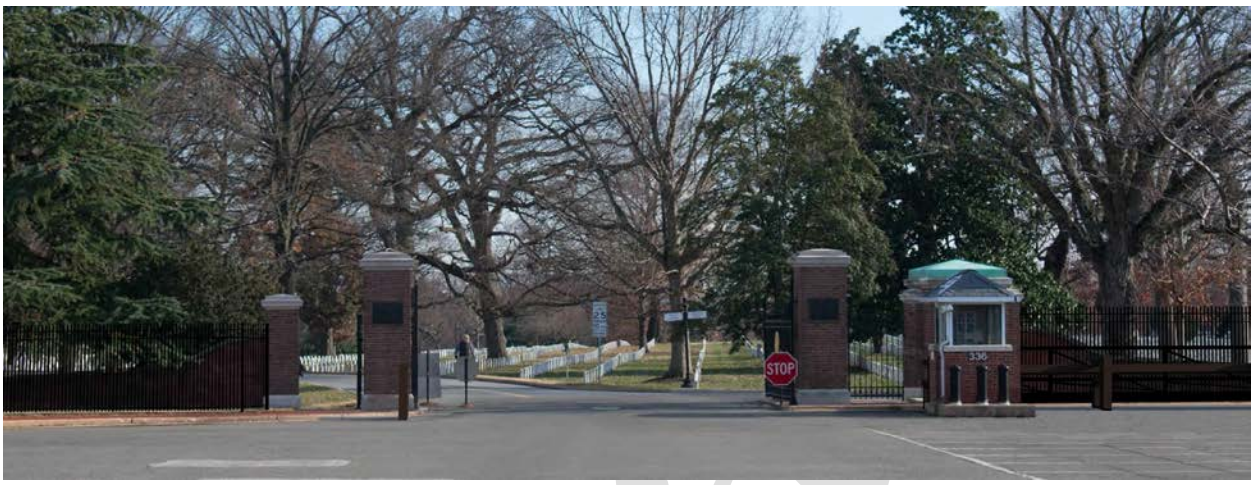
DRAFT ENVIRONMENTAL ASSESSMENT

for the Proposed Construction of a Perimeter Security Fence

JOINT BASE MYER-HENDERSON HALL

ARLINGTON COUNTY, VIRGINIA



June 2018

DRAFT FINDING OF NO SIGNIFICANT IMPACT
ENVIRONMENTAL ASSESSMENT
PROPOSED CONSTRUCTION OF A PERIMETER SECURITY FENCE
Joint Base Myer-Henderson Hall, Arlington County, Virginia

Name of Action: Proposed Construction of a Perimeter Security Fence at Joint Base Myer-Henderson Hall, Virginia.

Description of Proposed Action: Joint Base Myer-Henderson Hall (JBM-HH) proposes to construct a new perimeter eight foot tall ornamental security fence, five vehicle entry points, and an intrusion detection system along the JBM-HH and ANC perimeter. The fence will be aesthetically neutral as viewed from the ANC side. Walkways will be removed and replaced in alternative locations where the fence alignment conflicts with existing pedestrian flow. Additional proposed security measures include the installation of more security cameras, motion sensors, additional lighting and an increase of patrols by the Military Police. This Action would require relocation of some existing lighting poles and intrusion detection poles and cameras, as well as the permanent relocation of the parking along the existing stone wall near Henderson Hall Gate 3 to a nearby location on Henderson Hall. The parking area adjacent to the Old Post Chapel is being reconfigured to include caisson staging, ceremony staging, and improved circulation. Reconfiguration of this area will involve the removal of the existing asphalt and storm drainage within the lot footprint. The new proposed parking lot includes stormwater management features and an asphalt staging area for the ceremonial function of the chapel. Areas along the proposed fence that are disturbed during construction would be landscaped to return them to pre-construction conditions.

Under the Proposed Action, approximately 10,000 linear feet of fence would be added or improved along the entire length of the JBM-HH boundary with ANC. The security fence begins to the north at Wright Gate, continues past the Millennium Site, the Old Post Chapel, the Tri Service Parking Lot, the Memorial Chapel, Henderson Hall, and ends at the intersection of Hobson Drive and Southgate Road. The fence alignment would parallel the historic boundary wall between JBM-HH and ANC for the majority of its alignment with offsets up to 50 feet on the JBM-HH side. Slight realignments may occur which will require portions of the existing gates and fence to be removed and tied into the new fence.

The green space between the Tri-Service Parking Lot and the Memorial Chapel would be utilized for a proposed pavilion area. The proposed pavilion area would include a new trellis, a sitting wall, a jogging path, and landscape.

The proposed ornamental black structural steel and black wrought iron fence will be aesthetically neutral. Due to varying conditions along the boundary, different fence alignment strategies may be incorporated into the design throughout the length of the project. Design of the project will include an ornamental picket and post fence on the JBM-HH side, four to ten from the existing historic stone wall. Large, mature trees and other natural and cultural resources within the proposed project area would be identified and the project would be designed to avoid and protect these resources to the extent feasible.

Alternatives Evaluated: An Environmental Assessment (EA) is being prepared to evaluate the potential environmental, cultural, transportation and socioeconomic effects associated with the Proposed Action. The Proposed Action includes proposed construction of a perimeter security fence at JBM-HH. One alternative (Alternative 1) was also carried out throughout the EA. Alternative 1 includes all aspects of the Proposed Action, however, it would relocate the gate at the Old Post Chapel (OPC). The OPC gate, under the Proposed Action, is located along the perimeter of ANC and JBM-HH. The Alternative 1 alignment would relocate the fence near the OPC to the entrance of the parking area from McNair Road, putting the OPC on the ANC side of the fence. This would provide easier access for funeral attendees, would have less impact to cultural resources and trees at the OPC, would preserve views to ANC, and would provide increased parking capacity at the OPC. However, locating the OPC on the ANC side of the new fence would create a visual, physical, and cultural separation of the OPC from JBM-HH, would require additional security protocols from JBM-HH, would cause the loss of Tri-Service Area parking which is utilized for eliminating overflow during large funerals, would compromise traffic safety at the McNair Road entrance, and would add an increased security threat due to the proximity of the fence to residential and other facilities on JBM-HH.

Two other alternatives (Floating Wall and Limited Fence) were considered, but were eliminated because they do not meet legal or other Department of Defense (DoD) requirements.

As required, a No-Action Alternative was also included in the EA which reflects the status quo and serves as a benchmark against which federal actions can be evaluated. In this EA, the No-Action Alternative assumes JBM-HH would forego security upgrades, thereby maintaining the current insufficient boundary wall. If security improvements are not made, the facility will not be capable of properly securing government assets. Force Protection will continue to use current security devices that are inadequate in meeting DoD policies and standards. The No-Action Alternative would not be a sufficient resolution to the existing security inadequacies.

Anticipated Impacts: Based on the analysis contained in the EA, implementation of the Proposed Action is anticipated to result in short-term or long-term negligible to minor adverse impacts on soils, air quality, vegetation and wildlife, wetlands, land use, noise, traffic and transportation systems, visual resources and socioeconomics; long-term beneficial impacts to stormwater and traffic and transportation systems; and long-term moderate impacts on cultural resources. No impacts on geology, topography, surface water, groundwater, floodplains, threatened and endangered species, hazardous materials, utilities, and health and safety are anticipated to result from the Proposed Action. The Proposed Action will comply with all applicable federal, state and local regulations and permit requirements.

Public Involvement: Agency consultation letters were sent out on 1 November 2017 to interested parties to initiate the EA process. Also, JBM-HH conducted an Open House Public Meeting to present the Proposed Action to the general public and federal stakeholders on 18 April 2018 at the Sheraton, Pentagon City from 1800-2000. The Public Meeting was advertised in The Washington Post and The Pentagram on 4 April 2018. No one from the public or coordinating stakeholders attended the Public Meeting.

The Draft Final EA and Draft FNSI were made available for public review 18 June 2018 at the Arlington County Public Library, Columbia Pike Branch; Southwest Neighborhood Library; Martin Luther King, Jr. Memorial Library and Arlington County Public Library. Notices of Availability of the Draft Final EA and Draft FNSI were published in The Washington Post and The Pentagram and were mailed to interested agencies/parties.

Finding of No Significant Impact: *Anticipated Wording: After a review of the EA, I have determined that the Proposed Action evaluated may be selected for implementation. I have concluded that implementation of the Proposed Action will have no significant impacts to the natural environment, cultural resources or human environment. Based upon the aforementioned, preparation of an Environmental Impact Statement is not required.*

Date: _____ _____

Director, JBM-HH

Environmental Assessment for the Proposed Construction of a Perimeter Security Fence at Joint Base Myer-Henderson Hall, Virginia

Prepared for:
Environmental Management Division
Directorate of Public Works
Joint Base Myer-Henderson Hall
111 Stewart Road, Building 321
Fort Myer, Virginia 22211-1199

June 2018

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1.0 INTRODUCTION

1.1 PROJECT BACKGROUND

The National Environmental Policy Act of 1969 (NEPA) requires that Federal agencies consider the potential environmental consequences of proposed and alternative major Federal actions in their decision-making process. The Council on Environmental Quality (CEQ) was established under NEPA for the purpose of implementing and overseeing Federal policies as they relate to this process. This Environmental Assessment (EA) has been prepared to analyze the potential environmental, cultural and socioeconomic effects associated with the implementation of security upgrades along the boundary between Joint Base Myer-Henderson Hall (JBM-HH) and Arlington National Cemetery (ANC) located in Arlington, Virginia. This EA was prepared pursuant to the National Environmental Policy Act (NEPA) of 1969 (42 United States Code Section 4321 *et seq.*); the CEQ regulations that implement NEPA (Title 40 Code of Federal Regulations [CFR], Parts 1500 to 1508); and AR 200-1, *Environmental Protection and Enhancement*, as promulgated in 32 CFR 651.

JBM-HH includes Fort Myer, Henderson Hall, and Fort McNair, all located within the Washington, D.C. Metropolitan area. JBM-HH are adjacent installations located in Arlington, Virginia, directly across the Potomac River from Washington, D.C.; Fort McNair is located in Southwest Washington, D.C. at the confluence of the Washington Channel of the Potomac River and the Anacostia River (Figure 1-1). The Army installation Fort Myer encompasses 243 acres between Arlington Boulevard / United States (U.S.) Route 50, Washington Boulevard / State Route (SR) 27 and ANC in Arlington, Virginia.

Fort Myer assumed installation management responsibilities, and integrates some functions and services between JBM-HH, including security, anti-terrorism/force protection, utilities, parking, circulation and access control points, housing, and recreation, to provide more efficient support of the on-installation and regional populations. The missions of Fort Myer include responding to crises, disasters, or security requirements in the National Capital Region (NCR) through implementation of various contingency plans; providing both base operations and a variety of specialized support to Army and other Department of Defense (DoD) organizations throughout the NCR; and conducting official national and international ceremonial, musical, and special events. Fort Myer is home to 3rd U.S. Infantry Regiment (The Old Guard), the U.S. Army Band "Pershing's Own", and Headquarters U.S. Army Garrison.

Henderson Hall is home to the U.S. Marine Corps (USMC) Headquarters and Service Battalion. JBM-HH maintains a close functional relationship with ANC and the NCR. The Old Guard provides ceremonial duties at ANC and security for the nation's capital as a first response infantry unit. Community Support at JBM-HH provides services and support to more than 6,000 soldiers and more than 114,000 family members, retirees, and veterans in the NCR.

Figure 1-1: JBM-HH Location

The border between JBM-HH and ANC is currently demarcated by a historic stone wall. The wall was originally constructed in the late 1800's and portions are eligible for the National Register of Historic Places (NRHP). The wall was originally constructed to a variable height of four feet, which leaves JBM-HH vulnerable to unauthorized pedestrian access from the adjacent ANC. The Proposed Action evaluated in this EA includes improvements to the JBM-HH and ANC border including the installation of security fencing and other Anti-Terrorism Force Protection (AT/FP) and security features.

1.2 PURPOSE AND NEED FOR THE PROPOSED ACTION

The purpose of the Proposed Action is to strengthen or improve security in vulnerable areas along the JBM-HH and ANC boundary line. The current historic wall between JBM-HH and ANC does not meet the current DoD AT/FP standards as outlined in the Unified Facilities Criteria (UFC) 4-010-01, or Security Fences and Gates Criteria outlined in the UFC 4-022-03. The existing, low height, perimeter ANC historic stone wall is on the property line, and not a functional deterrent to trespassers who can enter JBM-HH by climbing over the stone wall at various unmonitored points. Implementation of the Proposed Action would strengthen or improve security in vulnerable areas along the existing boundary stone wall, and aid in meeting current AT/FP standards.

1.3 SCOPE OF THE ENVIRONMENTAL ASSESSMENT

The purpose of this EA is to evaluate the direct and indirect impacts associated with the proposed security measures along the boundary between JBM-HH and ANC in accordance with the NEPA. In this EA document, JBM-HH refers to the project area at JBM-HH, and excludes Fort McNair, unless stated otherwise. This document identifies and evaluates the potential environmental, cultural resources, and socioeconomic effects associated with the Proposed Action as accomplished by implementing the Preferred Alternative discussed in Section 2.0, as well as the No-Action Alternative. Section 3.0 describes the existing environmental, cultural, and socioeconomic conditions that could potentially be impacted by the Preferred and the No-Action Alternatives, as well as the environmental, cultural, and socioeconomic consequences envisioned as a result of implementing the feasible alternatives.

The EA focuses on impacts likely to occur within the proposed areas of development. The document analyzes direct effects (those resulting from the alternatives and occurring at the same time and place) and indirect effects (those distant or occurring at a future date). The potential for cumulative impacts as defined by 40 Code of Federal Regulations (CFR) 1508.7 is also addressed. Compliance with applicable Federal statutes, standards, and directives pertinent to the Proposed Action was considered during the preparation of this EA.

Under the guidance provided in NEPA and in 32 CFR Part 651, either an Environmental Impact Statement (EIS) or an EA must be prepared for any federal action. Actions that are determined to be exempt by law, emergencies, or categorically excluded do not require the preparation of an EA or EIS. If an action may significantly affect the environment, an EIS would be prepared. An EA provides sufficient evidence and analysis for determining whether or not to prepare an EIS. The contents of an EA includes the need for the Proposed Action, alternatives to the Proposed Action,

environmental impacts of the Proposed Action and alternatives considered for implementation; and documentation of agency coordination.

An evaluation of the environmental consequences of the Proposed Action and the No-Action Alternative includes direct, indirect, and cumulative effects, as well as qualitative and quantitative (where possible) assessment of the level of significance of these effects. The EA results in either a Finding of No Significant Impact (FNSI) or a Notice of Intent (NOI) to prepare an EIS. If JBM-HH determines that this Proposed Action may have a significant impact on the quality of the human environment, an EIS will be prepared.

1.4 PUBLIC INVOLVEMENT

Individual coordination letters were also provided to the Virginia State Historic Preservation Office (VASHPO) and the U.S. Fish and Wildlife Service (USFWS). Responses to these letters are incorporated into this EA and included in Appendix A. Coordination with Architectural Review Agencies have and will occur throughout the process. These agencies and stakeholders include (but are not limited to) ANC, the Advisory Council on Historic Preservation (ACHP), the Virginia Department of Historic Resources (VDHR), the Commission of Fine Arts (CFA) and the National Capital Planning Commission (NCPC).

JBM-HH conducted an Open House Public Meeting to present the Proposed Action to the general public and federal stakeholders on 18 April 2018 at the Sheraton, Pentagon City from 1800-2000. The Public Meeting was advertised in The Washington Post and The Pentagram on 4 April 2018. No one from the public or coordinating stakeholders attended the Public Meeting.

A Notice of Availability (NOA) dated 18 June 2018, was published in The Washington Post and The Pentagram as well as distributed to Federal, state and local agencies via letter. The NOA and publication announced the availability of the official public draft EA and requested comments from the general public and Federal, state and local agencies. The Draft EA was made available to the public for 30 days, from 18 June to 17 July 2018, along with a Draft FNSI. The Draft EA and FNSI were available for public review on the JBM-HH public website https://www.army.mil/jbmhh and hardcopies were placed in the following public libraries:

- Arlington County Public Library, Columbia Pike Branch
  816 South Walter Reed Drive
  Arlington, Virginia 22201

- Southwest Neighborhood Library
  900 Wesley Place SW
  Washington, D.C. 20024

- Martin Luther King, Jr. Memorial Library
  901 G Street
  Washington, D.C. 20001

- Arlington County Public Library
  1015 North Quincy Street
  Arlington, Virginia 22201

It is anticipated that the Proposed Action will not result in significant impacts and preparation of an EIS is not needed. All coordination letters sent and responses received during the preparation of this EA are located in Appendix A.

1.5 ENVIRONMENTAL LAWS AND REGULATIONS

This EA has been prepared in accordance with the NEPA, as amended (Title 42, United States Code [USC] §4321 et seq.), NEPA-implementing regulations of the Council on Environmental Quality (40 Code of Federal Regulations [CFR] Parts 1500–1508), and the Army's NEPA-implementing regulations (32 CFR Part 651, *Environmental Analysis of Army Actions*).

Army decisions that affect environmental resources and conditions occur within the framework of numerous laws, regulations, and Executive Orders (EO). Some of these authorities prescribe standards for compliance while others require specific planning and management actions to protect environmental values potentially affected by Army actions. Key provisions of appropriate statutes and EOs are described in more detail throughout the text of this EA and in Table 1-1.

Table 1-1: Compliance with Federal Environmental Statutes and Executive Orders

ACTS	Compliance
Clean Air Act, as amended (42 United States Code [U.S.C.] ch. 85, subch. I §7401 et seq.)	FULL
Clean Water Act, as amended (33 U.S.C. ch. 23 §1151)	FULL
Coastal Zone Management Act (16 U.S.C. ch. 33 §1451 et seq.)	FULL
Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended by the Superfund Amendments and Reauthorization Act of 1986 (42 U.S.C. §9601 et seq.)	FULL
Endangered Species Act of 1973, as amended (16 U.S.C. ch. 35 §1531 et seq.)	FULL
Farmland Protection Policy Act (7 U.S.C 4201)	FULL
Fish and Wildlife Coordination Act, as amended (16 U.S.C. 661-667e)	FULL
Migratory Bird Treaty Act (16 U.S.C §§703-712, et seq.)	FULL
National Environmental Policy Act of 1969 (42 U.S.C. §4321 et seq.)	FULL
National Historic Preservation Act of 1966, as amended (16 U.S.C. ch. 1A, subch.II §470 et seq.)	FULL
Noise Control Act of 1972, as amended (42 U.S.C. §§4901-4918, et seq.)	FULL
North American Wetlands Conservation Act (16 U.S.C. 4401-4412)	FULL
Resource Conservation and Recovery Act (42 U.S.C. ch. 82 §6901 et seq.)	FULL
Safe Drinking Water Act, as amended (42 U.S.C. §300f)	FULL
Solid Waste Disposal Act of 1965, as amended (42 U.S.C 6901 et seq.)	FULL
Toxic Substances Control Act of 1976 (15 U.S.C. ch.53, subch. I §§2601-2629)	FULL
Watershed Protection and Flood Prevention Act of 1954 (16 U.S.C. §1101, et seq.)	FULL
Wild and Scenic Rivers Act (16 U.S.C. 1271, et seq.)	FULL
Sikes Act, as amended (16 U.S.C. 670a-670o)	FULL
Archaeological Resources Protection Act, as amended (16 U.S.C. §§470aa-470mm)	FULL
Executive Orders (EO)	
Floodplain Management (EO 11988)	FULL
Protection of Wetlands (EO 11990)	FULL
Environmental Justice in Minority Populations and Low-Income Populations (EO 12898)	FULL
Federal Compliance with Pollution Control Standards (EO 12088)	FULL
Protection of Children from Environmental Health Risks and Safety Risks (EO 13045)	FULL
Invasive Species (EO 13112)	FULL
Consultation and Coordination with Indian Tribal Governments (EO 13175)	FULL
Strengthening Federal Environmental, Energy, and Transportation Management (EO 13514)	FULL
Chesapeake Bay Protection and Restoration (EO 13508)	FULL

2.0 PROPOSED ACTION AND ALTERNATIVES

This chapter describes the Proposed Action and alternatives to the Proposed Action. In accordance with CEQ guidance in 40 CFR 1502.14, the purpose of this chapter is to sharply define the differences between the alternatives.

2.1 PROPOSED ACTION

The Proposed Action includes the construction of a new perimeter eight foot tall ornamental security fence (Figure 2-1), five vehicle entry points, and an intrusion detection system along the JBM-HH and ANC perimeter. The fence will be aesthetically neutral as viewed from the ANC side. Walkways will be removed and replaced in alternative locations where the fence alignment conflicts with existing pedestrian flow. Additional proposed security measures include the installation of more security cameras, motion sensors, additional lighting and an increase of patrols by the Military Police. This Action would require relocation of some existing lighting poles and intrusion detection poles and cameras, as well as the permanent relocation of the parking along the existing stone wall near Henderson Hall Gate 3 to a nearby location on Henderson Hall (Figure 2-2). The parking area adjacent to the Old Post Chapel is being reconfigured to include caisson staging, ceremony staging, and improved circulation. Reconfiguration of this area will involve the removal of the existing asphalt and storm drainage within the lot footprint. The new proposed parking lot includes stormwater management features and an asphalt staging area for the ceremonial function of the chapel. Areas along the proposed fence that are disturbed during construction would be landscaped to return them to pre-construction conditions.

Figure 2-1: Example of Proposed Fence Style

Under the Proposed Action, approximately 10,000 linear feet of fence would be added or improved along the entire length of the JBM-HH boundary with ANC. The security fence begins to the north at Wright Gate, continues past the Millennium Site, the Old Post Chapel, the Tri Service Parking Lot, the Memorial Chapel, Henderson Hall, and ends at the intersection of Hobson Drive and Southgate Road. The fence alignment would parallel the historic boundary wall between JBM-HH and ANC for the majority of its alignment with offsets up to 50 feet on the JBM-HH side (Figures 2-2, 2-3 and 2-4). Slight realignments may occur which will require portions of the existing gates and fence to be removed and tied into the new fence.

The green space between the Tri-Service Parking Lot and the Memorial Chapel would be utilized for a proposed pavilion area. The proposed pavilion area would include a new trellis, a sitting wall, a jogging path, and landscape.

The proposed ornamental black structural steel and black wrought iron fence will be aesthetically neutral. Due to varying conditions along the boundary, different fence alignment strategies may be incorporated into the design throughout the length of the project. Design of the project will include an ornamental picket and post fence on the JBM-HH side, four to ten from the existing

Figure 2-2: Proposed Fence Alignment

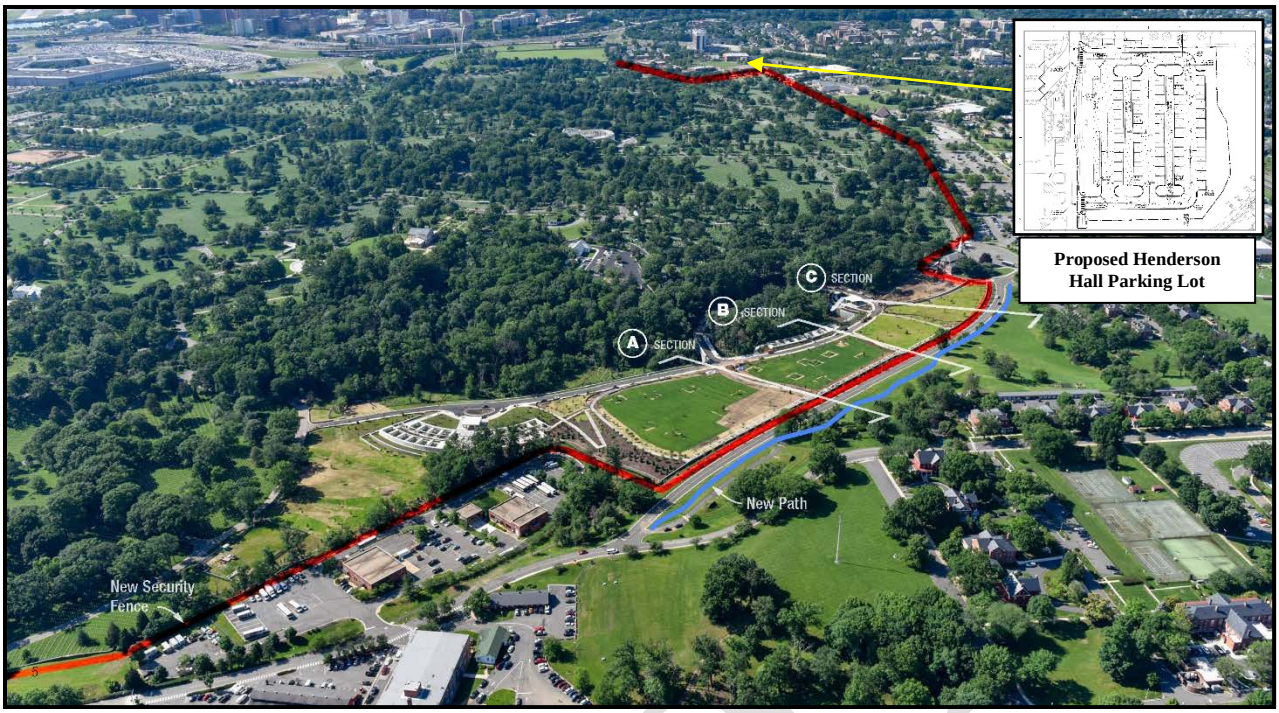

Figure 2-3: Proposed Fence Alignment and Henderson Hall Parking Lot

Figure 2-4: Proposed Fence Alignment and Gate near Old Post Chapel

historic stone wall. Large, mature trees and other natural and cultural resources within the proposed project area would be identified and the project would be designed to avoid and protect these resources to the extent feasible.

2.2 ALTERNATIVE 1

Alternative 1 would keep all aspects of the Proposed Action, except would relocate the gate at the Old Post Chapel (OPC). The OPC gate, under the Proposed Action, is located along the perimeter of ANC and JBM-HH (Figure 2-4). The Alternative 1 alignment would relocate the fence near the OPC to the entrance of the parking area from McNair Road, putting the OPC on the ANC side of the fence (Figure 2-5). This would provide easier access for funeral attendees, would have less impact to cultural resources and trees at the OPC, would preserve views to ANC, and would provide increased parking capacity at the OPC. However, because the OPC would now be on the ANC side of the new fence, it would create a visual, physical, and cultural separation of the OPC from JBM-HH, would require additional security protocols from JBM-HH, cause the loss of Tri-Service Area parking and elimination of large funeral overflow, compromise traffic safety at the McNair Road entrance, and add an increased threat due to the proximity of the fence to residential and other facilities on JBM-HH.

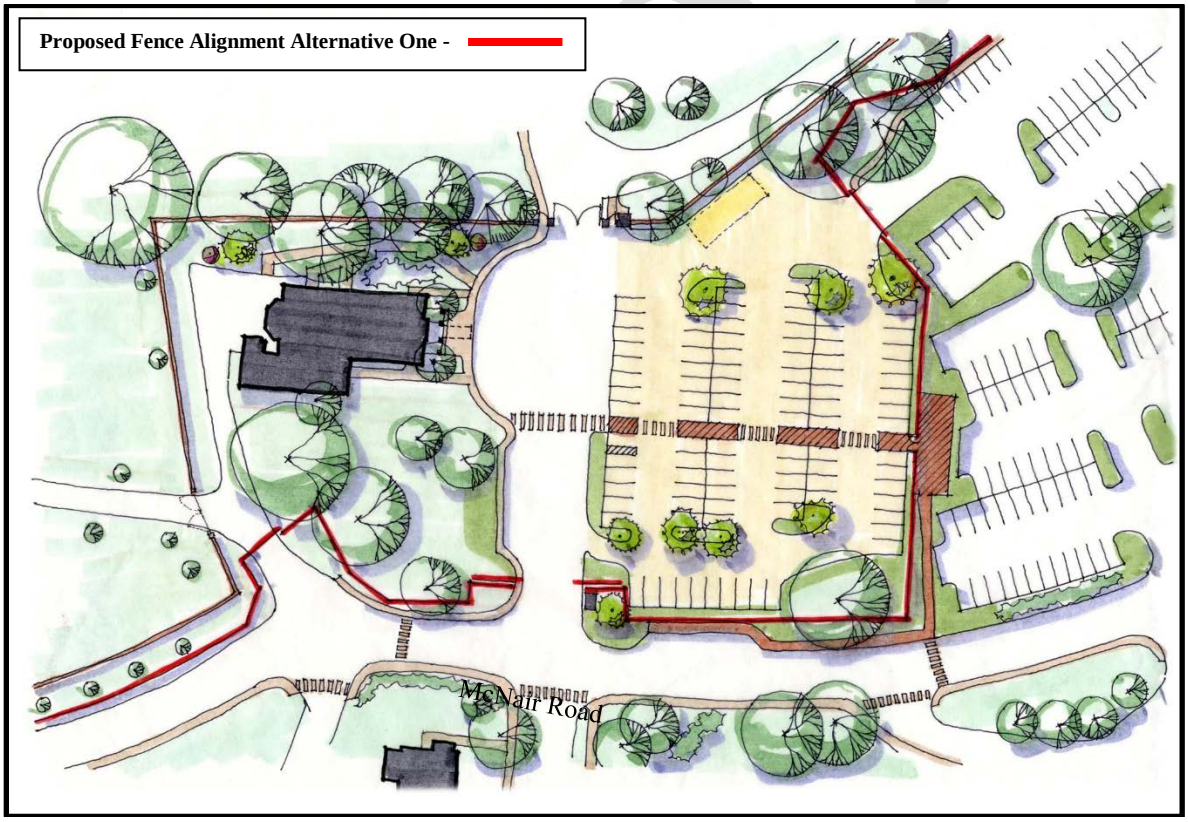

Figure 2-5: Proposed Fence Alignment and Gate under Alternative 1 near Old Post Chapel

2.3 NO-ACTION ALTERNATIVE

NEPA regulations refer to the continuation of the present course of action without the implementation of or in the absence of the Proposed Action, as the "No-Action Alternative." Inclusion of the No-Action Alternative is the baseline against which Federal actions are evaluated, and is prescribed by the CEQ regulations and 32 CFR 651.

Under the No-Action Alternative, JBM-HH would forego security upgrades, thereby maintaining the current insufficient boundary wall. If security improvements are not made, the facility will not be capable of properly securing government assets. Force protection will continue to use current security devices that are inadequate in meeting DoD policies and standards. The No-Action Alternative would not be a sufficient resolution to the existing security inadequacies.

2.4 ALTERNATIVES ELIMINATED FROM DETAILED STUDY

In addition to the Proposed Action and the No-Action Alternative, two other alternatives, a floating wall and a limited fence, were discussed early in the planning process, but eliminated from consideration because they are infeasible or do not meet the project purpose and need. These additional alternatives were not evaluated in this EA.

2.4.1 Floating Wall

The concept of a floating wall was proposed to reduce visual impacts. This alternative would involve the installation of a Plexiglass wall and supporting structure above the current stone wall to retain the current viewshed to and from ANC. This option would not be cost effective, would possibly adversely affect the native avian population, and would not mitigate impacts to the environment or cultural resources. Therefore, this alternative was eliminated from further consideration.

2.4.2 Limited Fence

Another alternative proposed was to only install fencing at the perimeters of the Fort Myer neighborhood and Child Development Center (CDC). This alternative would avoid all impacts to the ANC historic wall; however, it would not provide security as needed by current AT/FP requirements. Therefore, this alternative would not meet the purpose and need of this project and was eliminated from further consideration.

2.5 PREFERRED ALTERNATIVE

The Proposed Action is the Preferred Alternative. This alternative complies with AT/FP requirements by strengthening security in vulnerable areas along the boundary separating JBM-HH and ANC.

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3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

Chapter 3 describes existing resources at JBM-HH and ANC that may be affected by the Proposed Action and the No-Action Alternative.

Mitigation measures for potentially adverse impacts on the environment due to the Proposed Action and No-Action Alternative have been developed and specified that would minimize impacts, if implemented. Mitigation measures are described within each resource area, as appropriate within this chapter.

3.1 TOPOGRAPHY, SOILS, AND GEOLOGY

JBM-HH is located in Arlington County and lies within the mid-Atlantic Coastal Plain, which is comprised of a wedge of sediments that rest on eroded Precambrian to early Mesozoic rock increasing in thickness from west to east. The sediments are comprised of sands, silts, and clays (William and Mary, 2011).

3.1.1 Topography

JBM-HH topographic relief is moderate with elevations ranging from 55 feet (ft) above mean sea level (msl) to 235 ft msl in the northern portion of the Installation (Figure 3-1). There are moderately steep slopes in the northern portion of the Installation that constrain development and are at risk for erosion if not properly managed (FMMC, 2002). Henderson Hall is positioned on a knoll and topography ranges from 134 to 170 ft msl. The lowest elevation at Henderson Hall is in the flood basin parking lot in the southwest section, and the highest point is at the northern corner of Henderson Hall adjacent to ANC and Fort Myer (NFECW, 2006).

3.1.2 Soils

Soil characteristics within JBM-HH are described as Coastal Plain sediments consisting of unconsolidated clays, silts, and sands that are underlain by depositional sand and gravel. Soils are moderately well drained, but it is not unusual to find seasonal wet areas in low-lying sections. Elevations range from 55 feet at Wright Gate on Arlington Ridge Road to 235 feet on the parade grounds. The Arlington County Soil Survey classified soils within JBM-HH as Urban land-Udorthents complex, with 2 to 15 percent slopes (Harper, 2007). Urban land typically refers to areas covered by impervious materials. Udorthents are well drained to excessively drained, loamy and clayey soils (FMCC, 2002; Harper, 2007) (Figure 3-2). Construction in the mid-1980s at Henderson Hall indicated that soils are of poor load-bearing capacity (NFECW 2006). Moderate slopes which can pose an erosion risk if not properly managed characterize the northern and northeastern portions of the installation.

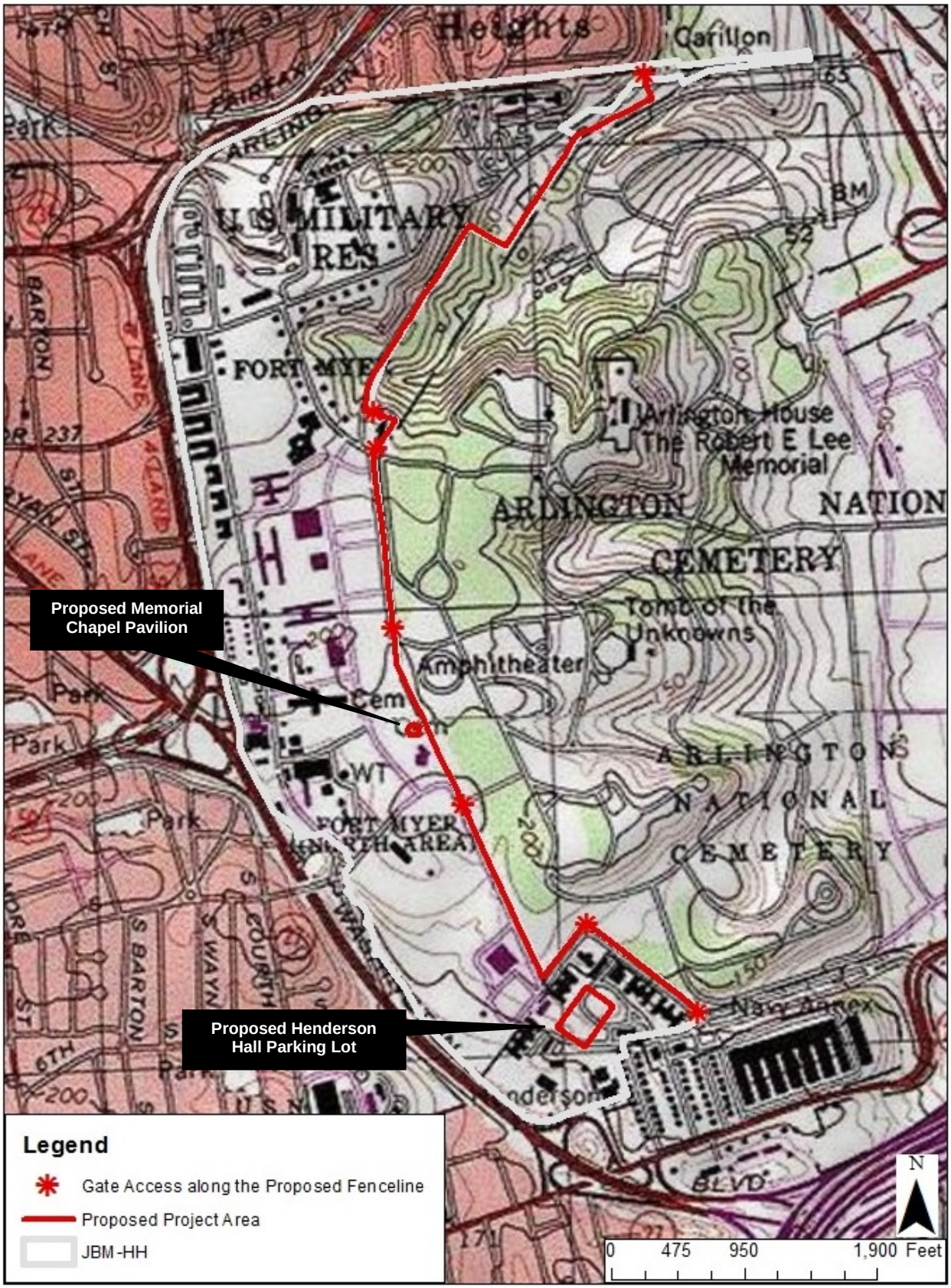

Figure 3-1: Joint Base Myer-Henderson Hall Topographic Map

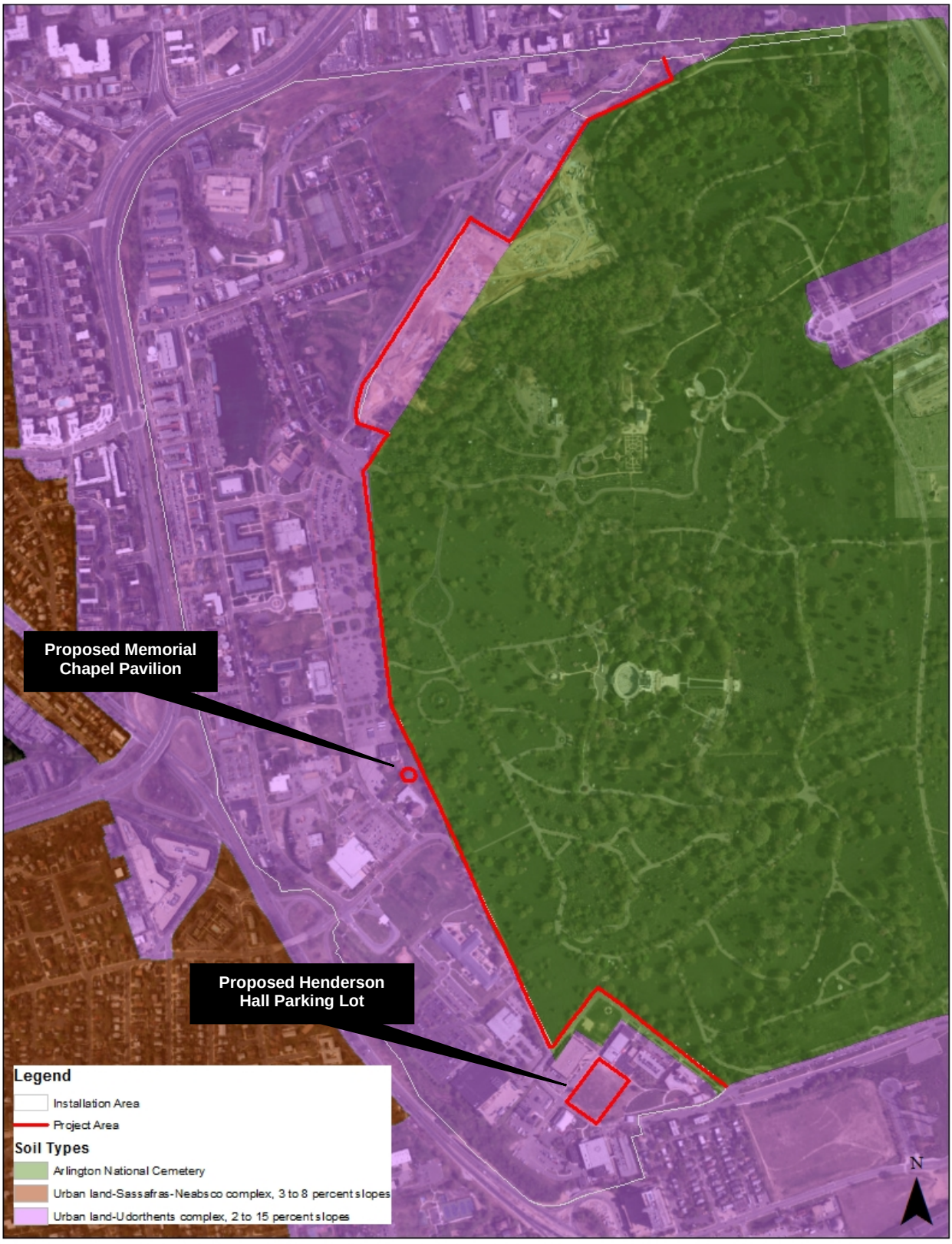

Figure 3-2: Joint Base Myer-Henderson Hall Soil Map

3.1.3 Geology

The geology of JBM-HH consists mainly of unconsolidated clays, silts, and sands that are underlain by depositional sand, gravel, and three types of similar sediments from the Cretaceous era: Patapsco, Arundel, and Patuxent, part of the Potomac Group, and are designated by upper beds of pink, red, and gray clay. The fundamental part of these formations is made up of sand, gravel, and occasionally a type of sandstone, which make some of the most valuable water-bearing formations in the region (FMMC, 2002; NFECW, 2006). The northeastern portion of Henderson Hall also includes river terrace deposits consisting of gravel, sand, silt, and loam, overlying boulders, pebbles, and sands (NFECW, 2006).

3.1.4 Environmental Consequences of the Alternatives on Topography, Soils, and Geology

The majority of the area comprising JBM-HH has historically been developed. Construction activities have occurred throughout the history of the installations, resulting in alterations to the original topography, excavated geology, and disturbed soils.

Projects would be initiated only after the environmental review has been completed and the required permits are obtained. For JBM-HH, erosion and sediment control compliance would be in accordance with requirements set forth under the Virginia Erosion and Sediment Control Law and Regulations, the Virginia Stormwater Management Law, and the Virginia Stormwater Management Program in addition to the Arlington County Code. The Commonwealth of Virginia mandates erosion control techniques during and after construction and techniques apply even if erodible soils are not present.

3.1.4.1 Proposed Action

No impacts to topography or geology are expected under the Proposed Action. Negligible long-term impacts are expected to soils; due to previously disturbed soils, there will be minimal impact from the mass grading for the construction of a replacement parking lot. Currently, a grass mound with unknown fill exists at the location of the proposed parking lot. Additional earthwork and a retaining wall may be required if stability issues arise.

3.1.4.2 Alternative 1

Impacts for Alternative 1 are the same for the Proposed Action, except where the Alternative 1 differs from the proposed action at the Old Post Chapel gate. There are no additional expected impacts to topography or geology due to the relocation of the Old Post Chapel gate.

3.1.4.3 No-Action Alternative

No impacts to topography, soils, or geology would occur under the No-Action Alternative.

3.2 WATER RESOURCES

3.2.1 Groundwater

The principal water-bearing aquifers in the vicinity of JBM-HH are the Patuxent, Patapsco, and Magothy Rivers, which generally store groundwater at depths of 20 to 30 feet at locations on the Installation. The predominant direction of groundwater flow is toward the southeast. Recharge occurs from precipitation in the outcrop areas and, in some areas, from downward leakage through confining beds.

Groundwater is not used as a drinking water supply in the area because of the readily available supply of municipally treated surface water.

3.2.2 Surface Water and Coastal Zone Management

One unnamed tributary is located along the southwestern boundary of JBM-HH. This tributary drains into the Potomac River via Long Branch and Four Mile Run, both located south of JBM-HH. The stream is approximately 15 to 20 feet wide with average water depths ranging between 1 to 1.5 feet during base flow conditions.

The Coastal Zone Management Act of 1972 (16 United States Code § 1451, et seq., as amended) was enacted by Congress to encourage states to protect, preserve, develop, and when possible, restore or enhance valuable natural coastal resources. The Coastal Zone Management Act contains a federal consistency requirement, by which federal actions must be consistent to the maximum extent practicable with the enforceable polices of the federally approved Virginia Coastal Resources Management Program and is applicable to actions at Fort Myer and Henderson Hall. The Virginia Coastal Resources Management Program was established to protect and manage Virginia's "coastal zone," also referred to as "Tidewater Virginia." This program focuses on problems associated with polluted runoff, habitat protection, riparian buffers, Resource Protection Areas (RPAs), wetlands, fisheries, sustainable development, waterfront redevelopment and encroachment, septic systems, erosion and sediment control, and air pollution control. Activities associated with watershed management include improving stormwater management practices, maintaining vegetated buffers along riparian areas, stabilizing shorelines, and educating developers on environmentally sensitive design.

3.2.3 Stormwater Management

The JBM-HH storm drainage system conveys runoff to the Potomac River. The storm sewer receives a considerable quantity of surface water drainage during storm events.

Storm water management regulations of Arlington County, Virginia govern on-post construction at JBM-HH. Current regulations require redevelopment to meet reductions in phosphorus of 20 percent at sites greater than 1 acre, and 10 percent at sites less than 1 acre from existing conditions. New construction greater than 1 acre or 2,500 square feet in Chesapeake Bay Preservation Area will not exceed 0.41 pounds of phosphorus per acre per year. Phosphorus concentrations are

measured in pounds per acre, and apply to construction projects regardless of the size of land disturbance.

The Clean Water Act (CWA) (33 U.S.C. §1251 et seq.), as amended in 1977, established the basic framework for regulating discharges of pollutants into the waters of the United States. The CWA National Pollutant Discharge Elimination System (NPDES) (33 U.S.C. §1342) requires permits for stormwater discharges associated with construction activities. The Virginia Department of Environmental Quality (DEQ) is authorized to carry out NPDES permitting under the Virginia Pollutant Discharge Elimination System (VPDES) (9 VAC §§25-151). The Virginia DEQ requires project proponents whose projects would disturb 0.4 hectare (1 acre) or greater, to develop a Stormwater Pollution Prevention Plan (SWPPP), and to obtain coverage under the Virginia Stormwater Management Program General Permit for Stormwater Discharges from Construction Activities, prior to construction. A VADEQ-approved Erosion and Sediment Control Plan, part of the SWPPP, is required if the project disturbs more 2,500 square feet or more.

3.2.4 Floodplain Management

Executive Order (EO) 11988, Floodplain Management, requires Federal agencies to avoid direct or indirect support of development within the 100-year floodplain whenever there is a practicable alternative. The Federal Emergency Management Agency (FEMA) uses Flood Insurance Rate Maps (FIRMs) to identify the regulatory 100-year floodplain for the National Flood Insurance Program. Consistent with EO 11988, FIRMs were examined during the preparation of this EA.

JBM-HH lays outside the 100-year floodplain, as recorded on FEMA Flood insurance rate map, updated in 2013 (Figure 3-3).

3.2.5 Wetlands

EO 11990, Protection of Wetlands, requires Federal agencies to avoid or minimize adverse impacts on wetlands. Construction in jurisdictional wetlands and streams is regulated by the U.S. Army Corps of Engineers (USACE) pursuant to Section 404 of the Clean Water Act as implemented in regulations contained in 33 CFR, Parts 320–330. Impacts to state waters, including wetlands, are regulated by the Virginia Water Protection Permit Program (9 Virginia Administrative Code [VAC] 25-210-10 et seq.), which serves as Virginia's 401 Water Quality Certification Program for federal Section 404 Permits. The Virginia Marine Resources Commission regulates activities in submerged lands, marine fisheries, and coastal resources (tidal wetlands and coastal sand dunes/beaches) under the Code of Virginia Title 28.2, Chapters 12, 13, and 14.

Virginia's Chesapeake Bay Preservation Act (CBPA), Virginia Code 10.1-2100 et seq., and its implementing Chesapeake Bay Preservation Area Designation and Management Regulations, 9 VAC 10-20-120 et seq., protect certain lands, designated as Chesapeake Bay Preservation Areas, which, if improperly developed, could result in substantial damage to the water quality of the Chesapeake Bay and its tributaries. Projects that occur on lands that are protected under the CBPA must be consistent with the Act and may be subject to the performance criteria for RPAs, as specified in 9 VAC 10-20-130 of the regulations. Under the CBPA, Fairfax County adopted a

Figure 3-3: Joint Base Myer Henderson Hall Floodplains

Chesapeake Bay Preservation Ordinance that designates RPAs and Resource Management Areas (RMAs) within in the county.

RPAs are sensitive lands at or near the shoreline or streambank that have an intrinsic water quality value due to the ecological and biological processes they perform. RPAs include tidal wetlands, tidal shores, nontidal wetlands connected by surface flow and contiguous to tidal wetlands or tributary perennial streams.

It should be noted that EO 13508, *Chesapeake Bay Protection and Restoration*, must be addressed in terms of the Army's obligation to consider the protection and restoration of the Chesapeake watershed in terms of meeting the goals, outcomes and objectives set out in the *Strategy for Protecting and Restoring the Chesapeake Bay Watershed*. This document not only sets goals/outcomes/objectives of the federal government, but encourages coordination with state, local, and nongovernmental partners to protect and restore the health of the Chesapeake Bay watershed.

USACE Baltimore District performed a wetland delineation on 29 March 2017. The team delineated an approximate 0.32 acre non-tidal, palustrine, emergent wetland on the north side of Fort Myer, southeast of the Wright Gate (Figure 3-4). The wetland is jurisdictional due to the connection to downstream receiving waters. The wetland flows into the Potomac River. Dominant species include soft rush (*Juncus effuses*), barnyard grass (*Echinochloa* sp.) and broadleaf cattail (*Typha latifolia*).

3.2.6 Environmental Consequences of the Alternatives on Water Resources

3.2.6.1 Proposed Action

No impacts to groundwater, surface water, or floodplains are expected under the Proposed Action.

A Consistency Determination under CZMA section 307(c)(1) and (2) and 15 CFR Part 930, subpart C, for the proposed construction of a perimeter security fence was prepared and sent for review to the Commonwealth of Virginia DEQ for concurrence (Appendix B). This consistency determination represents an analysis of the Proposed Action in light of established Virginia Coastal Resources Management (CRM) Program Enforceable Policies and Programs. Submission of the Consistency Determination reflects the commitment of JBM-HH to comply with the maximum extent practicable with those Enforceable Policies and Programs. The Proposed Action would be operated and implemented in a manner consistent with the CRM; therefore, it has determined that the effects of the Proposed Action would be less than significant on land and water uses and natural resources of the Commonwealth of Virginia's coastal zone and is consistent to the maximum extent practicable with the enforceable policies of the CRM.

Under the Proposed Action JBM-HH would continue to adhere to requirements set forth under the Virginia Erosion and Sediment Control Law and Regulations and the Virginia Stormwater Management Program Permit consistent with the requirements of the Arlington County Stormwater Management Program for activities initiated within JBM-HH. The Proposed Action is located in a Chesapeake Bay Preservation Area and would disturb approximately 6.8 acres

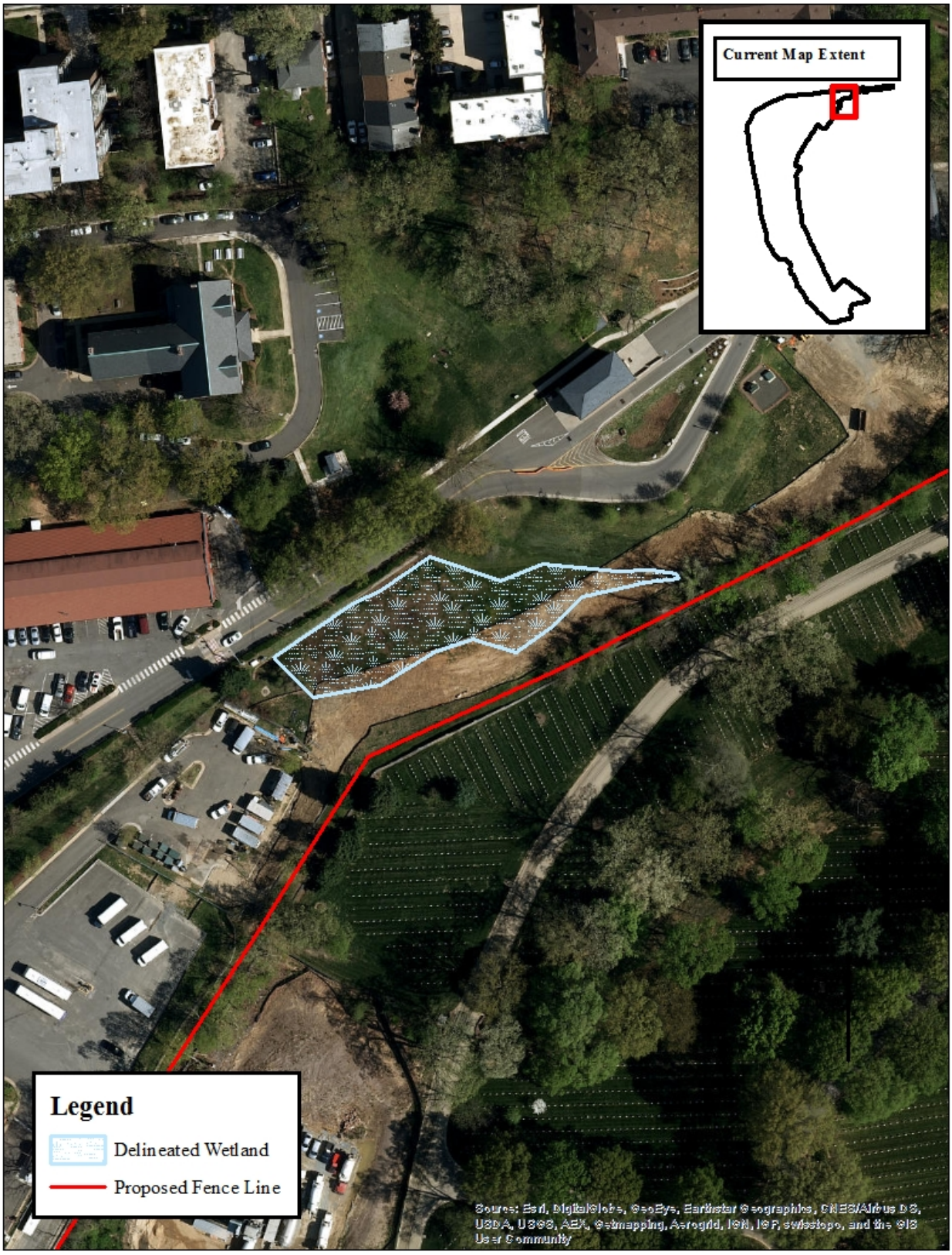

Figure 3-4: JBM-HH Wetlands

(298,270 square feet), which is greater than the 2,500 square feet needed to require a General Permit for the Discharge of Stormwater from Construction Activities (Construction General Permit) as required by the Virginia Stormwater Management Program. As required to obtain the permit, a site-specific stormwater pollution prevention plan (SWPPP) would be prepared prior to construction of the Proposed Action. Prior to construction the Army would also prepare and erosion and sediment control plan in compliance with 9 Virginia Administrative Code (VAC) 25-840 and in conformance with the Virginia Erosion and Sediment Control Handbook, Third Edition, 1992. The implementation of erosion and sediment control measures specified in the Construction General Permit, SWPPP and erosion and sediment control plan would minimize the erosion of exposed soils and the sedimentation of downstream water courses. Although these impacts cannot be entirely eliminated, they would remain minor. The implementation of erosion control features for all phases of construction or demolition would ensure that no sediment laden runoff will exit construction or demolition sites without proper treatment. BMPs appropriate to activities on JBM-HH would be planned and employed to incorporate all applicable state and local stormwater and erosion control requirements to offset pollutant loadings in streams. Mechanisms to control erosion and sediment to efficiently reduce phosphorus entering water bodies would be applied.

This Proposed Action includes the construction of a new parking lot structure to replace a lot of the same size that was demolished. The new parking lot would include stormwater management features such as a depressed bioretention drainage areas, pervious pavers, concrete sidewalks, and a retaining wall. Long-term minor beneficial impacts to stormwater are expected due to the addition of these stormwater management features.

The proposed action is approximately 700 feet away and not within the RPA to the unnamed tributary in the southwest section of JMP-HH. The intermittent channel that drains the impacted wetland within Arlington National Cemetery boundaries is not displayed on the most recent RPA mapping provided by Arlington County on January 1, 2018, and due to its intermittent status does not require an RPA.

Short-term adverse impacts to wetlands are possible if the final alignment of the fenceline is constructed to the west of the wetland identified on the north side of Fort Myer, southeast of the Wright Gate. If disturbance occurs, it would be during construction only, along 95 linear feet of the fence line, and consists of staking silt fence, digging post holes for the security fence, excavating for a ductbank adjacent to the fence, and traveling over the wetland with construction vehicles. After fenceline construction activities are complete, the area will be returned back to existing conditions, with no permanent wetland disturbance. Working with the Commonwealth of Virginia DEQ and the U.S. Army Corps of Engineers proper wetland permits will need to be secured prior to construction.

3.2.6.2 Alternative 1

Impacts for Alternative 1 are the same for the Proposed Action, except where the Alternative 1 differs from the proposed action at the Old Post Chapel gate. There are no additional expected impacts to water resources due to the relocation of the Old Post Chapel gate.

3.2.6.3 No-Action Alternative

No impacts to water resources would occur under the No-Action Alternative; however, the benefits of state of art stormwater best management practices would not be implemented for the updated Henderson Hall parking lot.

3.3 BIOLOGICAL RESOURCES

3.3.1 Vegetation

The majority of the native vegetation has been removed from JBM-HH as a result of past development and training activities and has been replaced by built or impervious surfaces or landscaped trees and grasses. Common grasses on JBM-HH include Kentucky bluegrass, red fescue (*Festuca rubra*), perennial ryegrass (*Lolium perenne*), zoysia grass, and Bermuda grass (*Cynodon dactylon*) maintained as turf. The predominant tree plantings in the project area include red maple (Acer rubrum), willow oak (*Quercus phellos*), red cedar (*Juniperus virginiana*), and flowering crabapple (*Malus floribunda*).

A tree survey was conducted where the perimeter of JBM-HH meets ANC on November 1 and 7, 2016 to determine the impact of the Proposed Action on trees (Appendix C). Of the 117 trees surveyed, 8 were dead, 23 were in poor condition, 18 were in fair condition, and 68 were in good condition (Figure 3-5). Poor condition is defined as 50 percent or more crown die off, fungus on roots, and/or extensive basal damage, fair condition is defined as 49-25 percent crown die off and/or some trunk damage, and good condition is defined as 75-100 percent crown health.

3.3.2 Wildlife Resources

Fauna commonly found on JBM-HH are those adapted to an urban environment, including squirrels (*Sciurus carolinensis*), chipmunks (*Tamias striatus*), rabbits (*Cuniculus*), raccoons (*Procyon lotor*), garter snakes (*Thamnophis sirtalis sirtalis*), and songbirds. Red foxes (*Vulpes vulpes*) have occasionally been observed in the area. During migration, warblers may use the small wooded area near the boundary with ANC, but the small size of this area precludes most from nesting. Common pests present on the base include numerous insects, rodents, and birds such as starlings (*Sturnus vulgaris*) and pigeons (*Columba livia*). The overall Integrated Pest Management Program uses inspections, sanitation, and various mechanical control procedures, such as trapping and elimination of shelter weeds.

3.3.3 Rare, Threatened and Endangered Species

The Endangered Species Act (ESA) of 1973 (16 U.S.C. 1531-1544) provides a program for the conservation of threatened and endangered plants and animals and their habitats. Under Section 7 of the ES A, Federal agencies, in consultation with the USFWS and/or National Oceanic and Atmospheric Administration National Marine Fisheries Service, are required to ensure that actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of any special status species of fish, wildlife, and plants, and their habitats. Special status species include those that are candidates for, proposed as, or listed as sensitive, threatened, or endangered.

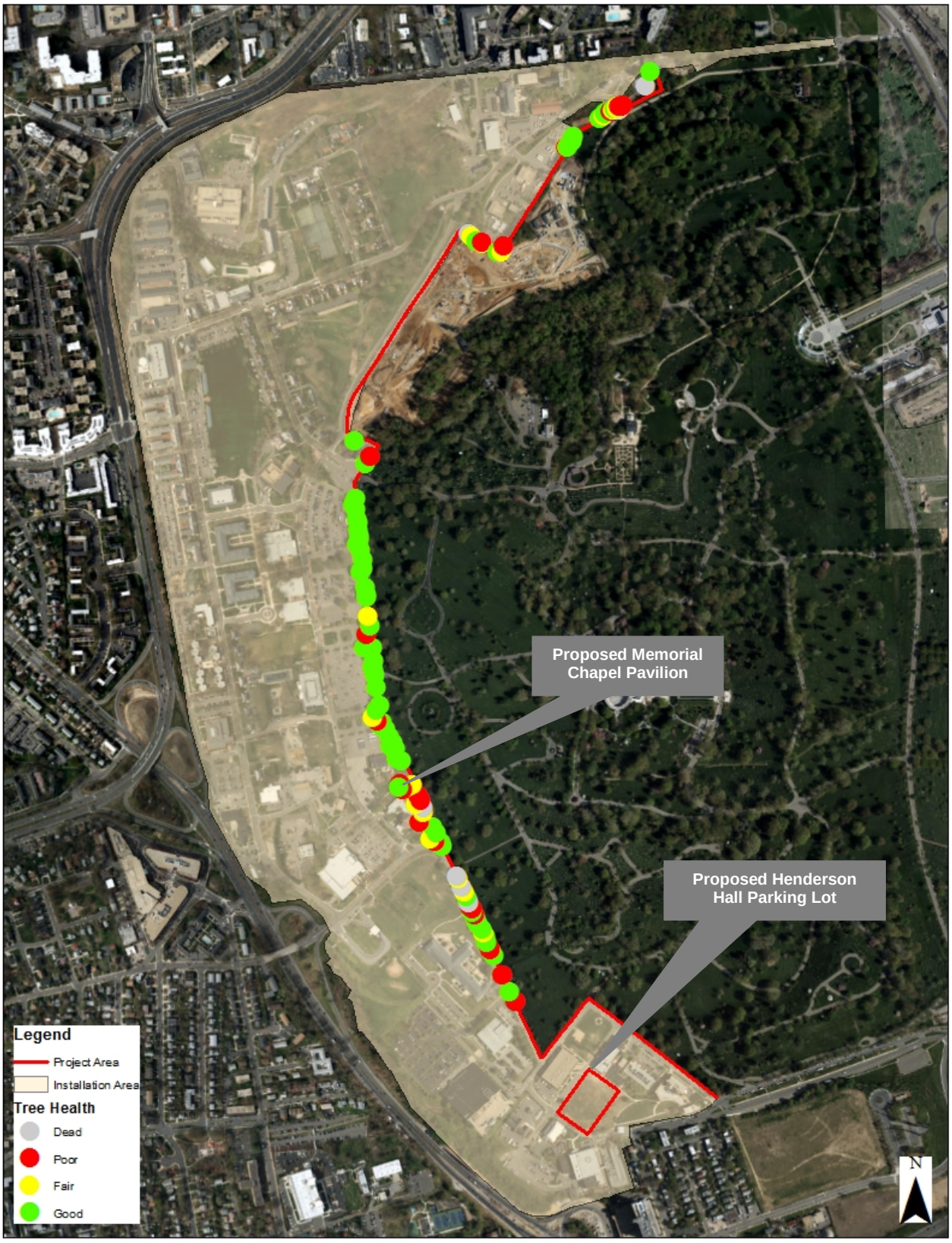

Figure 3-5: JBM-HH Tree Survey

County lists for federally listed and proposed species, federally designated critical habitat, candidate species and species of concern within the Commonwealth of Virginia are available through USFWS Information for Planning and Conservation (IPaC) system. The lists are based on documented records of occurrence and on potential habitat records in the databases of the Virginia Department of Game and Inland Fisheries (VDGIF) and the Virginia Department of Conservation and Recreation – Division of Natural Heritage (VDCR-DNH).

An analysis through IPaC dated May 2018 indicated that there are no endangered species expected to occur or could potentially be affected by activities in the project area (USFWS, 2018).

A search of the VDGIF Virginia Fish and Wildlife Information Service (VFWIS) database in May 2018 identified several state listed species that have been documented within the 3-mile search radius centered on the project location (see Table 3-1).

According to the USFWS Migratory Bird Program (USFWS, 2017), the Commonwealth of Virginia is within the Atlantic Flyway, where lands may provide resting, feeding and breeding grounds for migratory birds, especially flocking species.

Table 3-1: Federal and State-Listed Endangered or Threatened Plants and Animals and Rare Species and Communities in the Vicinity of Joint Base Myer- Henderson Hall

Scientific Name	Common Name	Status
Acipenser oxyrinchus	Sturgeon, Atlantic	FESE
Myotis septentrionalis	Bat, northern long-eared	FTST
Myotis lucifugus lucifugus	Bat, little brown	SE
Perimyotis subflavus	Bat, tri-colored	SE
Alasmidonta varicosa	Floater, brook	SE
Glyptemys insculpta	Turtle, wood	ST
Falco peregrinus	Falcon, peregrine	ST
Lanius ludovicianus	Shrike, loggerhead	ST
Ammodramus henslowii	Sparrow, Henslow's	ST
Pyrgus wyandot	Skipper, Appalachian grizzled	ST
Lanius ludovicianus migrans	Shrike, migrant loggerhead	ST
Clemmys guttata	Turtle, spotted	CC
Crotalus horridus	Rattlesnake, timber	CC

*FE=Federal Endangered; FT=Federal Threatened; SE=State Endangered; ST=State Threatened; FC=Federal Candidate; CC=Collection Concern

3.3.4 Environmental Consequences of the Alternatives on Biological Resources

3.3.4.1 Proposed Action

The Proposed Action would result in a temporary minor disturbance to wildlife and vegetation in areas of construction. Wildlife will be temporarily displaced during construction due to noise and vehicle presence, but will return once construction is completed. Long-term minor adverse impact is anticipated as approximately nineteen of the regularly spaced boundary trees will need to be removed to accommodate the fence and infrared cameras. A number of dead trees and trees in poor condition may be removed during the course of construction. When trees are removed, replacement trees should be planted consistent with the species lost; for trees over 4-in. diameter, tree replacement should occur at a 2:1 ratio, which is a common tree replacement mitigation requirement. In total, approximately 148 canopy trees will be planted to keep the "treed" quality of the viewshed from ANC, far exceeding the requirements for reforestation. Management of invasive plant species will occur to prevent species from encroaching into areas disturbed by construction activities and should continue as guided by the Installation's Integrated Pest Management Plans. Areas that would be temporarily disturbed would be re-planted, and landscaped to be compatible with the surrounding landscape. Projects would be initiated only after the environmental review has been completed and the required permits are obtained.

3.3.4.2 Alternative 1

Impacts for Alternative 1 are the same for the Proposed Action, except where the Alternative 1 differs from the proposed action at the Old Post Chapel gate. During construction of Alternative 1, approximately twelve trees may need to be removed to maintain security where the fence will be located. These impacts are expected to be long-term minor impacts, which would be mitigated with JBM-HH's tree replanting policy of 2:1 for every tree removed.

3.3.4.3 No-Action Alternative

Under the No-Action Alternative, there would be no changes to Biological Resources. No impacts would occur.

3.4 CULTURAL RESOURCES

Cultural resources are "historic properties" as defined by the NHPA of 1966, "cultural items" as defined by the Native American Graves Protection and Repatriation Act of 1979 (NAGPRA), "archaeological resources" as defined by the Archaeological Resource Protection Act of 1979 (ARPA), "sacred sites" as defined by EO 13007 to which access is afforded under the American Indian Religious Freedom Act of 1987 (AIRFA), and collections and associated records as defined in 36 CFR 79.

Archaeological resources consist of locations where prehistoric or historic activity measurably altered the earth or produced deposits of physical remains. Architectural resources include standing buildings, districts, bridges, dams, and other structures of historic significance. Traditional cultural properties include locations of historic occupations and events, historic and contemporary sacred

and ceremonial areas, prominent topographical areas that have cultural significance, traditional hunting and gathering areas, and other resources that Native Americans or other groups consider essential for the persistence of their traditional culture.

Several federal laws and regulations—including the NHPA of 1966, the Archaeological and Historic Preservation Act of 1974, the American Indian Religious Freedom Act of 1978, the Archaeological Resource Protection Act of 1979, and the Native American Graves Protection and Repatriation Act of 1990—have been established to manage cultural resources. In order for a cultural resource to be considered significant, it must meet one or more of the following criteria for inclusion on the NRHP:

> The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and: 1) that are associated with events that have made a significant contribution to the broad patterns of our history; or 2) that are associated with the lives or persons significant in our past; or 3) that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or 4) that have yielded, or may be likely to yield, information important in prehistory or history.

3.4.1 JBM-HH Fort Myer

No prehistoric archaeological sites have been identified on Ft. Myer to date, but they have been found on adjacent properties, so prehistoric use of the land is likely. A number of prehistoric lithic scatters have been identified in the area adjacent to the proposed action on ANC's property, although they were determined to be ineligible for listing in the National Register of Historic Places (NRHP), (USACE, Norfolk 2013). Regarding historic period archaeological sites, the Virginia State Historic Preservation Office (SHPO) lists one archeological site, 44AR0045 within JBM-HH Fort Myer. This historic period site, a cobble lined drain likely from nineteenth century, was identified during an archaeological investigation in 2011 (Versar, Inc. 2011a).

JBM-HH Fort Myer traces its historic period land ownership to George Washington Park Custis, the grandson of Martha Custis Washington, and its origins as a military installation to the Civil War. It became a post for the U.S. Cavalry in 1887, and most of the buildings at the north end of the installation were built during the ensuing 22 years. In 1972 the northern portion of JBM-HH Fort Myer was designated a National Historic Landmark (NHL) district, the National Park Service's highest recognition, primarily based on the exceptional significance of the facility's association with Orville Wright's flight demonstrations. These demonstrations led to the Army's first contract for airplanes and arguably the birth of the Army Air Corps. JBM-HH Fort Myer is also significant as the home of the Army and Deputy Army Chief of Staff, and for its association with the U.S. Army Signal Corps, Fort Whipple and the Civil War, and the Buffalo Soldiers of the 10th Cavalry Regiment.

JBM-HH Fort Myer's existing NHL district is a contiguous district of housing and administrative buildings and contains some of the first permanent construction at JBM-HH Fort Myer, dating

from the 1890's. The boundaries of the JBM-HH Fort Myer's NHL District remain the same as the original boundaries established in 1972 (USACE, Baltimore 2016a). JBM-HH's Integrated Cultural Resource Management Plan (ICRMP) identified the potential for a proposed expansion of the district to include buildings in the Lower Post Area and other areas that were not included within the NHL boundaries but were 50 years of age or older and were associated with the historical development of JBM-HH Fort Myer (Hanbury et al. 2000). A 2010 architectural study determined that additional areas warranted inclusion as part of a proposed expanded district. While the study only identified the Old Post Chapel as meeting the exceptional significance standards required of NHL districts, the 300 Area/Lower Post Area and the NCO Quarters along Sheridan Avenue were identified as containing a sufficient collection of resources that would merit inclusion in a NRHP eligible district consisting of these areas along with the present district (Versar, Inc. 2011b, Figure 3-6). Twenty-one buildings, one site and two objects were identified as part of a proposed expanded JBM-HH Fort Myer Historic District in 2014 (Versar, Inc. 2011b). A total of 84 buildings, 2 sites, and 3 objects have been identified as significant cultural resources at JBM-HH Fort Myer. All of these resources are either contributing resources to the NHL district or are contributing elements to a NRHP expanded district. There are no identified architectural resources at Henderson Hall (USACE, Baltimore 2016a).

3.4.2 Arlington National Cemetery

Directly adjacent to the east side of the project area is Arlington National Cemetery (ANC), including its stone boundary wall that separates ANC from JBM-HH Fort Myer. Formerly the part of the estate of Mary Lee Custis, ANC was converted into a military cemetery in 1864 for casualties of the Civil War. It has since served as the country's most revered resting place for those who have served in the U.S. military (USACE, 2015). ANC was nominated for the NRHP in 2014, as the preeminent cemetery for commemoration of the nation's war dead, and the burial place of people who made outstanding contributions to the nation's history. ANC is also significant as a designed historic landscape. The late 19th century stone boundary wall between JBM-HH Fort Myer and ANC is a contributing resource to ANC's historic district and is adjacent to the proposed undertaking.

An additional historic property in the vicinity of the project area is Arlington House, the Robert E. Lee Memorial. Arlington House and its surrounding forested area was designated a National Memorial in 1925. Also once part of the estate of Mary Lee Custis, it is located along the northwest portion of ANC.

3.4.3 Environmental Consequences of the Alternatives on Cultural Resources

3.4.3.1 Proposed Action

Implementation of the Proposed Action has the potential to create direct and indirect effects to historic properties, including archaeological sites, buildings, historic districts and associated historic landscapes. On October 4-6, 2016, USACE Baltimore District's cultural resource personnel, on behalf of JBM-HH, conducted a Phase I-level cultural resource investigation in accordance with Federal Regulation 36 CFR 800.4(a)(i) to identify historic archaeological

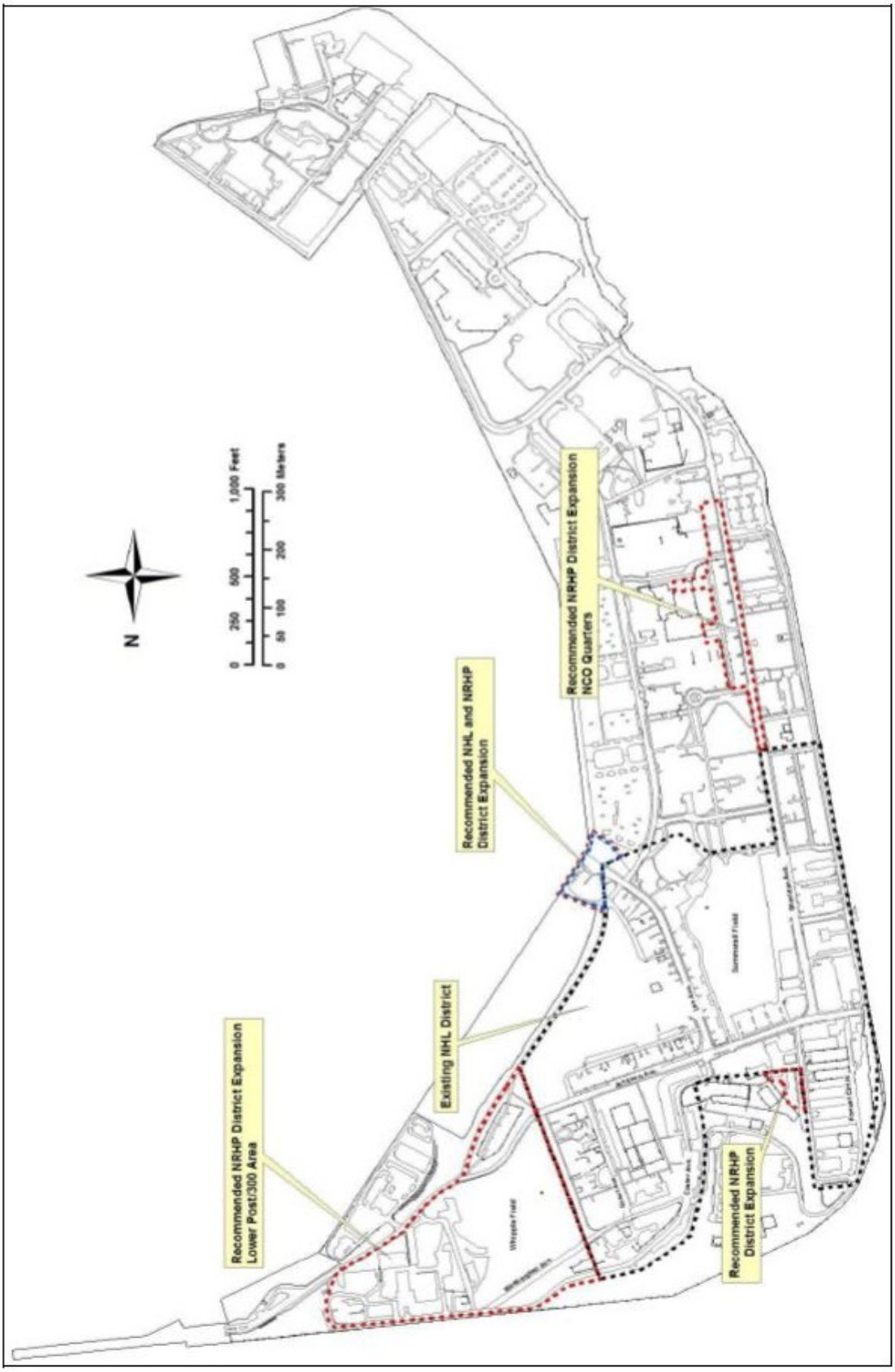

Figure 3-6: Present District Boundaries with Proposed Areas of District Expansion

properties within the area of potential effect for the Proposed Action (Appendix D). This investigation included a review of site files maintained by JBM-HH, previous cultural resource investigations conducted at the facility, and historic maps and atlases. An archaeological field investigation of the project area, including the excavation of shovel test pits, was also completed. The goals of the Phase I survey were to locate and identify all archaeological resources in the survey area, to estimate the size and boundaries of any identified sites, and to assess their potential for additional investigation. No significant archaeological resources were identified in the Phase I investigation of the project's area of potential effect. No prehistoric period artifacts were recovered, and the historic period artifacts that were found are either modern debris or non-diagnostic. The Phase I report concluded that implementation of the proposed project will have no effect on historic archeological properties, and no further investigations are recommended (USACE, Baltimore 2016b).

The proposed relocation of the existing jogging path from the east to the west side of McNair Road, adjacent to ANC's Millennium Project and north of the Old Post Chapel, will put the path within JBM-HH Fort Myer's NHL District's boundary, resulting in a direct alteration to this historic property. However, the limited nature and intrusiveness of the jogging path relocation suggests the alteration will be minor and will not diminish the property's integrity, so the effect will not be adverse. No other aspect of the security fence project, including tree removal and the construction of the garden and pavilion outside JBM-HH Fort Myer's Memorial Chapel, which are outside the existing and expanded historic district, will directly alter historic properties.

Three historic properties are located within the viewshed of the proposed project, including the existing JBM-HH Fort Myer NHL district, the proposed expanded JBM-HH Fort Myer historic district, and the ANC historic district. The security fence will be within the viewshed of portions of these historic districts. A viewshed analysis conducted in April 2018 determined that the security fence will be visible from the northern, eastern, and southern portions of JBM-HH Fort Myer, and the northern, western, and southern portions of ANC (Figure 3-7). The security fence will not be visible from any portion of Arlington House or its outbuildings, primarily due to the vegetative screening afforded by the forested areas between Arlington House and the proposed security fence location.

The Proposed Action will have an effect on historic properties through the removal of elements (trees) that contribute to their feeling and setting, and the introduction of intrusive visual elements (the security fence) that are out of character with the properties and will alter their feeling and setting. Therefore, in accordance with Section 106 of the NHPA and its implementing regulations found at 36 CFR 800, JMB-HH has determined that construction of the security fence would constitute an adverse effect to historic properties. JBM-HH is consulting with the Virginia Department of Historic Resources, the National Capitol Planning Commission, the National Park Service, the U.S. Commission on Fine Arts, and the public, under Section 106 to develop measures to lessen or mitigate the adverse effect. Such measures will be incorporated into a Memorandum of Agreement, including appropriate methods to inform the public, and notifying the Advisory Council on Historic Preservation. Copies of written correspondence received to date from the consulting parties can be found in Appendix A.

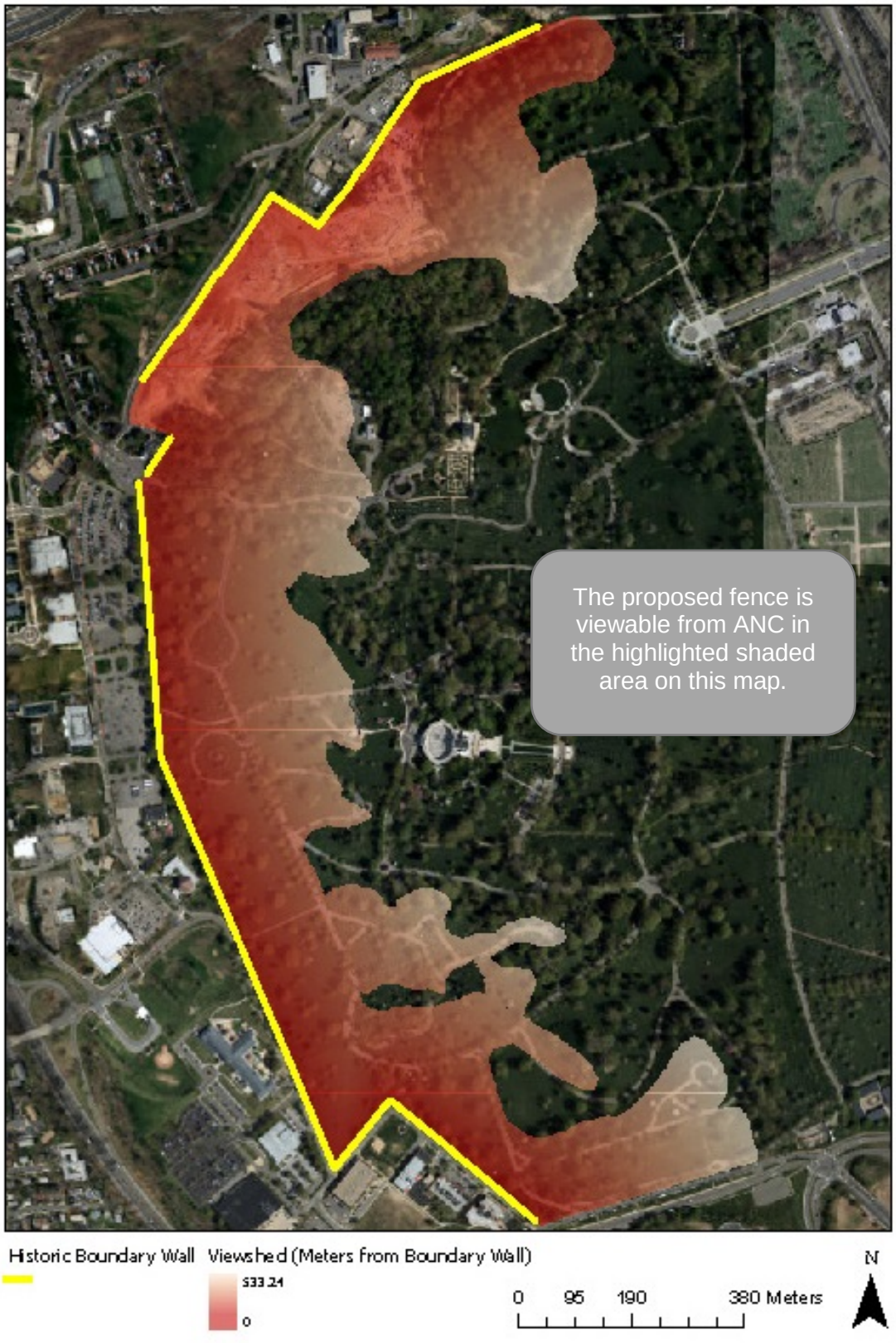

Figure 3-7: Proposed JBM-HH Fence Viewshed

3.4.3.2 Alternative 1

Impacts for Alternative 1 are the same for the Proposed Action, except where the Alternative 1 differs from the proposed action at the Old Post Chapel gate. Alternative 1 would place the security fence on the west side of the Old Post Chapel, putting the chapel on the ANC side of the security fence. Alternative 1 would create a physical, operational, and cultural separation between the Old Post Chapel and JBM-HH, causing an additional long-term adverse effect to historic properties on JBM-HH.

3.4.3.3 No-Action Alternative

Under the No Action Alternative, JBM-HH would not introduce adverse visual elements into the JBM-HH Fort Myer and ANC historic districts. The NRHP Historic Districts would not be adversely affected; however, the security threats to JBM-HH Fort Myer would continue unabated. The existing boundary between JBM-HH Fort Myer and ANC would continue to be non-compliant with current DoD antiterrorism and force protection requirements, jeopardizing JBM-HH mission and operational requirements.

3.5 SOCIOECONOMICS CHARACTERISTICS

Socioeconomic factors are defined by the interaction or combination of social and economic factors. The relevant factors related to JBM-HH include population and housing, economic development, and quality of life/health and safety issues.

3.5.1 Environmental Justice

Environmental justice addresses the race, ethnicity, and poverty status of populations within the ROI. The Region of Influence (ROI) for socioeconomic characteristics includes Arlington County, Virginia. On 11 February 1994, President Clinton issued EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*. The order is designed to focus the attention of federal agencies on the human health and environmental conditions in minority and low-income communities. Environmental justice analyses are performed to identify potential disproportionate adverse effects from proposed actions and to identify alternatives that might mitigate these effects (CEQ 1997).

Minority refers to people who classified themselves as American Indian or Alaskan Native; Asian or Pacific Islander; African Americans or Black, not of Hispanic origin; or Hispanic.

Minority populations are defined as areas where racial minorities comprise 50 percent or more of the total population (CEQ 1997). Because CEQ guidance does not establish a threshold for low-income communities, a low-income population that is at least 25 percent greater than the percentage of low-income populations of Arlington County, Virginia or Washington, D.C. were used to characterize populations living in poverty for the purposes of this EA.

3.5.1.1 Arlington County

Arlington County comprises an area of 26 square miles and is one of the smallest counties in Virginia, with one of the highest population densities. The estimated 2015 population is 229,164. The population of Arlington County increased approximately 10 percent between 2010 and 2015. (U.S. Census 2015).

In 2015, 37.5 percent of Arlington County's population was composed of minorities. Arlington County is not considered a minority community because the percentage of minorities living in Arlington County is less than 50 percent of the total population. There were approximately 8.5 percent of persons living in poverty in Arlington County in 2015 (U.S. Census 2015). Arlington County is not considered a low-income community since low-income people and families do not comprise more than 25 percent or more of the total population (U.S. Census 2015).

3.5.1.2 JBM-HH

JBM-HH had an approximate total working population of 4,000 in 2012 including roughly 2,250 military and 1,750 civilians.

3.5.2 Protection of Children

On 21 April 1997, President Clinton issued EO 13045, *Protection of Children from Environmental Health Risks and Safety Risks*. This EO directs each federal agency to ensure that its policies, programs, activities, and standards address disproportionate environmental health or safety risks to children that may result from the agency's actions. EO 13045 recognizes that a growing body of scientific knowledge demonstrates that children may suffer disproportionately from environmental health and safety risks due to still developing neurological, immunological, physiological, and behavioral systems. Examples of risks to children include increased traffic volumes and industrial- or production-oriented activities that would generate substances or pollutants that children could come into contact with and ingest.

Historically, children have been present as residents and visitors (e.g., living in family housing, using recreational facilities) on all installations comprising JBM-HH. The Child Development Center at Fort Myer provides child care services to the Pentagon as well as to the families on Fort Myer. The Army has taken precautions for their safety by a number of means, including limiting access to certain areas, the use of fencing, and providing adult supervision.

3.5.3 Environmental Consequences of the Alternative on Socioeconomics

3.5.3.1 Proposed Action

No impacts to socioeconomic resources are expected under the Proposed Action.

3.5.3.2 Alternative 1

Impacts for Alternative 1 are the same for the Proposed Action, except where the Alternative 1 differs from the proposed action at the Old Post Chapel gate. There are no additional expected impacts to socioeconomics due to the relocation of the Old Post Chapel gate.

3.5.3.3 No-Action Alternative

No impacts to socioeconomic resources would occur under the No-Action Alternative.

3.6 LAND USE

JBM-HH is located in Arlington County Virginia approximately 2 miles west of the Potomac River, across from Washington, D.C. Land Use on Fort Myer can be divided into 5 land use classifications: Professional/Institutional, Community, Residential, Troop, and Industrial.

Predominant land uses at Fort Myer are Community and Troop with smaller areas of Residential, Industrial, and Professional/Institutional scattered throughout the Installation (Table 3-2). The following is a summary of existing land use conditions in Fort Myer.

3.6.1 Professional/Institutional

Fort Myer's current administrative land uses are spread across the northern section of the Installation. There are currently three facilities: Building 59 – FMMC Garrison Command Headquarters, Building 305 – Offices of DPW, and Building 205 – NCR Directorate of Information Management Offices. Building 205 also serves as a storage facility for various other tenant organizations on Fort Myer.

3.6.2 Community

Except for the Commissary, most of the commercial-based activities – shopping, dining, services – are located along the main north-south axis of Fort McNair Road. There are currently four main areas that provide community support services and four others that are set aside for outdoor recreation: two tennis court areas, a baseball field, and the officer's club pool facilities.

The first area is located north of Jackson Avenue and west of Johnson Lane. Currently, this area offers several community service facilities such as the Officers Club and pools, post office, thrift stores, Army lodging facilities, Army Community Services, and the Morale, Welfare, and Recreation offices. Nearly all the facilities located here are within the historic district and are housed currently in buildings more than 50 years old.

The second area is along McNair Road in the central core of the Installation. It includes the Dining Facility, Spates Hall, Bowling Center, Recreation Center, Fitness Center, and Library. This area is used mainly by the public and officers after ceremonial funerals and special events. Currently, there is also a tennis court, but it is used for either storage or construction staging areas.

Table 3-2: Approximate Acreages of Developable Land at JBM-HH by Land Use Designation

Category of Existing Land Use	JBM-HH		
	Total Acreage	Developable	Non-Developable
Community	142.2	99.2	43.0
Industrial	15.5	9.0	6.5
Professional/ Institutional	14.3	13.8	0.5
Residential	29.3	27.9	1.4
Troop	71.1	62.9	8.2
Ranges and Training	0.0	0.0	0.0
Airfield	0.0	0.0	0.0
Total	**272.5**	**213.0**	**59.5**
Percent		**78.1**	**21.9**
Source: Atkins 2012.			

The third area is accessed directly from the main gate on Carpenter Road and includes community support facilities such as the Post Exchange (PX), the bank, gas station, shoppette, Department of Emergency Services, and chapels. In general, these community facilities are considerably larger in scale than those of the historic district because they serve a more regional purpose and therefore attract a larger volume of users and traffic.

The fourth area is located adjacent to Henderson Hall in the southern section of Fort Myer. The area includes the Commissary, Rader Medical Clinic, CDC, and baseball field. The CDC is the largest in the Army and serves Fort Myer as well as the Pentagon to the southwest.

3.6.3 Residential

Family Housing consists of General Officer and Senior Non-Commissioned Officer housing within the historic district of the Installation. These homes are historic, colonial in nature, and are maintained by the Executive Management Housing Directorate. Additionally, access to the General Officer housing is restricted by its own security gate and access drive.

3.6.4 Troop

The primary troop land use area on the Installation is located between Arlington Boulevard/U.S. Route 50 and McNair Road. This area encompasses a majority of the historic facilities on the Installation. These facilities include the horse stables, Conmy Hall, Town Hall, The Old Guard headquarters and barracks, Summerall Parade Field, The Old Guard Building, the Old Post Chapel,

and the Consolidated Operation Facility. This area supports the main ceremonial mission of the Installation and ANC.

The second troop area is located near the northern Installation boundary, between Marwill Drive and Fort McNair Road. Facilities in this area support local training operations, and include the canine kennel and training facility for the Military Police, Whipple Field, and storage bunkers.

3.6.5 Industrial

The only industrial area on the Installation is located between ANC and Marwill Drive in the northern section of Fort Myer. This area houses the DPW and storage facilities. It also includes a motor pool for The Old Guard, a fuel station, and a vehicle maintenance shop.

3.6.6 Environmental Consequences of the Alternatives on Land Use

3.6.6.1 Proposed Action

No impacts to land use are expected under the Proposed Action.

Projects would be initiated only after the environmental review has been completed and the required permits are obtained. By planning and designing projects in compliance with the Real Property Management Plan (RPMP), as well as implementation of Best Management Practices (BMPs) and Low Impact Development (LID) measures, projects would be developed, constructed, and operated consistent with the land use designations, purposes, and policies and requirements of the installations and would be consistent with the Arlington County's comprehensive planning. Projects should optimize sustainable practices.

3.6.6.2 Alternative 1

Impacts for Alternative 1 are the same for the Proposed Action, except where the Alternative 1 differs from the proposed action at the Old Post Chapel gate. There are no additional expected impacts to land use due to the relocation of the Old Post Chapel gate.

3.6.6.3 No-Action Alternative

No impacts to land use would occur under the No-Action Alternative.

3.7 AESTHETICS AND VISUAL RESOURCES

Visual resources consist of elements in both the natural environment and human made structures. Natural environment features include water bodies, vegetation, and mountains, and human made structures include buildings and support infrastructure. These resources impact view planes and influence the general appearance and aesthetic feel of the immediate and surrounding environments. Visual resources are analyzed to determine land use compatibility for new construction projects and the protection of important vistas and view planes. A viewshed survey

was conducted in April 2018 to analyze the potential impacts to the viewshed from JBM-HH and ANC (Appendix E).

3.7.1 Fort Myer

Fort Myer is located in a predominantly urban locale. Natural visual resources at Fort Myer include tree-lined streets, parade grounds, open fields with groves of trees, and views of ANC. The viewshed from ANC to Fort Myer is protected by a restricted development zone within Fort Myer consisting of woods, open fields, and parking lots, and building height restrictions protect the integrity of the viewshed from ANC from any development within Fort Myer. Visual resources at Fort Myer also consist of historical buildings and vistas of the parade grounds and the Potomac River and Washington, D.C. Many of the historical buildings are located in a historic district in the northern part of the Installation and as such provide an aesthetic value.

3.7.2 Henderson Hall

Visual resources at Henderson Hall consist of views into ANC and vistas of the Washington Monument and the Pentagon from the northeastern and southeastern portions of the Installation. Residential housing and high rise structures can be seen from the southern view. The southeastern view is dominated by vegetative screening and fencing to buffer traffic noise from Washington Boulevard. To the northwest, the view is limited by the loading dock at the back of the Commissary, the Rader Clinic, and parking lots. There are no structures of historical significance at Henderson Hall, and due to the Installation's urban character, there are essentially no natural resources available to provide the aesthetics of open space or a natural landscape.

3.7.3 Environmental Consequences of the Alternatives on Aesthetics and Visual Resources

3.7.3.1 Proposed Action

The boundary security fence, although ornamental and aesthetically neutral, will have a long-term adverse impact on the integrity of the view shed from JBM-HH to ANC and from ANC to JBM-HH. The fence will partially obstruct previously unobstructed views with the greatest impacts expected to affect residents and employees of JBM-HH, as well as visitors to ANC. A viewshed survey was conducted in April 2018 to analyze the potential impacts to the viewshed from JBM-HH and ANC. The survey determined that the security fence will be visible from the northern, eastern and southern portions of JBM-HH Fort Myer, and the northern, western and southern portions of ANC.

Long-term adverse impacts are expected to visual resources. Areas of concern include trees that will be cut down which will reduce the current "treed" view at the boundary between JBM-HH and ANC, as well as temporary impacts to ceremonial functions at the Old Post Chapel during gate and fence construction. Trees that are cut will be replanted to maintain the aesthetic impact they provide. Impacts to ceremonial functions will be mitigated by use of the Memorial Chapel while the Old Post Chapel gate and surrounding fenceline are under construction. Other accommodations will be made in areas where visual resources will be impacted; the fence line will be offset by approximately 7 feet in the areas from the Tri-service parking lot to the Memorial Chapel in order

to minimize the visual impacts of the fence. JBM-HH will coordinate with ANC to ensure construction will not impact visitors to ANC.

3.7.3.2 Alternative 1

Impacts for Alternative 1 are the same for the Proposed Action, except where the Alternative 1 differs from the proposed action at the Old Post Chapel gate. Additional impacts from Alternative 1 include the fence as a visual barrier from JBM-HH. However, Alternative 1, while disrupting the viewshed from JBM-HH, will preserve the existing views from ANC.

3.7.3.3 No-Action Alternative

No impacts to visual and aesthetic resources would occur under the No-Action Alternative.

3.8 TRANSPORTATION

3.8.1 Access Points and Primary Roads

Currently, there are nine access control points (ACPs) on JBM-HH (Figure 3-8). Primary circulation within JBM-HH is along four north-south transit corridors. Minor numbered streets run laterally in an east-west direction to create a staggered grid pattern of irregularly formed blocks. The road network is comprised of the following primary roads:

Marwill Drive: This two-lane road connects Wright Gate to Virginia Route 110 and the extensive highway system with regional connections to Washington, D.C., northern Virginia, and Maryland.

Jackson Avenue: Jackson Avenue forms the only primary east-west access road, and connects Wright Gate to the northern facilities of the Installation. A two-lane, tree-lined road, Jackson Avenue spans the majority of the historic district. It is the only access road to the DPW area.

Sheridan Avenue: This two-lane road connects Jackson Avenue with Carpenter Avenue and Hatfield Gate and links the historic district with the community services area of the Installation. Lining this road are the main troop support facilities.

McNair Road: This is one of two roads that runs in a north-south direction, and connects Jackson Avenue to Carpenter Road, and providing direct access to community service facilities that include: the dining facility, library, Commissary, bank, and Memorial Chapel. Troop facilities are located occasionally along the road such as The Old Guard building and Arlington National Chapel. A two-lane road, McNair Road is the most traveled as it provides the majority of parking on Fort Myer which lies adjacent to the east as a large parking lot.

Carpenter Road: This two-lane road is the primary access from Hatfield Gate to the southern section of Fort Myer, and connects to Henderson Hall. It forms part of the east boundary of the Installation adjacent to ANC and provides access to heavily used, community service facilities like the CDC, Rader Health Clinic, the Commissary, and the future privatized army lodge facility.

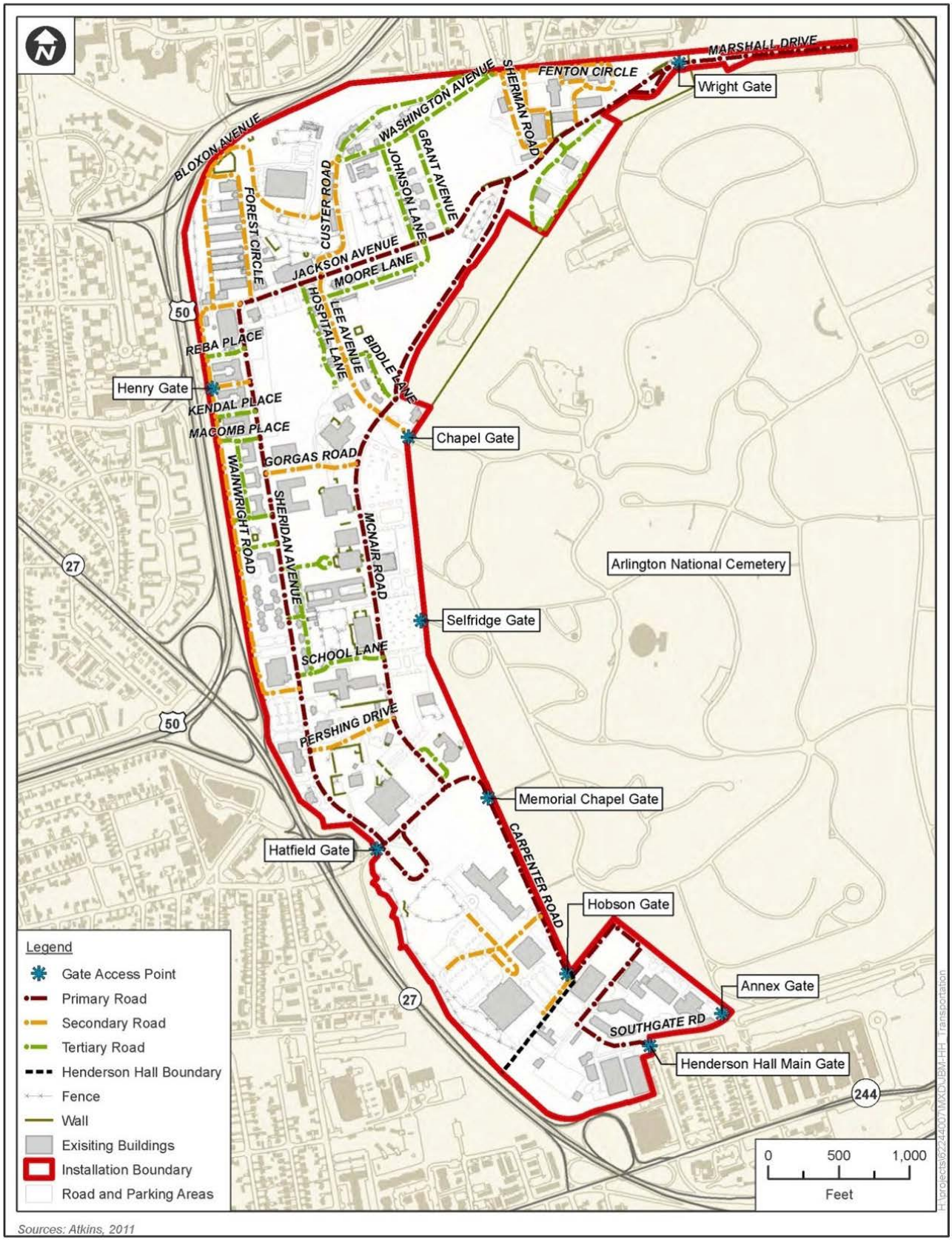

Figure 3-8: JBM-HH Access Points and Primary Roads

Southgate Road: This two-lane road provides the main circulatory spine for the Marine Corps within Henderson Hall and connects the main gate to the central core of Henderson Hall. Most soldier support facilities are located along Southgate Road including the MCX, administration facility, barracks, and pool facility.

3.8.2 Environmental Consequences of the Alternatives on Transportation

3.8.2.1 Proposed Action

During the construction short-term, minor adverse impacts are expected to occur due to road and pedestrian pathway closures. Traffic flow would be temporarily impacted while construction is taking place. These short-term adverse impacts would cease once construction was complete. Long-term minor beneficial impacts are expected from the addition of a walkway/ pedestrian access between the north and south areas of the Post.

Appropriate signage and placement of barriers would be implemented prior to demolition activities to alert pedestrians and motorists of demolition activities and to control traffic flow, as needed.

3.8.2.2 Alternative 1

Impacts for Alternative 1 are the same for the Proposed Action, except where the Alternative 1 differs from the proposed action at the Old Post Chapel gate. During construction of Alternative 1, additional traffic may be diverted to other routes since the fenceline is closer to McNair road, causing traffic delays. This could result in a minor, short-term adverse impacts to transportation. After the gate is built, there could be compromised traffic safety at the McNair Road entrance. This could result in a minor, long-term adverse impact to transportation.

3.8.2.3 No-Action Alternative

No impacts to transportation would occur under the No-Action Alternative.

3.9 UTILITIES

Potable water and water for fire emergencies is delivered to Fort Myer by the Arlington County water system, which ultimately obtains its water from the Potomac River. The water is treated at the Dalecarlia Water Treatment Plant by the Washington Aqueduct Division, an agency of USACE, Baltimore District. Fort Myer owns the sanitary system on the Installation, and Arlington County is the supplier of sanitary services. Sanitary waste is treated at Arlington County's Four Mile Run Water Treatment Control Plant. The existing electrical system is owned by Dominion Virginia Power (Dominion), who also supplies electricity to the Installation. Washington Gas supplies natural gas to JBM-HH and the surrounding community and owns and maintains the Installation distribution system. Solid waste from JBM-HH is collected by a solid waste and recycling contractor. Segregated wastes (recycled and non-recyclable) are transported to a licensed waste facility.

3.9.1 Environmental Consequences of the Alternatives on Utilities

3.9.1.1 Proposed Action

Existing site lighting that interferes with the new fence placement will be removed, and replaced with new relocated fixtures. New lighting will be provided at the Henderson Parking Lot. Since site lighting fixtures are owned by Dominion Virginia, this work will be funded by the project, and paid to Dominion Virginia Power. These new light fixtures will be powered from existing circuits owned by Dominion Virginia Power. A day/night camera system consisting of pathways only will be installed along the fence on the Fort Myer side. The day/night cameras will be mounted on new poles and will report back to the Central Dispatch Center in Building 415 via underground concrete encased ductbank when routed underneath pavement, but native backfill encased otherwise. Each camera pole would contain a backup battery inside of the cabinet mounted on the pole, and the backup battery would provide power to the day/night cameras in the event that there is a utility power outage. Infrastructure for keypads would be installed at each motorized gate along the Fort Myer side of the fence. The user would enter a pin number into the keypad, which would activate the opening of the gate. Minimal electrical circuit and wiring upgrades will be necessary to accommodate the proposed CCTV and keypads.

Based on the addition of lights and security cameras associated with the Proposed Action, it is anticipated that JBM-HH's power/electricity demand will increase. However, this increase demand is considered minor and will not adersely impact JBM-HH's current power supply by Dominion Virginia Power. No impacts to utilities are expected.

3.9.1.2 Alternative 1

Impacts for Alternative 1 are the same for the Proposed Action, except where the Alternative 1 differs from the proposed action at the Old Post Chapel gate. There are no additional expected impacts to utilities due to the relocation of the Old Post Chapel gate.

3.9.1.3 No-Action Alternative

No impacts to utilities would occur under the No-Action Alternative.

3.10 HAZARDOUS MATERIALS AND WASTE MANAGEMENT

Military operational activities performed at JBM-HH throughout the history of the installations have required the storage and use of hazardous substances and hazardous materials to successfully accomplish missions. Hazardous materials are identified and regulated under the Toxic Substances Control Act (TSCA); the Occupational Safety and Health Administration (OSHA); and the Emergency Planning and Community Right-to-Know Act (EPCRA).

Hazardous materials have been defined in AFI 32-7086, *Hazardous Materials Management*, to include any substance with special characteristics which could harm people, plants, or animals. Hazardous waste is defined by Resource Conservation and Recovery Act (RCRA) as any solid, liquid, contained gaseous or semisolid waste, or any combination of wastes that could or do pose a

substantial hazard to human health or the environment. Waste may be classified as hazardous due to its toxicity, reactivity, ignitibility, or corrosiveness. Certain types of waste are "listed" or identified as hazardous in 40 CFR 263.

Oversight of hazardous waste issues is provided primarily by the Environmental Protection Agency (EPA), as mandated by the TSCA, RCRA, and Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and its extension, the Superfund Amendments and Reauthorization Act (SARA). In addition, the Department of Transportation regulates the safe packaging and transporting of hazardous materials, as specified in 49 CFR Parts 171 through 180 and Part 397.

Hazardous materials are stored in a variety of locations on the JBM-HH, particularly in maintenance facilities such as carpentry, electric, painting, and plumbing shops, and petroleum supply points including service stations. JBM-HH actively uses an Installation Restoration Program (IRP) to identify sites with hazardous wastes that could be affected by activities on the installations. Any activities in the vicinity of an identified IRP site would be coordinated with the Environmental Management Division (EMD) and the Garrison Safety Office.

3.10.1 Underground Storage Tanks (USTs) and Aboveground Storage Tanks (ASTs) JBM-HH

The Oil and Hazardous Substance Spill Prevention, Control, and Countermeasures (SPCC) Plan for Fort Myer identified 13 spill control areas. Ten of the 13 spill control areas contain petroleum products and are considered hazardous materials. Five of the 13 areas contain hazardous substances. The primary locations for hazardous material/waste storage are associated with DPW shops (Buildings 306, 307, 309, and 325) and Chemical Storage (Building 448). The total oil storage on Fort Myer is approximately 184,094 gallons; significant storage is associated with the boiler plant (Building 447), transportation pool (Building 330), and the Army Air Force Exchange Service station (Building 453). Several emergency generators with fuel tanks, heating oil tanks and petroleum, and oil/cooking grease storage drums are also located throughout the Installation. There are no known hazardous material areas within Henderson Hall.

3.10.2 Environmental Consequences of the Alternatives on Hazardous Materials and Waste Management

3.10.2.1 Proposed Action

USTs and ASTs are not present in the project area. No impacts to hazardous materials and waste management resources are expected under the Proposed Action.

3.10.2.2 Alternative 1

Impacts for Alternative 1 are the same for the Proposed Action, except where the Alternative 1 differs from the proposed action at the Old Post Chapel gate. There are no additional expected impacts to hazardous materials and waste management due to the relocation of the Old Post Chapel gate.

3.10.2.3 No-Action Alternative

No impacts to hazardous materials and waste management resources would occur under the No-Action Alternative.

3.11 AIR QUALITY

The Clean Air Act (CAA) was passed in 1970 to protect the public's health and welfare. Congress amended the Act in 1990 to establish requirements for areas not meeting the National Ambient Air Quality Standards (NAAQS). The Clean Air Act (CAA) (42 4 U.S.C. 7401–7671q), as amended, gives USEPA the responsibility to establish the primary and secondary NAAQS (40 CFR Part 50) acceptable concentration levels for seven criteria pollutants: particulate matter less than 10 microns (PM10), particulate matter less than 2.5 microns (PM2.5), sulfur dioxide (SO2), carbon monoxide (CO), nitrogen oxides (NOx), ozone (O3), and lead (Pb). Short-term (1-hour, 8-hour, and 24-hour) levels have been established for pollutants contributing to acute health effects, and long-term (annual averages) levels have been established for pollutants contributing to chronic health effects; secondary standards were established to protect public health and welfare. Units of measure for the standards are parts per million (ppm) by volume and micrograms per cubic meter of air (µg/m3). Nonattainment areas are designated as Air Quality Control Regions (AQCR), or subdivisions thereof, that exceed the NAAQS for one or more criteria pollutant standards.

Fort Myer and Henderson Hall in Arlington County are within the National Capital Interstate Air Quality Control Region, which encompasses all of the District of Columbia and the adjoining Maryland and Virginia counties. This AQCR (Washington, D.C.-MD-VA Region) is currently designated by EPA as marginal nonattainment for the (2008) 8-hour ozone (O_3) standard and has an approved maintenance plan for CO (USEPA, 2018) (See Table 3-3). Within the Washington, D.C.-MD-VA Region, the District of Columbia Department of Environment, Maryland Department of Environment, and VDEQ are the agencies with the authority to administer programs for permitting the construction and operation of new or modified stationary sources of air emissions.

3.11.1 Regulatory Requirements for Hazardous Air Pollutants

In addition to criteria pollutant standards, the EPA also regulates hazardous air pollutant (HAP) emissions for each state. HAPs differ from criteria pollutants for they are known or suspected to cause cancer and other diseases, or have adverse environmental impacts. The National Emission Standards regulate 187 HAPs based on available control technologies. Sources of HAP emissions at JBM-HH include stationary, mobile, and fugitive emissions sources. Stationary sources include boilers, incinerators, fuel storage tanks, fuel-dispensing facilities, vehicle maintenance shops, laboratories, degreasing units, and similar testing units. Mobile sources of emissions include private and government-owned vehicles. Fugitive sources include dust generated from demolition activities, open burning, detonation of munitions, and roadway traffic. JBM-HH is a minor source of HAPs.

Table 3-3: National Ambient Air Quality Standards and Arlington County Status

Pollutant	Standard	Averaging Time	Ambient Concentration	Arlington County Attainment Status
CO	Primary	1-hour[a] (ppm)	35	Attainment/Maintenance
		8-hour[a] (ppm)	9	
NO_2	Primary	1-hour[b] (ppb)	100	Attainment
	Primary and Secondary	Annual[c] (ppb)	53	
O_3	Primary and Secondary	8-hour[d](ppm)	0.070	Nonattainment
SO_2	Primary	1-hour[e] (ppb)	75	Attainment
	Secondary	3-hour[a] (ppm)	0.5	
$PM_{2.5}$	Primary and Secondary	24-hour[f] ($\mu g/m^3$)	35	Attainment
	Primary	Annual arithmetic mean[g] ($\mu g/m^3$)	12	
	Secondary	Annual arithmetic mean[g] ($\mu g/m^3$)	15	
PM_{10}	Primary and Secondary	24-Hour[h] ($\mu g/m^3$)	150	Attainment

Source: USEPA Website
CO = carbon monoxide; µg/m3 = micrograms per cubic meter; NAAQS = National Ambient Air Quality Standards; NO2 = nitrogen dioxide; O3 = ozone; ppb = parts per billion; ppm = parts per million; PM2.5 = particulate matter less than 2.5 microns; PM10 = particulate matter less than 10 microns; SO2 = sulfur dioxide
a Not to be exceeded more than once per year.
b 98th percentile of 1-hour daily maximum concentrations, averaged over 3 years.
c Annual mean.
d Annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years.
e 99th percentile of 1-hour daily maximum concentrations, averaged over 3 years.
f 98th percentile, averaged over 3 years.
g Annual mean, averaged over 3 years.
h Not to be exceeded more than once per year, on average over 3 years.

3.11.2 Clean Air Act Conformity

States develop air quality plans, which are also referred to as State Implementation Plans (SIPs) that are designed to attain and maintain the NAAQS, and to prevent significant deterioration of air quality in areas which demonstrate air that exceeds the NAAQS. Federal agencies must ensure that their actions conform to the SIP in a nonattainment area, and do not contribute to new violations of ambient air quality standards, or an increase in the frequency or severity of existing violations, or a delay in timely state and/or regional attainment of the standards.

The 1990 amendments to the CAA require Federal agencies to ensure that their actions conform to the SIP in a nonattainment area. The purpose of the General Conformity Rule (GCR) is to:

- Ensure that Federal activities do not interfere with the budgets in the SIPs
- Ensure the attainment and maintenance of NAAQS
- Ensure that actions do not cause or contribute to new violations of NAAQS

USEPA has developed two distinctive sets of conformity regulations: one for transportation projects and one for non-transportation projects. Non-transportation projects are governed by

general conformity regulations (40 CFR 93). The Proposed Action is a non-transportation project within a nonattainment area. Therefore, a general conformity analysis is required with respect to the 8-hour O3 NAAQS.

The General Conformity Rule specifies threshold emissions levels by pollutant to determine the applicability of conformity requirements for a project. Due to the proximity to the urbanized east coast of the United States, Arlington County is considered an Ozone Transport Region (OTR). Because ozone formation is driven by other direct emissions, the air quality analyses focus on ozone precursors that include VOCs and NOX. For an area in marginal nonattainment for the 8-hour O3 NAAQS within the OTR, the applicability criterion is 100 tons per year (tpy) for NOx and 50 tpy for VOCs (40 CFR 93.153). The applicability criterion for CO in maintenance areas is 100 tpy.

The General Conformity Rule also prohibits any department, agency, or instrumentality of the Federal Government from engaging in, providing financial assistance for, approving, or supporting any activity that does not conform to applicable SIP designated for areas being in nonattainment of established NAAQS.

3.11.2.1 Asbestos Laws and Regulations

The most commonly found Asbestos in the United States are chrysotile, amosite, and crocidolite. The short, thin asbestos fibers released into the air are a hazard to people who inhale these fibers. There is no known safe level of exposure for persons working with asbestos or near the same area as an asbestos project, therefore the CAA has defined National Emission Standards for Hazardous Air Pollutants (NESHAP), including asbestos (a HAP pollutant with CAS No. 1332-21-4).

Under Section 112 of the CAA, the Asbestos NESHAP standards can be found under 40 CFR Part 61, Subpart M. The Asbestos standards have been amended several times, most comprehensively in November 1990 and again in 1995 the rule was amended to correct cross-reference citations to OSHA, DOT, and other EPA rules governing asbestos. Asbestos standards for demolition and renovation will apply to the Proposed Action.

Asbestos work practices for demolitions and renovations of all facilities, including, but not limited to, structures, installations, and buildings is covered in the CAA. The regulations require a thorough asbestos inspection where the demolition or renovation operation will occur. The regulations also require the owner or the operator of the renovation or demolition operation to notify the appropriate delegated entity (VDEQ) before any demolition, or before any renovations of buildings that contain a certain threshold amount of regulated asbestos-containing material. The rule requires work practice standards that control asbestos emissions during demolition and renovation activities. Work practices often involve removing all asbestos-containing materials, adequately wetting all regulated asbestos-containing materials, sealing the material in leak tight containers and disposing of the asbestos-containing waste material as expediently as practicable, as the regulation explains in greater detail.

On the State level, Virginia regulates how persons will work with asbestos and regulates those who train persons to work with asbestos. On the federal level, the EPA regulates the asbestos abatement

contractors and licenses, asbestos training providers, persons accredited to perform asbestos work, and the asbestos in schools program.

3.11.3 Greenhouse Gas Emissions

Greenhouse Gases (GHGs) are a particular group of gasses that have the ability to trap heat by absorbing infrared radiation in the atmosphere. Scientific evidence indicates a trend of increasing global temperature over the past century which may be due to an increase in GHG emissions from human based activities. The most common GHGs emitted from natural processes and human activities include carbon dioxide (CO2), methane (CH4), and nitrous oxide (N2O). The main source of GHGs from human activities is the combustion of fossil fuels, including crude oil and coal. Other examples of GHGs created and emitted primarily through human based activities include fluorinated gases (hydro-fluorocarbons and perfluorocarbons) and sulfur hexafluoride.

Each GHG is assigned a global warming potential (GWP). The GWP is the ability of a gas or aerosol to trap heat in the atmosphere. The GWP rating system is standardized to CO2, which has a value of one. For example, CH4 has a GWP of 25, which means that it has a global warming effect 25 times greater than CO2 on an equal-mass basis. To simplify GHG analyses, total GHG emissions from a source are often expressed as a CO2 equivalent (CO2e).

President Trump's *Executive Order on Energy Independence (EO 13783)* rescinded certain energy and climate-related Presidential and Regulatory actions that previously had required Federal Departments and Agencies to consider greenhouse gas emissions and the effects of climate change in National Environmental Policy Act Reviews.

3.11.3.1 Regulatory Review and Permitting

Currently the USEPA has two regulations that 1) require annual GHG emissions reporting, and 2) add the requirement to address best available control technology (BACT) for new or modified sources that occur after January 2, 2011. These rules apply to fossil fuel suppliers and industrial gas suppliers, direct GHG emitters, and manufacturers of heavy-duty and off-road vehicles and engines. The rule does not require control of GHGs, rather it requires only that sources above certain threshold levels monitor and report emissions.

On 18 February 2010, the Council on Environmental Quality (CEQ) proposed, for the first time, guidance on how federal agencies should evaluate the effects of climate change and GHG emissions for NEPA documentation (CEQ, 2010). Specifically, if a proposed action emits 25,000 metric tons or more of CO2e on an annual basis, agencies should consider this an indicator that a quantitative and qualitative assessment may be meaningful to decision makers and the public. The CEQ does not propose this reference point as an indicator of a level of GHG emissions that may significantly affect the quality of the human environment, but notes that it serves as a minimum standard for reporting emissions under the Clean Air Act (CAA). In the analysis of the direct effects of a proposed action, the CEQ proposes that it would be appropriate to: (1) quantify cumulative emissions over the life of the project; (2) discuss measures to reduce GHG emissions, including consideration of reasonable alternatives; and (3) qualitatively discuss the link between such GHG emissions and climate change. In August of 2016 the CEQ (CEQ, 2016) revised the guidance to establish direction for:

- Advises agencies to quantify projected greenhouse gas emissions of proposed federal actions whenever the necessary tools, methodologies, and data inputs are available;
- Encourages agencies to draw on their experience and expertise to determine the appropriate level (broad, programmatic or project- or site-specific) and the extent of quantitative or qualitative analysis required to comply with NEPA;
- Counsels agencies to consider alternatives that would make the action and affected communities more resilient to the effects of a changing climate; and
- Reminds agencies to use existing information and science when assessing proposed actions.

In the guidance issued on August 1, 2016, CEQ did not propose a particular quantity of GHG emissions as "significant" or "insignificant" relating to impacts to the environment or climate change. However, on 3 October 2016, EPA proposed establishing a de minimis value of GHGs or "Significant Emissions Rate" (SER) of 75,000 tons per year (tons/yr or tpy) CO2e from stationary sources as a basis for requiring sources to obtain a Title V permit, if the sources were not otherwise required to obtain a Title V permit.

3.11.3.2 Executive Order (EO) 13693

In April 2007, the U.S. Supreme Court determined that the USEPA has the regulatory authority to list GHGs as pollutants under the federal CAA. Congress has considered numerous proposals and bills to regulate GHGs but has not adopted any legislation.

Currently, federal agencies address emissions of GHGs by reporting and meeting reductions mandated in laws, executive orders, and policies. The most recent of these are EO 13693, *Planning for Federal Sustainability in the Next Decade*, of March 19, 2015.

The Energy Policy Act of 2005, Energy Independence and Security Act of 2007, and EO 13693 require an installation to adhere to specific energy improvements, which address waste reduction and improvements in efficiency. Specifically, the DoD Strategic Sustainability Performance Plan contains strategies to reduce energy waste and improve efficiency (DoD, 2016).

3.11.4 Environmental Consequences of the Alternatives on Air Quality

3.11.4.1 Proposed Action

A General Conformity Applicability Analysis was performed for the Proposed Action, which estimated the level of potential air emissions (CO, NO_x, and VOC) (Appendix F). It is not anticipated that the Proposed Action would result in a significant adverse impact to Air Quality as estimated emissions are below the de minimis thresholds (Table 3-4).

Table 3-4: Estimated Emissions from the Proposed Action

Emission Source	VOC	NO_X	CO
Proposed Action Emissions (tons per year)	8.1	80.9	54.8
De minimis Thresholds (tons per year)	50	100	100
Exceeds *de minimis or NSR* threshold?	No	No	No

Construction and vehicle emissions would result in temporary, localized changes to air quality as a result of fugitive dust and vehicle emissions. Criteria and hazardous air pollutant emissions from the operation of construction vehicles would be temporary and localized. Projects would be undertaken in compliance with state and federal standards for air quality. Applicable NEPA considerations would be made and the resulting documentation (if any) would be kept on file. Coordination with VDEQ prior to project initiation would determine the applicability of permits required. Projects would be initiated only after the environmental review has been completed and the appropriate state permits are acquired.

CEQ guidance, based on many previous NEPA analyses, suggest that individual project scale GHG emissions typically have small potential environmental effects (CEQ, 2010). According to the EPA, an emission report must be filed if a Proposed Action generates CO_2 emissions that are greater than 25,000 metric tons. The emissions estimated from the Proposed Action are 9,941 metric tons per year less than 25,000 metric tons. Currently, JBM-HH is not required to report GHG emissions from their stationary sources because their annual emissions do not exceed 25,000 metric tons (USEPA, 2016). It is anticipated that the project would not cause a perceivable impact when compared to JBM-HH's overall CO_{2e} emissions. Mitigation efforts to reduce GHG emissions could be applied by maintaining emission control technology on construction equipment.

3.11.4.2 Alternative 1

Impacts for Alternative 1 are the same for the Proposed Action, except where the Alternative 1 differs from the proposed action at the Old Post Chapel gate. There are no additional expected impacts to air quality due to the relocation of the Old Post Chapel gate.

3.11.4.3 No-Action Alternative

Under the No-Action Alternative no construction activities would take place and general emissions would stay at their current rate. No additional impacts would occur.

3.12 NOISE

The Noise Control Act of 1972 (42 USC 4901 *et seq*.) directs Federal agencies to comply with applicable Federal, State, interstate and local noise control regulations. Noise is considered to be undesirable sound that interferes with normal activities or otherwise diminishes the quality of the environment. It may be intermittent or continuous, steady or impulsive, stationary or transient. Sound varies by intensity and frequency and the human ear responds differently to different frequencies. Sound pressure level is described in decibels (dB) and is used to quantify sound intensity. Hertz is used to quantify sound frequency. "A-weighted" decibels (dBA) approximate the perception of sound by humans and describe steady noise levels, though few noises are constant.

A change of a few dBA in noise level is barely perceptible to most people; however, a 10-dBA change is considered a substantial change, and these thresholds are used to estimate a person's likelihood of perceiving a change in noise levels.

The major sources of noise at JBM-HH include aircraft overflights arriving and departing Ronald Reagan Washington National Airport, and traffic on the installations comprising JBM-HH and on adjacent streets and highways. Impulse noise is also generated by occasional ceremonial recorded bugle calls, and firings of rifle and artillery (cannon blasts and recorded bugle calls during ceremonies). In general, noise generated within the installations comprising JBM-HH is short term in nature.

Construction noise can result in relatively high noise levels during day-time periods and within several hundred feet of the construction activity. The zone of relatively high construction noise typically extends to distances of 400 to 800 ft from the operating equipment. Locations more than 1,000 ft from construction sites experience little disturbance from noise.

3.12.1 Environmental Consequences of the Alternatives on Noise

3.12.1.1 Proposed Action

Under the Proposed Action short-term, negative impacts are expected to occur throughout construction. The short-term, negative effects would include temporary increases in noise levels resulting from heavy equipment and machinery that could affect personnel sensitive noise areas. Noise levels under the Proposed Action are expected to be consistent with operations at a military site. JBM-HH will coordinate with ANC as needed to establish mitigative measures to ensure construction noise will have limited impact to ANC visitors and services.

3.12.1.2 Alternative 1

Impacts for Alternative 1 are the same for the Proposed Action, except where the Alternative 1 differs from the proposed action at the Old Post Chapel gate. There are no additional expected impacts to noise due to the relocation of the Old Post Chapel gate.

3.12.1.3 No-Action Alternative

Under the No-Action Alternative, there would be no changes to the local noise environment. No impacts would occur.

3.13 CUMULATIVE IMPACTS

This section addresses the cumulative impacts of the Proposed Action. Cumulative impacts are defined by the CEQ in 40 CFR 1508.7 as “impacts on the environment which result from the incremental impact of the action when added to other past, present and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions."

Evaluations of cumulative impacts include consideration of the Proposed Action with past and present actions, as well as reasonably foreseeable future actions. Actions included: JBM-HH Stormwater Retention Projects, ANC Millennium Project, the other regional development Compliance with applicable federal, state and local regulations would assist in ensuring that

implementation of the Proposed Action would minimize the incremental impacts of past, present, and future actions.

Topography, geology, groundwater, surface water, wetlands, floodplains, wildlife resources, environmental justice, protection of children, land use, utilities, and hazardous materials/waste management result in no impacts from the Proposed Action and do not contribute to cumulative impacts of other regional projects. Air quality and noise are negligible impacts only present during construction of the fenceline and as a result resources do not contribute to cumulative impacts and therefore are not presented in below Table. Table 3-5 summarizes the evaluation of cumulative impacts resulting from the Proposed Action and other ongoing or forseeable regional activities for the following resources with negligible adverse impacts associated with the Proposed Action: Soils, Vegetation, Stormwater, Cultural Resources, Aesthetics and Visual Resources, and Transportation.

The Proposed Action's minor adverse impacts associated with Soils, Vegetation, Stormwater, Cultural Resources, Aesthetics and Visual Resources, and Transportation will not significantly contribute to the cumulative impacts when considering other ongoing or foreseeable actions or projects at JBM-HH, ANC, or regional development.

Table 3-5: Cumulative Impact Analysis

Impact Source	JBM-HH Stormwater Retention	Millennium Project	JBM-HH Security Fenceline	Regional Development	Cumulative Impacts Summary
Soils	Beneficial Long-Term impacts due to reducing cumulative stormwater runoff to project area, lessening soil erosion on the site.	Minor local impacts to soils. Soils would be re-used on-site to the maximum extent practicable. Beneficial Long-Term impacts due to stormwater retention treatments to Chaffee Place parking lot. This would include reductions to cumulative stormwater runoff to project area, lessening soil erosion on the site.	Negligible Long-Term Adverse Impacts as soils are already heavily disturbed	Strong sediment and erosion regulations ensure that significant cumulative impacts are not occurring to soils in the region due to development.	Due to the highly disturbed soils at JBM-HH and current sediment and erosion regulations the cumulative impacts from multiple projects are considered negligible.

Impact Source	JBM-HH Stormwater Retention	Millennium Project	JBM-HH Security Fenceline	Regional Development	Cumulative Impacts Summary
Vegetation	Insignificant Impacts	Impacts to vegetation to be minimized to maximum degree possible with design techniques which minimize loss of large trees. Impacts also mitigated by additional plantings of new trees in final design. Large "green space" reserved indefinitely amidst a very urbanized area.	Short-term Minor Adverse Impacts during construction, and Long-term Minor Adverse Impacts as large trees may be cut down and replaced with smaller trees after fence construction is completed	The Washington D.C. metro area has limited large areas of green space. This space is mostly limited to parks and natural areas. ANC does provide one of the largest "green spaces" in the area, providing a wide variety of trees and natural areas which contribute Both environmental and aesthetic value to the community.	Appropriate mitigation measures (i.e., 2 to 1 tree replacement) for the preservation of vegetation and green space is considered for all projects by JBM-HH and ANC. As a result, the cumulative impacts from multiple projects are considered negligible to regional vegetation.
Stormwater	Beneficial Long-Term impacts due to improved management of stormwater and decreased overland drainage.	Long-Term Beneficial management of stormwater.	Long-Term Minor Beneficial Impacts from addition of stormwater management infrastructure	Strong regulations ensure that stormwater is appropriately handled.	Based on adherence to current stormwater management regulations and the implementation of new best management practices, the cummulative impacts for stormwater are considered to beneficial.
Cultural Resources	Negligible impacts to cultural resources.	Effects to cultural resources were appropriately minimized and mitigated for through Section 106 Consultation.	Long-Term Adverse Impacts to viewsheds	The National Historic Preservation Act provides some protection to historic resources in the area.	Cummulative adverse impacts to Cultural Resources would be mitigated through consultation with all required Federal and state agencies.

Impact Source	JBM-HH Stormwater Retention	Millennium Project	JBM-HH Security Fenceline	Regional Development	Cumulative Impacts Summary
Aesthetics and Visual Resources	Insignificant impacts.	Beneficial impacts due to restoration of stream and improved area for burials and internments.	Long-Term Adverse Impacts to viewsheds	Impacts vary based on the location of the project.	Cummulative adverse impacts to viewsheds would be mitigated through consultation with all required Federal and state agencies.
Transportation	Short-term minor adverse impacts due to construction.	Short-term minor adverse impacts would be minimized as possible and would only occur during construction of the project.	Short-term minor adverse impacts and long-term Minor beneficial Impacts	Transportation projects struggle to keep up with continued urban development. This project will not have a relative significant effect on transportation.	Short-term minor impacts to transportation due to construction projects.

4.0 CONCLUSIONS

This EA has been prepared to analyze the potential environmental, cultural and socioeconomic effects associated with the proposed construction of a fence line and additional security features on the border between Arlington National Cemetery and JBM-HH.

The purpose of the Proposed Action is to construct a fence that meets Anti-Terrorism Force Protection standards which will restrict unauthorized access from Arlington National Cemetery to JBM-HH. The EA analyzes two courses of action: the Proposed Action and the No-Action alternative.

The EA's analysis concluded the following: there would be no impacts to topography, geology, groundwater, surface water, wetlands, floodplains, wildlife resources, environmental justice, protection of children, land use, utilities, and hazardous materials/waste management result; negligible long-term adverse impacts to soils; long-term minor adverse impacts to vegetation; long-term minor beneficial impacts to stormwater and traffic and transportation systems; and short-term minor adverse impacts to air quality, vegetation, noise, and traffic and transportation systems.

Table 4-1 summarizes the potential consequences that the Proposed Action and the No-Action Alternative would have on environmental resources.

Based on the evaluation of the environmental consequences accomplished by this EA, the preparation of an EIS is not needed. The preparation of a FNSI will be appropriate.

Table 4-1: Summary of Potential Environmental Consequences on Environmental Resources

Resource	Proposed Action	No-Action Alternative
Geology and Topography	No Impacts	No Impacts
Soils	Long-term Negligible Adverse Impacts	No Impacts
Water Resources (surface water, groundwater, floodplains)	No Impacts	No Impacts
Wetlands	Short-term Minor Adverse Impacts	No Impacts
Stormwater	Long-term Minor Beneficial Impacts	No Impacts
Air Quality	Short-term Minor Adverse Impacts	No Impacts
Vegetation	Short-term Minor Adverse Impacts and Long-term Minor Adverse Impacts	No Impacts
Wildlife	Short-term Minor Adverse Impacts	No Impacts

Table 4-1: Summary of Potential Environmental Consequences on Environmental Resources

Resource	Proposed Action	No-Action Alternative
Threatened or Endangered Species	No Impacts	No Impacts
Cultural Resources	Long-term Moderate Adverse Impacts	No Impacts
Land Use	Long-term Minor Adverse Impacts	No Impacts
Hazardous Materials, Health and Safety	No Impacts	No Impacts
Noise	Short-term Minor Adverse Impacts	No Impacts
Traffic and Transportation Systems	Short-term Minor Adverse Impacts and Long-term Minor Beneficial Impacts	No Impacts
Utilities	No Impacts	No Impacts
Visual Resources	Long-term Minor Adverse Impacts	No Impacts
Socioeconomics	Short-term Minor Adverse Impacts	No Impacts
Cumulative Impacts	No Impacts	No Impacts

5.0 DISTRIBUTION AND CONSULTATION

JBM-HH consulted with the following agencies during the preparation of this EA:

Mr. Karl Van Newkirk
Arlington Historical Society
P.O. Box 100402
Arlington, Virginia 22210-3402

Ms. Katharine Kerr
Advisory Council on Historic Preservation
401 F Street NW, Suite 308
Washington, D.C. 20001-2637

Dr. Dean Herrin
National Park Service, National Capital Region
1100 Ohio Drive SW
Washington, D.C. 20242

Mr. Marc E. Holma
Virginia Department of Historic Resources,Office of Review and Compliance
2801 Kensington Avenue
Richmond, Virginia 23221

Ms. Rebbecah Ballo
Arlington County Planning and Community Development
2100 Clarendon Boulevard, Suite 700
Arlington, Virginia 22201

Ms. Rebecca Stevens
Arlington National Cemetery
1 Memorial Avenue, WC Building
Arlington, Virginia 22211-5003

Mr. Robert Nieweg
National Trust for Historic Preservation
2600 Virginia Avenue NW, Suite 1100
Washington, D.C. 20037

Ms. Ellie Irons
Office of Environmental Impact Review, Department of Environmental Quality, Division of Environmental Enhancement
629 East Main Street, 6th Floor
Richmond, Virginia 23219

Dr. Mary J. Ratnaswamy
U.S. Fish and Wildlife Service, Chesapeake Bay Field Office
177 Admiral Cochrane Drive
Annapolis, Maryland 21401-7307

Mr. Hamid Karimi
Department of Energy and Environment
1200 First Street NE, Fifth Floor
Washington, D.C. 20002

Mr. Timothy Dennee
Historic Preservation Office, Office of Planning
1100 4th Street SW, Suite E650
Washington, D.C. 20024

Mr. Thomas Luebke
U.S. Commission of Fine Arts
401 F Street NW, Suite 312
Washington, D.C. 20001-2728

Mr. Marcel C. Acosta
National Capital Planning Commission
401 9th Street NW, North Lobby, Suite 500
Washington, D.C. 20004

Ms. Harriet Tregoning
District of Columbia Office of Planning
1100 4th Street SW, Suite E605
Washington, D.C. 20024

Mr. Christopher Tulou
District of Columbia Environmental Office
1200 First Street, Fifth Floor
Washington, D.C. 20002

Mr. William O'Connor III
Arlington County Department of Environmental Services
2100 Clarendon Boulevard
Arlington, Virginia 22201

Mr. Joel Gorder
National Park Service, National Capital Region
1100 Ohio Drive
Washington, D.C. 20242

Mr. Thomas Sheffer
George Washington Parkway Headquarters
700 George Washington Parkway
McLean, Virginia 22101

Mr. Daniel Delahaye
Army National Cemeteries Program
1 Memorial Drive, Administration Building Arlington
Virginia 22211-5003

Ms. Caitlin H. Totherow
Catawba Indian Nation
1536 Tom Steven Road
Rock Hill, South Carolina 29730

Mr. Bryan Printup
Tuscarora Nation of New York, Tuscarora Environmental Program
5226 East Walmore Road
Lewistown, New York 14092

Ms. Lisa C. Baker
United Keetowah Band of Cherokee Indians in Oklahoma
P.O. Box 746
Tahlequah, Oklahoma 74431

Mr. Russell Townsend
Eastern Band of Cherokee Indians, Qualla Boundary Reservation
P.O. Box 455
Cherokee, North Carolina 28719

Mr. Robert Gray
Pamunkey Tribal Government, Pamunkey Indian Reservation
191 Lay Landing Road
King William, Virginia 23086

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APPENDIX A

Agency Coordination

APPENDIX B

Coastal Zone Management Act (CZMA) Consistency Determination

APPENDIX C

Tree Survey

APPENDIX D

Phase 1 Archeological Site Assessment

APPENDIX E

Viewshed Study

APPENDIX F

General Conformity – Record of Non-Applicability (RONA)