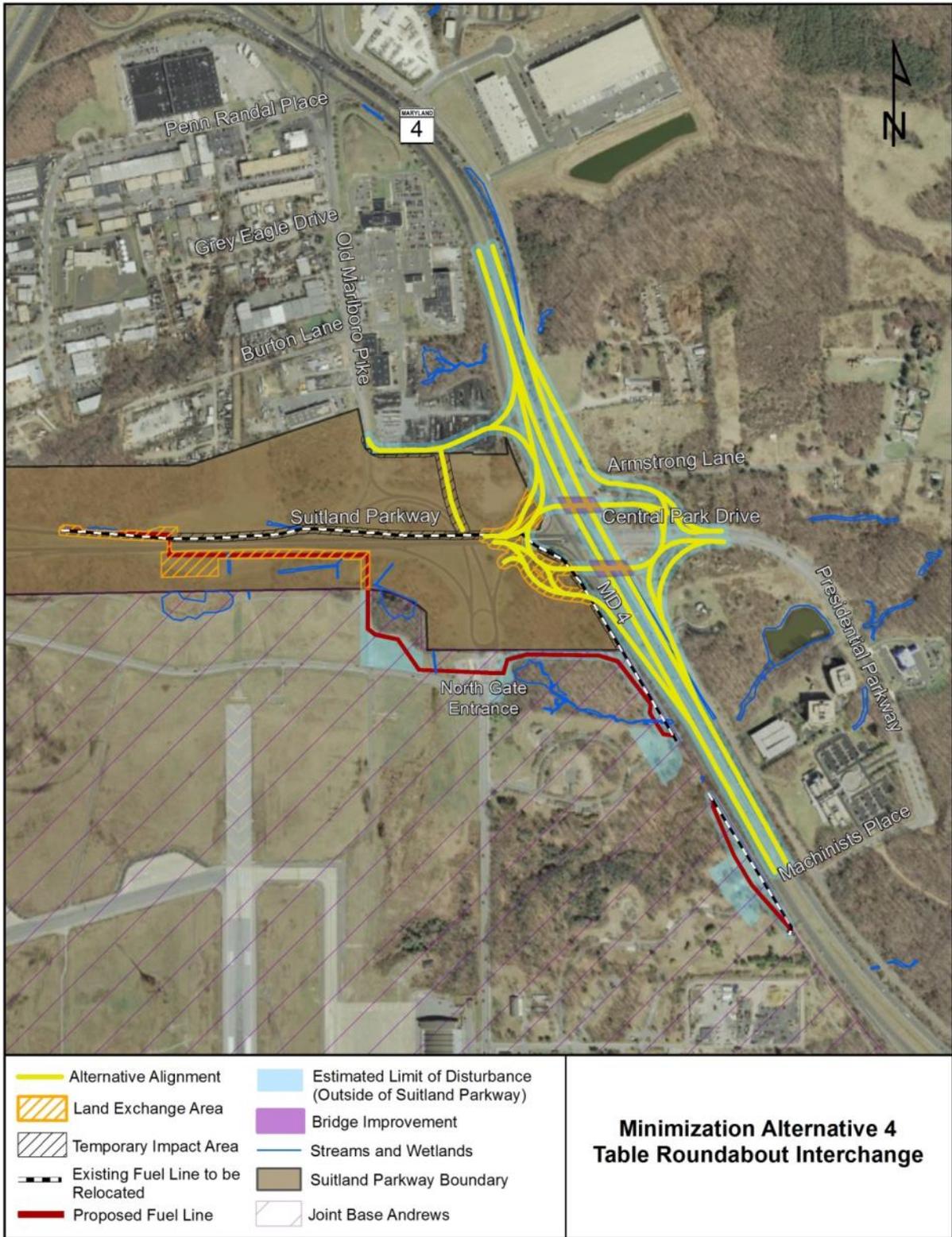


Figure 9: Minimization Alternative 4

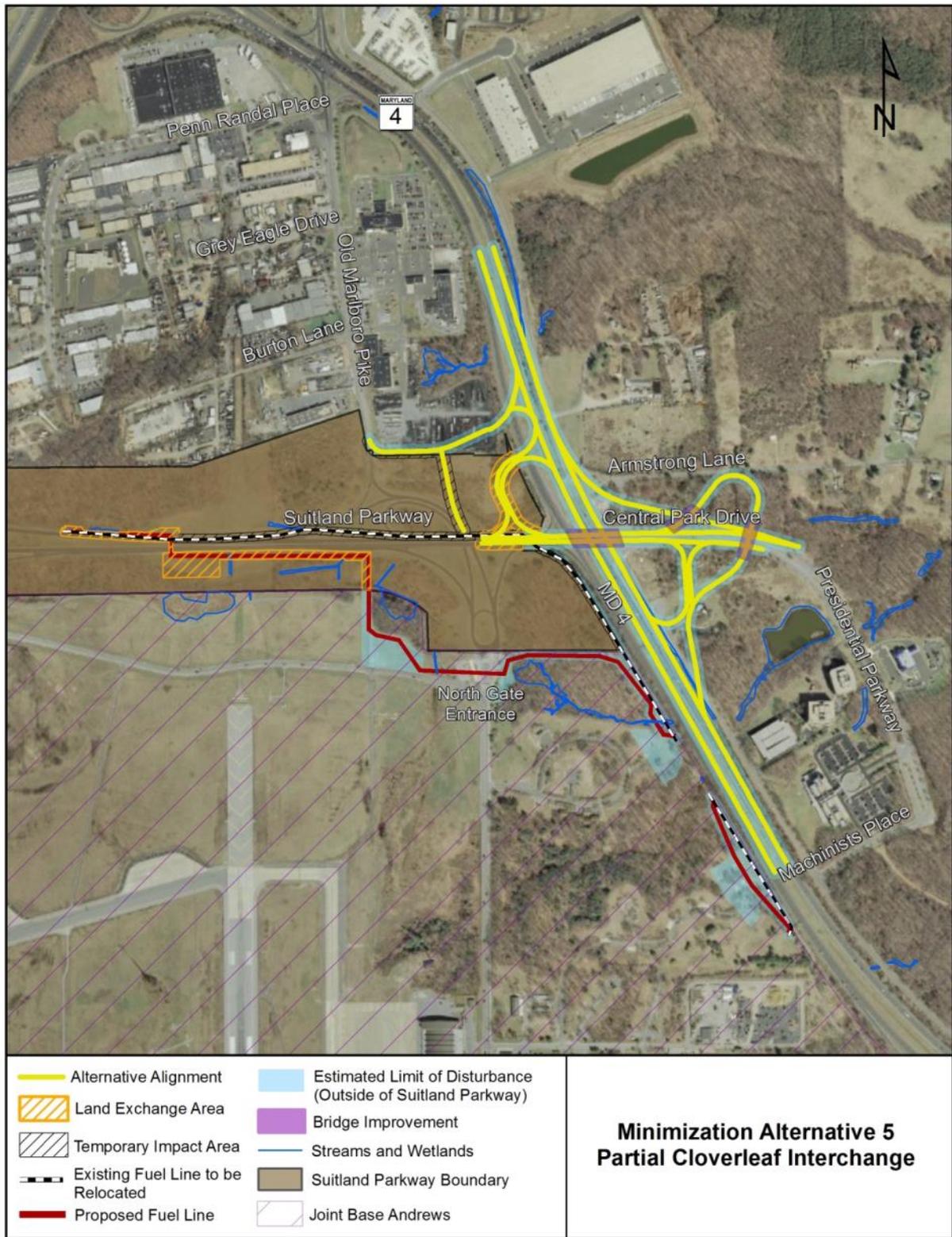


Figure 10: Minimization Alternative 5

Suitland Parkway, Minimization Alternative 5 would not require the reconstruction of the Suitland Parkway Bridge over the entrance ramp to JBA North Gate.

According to the analysis completed by EFLHD, this design breaks down in the AM peak hour, as adequate capacity would not be provided for the volume of traffic circumnavigating the interchange from northbound MD 4 to westbound Suitland Parkway. Further, weaving areas compromise the operations of this design. The complex design and numerous ramps present additional cost and constructability

obstacles as well. In their 2011 study, EFHLD determined that this alternative should be eliminated from further detailed study. Therefore, Minimization Alternative 5 would not address the project's purpose and need.

The overall ROW needs for the Partial Cloverleaf Interchange design would be reduced compared to the proposed action. It is estimated that approximately 20.5 acres of ROW would be required to construct this alternative. Access to Central Park Drive, Presidential Parkway, and proposed development east of the interchange would be provided similar to the proposed action. Minimization Alternative 5 would impact an estimated 1,300 linear feet of streams, less than 0.1 acre of wetlands and 9.1 acres of forested area.

Minimization Alternative 5 would require three separate bridges in addition to numerous access ramps. Cursory estimates of the conceptual design indicate that this alternative would cost between \$122.1 million and \$140.4 million to construct. The estimated ROW cost for this alternative would be an additional \$4.5 million.

Minimization Alternative 6: Folded Diamond Interchange

Another alternative originally developed by the EFLHD in 2011, the folded diamond interchange would construct double ramps in both the northeast and southwest quadrants of the interchange (**Figure 11**). 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. Based on conceptual design it is estimated that the permanent impact to the Section 4(f) property would be approximately 8.4 acres. Minimization Alternative 6 would likely require the reconstruction of the Suitland Parkway Bridge over the entrance ramp to JBA North Gate.

While Minimization Alternative 6 would meet the project's purpose and need by allowing adequate traffic capacity and improving safety for vehicles, bikes, and pedestrians, this alternative would result in a full reconstruction of the Suitland Parkway Bridge over the entrance ramp to JBA North Gate. 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. The design would also be difficult to construct while maintaining traffic flow. During their 2011 analysis EFHLD determined that this alternative should be eliminated from further detailed study.

The overall ROW needs for the Folded Diamond Interchange design would be reduced compared to the proposed action. It is estimated that approximately 23.3 acres of ROW would be required to construct this alternative. Access to Central Park Drive, Presidential Parkway, and proposed development east of the interchange would be provided similar to the proposed action. Minimization Alternative 6 would impact an estimated 1,300 linear feet of streams, less than 0.1 acre of wetlands and 11.4 acres of forested area.

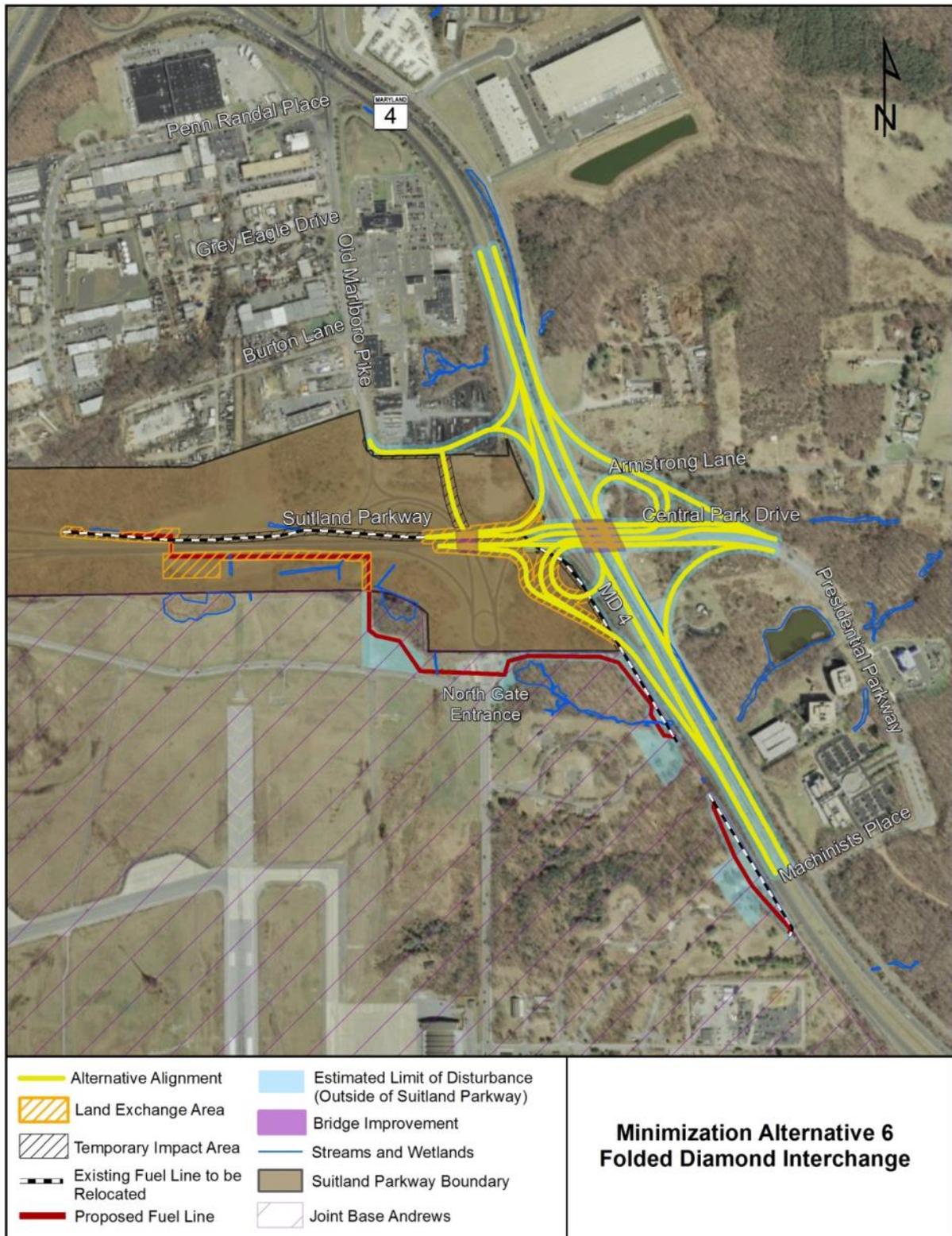


Figure 11: Minimization Alternative 6

Minimization Alternative 6 would require a single wider and longer bridge over MD 4 in addition to numerous access and loop ramps. As a result, cursory estimates of the conceptual design indicate that this alternative would cost between \$93.3 million and \$107.3 million to construct. The estimated ROW cost for this alternative would be an additional \$5.1 million.

B. Interchange Modification Alternatives

The following alternatives modify the design of the MD 4/Suitland Parkway interchange included in the proposed action in order to minimize impacts to Suitland Parkway. Minimization Alternative 7 is depicted in **Figure 12**, while **Figure 13** depicts Minimization Alternatives 8 and 9.

Minimization Alternative 7: Diamond Roundabout Interchange

This alternative is the interchange design that was selected in the 2000 FONSI (**Figure 12**). This alternative would construct a diamond interchange that provides all of the directional movements of the proposed action. However, there are several interchange elements that differ from the proposed action which influence the impact to Suitland Parkway, including the following:

- There would be no directional ramp from northbound MD 4 to Suitland Parkway;
- Two roundabouts would be located on Suitland Parkway at the end of the ramps from MD 4 (instead of the signalized intersections at the ramp termini); and
- The JBA North Entrance would not be modified, and a short directional ramp would be provided from the JBA North Entrance to MD 4 southbound.

Based on conceptual design it is estimated that the permanent impact to the Section 4(f) property would be approximately 10.9 acres. Minimization Alternative 7 would not require the reconstruction of the Suitland Parkway Bridge over the entrance ramp to JBA North Gate. This is principally because Minimization Alternative 7 would not include the directional ramp included with the proposed action

Without the directional ramp all traffic traveling from northbound MD 4 to westbound Suitland Parkway would circumnavigate the two roundabouts located at the ramp terminals of the interchange. The roundabouts would not accommodate the existing and future traffic volumes for this movement, 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. Further, the roundabout design would be difficult for pedestrians and bicycles to navigate safely. Therefore, Minimization Alternative 7 would not address the project's purpose and need.

The overall ROW needs for the Diamond Roundabout design would be reduced compared to the proposed action. It is estimated that approximately 39.0 acres of ROW would be required to construct this alternative. Access to Central Park Drive, Presidential Parkway, and proposed development east of the

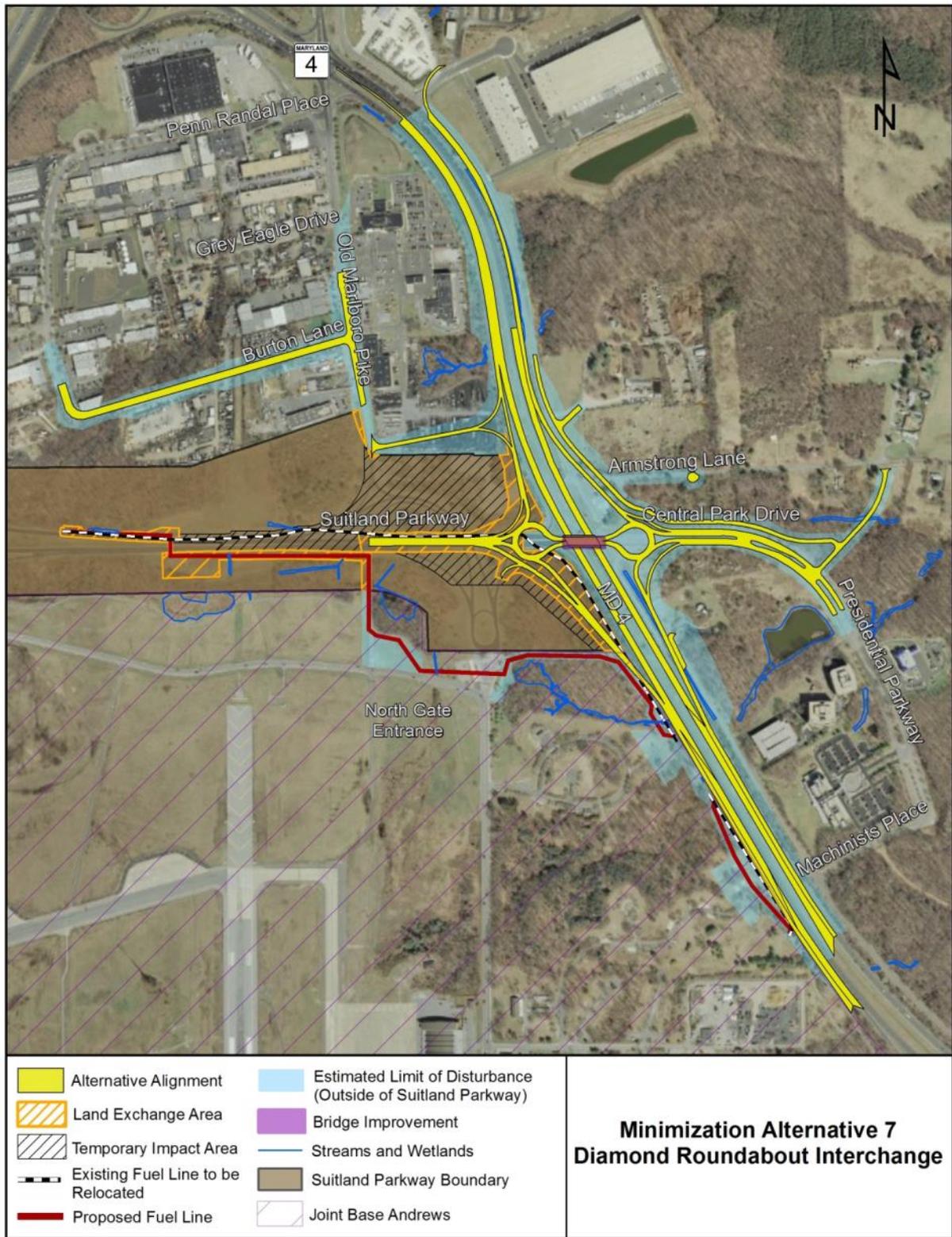


Figure 12: Minimization Alternative 7

interchange would be provided similar to the proposed action. Minimization Alternative 7 would impact an estimated 1,900 linear feet of streams, 0.1 acre of wetlands and approximately 18.9 acres of forested area.

Minimization Alternative 7 would cost less than the proposed action because it would not include the directional ramp from northbound MD 4 to westbound Suitland Parkway. Cursory estimates of the conceptual design indicate that this alternative would cost between \$113.8 million and \$130.9 million to construct. The estimated ROW cost for this alternative would be an additional \$8.5 million.

Minimization Alternative 8: Eliminate Northbound MD 4 to Suitland Parkway Directional Ramp

This alternative would be a traditional diamond interchange without the directional ramp that to facilitate travel from northbound MD 4 to Suitland Parkway (**Figure 13**). This modification would eliminate the direct impact to Suitland Parkway at the stockpile yard, and would remove the elevated hardscape from the viewshed of Suitland Parkway. Based on conceptual design it is estimated that the permanent impact to the Section 4(f) property would be approximately 3.4 acres.

Similar to Minimization Alternative 3, this alternative would require that all traffic traveling from northbound MD 4 onto westbound Suitland Parkway make a left turn at the signalized intersection located on the east side of the interchange. The signal would not accommodate the existing and future traffic volumes for this movement, resulting in lengthy intersection queues along the ramp from MD 4. Therefore, this alternative would not address the project's purpose and need.

The overall ROW needs for the Minimization Alternative 8 would be reduced compared to the proposed action because of elimination of the directional ramp. Minimization Alternative 8 would require the reconstruction of the Suitland Parkway Bridge over the entrance ramp to JBA North Gate. It is estimated that approximately 40.6 acres of ROW would be required to construct this alternative. Access to Central Park Drive, Presidential Parkway, and proposed development east of the interchange would be provided similar to the proposed action. Minimization Alternative 8 would impact an estimated 2,500 linear feet of streams, 0.1 acre of wetlands and 17.3 acres of forested area.

Minimization Alternative 8 would cost less than the proposed action because it would not include the directional ramp from northbound MD 4 to westbound Suitland Parkway. Cursory estimates of the conceptual design indicate that this alternative would cost \$107.3 million to construct. The estimated ROW cost for this alternative would be an additional \$8.1 million.

Minimization Alternative 9: Eliminate Channelized Right Turn Ramp

This alternative would be identical to the proposed action design for the MD 4/Suitland Parkway interchange, but would not include the channelized directional ramp from Suitland Parkway to southbound MD 4 (**Figure 13**). This modification would reduce the amount of Suitland Parkway land that is incorporated into the proposed action in the southwest quadrant of the interchange. Based on conceptual design it is estimated that the permanent impact to the Section 4(f) property would be approximately 5.1 acres.

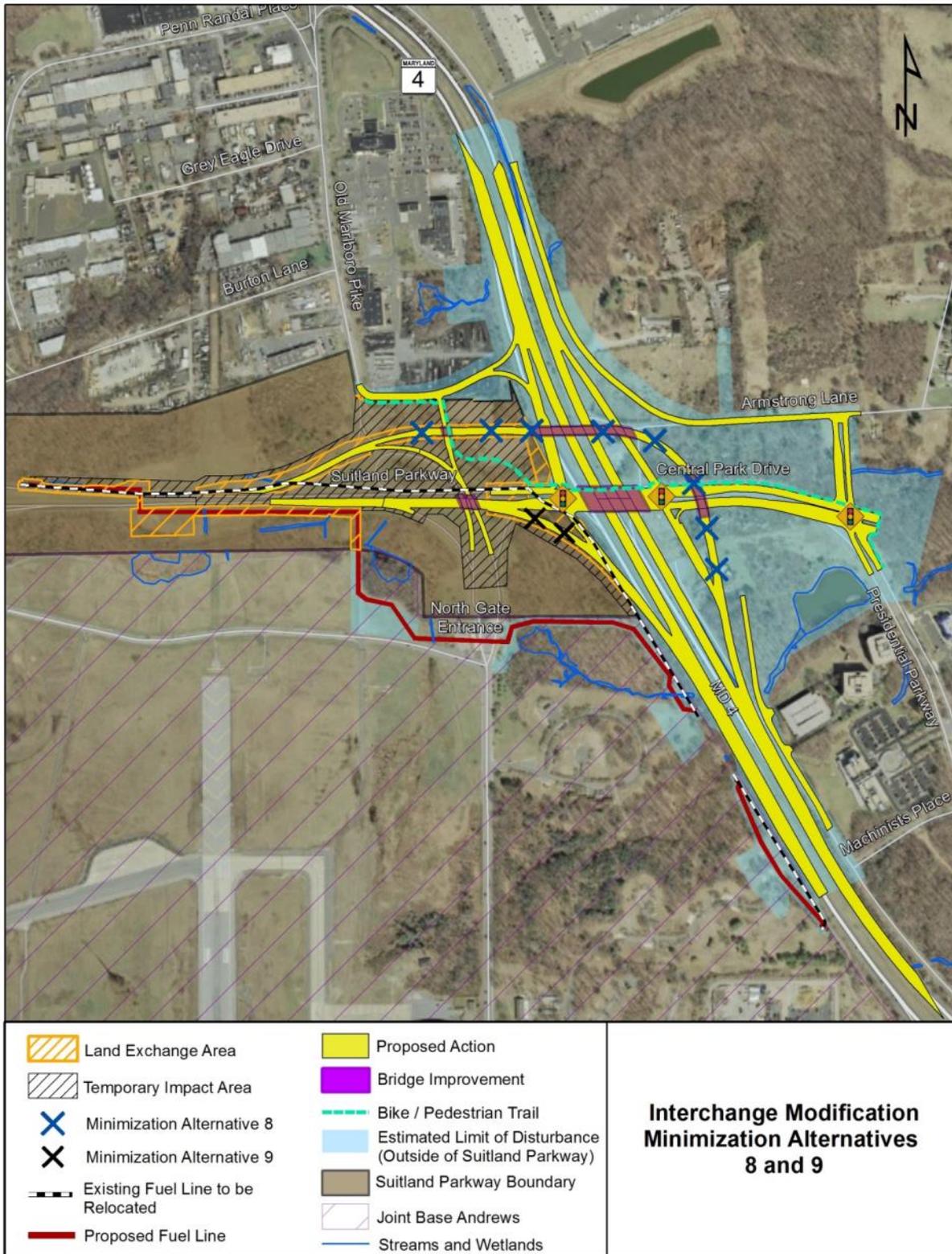


Figure 13: Minimization Alternatives 8 and 9

With this alternative, 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. The signal would not accommodate the existing and future traffic volumes for this movement, resulting in lengthy intersection queues along Suitland Parkway. Therefore, Minimization Alternative 9 would not address the project's purpose and need.

The ROW needs for Minimization Alternative 9 would be somewhat reduced compared to the proposed action because of elimination of the directional ramp from eastbound Suitland Parkway to southbound MD 4. Minimization Alternative 9 would not require the reconstruction of the Suitland Parkway Bridge over the entrance ramp to JBA North Gate. It is estimated that approximately 42.3 acres of ROW would be required to construct this alternative. Access to Central Park Drive, Presidential Parkway, and proposed development east of the interchange would be provided similar to the proposed action. Minimization Alternative 9 would impact an estimated 2,500 linear feet of streams 0.1 acre of wetlands and 16.5 acres of forested area.

Minimization Alternative 9 would cost less than the proposed action because it would not include the channelized right-turn lanes from eastbound Suitland Parkway to southbound MD 4. cursory estimates of the conceptual design indicate that this alternative would cost \$111.5 million to construct. The estimated ROW cost for this alternative would be an additional \$8.4 million.

Conclusion of Least Overall Harm Analysis

Based on the evaluation presented in this section and summarized in **Table 1**, the proposed action (the SHA and NPS Preferred Alternative) is the alternative that causes the least overall harm to Section 4(f) properties.

VII. ALL POSSIBLE PLANNING TO MINIMIZE HARM

“All possible planning,” as defined in 23 CFR §774.17, includes all reasonable measures to minimize harm and mitigate for adverse impacts and effects. The proposed action, which is the SHA and NPS Preferred Alternative comprised of the signalized diamond interchange with directional ramp, minimizes harm to Section 4(f) resources by incorporating measures into the project that minimize the impact on and the use of the resources. Planning to minimize harm has specifically involved a review of alignment shifts, roadway location in the landscape, retaining walls, other design elements, and mitigation.

Design considerations to minimize harm to Suitland Parkway include carrying Suitland Parkway over MD 4, thus reducing the visual effect of the new interchange at this eastern terminus of the Parkway. The MD 4 alignment has been shifted 75 feet east of its current alignment, minimizing the ROW required from NPS. In accordance with previous requests from NPS, the two-lane directional ramp is reduced to a single-lane prior to its tie in with westbound Suitland Parkway.

Lowering the elevation of the directional ramp as it crosses over Presidential Parkway and the JBA North Gate access road was considered at length. However, safety and constructability considerations, as well as overhead requirements of the routes being crossed dictate the necessary elevation of the ramp.

The use of 2:1 and 3:1 side slopes was a consideration during design of the roadway; however, based on the soil composition and maintenance needs of NPS, it was determined that use of steeper side slopes did not provide an improvement to the design in context of Suitland Parkways needs. Moreover, the Maryland Department of Environment regulations require that the slopes be no steeper than 2:1.

Defining the ROW to be acquired by SHA is the result of at-length discussions to identify areas to be maintained by SHA following construction of the proposed action. Included in the seven acres of property transfer, SHA will acquire the directional ramp as it crosses the Section 4(f) property and the area occupied by the relocated fuel line. The provision to include the fuel line relocation within the land transfer being obtained by SHA comes at the request of NPS. An additional 12-acre easement area would be 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.

A Memorandum of Agreement (MOA), executed on August 20, 1999, proposed measures to mitigate impacts to Suitland Parkway based on the FONSI-Selected Alternative. Mitigation discussed in the 1999 MOA included the NPS involvement in the Final Review design of structures and landscaping. This commitment has continued through the project design stages and will continue through construction.

The proposed action implements many additional design changes compared to the FONSI-Selected Alternative. In support of design discussions and considerations, a revised MOA was executed by FHWA, NPS, MD SHPO and SHA October 17, 2014 (**Appendix A**). The MOA was developed in accordance with the provisions of Section 106 of the NHPA and its implementing regulations, 36 CFR Part 800. The MOA stipulates the implementation of numerous measures to minimize harm to the Section 4(f) property, Suitland Parkway. The following are outlined as stipulations of the MOA:

- SHA will require its contractor to salvage and reuse the stone cladding from the historic Suitland Parkway Bridge over the entrance ramp to JBA North Gate. If it is not possible to remove the stone cladding, new stone for the cladding will match the original in color, size, and shape. The name of stone required will be included in the Contract Documents. The mortar used to reset the stone cladding on the south side of the historic Suitland Parkway Bridge will match in color and texture the original mortar on the south side of the bridge, and will be recessed to the same depth from the stone surface as the current mortar on the south side of the bridge. SHA shall make three samples of the new bridge's bonding pattern and mortar available to the MD SHPO and NPS for inspection and approval prior to installation by the Mason. All work resetting the stone façade on the historic bridge will be completed by a mason who has a minimum of five (5) years of experience with repointing historic masonry bridges.
- The exterior of the parapets (bridge rails) as well as the abutments (supporting ends of the bridge) of the Directional Ramp will be clad with a stone and mortar bonding pattern that is similar to, but not replicating the pattern on the historic Suitland Parkway Bridge. SHA will provide new stone for the cladding that is similar to color, size and shape of the stone used for the Suitland Parkway Bridge over the entrance ramp to JBA North Gate. The name of stone required will be

included in SHA's Project Construction Contract. SHA shall make three samples of the new bridge's bonding pattern and mortar available to the MD SHPO and NPS for inspection and approval prior to installation by the Mason. All work setting the stone façade on the new bridge will be completed by a Mason who has at least five (5) years of experience with the pointing of stone structures.

- A landscaping plan is being developed in coordination with the NPS and MD SHPO. The landscaping plan will 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 will, in consultation with the MD SHPO and NPS, 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.
- NPS – National Capital Parks East will benefit through the acquisition of 12.8 acres located at 8801 Fort Foote Road, adjacent to the NRHP boundary of Fort Foote. While this acquisition will not directly benefit Suitland Parkway, substantial benefits will be generated to the regional park entity through the acquisition of the property. This property was identified by NPS, National Capital Parks East and would provide a necessary natural area buffer between the Fort Foote Park and surrounding residential development.

VIII. COORDINATION

- United States Department of Interior (DOI) – The Draft Section 4(f) Evaluation was provided to DOI for comment June 2014. Comments from DOI were received on July 31, 2014 (**Appendix B**). DOI agreed that there is no feasible and prudent alternative to the “use” of land from the proposed roadway improvements at the intersection of MD 4 and Suitland Parkway. DOI acknowledged the continuing commitment by MD SHA and sponsoring agencies to ensure all possible planning to minimize harm to Section 4(f) properties. The DOI asked for further discussion of impacts to the Star-Spangled Banner National Historic Trail, which has been included in **Section III.B** of this document. The DOI indicated that concurrence or non-concurrence by DOI on the Section 4(f) Evaluation would require the selection of a preferred alternative with mitigation and minimization efforts focused on that selection. This Final Section 4(f) Evaluation identified the proposed action, the signalized diamond interchange with directional ramp, as the Preferred Alternative.
- National Park Service (NPS) – More than 20 coordination meetings have been held between various representatives of NPS – National Capital Parks East and SHA to discuss the MD 4/Suitland Parkway Interchange design since the FONSI/Section 4(f) approval in 2000. **Appendix C** includes a table summarizing meetings and correspondence since 1999. In June 2014 NPS released the *MD 4 at Suitland Parkway Interchange Construction Environmental Assessment*, in which NPS identified the proposed action, the signalized diamond interchange with directional ramp, as the NPS Preferred Alternative. The June 2014 Draft Section 4(f)

Evaluation was provided to the NPS for comment June 2014. Other than minor editorial comments, no major revisions were requested following NPS review of the Draft Section 4(f) Evaluation. On October 15, 2014 NPS signed an MOA identifying measures to mitigate for impacts to the Section 4(f) property, the Suitland Parkway.

- Maryland Historical Trust (MHT) – Substantial consultation with MHT, the MD SHPO, has occurred throughout this study pursuant to Section 106 of the National Historic Preservation Act. Consultation topics included identification of the area of potential effects (APE); identification of historic properties within the APE; determination of effects to historic properties; and development of minimization and mitigation measures. The June 2014 Draft Section 4(f) Evaluation was provided to the MHT for comment; no comments were received. On October 16, 2014 MHT signed the MOA, concurring with measures to mitigate for impacts to the Section 4(f) property, the Suitland Parkway.
- Advisory Council on Historic Preservation (ACHP) – The ACHP has been consulted during the study and was notified of the adverse effect determination to historic properties. In their letter dated July 21, 2013, ACHP indicated that their participation in the consultation to resolve adverse effects is not needed.
- Public – The public was granted an opportunity to review and comment on the Draft Section 4(f) Evaluation concurrent with the public review period for the *MD 4 at Suitland Parkway Interchange Construction Environmental Assessment*. The public comment period for this document concluded July 23, 2014. No public comments regarding the Draft Section 4(f) Evaluation were received.

IX. CONCLUSION

This Final Section 4(f) Evaluation has been prepared in accordance with 23 CFR Part 774 and 49 U.S.C 303. Based on the above considerations, FHWA has determined that there is no feasible and prudent alternative to the use of land from the Suitland Parkway and that the proposed action, which is the SHA and NPS Preferred Alternative, includes all possible planning to minimize harm resulting from the use of this property.

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Appendix A

MD 4 – Suitland Parkway Interchange Memorandum of Agreement (MOA)

Executed by: Federal Highway Administration, National Park Service, Maryland State
Historic Preservation Officer, and Maryland State Highway Administration Coordination
October 17, 2014

**MEMORANDUM OF AGREEMENT AMONG
THE FEDERAL HIGHWAY ADMINISTRATION,
THE NATIONAL PARK SERVICE,
THE MARYLAND STATE HISTORIC PRESERVATION OFFICER
AND THE MARYLAND STATE HIGHWAY ADMINISTRATION
PURSUANT TO 36 CFR 800 REGARDING
CONSTRUCTION OF THE MD 4/SUITLAND PARKWAY
INTERCHANGE
IN PRINCE GEORGE'S COUNTY, MARYLAND**

WHEREAS, the Federal Highway Administration (FHWA) proposes to assist the Maryland State Highway Administration (MD SHA) with the improvements to the MD 4/Suitland Parkway Interchange in Prince George's County (Undertaking); and

WHEREAS, after detailed study of alternatives, the MD SHA has selected the following Preferred Alternative for construction: MD 4/Suitland Parkway Diamond Interchange with a directional ramp; and

WHEREAS, the FHWA has determined that the Undertaking will have an adverse effect on Suitland Parkway (MIHP No. PG:76A-22), which is listed in the National Register of Historic Places (NRHP) under Criteria A and C; and

WHEREAS, the FHWA has consulted with the Maryland State Historic Preservation Officer (MD SHPO) pursuant to 36 CFR Part 800, the regulations implementing Section 106 of the National Historic Preservation Act (16 USC 470f); and

WHEREAS, the National Park Service (NPS), the federal agency with jurisdiction over the Suitland Parkway which is part of a unit of the National Park System, has participated in the Section 106 process for the Undertaking; and

WHEREAS, FHWA shall serve as the lead Agency Official pursuant to 36 CFR 800.2(a)(2) and shall act in cooperation with NPS in order to fulfill their respective responsibilities under the requirements Section 106 of the National Historic Preservation Act of 1966; and

WHEREAS, FHWA has invited NPS to be a signatory to this Memorandum of Agreement (MOA); and

WHEREAS, in 1999, FHWA assisted MD SHA with the planning for improvements to the MD 4/Suitland Parkway Interchange that resulted in a signed Memorandum of Agreement between FHWA, the MD SHPO, the NPS, MD SHA and the Advisory Council on Historic Preservation (the Council) that has expired and the same parties now propose this MOA; and

WHEREAS, the MD SHA has participated in consultation, has responsibilities for implementing stipulations under this MOA, and has been invited to be a signatory to this MOA; and

WHEREAS, the United States owns in fee the property on the west side of MD 4 which contains the portion of the Suitland Parkway administered by the NPS, and prior to the commencement of the on-site work, the NPS will undertake a land exchange with the MD SHA of lands in the amount of 7.0 Acres required for the Undertaking's construction, operations and maintenance of the bridges, ramps and landscaping; and

WHEREAS, SHA will apply to NPS for permits to access the Suitland Parkway for activities including construction of the interchange and incidentals, and will comply with the Archaeological Resources Protection Act (ARPA) and other permits, if needed; and NPS's processing and issuance of these permits constitutes Federal undertakings by the NPS; and

WHEREAS, the NPS administers the property which contains and will continue to contain the Suitland Parkway, and will issue permit(s) to allow MD SHA access to lands in the amount of 9.5 Acres for nine (9) years including four years of construction and five years for post-construction landscape maintenance, , also all constituting a Federal undertaking by the NPS; and

WHEREAS, the MD SHPO agrees that fulfillment of the terms of this MOA will satisfy the responsibilities of any Maryland state agency under the requirements of the Maryland Historical Trust Act of 1985, as amended, State Finance and Procurement Article §§ 5A-325 and 5A-326 of the Annotated Code of Maryland, for any components of the Undertaking that require licensing, permitting, and/or funding actions from Maryland state agencies; and

WHEREAS, the MD SHA held a public meeting on April 12, 2008, and notified the public through newsletter(s) and posting of National Environmental Policy Act (NEPA) documentation on the SHA Project and NPS PEPC websites during 2014; and

WHEREAS, the FHWA has notified the Council of the adverse effect determination, and the Council has declined to participate in the consultation; and

NOW THEREFORE, the FHWA, NPS, MD SHPO and MD SHA agree that the undertaking shall be implemented in accordance with the following stipulations evidencing that the signatories have taken into account the effect of the undertaking on historic properties.

STIPULATIONS

FHWA and MD SHA will ensure that the following measures will be implemented: .

I. Mitigation Measures for Suitland Parkway (MIHP No. PG:76A-22)

- A. All activities of the Undertaking that physically affect Suitland Parkway shall be conducted in compliance with NPS requirements and permits.
- B. MD 4/Suitland Parkway Interchange Design Plan Review –
 1. MD SHA shall provide a copy of the 90% interchange design plans, including the designs for the historic bridge, new bridges and ramps, pedestrian trail, traffic

barrier, utilities, decorative fencing and decorative finishes, lighting and landscaping for approval by the MD SHPO and NPS. The MD SHPO and the NPS shall provide review comments about the plans within thirty (30) calendar days after receipt.

2. If the MD SHPO or the NPS cannot provide comments within the 30 day period, at 30 days following receipt, each party shall notify the MD SHA about a date certain by which comments will be made.
3. If the MD SHPO or the NPS object to any aspect of the plans, the objecting party will follow the procedure stipulated in Stipulation VII below.

C. Treatment of Historic Suitland Parkway Bridge over Entrance Ramp to Joint Base Andrews North Gate and Ramp Salvage and Reuse of Stone

1. MD SHA shall require its Contractor to salvage and reuse the stone cladding from the historic bridge and the stone guard wall on the ramp. Each stone will be cleaned, stockpiled and reset on the new portion of the bridge and wall in the same manner as the historic bonding pattern. If, during removal, any stone is lost or damaged, the Contractor will be responsible for obtaining stone similar in color, size, shape and integrity to complete the design.
2. Interim Protection of Stone – Following the removal of the stone cladding from the historic bridge and wall, the Contractor will be responsible for storing the cleaned stone in a secure location until it is reset on the historic Suitland Parkway Bridge.

D. New Stone for Suitland Parkway Bridge and Ramp –

1. If it is not possible to salvage and re-use the stone cladding from the historic bridge and/or wall, MD SHA shall require its Contractor to obtain new stone for the cladding that matches the original in color and integrity.
2. Selection of Stone for Suitland Parkway Bridge and Ramp Wall -- FHWA and MD SHA will provide NPS and MD SHPO with the opportunity to make the stone selection by visiting up to three (3) local quarries that have the similar type of stone as the stone used on the historic Suitland Parkway Bridge.
 - a. At each quarry, a selection of stone will be examined to determine suitability for inclusion on the historic Suitland Parkway Bridge based on color, durability and integrity.
 - b. The name of the selected quarries and chosen stone(s) will be included in the Contract Documents.
 - c. Prior to construction, the SHA contractor will create three (3) sample panels using the selected stone to demonstrate the color and texture of the cladding, the bonding pattern and the mortar.
 - d. The NPS and the MD SHPO will meet with MD SHA on site at the historic bridge to compare the sample panels with the original stone cladding to make a final determination of which stone and mortar to use. Information about the requirements for the three samples and notification of the parties will be found in the Contract Documents.
 - e. In the event that MD SHA is unable to provide comparable stone, MD SHA will make an effort to find an alternative supplier with NPS

approval; and the same selection procedure described above will occur.

3. Mortar Joints – The mortar used by the Contractor to reset the stone cladding on the south side of the historic Suitland Parkway Bridge will match in color and texture the original mortar on the south side of the bridge, will have greater vapor permeability and be softer (measured in compressive strength) than the masonry units, and will be recessed to the same depth from the stone surface as the current mortar on the south side of the bridge.
4. Qualified Mason – All work resetting the stone façade on the historic bridge and guard wall will be completed by a mason who has a minimum of five (5) years of experience with repointing of historic masonry structures.
5. Contract Documents – The requirements of Stipulations I.B.1-3. will be included in MD SHA’s Project Construction Contract and Plans.

E. Treatment of New Bridge within Suitland Parkway Boundary over Exit Ramp from Joint Base Andrews North Gate (SHA Bridge No. 1630000, Ramp D over Ramp J)

1. New Bridge Design – MD SHA will design a concrete slab bridge for the MD 4 Directional Ramp D over Ramp J within the Suitland Parkway’s NRHP boundary and the exterior of the parapets as well as the abutments will be clad with a stone and mortar bonding pattern that is similar to, but does not replicate the color or pattern of the historic Suitland Parkway Bridge.
2. Stone Cladding – MD SHA will provide NPS and MD SHPO with the opportunity to make the stone selection for the new structure within the Suitland Parkway. The process for stone selection that is described in Stipulation I.D. 2-5 above will also be used for the new structure.
3. Qualified Mason – All work setting the stone façade on the new bridge will be completed by a Mason who has at least five (5) years of experience with the pointing of stone structures.
4. Contract Documents -- The requirements of Stipulation I.D.2. and I.E. will be included in SHA’s Project Construction Contract and Plans.

F. Landscaping within Suitland Parkway Boundary

1. New Landscape Plan – MD SHA shall, in consultation with the MD SHPO and NPS, develop and implement a landscape plan to provide an appropriate vegetative buffer within the MD 4/Suitland Parkway Interchange, consistent with the proposal entitled “Suitland Parkway Landscape Plan.” The proposed trees and vegetation on NPS lands have been selected from a list provided by NPS. The Suitland Parkway Landscape Plan will incorporate grading and planting trees, shrubbery and other plants that are visually and historically compatible with the existing historic landscape of the Suitland Parkway.

2. Vegetation Maintenance – MD SHA shall, in consultation with the MD SHPO and NPS, develop and implement a five year vegetation maintenance plan that will include an invasive plant removal plan for the area within the MD 4/Suitland Parkway project limits. The “Vegetative Removal Plan” will be provided separately from the interchange landscape plans.
 3. Implementation – MD SHA shall implement the approved landscape maintenance plans after the completion of construction of the Undertaking, and shall start the work following the completion of the Interchange construction. The MD SHA is responsible for erosion and sediment control measures in compliance with the U.S. Army Corps of Engineers and Maryland Department of the Environment Permit. The landscape installation will commence as soon as seasonal planting is recommended by NPS.
 4. Maintenance – MD SHA will maintain the newly planted landscape features for five (5) years following installation. Maintenance will include Controls that will be put in place to ensure the survival of the plants by watering and monitoring them, to ensure that they survive. If they die, they will be replaced in-kind.
 5. Landscape Plans – MD SHA shall provide the landscape plan and the vegetation removal plan to the MD SHPO and NPS as part of the 90% plan review.
- G. Additional Activities within Suitland Parkway Boundary
1. Pedestrian Trail – MD SHA shall provide a bicycle trail along westbound Suitland Parkway from Presidential Parkway to Old Marlboro Pike in a location approved by NPS.
 2. Traffic Barrier – MD SHA shall provide a steel-backed timber traffic barrier within the project limits along the Suitland Parkway NRHP boundary.
 3. Highway Signage – MD SHA shall provide design and location information for MD SHPO and NPS approval of any highway signs within the Suitland Parkway NRHP boundary.
 4. Lighting – MD SHA shall provide the location and type of lighting within the Suitland Parkway NRHP boundary for MD SHPO and NPS approval.
 5. Utilities – MD SHA shall provide design and location information for any utilities within the Suitland Parkway NRHP boundary for MD SHPO and NPS approval.
- H. Additional Activities within MD 4/Suitland Parkway Interchange
1. Plans for the decorative fencing and decorative finish within the Interchange will be provided to the MD SHPO and NPS as required by Stipulation I.B.1 for thirty day review.
 2. Decorative Fencing – MD SHA shall provide decorative safety fencing along the parapets of the Suitland Parkway Bridge over MD 4 (SHA Bridge No. 1629700) outside the Suitland Parkway NRHP Boundary.
 3. Decorative Finish – Outside of the Suitland Parkway NRHP boundary, MD SHA shall provide a surface applied stain to the exterior bridge concrete surfaces on the MD 4 ramps visible from Suitland Parkway.

II. Design Development, Alignment Modifications and Ancillary Activities

- A. MD SHA shall coordinate any change, modification, or refinement to the design or scheduling of this Undertaking that may potentially impact the viewshed of the Suitland Parkway with the MD SHPO and the NPS at that time, in accordance with the provisions of Stipulation III below.
- B. The project may result in unforeseen effects on other historic properties due to changes made during design development, alignment modifications, or as a result of associated ancillary activities including, but not limited to construction staging areas, stormwater management facilities, wetland mitigation areas, reforestation areas, environmental stewardship activities, or other actions. All design and construction elements that may affect historic properties will be subject to review and concurrence by the MD SHPO and, if the resource is administered by NPS, the NPS. The FHWA and the MD SHA will ensure that avoidance of adverse impacts to historic properties is the preferred strategy and will utilize all feasible, prudent, and practicable measures to avoid adverse impacts.
 1. Should activities be added to the Undertaking for which cultural resources studies have not been completed, the MD SHA shall ensure that consultation ensues with the MD SHPO, the FHWA, the NPS, if the lands are administered by NPS, and other relevant consulting parties as appropriate, and that all required cultural resources studies are implemented in accordance with the applicable performance standards in Stipulation V and with the following procedures:
 - a. Identification -- The MD SHA professional cultural resources staff shall review any additions or changes to the project and implement identification investigations as necessary to identify any historic properties that may be impacted by the proposed activity or alignment modification. If project changes are made within lands administered by NPS, cultural resources investigations shall be carried out in consultation with NPS. The MD SHA shall provide all completed information to the MD SHPO, the FHWA, NPS, and relevant consulting parties under this MOA for review and comment.
 - b. Evaluation -- The MD SHA shall evaluate all cultural resources identified in the areas inventoried under Stipulation II.B.1.a. in accordance with 36 CFR 800.4(c) to determine their eligibility for the National Register of Historic Places. If project changes are made within lands administered by NPS, cultural resources investigations shall be carried out in consultation with NPS. The MD SHA shall provide the results of any such evaluation efforts to the MD SHPO, the FHWA, NPS, and relevant consulting parties for review and comment.
 - c. Treatment -- Should any property eligible for inclusion in the National Register of Historic Places be identified under Stipulation II.B.1.a., the MD SHA shall make a reasonable and good-faith effort to avoid adversely impacting the resource(s) by relocating or modifying the proposed action. If adverse impacts effects are unavoidable, the MD SHA, the FHWA, the MD SHPO, NPS, if the lands are administered by NPS, and relevant consulting parties shall consult in accordance with 36 CFR 800.6 to resolve adverse effects on National Register-eligible historic properties.

The FHWA shall solicit the participation of the Council. If adverse effects are unavoidable, the MD SHA, the FHWA, the MD SHPO, NPS and relevant consulting parties shall develop and implement appropriate treatment options in a Memorandum of Agreement. The FHWA and the MD SHA shall implement the mitigation plan once the MD SHPO concurs with the plan. The MD SHA shall ensure that any resulting cultural resources work is accomplished in accordance with the relevant performance standards in Stipulation V.

III. Unanticipated Discovery of Historic Properties. Because the project is within an area of that may have high sensitivity for cultural resources, buried archaeological features may exist within or adjacent to the construction area.

The SHA Senior Archaeologist (410-545-2878) (the SHA Archaeologist) shall act as the archaeological liaison with the SHA Construction Engineer and shall attend the pre-construction meeting. The SHA Archaeologist, assisted by SHA consultant archaeologist URS, shall be available to report to the job site within 24 hours of notification to inspect any archaeological features that might be discovered during construction.

A. Discoveries made within lands administered by the National Park Service:

1. Human Remains - Should any human remains (hereafter, "Remains") be encountered during construction, all construction work in the vicinity of the Remains shall be temporarily stopped to prevent damage to the Remains, or to any additional Remains that might be present in the immediate vicinity. The SHA Construction Engineer shall immediately notify the Park Superintendent (202-690-5127), Park Police (202-610-8703), Park Archeologist (202-692-6038), NPS Regional Archeologist (202-619-7280), Maryland SHPO (Administrator, Review and Compliance, 410-514-7631), and the SHA Archaeologist. In consultation with NPS, the SHA Archaeologist shall immediately coordinate with the SHA archaeological contractor to inspect the Remains within 24 hours of notification. The SHA Archaeologist shall prepare a preliminary evaluation of the Remains and shall propose a plan (hereafter, "Plan") for their protection, recovery, or destruction without recovery. Construction shall be temporarily suspended in the immediate vicinity of the Remains until the archaeological investigation has been completed, as provided for in the Standard Specifications for Construction and Materials under Section TC-5.04 (Cultural Resources) and Section TC-4.04 (Work Suspension). Construction can and should continue in all other parts of the project area. If the SHA Construction Engineer determines that the feature is located in a part of the project that will affect the critical path of construction, investigations will be limited to the minimum time required to complete necessary archaeological investigations. The SHA Archaeologist shall consult with, and shall provide the proposed Plan to, the Park Superintendent, Park Archaeologist, Regional Archaeologist, and Maryland SHPO for their review and approval. The Park Superintendent, in consultation with the Park and Regional Archaeologists, and Maryland SHPO, shall determine the appropriate course of action, following the Department of the Interior's guidelines on human remains.

2. Should any previously unidentified archaeological sites, features, artifacts, or materials (hereafter, "Resources") be encountered during construction, all construction work in the vicinity of the Resources shall be temporarily stopped to prevent damage to the Resource, or to any additional Resources that might be present in the immediate vicinity. The SHA Construction Engineer shall immediately notify the Park Superintendent, Park Archaeologist, Regional Archaeologist, Maryland SHPO, and the SHA Archaeologist for their review and approval. The SHA Archaeologist shall immediately coordinate with the SHA archaeological contractor to inspect the Resource within 24 hours of notification. The SHA Archaeologist shall prepare a preliminary evaluation of the Resource and shall propose a plan (hereafter, "Plan") for its protection, recovery, or destruction without recovery. Construction shall be temporarily suspended in the immediate vicinity of the Resource until the archaeological investigation has been completed, as provided for in the Standard Specifications for Construction and Materials under Section TC-5.04 (Cultural Resources) and Section TC-4.04 (Work Suspension). Construction can and should continue in all other parts of the project area.
 3. The SHA Archaeologist shall consult with, and shall provide the proposed Plan to, the Park Superintendent, Park Archaeologist, Regional Archaeologist, and Maryland SHPO. The Regional and Park Archaeologists will determine the appropriate course of action with the SHA Archaeologist; additional specifications are spelled out by the NPS in the "Special Stipulations" section of the approved ARPA permit that will be issued by the Regional Director. Construction shall be temporarily suspended in the immediate vicinity of the resource until the archaeological investigation has been completed, as provided for in the Standard Specifications for Construction and Materials under Section TC-5.04 (Cultural Resources) and Section TC-4.04 (Work Suspension). Construction can and should continue in all other parts of the project area. If the SHA Construction Engineer determines that the feature is located in a part of the project that will affect the critical path of construction, investigations will be limited to the minimum time required to complete necessary archaeological investigations.
- B. Discoveries made within lands not administered by the National Park Service.
1. Human Remains - Should any human remains (hereafter, "Remains") be encountered during construction, all construction work in the vicinity of the Remains shall be temporarily stopped to prevent damage to the Remains, or to any additional Remains that might be present in the immediate vicinity. The SHA Construction Engineer shall immediately notify the SHA Archaeologist.
 - a. In consultation with the MD SHPO, the SHA Archaeologist shall immediately coordinate with the SHA archaeological contractor to inspect the Remains within 24 hours of notification. If the Remains cannot be avoided by construction, the SHA Archaeologist shall prepare a preliminary evaluation of the Remains and shall propose a plan (hereafter, "Plan") for their protection, recovery, or destruction without recovery. Construction shall be temporarily suspended in the immediate

vicinity of the Remains until the archaeological investigation has been completed, as provided for in the Standard Specifications for Construction and Materials under Section TC-5.04 (Cultural Resources) and Section TC-4.04 (Work Suspension). Construction can and should continue in all other parts of the project area.

- b. If the SHA Construction Engineer determines that the feature is located in a part of the project that will affect the critical path of construction, investigations will be limited to the minimum time required to complete necessary archaeological investigations. The SHA Archaeologist shall consult with, and shall provide the proposed Plan to, Maryland SHPO for their review and approval. Construction may resume in any areas under a temporary work suspension after the SHA archaeologist notifies the SHA Project Engineer.
2. If previously unrecorded archaeological features, artifacts, or other resources are discovered during construction, all construction work in the immediate vicinity of the archaeological resource shall be temporarily halted or modified to prevent further damage to the discovered resource, or to any unidentified resources that might be present in the immediate vicinity. The contractor shall immediately notify the SHA Project Engineer, who shall coordinate with the SHA archaeologist.
 - a. If a discovered resource cannot be avoided by construction, the SHA archaeologist shall perform a preliminary inspection of the resource to evaluate its potential eligibility to the National Register of Historic Places, and, in consultation with the Maryland State Historic Preservation Office (MD SHPO), shall develop a Treatment Plan for its protection, recovery, or destruction without recovery. The archaeological investigation may include further clearing to define the archaeological resource, photography and measured drawings, and excavation of all or part of the resource.
 - b. Construction shall be temporarily suspended in the immediate vicinity of the resource until the archaeological investigation has been completed, as provided for in the Standard Specifications for Construction and Materials under Section TC-5.04 (Cultural Resources) and Section TC-4.04 (Work Suspension). Construction can and should continue in all other parts of the project area. Construction may resume within the area of the archaeological feature once the Treatment Plan has been approved by the MD SHPO, and all of its provisions have been successfully concluded. Construction may resume in any areas under a temporary work suspension after the SHA archaeologist notifies the SHA Project Engineer.

IV. Archeological Resource Protection Act (ARPA) Permit

- A. In accordance with the provisions of ARPA, and prior to the construction/implementation phase of the project, before any and all ground disturbing activities occur within lands administered by the NPS, specifically the National Capital Parks-East/Suitland Parkway (including all related activities such as utility work and relocations, staging or stockpiling

of materials, and establishment of construction trailers and access points), SHA shall apply for and obtain an ARPA Permit so that archeological work may be undertaken under the terms of Stipulation III. or Stipulation IV., if warranted.

- B. The SHA Archaeologist will hire an archaeological contractor meeting the Secretary of Interior's Standards, and will apply for an ARPA permit through the NPS NCR Regional Archaeologist in case of any inadvertent discovery due to project construction. The SHA Archaeologist and the archaeological contractor shall be available to conduct any required archaeological investigations on NPS lands, under the direction of the Park Archeologist and the NPS Regional Archeologist.
- C. Additional specifications are spelled out by the NPS in the "Special Stipulations" section of the approved ARPA permit that will be issued by the Regional Director, and within the "Plan for Treatment of Unanticipated Historic Properties on Lands owned by the NPS," which shall be included within the Undertaking's Special Provisions.

V. Performance Standards

- A. Professional Qualifications – The MD SHA shall ensure that all cultural resources work performed pursuant to this MOA is carried out by or under the direct supervision of a person or persons meeting at a minimum the Professional Qualifications Standards set forth in the Secretary of the Interior's Standards for Architectural History and Archeology (36 CFR Part 61).
- B. Standards and Guidelines - The MD SHA shall ensure that all cultural resources work carried out pursuant to this MOA shall be conducted in a manner consistent with the principles and standards contained in the documents (and subsequent revisions thereof) listed below:

- *Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation (48 FR 44716-44742) (1983 and successors);*
- *Standards and Guidelines for Archeological Investigations in Maryland (Shaffer and Cole 1994);*
- *Standards and Guidelines for Architectural and Historical Investigations in Maryland (Maryland Historical Trust, 2000);*
- *Guidelines and Resources for Compliance-Generated Determinations of Eligibility (DOEs) (Maryland Historical Trust, 2009);*
- *Advisory Council on Historic Preservation – Section 106 Archaeology Guidance (ACHP 2007);*
- *Recommended Approach for Consultation on Recovery of Significant Information from Archaeological Sites (ACHP 2007) (64 FR 27085-27087);*
- *the Annotated Code of Maryland, Title 10 Subtitle 4, §10-401 through §10-404;*
- *Guidelines for Applying the National Register Criteria for Evaluation, National Park Service Bulletin 15;*
- *Secretary of Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes (1996).*
- *Preservation Brief 2: Repointing Mortar Joints in Historic Masonry Buildings (<http://www.nps.gov/tps/how-to-preserve/briefs/2-repoint-mortar-joints.htm>)*

VI. Curation

- A. The MD SHA shall ensure that all materials and records generated by archeological work conducted on non-NPS administered lands pursuant to the MOA, including but not limited to recovered artifacts, field notes and forms, photographs, maps, and reports, for which legal title can be obtained, shall be submitted to the MD SHPO for curation in accordance with 36 CFR Part 79.
- B. The MD SHA and NPS shall ensure that all artifacts, specimens, samples, materials, and records generated by archeological work conducted on lands that are at the time administered by NPS pursuant to this MOA, including but not limited to recovered artifacts, field notes and forms, photographs, maps, and reports, are the property of the NPS and will be documented, curated, and conserved, as necessary, according to the standards found in 36 CFR 79, *Curation of Federally-Owned and Administered Archaeological Collections*; the *National Park Service Museum Handbook, Part 1*; and the requirements of the NPS's Regional Archaeology Program for the storage of objects at the NPS National Capital Region Museum Resource Center in Landover, Maryland in accordance with 36 CFR Part 79 and the Archeology Laboratory Manual of the NPS Regional Archeology Program, National Capital Region. The artifacts, specimens, samples, materials, and records will be turned over to the NPS upon completion of any archaeological analysis performed as part of this MOA.

VII. Resolution of Objections by the Signatories

- A. Should the MD SHPO, or any of the signatories to this MOA, object in writing within 30 days to any plans or actions proposed pursuant to this MOA, the FHWA shall consult with the objecting party to resolve the objection. Pending resolution of the objection, construction related specifically to the plans or actions to which objection is made shall be temporarily suspended, as provided for in the Standard Specifications for Construction and Materials under Section TC-5.04 (Cultural Resources) and Section TC-4.04 (Work Suspension). Construction can and should continue in all other parts of the project area. If the FHWA determines that such objection cannot be resolved, the FHWA will:
 1. Forward all documentation relevant to the dispute, including the FHWA's proposed resolution, to the Council. The Council shall provide the FHWA with its advice on the resolution of the objection within 30 days of receiving adequate documentation. Prior to reaching a final decision on the dispute, the FHWA shall prepare a written response that takes into account any timely advice or comments regarding the dispute from the Council, signatories and concurring parties, and provide them with a copy of this written response. The FHWA will then proceed according to its final decision.

2. If the Council does not provide its advice regarding the dispute within the 30 day time period, the FHWA may make a final decision on the dispute and proceed accordingly. Prior to reaching such a final decision, the FHWA shall prepare a written response that takes into account any timely comments regarding the dispute from the signatories and concurring parties to the MOA, and provide them and the Council with a copy of such written response.
3. The FHWA's responsibility to carry out all other actions subject to the terms of this MOA that are not the subject of the dispute remains unchanged.

VIII. Resolution of Objections by the Public - At any time during implementation of the measures stipulated in this MOA, should an objection pertaining to this MOA or the effect of the undertaking on historic properties be raised by another consulting party, a concurring party to the MOA, or a member of the public, the FHWA shall notify the parties to this agreement and take the objection into account, consulting with the objector and the NPS, if the objection pertains to the Parkway, and, should the objector so request, with any of the parties to this MOA to resolve the objection.

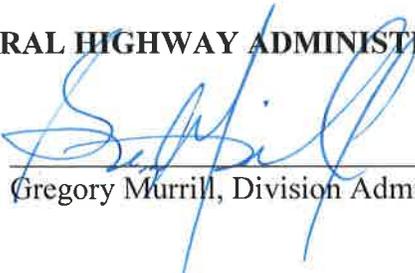
IX. Amendment - If any of the signatories to this MOA believe that its terms cannot be carried out, or that an amendment to the terms must be made, that signatory shall immediately consult with the other signatories to develop amendments. If an amendment cannot be agreed upon within fifteen (15) days, the dispute resolution process set forth in Stipulation VII will be followed.

X. Termination - Any signatory to this MOA may terminate it by providing thirty days written notice to the other parties, provided that the parties will consult during the period prior to termination to seek agreement on amendments or other actions that would avoid termination. Termination of this MOA will require compliance with 36 CFR 800. However, notwithstanding the aforementioned, this MOA may be terminated by the execution of a subsequent MOA that explicitly terminates or supersedes its terms.

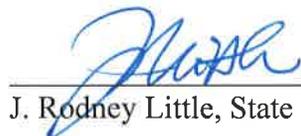
XI. Duration -- This MOA remains valid for a period of 10 years from the date of execution. If the Undertaking has not been constructed within ten (10) years after the execution of the MOA, SHA shall undertake a review of the MOA with all the signatories to determine if the MOA remains valid. If the signatories agree that the MOA requires amendment, a new agreement and consultation shall commence. The signatories may also agree to an extension for carrying out its terms.

Execution of this MOA by the FHWA, NPS, MD SHPO and MD SHA, and implementation of its terms provide evidence that FHWA and NPS have afforded the Council an opportunity to comment on the Undertaking and its effects on historic properties, and that FHWA and NPS have taken into account the potential effects of the Undertaking on historic properties.

FEDERAL HIGHWAY ADMINISTRATION

By:  _____ Date: 10/17/14
Gregory Murrill, Division Administrator

MARYLAND STATE HISTORIC PRESERVATION OFFICER

By:  _____ Date: 10-16-14
J. Rodney Little, State Historic Preservation Officer

NATIONAL PARK SERVICE

By:  _____ Date: 10/15/14
Gopaul Noojibail, Superintendent
National Capital Parks -- East

MARYLAND STATE HIGHWAY ADMINISTRATION

By:  _____ Date: 10/10/14
Melinda B. Peters, Administrator

Appendix B

MD 4 – Suitland Parkway Interchange

National Park Service, Federal Highway Administration, and Maryland State Highway
Administration Coordination

As of March 28, 2014

	Date	Description	Summary
1.	June 14, 1999	MOA - FHWA, NPS, SHA, MHT	This MOA was signed by NPS 6/14/1999, MHT 5/5, FHWA 8/9, SHA 5/21, and concurred with by ACHP 8/20.
2.	Jan. 19, 2005	FHWA, NPS, SHA	Discussed the Highway Design Div. Project after being on hold. SHA presented the directional ramp option to NPS and explained that changes in traffic volumes due to recent and planned development would cause the EA/FONSI Selected Alternate to fail. The 1999 MOA and potential revisions were discussed. NPS expressed concern for impacts to the gravel terrace forest, a unique vegetative community, and suggested that this design option would provide an opportunity for SHA to mitigate by rehabilitating an existing maintenance area located adjacent to the current intersection.
3.	Sep. 11, 2006	FHWA, NPS, SHA	Presented the direction ramp alternative. Future development and increased traffic volumes were discussed; including the rezoning of adjacent areas by PG County to accommodate multi-use development.
4.	Apr. 4, 2007	FHWA, NPS, SHA	Discussed revisions to the MOA with regard to project changes. A revised directional ramp option was presented that reduced impacts to park property, particularly the area previously cited by NPS as being of significant concern, the terrace gravel forest.
5.	Nov. 13, 2007	FHWA, NPS, SHA	Discussed NPS comments on the project MOA and requested revisions.
6.	Jan. 31, 2008	Letter – SHA to NPS	Provided NPS with information such as the current design plans for MD 4 at Suitland Parkway, environmental impact information, proposed landscaping plans, and a draft amendment to the 1999 MOA.
7.	Mar. 24, 2008	Letter – NPS to SHA	Provided SHA with comments on the project compliance including NEPA, Section 4(f), the draft amendment to the MOA, and Section 106. Comments were also expressed regarding ROW acquisition, construction easements, property boundary information, future maintenance, the flyover ramp and other design aspects, mitigation, and the landscape plan.
8.	Apr. 2, 2008	Teleconference FHWA, NPS, SHA	Discussed NPS comments on the project MOA.
9.	July 22, 2008	NPS, SHA	Informal review introduced the new NPS Director to several ongoing improvement projects that have potential to impact NPS properties.
10.	Sep. 9, 2008	NPS, SHA	The SHA project team met with NPS staff representative, Tammy Stidham to review NPS comments based on the draft MOA and outstanding items to be addressed.
11.	Oct. 28, 2008	NPS, EFHLD, SHA @ NPS	Discussion included a project overview for individuals new to the Suitland Parkway Project, ROW concerns, landscaping concerns and design suggestions. NPS committed to providing SHA with a scope of the FHWA plan review they had requested.
12.	Feb. 19, 2009	Report – SHA to NPS	Draft FONSI/Section 4(f) Reevaluation forwarded to NPS for review and comment concurrent with FHWA review of draft document.
13.	May 2, 2009	Letter – NPS to SHA	NPS provided comments on the draft reevaluation.

Date	Description	Summary
14. Mar. 31, 2010	Letter – SHA to MHT	Re-coordination with MHT, requested concurrence with continued Adverse Effect.
15. Jun. 2, 2010	FHWA, NPS, EFLHD, SHA	Review of 2 Alternatives proposed by EFLHD. Both eliminated flyover ramp design; one eliminated need to reconstruction bridge over AAFB entrance. SHA to evaluate traffic/LOS.
16. Oct. 2010	EFLHD,SHA	Staff met to discuss the result of traffic and LOS analysis for the EFLHD proposed alternatives.
17. July 9, 2010	MHT Response Letter	MHT concurs that the overall undertaking continues to adversely affect historic properties. Rather than amend the existing MOA, requests that a new agreement be developed and suggest a meeting with consulting parties to discuss mitigation opportunities.
18. Feb. 28, 2011	FHWA, NPS, EFLHD, SHA	SHA and EFLHD presented Folded Diamond Interchange Alternative to NPS staff as an Alternative design which eliminated flyover ramp, but had larger footprint. NPS determined that more information would be needed to determine which Alternative would be preferable to them.
19. Apr. 4, 2011	FHWA, NPS, EFLHD, SHA	SHA and Design Consultant presented additional impact evaluation as well as rendering of proposed directional ramp (formerly “flyover”) option. NPS consensus was received that directional ramp design would have less adverse impact than the folded diamond design. Project Team to pursue directional ramp design.
20. June 21, 2011	FHWA, NPS, EFLHD, SHA	Follow-up meeting to discuss next steps as project and design proceeds. Determined that multiple sub-groups would be identified to meet and resolve concerns of interested stakeholders.
21. July 29, 2011	FHWA, NPS, EFLHD, SHA – CR and Env Compliance Sub-Grp Mtg	Design coordination meeting
22. Aug. 18, 2011	FHWA, NPS, EFLHD, SHA,	Design coordination meeting
23. Oct. 13, 2011	FHWA, NPS, SHA @ NPS	Design coordination meeting
24. Feb. 29, 2012	FHWA, NPS, SHA @ SHA D3	Design coordination meeting
25. May 21, 2012	FHWA, NPS, SHA @ SHA D3	Design coordination meeting
26. Dec. 6, 2012	FHWA, NPS, SHA @ NPS	Design coordination meeting
27. Jan. 22, 2013	FHWA, NPS, SHA – Field Meeting	Design coordination meeting
28. March, 2013	Letter – NPS to SHA	Expressed support for acquisition of Fort Foote property for replacement for permanent impacts to NPS lands at Suitland Parkway.
29. May 21, 2013 June 20, 2013	Report – SHA to NPS	Fort Foote Property Environmental Site Assessment and Checklist – Submitted for NPS review.
30. Aug. 15, 2013	FHWA, NPS, SHA – Teleconference	Design coordination meeting

Date	Description	Summary
31. Aug. 20, 2013	Letter – SHA to NPS	<p>Requested the following by August 30, 2013:</p> <ul style="list-style-type: none"> • Comments on the ESA and an opinion regarding the Fort Foote Property acceptability. • NPS concurrence that land required for the relocated pipeline be added to the project's permanent impacts and therefore be included in the land exchange (increasing perm impacts to 6.942 acres). • NPS comments on the MOA. • A decision from NPS regarding ability to adopt SHA's prepared documents. • Information from NPS regarding costs associated with permit oversight.
32. Sep. 6, 2013	Letter – NPS to SHA	<ul style="list-style-type: none"> • Re-evaluation will not be sufficient to meet NPS NEPA requirements, new EA and Section 4(f) are necessary. • Land exchange of Fort Foote property is contingent on the successful completion of NEPA, Section 4(f) and Section 106. • NPS review of ESA and checklist anticipated by 9/15/13. NPS notified of SHA of potential need to update ESA prior to NPS taking title of property. • Acknowledges advantages of expanding the SHA acquisition to include Fuel Line property. • Some elements of the MOA are also contingent on NEPA analysis. • Requested meeting with SHA
33. Sep. 18, 2013	Letter – SHA to NPS	<ul style="list-style-type: none"> • SHA has initiated the acquisition process of Fort Foote property as a <i>protective buy</i>. • SHA requested formal response from NPS regarding approval of the ESA. • SHA requested a listing of specific requirements for DO-12 NEPA approval. • SHA requested NPS to provide next steps to successful land exchange for pipeline relocation. • SHA requested NPS comments on MOA by 9/27/13. • NPS to inform SHA of desire to have trail extension grading constructed as part of this project or eliminated (save 30" Sweet Gum) by 9/27/13. • SHA requested comments on landscape drawings by 9/27/13. • SHA requested senior level meeting with FHWA, NPS, and SHA staff.
34. Nov. 5, 2013	FHWA, NPS, SHA	<ul style="list-style-type: none"> • DO-12 NEPA kick-off meeting
35. Dec. 12, 2013	FHWA, NPS, SHA	<ul style="list-style-type: none"> • DO-12 and Section 4(f) evaluation status meeting
36. Jan. 28, 2014	FHWA, NPS, SHA	<ul style="list-style-type: none"> • DO-12 and Section 4(f) evaluation status meeting
37. Feb 19, 2014	Interagency Group	<ul style="list-style-type: none"> • Agency Scoping presentation for DO-12 NEPA process
38. Mar. 6, 2014	FHWA, NPS, SHA	<ul style="list-style-type: none"> • DO-12 and Section 4(f) evaluation status meeting

Appendix C

MD 4 – Suitland Parkway Interchange Section 4(f) Coordination



IN REPLY REFER TO:

United States Department of the Interior

OFFICE OF THE SECRETARY
Office of Environmental Policy and Compliance
Custom House, Room 244
200 Chestnut Street
Philadelphia, Pennsylvania 19106-2904



July 31, 2014

9043.1
ER 14/0402

Heather Lowe
NEPA Compliance Section Team Leader
Environmental Planning Division
Maryland State Highway Administration
707 N. Calvert Street I Mail Stop C-301
Baltimore, MD 21202
hloew@sha.state.md.us

Subject: Review of the Draft Section 4(f) Evaluation for the **MD4 at Suitland Parkway** project by the Maryland Department of Transportation; Maryland State Highway Administration; PG618C21; Prince George's County, Maryland

Dear Ms. Lowe:

The Department of the Interior (Department) has reviewed the Draft Section 4(f) Evaluation for MD 4 and Suitland Parkway, Prince George's County, MD and submits the following comments in accordance with provisions of the National Transportation Act of 1966, as amended 23 U.S.C. 138 and 49 U.S.C. 303, referred to as Section 4(f), and the applicable regulations at 23 C.F.R. 774, and other regulations and guidance.

The Department understands that The Maryland State Highway Administration (SHA) and the Federal Highway Administration (FHWA) has released an EA and draft Section 4(f) for the proposed roadway improvements at the intersection of MD 4 and Suitland Parkway, located approximately one mile southeast of the MD 4/Capital Beltway (I-95/I-495) interchange in Prince George's County. The MD 4/Suitland Parkway Interchange project would upgrade the existing MD 4 and Suitland Parkway/Presidential Parkway intersection to a grade-separated, signalized diamond interchange with a directional ramp.

This project will result in the temporary and permanent use of Suitland Parkway, a Section 4(f) resource. Suitland Parkway spans a total of 9.18 miles, including 6.38 miles through Prince George's County, Maryland, and 2.8 miles through the District of Columbia. The park surrounding the Suitland Parkway corridor comprises 418.9 acres and is managed by the National Park Service (NPS). Suitland Parkway is owned by United States Government and

under the jurisdiction of NPS National Capital Parks-East. The entirety of Suitland Parkway is a historic district listed in the National Register of Historic Places (NRHP), as 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 values, or representation of a significant and distinguishable entity whose components may lack individual distinction.

Impacts to Suitland Parkway include the permanent transfer of NPS lands to SHA, temporary construction impacts, and impacts that would result in a change in the features and attributes of Suitland Parkway.

The proposed action, including the interchange construction and requisite utility relocations, would require the permanent transfer of approximately seven acres from NPS to SHA. The land transfer would occur via a land exchange of fee simple ROW of NPS lands to SHA. In addition, an estimated 12-acre area of NPS land along the Suitland Parkway would be impacted by temporary construction activities that would span four to five years. This 12-acre area would encompass: staging areas, areas for grading and drainage, the resurfacing and reconstruction of the approach roadways, construction of the bike/multi-use path, and areas for re-vegetation.

In support of design discussions and considerations, a Memorandum of Agreement (MOA) has been drafted for execution by FHWA, NPS, SHA, and the Maryland State Historic Preservation Office (MD SHPO). The MOA is being developed in accordance with the provisions of Section 106 of the National Historic Preservation Act (NHPA) and its implementing regulations, 36 CFR Part 800. The MOA stipulates the implementation of numerous measures to minimize harm to the Section 4(f) property. The MOA is presently under review by its signatories; measures included in the MOA will be addressed in the Final Section 4(f) Evaluation.

One issue to note, the Draft Section 4(f) Evaluation fails to mention any potential impacts this proposal could have to the Star-Spangled Banner National Historic Trail. The Star-Spangled Banner National Historic Trail commemorates and connects the places, people and events that led to the birth of our National Anthem during the Chesapeake Campaign of the War of 1812. The Star-Spangled Banner State Scenic Byway is a state-designated driving route that follows the historic paths traveled by the British armies within Maryland. Both the land and water routes of the trail and the route of the byway are referred to as the "Star-Spangled Banner National Historic Trail". Together the trail and byway comprise approximately 560 miles of land and water segments that closely follow the historic routes of the British armies and American defenders in Maryland, Virginia, and the District of Columbia. Congress designated the trail in 2008 through an amendment to the National Trails Act.

The designation was based upon the findings of a National Park Service-led study published in 2004 that applied National Historic Landmark criteria to historic land and water segments to determine their eligibility as potential segments of a National Historic Trail. The study found that the land route which follows MD 4 in Prince Georges County, met the criteria.

The Department agrees that there is no feasible and prudent alternative, as defined in 23 CFR 774.17, to the "use" of land from the proposed roadway improvements at the intersection of MD

4 and Suitland Parkway. We understand that MD SHA has been, and continues to work closely with the NPS and acknowledges the commitment the sponsoring agencies are taking to ensure all possible planning, as defined in 23 CFR 774.17, will be accomplished that minimizes harm to Section 4(f) properties. The Department also recognizes the need for NPS and SHA to further discuss potential impacts to the Star-Spangled Banner National Historic Trail, as well as possible mitigations to off-set those impacts. At this point, however, the Department cannot comment on the overall proposal since no preferred alternative has been identified. These comments represent an indication of the Departments thoughts about the findings of the Draft Section 4(f) properties information and involvements, but concurrence or non-concurrence by the Department requires a preferred alternative be selected with mitigation and minimization efforts focused on that selection. The Department and NPS look forward to continued coordination with this effort.

Sincerely,

A handwritten signature in black ink, appearing to read "Lindy Nelson", with a long, sweeping horizontal stroke extending to the right.

Lindy Nelson
Regional Environmental Officer

cc:
SHPO-MD (elizabeth.hughes@maryland.gov)
MD SHA (gslater@sha.state.md.us)