

***DRAFT* ENVIRONMENTAL ASSESSMENT
FOR
INSTALLATION DEVELOPMENT PLAN
AT
JOINT BASE ANDREWS-NAVAL AIR FACILITY, MARYLAND**

Department of the Air Force
Joint Base Andrews-Naval Air Facility, Maryland

January 2022

THIS PAGE INTENTIONALLY LEFT BLANK

***DRAFT* Environmental Assessment for
Installation Development Plan (IDP) at
Joint Base Andrews-Naval Air Facility, Maryland**

**Prepared for:
DEPARTMENT OF THE AIR FORCE
Joint Base Andrews-Naval Air Facility, Maryland 20762**

January 2022

Letters or other written comments provided may be published in the Final EA. As required by law, substantive comments will be addressed in the Final EA and made available to the public. Any personal information provided will be kept confidential. Private addresses will be compiled to develop a mailing list for those requesting copies of the Final EA. However, only the names of the individuals making comments and their specific comments will be disclosed. Personal home addresses and phone numbers will not be published in the Final EA.

THIS PAGE INTENTIONALLY LEFT BLANK

***Draft Environmental Assessment for
Installation Development Plan at
Joint Base Andrews-Naval Air Facility, MD***

Lead Agency: Department of the Air Force

Proposed Action: Installation Development Plan at Joint Base Andrews-Naval Air Facility, Maryland

Written comments and inquiries regarding this document should be directed to: Mr. Ryan Soens, 316 CES/CEIE, 3466 North Caroline Avenue, Joint Base Andrews, Maryland 20762

Report Designation: Environmental Assessment (EA)

Abstract: Joint Base Andrews-Naval Air Facility (JBA) proposes the implementation of an Installation Development Plan (IDP) to outline the development projects planned for fiscal years 2022 through 2026 on JBA's main installation and the Brandywine annex.

The Proposed Action is to implement the IDP, which includes 27 projects of varying sizes and work types. These projects include development associated with the MH-139 Beddown; Facilities Sustainment, Restoration, and Modernization (FSRM) projects; Military Construction (MILCON) and Unspecified Minor Military Construction (UMMC) projects; demolitions; and other projects. The total acreage for the limits of disturbance of all 27 projects is 4,756.49 acres. Projects can be divided into four work types: demolition, tree removal, interior renovations, and new construction.

This EA evaluates the potential impacts to the human and natural environment that could be expected as a result of the implementation of the projects included in the IDP. The analyses of potential environmental consequences are based on the locations of the proposed projects and the known locations of existing resources. Best Management Practices (BMPs) and mitigation measures would be utilized for all projects to reduce the potential for impacts to the environment. However, many details are not available to fully analyze the effects of each project, but the projects are included for real property planning and capacity for future development. JBA would conduct additional NEPA analyses (either an Air Force [AF] Form 813 to document a categorical exclusion, EA, or Environmental Impact Statement [EIS]) when project details become available. These analyses may be tiered from this EA in accordance with 40 CFR Part 1501.11 and 32 CFR Part 989.

The EA also evaluates the No Action Alternative, which would be to make no changes and continue without implementing the IDP or any of the projects within the IDP. No other alternatives considered as part of this EA.

Based on the analyses conducted for this EA, there are different anticipated impacts identified for each of the 27 IDP projects. These impacts are further explained in Sections 3.2 through 3.28. In order to further analyze the specific adverse impacts identified in this EA, additional NEPA documentation will be prepared for any projects with identified adverse impacts. The level of NEPA analysis anticipated for each project is as follows: Projects A1, A2, A5, A6, B2, B3, B4, C2, C3, C6, C7, C8, C9, D1, D3, D4, D5, E1, E2, and E3 are anticipated to require AF Form 813s; Projects A3, A4, C1, C4, C5, and D2 are anticipated to require EAs; and Project B1 is anticipated to require either an EA or EIS based on potentially significant impacts.

No adverse or beneficial impacts would be expected as a result of the No Action Alternative.

As previously mentioned, implementation of each of the IDP projects will require additional NEPA analysis, as well as the appropriate Federal and state reviews and permits. Potential permits and plans that may be required include, but are not limited to, the following:

- Stormwater permits from the Maryland Department of the Environment (MDE)
- Erosion and Sediment Control Plan (ESCP)
- Spill Prevention, Control, and Countermeasures Plan (SPCCP)
- Air quality permits
- Non-tidal wetland permits
- Coastal Zone Management Act (CZMA) Federal Consistency Determination

These permits and approvals would be obtained prior to contract solicitation and/or the start of construction.

Table of Contents

1.0 Purpose of and Need for the Proposed Action.....	1-1
1.1 Introduction.....	1-1
1.2 Purpose and Need.....	1-1
1.3 Scope of the Environmental Assessment.....	1-3
1.4 Interagency/Intergovernmental Coordination and Consultations	1-4
1.4.1 Interagency Coordination and Consultations	1-4
1.4.2 Government to Government Consultations.....	1-4
1.4.3 Other Agency Consultations.....	1-4
1.5 Public and Agency Review of EA	1-5
1.6 Decision to be made.....	1-5
2.0 Description of the Proposed Action and Alternatives.....	2-1
2.1 Proposed Action	2-1
2.2 Alternatives Considered.....	2-3
2.3 No Action Alternative.....	2-3
3.0 Affected Environment and Environmental Consequences.....	3-1
3.1 Scope of Analysis.....	3-1
3.1.1 Resource Areas Eliminated from Detailed Analysis.....	3-1
3.2 Project A1 – Renovation/Repair of Hangar 1	3-2
3.2.1 Existing Conditions.....	3-2
3.2.2 Environmental Consequences.....	3-24
3.3 Project A2 – Renovation/Repair of Hangar 2	3-24
3.3.1 Existing Conditions.....	3-24
3.3.2 Environmental Consequences.....	3-26
3.4 Project A3 – Aircraft Parking Ramp Modifications and Ramp Extension.....	3-27
3.4.1 Existing Conditions.....	3-27
3.4.2 Environmental Consequences.....	3-28
3.5 Project A4 – Construct Helicopter Wash Rack.....	3-29
3.5.1 Existing Conditions.....	3-29
3.5.2 Environmental Consequences.....	3-31
3.6 Project A5 – Renovation/Repair of Hangar 4	3-32
3.6.1 Existing Conditions.....	3-32
3.6.2 Environmental Consequences.....	3-33
3.7 Project A6 – Renovation/Repair of Hangar 5	3-34
3.7.1 Existing Conditions.....	3-34
3.7.2 Environmental Consequences.....	3-36
3.8 Project B1 – Regrade the Airfield.....	3-36
3.8.1 Existing Conditions.....	3-36
3.8.2 Environmental Consequences.....	3-39
3.9 Project B2 – Virginia Gate.....	3-40
3.9.1 Existing Conditions.....	3-40
3.9.2 Environmental Consequences.....	3-42
3.10 Project B3 – Storm Drains on Buildings 3447, 3066, & 2487	3-42
3.10.1 Existing Conditions.....	3-42
3.10.2 Environmental Consequences.....	3-44

3.11	Project B4 – Stormwater BMP at 21 Point Range.....	3-45
3.11.1	Existing Conditions.....	3-45
3.11.2	Environmental Consequences.....	3-46
3.12	Project C1 – East Runway Relocation.....	3-47
3.12.1	Existing Conditions.....	3-47
3.12.2	Environmental Consequences.....	3-49
3.13	Project C2 – Crash Rescue Station 2.....	3-50
3.13.1	Existing Conditions.....	3-50
3.13.2	Environmental Consequences.....	3-52
3.14	Project C3 – New Dormitory.....	3-53
3.14.1	Existing Conditions.....	3-53
3.14.2	Environmental Consequences.....	3-54
3.15	Project C4 – Compass Calibration Pad.....	3-55
3.15.1	Existing Conditions.....	3-55
3.15.2	Environmental Consequences.....	3-57
3.16	Project C5 – Second Taxiway for Hangar 21.....	3-57
3.16.1	Existing Conditions.....	3-57
3.16.2	Environmental Consequences.....	3-59
3.17	Project C6 – Security Forces Group (SFG) Complex.....	3-60
3.17.1	Existing Conditions.....	3-60
3.17.2	Environmental Consequences.....	3-62
3.18	Project C7 – Passenger Terminal.....	3-62
3.18.1	Existing Conditions.....	3-62
3.18.2	Environmental Consequences.....	3-64
3.19	Project C8 – West Fitness Center Addition.....	3-64
3.19.1	Existing Conditions.....	3-65
3.19.2	Environmental Consequences.....	3-66
3.20	Project C9 – 459 th Readiness Alert Facility.....	3-67
3.20.1	Existing Conditions.....	3-67
3.20.2	Environmental Consequences.....	3-68
3.21	Project D1 – Child Development Center (CDC) #1.....	3-69
3.21.1	Existing Conditions.....	3-69
3.21.2	Environmental Consequences.....	3-71
3.22	Project D2 – Suitland Tree Management.....	3-71
3.22.1	Existing Conditions.....	3-71
3.22.2	Environmental Consequences.....	3-73
3.23	Project D3 – East Deluge System.....	3-74
3.23.1	Existing Conditions.....	3-74
3.23.2	Environmental Consequences.....	3-76
3.24	Project D4 – Former Firestone Building.....	3-77
3.24.1	Existing Conditions.....	3-77
3.24.2	Environmental Consequences.....	3-78
3.25	Project D5 – Former Starbucks.....	3-79
3.25.1	Existing Conditions.....	3-79
3.25.2	Environmental Consequences.....	3-81

3.26	Project E1 – Smart Center Addition.....	3-81
3.26.1	Existing Conditions.....	3-81
3.26.2	Environmental Consequences.....	3-83
3.27	Project E2 – Brandywine Annex Gravel Road.....	3-83
3.27.1	Existing Conditions.....	3-83
3.27.2	Environmental Consequences.....	3-86
3.28	Project E3 – DLA Fuel Row Additions.....	3-87
3.28.1	Existing Conditions.....	3-87
3.28.2	Environmental Consequences.....	3-89
3.29	No Action Alternative.....	3-89
3.29.1	Environmental Consequences.....	3-89
4.0	Conclusion	4-1
5.0	References.....	5-1

List of Tables

Table 2-1:	IDP Project List.....	2-1
Table 3-1:	National Ambient Air Quality Standards.....	3-2
Table 3-2:	Common Sound Analysis.....	3-7
Table 3-3:	Migratory Birds on JBA and the Brandywine Annex.....	3-12
Table 3-4:	Population Trends.....	3-21
Table 3-5:	Labor Force and Unemployment.....	3-22
Table 3-6:	PCPI and Median Household Income 2018 Estimates.....	3-23
Table 3-7:	Income and Poverty Data.....	3-23
Table 4-1:	Summary of Impacts and Expected Future NEPA Analyses.....	4-1

List of Figures

Figure 1-1:	Vicinity Map.....	1-2
Figure 2-1:	LODs for IDP Projects – Main Installation.....	2-4
Figure 2-2:	LODs for IDP Projects – Brandywine Annex.....	2-5
Figure 3-1:	Facility 1245, Passenger Terminal.....	3-15
Figure 3-2:	Facility 1280, Presidential Hangar 6.....	3-15
Figure 3-3:	Facility 1754, Hangar 3.....	3-15
Figure 3-4:	Concrete Pond and Retaining Wall at Belle Chance.....	3-16
Figure 3-5:	Darcy Family Cemetery at Belle Chance.....	3-16
Figure 3-6:	Locations of Recommended NRHP-Eligible Properties.....	3-17

List of Appendices

Appendix A:	Figures
Appendix B:	Agency Correspondence and Tribal Coordination
Appendix C:	USFWS Information for Planning and Conservation (IPaC) and Migratory Bird Reports
Appendix D:	Notice of Availability

THIS PAGE INTENTIONALLY LEFT BLANK

Acronyms and Abbreviations

ACAM	Air Conformity Applicability Model
ACM	Asbestos Containing Material
AF	Air Force
AFCEC	Air Force Civil Engineer Center
AFDW	Air Force District of Washington
AFFF	Aqueous Film Forming Foam
AFI	Air Force Instruction
AICUZ	Air Installation Compatible Use Zone
AIRFA	American Indian Religious Freedom Act
ANSI	American National Standards Institute
APE	Area of Potential Effect
ARPA	Archaeological Resource Protection Act
AST	Above ground Storage Tank
ASUS	American States Utility Services, Inc.
AT/FP	Anti-Terrorism/Force Protection
BCC	Birds of Conservation Concern
BEA	Bureau of Economic Analysis
BGEPA	Bald and Golden Eagle Protection Act
bgs	below ground surface
BLS	Bureau of Labor Statistics
BMP	Best Management Practice
CAA	Clean Air Act
CDC	Child Development Center
CEQ	Council of Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CH ₄	Methane
CO	Carbon monoxide
CO ₂	Carbon dioxide
CO _{2e}	Carbon dioxide equivalent
COMAR	Code of Maryland Regulations
CR	Conformity Rule
CWA	Clean Water Act
CZMA	Coastal Zone Management Act
DAF	Department of the Air Force
dB	decibel
dBA	A-weighted decibel
DNL	Day-Night Level
DoD	Department of Defense
DoDI	Department of Defense Instruction
EA	Environmental Assessment
EIAP	Environmental Impact Analysis Process
EIS	Environmental Impact Statement
EISA	Energy Independence and Security Act
EO	Executive Order

ERP	Environmental Restoration Program
ESA	Endangered Species Act
ESCP	Erosion and Sediment Control Plan
ESD	Environmental Site Design
ESQD	Explosive Safety Quantity Distance
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Administration
FIRM	Flood Insurance Rate Map
FL	flight level
FNSI	Finding of No Significance
FRZ	Flight Restricted Zone
FSRM	Facilities Sustainment, Restoration, and Modernization
GCR	General Conformity Rule
GHG	Greenhouse Gas
GIS	Geographic Information System
GWP	Global Warming Potential
HAP	Hazardous Air Pollutant
HTMW	Hazardous and Toxic Materials and Waste
HUD	Housing and Urban Development
ICRMP	Integrated Cultural Resources Management Plan
IDP	Installation Development Plan
IPaC	Information for Planning and Conservation
ITLO	Installation Tribal Liaison Officer
JBA	Joint Base Andrews–Naval Air Facility
LBP	Lead Based Paint
LID	Low Impact Development
LOD	limit of disturbance
MACT	Maximum Achievable Control Technology
MBTA	Migratory Bird Treaty Act
MD	Maryland
MDE	Maryland Department of the Environment
MDNR	Maryland Department of Natural Resources
MHT	Maryland Historical Trust
MILCON	Military Construction
MMRP	Military Munitions Response Program
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriation Act
NCPC	National Capital Planning Commission
NCR	National Capital Region
NEPA	National Environmental Policy Act
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NHPA	National Historic Preservation Act
NLEB	Northern Long-Eared Bat
NLR	noise level reduction
NMFS	National Marine Fisheries Service
NO ₂	Nitrogen dioxide

NO _x	Nitrogen oxides
NOA	Notice of Availability
NOI	Notice of Intent
NOTAM	Notice to Airmen
NPDES	National Pollutant Discharge Elimination System
NPS	National Park Service
NRHP	National Register of Historic Places
NSA	noise sensitive area
NSUFR	National Security UAS Flight Restriction
O ₃	Ozone
Pb	Lead
PCB	Polychlorinated biphenyls
PCPI	Per Capita Personal Income
PEM	Palustrine Emergent wetland
PEPCO	Potomac Electric Power Company
PFAS	Per- and polyfluorinated alkyl substance
PFC	Perfluorinated Compound
PFO	Palustrine Forested wetland
PM _{2.5}	Particulate matter less than 2.5 microns
PM ₁₀	Particulate matter less than 10 microns
ppb	parts per billion
ppm	parts per million
PSD	Prevention of Significant Deterioration
PSS	Palustrine Scrub-Shrub wetland
RCRA	Resource Conservation and Recovery Act
ROI	Region of Influence
SFG	Security Forces Group
SFRA	Special Flight Rules Area
SIP	State Implementation Plan
SO ₂	Sulfur dioxide
SPCCP	Spill Prevention, Control, and Countermeasures Plan
sq ft	square foot (feet)
SWPPP	Stormwater Pollution Prevention Plan
TCP	Traditional Cultural Property
tpy	tons per year
TSCA	Toxic Substances Control Act
TSS	Total Suspended Solids
UAS	Unmanned Aircraft System
UFC	Uniform Facilities Code
UMMC	Unspecified Minor Military Construction
USAF	United States Air Force
USC	United States Code
USDA	U.S. Department of Agriculture
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
UST	Underground Storage Tank

VOC	volatile organic compound
WSSC	Washington Suburban Sanitary Commission
$\mu\text{g}/\text{m}^3$	micrograms per cubic meter

1.0 PURPOSE OF AND NEED FOR THE PROPOSED ACTION

1.1 Introduction

The U.S. Air Force's (USAF) Joint Base Andrews-Naval Air Facility (JBA), Maryland, has developed a five-year Installation Development Plan (IDP) to outline the planned development projects on JBA's main installation and the Brandywine annex, which is approximately 8 miles southeast of the main installation. JBA's IDP is a detailed development plan geared towards the installation's goals that align with the larger JBA mission. This IDP includes 27 projects and covers fiscal years 2022 through 2026.

This Environmental Assessment (EA) was prepared to evaluate the potential environmental impacts of the projects in the IDP, in compliance with the National Environmental Policy Act of 1969 (NEPA) (42 United States Code [USC] 4331 et seq.), the regulations of the President's Council on Environmental Quality (CEQ) that implement NEPA procedures (40 Code of Federal Regulations [CFR] 1500-1508), the Air Force Environmental Impact Analysis Process (EIAP) Regulations at 32 CFR Part 989, and Air Force Instruction (AFI) 32-1015.

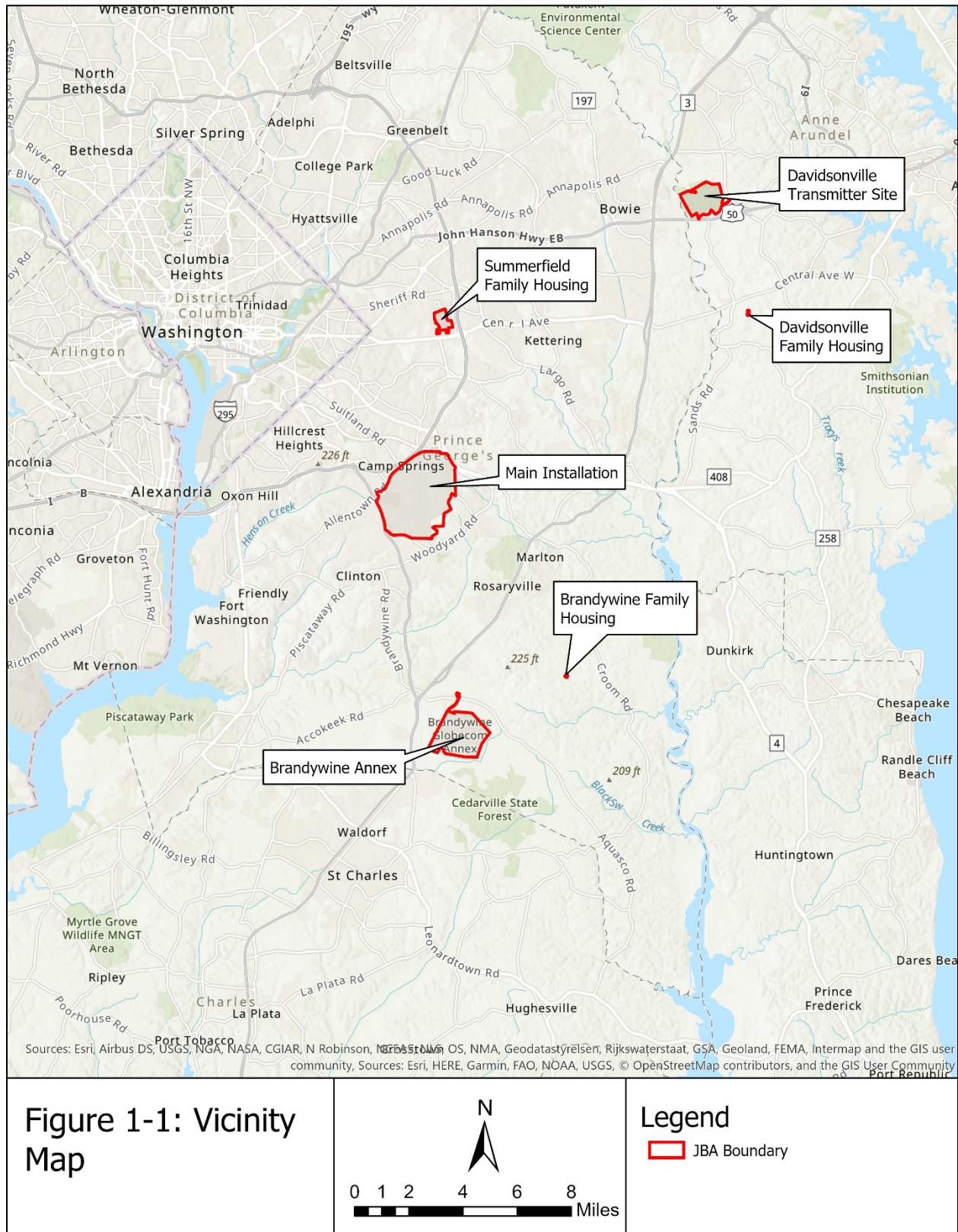
JBA is located five miles southeast of Washington, D.C., in southern Prince George's County, Maryland, and occupies 4,390 acres of land (Figure 1-1). JBA is home to multiple units that are critical to national security, including emergency reaction rotary-wing airlift for the National Capital Region (NCR), the Air Force District of Washington (AFDW), Air National Guard Readiness Center, Naval Air Facility Washington, U.S. Army Priority Air Transport, and Defense Intelligence Agency. In order to maintain unit readiness and effectiveness, JBA must continue to develop installation infrastructure to meet ever changing operational requirements. The IDP helps the installation to track and prioritize projects to meet the installation's development needs.

The information presented in this document will serve as the basis for deciding whether implementation of the IDP would result in a significant impact to the human environment, requiring the preparation of an Environmental Impact Statement (EIS), or whether no significant impacts would occur, in which case a Finding of No Significant Impact (FNSI) would be appropriate. This EA will provide a basic analysis of potential constraints that may be encountered during the development of each of the IDP projects and will identify whether or not supplemental NEPA documentation is expected to be needed for each project as designs progress.

1.2 Purpose and Need

The ***purpose*** of the Proposed Action is to implement the IDP for JBA with the intent of creating a manageable plan for growth at JBA and the Brandywine Annex. The IDP addresses the specific development needs at JBA within the next five years to provide the infrastructure upgrades and expansions needed to meet mission requirements.

Figure 1-1: Vicinity Map



The Proposed Action is *needed* for the Department of Defense (DoD) to ensure that JBA's airfield meets operational requirements, and to accommodate changing unit and administrative needs on the installation. The IDP will help JBA to track and prioritize the development projects planned for the five-year period between fiscal year 2022 and fiscal year 2026. The IDP will allow JBA to meet installation development goals and ensure that operations and missions on the installation are carried out efficiently and properly.

1.3 Scope of the Environmental Assessment

This EA evaluates the direct and indirect impacts associated with the implementation and correlated development of JBA's IDP, in accordance with NEPA and the CEQ NEPA implementing regulations. This document identifies and evaluates the potential environmental, cultural, and socioeconomic impacts associated with the implementation of the Proposed Action and the No Action Alternative.

The EA focuses on impacts likely to occur within the proposed limits of disturbance (LODs) for each of the 27 proposed projects. The LODs for the projects listed in the IDP are discussed in further detail in Section 2 of this EA and are shown in Figures 2-1 and 2-2. All projects are within the boundaries of JBA's main installation or Brandywine Annex.

This document analyzes direct impacts (those resulting from the alternatives and occurring at the same time and place) and indirect impacts (those distant or occurring at a future date) of the implementation of the projects listed on the IDP. The analyses of potential environmental consequences are based on the locations of the proposed projects and the known locations of existing resources. Best Management Practices (BMPs) and mitigation measures would be utilized for all projects to reduce the potential for impacts to the environment. However, many details are not available to fully analyze the effects of each project, but the projects are included for real property planning and capacity for future development. JBA would conduct additional NEPA analyses (either an Air Force [AF] Form 813 to document a categorical exclusion, EA, or Environmental Impact Statement [EIS]) when project details become available. These analyses may be tiered from this EA in accordance with 40 CFR Part 1501.11 and 32 CFR Part 989.

Under the guidance provided in NEPA, 32 CFR Part 989, and AFI 32-1015, either an 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, but the decision and analyses will be documented in an AF Form 813 if required. An EA provides sufficient evidence and analysis for determining whether or not to prepare an EIS. If an action may significantly affect the environment, an EIS would be prepared. The contents of an EA include 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 and public coordination.

An evaluation of the environmental consequences of the implementation of the Proposed Action and the No Action Alternative includes direct, and indirect impacts, as well as qualitative and quantitative (where possible) assessments of the level of significance of these effects. The EA results in either a FNSI or a Notice of Intent (NOI) to prepare an EIS. If JBA determines that this

Proposed Action may have a significant impact on the quality of the human environment, an EIS will be prepared.

1.4 Interagency/Intergovernmental Coordination and Consultations

1.4.1 Interagency Coordination and Consultations

Scoping is an early and open process for developing the breadth of issues to be addressed in the EA and for identifying significant concerns related to a Proposed Action. Per the requirements of the Intergovernmental Cooperation Act of 1968 (42 USC 4231(a)) and Executive Order (EO) 12372, *Intergovernmental Review of Federal Programs*, Federal, state, and local agencies with jurisdiction that could be affected by the Proposed Action were notified during the development of this EA.

Appendix B contains the list of agencies consulted during this analysis and copies of correspondence.

1.4.2 Government to Government Consultations

EO 13175, *Consultation and Coordination with Indian Tribal Governments*, directs Federal agencies to coordinate and consult with Native American tribal governments whose interests might be directly and substantially affected by activities on federally administered lands. Consistent with that EO, Department of Defense Instruction (DoDI) 4710.02, *Interactions with Federally-Recognized Tribes*, and Department of the Air Force Instruction (DAFI) 90-2002, *Air Force Interaction with Federally-Recognized Tribes*, federally-recognized tribes that are historically affiliated with the JBA geographic region were invited to consult on all proposed undertakings that have a potential to affect properties of cultural, historical, or religious significance to the tribes. The tribal consultation process is distinct from NEPA consultation or the interagency coordination process, and it requires separate notification of all relevant tribes. The timelines for tribal consultation are also distinct from those of other consultations. The JBA point-of-contact for Native American tribes is the Installation Tribal Liaison Officer (ITLO).

The Native American tribal governments that were coordinated or consulted with regarding these actions are listed in Appendix B.

1.4.3 Other Agency Consultations

Per the requirements of Section 106 of the National Historic Preservation Act (NHPA) and implementing regulations (36 CFR Part 800); Section 7 of the Endangered Species Act (ESA) and implementing regulations; the Migratory Bird Treaty Act (MBTA); and Coastal Zone Management Act (CZMA); findings of effect and request for concurrence were transmitted to the Maryland Historic Trust (MHT) and the U.S. Fish and Wildlife Service (USFWS). JBA also initiated consultation with the following agencies for the proposed project: U.S. Environmental Protection Agency (USEPA), Maryland Department of Natural Resources (MDNR), Maryland State Clearinghouse Office of Planning, Maryland Department of the Environment (MDE), Prince George's County Department of Planning, National Capital Parks-East, and National Capital Planning Commission (NCPC).

Concurrence indicating a finding of no effect for the implementation of the IDP was sent by the MHT on [date]. On 21 October 2021, a report was generated through the Information for Planning and Conservation (IPaC) system, the USFWS online system for searching for species protected under the ESA, which notes that 2 protected species – the Northern Long-Eared Bat (*Myotis septentrionalis*) and Monarch butterfly (*Danaus plexippus*) – have the potential to occur within the LODs of the proposed projects.

Correspondence regarding the findings, and concurrence and resolution of any adverse impact is included in Appendix B.

While the Proposed Action is located within Maryland's Coastal Zone and federal consistency determinations will be required, specific project details for each IDP project are not available at this time. Therefore, CZMA federal consistency determinations will need to be prepared for each project as part of the supplemental NEPA documentation and will be sent to the Maryland Coastal Zone Management Program for review.

1.5 Public and Agency Review of EA

A Notice of Availability (NOA) of the Draft EA and FNSI was published in the newspapers of record (listed below), announcing the availability of the Draft EA for review on [date]. The NOA invited the public to review and comment on the Draft EA. The public and agency review period ended on [date]. The NOA and public and agency comments are provided in Appendix B.

The NOA was published in the *Maryland Independent*. Electronic copies of the EA and Draft FNSI were made available for review on the JBA environmental website, <https://www.jba.af.mil/About-Us/Environmental-Mission/>. The Draft EA and Draft FNSI were also available by request from JBA, and hardcopies were placed in the following Prince George's County Public Library:

- Prince George's County Memorial Library System - Spauldings Branch
5811 Old Silver Hill Rd
District Heights, MD 20747

Comments received during the 30-day public review period have been addressed and documented in the final EA. All coordination letters sent and responses received during the preparation of this EA are located in Appendix B.

1.6 Decision to be made

The EA evaluates whether the Proposed Action would result in adverse impacts on the human and natural environment. If adverse impacts are identified, JBA would undertake supplemental NEPA analyses for those projects which have expected adverse impacts. This supplemental NEPA documentation may be tiered off of this EA, in accordance with 40 CFR 1501.11. This EA also identifies the actions that JBA would undertake to minimize environmental impacts, as required under NEPA, its implementing regulations from CEQ (40 CFR 1500-1508) and the Air Force (32 CFR Part 989).

The decision to be made is whether or not JBA should implement the Proposed Action or other alternative, including measures to reduce potential adverse effects as needed, while considering the potential environmental, physical, traffic, socioeconomic, and cultural impacts. This EA is a planning and decision-making tool that will be used to guide JBA in implementing the Proposed Action in a manner consistent with USAF standards for environmental stewardship.

2.0 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

2.1 Proposed Action

The Proposed Action is the preferred alternative and includes the implementation of the JBA IDP, which includes 27 projects of varying sizes and work types. These projects are in line with the mission of JBA and the unit goals and development plans needed to meet operational requirements.

The 27 projects include development associated with the MH-139 Beddown; Facilities Sustainment, Restoration, and Modernization (FSRM) projects; Military Construction (MILCON) and Unspecified Minor Military Construction (UMMC) projects; demolitions; and other projects. The total acreage for all project LODs is 4,756.49 acres. The list of projects included in the IDP are shown in Table 2-1, below, and the LODs for all of the IDP projects are shown in Figures 2-1 and 2-2 for the main installation and Brandywine Annex, respectively.

Table 2-1: IDP Project List

Site Code	Project Name	Project Description	Work Type	Size of LOD (acres)
MH-139 Beddown Projects				
A1	Renovation/Repair of Hangar 1	Renovate interior of Hangar 1, including maintenance and storage functions and the parking of 5 MH-139 aircraft, along with minor drainage work around the building exterior	Interior Renovations	3.39
A2	Renovation/Repair of Hangar 2	Renovate interior of Hangar 2, including the parking of 9 MH-139 aircraft and the relocation of alert facility into the building lean-to, along with minor drainage work around the building exterior	Interior Renovations	3.03
A3	Aircraft parking ramp modifications and ramp extension	Add 16 ramp parking spots and 64 mooring points in the West Apron, add a new ~240,000 square foot (sq ft) ramp extension to the north, and demolish Building 1911	New Construction	65.25
A4	Construct helicopter wash rack	Construct ~4,800 sq ft helicopter wash rack just south of Hangar 2, and potential demolition of access driveway	New Construction	1.11
A5	Renovation/Repair of Hangar 4	Renovate interior of Hangar 4 for Transient Alert	Interior Renovation	3.03
A6	Renovation/Repair of Hangar 5	Renovate interior of Hangar 5 for U.S. Army Priority Air Transport (USAPAT)	Interior Renovation	2.17
FSRM Projects				
B1	Regrade the airfield	Regrade the portions of the legacy airfield that do not meet the Unified Facilities Code (UFC) 3-260-1 requirements for obstructions and drainage	New Construction	1,978.55

Site Code	Project Name	Project Description	Work Type	Size of LOD (acres)
B2	Virginia Gate	Modify and widen road, upgrade guard shack, and install bollards, speed tables, signage, and a gate-controlled drop arm	New Construction	6.84
B3	Storm Drains on Buildings 3447, 3066, & 2487	Correct ditch line between Buildings 3086 and 3066; Replace storm drain lines and BMP near Building 2487; and replace two drop boxes, 700 ft of pipe, and two head walls next to Building 3447	New Construction	3.51
B4	Stormwater BMP at 21 Point Range	Repair BMP and outlet structure south of the current firing range and removal of trees from the detention area and along the dam embankment	New Construction	9.36
MILCON/UMMC Projects				
C1	East Runway relocation	Shift East Runway, or repair or replace in its current position, and construct associated taxiways, aprons, and drainage	New Construction	1,978.55
C2	Crash Rescue Station 2	Add an ~5,200 sq ft additional bay and ~3,700 sq ft of crew space, and relocated parking and stormwater features	New Construction	2.59
C3	New dormitory	Construct new 144 bed dormitory along Colorado Avenue between D Street and F Street	New Construction	3.10
C4	Compass Calibration Pad	Relocate Compass Calibration Pad, including paving of pad and access taxiway, based on the design of the East Runway	New Construction	60.54
C5	Second Taxiway for Hangar 21	Construct second taxiway for Hangar 21	New Construction	72.13
C6	Security Forces Group (SFG) Complex	Construct a total of ~88,000 sq ft of operations and training facilities between four buildings; construct parking lot; and demolish existing car wash facility on site	New Construction	40.82
C7	Passenger Terminal	Construct new passenger terminal or expand existing passenger terminal to address existing size deficiency and provide modern airport security facilities	New Construction	5.61
C8	West Fitness Center Addition	Add ~25,000 sq ft to existing West Fitness Center	New Construction	7.70
C9	459 th Readiness Alert Facility	Construct ~17,600 sq ft Readiness Alert Facility and associated parking lot	New Construction	3.46
Demolitions				
D1	Child Development Center (CDC) #1	Demolish existing CDC #1 (Building 4575) and surrounding parking and pavement	Demolition	4.96
D2	Suitland Tree Management	Remove trees and vegetation in the approach paths of the two runways; replant with new species over time; 10-year reoccurring program	Tree Removal	266.92
D3	East Deluge System	Remove and replace east underground deluge line and valves	New Construction	152.76

Site Code	Project Name	Project Description	Work Type	Size of LOD (acres)
D4	Former Firestone Building	Demolish former Firestone building (Building 1568) and surrounding pavement	Demolition	3.64
D5	Former Starbucks	Demolish former Starbucks (Building 1685) and surrounding pavement	Demolition	2.17
Other Projects				
E1	Smart Center Addition	Construct ~3,380 sq ft addition to multi-function room in conference center, construct an addition to the dining area and office space, and renovate interior	New Construction	5.57
E2	Brandywine Annex gravel road	Upgrade existing ~3/4 mile stretch of gravel road to asphalt and develop roadway drainage	New Construction	18.97
E3	DLA fuel row additions	Install 3 additional in-ground fuel hydrants on west ramp and trenching for pipeline across west ramp	New Construction	50.76

2.2 Alternatives Considered

NEPA and the CEQ regulations mandate the consideration of reasonable alternatives for the Proposed Action. “Reasonable alternatives” are those that also could be utilized to meet the purpose of and need for the Proposed Action. Per the requirements of 32 CFR 989, the USAF EIAP regulations, selection standards are used to identify alternatives for meeting the purpose of and need for the Proposed Action.

As design and planning for the 27 IDP projects is ongoing, and exact locations have not been chosen in some cases, a thorough alternatives evaluation is not included in this EA. A thorough description of other alternatives considered will be included in the supplemental NEPA documents for each project.

2.3 No Action Alternative

In accordance with CEQ NEPA Regulations and 32 CFR Part 989, the No Action Alternative must be taken into consideration in the NEPA analysis. This alternative provides a baseline against which the action alternatives can be measured.

The No Action Alternative in this EA is to allow the development of JBA to continue without a plan for future growth and management. The growth and development occurring at JBA would not be tracked or prioritized in an organized manner. Environmental impacts of development would be considered on a case-by-case basis, but impacts would not be looked at in a wholistic manner.

The No Action Alternative does not adhere to state or Federal regulations requiring the installation to consider environmental consequences of its development. Outdated infrastructure, including airfield infrastructure and electrical and drainage systems, would not be updated and would therefore fail to meet the operational needs of JBA and the units located on the installation. This alternative does not meet the needs of the installation; however, this alternative is evaluated further in this EA in accordance with CEQ NEPA regulations.

Figure 2-1: LODs for IDP Projects – Main Installation

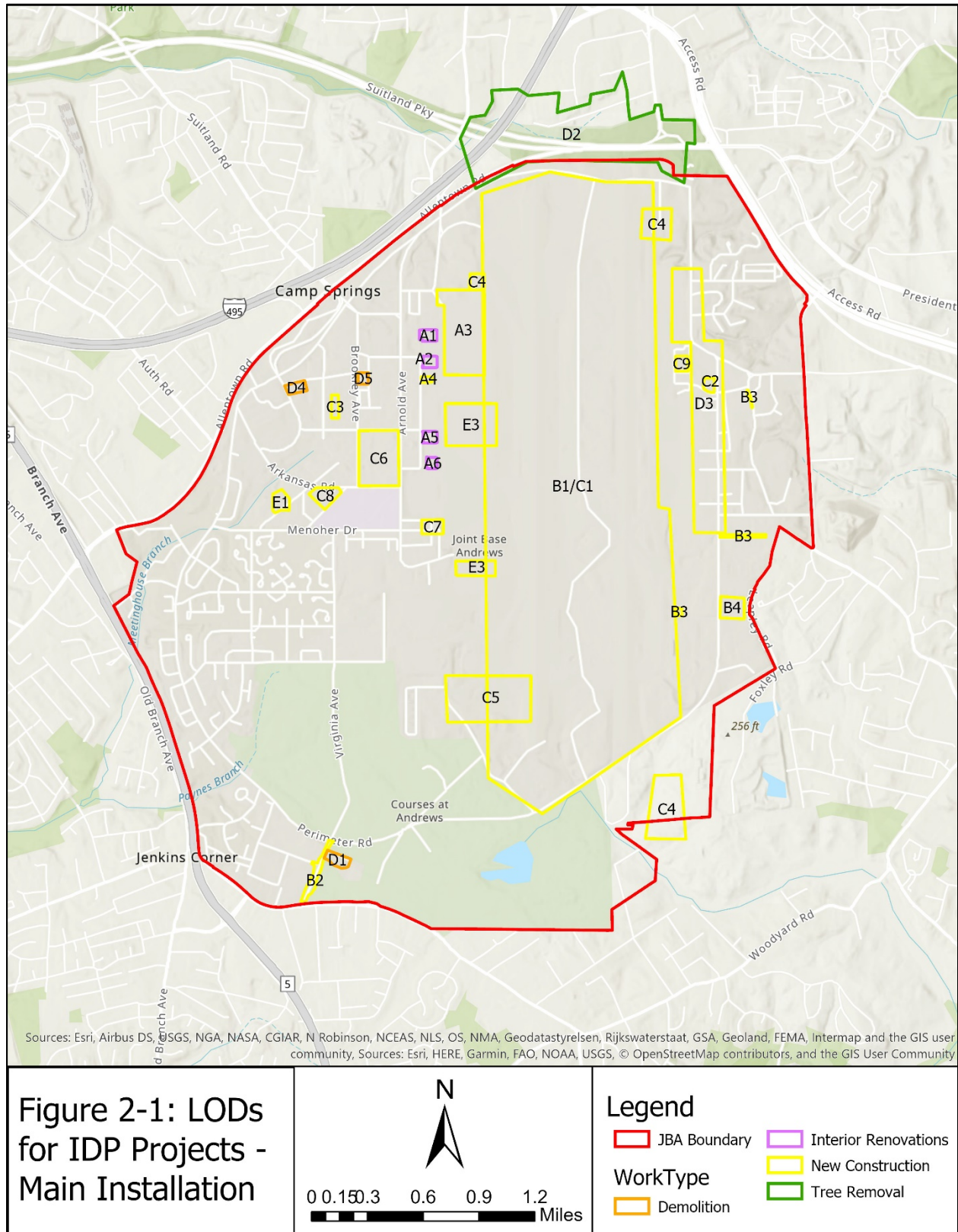
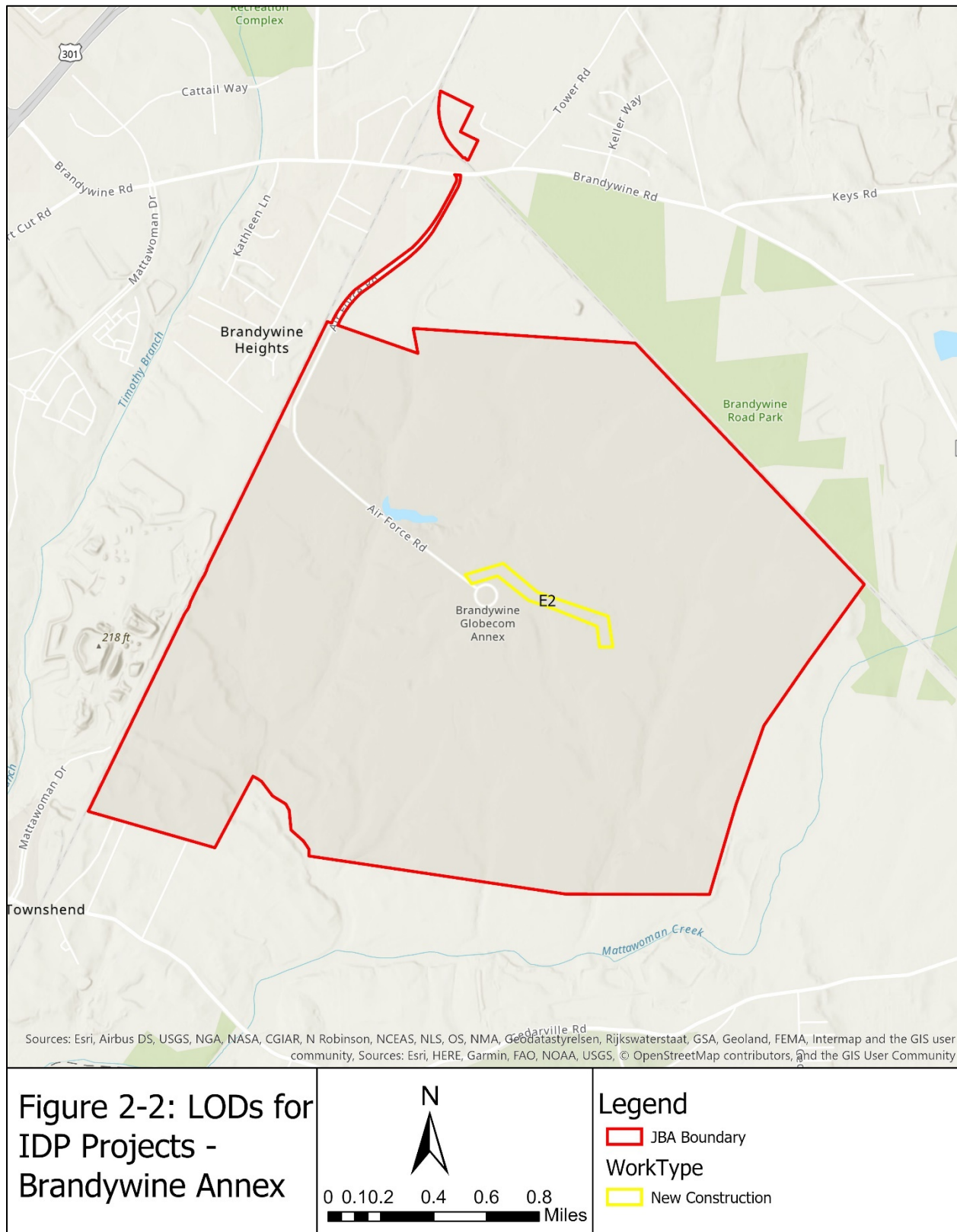


Figure 2-2: LODs for IDP Projects – Brandywine Annex



THIS PAGE INTENTIONALLY LEFT BLANK

3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

3.1 Scope of Analysis

This section describes the existing conditions of the natural and human environment at the proposed project sites and surrounding areas for resources potentially affected by the Proposed Action and No Action Alternative described in Section 2.0. It also describes the expected impacts to these resource areas as a result of the implementation of each project in the Proposed Action, or as a result of implementing the No Action Alternative. The environmental consequences analyses look at the potential for impacts or effects resulting from the location(s) of the proposed projects and potential for environmental consequences based on the known location(s) of existing resources as provided during the data gathering phase of this effort. However, many details are not available to fully analyze the effects of each project, but the projects are included for real property planning and capacity for future development. JBA would conduct additional NEPA analyses (either an AF Form 813, EA, or EIS) when project details become available. These analyses may be tiered from this EA in accordance with 40 CFR Part 1501.11 and 32 CFR Part 989. As specific project details for each IDP project are not available at this time, certain analyses cannot be performed as part of this EA. Comprehensive air quality analyses and CZMA federal consistency determinations will need to be completed as part of the supplemental NEPA documentation for each project.

The Region of Influence (ROI) for potential impacts is JBA and the Brandywine Annex for most resources; however, the ROI may include areas outside of JBA boundaries for some resources.

In compliance with guidelines contained in NEPA and CEQ regulations, and in AFI 32-1015, *Integrated Installation Planning*, each environmental, cultural, and social resource category typically considered in an EA was reviewed for its applicability to the Proposed Action and No Action Alternative. This section is broken down by each project under the Proposed Action in order to better convey the existing conditions and potential environmental impacts that could result from each project. Maps of the existing conditions for each project site are included in Appendix A.

3.1.1 Resource Areas Eliminated from Detailed Analysis

To the extent possible, analyses of the various resources presented in this EA are streamlined based on the anticipated level of potential impact. The focus of this EA is on the potential environmental impacts associated with the implementation of the IDP and its 27 projects. The following resource area is not analyzed in this EA because the Proposed Action has no potential to affect it:

Designated Natural Areas. No Wild or Scenic Rivers, Natural Areas, or National Forests are present in the proposed project areas.

3.2 Project A1 – Renovation/Repair of Hangar 1

Project A1 includes the interior renovations and repairs of Hangar 1, including the renovation of maintenance and storage functions, renovations to allow for the parking of five MH-139 aircraft, and minor drainage work around the building exterior.

3.2.1 Existing Conditions

3.2.1.1 Air Quality and Greenhouse Gases

3.2.1.1.1 National Ambient Air Quality Standards and Attainment Status

The USEPA Region 3 and the MDE regulate air quality in Maryland. The Clean Air Act (CAA) (42 USC §7401–7671q), as amended, gives USEPA the responsibility to establish the primary and secondary National Ambient Air Quality Standards (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 (PM_{2.5}), sulfur dioxide (SO₂), carbon monoxide (CO), nitrogen dioxide (NO₂), ozone (O₃), and lead (Pb). Short-term standards (i.e., 1-, 8-, and 24-hour periods) have been established for pollutants that contribute to acute health effects, while long-term standards (i.e., annual averages) have been established for pollutants that contribute to chronic health effects. These standards identify the maximum allowable concentrations of criteria pollutants that regulatory agencies consider safe, with an additional adequate margin of safety to protect human health and welfare.

Primary and secondary NAAQS for the aforementioned criteria are presented in Table 3-1. The attainment status of Prince George’s County is included, for that is where all project activities would take place. Areas that exceed the NAAQS ambient concentration (i.e., have poor air quality) are labeled as nonattainment areas and are designated by federal regulations. According to the severity of the pollution problem, areas exceeding the established NAAQS are categorized as marginal, moderate, serious, severe, or extreme nonattainment. JBA is within the National Capital Interstate Air Quality Control Region and the region is in marginal nonattainment for the 2015 8-hour O₃ standards (United States Environmental Protection Agency [USEPA], 2020). Additionally, the Proposed Action projects are located within the O₃ transport region that includes 11 states and the Washington, D.C. Metropolitan Statistical Area, including the northern Virginia suburbs.

Table 3-1: National Ambient Air Quality Standards

Pollutant	Standard	Averaging Time	Ambient Concentration	Prince George’s County Attainment Status
CO	Primary	1-hour ^a (ppm)	35	Attainment
		8-hour ^a (ppm)	9	
NO ₂	Primary	1-hour ^b (ppm)	100	Attainment
	Primary and Secondary	Annual ^c (ppm)	53	
O ₃	Primary and Secondary	8-hour ^d (ppm)	0.070	Nonattainment

Pollutant	Standard	Averaging Time	Ambient Concentration	Prince George's County Attainment Status
SO ₂	Primary	1-hour ^c (ppb)	75	Attainment
	Secondary	3-hour ^a (ppm)	0.5	
PM _{2.5}	Primary and Secondary	24-hour ^f (µg/m ³)	35	Attainment
	Primary	Annual arithmetic mean ^g (µg/m ³)	12	
	Secondary	Annual arithmetic mean ^g (µg/m ³)	15	
PM ₁₀	Primary and Secondary	24-Hour ^h (µg/m ³)	150	Attainment
Pb	Primary and Secondary	Rolling 3-month Average ⁱ (µg/m ³)	0.15	Attainment

Source: 40 CFR 50.1-50.12; USEPA, 2020

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; PM_{2.5} = 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, averaged over 3 years.

c Annual mean.

d Annual fourth highest daily maximum 8-hour average O₃ concentrations, averaged over 3 years.

e The 3-year average of the 99th percentile of 1-hour daily maximum concentrations.

f The 3-year average of the 98th percentile of 24-hour concentrations.

g The 3-year average of the weighted annual mean.

h Not to be exceeded more than once per year, on average over 3 years.

i Not to be exceeded.

3.2.1.1.2 Regulatory Requirements for Hazardous Air Pollutants

In addition to criteria pollutant standards, the USEPA 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 for HAPs (NESHAP) found in 40 CFR Part 63 regulate 187 HAPs that are known or suspected to cause cancer or other serious health effects, such as reproductive effects or birth defects, or adverse environmental effects. NESHAP requires application of technology-based emissions standards referred to as Maximum Achievable Control Technology (MACT).

Stationary sources of HAP emissions at JBA include the boilers, generators, fuel storage tanks, fuel-dispensing facilities, vehicle maintenance shops, laboratories, solvent degreasers, and aircraft engine testing facilities. JBA is an existing minor source of HAP, meaning total annual emissions of any single HAP are less than 10 tons per year (tpy) and annual emissions of combined HAP are less than 25 tpy.

3.2.1.1.3 Clean Air Act Conformity

32 CFR 989, EIAP is the Air Force's implementation tool for NEPA. EIAP provides the Air Force with a framework on how to comply with NEPA and the CEQ Regulations for Implementing the Procedural Provisions of NEPA (40 CFR Parts 1500-1508). Additionally, for air quality (according to 32 CFR 989.30), all EIAP documents must address the CAA Conformity Rules (CRs) requirements. States (in this case MDE) 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 with air quality that exceeds NAAQS standards. Maryland has individual SIPs for various pollutants, including NO₂, PM_{2.5}, 8-hour O₃, regional haze, lead, etc. 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 standards.

Under the CAA's General Conformity Rule (GCR) for non-transportation projects, a conformity determination is required for each criteria pollutant or precursor where the total of direct and indirect emissions of the criteria pollutant or precursor in a nonattainment or maintenance area caused by a Federal action would equal or exceed threshold emissions levels provided under 40 CFR 93.153 (b)(1) or (2). Two levels of GCR documentation exist under a Conformity Evaluation: Applicability Analysis and Conformity Determination. Applicability Analysis is the process of determining if the Federal action must be supported by a Conformity Determination. This is accomplished through the use of the Air Force's approved tool, Air Conformity Applicability Model (ACAM). ACAM will perform a quantitative analysis of projected emissions against regulatory thresholds which trigger a Conformity Determination. The Conformity Determination is a complex assessment of air quality impacts and, if necessary, mitigation measures to ensure that a Federal action conforms to the applicable implementation plan and meets the requirements of the GCR.

Prince George's County has marginal ozone nonattainment classification (USEPA, 2020). Due to the proximity to the urbanized east coast of the United States, Prince George's County is considered an Ozone Transport Region. Because ozone formation is driven by other direct emissions, the air quality analyses focus on ozone precursors that include volatile organic compounds (VOCs) and nitrous oxides (NO_x). For an area in marginal nonattainment for the 8-hour O₃ NAAQS within the O₃ transport region, the applicability criteria are 100 tpy for NO_x and 50 tpy for VOCs (40 CFR 93.153). Also, routine operation of facilities, mobile assets and equipment are exempt from the General Conformity Rule in accordance with 40 CFR 93.153(c)(2)(xiii). Therefore, operational emissions from JBA need not be included in the applicability analysis.

3.2.1.1.4 Greenhouse Gas Emissions

Greenhouse gases (GHGs) are a particular group of gases 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. The main source of GHGs from human activities is the combustion of fossil fuels, including natural gas, gasoline, diesel fuel, crude oil and coal. Other examples of GHGs created and emitted primarily through human-based activities include fluorinated gases (hydrofluorocarbons 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 (CO_{2e}). The CO_{2e} is calculated by multiplying the emissions of each GHG by its GWP and adding the results together to produce a single, combined emission rate representing all GHGs. While CH₄ and nitrous oxide have much higher GWPs than CO₂, CO₂ is emitted in such higher quantities that it is the overwhelming contributor to CO_{2e} from both natural processes and human activities.

Currently the USEPA has two primary GHG regulations for regulated stationary emission sources: 1) 40 CFR Part 98 - requires annual GHG emissions reporting and applies to fossil fuel suppliers and industrial gas suppliers, facilities that inject CO₂ underground for sequestration or other reasons, 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, and 2) GHG emission limits in 40 CFR Parts 51, 52, 60, 70 and 71 – establishes CO₂ emission limits to be addressed in Prevention of Significant Deterioration (PSD) and Title V permits required for electric utility generating units that are major stationary sources for regulated pollutants other than GHG. A 75,000 tpy threshold is used by EPA as a de minimis value to determine whether a PSD permit must include an emission limitation for CO₂ and a 100,000 tpy threshold is applied for Title V permits.

The CEQ provides guidance to Federal agencies on how to evaluate GHGs for federal actions under NEPA. Currently, the 2016 CEQ guidance titled “Final guidance on consideration of greenhouse gas emissions and the effects of climate change” is under review for revision and update.

Additionally, the USAF Air Quality EIAP Guide provides an overview and specific procedures on addressing GHGs for air quality NEPA assessments. GHGs are treated like any other air pollutant under air quality EIAP (where the action’s impacts on the environment are evaluated). Currently there is no established quantity or threshold of GHG emissions that would be considered “significant” relating to impacts to the environment or human health. The EIAP Guide recommends comparing GHG annual emissions of each action/alternative against each other in a relative comparison analysis to establish relative significance of each. The results of the relative comparison analysis are evaluated using the rule of reason and the concept of proportionality.

3.2.1.1.5 Executive Orders and Federal Laws

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 (USEPA, 2007). Additionally, federal agencies address emissions of GHGs by reporting and meeting reductions mandated in laws, executive orders, and policies. The Energy Policy Act of 2005, Energy Independence and Security Act of 2007, and EO 13834 require an installation to adhere to specific energy improvements, which address waste reduction and improvements in efficiency. The EO on Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis from January 2021 required that agencies capture the full costs of greenhouse gas emissions, including the social cost of carbon, social cost of nitrous oxide, and social cost of methane, when considering actions.

3.2.1.2 Land Use

Since what is now known as JBA's development in 1943, development has occurred adjacent to the installation, with existing land uses adjacent to JBA being mostly residential, commercial, or industrial. Suitland Parkway, a limited access scenic roadway managed by the National Park Service, is located just north of the main installation. It is part of the National Executive Route, along which motorcades travel between JBA and Washington, D.C., and it is also listed on the National Register of Historic Places (NRHP).

The existing land use at project site A1 is Aircraft Operations and Maintenance. Maps of land use for all of the IDP project sites can be found in Appendix A.

3.2.1.3 Airspace Management

Airspace management is defined as the coordination, integration, and regulation of the use of airspace. The objective of military airspace management is to meet operational requirements through the safe and efficient use of available navigable airspace in a peacetime environment, while minimizing the impact on other aviation users and the public.

JBA currently supports both fixed-wing and rotary-wing aircraft operations. Approximately 11 types of fixed-wing aircraft and approximately 3 types of rotary-wing aircraft are in operation at the airfield (Joint Base Andrews [JBA], 2017). The airfield contains two runways and, as of the 2017 Air Installation Compatible Use Zones (AICUZ) Study, supported an estimated 91,616 annual flight operations, including both assigned and transient flights (JBA, 2017).

The main installation is located within several flight restricted zones, which include restrictions and/or prohibitions for fixed-wing and rotary-wing aircraft and unmanned aircraft systems (UAS). First, JBA's main installation is within the Washington Tri-Area Class B airspace, which means that all aircraft and UAS are prohibited in this airspace unless permission has been received from Air Traffic Control. Additionally, the Brandywine Annex is located within the DC Special Flight Rules Area (SFRA), and the main installation is within the DC Flight Restricted Zone (FRZ). In accordance with 14 CFR §93.339, several flight restrictions are in place for these zones. Notice to Airmen (NOTAM) 1/1155 also limits airspeed in these zones from ground surface to flight level (FL) 180. The SFRA also has limitations on UAS operations. No UAS are allowed to be flown within the FRZ without specific Federal Aviation Administration (FAA) authorization, and they may be flown within the outer ring of the SFRA only under certain circumstances (Federal Aviation Administration [FAA], 2019). Finally, the airspace directly over JBA's main installation has a National Security UAS Flight Restriction (NSUFR), which prohibits UAS flights over the installation (B4UFLY, 2021).

3.2.1.4 Noise

Noise is defined as any sound that is undesirable because it interferes with communication, is intense enough to damage hearing, or is otherwise intrusive. Human response to noise varies depending on the type and characteristics of the noise distance between the noise source and the receptor, receptor sensitivity, and time of day. Noise often is generated by activities essential to a community's quality of life such as construction or vehicular traffic.

Sound intensity is described using decibels (dB), which is a logarithmic unit that expresses the ratio of a sound pressure level to a standard reference level. Some common sounds encountered in everyday life and their dB levels are provided in Table 3-2. A-weighting, measured in A-weighted decibels (dBA), approximates a frequency response expressing the perception of sound by humans.

Table 3-2: Common Sound Analysis

Sound	Sound Level (dB)
Standing near sirens	120
Approaching subway train	100
Motorcycle	95
Gas-powered lawnmower	80-85
City traffic (inside a car)	80-85
Dishwasher	70
Normal conversation	60
Refrigerator hum	40

Source: Centers for Disease Control, 2019

The dBA noise metric describes steady noise levels, although very few noises are, in fact, constant. Therefore, A-weighted day-night sound level has been developed. Day-night sound level (DNL) is defined as the average sound energy in a 24-hour period with a 10-dB penalty added to the nighttime levels (10:00 p.m. to 7:00 a.m.). DNL is a useful descriptor for noise because it averages ongoing, yet intermittent noise and it measures total sound energy over a 24-hour period.

The Noise Control Act of 1972 (Public Law 92-574) directs Federal agencies to comply with applicable Federal, state, and local noise control regulations. In 1974, the USEPA provided information suggesting continuous and long-term noise levels in excess of DNL 65 dBA are normally unacceptable for noise-sensitive land uses such as residences, schools, churches, recreation areas, and hospitals.

Maryland's Environmental Noise Act of 1974 limits noise to the level that will protect the health, general welfare, and property of the people of the state. Maryland limits both the overall noise environment and the maximum allowable noise level for residential, industrial, and commercial areas (Code of Maryland [COMAR] 26.02.03). Maximum levels in residential areas cannot exceed 65 dBA in the daytime (7:00 a.m. to 10:00 p.m.) and 55 dBA at night. In addition, the DNL cannot exceed 55 dBA in residential areas and 64 dBA in commercial areas. For construction and demolition activities, a person may not cause or permit noise levels that exceed 90 dBA during daytime hours (COMAR 26.02.03).

DoDI 4165.57 requires the military departments to develop, implement, and maintain an AICUZ program for installations with flying operations. AFI 32-1015, *Integrated Installation Planning*, provides installations with an overview of the Air Force's AICUZ program. JBA's AICUZ Study was most recently updated in 2017, and it outlines noise abatement procedures to be undertaken to reduce noise impacts from the airfield. AFI 32-1015 outlines noise level reduction (NLR) for new construction exposed to greater than 65 dB DNL. These NLR measures must be incorporated into the design and construction of portions of the new buildings where the public is received, office areas, noise-sensitive areas (NSA), and where the normal noise level is low.

Existing sources of noise at JBA include aircraft overflights, road traffic, and other noises such as lawn maintenance equipment, construction noise, and bird and animal vocalizations. Background noise levels without aircraft overflights were estimated for the surrounding areas using the techniques specified in the American National Standards Institute's (ANSI's) *Quantities and Procedures for Description and Measurement of Environmental Sound Part 3: Short-term measurements with an observer present* (American National Standards Institute [ANSI], 2013). An NSA is an area that, because of its use by humans or special status wildlife species and the importance of reduced noise levels to such use, is designated for management which limits the noise level from long-term and/or continuous noise producing sources. There are no NSAs in the immediate vicinity of project site A1; however, there are several dormitories about 0.5 miles southwest of the project site.

3.2.1.5 Geology, Topography, and Soils

JBA is located between the Blue Ridge Mountains (60 miles to the west) and the Chesapeake Bay (25 miles to the east). The base is near the western edge of the Middle Atlantic Coastal Plain physiographic province. This fall line occurs between the Piedmont and Coastal Plain, approximately 12 miles west of the base. JBA is located on a plateau, situated between the Potomac River to the west and the Patuxent River to the east. The topography is level to gently sloping, with elevations averaging 260 feet above mean sea level and local relief being less than 100 feet.

The majority of the surficial geology on JBA is comprised of upland deposits approximately 7 million years old and consists of irregularly bedded cobbles, gravel, and fine sand intermixed with silt or clay varying in thickness from 10 to 20 feet. The underlying Calvert Formation is visible where streams have cut deeply through the upland deposits. This formation was deposited during the Miocene Epoch, approximately 19 million years ago, and consists of a mixture of sands, silts, clays, and shell beds.

Much of the original land area of the base has been disturbed by cut and fill or other construction activities since the base was constructed in 1942. Some areas, especially in and around the runways and taxiways, have been highly disturbed, and some disturbed areas have 20 feet or more of fill material.

The majority of the main installation is comprised of udorthents and urban soils, which are typically previously disturbed areas with moderately well drained to excessively drained soils and low to very low runoff potential. Soils within project site A1 are all Un, or developed urban soils, which is not considered prime farmland or farmland of statewide importance (U.S. Department of Agriculture [USDA], 2021). A map of the soils found within the IDP project areas can be found in Appendix A.

3.2.1.6 Water Resources

3.2.1.6.1 Groundwater

JBA is located in a section of the Inner Coastal Plain where several important and regional aquifers exist. Groundwater underlying the main installation occurs at or near the ground surface, with shallow groundwater occurring at depths of less than 20 feet below ground surface (bgs), likely

under confined conditions. Groundwater recharge occurs primarily through precipitation. Groundwater flow is believed to be down-gradient toward local streams or downward toward deeper underlying aquifers.

3.2.1.6.2 Surface Water

JBA is located in the watersheds of the Potomac and Patuxent Rivers. The vast majority of the base is within the Potomac River watershed. Tributaries of the Potomac River on JBA are Meetinghouse Branch and Paynes Branch, which both originate in the southwestern quadrant of the base and flow west to the Potomac; Piscataway Creek, which originates in the southeast corner of the base; Tinkers Creek, which originates near the southwest corner of the base and flows to Piscataway Creek; and Henson Creek, in the northwest corner of the base. An area at the northeastern corner of the base is within the Patuxent River watershed. Tributaries of the Patuxent River are Cabin Creek and Charles Branch.

In *Maryland's 2018 Integrated Report of Surface Water Quality*, 22 percent of first through fourth order streams in the upper Patuxent River, which is partially located in Prince George's County, are listed as impaired for the designated use of aquatic life and wildlife as a result of chlorides and sulfates attributable to urban runoff and stormwater (Maryland Department of the Environment [MDE], 2019). This is unchanged from the 2014 assessment. The 2018 assessment also made no change to the 2014 assessment of Piscataway Creek, in which first through fourth order streams in the creek in Prince George's County are listed as impaired for the designated use of aquatic life and wildlife due to total suspended solids (TSS) and chlorides.

Other surface water resources at JBA are Base Lake (Freedom Lake) in the southwest corner, three ponds in the northwest portion, and two other small impoundments at the south golf course.

There are no surface water resources in the vicinity of project site A1, but the project site lies within the Tinkers Creek watershed, a tributary of Piscataway Creek, which is degraded due to elevated levels of sediment and inorganics. Surface water resources in the vicinity of all IDP projects are shown in the Water Resources maps in Appendix A.

3.2.1.6.3 Floodplains

EO 11988, *Floodplain Management*, requires that development on Federal lands avoid to the extent possible the long- and short-term adverse impacts to floodplains. Section 2 of the EO states that each agency has a responsibility to evaluate the potential impacts of any actions it may take in a floodplain to ensure that its planning programs and budget requests reflect consideration of flood hazards and floodplain management, and to prescribe procedures to implement the policies and requirements of the EO. Before taking an action, each agency shall determine whether the Proposed Action will occur in a floodplain.

This determination shall be made according to a Department of Housing and Urban Development (HUD) floodplain map, Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) or a more detailed map of an area, if available. If such maps are not available, the agency shall make a determination of the location of the floodplain based on the best available information.

In July 2005, JBA completed an analysis to determine the extent of the 100-year floodplain for the entire base. The purpose of this analysis, titled *Andrews Air Force Base, 89th Airlift Wing Floodplain Analysis*, was to produce a 100-year floodplain map and correlated Geographic Information System (GIS) files of the main JBA installation.

There are no floodplains within project site A1; however, it is located in the vicinity of the 100- and 500-year floodplains associated with Tinkers Creek. Floodplains in the vicinity of all IDP projects are shown in the Water Resources maps in Appendix A.

3.2.1.6.4 Coastal Zone

All of JBA's main installation and Brandywine annex are within the designated Maryland coastal zone. When a Federal agency conducts an activity or development project, or has an activity performed by a contractor for the benefit of the Federal agency, the agency must determine whether its activities are reasonably likely to affect any coastal use or resource and to conduct the activities in a manner that is consistent to the maximum extent practicable with the enforceable policies of the applicable state coastal program. The Federal agency must provide a Consistency Determination and supporting materials to the state Coastal Zone Management Program agency at least 90 days before starting the proposed activity, unless a different arrangement has previously been made between the Federal agency and the authorized state agency (Ghigiarelli, 2004).

3.2.1.6.5 Stormwater

JBA is required to manage its stormwater discharges in accordance with the regulations and requirements contained in the COMAR Chapter 26 subsections. Generally, JBA is required to control pre-construction and post-construction stormwater runoff, including erosion, sedimentation, and non-point source pollution. Specific requirements for JBA are described in *Maryland Stormwater Management and Erosion & Sediment Control Guidelines for State and Federal Projects* (MDE, 2015) and in the MDE Stormwater Management Act of 2007 (MDE, 2007). The regulations require that environmental site design (ESD) be implemented to the maximum extent practicable through the use of nonstructural BMPs and other site design techniques.

In accordance with the Stormwater Management Act of 2007, Maryland requires construction projects, including stream restoration projects, to provide ESD to the maximum extent practicable in an effort to minimize the adverse impacts of the discharge of stormwater runoff. ESD means using small-scale stormwater management practices, nonstructural techniques, and better site planning to mimic natural hydrologic runoff characteristics and minimize the impact of land development on water resources. MDE has published guidance on how Federal facilities shall comply with the Stormwater Management Act, and it is enforced during the permit application process.

The Energy Independence and Security Act (EISA) Section 438 requires Federal agencies to reduce water quality problems from stormwater runoff to the maximum extent technically feasible. Federal agencies can comply with EISA Section 438 by using a variety of stormwater management practices often referred to as green infrastructure or low impact development (LID) practices. The document, *Technical Guidance on Implementing the Stormwater Runoff Requirements for Federal*

Projects under Section 438 of the Energy Independence and Security Act, is used as guidance to ensure compliance with EISA Section 438 (USEPA, 2009).

It is USAF policy to apply sustainable development concepts to the planning, design, construction, environmental management, operation, maintenance, and disposition of infrastructure projects. Sustainable infrastructure achieves optimum resource efficiency and constructability while minimizing adverse impacts to the built and natural environments through all phases of its life cycle. The goal of sustainable infrastructure is to prevent environmental degradation caused by construction, operations, and disposition of facilities and to create built environments that are livable, healthy, maintainable, and productive. The USAF follows Uniform Facilities Code (UFC) 1-200-02, *High Performance and Sustainable Building Requirements*, to meet sustainability criteria with all projects.

Stormwater runoff at JBA's main installation is conveyed through oil/water separators and storm drains in industrial areas, and through swales and ditches in other areas. JBA has eight sub-watersheds, each of which discharges to a major storm drain outfall at the base boundary. Most stormwater (approximately 90 percent) drains to tributaries that flow to the Potomac River, with the rest draining to the Patuxent River.

3.2.1.6.6 Wetlands

The Clean Water Act (CWA) Section 404 (33 USC 1344) establishes a program to regulate all dredging and filling activities related to jurisdictional waters and wetlands of the United States. Actions that might impact wetlands, to include dredging, filling, and activities that could displace soil into a wetland, might require a Section 404 permit from USACE.

CWA Section 401 directs that any proponent of an action that requires a Federal license or permit (such as a Section 404 permit) must obtain a Water Quality Certificate from the state water pollution control agency, certifying that the action complies with state water quality criteria.

In compliance with EO 11990, *Protection of Wetlands*, the USAF attempts to preserve the natural values of wetlands while carrying out its mission on both USAF lands and non-USAF lands. To the maximum extent practicable, the USAF avoids actions that would either destroy or adversely modify wetlands.

Wetland surveys were conducted at JBA in 1997, 2004, 2010, 2012, 2014, and 2016. The three main wetland community types identified at JBA are palustrine emergent wetlands (PEM), palustrine scrub-shrub wetlands (PSS), and palustrine forested wetlands (PFO).

There are no wetlands with the LOD for project A1. Wetlands in the vicinity of all IDP projects are shown in the Water Resources maps in Appendix A.

3.2.1.7 Biological Resources

3.2.1.7.1 Vegetation

Nearly 80 percent of JBA's main installation is developed or extensively managed, and any vegetation in these areas includes lawns, gardens, golf course fairways, housing areas, and

recreational fields; along major roadways; and in semi-improved areas such as runway borders and clear zones, and the runway infield. Some small patches of original vegetation (unimproved areas) exist around the main installation and primarily consist of shallow, emergent marshland and forestland. JBA is in the Atlantic Slope section of the Oak-Pine Forest Region. Approximately 720 acres of forested land are scattered around the perimeter and southern portion of the base (JBA, 2014). A map of the forest stands located on JBA is located in the Biological Resources map in Appendix A.

3.2.1.7.2 Wildlife

Wildlife on JBA is typical of the mid-Atlantic region. More than 80 bird species have been identified at the base, including geese, herons, perching birds, and birds of prey. Migratory birds, especially waterfowl, are common at JBA because of the ponds and wetlands and its proximity to the Chesapeake Bay. Certain birds are protected under the MBTA and the Bald and Golden Eagle Protection Act (BGEPA). Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures.

A search of the IPaC system, which is the USFWS online system for searching for species protected as birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention, returned a list of eight migratory bird species of concern (Table 3-3). A full report including breeding season and probability of presence within IDP project LODs is included in Appendix C.

Reptiles found on JBA include common species of snakes, lizards, and turtles. Mammals known to occur at JBA also are typical of those in the region, including white-tailed deer (*Odocoileus virginianus*), raccoon (*Procyon lotor*), eastern gray squirrel (*Sciurus carolinensis*), eastern cottontail (*Sylvilagus floridanus*), and several bat species (JBA, 2014).

Table 3-3: Migratory Birds on JBA and the Brandywine Annex

Common Name	Scientific Name	Level of Concern
Bald Eagle	<i>Haliaeetus leucocephalus</i>	Non-BCC Vulnerable*
Bobolink	<i>Dolichonyx oryzivorus</i>	BCC Rangewide
Kentucky Warbler	<i>Oporornis formosus</i>	BCC Rangewide
Lesser Yellowlegs	<i>Tringa flavipes</i>	BCC Rangewide
Prairie Warbler	<i>Dendroica discolor</i>	BCC Rangewide
Red-headed Woodpecker	<i>Melanerpes erythrocephalus</i>	BCC Rangewide
Rusty Blackbird	<i>Euphagus carolinus</i>	BCC only in certain regions
Wood Thrush	<i>Hylocichla mustelina</i>	BCC Rangewide

*This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the BGEPA or for potential susceptibilities in offshore areas from certain types of development or activities.

3.2.1.7.3 Threatened and Endangered Species

The ESA of 1973 (16 USC 1531-1544) provides a program for the conservation of threatened and endangered plants and animals and their habitats. Under Section 7 of the ESA, federal agencies, in consultation with the USFWS and/or the National Marine Fisheries Service (NMFS), 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, plants, and their habitats. Special

status species include those that are candidates for, proposed as, or listed as sensitive, threatened, or endangered.

Initial consultation with USFWS through the IPaC system determined the potential for the federally listed Northern Long-Eared Bat (NLEB) (*Myotis septentrionalis*) and Monarch Butterfly (*Danaus plexippus*) to occur within the IDP project LODs. The full report can be found in Appendix C. Initial consultation with MDNR noted the potential for the state listed endangered Blue Ridge False Foxglove (*Agalinis decemloba*) to occur on the main installation.

3.2.1.8 Cultural Resources

Cultural resources are any prehistoric or historic district, site, building, structure, or object considered important to a culture or community for scientific, traditional, religious, or other purposes. Cultural resources include archaeological resources, historic architectural resources, and traditional cultural properties. These three types of resources are described below:

- Archaeological resources are prehistoric or historic sites where human activity has left physical evidence to that activity, but no structures remain.
- Historic architectural resources are buildings, other structures, groups of structures (districts), or designed landscapes that are of historic or aesthetic significance.
- Traditional Cultural Properties (TCPs) are resources of traditional, religious, or cultural significance to Native American tribes.

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, Indian Sacred Sites, 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.

The NHPA, as amended, requires Federal agencies to consider impacts of Federal undertakings on historic properties prior to making a decision or taking an action, and to integrate historic preservation values into their decision-making processes. Federal agencies fulfill this requirement by completing the Section 106 consultation process, as set forth in 36 CFR 800. When completing the Section 106 process, Federal agencies must identify, and consider impacts to, the area of potential effect (APE) for the project, which is typically the project boundary and any surrounding areas within the viewshed of the proposed project. For this Proposed Action, the APE is all of JBA’s main installation and Brandywine Annex.

3.2.1.8.1 Archaeological Resources

The physiographic location of JBA between the Potomac and Patuxent Rivers would have been attractive to prehistoric inhabitants of the region. It is known that prehistoric groups utilized the immediate environment of JBA for habitation and/or resource procurement. During the historic period, this region contained plantations associated with the rural agricultural economy of Prince George's County. However, a 1993 survey conducted by the National Park Service (NPS) concluded that construction and development of JBA has disturbed much of the area’s soils, thus affecting the integrity of many prehistoric and historic deposits within JBA.

The 2017 JBA Integrated Cultural Resources Management Plan (ICRMP) Update includes a synopsis of previous cultural resource surveys and architectural inventories, and outlines and assigns responsibilities for the management and preservation of cultural resources at JBA. The ICRMP indicates that JBA has completed its inventory and identification of archaeological resources and that no new inventory efforts are needed (JBA, 2017b).

While previous investigations have identified six archaeological sites that are eligible for inclusion in the NRHP on properties owned by JBA (Harrell and Montagliani, 1984; Moeller et al., 1995; JBA, 2017b; Tetra Tech, 1999), the only eligible site on JBA's main installation is the Belle Chance cemetery (site 18PR447) (Figure 3-1). Moeller et al. (1995) identified 62 locations that could contain historic archaeological resources. Although these locations have been subjected to disturbance from base construction, subsurface deposits associated with these sites may remain intact at some localities.

There are no known archaeological sites within the LOD for Project A1.

3.2.1.8.2 Architectural Resources

In April 2020, a historic building inventory and evaluation was conducted for JBA. The survey examined 52 structures and facilities. This investigation evaluated three types of buildings and structures at JBA including four large hangars, three of which are associated with the Air Force One Maintenance and Support Complex (also known as the Presidential Air Group); four pre-base nonmilitary historic structures and landscape features associated with the "Belle Chance" area of the base; and 44 mission support facilities and base operations buildings. The survey identified five resources that were recommended as eligible for listing in the NRHP.

Tagged as the "Aerial Gateway to the Nation's Capital" in July 1969, Andrews Air Force Base (now part of Joint Base Andrews) and its distinctive group of presidential hangars, Hangars 3 (Facility 1754), Hangar 6 (Facility 1280), and Hangar 19 (Facility 5016), and passenger terminal (Facility 1245), has been a symbolic location for historically significant events associated with the duties of the President of the United States from 1961 to the present. Following World War II and with the increasingly global influence of the United States in international conflicts and political transitions throughout the Cold War Era, Andrews Air Force Base's presidential hangars served as primary arrival and departure points during times of national achievements and crises and international diplomatic missions. Preliminary investigation of base records and base historian files has confirmed that Hangars 3, 6, and 19 and the terminal building are associated with many historically significant national events and international diplomatic occasions, making them eligible for listing in the NRHP under Criteria A and B. Although significant presidential events at the hangars might last only hours, the hangars were the designated sites for many of these historic occasions, often associated with highly important people and pivotal events in the history of the United States throughout the Cold War Era and after (O'Rourke et. al 2020).

Any proposed alterations to these buildings or proposed actions within the viewsheds of these buildings will have to be carefully consulted on with the Maryland SHPO and other consulting parties.



Figures 3-1 and 3-2: Facility 1245, Passenger Terminal (Left) & Facility 1280, Presidential Hangar 6 (Right)



Figure 3-3: Facility 1754, Hangar 3

Belle Chance is a collection of early twentieth-century structures located on the northern end of JBA. The location was once the site of a plantation dating back to the eighteenth century. Currently, the main structure in the Belle Chance area serves as the base commander's home. The 2020 study examined four features in the Belle Chance area: a concrete springhouse (meat house), a pond and its associated concrete retaining wall, a wooden corncrib, and a family cemetery dating to the 1840 plantation. The survey found only the cemetery as being eligible for listing in the NRHP.

None of the properties recommended for NRHP listing are located within the LOD for Project A1, and Project A1 is not within the viewshed of any of these properties.



Figures 3-4 & 3-5: Concrete Pond and Retaining Wall (Left) & Darcy Family Cemetery (Right) at Belle Chance

3.2.1.8.3 Traditional Cultural Properties

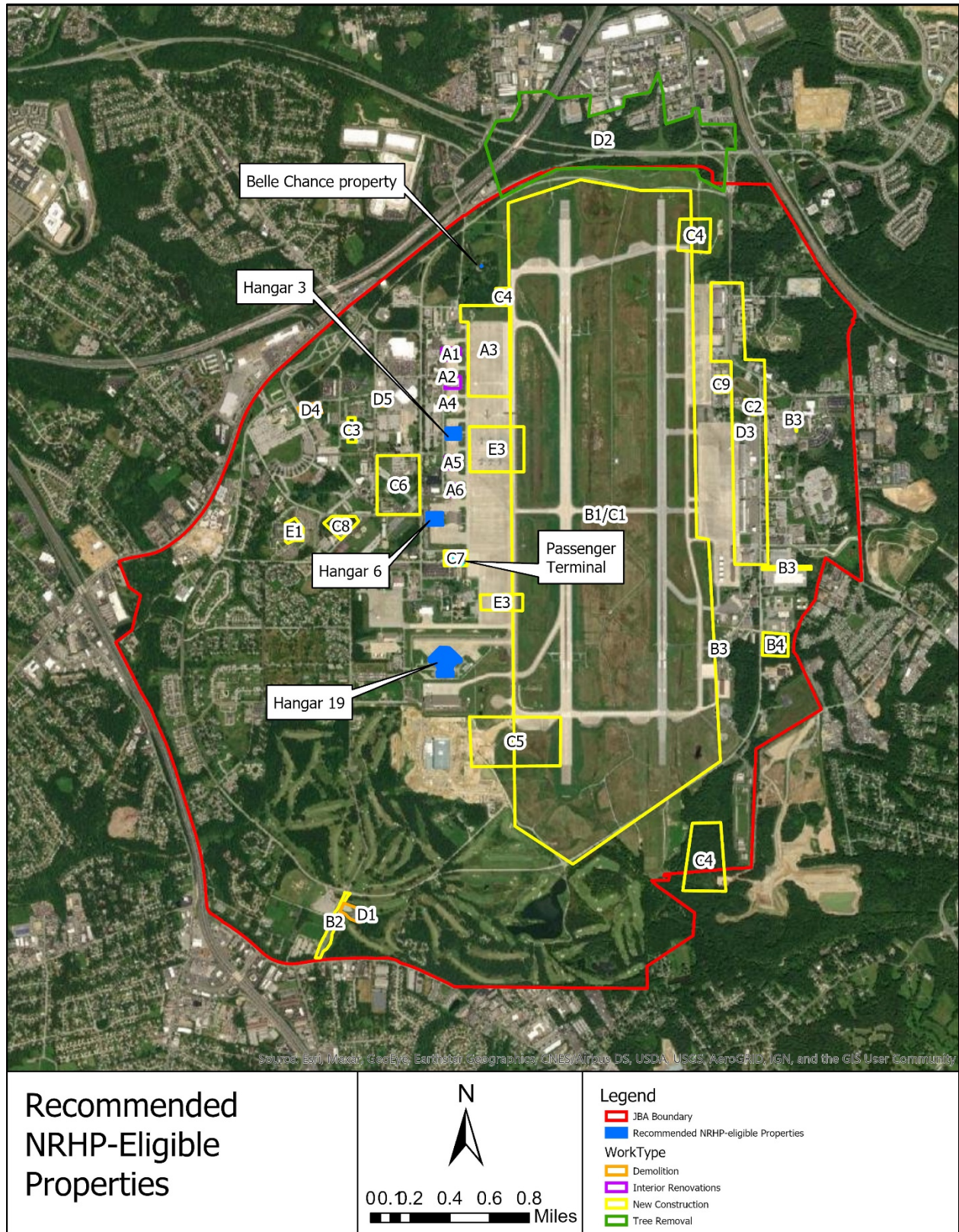
No TCPs have been identified on JBA’s main installation or the Brandywine Annex.

3.2.1.9 Transportation

JBA’s main installation is located 5 miles southeast of Washington, D.C. The primary roadway serving JBA and the surrounding communities is Interstate 95/495 (I-95/495), known as the “Capital Beltway,” which runs along the west side of the base and provides direct access to Allentown Road (Maryland [MD] 337), Suitland Parkway, and Marlboro Pike. Other routes, including MD 4, Pennsylvania Avenue, and MD 5, distribute traffic from I-95/495 onto other local roadways.

Transportation on and near JBA is achieved mainly via road and street networks and pedestrian walkways. Regional access to JBA is provided by the Capital Beltway. State routes that provide access to the area include Pennsylvania Avenue, Branch Avenue, Allentown Road, Woodyard Road, and Dower House Road; and the base perimeter roads, Maryland Avenue, North Carolina Avenue, and Arkansas Road provide access to the sites. In general, major intersections in the roadway network surrounding JBA are operating over capacity. That situation creates queuing, delays, and potentially unsafe conditions.

Figure 3-6: Locations of Recommended NRHP-Eligible Properties



JBA has approximately 101 miles of paved roads that provide access to administrative, operations, housing, industrial, medical, recreation, and airfield areas. The overall pavement condition for roads and parking lots on JBA is adequate, and the majority are in good condition. The perimeter roads (North, East, South, and West Perimeter roads) are the primary roadways connecting the two sides of JBA. Combined, they form a two-lane, undivided road that makes an 8.2-mile loop around the base in four segments. Traffic during peak flow hours is heaviest at the Alabama Avenue/North Perimeter Road and Virginia Avenue/South Perimeter Road intersections because of the limited number of egress points on the base (JBA, 2019).

The closest large public airport is Ronald Reagan Washington National Airport, which is 15 miles away in Arlington, Virginia, and has approximately 816 operations per day (AirNav, 2020). Other nearby airports include Baltimore-Washington Thurgood Marshall International Airport and Washington Dulles International Airport. The closest Amtrak station is about 10 miles away at Union Station in Washington, D.C. Three public agencies provide transit service to the area surrounding JBA: Washington Metropolitan Area Transit Authority via the Metrorail and Metrobus systems, the Maryland Transit Administration, and Prince George's County via TheBus service. The Branch Avenue Metrorail station (approximately 3 miles from the JBA main gate) provides rail service and transfers. Two bus routes have at least two stops within one-quarter mile of the intersection of Suitland Road and Allentown Road outside the main gate.

3.2.1.10 Infrastructure and Utilities

The water system infrastructure and sanitary sewer system at JBA were both privatized in February 2006, and this infrastructure is now owned and operated by American States Utility Services, Inc. (ASUS) under a 50-year contract. ASUS purchases water from the Washington Suburban Sanitary Commission (WSSC) to serve the base, and the existing water supply and treatment are adequate for all current and industrial uses. ASUS addresses issues in the distribution system, particularly on the east side and lower west side of the base, as part of its contractual arrangement and replaced water distribution pipes throughout the base within the last few years. The wastewater at JBA is sent off-base to the WSSC wastewater treatment plant. JBA's wastewater distribution system is divided into two sections – east and west – and each has its own capacity and demand. The combined average daily demand of both sections is less than 600,000 gallons per day, which is well below the system's capacity (JBA, 2019).

The stormwater system at JBA includes catch basins and culverts that guide water through a series of natural drainage channels, underground storm sewer pipes, and man-made ditches. The system ultimately discharges stormwater into Piscataway Creek and tributaries to Tinkers Creek, Henson Creek, Cabin Branch, and Charles Branch. These creeks flow into either the Potomac or the Patuxent Rivers, with the majority of the stormwater from JBA ultimately draining into the Piscataway Creek watershed and eventually into the Potomac River (JBA, 2019).

JBA developed a Stormwater Pollution Prevention Plan (SWPPP) in 2020 that provides drainage descriptions and BMPs for stormwater pollution prevention in accordance with the National Pollutant Discharge Elimination System (NPDES) requirements located in 40 CFR 126.26 (JBA, 2020).

Potomac Electric Power Company (PEPCO) provides JBA's electrical power. Two 69-kilovolt electrical feeders from off base tie directly into a main substation on base, which is owned and operated by the USAF. Primary feeder circuits distribute electricity to the rest of the base from the substation, with more than 90 percent of the overhead power lines now located underground. The base owns, operates, and maintains the on-base electric power distribution system, except in the housing area, where it is privatized. The current electrical supply from PEPCO is adequate for all existing on-base needs.

The JBA heating and cooling system has been decentralized and no longer includes central heating plants. Instead, JBA relies on more than 300 oil-fired and natural gas boilers, with about 95 percent running on natural gas and the remaining approximately 5 percent running on oil. Approximately 60 percent of the buildings on JBA utilize automated heating and cooling systems. Eighty percent of the system is new and in good condition, and the remaining 20 percent of the system is in mediocre-to-poor condition (JBA, 2019).

Natural gas is supplied to JBA by Washington Gas through seven connection points. The system, which was installed in 1985, is a looped distribution system approximately 10 miles long. Washington Gas owns and operates all of the natural gas system and is responsible for maintaining and installing natural gas lines from the connection point to the pressure regulators at each building. The USAF is responsible for maintaining and repairing all lines within each building. The natural gas system is adequate, and the privatization of the distribution system's maintenance and operation to Washington Gas has improved the efficiency for completing on-site repairs and reduced the likelihood of system failures (JBA, 2019).

Finally, solid waste generated on JBA is collected, handled, and disposed of through a program managed by the Civil Engineering Operations Flight. The Resources, Recovery, and Recycling Program office and the Maintenance and Engineering office are responsible for the collection, segregation, accumulation, and disposition of domestic waste recyclables from numerous industrial and domestic collection sites. Solid waste generated on JBA that cannot be recycled is collected and disposed of by a contractor at a licensed landfill in Prince George's County. Debris and materials from construction activities are disposed of at an off-site landfill by the contractor responsible for any renovation or demolition activities (JBA, 2019).

3.2.1.11 Hazardous and Toxic Materials and Waste (HTMW)

The term "hazardous materials" refers to substances defined as hazardous by the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), and the term "hazardous waste" refers to wastes defined as hazardous by the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act (RCRA). Hazardous materials are substances that, because of their quality, concentration, or physical, chemical, or infectious characteristics, could present substantial danger to public health or the environment when released into the environment.

Under 40 CFR Part 261, hazardous wastes regulated under RCRA are defined as solid, liquid, contained gaseous, semisolid waste, or any combination of wastes that either are listed or exhibit one or more of the hazardous characteristics. Petroleum products – including petroleum-based fuels, oils, and their wastes – are not covered under CERCLA, but might be covered under RCRA.

Analyses of HTMW typically center on waste streams; underground storage tanks (USTs); above ground storage tanks (ASTs); and the storage, transport, use, and disposal of pesticides, fuels, lubricants, and other industrial substances. In this EA, HTMW include hazardous materials and waste management, Environmental Restoration Program (ERP) sites, Military Munitions Response Program (MMRP) sites, USTs and ASTs, asbestos containing material (ACM), and lead based paint (LBP).

3.2.1.11.1 Hazardous and Petroleum Waste Management

JBA missions and operations require the use and storage of hazardous materials, especially those associated with aircraft operations. The primary types of hazardous waste generated at JBA include batteries, used fuel and oil, solvents, fluorescent bulbs, fuel filters, and solvent-contaminated solids, most of which is generated as a result of aircraft operations. JBA is considered a large quantity generator of hazardous wastes under RCRA, and as such, reports to USEPA using identification number MD0570024000.

The Toxic Substances Control Act of 1976 (TSCA) addresses the production, import, use, and disposal of chemicals such as polychlorinated biphenyls (PCBs), lead and LBP, asbestos, mercury, formaldehyde, and hexavalent chromium compounds.

There are no known hazardous or petroleum waste concerns within the Project A1 LOD.

3.2.1.11.2 Environmental Restoration Program (ERP) Sites

The JBA ERP identifies, evaluates, remediates, and restores sites contaminated with toxic and hazardous substances, petroleum, oils, lubricants, and other pollutants and contaminants. The ERP has established a process to evaluate past disposal sites, control the migration of contaminants, identify potential hazards to human health and the environment, and remediate the sites.

The Air Force previously used aqueous film forming foam (AFFF) at its installations, including JBA, that contained per- and polyfluoroalkyl substances (PFAS), which have been the subject of recent EPA health advisories. Because of the previous use of this foam at JBA, there is the potential for PFAS contamination throughout the main installation and Brandywine annex. The Air Force is conducting drinking water and ground water sampling efforts across its installations to determine the locations of PFAS contamination. JBA conducted a preliminary assessment for perfluorinated compounds (PFCs) in May 2015 and additional site inspections related to PFAS contamination due to AFFF in May 2018 (Air Force Civil Engineer Center [AFCEC], 2015; AFCEC, 2018). JBA should continue to test for PFAS on its main installation, and any areas with PFAS levels exceeding EPA standards should be remediated in accordance with CERCLA. JBA should test the soil and ground water in an area prior to beginning any projects, and should consult the ERP office to determine remediation measures, as needed. The Air Force should also ensure that the legacy PFAS-containing firefighting foam is replaced with a PFAS-free alternative (AFCEC, n.d.).

There are currently 35 active ERP sites on JBA; however, none are on, or in the immediate vicinity of, the A1 project LOD (JBA, 2018a).

3.2.1.11.3 Military Munitions Response Program (MMRP)

The MMRP at JBA consists of several sites dating back to 1943. The areas of concern are to the south end of the west runway and include: the Skeet and Trap Club, the Old Skeet Range, a Firing-In Buttress, a Small Arms Range, and two Rifle Ranges (I and II). The Skeet and Trap Club and Old Skeet Range were recreational in use and likely used 12-, 20-, and 28-gauge ammunition. The Firing-In Buttress was built to withstand munitions ranging from .30 caliber to 37mm. The Small Arms Range was an indoor pistol range with five firing positions. The only documented ammunition used were .38 and .45 caliber rounds. Rifle Range I was likely used for an Air Police training program that included training on the M1A1 Carbine and Thompson submachine gun, which means .30 and .45 caliber cartridges were likely used. Rifle Range II was recreational in use, but the site is currently part of the golf course and all traces of debris appear to have been removed. There are no MMRP sites known to occur near the project site (JBA, 2018b).

3.2.1.11.4 Above Ground and Underground Storage Tanks

There are more than 150 storage tanks within JBA boundaries; however, there are no existing ASTs or USTs within the A1 project LOD or in its immediate vicinity.

3.2.1.11.5 Asbestos and Lead

Hangar 1, which makes up most of project LOD A1, was built in 1961. Based on the age of the building, there is potential for ACM and LBP.

3.2.1.12 Socioeconomics, Environmental Justice, and Protection of Children

The ROI for the socioeconomic environment is defined as Prince George's County, Maryland. For comparative purposes, socioeconomic data also are presented for the State of Maryland and the United States. The 2019 socioeconomic data is the most recently available at the time of writing.

3.2.1.12.1 Population

The ROI's population increased by about 5 percent (about 46,000 people) between 2010 and 2019 (Table 3-4). That population growth rate was similar to the rates of the State of Maryland and the nation, where the populations increased by 4 percent and 6 percent, respectively. By 2030, the ROI's population is projected to increase by 4 percent, Maryland's population is projected to increase by 14 percent, and the United States population is projected to increase by 10 percent (United States Census Bureau, 2019).

Table 3-4: Population Trends

Geographic Area	2010 Population	2019 Population	Change in Population 2010-2019	Projected Change in Population 2019-2030
ROI (Prince Georges County)	863,519	909,327	5%	4%
Maryland	5,773,785	6,045,680	4%	14%
United States	308,758,105	328,239,523	6%	10%

Source: United States Census Bureau, 2019

JBA's main installation is bordered on the west by a highly urbanized area and on the east by a semi-rural area that is undergoing suburban residential and commercial growth. Immediately adjacent to the northeast boundary of JBA is a major new town development (Westphalia) to be built-out over a 30-year period with about 10,000 new homes and a town center with offices, retail, and entertainment venues. Communities around JBA include Forestville and Morningside to the north and northwest, Camp Springs to the west, Clinton to the south, and Rosaryville to the southeast and east (Department of the Air Force [DAF], 2017).

3.2.1.12.2 *Employment and Income*

The ROI is within the Washington, D.C., Metropolitan Statistical Area. The area generally enjoys a strong economy and has experienced sustained growth. Table 3-5 shows that ROI labor force and unemployment trends are about the same as they are for the state and nation. The ROI labor force increased 2.7 percent between 2010 and 2018, which is slightly less than the Maryland labor force growth of 3.9 percent, and about half of the U.S. labor force growth for that time period.

The ROI, state, and national unemployment rates all declined from 2010 to 2019 – the most recent year for which data is available. The ROI and Maryland 2019 annual unemployment rates were 5.5 percent and 4.5 percent, respectively, similar to the national rate of 4.5 percent (Bureau of Labor Statistics [BLS], 2019).

Table 3-5: Labor Force and Unemployment

Geographic Area	Change in Labor Force 2010-2018	2010 Annual Unemployment Rate	2019 Annual Unemployment Rate
ROI (Prince George's County)	2.7%	7.5%	5.5%
Maryland	3.9%	7.7%	4.5%
United States	6.9%	10.6%	4.5%

Source: BLS, 2018; BLS, 2019

As of 2018, the leading ROI industries on the basis of employment were government and government enterprises (which includes Federal military, civilian, and state and local government); retail trade; construction; health care and social assistance; and professional, scientific, and technical services. Together, those five industry sectors accounted for about 60 percent of regional employment. The government and government enterprises industry sector (which includes JBA) was the largest employer in the ROI, accounting for 21 percent of total ROI employment (Bureau of Economic Analysis [BEA], 2018).

JBA is a major contributor to the regional economy. The daytime workforce consists of about 17,000 USAF personnel and about 500 Navy personnel. JBA is the largest employer in the ROI and has an estimated economic impact of \$1.2 billion on the local economy (JBA, 2019).

Table 3-6 lists 2018 per capita personal income (PCPI) and median household income. The ROI income levels were about the same as for the state, but higher than for the nation. As of 2018, the ROI PCPI was \$35,869, which was 89 percent of the Maryland state PCPI of \$40,517, but 110 percent of the national PCPI of \$32,621 (BLS, 2018). The ROI median household income of

\$81,969 was just over 100 percent of the Maryland median household income of \$81,868, and 136 percent of the national median household income of \$60,293 (BLS, 2018).

Table 3-6: PCPI and Median Household Income 2018 Estimates

Geographic Area	PCPI	Median Household Income
ROI (Prince George’s County)	\$35,869	\$81,969
Maryland	\$40,517	\$81,868
United States	\$32,621	\$60,293

Source: BLS, 2018

3.2.1.12.3 Environmental Justice

EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, encourages Federal facilities to achieve “environmental justice” by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental impacts of its programs, policies, and activities on minority and low-income populations. To determine whether the ROI contains a disproportionately high minority or low-income population, data for Prince George’s County was compared to data for Maryland and the United States.

Within the ROI, approximately 87 percent of the population is considered minority, which is higher than both state (50 percent) and national (40 percent) averages (U.S. Census Bureau, 2019). African Americans accounted for the largest minority populations in Prince George’s County (64.4 percent).

Within the ROI, approximately 8.6 percent of the population lived at or below the poverty level in 2019, which is lower than Maryland (9 percent) and the national (12.3 percent) average (BLS, 2019 (Table 3-7)).

Table 3-7: Income and Poverty Data

Category	United States	Maryland	Prince George’s County
Median household income (in 2018 dollars), 2014-2018	\$65,712	\$86,738	\$100,654
Per capita income in past 12 months (in 2018 dollars), 2014-2018	\$35,672	\$43,325	\$37,618
Persons in poverty, percent	12.3%	9.0%	8.6%

Source: BLS, 2019

3.2.1.12.4 Protection of Children

EO 13045, *Protection of Children from Environmental Health Risks and Safety Risks*, aims to reduce environmental or health safety risks that the USEPA finds may disproportionately affect children. The project LOD for A1 and the surrounding buildings are primarily administrative and do not house any existing schools, playgrounds, CDCs, or other facilities that would put children

at a disproportionate risk for any environmental or health risks during construction or operation of this proposed facility.

3.2.1.13 Safety and Occupational Health

Development on JBA is constrained by explosive safety zones, environmental restoration activities, airfield clearance requirements, and airfield noise. Minor safety-related development constraints on JBA are Anti-Terrorism/Force Protection (AT/FP) requirements and ERP site restrictions. Consideration of noise constraints is discussed in section 3.2.1.4, and consideration of ERP sites is discussed in section 3.2.1.11. Explosive safety quantity distance (ESQD) arcs, or the areas within a specified distance of explosive materials storage sites, cover a portion of the golf course and the southwest portion of the airfield. Those areas are either limited or restricted for development. The project LOD for A1 is not within existing ESQD arcs. Construction site safety and prevention of mishaps is an ongoing activity for any Air Force job site. The Air Force Occupational Safety and Health regulations provide for compliance with confined spaces regulations, minimum personal protection equipment standards, limited access to the jobsite, and other items.

3.2.2 Environmental Consequences

This project involves primarily interior renovations, with some minor exterior drainage work, so anticipated impacts would be limited. There are no anticipated impacts to land use, airspace management, geology, topography, soils, water resources, biological resources, transportation, socioeconomics, environmental justice, protection of children, or safety and occupational health. There would be negligible to minor, temporary adverse impacts to air quality, noise, HTMW, and infrastructure and utilities during construction. These potential impacts would be reduced through the implementation of appropriate controls and mitigation measures. No impacts would be expected to archaeological resources of TCPs, but before cultural impacts can be fully assessed, Hangar 1 should be evaluated for NRHP eligibility. Because Hangar 1 was built in 1961 and is now over 50 years old, it could be eligible for the NRHP. Potential HTMW impacts could include ACM or LBP within the building, either of which could be impacted during the interior renovations. While there are no known PFAS sites on, or in the immediate vicinity of, the A1 project, the soil and ground water should still be tested prior to any ground disturbing activities.

Based on the expected impacts of project A1, it is anticipated that an AF Form 813 would be the appropriate level of supplemental NEPA once additional project details are determined.

3.3 Project A2 – Renovation/Repair of Hangar 2

Project A2 includes the interior renovations and repairs of Hangar 2, including renovations to allow for the parking of nine MH-139 aircraft, the relocation of alert facility into the building lean-to, and minor drainage work around the building exterior.

3.3.1 Existing Conditions

3.3.1.1 Air Quality

Air quality existing conditions described in Section 3.2.1.1 apply to this project's LOD as well.

3.3.1.2 Land Use

Background information and information on land use adjacent to the main installation described in Section 3.2.1.2 are applicable to this project as well. The existing land use at project site A2 is Aircraft Operations and Maintenance. Maps of land use for all of the IDP project sites can be found in Appendix A.

3.3.1.3 Airspace Management

Airspace management existing conditions described in Section 3.2.1.3 apply to this project's LOD as well.

3.3.1.4 Noise

Regulations related to noise and existing conditions on JBA as described in Section 3.2.1.4 are applicable to this project as well. There are no NSAs in the immediate vicinity of project site A2; however, there are several dormitories about 0.4 miles southwest of the site.

3.3.1.5 Geology, Topography, and Soils

The geology and topography existing conditions described in Section 3.2.1.5 apply to this project's LOD as well. The majority of the main installation is comprised of udorthents and urban soils, which are typically previously disturbed areas with moderately well drained to excessively drained soils and low to very low runoff potential. Soils within project site A2 are all Un, or developed urban soils, which is not considered prime farmland or farmland of statewide importance (USDA, 2021). A map of the soils found within the IDP project areas can be found in Appendix A.

3.3.1.6 Water Resources

The existing conditions of water resources as described in Section 3.2.1.6 apply to this project area as well. Project A2 falls within the Tinkers Creek watershed and there are no surface waters or floodplains within the project LOD; however, there are 100- and 500-year floodplains in the vicinity of the project site. There are also no wetlands on or in the vicinity of project A2. Water Resources maps in Appendix A show the surface waters, floodplains, and wetlands in the vicinity of all IDP projects.

3.3.1.7 Biological Resources

The existing conditions described in Section 3.2.1.7 for vegetation, wildlife, and threatened and endangered species within JBA's main installation apply to the project area for A2 as well. This project area is totally developed and mowed lawn and there are no threatened or endangered species known to occur within this LOD. A map of the forest stands and threatened and endangered species within this project area is located in the Biological Resources map in Appendix A.

3.3.1.8 Cultural Resources

Background information and information on JBA's cultural resources described in Section 3.2.1.8 are applicable to this project as well. No architectural or archaeological historic properties are known to be within the A2 LOD, nor are there any known historic properties within the viewshed of the project site.

3.3.1.9 Transportation

Existing conditions regarding transportation as described in Section 3.2.1.9 apply to this proposed project area as well.

3.3.1.10 Infrastructure and Utilities

The existing conditions related to infrastructure and utilities as described in Section 3.2.1.10 apply to this proposed project area as well.

3.3.1.11 HTMW

The majority of the existing conditions described in Section 3.2.1.11 apply to this project area as well. There are no ERP sites or MMRP sites on the A2 project LOD (JBA, 2018a; JBA, 2018b). There are no existing ASTs or USTs within the A2 project LOD or in its immediate vicinity. Based on the age of Hangar 2, there is potential for ACM and LBP.

3.3.1.12 Socioeconomics, Environmental Justice, and Protection of Children

The existing conditions for socioeconomics, environmental justice, and protection of children as described in Section 3.2.1.12 apply to this project area as well. This project area does not contain any existing schools, playgrounds, CDCs, or other facilities that would put children at a disproportionate risk for any environmental or health risks during development of this proposed project.

3.3.1.13 Safety and Occupational Health

The existing conditions for safety and occupational health as described in Section 3.2.1.13 apply to the A2 project LOD as well. The project LOD for A2 is not within existing ESQD arcs.

3.3.2 Environmental Consequences

Project A2 involves primarily interior renovations, with some minor exterior drainage work, so anticipated impacts would be limited. There are no anticipated impacts to land use, airspace management, geology, topography, soils, cultural resources, water resources, biological resources, transportation, socioeconomics, environmental justice, protection of children, or safety and occupational health. There would be negligible to minor, temporary adverse impacts to air quality, noise, HTMW, and infrastructure and utilities during construction. These potential impacts would be reduced through the implementation of appropriate controls and mitigation measures. Potential HTMW impacts could include ACM or LBP within the building, either of which could be impacted during the interior renovations. While there are no known PFAS sites on, or in the immediate vicinity of, the A2 project, the soil and ground water should still be tested prior to any ground disturbing activities.

Based on the expected impacts of project A2, it is anticipated that an AF Form 813 would be the appropriate level of supplemental NEPA once additional project details are determined.

3.4 Project A3 – Aircraft Parking Ramp Modifications and Ramp Extension

Project A3 comprises the addition of 16 ramp parking spots and 64 mooring points in the West Apron of the airfield, along with the addition of a new approximately 240,000 square foot (sq ft) ramp extension to the north of the existing West Apron. As part of the ramp extension, Building 1911 will be demolished and its functions relocated.

3.4.1 Existing Conditions

3.4.1.1 Air Quality

Air quality existing conditions described in Section 3.2.1.1 apply to this project's LOD as well.

3.4.1.2 Land Use

Background information and information on land use adjacent to the main installation described in Section 3.2.1.2 are applicable to this project as well. The existing land use at project site A3 includes Aircraft Operations and Maintenance, Airfield Pavement, and Open Space/Buffer Zone. Maps of land use for all of the IDP project sites can be found in Appendix A.

3.4.1.3 Airspace Management

Airspace management existing conditions described in Section 3.2.1.3 apply to this project's LOD as well.

3.4.1.4 Noise

Regulations related to noise and existing conditions on JBA as described in Section 3.2.1.4 are applicable to this project as well. There are no NSAs in the vicinity of project site A3.

3.4.1.5 Geology, Topography, and Soils

The geology and topography existing conditions described in Section 3.2.1.5 apply to this project's LOD as well. The majority of the main installation is comprised of udorthents and urban soils, which are typically previously disturbed areas with moderately well drained to excessively drained soils and low to very low runoff potential. Soils within project site A3 include: UdbB, Un, WoB. These soils are udorthents, urban developed land, and Woodbridge sandy loams, which are well drained gravelly loams with high runoff potential. None of the soils within this project area are prime farmland or farmland of statewide importance (USDA, 2021). A map of the soils found within the IDP project areas can be found in Appendix A.

3.4.1.6 Water Resources

The existing conditions of water resources as described in Section 3.2.1.6 apply to this project area as well. Project A3 falls within the Tinkers Creek and Henson Creek watersheds and the project site contains a perennial pond and palustrine wetlands in the northwestern corner of the project site. It also contains 100- and 500-year floodplains within both the Tinkers Creek and Henson Creek watersheds. Water Resources maps in Appendix A show the surface waters, floodplains, and wetlands in the vicinity of all IDP projects.

3.4.1.7 Biological Resources

The existing conditions described in Section 3.2.1.7 for vegetation, wildlife, and threatened and endangered species within JBA's main installation apply to the project area for A3 as well. This project area is mostly developed and mowed lawn with a small portion of forest in the along the northern edge of the project site. There are no threatened or endangered species known to occur within this LOD. A map of the forest stands and threatened and endangered species within this project area is located in the Biological Resources map in Appendix A.

3.4.1.8 Cultural Resources

Background information and information on JBA's cultural resources described in Section 3.2.1.8 are applicable to this project as well. No architectural or archaeological historic properties are known to be within the A3 LOD; however, Project A3 does fall within the viewshed of recommended NRHP-eligible building 1754, also known as Hangar 3.

3.4.1.9 Transportation

Existing conditions regarding transportation as described in Section 3.2.1.9 apply to this proposed project area as well.

3.4.1.10 Infrastructure and Utilities

The existing conditions related to infrastructure and utilities as described in Section 3.2.1.10 apply to this proposed project area as well.

3.4.1.11 HTMW

The majority of the existing conditions described in Section 3.2.1.11 apply to this project area as well. There are no ERP sites or MMRP sites on the A3 project LOD (JBA, 2018a; JBA, 2018b). While there are no USTs within the A3 project LOD, there is one AST associated with Building 1911 within the project LOD.

3.4.1.12 Socioeconomics, Environmental Justice, and Protection of Children

The existing conditions for socioeconomics, environmental justice, and protection of children as described in Section 3.2.1.12 apply to this project area as well. This project area does not contain any existing schools, playgrounds, CDCs, or other facilities that would put children at a disproportionate risk for any environmental or health risks during development of this proposed project.

3.4.1.13 Safety and Occupational Health

The existing conditions for safety and occupational health as described in Section 3.2.1.13 apply to the A3 project LOD as well. The project LOD for A3 is not within existing ESQD arcs.

3.4.2 Environmental Consequences

Project A3 involves new construction of a ramp extension and the addition of helicopter parking areas and mooring points. This new construction will require building demolition and potential alteration of forested areas, wetlands, floodplains, and surface waters, so there would be

anticipated adverse impacts; however, the extent of these impacts would be dependent on how much of these resource areas can be avoided based on project design.

There are no anticipated impacts to airspace management, geology, topography, transportation, socioeconomics, environmental justice, protection of children, or safety and occupational health. There would be minor, temporary adverse impacts to air quality, cultural resources, noise, and infrastructure and utilities during construction. There would be minor adverse impacts to land use, soils, surface waters, wetlands, floodplains, stormwater, biological resources, and HTMW. These potential impacts would be reduced through the implementation of appropriate controls and mitigation measures. Land use changes would take place as additional helicopter parking would be added, changing some open space/buffer zone areas to airfield pavement. As the project requires an increase in impervious surfaces, there would be minor impacts to stormwater. The increased paved areas would also encroach upon surface waters and wetlands, and would require some tree removal. The project also falls within the 500-year floodplain, so the appropriate coordination and permits would be required prior to development of this project. As Building 1911 would be removed as part of proposed project A3, the associated AST would need to be removed in accordance with appropriate guidance and regulations. While there are no known PFAS sites on, or in the immediate vicinity of, the A3 project, the soil and ground water should still be tested prior to any ground disturbing activities.

Based on the expected impacts of project A3, it is anticipated that an EA would be the appropriate level of supplemental NEPA once additional project details are determined.

3.5 Project A4 – Construct Helicopter Wash Rack

Project A4 involves the construction of an approximately 4,800 sq ft helicopter wash rack just south of Hangar 2, and the potential demolition of an existing access driveway to the southwest of the proposed site.

3.5.1 Existing Conditions

3.5.1.1 Air Quality

Air quality existing conditions described in Section 3.2.1.1 apply to this project's LOD as well.

3.5.1.2 Land Use

Background information and information on land use adjacent to the main installation described in Section 3.2.1.2 are applicable to this project as well. The existing land use at project site A4 is Aircraft Operations and Maintenance. Maps of land use for all of the IDP project sites can be found in Appendix A.

3.5.1.3 Airspace Management

Airspace management existing conditions described in Section 3.2.1.3 apply to this project's LOD as well.

3.5.1.4 Noise

Regulations related to noise and existing conditions on JBA as described in Section 3.2.1.4 are applicable to this project as well. There are no NSAs in the immediate vicinity of project site A4; however, there are several dormitories about 0.4 miles west of the project site.

3.5.1.5 Geology, Topography, and Soils

The geology and topography existing conditions described in Section 3.2.1.5 apply to this project's LOD as well. A large portion of the main installation is comprised of Beltsville silt loams, Croom gravelly sandy loams, and Grosstown gravelly silt loams. Site A4 is comprised solely of soil type BuB, or Beltsville-urban soils complex, which is a moderately well drained silt loam with medium runoff potential. This soil type is not prime farmland or farmland of statewide importance (USDA, 2021). A map of the soils found within the IDP project areas can be found in Appendix A.

3.5.1.6 Water Resources

The existing conditions of water resources as described in Section 3.2.1.6 apply to this project area as well. Project A4 falls within the Tinkers Creek watershed and there are no surface waters or wetlands within the project LOD; however, there is a portion of the 500-year floodplain within the project LOD, and there are both 100- and 500-year floodplains within the vicinity of the project site. Water Resources maps in Appendix A show the surface waters, floodplains, and wetlands in the vicinity of all IDP projects.

3.5.1.7 Biological Resources

The existing conditions described in Section 3.2.1.7 for vegetation, wildlife, and threatened and endangered species within JBA's main installation apply to the project area for A4 as well. This project area is totally developed and mowed lawn and there are no threatened or endangered species known to occur within this LOD. A map of the forest stands and threatened and endangered species within this project area is located in the Biological Resources map in Appendix A.

3.5.1.8 Cultural Resources

Background information and information on JBA's cultural resources described in Section 3.2.1.8 are applicable to this project as well. No architectural or archaeological historic properties are known to be within the A4 LOD; however, Project A4 does fall within the viewshed of recommended NRHP-eligible building 1754, also known as Hangar 3.

3.5.1.9 Transportation

Existing conditions regarding transportation as described in Section 3.2.1.9 apply to this proposed project area as well.

3.5.1.10 Infrastructure and Utilities

The existing conditions related to infrastructure and utilities as described in Section 3.2.1.10 apply to this proposed project area as well.

3.5.1.11 HTMW

The majority of the existing conditions described in Section 3.2.1.11 apply to this project area as well. ERP site ST-10, P-680 spill site, is located within the project LOD for A4. A Feasibility Study (FS) with a treatability study has been completed and a Record of Decision (ROD) has been signed. The ROD specifies groundwater monitoring and institutional controls as the remedy, and these actions are ongoing. This ERP site also has land use control restrictions in place due to the contamination (JBA, 2018a). There are no MMRP sites known to occur near the project site (JBA, 2018b). While there are no ASTs within the proposed site, there is one UST remaining – a 25,000-gallon fiberglass tank containing glycol. Several other USTs have been previously removed and they contained PD-680 solvent, glycol, and JP-4 jet fuel (JBA, 2018a).

3.5.1.12 Socioeconomics, Environmental Justice, and Protection of Children

The existing conditions for socioeconomics, environmental justice, and protection of children as described in Section 3.2.1.12 apply to this project area as well. This project area does not contain any existing schools, playgrounds, CDCs, or other facilities that would put children at a disproportionate risk for any environmental or health risks during development of this proposed project.

3.5.1.13 Safety and Occupational Health

The existing conditions for safety and occupational health as described in Section 3.2.1.13 apply to the A4 project LOD as well. The project LOD for A4 is not within existing ESQD arcs.

3.5.2 Environmental Consequences

As this project involves new construction and would take place within floodplains, in an area with surface waters, wetlands, and a former ERP site with monitoring protocols still in place, minor adverse impacts are expected. There are no anticipated impacts to land use, airspace management, geology, topography, surface waters, wetlands, biological resources, transportation, socioeconomics, environmental justice, protection of children, infrastructure and utilities, or safety and occupational health. There would be minor, temporary adverse impacts to air quality, cultural resources, and noise during construction. There would be minor adverse impacts to soils, floodplains, and HTMW. These potential impacts would be reduced through the implementation of appropriate controls and mitigation measures. As the project requires an increase in impervious surfaces, there would be minor impacts to stormwater. The project also contains surface waters and wetlands, and it falls within the 500-year floodplain, so the appropriate coordination and permits would be required prior to development of this project. As mentioned in the ROD for ERP site ST-10, this project should be reviewed prior to implementation to ensure that it complies with the appropriate land use control restrictions. While there are no known PFAS sites on, or in the immediate vicinity of, the A4 project, the soil and ground water should still be tested prior to any ground disturbing activities.

Based on the expected impacts of project A4, it is anticipated that an EA would be the appropriate level of supplemental NEPA once additional project details are determined.

3.6 Project A5 – Renovation/Repair of Hangar 4

Project A5 involves the interior renovation of Hangar 4 to accommodate the Transient Alert functions.

3.6.1 Existing Conditions

3.6.1.1 Air Quality

Air quality existing conditions described in Section 3.2.1.1 apply to this project's LOD as well.

3.6.1.2 Land Use

Background information and information on land use adjacent to the main installation described in Section 3.2.1.2 are applicable to this project as well. The existing land use at project site A5 is Aircraft Operations and Maintenance. Maps of land use for all of the IDP project sites can be found in Appendix A.

3.6.1.3 Airspace Management

Airspace management existing conditions described in Section 3.2.1.3 apply to this project's LOD as well.

3.6.1.4 Noise

Regulations related to noise and existing conditions on JBA as described in Section 3.2.1.4 are applicable to this project as well. The closest NSAs to project site A5 are several dormitories approximately 0.35 miles southwest of the project site, and an education center approximately 0.4 miles southwest of the project site.

3.6.1.5 Geology, Topography, and Soils

The geology and topography existing conditions described in Section 3.2.1.5 apply to this project's LOD as well. The majority of the main installation is comprised of udorthents and urban soils, which are typically previously disturbed areas with moderately well drained to excessively drained soils and low to very low runoff potential. Soils within project site A5 are all Un, or developed urban soils, which is not considered prime farmland or farmland of statewide importance (USDA, 2021). A map of the soils found within the IDP project areas can be found in Appendix A.

3.6.1.6 Water Resources

The existing conditions of water resources as described in Section 3.2.1.6 apply to this project area as well. Project A5 falls within the Tinkers Creek watershed and there are no surface waters or floodplains within the project LOD; however, there are 100- and 500-year floodplains in the vicinity of the project site. There are also no wetlands on or in the vicinity of project A5. Water Resources maps in Appendix A show the surface waters, floodplains, and wetlands in the vicinity of all IDP projects.

3.6.1.7 Biological Resources

The existing conditions described in Section 3.2.1.7 for vegetation, wildlife, and threatened and endangered species within JBA's main installation apply to the project area for A5 as well. This project area is totally developed and mowed lawn and there are no threatened or endangered species known to occur within this LOD. A map of the forest stands and threatened and endangered species within this project area is located in the Biological Resources map in Appendix A.

3.6.1.8 Cultural Resources

Background information and information on JBA's cultural resources described in Section 3.2.1.8 are applicable to this project as well. No architectural or archaeological historic properties are known to be within the A5 LOD; however, Project A5 does fall within the viewshed of recommended NRHP-eligible building 1754, also known as Hangar 3.

3.6.1.9 Transportation

Existing conditions regarding transportation as described in Section 3.2.1.9 apply to this proposed project area as well.

3.6.1.10 Infrastructure and Utilities

The existing conditions related to infrastructure and utilities as described in Section 3.2.1.10 apply to this proposed project area as well.

3.6.1.11 HTMW

The majority of the existing conditions described in Section 3.2.1.11 apply to this project area as well. There are no ERP sites or MMRP sites on the A5 project LOD (JBA, 2018a; JBA, 2018b). There are no existing ASTs or USTs within the A5 project LOD or in its immediate vicinity. Based on the age of Hangar 4, there is potential for ACM and LBP.

3.6.1.12 Socioeconomics, Environmental Justice, and Protection of Children

The existing conditions for socioeconomics, environmental justice, and protection of children as described in Section 3.2.1.12 apply to this project area as well. This project area does not contain any existing schools, playgrounds, CDCs, or other facilities that would put children at a disproportionate risk for any environmental or health risks during development of this proposed project.

3.6.1.13 Safety and Occupational Health

The existing conditions for safety and occupational health as described in Section 3.2.1.13 apply to the A5 project LOD as well. The project LOD for A5 is not within existing ESQD arcs.

3.6.2 Environmental Consequences

As this project involves primarily interior renovations with some potential minor exterior repairs, anticipated impacts are limited. There are no anticipated impacts to land use, airspace management, geology, topography, soils, water resources, biological resources, transportation, socioeconomics, environmental justice, protection of children, or safety and occupational health. There would be negligible to minor, temporary adverse impacts to air quality, cultural resources,

noise, HTMW, and infrastructure and utilities during construction. These potential impacts would be reduced through the implementation of appropriate controls and mitigation measures. Potential HTMW impacts could include ACM or LBP within the building, either of which could be impacted during the interior renovations. While there are no known PFAS sites on, or in the immediate vicinity of, the A5 project, the soil and ground water should still be tested prior to any ground disturbing activities.

Based on the expected impacts of project A5, it is anticipated that an AF Form 813 would be the appropriate level of supplemental NEPA once additional project details are determined.

3.7 Project A6 – Renovation/Repair of Hangar 5

Project A5 includes the interior renovation of Hangar 5 to accommodate the U.S. Army Priority Air Transport (USAPAT) functions.

3.7.1 Existing Conditions

3.7.1.1 Air Quality

Air quality existing conditions described in Section 3.2.1.1 apply to this project's LOD as well.

3.7.1.2 Land Use

Background information and information on land use adjacent to the main installation described in Section 3.2.1.2 are applicable to this project as well. The existing land use at project site A6 is Aircraft Operations and Maintenance. Maps of land use for all of the IDP project sites can be found in Appendix A.

3.7.1.3 Airspace Management

Airspace management existing conditions described in Section 3.2.1.3 apply to this project's LOD as well.

3.7.1.4 Noise

Regulations related to noise and existing conditions on JBA as described in Section 3.2.1.4 are applicable to this project as well. The closest NSAs to project site A6 are several dormitories approximately 0.3 miles west of the project site, and an education center approximately 0.35 miles southwest of the project site.

3.7.1.5 Geology, Topography, and Soils

The geology and topography existing conditions described in Section 3.2.1.5 apply to this project's LOD as well. The majority of the main installation is comprised of udorthents and urban soils, which are typically previously disturbed areas with moderately well drained to excessively drained soils and low to very low runoff potential. Soils within project site A6 are all Un, or developed urban soils, which is not considered prime farmland or farmland of statewide importance (USDA, 2021). A map of the soils found within the IDP project areas can be found in Appendix A.

3.7.1.6 Water Resources

The existing conditions of water resources as described in Section 3.2.1.6 apply to this project area as well. Project A6 falls within the Tinkers Creek watershed and there are no surface waters or floodplains within the project LOD; however, there are 100- and 500-year floodplains in the vicinity of the project site. There are also no wetlands on or in the vicinity of project A6. Water Resources maps in Appendix A show the surface waters, floodplains, and wetlands in the vicinity of all IDP projects.

3.7.1.7 Biological Resources

The existing conditions described in Section 3.2.1.7 for vegetation, wildlife, and threatened and endangered species within JBA's main installation apply to the project area for A6 as well. This project area is totally developed and mowed lawn and there are no threatened or endangered species known to occur within this LOD. A map of the forest stands and threatened and endangered species within this project area is located in the Biological Resources map in Appendix A.

3.7.1.8 Cultural Resources

Background information and information on JBA's cultural resources described in Section 3.2.1.8 are applicable to this project as well. No architectural or archaeological historic properties are known to be within the A6 LOD, however, Project A6 does fall within the viewshed of recommended NRHP-eligible building 1280, also known as Hangar 6.

3.7.1.9 Transportation

Existing conditions regarding transportation as described in Section 3.2.1.9 apply to this proposed project area as well.

3.7.1.10 Infrastructure and Utilities

The existing conditions related to infrastructure and utilities as described in Section 3.2.1.10 apply to this proposed project area as well.

3.7.1.11 HTMW

The majority of the existing conditions described in Section 3.2.1.11 apply to this project area as well. There are no MMRP sites on the A6 project LOD (JBA, 2018b). The only ERP site in the vicinity of the project is AFFF Area 5, located in Hangars 6 and 7, where initial ground water testing showed PFAS contamination (AFCEC, 2018). There are no existing ASTs or USTs within the A6 project LOD or in its immediate vicinity. Based on the age of Hangar 5, there is potential for ACM and LBP.

3.7.1.12 Socioeconomics, Environmental Justice, and Protection of Children

The existing conditions for socioeconomics, environmental justice, and protection of children as described in Section 3.2.1.12 apply to this project area as well. This project area does not contain any existing schools, playgrounds, CDCs, or other facilities that would put children at a disproportionate risk for any environmental or health risks during development of this proposed project.

3.7.1.13 Safety and Occupational Health

The existing conditions for safety and occupational health as described in Section 3.2.1.13 apply to the A6 project LOD as well. The project LOD for A6 is not within existing ESQD arcs.

3.7.2 Environmental Consequences

Project A6 involves primarily interior renovations with some potential minor exterior repairs, so anticipated impacts are limited. There are no anticipated impacts to land use, airspace management, geology, topography, soils, water resources, biological resources, transportation, socioeconomics, environmental justice, protection of children, or safety and occupational health. There would be negligible to minor, temporary adverse impacts to air quality, cultural resources, noise, HTMW, and infrastructure and utilities during construction. These potential impacts would be reduced through the implementation of appropriate controls and mitigation measures. Potential HTMW impacts could include ACM or LBP within the building, either of which could be impacted during the interior renovations. While there are no known PFAS sites within the A6 project site, there is known PFAS contamination nearby at AFFF Area 5, so the soil and ground water should still be tested prior to any ground disturbing activities.

Based on the expected impacts of project A6, it is anticipated that an AF Form 813 would be the appropriate level of supplemental NEPA once additional project details are determined.

3.8 Project B1 – Regrade the Airfield

Project B1 includes the regrading of the portions of the legacy airfield that do not meet the Unified Facilities Code (UFC) 3-260-1 requirements for obstructions and drainage.

3.8.1 Existing Conditions

3.8.1.1 Air Quality

Air quality existing conditions described in Section 3.2.1.1 apply to this project's LOD as well.

3.8.1.2 Land Use

Background information and information on land use adjacent to the main installation described in Section 3.2.1.2 are applicable to this project as well. The existing land use at project site B1 is primarily Airfield Pavement, with some small sections of Aircraft Operations and Maintenance, Open Space/Buffer Zone, and Outdoor Recreation. Maps of land use for all of the IDP project sites can be found in Appendix A.

3.8.1.3 Airspace Management

In addition to the flight restrictions outlined in Section 3.2.1.3, JBA also adheres to the Air Installation Compatible Use Zone (AICUZ) program as part of airspace management. The AICUZ program establishes noise zones, flight clearance requirements, clear zones, and accident potential zones (APZs), and encourages the incorporation of these zones and requirements in local community planning to in order to minimize impacts to the surrounding communities while maintaining the installation's operational requirements (JBA, 2017). JBA has also developed an

AICUZ Study, most recently updated in 2017, to summarize existing AICUZ conditions and to help communities with future planning in the vicinity of the installation.

The 2017 AICUZ Study established clear zones and two APZs – APZ I and APZ II – in the vicinity of JBA’s runways. These zones are the areas where accidents would be most likely to take place if they were to occur. The clear zone is the 3,000-foot wide by 3,000-foot long square area at the end of the runway and centered on the runway centerline. APZ I is the 3,000-foot wide by 5,000-foot long rectangular area beyond the clear zone and centered on the extended runway centerline. APZ II is the 3,000-foot wide by 7,000-foot long rectangular area beyond APZ I and centered on the extended runway centerline (JBA, 2017). Based on these measurements, the clear zone for JBA’s runways encompasses 150 acres, APZ I encompasses 923.2 acres, and APZ II encompasses 1,607.9 acres (JBA, 2017). Portions of this project’s LOD cover JBA’s runways, along with the APZs and clear zones.

3.8.1.4 Noise

Regulations related to noise and existing conditions on JBA as described in Section 3.2.1.4 are applicable to this project as well. The closest NSA to project site B1 is an outdoor recreation area (golf course) immediately south and southwest of the project site. The education center, two child development centers, and several military housing neighborhoods on the installation are between 0.5 and 1 miles from the project site.

3.8.1.5 Geology, Topography, and Soils

The geology and topography existing conditions described in Section 3.2.1.5 apply to this project’s LOD as well. A large portion of the main installation is comprised of Beltsville silt loams, Croom gravelly sandy loams, and Grosstown gravelly silt loams. Soil types on project site B1 include: ApA (Aquasco silt loam), BaB (Beltsville silt loam), DoB (Downer-Hammonton complex), GgC (Grosstown gravelly silt loam), FaaA (Fallsington sandy loam), UdbB and UdbD (udorthents), Un (urban soils), WE (Widewater and Issue soils), and WoA and WoB (Woodstown sandy loams). These soils types are moderately well drained to poorly drained silt loam with medium to very high runoff potential, poorly drained mucky peat, well drained udorthents, and urban areas with high runoff potential. Prime farmland soils within this project site include BaB, DoB, and FaaA, and farmland of statewide importance soils within this project site include ApA and GgC (USDA, 2021). A map of the soils found within the IDP project areas can be found in Appendix A.

3.8.1.6 Water Resources

The existing conditions of water resources as described in Section 3.2.1.6 apply to this project area as well. Project B1 falls within the Tinkers Creek, Henson Creek, and Piscataway Creek watersheds and the headwaters of the Piscataway Creek begin within the southern portion of the project LOD; however, there are 100- and 500-year floodplains for all three watersheds within the project site. There are also more than 50 acres of wetlands within the project area – all of which are palustrine emergent (PEM) or palustrine scrub-shrub (PSS). Water Resources maps in Appendix A show the surface waters, floodplains, and wetlands in the vicinity of all IDP projects.

3.8.1.7 Biological Resources

The existing conditions described in Section 3.2.1.7 for vegetation, wildlife, and threatened and endangered species within JBA's main installation apply to the project area for B1 as well. This project area is totally developed and mowed lawn and there are no threatened or endangered species known to occur within this LOD. A map of the forest stands and threatened and endangered species within this project area is located in the Biological Resources map in Appendix A.

3.8.1.8 Cultural Resources

Background information and information on JBA's cultural resources described in Section 3.2.1.8 are applicable to this project as well. No architectural or archaeological historic properties are known to be within the B1 LOD; however, this project site falls within the viewshed of buildings 1245 (Passenger Terminal), 1280 (Hangar 6), 1754 (Hangar 3), and 5016 (Hangar 19), all of which are recommended eligible for NRHP listing.

3.8.1.9 Transportation

Existing conditions regarding transportation as described in Section 3.2.1.9 apply to this proposed project area as well.

3.8.1.10 Infrastructure and Utilities

The existing conditions related to infrastructure and utilities as described in Section 3.2.1.10 apply to this proposed project area as well.

3.8.1.11 HTMW

The majority of the existing conditions described in Section 3.2.1.11 apply to this project area as well. Several active and completed ERP sites are located within the project LOD for B1: ERP site AOC-26, a former fuel hydrant system; FT-02, former fire training area number 1; FT-03, former fire training area number 2; FT-04, fire training area number 4; LF-06, Landfill 6; SD-23, sludge disposal area; SS-26, former Hangar 15, former AOC-30; SS-28, fire truck maintenance facility. Remediation of AOC-26 was completed, and a no further remedial action planned (NFRAP) was signed. FT-02 is still in the remedial action-operations phase and the groundwater plume occupies 34 acres of the active flightline. Contaminants include trichloroethene (TCE), degradation products, and petroleum products. Remediation of FT-03 and FT-04 were completed, and Response Complete (RC) was obtained for both sites. Remediation for LF-06 is ongoing, with a Feasibility Study (FS), Proposal Plan (PP), and ROD planned. Contaminants include pesticides, volatile organic compounds (VOCs), PCBs, and metals. SD-23's investigation has been completed and the site has been closed. SS-26 is still in remediation, and contaminants on the site include TCE, cis-1,2- dichloroethene (DCE), vinyl chloride, carbon tetrachloride, and benzene. Remediation for SS-28 was completed, but perfluorinated compounds were detected at the site in 2020 and JBA is now in discussions with regulators to determine the next steps (JBA, 2018a).

Project site B1 is also within the vicinity of several PFAS initial testing areas: AFFF Area 1, Area 2, Area 3, Area 4, and Area 9. All of these testing areas showed ground water PFAS levels that exceeded screening criteria (AFCEC, 2018).

There are five MMRP sites located within the B1 LOD – the Firing-In Buttress, Skeet and Trap Club, Old Skeet Range, Small Arms Range, and Rifle Range I. Remediation at these sites was ongoing as of 2020 (JBA, 2018b). There are no existing ASTs or USTs within the B1 project LOD or in its immediate vicinity.

3.8.1.12 Socioeconomics, Environmental Justice, and Protection of Children

The existing conditions for socioeconomics, environmental justice, and protection of children as described in Section 3.2.1.12 apply to this project area as well. This project area does not contain any existing schools, playgrounds, CDCs, or other facilities that would put children at a disproportionate risk for any environmental or health risks during development of this proposed project.

3.8.1.13 Safety and Occupational Health

The existing conditions for safety and occupational health as described in Section 3.2.1.13 apply to the B1 project LOD as well. The existing ESQD arcs fall within the southern portion of the B1 project LOD and the appropriate safety and occupational health precautions would need to be followed for any development within these ESQD arcs.

3.8.2 Environmental Consequences

Project B1 includes the regrading of the airfield to meet UFC requirements, and based on the potential impacts to wetlands, floodplains, surface waters, and other resource areas, there is the potential for significant impacts. There are approximately 50 acres of wetlands that may be filled or otherwise altered, approximately 450 acres of floodplains that could be impacted, and approximately 1 acre of surface water associated with the Piscataway Creek that could be impacted by the regrading.

There are no, to negligible, anticipated impacts to land use, geology, biological resources, transportation, socioeconomics, environmental justice, or protection of children. There would be beneficial impacts to airspace management, as the project would allow JBA to meet the required codes regarding obstructions and drainage. There would be minor, temporary adverse impacts to air quality, cultural resources, noise, and safety and occupational health during construction. There would be minor to moderate adverse impacts to airspace management, topography, soils, stormwater, infrastructure and utilities, and HTMW. There is the potential for significant impacts to wetlands, floodplains, and surface waters. These potential impacts may be reduced through the implementation of appropriate controls and mitigation measures. Topography would be slightly changed, and soils would be modified as part of the regrading. There are some soils of statewide importance and prime farmland soils within the airfield LOD. As the project requires regrading and changes to drainage patterns, there would be minor impacts to stormwater. The project area falls within the 100- and 500-year floodplains and contains wetlands and surface waters, so the appropriate coordination and permits would be required prior to development of this project. There are ongoing remediation measures and monitoring in place as part of remediation for several ERP sites and MMRP sites within the project LOD, and the ESQD arcs for these projects also fall within this LOD, so safety and occupational health measures would need to be taken. While there are no known PFAS sites within the B1 project site, there is known PFAS contamination within several adjacent AFFF testing areas and PFAS contamination within B1 is likely, so the soil and ground water should still be tested prior to any ground disturbing activities.

Based on the expected impacts of project B1, it is anticipated that either an EA or an EIS would be the appropriate level of supplemental NEPA once additional project details are determined.

3.9 Project B2 – Virginia Gate

Project B2 involves the renovations of Virginia Gate, which includes modifying and widening the roadway, upgrading the guard shack, and installing bollards, speed tables, signage, and a gate-controlled drop arm.

3.9.1 Existing Conditions

3.9.1.1 Air Quality

Air quality existing conditions described in Section 3.2.1.1 apply to this project's LOD as well.

3.9.1.2 Land Use

Background information and information on land use adjacent to the main installation described in Section 3.2.1.2 are applicable to this project as well. The existing land use at project site B2 includes Community Commercial, Open Space/Buffer Zone, and Administration. Maps of land use for all of the IDP project sites can be found in Appendix A.

3.9.1.3 Airspace Management

Airspace management existing conditions described in Section 3.2.1.3 apply to this project's LOD as well.

3.9.1.4 Noise

Regulations related to noise and existing conditions on JBA as described in Section 3.2.1.4 are applicable to this project as well. The closest NSAs to project site B2 are Francis T. Evans Elementary School immediately to the west, Child Development Center #1 immediately to the east, and an outdoor recreation area (golf course) immediately to the north and east. There are also several homes and a child care center within 0.10 miles of the project site, off-installation to the south.

3.9.1.5 Geology, Topography, and Soils

The geology and topography existing conditions described in Section 3.2.1.5 apply to this project's LOD as well. A large portion of the main installation is comprised of Beltsville silt loams, Croom gravelly sandy loams, and Grosstown gravelly silt loams. Soil types on project site B1 include: BuB (Beltsville-urban soils complex), DuB (Downer-Hammonton urban complex), GuB (Grosstown-urban soils complex), UdbD (udorthents), and WoA (Woodstown sandy loam). These soils are moderately well drained to well drained silt loams with medium to very low runoff potential, and well drained gravelly loam with high runoff potential. None of these soils are prime farmland or farmland of statewide importance (USDA, 2021). A map of the soils found within the IDP project areas can be found in Appendix A.

3.9.1.6 Water Resources

The existing conditions of water resources as described in Section 3.2.1.6 apply to this project area as well. Project B2 falls within the Tinkers Creek watershed and there are no surface waters or wetlands within the project LOD; however, a small portion of the northeastern corner of the project site is within the 500- year floodplains, and there are both 100- and 500-year floodplains in the vicinity of the project site. Water Resources maps in Appendix A show the surface waters, floodplains, and wetlands in the vicinity of all IDP projects.

3.9.1.7 Biological Resources

The existing conditions described in Section 3.2.1.7 for vegetation, wildlife, and threatened and endangered species within JBA's main installation apply to the project area for B2 as well. This project area is totally developed and mowed lawn and there are no threatened or endangered species known to occur within this LOD. A map of the forest stands and threatened and endangered species within this project area is located in the Biological Resources map in Appendix A.

3.9.1.8 Cultural Resources

Background information and information on JBA's cultural resources described in Section 3.2.1.8 are applicable to this project as well. No architectural or archaeological historic properties are known to be within the B2 LOD, nor are there any known historic properties within the viewshed of the project site.

3.9.1.9 Transportation

Existing conditions regarding transportation as described in Section 3.2.1.9 apply to this proposed project area as well.

3.9.1.10 Infrastructure and Utilities

The existing conditions related to infrastructure and utilities as described in Section 3.2.1.10 apply to this proposed project area as well.

3.9.1.11 HTMW

The majority of the existing conditions described in Section 3.2.1.11 apply to this project area as well. There are no ERP sites or MMRP sites on the B2 project LOD (JBA, 2018a; JBA, 2018b). There are no existing ASTs or USTs within the B2 project LOD or in its immediate vicinity.

3.9.1.12 Socioeconomics, Environmental Justice, and Protection of Children

The existing conditions for socioeconomics, environmental justice, and protection of children as described in Section 3.2.1.12 apply to this project area as well. This proposed project area is in the vicinity of an elementary school to the west and a CDC to the east. Appropriate measures would need to be taken to ensure the safety of children should this proposed project be developed.

3.9.1.13 Safety and Occupational Health

The existing conditions for safety and occupational health as described in Section 3.2.1.13 apply to the B2 project LOD as well. The project LOD for B2 is not within existing ESQD arcs.

3.9.2 Environmental Consequences

Project B2 includes new construction and renovations associated with the Virginia gate, and anticipated adverse impacts would be minor. There are no anticipated impacts to land use, airspace management, geology, topography, surface waters, wetlands, biological resources, cultural resources, HTMW, socioeconomics, environmental justice, or safety and occupational health. There would be expected long-term beneficial impacts to transportation, as the project would make security improvements and would improve the flow of traffic at the gate. There would be negligible to minor, temporary adverse impacts to air quality, noise, soils, and infrastructure and utilities during construction. There would also be minor adverse impacts to floodplains, as part of the site is within the 500-year floodplain; transportation, as the project involves renovations to one of the access points to JBA; and protection of children, as the gate is immediately adjacent to an elementary school and CDC. These potential impacts would be reduced through the implementation of appropriate controls and mitigation measures. Appropriate coordination would need to be completed and applicable permits obtained prior to implementation of this project. While there are no known PFAS sites within the B2 project site, the soil and ground water should still be tested prior to any ground disturbing activities.

Based on the expected impacts of project B2, it is anticipated that an AF Form 813 would be the appropriate level of supplemental NEPA once additional project details are determined.

3.10 Project B3 – Storm Drains on Buildings 3447, 3066, & 2487

Project B3 includes storm drain repairs around three JBA buildings. This includes correcting the ditch line between Buildings 3086 and 3066; replacing storm drain lines and a BMP near Building 2487; and replacing two drop boxes, 700 feet of pipe, and two head walls next to Building 3447.

3.10.1 Existing Conditions

3.10.1.1 Air Quality

Air quality existing conditions described in Section 3.2.1.1 apply to this project's LOD as well.

3.10.1.2 Land Use

Background information and information on land use adjacent to the main installation described in Section 3.2.1.2 are applicable to this project as well. The existing land use at project site B3 includes Aircraft Operations and Maintenance, Industrial, and Open Space/Buffer Zone. Maps of land use for all of the IDP project sites can be found in Appendix A.

3.10.1.3 Airspace Management

Airspace management existing conditions described in Section 3.2.1.3 apply to this project's LOD as well.

3.10.1.4 Noise

Regulations related to noise and existing conditions on JBA as described in Section 3.2.1.4 are applicable to this project as well. The closest NSAs to the B3 project sites are a chapel about 0.1 miles northeast, CDC #3 about 0.25 miles northeast, and the East Fitness Center about 0.2 miles

northwest of the Building 3447 B3 project site; and an off-installation residential neighborhood about 0.2 miles southeast of the Building 3066 B3 project site.

3.10.1.5 Geology, Topography, and Soils

The geology and topography existing conditions described in Section 3.2.1.5 apply to this project's LOD as well. The majority of the main installation is comprised of udorthents and urban soils, which are typically previously disturbed areas with moderately well drained to excessively drained soils and low to very low runoff potential. Soils within project site B3 include: BuB and Un, which are moderately well drained silt loams with medium runoff potential and developed urban soils. None of the soils within this project area are prime farmland or farmland of statewide importance (USDA, 2021). A map of the soils found within the IDP project areas can be found in Appendix A.

3.10.1.6 Water Resources

The existing conditions of water resources as described in Section 3.2.1.6 apply to this project area as well. Project B3 falls within the Piscataway Creek and Charles Branch-Western Branch Patuxent River watersheds and there are no surface waters or wetlands within the project LODs; however, two of the three project sites for B3 fall within the 500-year floodplain for Piscataway Creek. Water Resources maps in Appendix A show the surface waters, floodplains, and wetlands in the vicinity of all IDP projects.

3.10.1.7 Biological Resources

The existing conditions described in Section 3.2.1.7 for vegetation, wildlife, and threatened and endangered species within JBA's main installation apply to the project areas for B3 as well. The project areas are mostly developed and mowed lawn with a small portion of the LOD near Building 3066 containing forest stand. There are no threatened or endangered species known to occur within this LOD. A map of the forest stands and threatened and endangered species within this project area is located in the Biological Resources map in Appendix A.

3.10.1.8 Cultural Resources

Background information and information on JBA's cultural resources described in Section 3.2.1.8 are applicable to this project as well. No architectural or archaeological historic properties are known to be within the B3 LOD, nor are there any known historic properties within the viewshed of the project site.

3.10.1.9 Transportation

Existing conditions regarding transportation as described in Section 3.2.1.9 apply to this proposed project area as well.

3.10.1.10 Infrastructure and Utilities

The existing conditions related to infrastructure and utilities as described in Section 3.2.1.10 apply to this proposed project area as well.

3.10.1.11 HTMW

The majority of the existing conditions described in Section 3.2.1.11 apply to this project area as well. There are no MMRP sites on the B3 project LOD; however, a portion of the project LOD lies within ERP site ST-14, East Side Service Station (JBA, 2018a; JBA, 2018b). The remediation process for ST-14 is ongoing, as JBA works to prevent further migration of plumes and degrade contaminants in ground water in accordance with the ROD. This ERP site also has land use control restrictions in place due to the contamination (JBA, 2018a). Other ERP sites in the vicinity of the project are: AFFF Area 1, former Fire Training area FT-04, near the southernmost B3 LOD; and AFFF Area 2, Hangar 16, near the middle B3 LOD. Initial ground water testing at both sites showed PFAS contamination (AFCEC, 2018). There are no existing ASTs or USTs within the B3 project LOD or in its immediate vicinity.

3.10.1.12 Socioeconomics, Environmental Justice, and Protection of Children

The existing conditions for socioeconomics, environmental justice, and protection of children as described in Section 3.2.1.12 apply to this project area as well. This project area does not contain any existing schools, playgrounds, CDCs, or other facilities that would put children at a disproportionate risk for any environmental or health risks during development of this proposed project.

3.10.1.13 Safety and Occupational Health

The existing conditions for safety and occupational health as described in Section 3.2.1.13 apply to the B3 project LOD as well. The project LOD for B3 is not within existing ESQD arcs.

3.10.2 Environmental Consequences

As project B3 involves repairs and renovations to storm drains on three buildings, anticipated impacts are expected to be minor. There are no anticipated impacts to land use, airspace management, geology, topography, surface waters, wetlands, cultural resources, transportation, HTMW, socioeconomics, environmental justice, protection of children, or safety and occupational health. There would be expected long-term beneficial impacts to stormwater, as the project would upgrade the stormwater system. There would be negligible to minor, temporary adverse impacts to air quality, noise, and infrastructure and utilities during construction. There would also be minor adverse impacts to soils; floodplains, as part of the site is within the 500-year floodplain; stormwater, as the project includes renovations to the storm drains; and biological resources, as part of the LOD contains forest stands. These potential impacts would be reduced through the implementation of appropriate controls and mitigation measures. Appropriate coordination would need to be completed and applicable permits obtained prior to implementation of this project. As mentioned in the ROD for ERP site ST-14, this project should be reviewed prior to implementation to ensure that it complies with the appropriate land use control restrictions. While there are no known PFAS sites within the B3 project site, there is known PFAS contamination nearby at AFFF Areas 1 and 2, so the soil and ground water should still be tested prior to any ground disturbing activities.

Based on the expected impacts of project B3, it is anticipated that an AF Form 813 would be the appropriate level of supplemental NEPA once additional project details are determined.

3.11 Project B4 – Stormwater BMP at 21 Point Range

Project B4 involves repairing the BMP and outlet structure south of the current firing range and removal of trees from the detention area and along the dam embankment.

3.11.1 Existing Conditions

3.11.1.1 Air Quality

Air quality existing conditions described in Section 3.2.1.1 apply to this project's LOD as well.

3.11.1.2 Land Use

Background information and information on land use adjacent to the main installation described in Section 3.2.1.2 is applicable to this project as well. The existing land use at project site B4 includes Industrial and Open Space/Buffer Zone. Maps of land use for all of the IDP project sites can be found in Appendix A.

3.11.1.3 Airspace Management

Airspace management existing conditions described in Section 3.2.1.3 apply to this project's LOD as well.

3.11.1.4 Noise

Regulations related to noise and existing conditions on JBA as described in Section 3.2.1.4 are applicable to this project as well. The closest NSA to the B4 project site is an off-installation residential neighborhood about 250 feet east of the project site.

3.11.1.5 Geology, Topography, and Soils

The geology and topography existing conditions described in Section 3.2.1.5 apply to this project's LOD as well. The majority of the main installation is comprised of udorthents and urban soils, which are typically previously disturbed areas with moderately well drained to excessively drained soils and low to very low runoff potential. Soils within project site B4 include: ApA and BaB, which are moderately well drained to poorly drained silt loam with medium to very high runoff potential. Soil type ApA is farmland of statewide importance and soil type BaB is considered prime farmland (USDA, 2021). A map of the soils found within the IDP project areas can be found in Appendix A.

3.11.1.6 Water Resources

The existing conditions of water resources as described in Section 3.2.1.6 apply to this project area as well. Project B4 falls within the Piscataway Creek watershed and there are no surface waters within the project LOD; however, there is a palustrine forested wetland (PFO1A), and the project site also falls within the 100- and 500-year floodplains. Water Resources maps in Appendix A show the surface waters, floodplains, and wetlands in the vicinity of all IDP projects.

3.11.1.7 Biological Resources

The existing conditions described in Section 3.2.1.7 for vegetation, wildlife, and threatened and endangered species within JBA's main installation apply to the project area for B4 as well. This project area is completely forested and there are no threatened or endangered species known to occur within this LOD. A map of the forest stands and threatened and endangered species within this project area is located in the Biological Resources map in Appendix A.

3.11.1.8 Cultural Resources

Background information and information on JBA's cultural resources described in Section 3.2.1.8 are applicable to this project as well. No architectural or archaeological historic properties are known to be within the B4 LOD, nor are there any known historic properties within the viewshed of the project site.

3.11.1.9 Transportation

Existing conditions regarding transportation as described in Section 3.2.1.9 apply to this proposed project area as well.

3.11.1.10 Infrastructure and Utilities

The existing conditions related to infrastructure and utilities as described in Section 3.2.1.10 apply to this proposed project area as well.

3.11.1.11 HTMW

The majority of the existing conditions described in Section 3.2.1.11 apply to this project area as well. There are no ERP sites or MMRP sites on the B4 project LOD; however, ERP site LF-05, Leroy's Lane Landfill, is located just north of B4 (JBA, 2018a; JBA, 2018b). There are no existing ASTs or USTs within the B4 project LOD or in its immediate vicinity.

3.11.1.12 Socioeconomics, Environmental Justice, and Protection of Children

The existing conditions for socioeconomics, environmental justice, and protection of children as described in Section 3.2.1.12 apply to this project area as well. This project area does not contain any existing schools, playgrounds, CDCs, or other facilities that would put children at a disproportionate risk for any environmental or health risks during development of this proposed project.

3.11.1.13 Safety and Occupational Health

The existing conditions for safety and occupational health as described in Section 3.2.1.13 apply to the B4 project LOD as well. The project LOD for B4 is not within existing ESQD arcs.

3.11.2 Environmental Consequences

Project B4 involves repairs to a BMP and some minor tree removal from the detention area, and adverse impacts are expected to be minor. There are no anticipated impacts to land use, airspace management, geology, topography, surface waters, cultural resources, transportation, HTMW, infrastructure and utilities, socioeconomics, environmental justice, protection of children, or safety and occupational health. There would be expected long-term beneficial impacts to stormwater, as

the project would improve the stormwater BMP. There would be negligible to minor, temporary adverse impacts to air quality and noise during construction. There would also be minor adverse impacts to soils, as the site contains soils of statewide importance and prime farmland soils; wetlands; floodplains, as the site falls within the 100- and 500-year floodplain; and biological resources, as the LOD is forested. These potential impacts would be reduced through the implementation of appropriate controls and mitigation measures. Appropriate coordination would need to be completed and applicable permits obtained prior to implementation of this project. While there are no known PFAS sites within the B4 project site, the soil and ground water should still be tested prior to any ground disturbing activities. JBA should also consult the ERP office during design to discuss any concerns regarding potential ground water contamination associated with LF-05.

Based on the expected impacts of project B4, it is anticipated that an AF Form 813 would be the appropriate level of supplemental NEPA once additional project details are determined.

3.12 Project C1 – East Runway Relocation

Project C1 entails shifting the East Runway to the west of its current location or repairing or replacing it in its current position. It also includes the construction of the taxiways, aprons, and drainage associated with this runway relocation or replacement.

3.12.1 Existing Conditions

3.12.1.1 Air Quality

Air quality existing conditions described in Section 3.2.1.1 apply to this project's LOD as well.

3.12.1.2 Land Use

Background information and information on land use adjacent to the main installation described in Section 3.2.1.2 are applicable to this project as well. The existing land use at project site C1 is primarily Airfield Pavement, with some small sections of Aircraft Operations and Maintenance, Open Space/Buffer Zone, and Outdoor Recreation. Maps of land use for all of the IDP project sites can be found in Appendix A.

3.12.1.3 Airspace Management

The airspace management existing conditions for this project LOD are captured by descriptions in Section 3.2.1.3 and Section 3.8.1.3. Portions of this project's LOD cover JBA's runways, along with the APZs and clear zones.

3.12.1.4 Noise

Regulations related to noise and existing conditions on JBA as described in Section 3.2.1.4 are applicable to this project as well. The closest NSA to project site C1 is an outdoor recreation area (golf course) immediately south and southwest of the project site. The education center, two child development centers, and several military housing neighborhoods on the installation are between 0.5 and 1 miles from the project site.

3.12.1.5 Geology, Topography, and Soils

The geology and topography existing conditions described in Section 3.2.1.5 apply to this project's LOD as well. A large portion of the main installation is comprised of Beltsville silt loams, Croom gravelly sandy loams, and Grosstown gravelly silt loams. Soil types on project site B1 include: ApA (Aquasco silt loam), BaB (Beltsville silt loam), DoB (Downer-Hammonton complex), GgC (Grosstown gravelly silt loam), FaaA (Fallsington sandy loam), UdbB and UdbD (udorthents), Un (urban soils), WE (Widewater and Issue soils), and WoA and WoB (Woodstown sandy loams). These soils types are moderately well drained to poorly drained silt loam with medium to very high runoff potential, poorly drained mucky peat, well drained udorthents, and urban areas with high runoff potential. Prime farmland soils within this project site include BaB, DoB, and FaaA, and farmland of statewide importance soils within this project site include ApA and GgC (USDA, 2021). A map of the soils found within the IDP project areas can be found in Appendix A.

3.12.1.6 Water Resources

The existing conditions of water resources as described in Section 3.2.1.6 apply to this project area as well. Project C1 falls within the Tinkers Creek, Henson Creek, and Piscataway Creek watersheds and there are no surface waters within the project LOD; however, there are 100- and 500-year floodplains for all three watersheds within the project site. There are also many wetlands within the project area – all of which are palustrine emergent (PEM) or palustrine scrub-shrub (PSS). Water Resources maps in Appendix A show the surface waters, floodplains, and wetlands in the vicinity of all IDP projects.

3.12.1.7 Biological Resources

The existing conditions described in Section 3.2.1.7 for vegetation, wildlife, and threatened and endangered species within JBA's main installation apply to the project area for C1 as well. This project area is totally developed and mowed lawn and there are no threatened or endangered species known to occur within this LOD. A map of the forest stands and threatened and endangered species within this project area is located in the Biological Resources map in Appendix A.

3.12.1.8 Cultural Resources

Background information and information on JBA's cultural resources described in Section 3.2.1.8 are applicable to this project as well. No architectural or archaeological historic properties are known to be within the C1 LOD; however, this project site falls within the viewshed of buildings 1245 (Passenger Terminal), 1280 (Hangar 6), 1754 (Hangar 3), and 5016 (Hangar 19), all of which are recommended eligible for NRHP listing.

3.12.1.9 Transportation

Existing conditions regarding transportation as described in Section 3.2.1.9 apply to this proposed project area as well.

3.12.1.10 Infrastructure and Utilities

The existing conditions related to infrastructure and utilities as described in Section 3.2.1.10 apply to this proposed project area as well.

3.12.1.11 HTMW

The majority of the existing conditions described in Section 3.2.1.11 apply to this project area as well. Several active and completed ERP sites are located within the project LOD for C1: ERP site AOC-26, a former fuel hydrant system; FT-02, former fire training area number 1; FT-03, former fire training area number 2; FT-04, fire training area number 4; LF-06, Landfill 6; SD-23, sludge disposal area; SS-26, former Hangar 15, former AOC-30; SS-28, fire truck maintenance facility. Remediation of AOC-26 was completed, and a NFRAP was signed. FT-02 is still in the remedial action-operations phase and the groundwater plume occupies 34 acres of the active flightline. Contaminants include TCE, degradation products, and petroleum products. Remediation of FT-03 and FT-04 were completed, and RC was obtained for both sites. Remediation for LF-06 is ongoing, with a FS, PP, and ROD planned. Contaminants include pesticides, VOCs, PCBs, and metals. SD-23's investigation has been completed and the site has been closed. SS-26 is still in remediation, and contaminants on the site include TCE, cis-1,2-DCE, vinyl chloride, carbon tetrachloride, and benzene. Remediation for SS-28 was completed, but perfluorinated compounds were detected at the site in 2020 and JBA is now in discussions with regulators to determine the next steps (JBA, 2018a).

Project site C1 is also within the vicinity of several PFAS initial testing areas: AFFF Area 1, Area 2, Area 3, Area 4, and Area 9. All of these testing areas showed ground water PFAS levels that exceeded screening criteria (AFCEC, 2018).

There are five MMRP sites located within the B1 LOD – the Firing-In Buttress, Skeet and Trap Club, Old Skeet Range, Small Arms Range, and Rifle Range I. Remediation at these sites was ongoing as of 2020 (JBA, 2018b). There are no existing ASTs or USTs within the C1 project LOD or in its immediate vicinity.

3.12.1.12 Socioeconomics, Environmental Justice, and Protection of Children

The existing conditions for socioeconomics, environmental justice, and protection of children as described in Section 3.2.1.12 apply to this project area as well. This project area does not contain any existing schools, playgrounds, CDCs, or other facilities that would put children at a disproportionate risk for any environmental or health risks during development of this proposed project.

3.12.1.13 Safety and Occupational Health

The existing conditions for safety and occupational health as described in Section 3.2.1.13 apply to the C1 project LOD as well. The existing ESQD arcs fall within the southern portion of the C1 project LOD and the appropriate safety and occupational health precautions would need to be followed for any development within these ESQD arcs.

3.12.2 Environmental Consequences

As project C1 involves the relocation of one of JBA's runways, there are some concerns regarding wetlands, floodplains, stormwater, and airspace management, among other resource areas; however, the overall adverse impacts of the project are expected to be minor.

There are no, to negligible, anticipated impacts to land use, geology, surface waters, biological resources, transportation, socioeconomics, environmental justice, or protection of children. There would be minor, temporary adverse impacts to air quality, cultural resources, noise, and safety and occupational health during construction. There would be expected long-term beneficial impacts to airspace management, as the project would make upgrades that would improve the functioning of the airfield. There would be minor to moderate adverse impacts to airspace management, topography, soils, wetlands, floodplains, stormwater, infrastructure and utilities, and HTMW. These potential impacts would be reduced through the implementation of appropriate controls and mitigation measures. Topography would be slightly changed, and soils would be modified as part of the runway relocation. There are some soils of statewide importance and prime farmland soils within the airfield LOD. As the project requires relocating runways and taxiways and includes changes to drainage patterns, there would be minor impacts to stormwater. The project area also includes wetlands, which would be filled in or modified as part of this project, and it falls within the 500-year floodplain, so the appropriate coordination and permits would be required prior to development of this project. There are ongoing remediation measures and monitoring in place as part of remediation for several ERP sites and MMRP sites within the project LOD, and the ESQD arcs for these projects also fall within this LOD, so safety and occupational health measures would need to be taken. While there are no known PFAS sites within the C1 project site, there is known PFAS contamination within several adjacent AFFF testing areas and PFAS contamination within C1 is likely, so the soil and ground water should still be tested prior to any ground disturbing activities.

Based on the expected impacts of project C1, it is anticipated that an EA would be the appropriate level of supplemental NEPA once additional project details are determined.

3.13 Project C2 – Crash Rescue Station 2

Project C2 includes the construction of an addition to Crash Rescue Station 2. The addition includes an approximately 5,200 sq ft additional bay and approximately 3,700 sq ft of additional crew space. It also involves relocating a parking area and the implementation of stormwater management features.

3.13.1 Existing Conditions

3.13.1.1 Air Quality

Air quality existing conditions described in Section 3.2.1.1 apply to this project's LOD as well.

3.13.1.2 Land Use

Background information and information on land use adjacent to the main installation described in Section 3.2.1.2 is applicable to this project as well. The existing land use at project site C2 includes Aircraft Operations and Maintenance, Open Space/Buffer Zone, and Administration. Maps of land use for all of the IDP project sites can be found in Appendix A.

3.13.1.3 Airspace Management

Airspace management existing conditions described in Section 3.2.1.3 apply to this project's LOD as well.

3.13.1.4 Noise

Regulations related to noise and existing conditions on JBA as described in Section 3.2.1.4 are applicable to this project as well. The closest NSAs to the C2 project site are a fitness track about 100 feet north, the East Fitness Center about 0.15 miles north, a chapel about 0.25 miles northeast, and CDC #3 about 0.35 miles northeast of the project site.

3.13.1.5 Geology, Topography, and Soils

The geology and topography existing conditions described in Section 3.2.1.5 apply to this project's LOD as well. The majority of the main installation is comprised of udorthents and urban soils, which are typically previously disturbed areas with moderately well drained to excessively drained soils and low to very low runoff potential. Soils within project site C2 are all Un, or developed urban soils, which is not considered prime farmland or farmland of statewide importance (USDA, 2021). A map of the soils found within the IDP project areas can be found in Appendix A.

3.13.1.6 Water Resources

The existing conditions of water resources as described in Section 3.2.1.6 apply to this project area as well. Project C2 falls within the Tinkers Creek watershed and there are no surface waters or wetlands within the project LOD; however, a small portion of the project site does fall within the 500-year floodplain. Water Resources maps in Appendix A show the surface waters, floodplains, and wetlands in the vicinity of all IDP projects.

3.13.1.7 Biological Resources

The existing conditions described in Section 3.2.1.7 for vegetation, wildlife, and threatened and endangered species within JBA's main installation apply to the project area for C2 as well. This project area is totally developed and mowed lawn and there are no threatened or endangered species known to occur within this LOD. A map of the forest stands and threatened and endangered species within this project area is located in the Biological Resources map in Appendix A.

3.13.1.8 Cultural Resources

Background information and information on JBA's cultural resources described in Section 3.2.1.8 are applicable to this project as well. No architectural or archaeological historic properties are known to be within the C2 LOD, nor are there any known historic properties within the viewshed of the project site.

3.13.1.9 Transportation

Existing conditions regarding transportation as described in Section 3.2.1.9 apply to this proposed project area as well.

3.13.1.10 Infrastructure and Utilities

The existing conditions related to infrastructure and utilities as described in Section 3.2.1.10 apply to this proposed project area as well.

3.13.1.11 HTMW

The majority of the existing conditions described in Section 3.2.1.11 apply to this project area as well. There are no MMRP sites on the C2 project LOD; however, ERP site ST-14, East Side Service Station, does fall within this project LOD (JBA, 2018a; JBA, 2018b). The remediation process for ST-14 is ongoing, as JBA works to prevent further migration of plumes and degrade contaminants in ground water in accordance with the ROD. This ERP site also has land use control restrictions in place due to the contamination (JBA, 2018a). In addition, as a crash rescue station, there is an increased risk that this site is contaminated with PFAS due to previous AFFF use. Ground water and soil testing should be completed prior to any ground disturbing activities. While there are no USTs within the C2 project LOD, there is an AST associated with Building 3464 within the project LOD.

3.13.1.12 Socioeconomics, Environmental Justice, and Protection of Children

The existing conditions for socioeconomics, environmental justice, and protection of children as described in Section 3.2.1.12 apply to this project area as well. This project area does not contain any existing schools, playgrounds, CDCs, or other facilities that would put children at a disproportionate risk for any environmental or health risks during development of this proposed project.

3.13.1.13 Safety and Occupational Health

The existing conditions for safety and occupational health as described in Section 3.2.1.13 apply to the C2 project LOD as well. The project LOD for C2 is not within existing ESQD arcs.

3.13.2 Environmental Consequences

This project involves new construction in the form of an addition to an existing building, so overall anticipated impacts would be limited. There are no anticipated impacts to land use, airspace management, geology, topography, surface waters, wetlands, biological resources, cultural resources, transportation, socioeconomics, environmental justice, protection of children, or safety and occupational health. There would be negligible to minor, temporary adverse impacts to air quality, soils, noise, and infrastructure and utilities during construction. There would also be minor adverse impacts to floodplains, as a portion of the site falls within the 500-year floodplain, and HTMW, as there is an AST associated with the fire station that may need to be moved depending on the location of the addition and there is the potential for PFAS contamination. These potential impacts would be reduced through the implementation of appropriate controls and mitigation measures. Appropriate coordination would need to be completed and applicable permits obtained prior to implementation of this project. As mentioned in the ROD for ERP site ST-14, this project should be reviewed prior to implementation to ensure that it complies with the appropriate land use control restrictions. While there are no known PFAS sites within the C2 project site, there is high probability of PFAS contamination in the area due to previous AFFF use, so the soil and ground water should still be tested prior to any ground disturbing activities.

Based on the expected impacts of project C2, it is anticipated that an AF Form 813 would be the appropriate level of supplemental NEPA once additional project details are determined.

3.14 Project C3 – New Dormitory

Project C3 involves the construction of a new 144-bed dormitory along Colorado Avenue between D Street and F Street.

3.14.1 Existing Conditions

3.14.1.1 Air Quality

Air quality existing conditions described in Section 3.2.1.1 apply to this project's LOD as well.

3.14.1.2 Land Use

Background information and information on land use adjacent to the main installation described in Section 3.2.1.2 is applicable to this project as well. The existing land use at project site C3 is Administration. Maps of land use for all of the IDP project sites can be found in Appendix A.

3.14.1.3 Airspace Management

Airspace management existing conditions described in Section 3.2.1.3 apply to this project's LOD as well.

3.14.1.4 Noise

Regulations related to noise and existing conditions on JBA as described in Section 3.2.1.4 are applicable to this project as well. The closest NSAs to the C3 project site are other existing dormitories about 150 feet and 400 feet to the north, and about 200 feet and 450 feet to the southeast of the project site. There is also a theater about 0.2 miles east, and there are plans to build a new CDC about 0.3 miles southwest of the project site.

3.14.1.5 Geology, Topography, and Soils

The geology and topography existing conditions described in Section 3.2.1.5 apply to this project's LOD as well. The majority of the main installation is comprised of udorthents and urban soils, which are typically previously disturbed areas with moderately well drained to excessively drained soils and low to very low runoff potential. Soils within project site C3 are all UdbB, which are well drained udorthents with low runoff potential. These soils are not prime farmland soils or farmland of statewide importance (USDA, 2021). A map of the soils found within the IDP project areas can be found in Appendix A.

3.14.1.6 Water Resources

The existing conditions of water resources as described in Section 3.2.1.6 apply to this project area as well. Project C3 falls within the Tinkers Creek watershed and there are no surface waters or wetlands within the project LOD; however, much of the project site does fall within the 100- and 500-year floodplains. Water Resources maps in Appendix A show the surface waters, floodplains, and wetlands in the vicinity of all IDP projects.

3.14.1.7 Biological Resources

The existing conditions described in Section 3.2.1.7 for vegetation, wildlife, and threatened and endangered species within JBA's main installation apply to the project area for C3 as well. This project area is totally developed and mowed lawn and there are no threatened or endangered species known to occur within this LOD. A map of the forest stands and threatened and endangered species within this project area is located in the Biological Resources map in Appendix A.

3.14.1.8 Cultural Resources

Background information and information on JBA's cultural resources described in Section 3.2.1.8 are applicable to this project as well. No architectural or archaeological historic properties are known to be within the C3 LOD, nor are there any known historic properties within the viewshed of the project site.

3.14.1.9 Transportation

Existing conditions regarding transportation as described in Section 3.2.1.9 apply to this proposed project area as well.

3.14.1.10 Infrastructure and Utilities

The existing conditions related to infrastructure and utilities as described in Section 3.2.1.10 apply to this proposed project area as well.

3.14.1.11 HTMW

The majority of the existing conditions described in Section 3.2.1.11 apply to this project area as well. There are no ERP sites or MMRP sites on the C3 project LOD (JBA, 2018a; JBA, 2018b). There are no existing ASTs or USTs within the C3 project LOD or in its immediate vicinity.

3.14.1.12 Socioeconomics, Environmental Justice, and Protection of Children

The existing conditions for socioeconomics, environmental justice, and protection of children as described in Section 3.2.1.12 apply to this project area as well. This project area does not contain any existing schools, playgrounds, CDCs, or other facilities that would put children at a disproportionate risk for any environmental or health risks during development of this proposed project.

3.14.1.13 Safety and Occupational Health

The existing conditions for safety and occupational health as described in Section 3.2.1.13 apply to the C3 project LOD as well. The project LOD for C3 is not within existing ESQD arcs.

3.14.2 Environmental Consequences

Project C3 involves new construction of a dormitory in a previously developed area, so anticipated impacts are expected to be limited. There are no anticipated impacts to land use, airspace management, geology, topography, surface waters, wetlands, biological resources, cultural resources, transportation, HTMW, socioeconomics, environmental justice, protection of children, or safety and occupational health. There would be negligible to minor, temporary adverse impacts to air quality, soils, noise, and infrastructure and utilities during construction. There would also be

minor adverse impacts to floodplains, as a portion of the site falls within the 100- and 500-year floodplain. These potential impacts would be reduced through the implementation of appropriate controls and mitigation measures. Appropriate coordination would need to be completed and applicable permits obtained prior to implementation of this project. While there are no known PFAS sites on, or in the immediate vicinity of, the C3 project, the soil and ground water should still be tested prior to any ground disturbing activities.

Based on the expected impacts of project C3, it is anticipated that an AF Form 813 would be the appropriate level of supplemental NEPA once additional project details are determined.

3.15 Project C4 – Compass Calibration Pad

Project C4 involves relocating the Compass Calibration Pad, including the paving of the new pad and access taxiway. There are three alternative locations for the Compass Calibration Pad, and the size and location of the associated taxiway will be determined by the alternative selected.

3.15.1 Existing Conditions

3.15.1.1 Air Quality

Air quality existing conditions described in Section 3.2.1.1 apply to this project's LOD as well.

3.15.1.2 Land Use

Background information and information on land use adjacent to the main installation described in Section 3.2.1.2 is applicable to this project as well. The existing land use at project site C4 is Open Space/Buffer Zone and Airfield Pavement. Maps of land use for all of the IDP project sites can be found in Appendix A.

3.15.1.3 Airspace Management

Airspace management existing conditions described in Section 3.2.1.3 apply to this project's LOD as well.

3.15.1.4 Noise

Regulations related to noise and existing conditions on JBA as described in Section 3.2.1.4 are applicable to this project as well. The closest NSAs to the C4 project sites are an off-installation apartment complex about 0.5 miles northwest of the northwestern project site, the JBA golf course about 0.2 miles west of the southernmost project site, and an off-installation residential neighborhood about 0.4 miles south of the southernmost project site.

3.15.1.5 Geology, Topography, and Soils

The geology and topography existing conditions described in Section 3.2.1.5 apply to this project's LOD as well. A large portion of the main installation is comprised of Beltsville silt loams, Croom gravelly sandy loams, and Grosstown gravelly silt loams. Soil types on project site C4 include: BaA and BaB (Beltsville silt loams); CwE (Croom-Marr complex); DfA (Dodon fine sandy loam); UdbB, UdgB, and UdbD (udorthents); Un (urban soils); WE (Widewater and Issue soils); and WoB (Woodstown sandy loam). These soils types are moderately well drained to well drained silt

loams with medium to very low runoff potential, well drained gravelly loam with high runoff potential, and well drained udorthents and urban areas with high runoff potential. Prime farmland soils within this project site include BaA, BaB, and DfA. There is no farmland of statewide importance (USDA, 2021). A map of the soils found within the IDP project areas can be found in Appendix A.

3.15.1.6 Water Resources

The existing conditions of water resources as described in Section 3.2.1.6 apply to this project area as well. Project C4 falls within the Tinkers Creek, Henson Creek, Piscataway Creek, and Charles Branch-Western Branch Patuxent River watersheds. There are no surface waters in any of the three project LODs; however, the northwestern LOD falls within the 500-year floodplain of the Tinkers Creek watershed, the northeastern LOD contains palustrine emergent (PEM) wetlands, and the southern LOD contains palustrine forested (PFO1A) wetlands and falls within the 500-year floodplain of the Piscataway Creek watershed. The southernmost project site lies about 500 feet northeast of Piscataway Creek. Water Resources maps in Appendix A show the surface waters, floodplains, and wetlands in the vicinity of all IDP projects.

3.15.1.7 Biological Resources

The existing conditions described in Section 3.2.1.7 for vegetation, wildlife, and threatened and endangered species within JBA's main installation apply to the project areas for C4 as well. The northeastern project area is totally developed and mowed lawn, the northwestern project area is mostly developed and mowed lawn with a small portion of forested vegetation, and the southern project area is completely forested. There are no threatened or endangered species known to occur within this LOD. A map of the forest stands and threatened and endangered species within this project area is located in the Biological Resources map in Appendix A.

3.15.1.8 Cultural Resources

Background information and information on JBA's cultural resources described in Section 3.2.1.8 are applicable to this project as well. No architectural or archaeological historic properties are known to be within the C4 LODs; however, the northwestern project area is likely located within the viewshed of the Belle Chance cemetery.

3.15.1.9 Transportation

Existing conditions regarding transportation as described in Section 3.2.1.9 apply to this proposed project area as well.

3.15.1.10 Infrastructure and Utilities

The existing conditions related to infrastructure and utilities as described in Section 3.2.1.10 apply to this proposed project area as well.

3.15.1.11 HTMW

The majority of the existing conditions described in Section 3.2.1.11 apply to this project area as well. There are no ERP sites or MMRP sites on the C4 project LOD (JBA, 2018a; JBA, 2018b). The only ERP site in the vicinity of the project is AFFF Area 7, the former Hare Berry Farm near the southeastern C4 LOD, and initial ground water testing at AFFF Area 7 showed PFAS

contamination (AFCEC, 2018). There are no existing ASTs or USTs within the C4 project LOD or in its immediate vicinity.

3.15.1.12 Socioeconomics, Environmental Justice, and Protection of Children

The existing conditions for socioeconomics, environmental justice, and protection of children as described in Section 3.2.1.12 apply to this project area as well. This project area does not contain any existing schools, playgrounds, CDCs, or other facilities that would put children at a disproportionate risk for any environmental or health risks during development of this proposed project.

3.15.1.13 Safety and Occupational Health

The existing conditions for safety and occupational health as described in Section 3.2.1.13 apply to the C4 project LOD as well. The project LOD for C4 is not within existing ESQD arcs.

3.15.2 Environmental Consequences

This project includes the new construction of a compass calibration pad, which includes a parking pad and access taxiway, so while there are some environmental concerns at several of the alternative locations, anticipated impacts are expected to be minor. There are no anticipated impacts to airspace management, geology, topography, surface waters, transportation, HTMW, socioeconomics, environmental justice, protection of children, or safety and occupational health. There would be negligible to minor, temporary adverse impacts to air quality, noise, and infrastructure and utilities during construction. There would also be minor adverse impacts to cultural resources; soils, as there are prime farmland soils within the LOD; land use, as open space/buffer zone lands may be converted to airfield pavement; biological resources, as part of the site is forested; wetlands; stormwater; and floodplains, as a portion of the site falls within the 100- and 500-year floodplain. These potential impacts would be reduced through the implementation of appropriate controls and mitigation measures. Appropriate coordination would need to be completed and applicable permits obtained prior to implementation of this project. While there are no known PFAS sites within the C4 project site, there is known PFAS contamination nearby at AFFF Area 7, so the soil and ground water should still be tested prior to any ground disturbing activities.

Based on the expected impacts of project C4, it is anticipated that an EA would be the appropriate level of supplemental NEPA once additional project details are determined.

3.16 Project C5 – Second Taxiway for Hangar 21

Project C5 covers the construction of a second taxiway for Hangar 21, including any necessary drainage measures.

3.16.1 Existing Conditions

3.16.1.1 Air Quality

Air quality existing conditions described in Section 3.2.1.1 apply to this project's LOD as well.

3.16.1.2 Land Use

Background information and information on land use adjacent to the main installation described in Section 3.2.1.2 is applicable to this project as well. The existing land use at project site C5 includes Airfield Pavement, Open Space/Buffer Zone, and Industrial. Maps of land use for all of the IDP project sites can be found in Appendix A.

3.16.1.3 Airspace Management

Airspace management existing conditions described in Section 3.2.1.3 apply to this project's LOD as well.

3.16.1.4 Noise

Regulations related to noise and existing conditions on JBA as described in Section 3.2.1.4 are applicable to this project as well. The closest NSA to the C5 project sites is an outdoor recreation facility (golf course) about 0.4 miles to the south and west of the project site. CDC #2 and a family housing area are also within 0.65 miles of the project site.

3.16.1.5 Geology, Topography, and Soils

The geology and topography existing conditions described in Section 3.2.1.5 apply to this project's LOD as well. A large portion of the main installation is comprised of Beltsville silt loams, Croom gravelly sandy loams, and Grosstown gravelly silt loams. Soil types on project site C5 include: DoB (Downer-Hammonton complex), FaaA (Fallsington sandy loam), InA (Ingleside sandy loam), SaaC (Sassafras sandy loam), UdbB (udorthents), Un (urban soils), and WoA (Woodstown sandy loam). These soils are well drained loamy sands with very low runoff potential, poorly drained mucky peat, and well drained udorthents and urban areas with high runoff potential. Soil types DoB and InA are prime farmland soils, and SaaC is farmland of statewide importance (USDA, 2021). A map of the soils found within the IDP project areas can be found in Appendix A.

3.16.1.6 Water Resources

The existing conditions of water resources as described in Section 3.2.1.6 apply to this project area as well. Project C5 falls within the Piscataway Creek watershed and there are no surface waters within the project LOD; however, a large portion of the site is covered by palustrine emergent (PEM) wetlands and much of the site falls within the 100- and 500-year floodplains. Water Resources maps in Appendix A show the surface waters, floodplains, and wetlands in the vicinity of all IDP projects.

3.16.1.7 Biological Resources

The existing conditions described in Section 3.2.1.7 for vegetation, wildlife, and threatened and endangered species within JBA's main installation apply to the project area for C5 as well. This project area is mostly developed and mowed lawn with a small portion of forest, and there are no threatened or endangered species known to occur within this LOD. A map of the forest stands and threatened and endangered species within this project area is located in the Biological Resources map in Appendix A.

3.16.1.8 Cultural Resources

Background information and information on JBA's cultural resources described in Section 3.2.1.8 are applicable to this project as well. No architectural or archaeological historic properties are known to be within the C5 LOD; however, the project site is within the viewshed of Building 5016 (Hangar 19), which is recommended as eligible for NRHP listing.

3.16.1.9 Transportation

Existing conditions regarding transportation as described in Section 3.2.1.9 apply to this proposed project area as well.

3.16.1.10 Infrastructure and Utilities

The existing conditions related to infrastructure and utilities as described in Section 3.2.1.10 apply to this proposed project area as well.

3.16.1.11 HTMW

The majority of the existing conditions described in Section 3.2.1.11 apply to this project area as well. There are no ERP sites or MMRP sites on the C5 project LOD (JBA, 2018a; JBA, 2018b). There are no existing ASTs or USTs within the C5 project LOD or in its immediate vicinity.

3.16.1.12 Socioeconomics, Environmental Justice, and Protection of Children

The existing conditions for socioeconomics, environmental justice, and protection of children as described in Section 3.2.1.12 apply to this project area as well. This project area does not contain any existing schools, playgrounds, CDCs, or other facilities that would put children at a disproportionate risk for any environmental or health risks during development of this proposed project.

3.16.1.13 Safety and Occupational Health

The existing conditions for safety and occupational health as described in Section 3.2.1.13 apply to the C5 project LOD as well. The project LOD for C5 is not within existing ESQD arcs.

3.16.2 Environmental Consequences

Project C5 includes the construction of a new taxiway and associated drainage, and while there are some environmental concerns associated with the project and its LOD, anticipated impacts are expected to be minor. There are no anticipated impacts to land use, airspace management, geology, topography, surface waters, biological resources, transportation, HTMW, socioeconomics, environmental justice, protection of children, or safety and occupational health. There would be negligible to minor, temporary adverse impacts to air quality, noise, and infrastructure and utilities during construction. There would also be minor adverse impacts to cultural resources; soils, as there are prime farmland soils within the LOD; wetlands; stormwater; and floodplains, as a portion of the site falls within the 100- and 500-year floodplain. These potential impacts would be reduced through the implementation of appropriate controls and mitigation measures. Appropriate coordination would need to be completed and applicable permits obtained prior to implementation of this project. While there are no known PFAS sites on, or in the immediate vicinity of, the C5 project, the soil and ground water should still be tested prior to any ground disturbing activities.

Based on the expected impacts of project C5, it is anticipated that an EA would be the appropriate level of supplemental NEPA once additional project details are determined.

3.17 Project C6 – Security Forces Group (SFG) Complex

Project C6 involves construction of a total of approximately 88,000 sq ft of operations and training facilities between four buildings. It also includes the construction of a parking lot and the demolition of the existing car wash facility on site.

3.17.1 Existing Conditions

3.17.1.1 Air Quality

Air quality existing conditions described in Section 3.2.1.1 apply to this project's LOD as well.

3.17.1.2 Land Use

Background information and information on land use adjacent to the main installation described in Section 3.2.1.2 is applicable to this project as well. The existing land use at project site C6 includes Airfield Operations and Maintenance and Administration. Maps of land use for all of the IDP project sites can be found in Appendix A.

3.17.1.3 Airspace Management

Airspace management existing conditions described in Section 3.2.1.3 apply to this project's LOD as well.

3.17.1.4 Noise

Regulations related to noise and existing conditions on JBA as described in Section 3.2.1.4 are applicable to this project as well. The closest NSAs to the C6 project site are dormitories about 100 feet west, about 150 feet west, about 250 feet northwest, and about 0.25 miles northwest of the project site, along with a theater about 300 feet north, the education center about 250 feet south, and the West Fitness Center about 0.15 miles southwest of the project site.

3.17.1.5 Geology, Topography, and Soils

The geology and topography existing conditions described in Section 3.2.1.5 apply to this project's LOD as well. The majority of the main installation is comprised of udorthents and urban soils, which are typically previously disturbed areas with moderately well drained to excessively drained soils and low to very low runoff potential. Soils within project site C6 include: GuB and Un, which are well drained silt loams with very low runoff potential and developed urban soils. Neither soils are prime farmland nor farmland of statewide importance (USDA, 2021). A map of the soils found within the IDP project areas can be found in Appendix A.

3.17.1.6 Water Resources

The existing conditions of water resources as described in Section 3.2.1.6 apply to this project area as well. Project C6 falls within the Tinkers Creek watershed and there are no surface waters or wetlands within the project LOD; however, much of the site does fall within the 100- and 500-year

floodplains. Water Resources maps in Appendix A show the surface waters, floodplains, and wetlands in the vicinity of all IDP projects.

3.17.1.7 Biological Resources

The existing conditions described in Section 3.2.1.7 for vegetation, wildlife, and threatened and endangered species within JBA's main installation apply to the project area for C6 as well. This project area is totally developed and mowed lawn and there are no threatened or endangered species known to occur within this LOD. A map of the forest stands and threatened and endangered species within this project area is located in the Biological Resources map in Appendix A.

3.17.1.8 Cultural Resources

Background information and information on JBA's cultural resources described in Section 3.2.1.8 are applicable to this project as well. No architectural or archaeological historic properties are known to be within the C6 LOD; however, the project site is located within the viewshed of buildings 1754 (Hangar 3) and 1280 (Hangar 6), which are recommended as eligible for listing in the NRHP.

3.17.1.9 Transportation

Existing conditions regarding transportation as described in Section 3.2.1.9 apply to this proposed project area as well.

3.17.1.10 Infrastructure and Utilities

The existing conditions related to infrastructure and utilities as described in Section 3.2.1.10 apply to this proposed project area as well.

3.17.1.11 HTMW

The majority of the existing conditions described in Section 3.2.1.11 apply to this project area as well. ERP site SS-27 – former dry cleaner Building 1623 – is located within the project LOD for project C6. Remediation is ongoing at this site and contaminants include: tetrachloroethene (PCE), TCE, DCE, vinyl chloride, and chloroform (JBA, 2018a). The only PFAS site in the vicinity of the project is AFFF Area 5, located in Hangars 6 and 7, where initial ground water testing showed PFAS contamination (AFCEC, 2018). There are no MMRP sites within the C6 LOD (JBA, 2018b). While there are no USTs within the C6 project LOD, there are two ASTs associated with Buildings 1618 and 1658 within the project LOD.

3.17.1.12 Socioeconomics, Environmental Justice, and Protection of Children

The existing conditions for socioeconomics, environmental justice, and protection of children as described in Section 3.2.1.12 apply to this project area as well. This project area does not contain any existing schools, playgrounds, CDCs, or other facilities that would put children at a disproportionate risk for any environmental or health risks during development of this proposed project.

3.17.1.13 Safety and Occupational Health

The existing conditions for safety and occupational health as described in Section 3.2.1.13 apply to the C6 project LOD as well. The project LOD for C6 is not within existing ESQD arcs.

3.17.2 Environmental Consequences

Project C6 involves the construction of a new operations and training complex on a previously developed site, so while there is the potential for impacts, they are expected to be minor. There are no anticipated impacts to land use, airspace management, geology, topography, soils, surface waters, wetlands, biological resources, transportation, socioeconomics, environmental justice, protection of children, or safety and occupational health. There would be negligible to minor, temporary adverse impacts to air quality, noise, and infrastructure and utilities during construction. There would also be minor adverse impacts to cultural resources; stormwater, as there would be changes to drainage patterns and impervious surfaces; floodplains, as a portion of the site falls within the 100- and 500-year floodplain; and HTMW, as there is ongoing ERP remediation and there are 2 ASTs within the project LOD. These potential impacts would be reduced through the implementation of appropriate controls and mitigation measures. Appropriate coordination would need to be completed and applicable permits obtained prior to implementation of this project. While there are no known PFAS sites within the C6 project site, there is known PFAS contamination nearby at AFFF Area 5, so the soil and ground water should still be tested prior to any ground disturbing activities.

Based on the expected impacts of project C6, it is anticipated that an AF Form 813 would be the appropriate level of supplemental NEPA once additional project details are determined.

3.18 Project C7 – Passenger Terminal

Project C7 involves two alternatives to address existing size deficiencies and provide modern airport security features – the construction of a new passenger terminal or the expansion of the existing passenger terminal. Both alternatives would utilize the same LOD surrounding the existing passenger terminal.

3.18.1 Existing Conditions

3.18.1.1 Air Quality

Air quality existing conditions described in Section 3.2.1.1 apply to this project's LOD as well.

3.18.1.2 Land Use

Background information and information on land use adjacent to the main installation described in Section 3.2.1.2 is applicable to this project as well. The existing land use at project site C7 is Airfield Operations and Maintenance. Maps of land use for all of the IDP project sites can be found in Appendix A.

3.18.1.3 Airspace Management

Airspace management existing conditions described in Section 3.2.1.3 apply to this project's LOD as well.

3.18.1.4 Noise

Regulations related to noise and existing conditions on JBA as described in Section 3.2.1.4 are applicable to this project as well. The closest NSAs to the C7 project site are the education center about 0.3 miles west, the West Fitness Center about 0.5 miles northwest, and a residential neighborhood about 0.5 miles southwest of the project site.

3.18.1.5 Geology, Topography, and Soils

The geology and topography existing conditions described in Section 3.2.1.5 apply to this project's LOD as well. The majority of the main installation is comprised of udorthents and urban soils, which are typically previously disturbed areas with moderately well drained to excessively drained soils and low to very low runoff potential. Soils within project site C7 include: BuB and Un, which are moderately well drained silt loams with medium runoff potential and developed urban soils. None of the soils within this project area are prime farmland or farmland of statewide importance (USDA, 2021). A map of the soils found within the IDP project areas can be found in Appendix A.

3.18.1.6 Water Resources

The existing conditions of water resources as described in Section 3.2.1.6 apply to this project area as well. Project C7 falls within the Tinkers Creek watershed and there are no surface waters or wetlands within the project LOD; however, a portion of the site falls within the 500-year floodplain. Water Resources maps in Appendix A show the surface waters, floodplains, and wetlands in the vicinity of all IDP projects.

3.18.1.7 Biological Resources

The existing conditions described in Section 3.2.1.7 for vegetation, wildlife, and threatened and endangered species within JBA's main installation apply to the project area for C7 as well. This project area is totally developed and mowed lawn and there are no threatened or endangered species known to occur within this LOD. A map of the forest stands and threatened and endangered species within this project area is located in the Biological Resources map in Appendix A.

3.18.1.8 Cultural Resources

Background information and information on JBA's cultural resources described in Section 3.2.1.8 are applicable to this project as well. No archaeological historic properties are known to be within the C7 LOD; however, the passenger terminal itself is recommended as eligible for listing in the NRHP, and it is within the viewshed of two other buildings recommended as eligible – buildings 1280 (Hangar 6) and 5016 (Hangar 19).

3.18.1.9 Transportation

Existing conditions regarding transportation as described in Section 3.2.1.9 apply to this proposed project area as well.

3.18.1.10 Infrastructure and Utilities

The existing conditions related to infrastructure and utilities as described in Section 3.2.1.10 apply to this proposed project area as well.

3.18.1.11 HTMW

The majority of the existing conditions described in Section 3.2.1.11 apply to this project area as well. There are no ERP sites or MMRP sites on the C7 project LOD (JBA, 2018a; JBA, 2018b). The only ERP sites in the vicinity of the project are AFFF Area 5, located in Hangars 6 and 7, and AFFF Area 6, associated with Fire Station 1. Initial ground water testing at both sites showed PFAS contamination (AFCEC, 2018). While there are no USTs within the C7 project LOD, there is one existing ASTs associated with Building 1245 within the project LOD. Based on the age of the passenger terminal, there is potential for ACM and LBP.

3.18.1.12 Socioeconomics, Environmental Justice, and Protection of Children

The existing conditions for socioeconomics, environmental justice, and protection of children as described in Section 3.2.1.12 apply to this project area as well. This project area does not contain any existing schools, playgrounds, CDCs, or other facilities that would put children at a disproportionate risk for any environmental or health risks during development of this proposed project.

3.18.1.13 Safety and Occupational Health

The existing conditions for safety and occupational health as described in Section 3.2.1.13 apply to the C7 project LOD as well. The project LOD for C7 is not within existing ESQD arcs.

3.18.2 Environmental Consequences

This project involves either the construction of a new passenger terminal or the expansion of the existing terminal. Either way, this development would occur on a previously developed site, so while there is the potential for impacts, they are expected to be minor. There are no anticipated impacts to land use, airspace management, geology, topography, soils, surface waters, wetlands, stormwater, biological resources, cultural resources, transportation, socioeconomics, environmental justice, protection of children, or safety and occupational health. There would be negligible to minor, temporary adverse impacts to air quality, noise, and infrastructure and utilities during construction. There would also be minor adverse impacts to cultural resources; floodplains, as a portion of the site falls within the 500-year floodplain; and HTMW, as there is one AST that may need to be removed depending on the project design and there is the potential for ACM and LBP that could be disturbed during construction. These potential impacts would be reduced through the implementation of appropriate controls and mitigation measures. Appropriate coordination would need to be completed and applicable permits obtained prior to implementation of this project. While there are no known PFAS sites within the C7 project site, there is known PFAS contamination nearby at AFFF Areas 5 and 6, so the soil and ground water should still be tested prior to any ground disturbing activities.

Based on the expected impacts of project C7, it is anticipated that an AF Form 813 would be the appropriate level of supplemental NEPA once additional project details are determined.

3.19 Project C8 – West Fitness Center Addition

Project C8 covers the construction of an approximately 25,000 sq ft addition to the West Fitness Center.

3.19.1 Existing Conditions

3.19.1.1 Air Quality

Air quality existing conditions described in Section 3.2.1.1 apply to this project's LOD as well.

3.19.1.2 Land Use

Background information and information on land use adjacent to the main installation described in Section 3.2.1.2 is applicable to this project as well. The existing land use at project site C8 is Community Service. Maps of land use for all of the IDP project sites can be found in Appendix A.

3.19.1.3 Airspace Management

Airspace management existing conditions described in Section 3.2.1.3 apply to this project's LOD as well.

3.19.1.4 Noise

Regulations related to noise and existing conditions on JBA as described in Section 3.2.1.4 are applicable to this project as well. The closest NSAs to the C8 project site are a recreation center immediately southwest, a dormitory about 500 feet northeast, the education center about 600 feet east, a child care center about 0.15 miles southwest, and a residential neighborhood about 0.3 miles south of the project site.

3.19.1.5 Geology, Topography, and Soils

The geology and topography existing conditions described in Section 3.2.1.5 apply to this project's LOD as well. The majority of the main installation is comprised of udorthents and urban soils, which are typically previously disturbed areas with moderately well drained to excessively drained soils and low to very low runoff potential. Soils within project site C8 include: BuB and GuB, which are moderately well drained to well drained silt loams with medium to very low runoff potential. Neither of these soils are prime farmland nor farmland of statewide importance (USDA, 2021). A map of the soils found within the IDP project areas can be found in Appendix A.

3.19.1.6 Water Resources

The existing conditions of water resources as described in Section 3.2.1.6 apply to this project area as well. Project C8 falls within the Tinkers Creek watershed and there are no surface waters or wetlands within the project LOD; however, a very small portion of the eastern corner of the site falls within the 500-year floodplain. Water Resources maps in Appendix A show the surface waters, floodplains, and wetlands in the vicinity of all IDP projects.

3.19.1.7 Biological Resources

The existing conditions described in Section 3.2.1.7 for vegetation, wildlife, and threatened and endangered species within JBA's main installation apply to the project area for C8 as well. This project area is totally developed and mowed lawn and there are no threatened or endangered species known to occur within this LOD. A map of the forest stands and threatened and endangered species within this project area is located in the Biological Resources map in Appendix A.

3.19.1.8 Cultural Resources

Background information and information on JBA's cultural resources described in Section 3.2.1.8 are applicable to this project as well. No architectural or archaeological historic properties are known to be within the C8 LOD, nor are there any known historic properties within the viewshed of the project site.

3.19.1.9 Transportation

Existing conditions regarding transportation as described in Section 3.2.1.9 apply to this proposed project area as well.

3.19.1.10 Infrastructure and Utilities

The existing conditions related to infrastructure and utilities as described in Section 3.2.1.10 apply to this proposed project area as well.

3.19.1.11 HTMW

The majority of the existing conditions described in Section 3.2.1.11 apply to this project area as well. There are no ERP sites or MMRP sites on the C8 project LOD (JBA, 2018a; JBA, 2018b). There are no existing ASTs or USTs within the C8 project LOD or in its immediate vicinity. Based on the age of the fitness center, there is potential for ACM and LBP.

3.19.1.12 Socioeconomics, Environmental Justice, and Protection of Children

The existing conditions for socioeconomics, environmental justice, and protection of children as described in Section 3.2.1.12 apply to this project area as well. There is a child care center located to the southwest of this proposed project site. Appropriate measures would need to be taken to ensure the safety of children should this proposed project be developed.

3.19.1.13 Safety and Occupational Health

The existing conditions for safety and occupational health as described in Section 3.2.1.13 apply to the C8 project LOD as well. The project LOD for C8 is not within existing ESQD arcs.

3.19.2 Environmental Consequences

This project involves new construction in the form of an addition to an existing building, so overall anticipated impacts would be limited. There are no anticipated impacts to land use, airspace management, geology, topography, surface waters, wetlands, biological resources, cultural resources, transportation, socioeconomics, environmental justice, protection of children, or safety and occupational health. There would be negligible to minor, temporary adverse impacts to air quality, noise, soils, and infrastructure and utilities during construction. There would also be minor adverse impacts to stormwater and floodplains, as a portion of the site falls within the 500-year floodplain; and HTMW, as there is the potential for ACM and LBP within the buildings that could be disturbed during construction. These potential impacts would be reduced through the implementation of appropriate controls and mitigation measures. Appropriate coordination would need to be completed and applicable permits obtained prior to implementation of this project. While there are no known PFAS sites on, or in the immediate vicinity of, the C8 project, the soil and ground water should still be tested prior to any ground disturbing activities.

Based on the expected impacts of project C8, it is anticipated that an AF Form 813 would be the appropriate level of supplemental NEPA once additional project details are determined.

3.20 Project C9 – 459th Readiness Alert Facility

Project C9 includes the construction of an approximately 17,600 sq ft Readiness Alert Facility, along with the associated parking lot.

3.20.1 Existing Conditions

3.20.1.1 Air Quality

Air quality existing conditions described in Section 3.2.1.1 apply to this project's LOD as well.

3.20.1.2 Land Use

Background information and information on land use adjacent to the main installation described in Section 3.2.1.2 is applicable to this project as well. The existing land use at project site C9 is Airfield Operations and Maintenance. Maps of land use for all of the IDP project sites can be found in Appendix A.

3.20.1.3 Airspace Management

Airspace management existing conditions described in Section 3.2.1.3 apply to this project's LOD as well.

3.20.1.4 Noise

Regulations related to noise and existing conditions on JBA as described in Section 3.2.1.4 are applicable to this project as well. The closest NSAs to the C9 project site are a fitness track about 100 feet east, the East Fitness Center about 0.15 miles northeast, a chapel about 0.4 miles east, and CDC #3 about 0.5 miles east of the project site.

3.20.1.5 Geology, Topography, and Soils

The geology and topography existing conditions described in Section 3.2.1.5 apply to this project's LOD as well. The majority of the main installation is comprised of udorthents and urban soils, which are typically previously disturbed areas with moderately well drained to excessively drained soils and low to very low runoff potential. Soils within project site C9 are all Un, or developed urban soil, which is not considered prime farmland or farmland of statewide importance (USDA, 2021). A map of the soils found within the IDP project areas can be found in Appendix A.

3.20.1.6 Water Resources

The existing conditions of water resources as described in Section 3.2.1.6 apply to this project area as well. Project C9 falls within the Tinkers Creek watershed and there are no surface waters, wetlands, or floodplains within the project LOD. Water Resources maps in Appendix A show the surface waters, floodplains, and wetlands in the vicinity of all IDP projects.

3.20.1.7 Biological Resources

The existing conditions described in Section 3.2.1.7 for vegetation, wildlife, and threatened and endangered species within JBA's main installation apply to the project area for C9 as well. This project area is totally developed and mowed lawn and there are no threatened or endangered species known to occur within this LOD. A map of the forest stands and threatened and endangered species within this project area is located in the Biological Resources map in Appendix A.

3.20.1.8 Cultural Resources

Background information and information on JBA's cultural resources described in Section 3.2.1.8 are applicable to this project as well. No architectural or archaeological historic properties are known to be within the C9 LOD, nor are there any known historic properties within the viewshed of the project site.

3.20.1.9 Transportation

Existing conditions regarding transportation as described in Section 3.2.1.9 apply to this proposed project area as well.

3.20.1.10 Infrastructure and Utilities

The existing conditions related to infrastructure and utilities as described in Section 3.2.1.10 apply to this proposed project area as well.

3.20.1.11 HTMW

The majority of the existing conditions described in Section 3.2.1.11 apply to this project area as well. There are no ERP sites or MMRP sites on the C9 project LOD (JBA, 2018a; JBA, 2018b). The only ERP site in the vicinity of the project is AFFF Area 3, the East Side Service Station, where initial ground water testing showed PFAS contamination (AFCEC, 2018). There are no existing ASTs or USTs within the C9 project LOD or in its immediate vicinity.

3.20.1.12 Socioeconomics, Environmental Justice, and Protection of Children

The existing conditions for socioeconomics, environmental justice, and protection of children as described in Section 3.2.1.12 apply to this project area as well. This project area does not contain any existing schools, playgrounds, CDCs, or other facilities that would put children at a disproportionate risk for any environmental or health risks during development of this proposed project.

3.20.1.13 Safety and Occupational Health

The existing conditions for safety and occupational health as described in Section 3.2.1.13 apply to the C9 project LOD as well. The project LOD for C9 is not within existing ESQD arcs.

3.20.2 Environmental Consequences

Project C9 involves the construction of a new alert facility on a previously developed site, so while there is the potential for impacts, they are expected to be minor. There are no anticipated impacts to land use, airspace management, geology, topography, surface waters, wetlands, floodplains, biological resources, cultural resources, transportation, HTMW, socioeconomics, environmental

justice, protection of children, or safety and occupational health. There would be negligible to minor, temporary adverse impacts to air quality, noise, soils, and infrastructure and utilities during construction. There would also be minor adverse impacts to stormwater from the additional impervious surface associated with the proposed building. These potential impacts would be reduced through the implementation of appropriate controls and mitigation measures. While there are no known PFAS sites within the C9 project site, there is known PFAS contamination nearby at AFFF Area 3, so the soil and ground water should still be tested prior to any ground disturbing activities.

Based on the expected impacts of project C9, it is anticipated that an AF Form 813 would be the appropriate level of supplemental NEPA once additional project details are determined.

3.21 Project D1 – Child Development Center (CDC) #1

Project D1 covers the demolition of the existing CDC #1 (Building 4575) and removal of the surrounding parking and pavement.

3.21.1 Existing Conditions

3.21.1.1 Air Quality

Air quality existing conditions described in Section 3.2.1.1 apply to this project's LOD as well.

3.21.1.2 Land Use

Background information and information on land use adjacent to the main installation described in Section 3.2.1.2 is applicable to this project as well. The existing land use at project site D1 is Administration. Maps of land use for all of the IDP project sites can be found in Appendix A.

3.21.1.3 Airspace Management

Airspace management existing conditions described in Section 3.2.1.3 apply to this project's LOD as well.

3.21.1.4 Noise

Regulations related to noise and existing conditions on JBA as described in Section 3.2.1.4 are applicable to this project as well. The closest NSAs to project site D1 are an outdoor recreation area (golf course) immediately to the north and east, and Francis T. Evans Elementary School about 0.25 miles to the southwest. There are also several homes and a daycare center about 0.25 miles of the project site, off-installation to the south.

3.21.1.5 Geology, Topography, and Soils

The geology and topography existing conditions described in Section 3.2.1.5 apply to this project's LOD as well. The majority of the main installation is comprised of udorthents and urban soils, which are typically previously disturbed areas with moderately well drained to excessively drained soils and low to very low runoff potential. Soils within project site D1 include BuB and WoA, which are moderately well drained silt and sandy loams with medium runoff potential. Neither of

these soils are prime farmland nor farmland of statewide importance (USDA, 2021). A map of the soils found within the IDP project areas can be found in Appendix A.

3.21.1.6 Water Resources

The existing conditions of water resources as described in Section 3.2.1.6 apply to this project area as well. Project D1 falls within the Tinkers Creek watershed and there are no surface waters, wetlands, or floodplains within the project LOD. Water Resources maps in Appendix A show the surface waters, floodplains, and wetlands in the vicinity of all IDP projects.

3.21.1.7 Biological Resources

The existing conditions described in Section 3.2.1.7 for vegetation, wildlife, and threatened and endangered species within JBA's main installation apply to the project area for D1 as well. This project area is mostly developed and mowed lawn with a very small portion of forested area around the perimeter of the LOD. There are no threatened or endangered species known to occur within this LOD. A map of the forest stands and threatened and endangered species within this project area is located in the Biological Resources map in Appendix A.

3.21.1.8 Cultural Resources

Background information and information on JBA's cultural resources described in Section 3.2.1.8 are applicable to this project as well. No architectural or archaeological historic properties are known to be within the D1 LOD, nor are there any known historic properties within the viewshed of the project site.

3.21.1.9 Transportation

Existing conditions regarding transportation as described in Section 3.2.1.9 apply to this proposed project area as well.

3.21.1.10 Infrastructure and Utilities

The existing conditions related to infrastructure and utilities as described in Section 3.2.1.10 apply to this proposed project area as well.

3.21.1.11 HTMW

The majority of the existing conditions described in Section 3.2.1.11 apply to this project area as well. There are no ERP sites or MMRP sites on the D1 project LOD (JBA, 2018a; JBA, 2018b). While there previously was a UST within the D1 project LOD, it was removed and contamination from a previous leak remediated. There are no existing ASTs or USTs within the D1 project LOD or in its immediate vicinity. Based on the age of the building, there is potential for ACM and LBP.

3.21.1.12 Socioeconomics, Environmental Justice, and Protection of Children

The existing conditions for socioeconomics, environmental justice, and protection of children as described in Section 3.2.1.12 apply to this project area as well. This project area does not contain any existing schools, playgrounds, CDCs, or other facilities that would put children at a disproportionate risk for any environmental or health risks during development of this proposed project.

3.21.1.13 Safety and Occupational Health

The existing conditions for safety and occupational health as described in Section 3.2.1.13 apply to the D1 project LOD as well. The project LOD for D1 is not within existing ESQD arcs.

3.21.2 Environmental Consequences

Project D1 includes the demolition of the CDC and associated parking lots, so while there is the potential for impacts, they are expected to be very minor and limited to the time of demolition. There are no anticipated impacts to land use, airspace management, geology, topography, water resources, biological resources, cultural resources, transportation, socioeconomics, environmental justice, protection of children, or safety and occupational health. There would be negligible to minor, temporary adverse impacts to air quality, noise, soils, and infrastructure and utilities during demolition. There would also be minor adverse impacts to HTMW, as the building was built in 1943 and may contain ACM or LBP that would need to be remediated. These potential impacts would be reduced through the implementation of appropriate controls and mitigation measures. While there are no known PFAS sites on, or in the immediate vicinity of, the D1 project, the soil and ground water should still be tested prior to any ground disturbing activities.

Based on the expected impacts of project D1, it is anticipated that an AF Form 813 would be the appropriate level of supplemental NEPA once additional project details are determined.

3.22 Project D2 – Suitland Tree Management

Project D2 is a program that will reoccur every 10 years to maintain the approach paths for the two runways. This project entails removing trees and vegetation along Suitland Parkway within the approach paths of the runways and replanting the areas with new species of vegetation over time.

3.22.1 Existing Conditions

3.22.1.1 Air Quality

Air quality existing conditions described in Section 3.2.1.1 apply to this project's LOD as well.

3.22.1.2 Land Use

This project site is primarily off-site, but the background information on the Suitland Parkway and information on land use adjacent to the main installation described in Section 3.2.1.2 is applicable to this project as well. The existing land use at project site D2 includes Open Space/Buffer Zone and Industrial. Maps of land use for all of the IDP project sites can be found in Appendix A.

3.22.1.3 Airspace Management

The airspace management existing conditions for this project LOD are captured by descriptions in Section 3.2.1.3 and Section 3.8.1.3. Portions of this project's LOD cover JBA's APZs and clear zones.

3.22.1.4 Noise

Regulations related to noise and existing conditions on JBA as described in Section 3.2.1.4 are applicable to this project as well. The closest NSAs to project site D2 are an off-installation

apartment complex about 0.15 miles west and an off-installation residential neighborhood about 0.6 miles east of the project site.

3.22.1.5 Geology, Topography, and Soils

The geology and topography existing conditions described in Section 3.2.1.5 apply to this project's LOD as well. A large portion of the main installation is comprised of Beltsville silt loams, Croom gravelly sandy loams, and Grosstown gravelly silt loams. Soil types on project site D2 include: BaB (Beltsville silt loam); BuB (Beltsville-urban soil complex); CwD (Croom-Marr complex); CxE (Cunningham silt loam); DfA (Dodon fine sandy loam); GgC (Grosstown gravelly silt loam); MnC (Marr-Dodon complex); MoB (Marr-Dodon-urban soil complex); Px (Potomac-Issue complex); SnB and SnD (Sassafras-urban soil complex); UdaF, UdbB, and UdbD (udorthents); UraB, UrbB, UrbB, and UrsB (urban soil complexes). These soils are moderately well drained silt loams with medium runoff potential, well drained gravelly and fine sandy loams with low runoff potential, poorly drained loams with high runoff potential, and well drained udorthents and urban areas with high runoff potential. Prime farmland soils include BaA, BaB, DfA, and MoB, and farmland of statewide importance include GgC and MnC (USDA, 2021). A map of the soils found within the IDP project areas can be found in Appendix A.

3.22.1.6 Water Resources

The existing conditions of water resources as described in Section 3.2.1.6 apply to this project area as well. Project D2 falls within the Henson Creek and Charles Branch-Western Branch Patuxent River watersheds. Henson Creek runs east-west through the project site, and there are portions of palustrine emergent (PEM) wetlands and 500-year floodplains within the D2 site as well. Water Resources maps in Appendix A show the surface waters, floodplains, and wetlands in the vicinity of all IDP projects.

3.22.1.7 Biological Resources

While some of the existing conditions outlined in Section 3.2.1.7 apply to project area D2 as well, some of the existing conditions on this off-installation project area are different. Any migratory bird species or wildlife species that could be found on the main installation could also be found within the D2 LOD. Unlike the main installation, roughly 50 percent of this project area along Suitland Parkway is undeveloped and contains original vegetation, while the remaining approximately 50 percent is developed roadways or industrial areas. There are no threatened or endangered species known to occur within this LOD. A map of the forest stands and threatened and endangered species within this project area is located in the Biological Resources map in Appendix A.

3.22.1.8 Cultural Resources

As project site D2 is located off JBA's main installation, no archaeological or architectural surveys are known to have been conducted in this area. Much of the area has been previously disturbed due to the construction of industrial facilities and several major roadways within and surrounding the project area. Suitland Parkway is listed on the National Register (PG:76A-22), and JBA, NPS, and MHT are in the process of negotiating measures that will be completed to resolve the project's adverse effects to the Suitland Parkway. As noted in MHT's correspondence dated 20 August

2021, the MOA should be finalized and signed by all parties prior to implementation of the project. The Belle Chance historic property is also about 0.3 miles southwest of the project site.

3.22.1.9 Transportation

Like JBA's main installation, project area D2 is located about 5 miles southeast of Washington, D.C. The primary roadways serving, and running through part of, this project area are the Capital Beltway, which runs north-south through the western portion of the project area and Suitland Parkway, which runs east-west through the project area. Old Marlboro Pike is also located within the northeastern corner of the project area and Allentown Road is located in the southeastern corner of the project area.

Existing conditions for regional roadway transportation, air travel, and other modes of public transportation as described in Section 3.2.1.9 apply to the D2 project LOD as well.

3.22.1.10 Infrastructure and Utilities

Data is limited regarding the off-installation infrastructure and utilities for the D2 project area. Any water, sewer, electric, heating and cooling, natural gas, stormwater, and solid waste management associated with the industrial properties along the northern edge of the project area are the responsibility of the property owners. Maryland Department of Transportation State Highway Administration (MD SHA) maintains the Capital Beltway and NPS maintains Suitland Parkway, so any stormwater or other utilities associated with those roadways would be the responsibility of MD SHA or NPS.

3.22.1.11 HTMW

While data is limited regarding the off-installation industrial areas and any potential associated leaks, spills, or remediation actions, there are no known ERP sites, MMRP sites, USTs, or ASTs within the D2 project LOD (JBA, 2018a; JBA, 2018b). Further investigation may be warranted prior to implementation of project D2.

3.22.1.12 Socioeconomics, Environmental Justice, and Protection of Children

The existing conditions for socioeconomics, environmental justice, and protection of children as described in Section 3.2.1.12 apply to this project area as well. This project area does not contain any existing schools, playgrounds, CDCs, or other facilities that would put children at a disproportionate risk for any environmental or health risks during development of this proposed project.

3.22.1.13 Safety and Occupational Health

The existing conditions for safety and occupational health as described in Section 3.2.1.13 apply to the D2 project LOD as well. The project LOD for D2 is not within existing ESQD arcs.

3.22.2 Environmental Consequences

This project involves the removal of trees and vegetation within the approach paths for JBA's runways, and while there are some environmental concerns, the overall anticipated impacts would be minor. There are no anticipated impacts to land use, geology, topography, stormwater, HTMW, infrastructure and utilities, socioeconomics, environmental justice, protection of children, or safety

and occupational health. There would be long-term beneficial impacts to airspace management, as the tree removal would better clear the APZs and clear zones for JBA's runways. There would be negligible to minor, temporary adverse impacts to air quality, noise, soils, and transportation during tree removal. There would also be minor adverse impacts to cultural resources due to changes within the viewshed of the NRHP-listed Suitland Parkway; surface waters, wetlands, and floodplains due to tree removal measures; and biological resources due to tree removal and potential wildlife impacts that would have. These potential impacts would be reduced through the implementation of appropriate controls and mitigation measures. Appropriate coordination would need to be completed and permits would need to be obtained prior to initiating the project. Mitigation for cultural impacts along Suitland Parkway are being outlined in an MOA, and this MOA would need to be completed prior to initiation of the project.

Based on the expected impacts of project D2, it is anticipated that an EA would be the appropriate level of supplemental NEPA once additional project details are determined. Additional information regarding water resources, including ground truthing of wetland delineations; biological resources, including locating any rare, threatened, or endangered species; cultural resources; and HTMW should be gathered during development of the EA in order to better evaluate anticipated impacts.

3.23 Project D3 – East Deluge System

Project D3 includes the removal and replacement of the east deluge system and associated valves.

3.23.1 Existing Conditions

3.23.1.1 Air Quality

Air quality existing conditions described in Section 3.2.1.1 apply to this project's LOD as well.

3.23.1.2 Land Use

Background information and information on land use adjacent to the main installation described in Section 3.2.1.2 is applicable to this project as well. The existing land use at project site D3 includes Airfield Operations and Maintenance, Administration, Open Space/Buffer Zone, Industrial, and Community Service. Maps of land use for all of the IDP project sites can be found in Appendix A.

3.23.1.3 Airspace Management

Airspace management existing conditions described in Section 3.2.1.3 apply to this project's LOD as well.

3.23.1.4 Noise

Regulations related to noise and existing conditions on JBA as described in Section 3.2.1.4 are applicable to this project as well. The closest NSAs to the D3 project site are a fitness track and the East Fitness Center which fall within the project LOD, a chapel about 0.2 miles east, CDC #3 about 0.3 miles east, and an off-installation residential neighborhood about 0.4 miles southeast of the project site.

3.23.1.5 Geology, Topography, and Soils

The geology and topography existing conditions described in Section 3.2.1.5 apply to this project's LOD as well. A large portion of the main installation is comprised of Beltsville silt loams, Croom gravelly sandy loams, and Grosstown gravelly silt loams. Soil types on project site D3 include: ApA (Aquasco silt loam), BaB (Beltsville silt loam), BuB (Beltsville-urban soil complex), and Un (urban soils). These soils are moderately well drained to poorly drained silt loam with medium to very high runoff potential and developed urban soils. Soil type ApA is farmland of statewide importance, and soil type BaB is prime farmland (USDA, 2021). A map of the soils found within the IDP project areas can be found in Appendix A.

3.23.1.6 Water Resources

The existing conditions of water resources as described in Section 3.2.1.6 apply to this project area as well. Project D3 falls within the Tinkers Creek, Piscataway Creek, and Charles Branch-Western Branch Patuxent River watersheds and there are no surface waters or wetlands within the project LOD; however, there are small areas that fall within the 100- and 500-year floodplains in each of the three watersheds. Water Resources maps in Appendix A show the surface waters, floodplains, and wetlands in the vicinity of all IDP projects.

3.23.1.7 Biological Resources

The existing conditions described in Section 3.2.1.7 for vegetation, wildlife, and threatened and endangered species within JBA's main installation apply to the project area for D3 as well. This project area is mostly developed and mowed lawn with some forested portions along the eastern edge of the LOD. There are no threatened or endangered species known to occur within this LOD. A map of the forest stands and threatened and endangered species within this project area is located in the Biological Resources map in Appendix A.

3.23.1.8 Cultural Resources

Background information and information on JBA's cultural resources described in Section 3.2.1.8 are applicable to this project as well. No architectural or archaeological historic properties are known to be within the D3 LOD, nor are there any known historic properties within the viewshed of the project site.

3.23.1.9 Transportation

Existing conditions regarding transportation as described in Section 3.2.1.9 apply to this proposed project area as well.

3.23.1.10 Infrastructure and Utilities

The existing conditions related to infrastructure and utilities as described in Section 3.2.1.10 apply to this proposed project area as well.

3.23.1.11 HTMW

The majority of the existing conditions described in Section 3.2.1.11 apply to this project area as well. ERP sites SS-22 – Hangar 13, and SS-26 – former Hangar 15 and former AOC-30, are located within the D3 project LOD. Site TU-167, near Hangars 12 and 13, is also currently under

investigation. Remediation on SS-22 has been completed and JBA has applied for Site Closure. Contaminants on this site include petroleum products. SS-26 is still in remediation, and contaminants on the site include TCE, DCE, vinyl chloride, carbon tetrachloride, and benzene (JBA, 2018a). There are no MMRP sites within the D3 LOD (JBA, 2018b). While there were USTs associated with Buildings 3121, 3165, and 3252 within the project D3 LOD, they have been removed. There are also 6 existing ASTs associated with Buildings 3456, 3639, and 3755 within the D3 project LOD.

Project site D3 is also within several PFAS initial testing areas: AFFF Area 2, Area 3, and Area 4. All of these testing areas showed ground water PFAS levels that exceeded screening criteria. (AFCEC, 2018).

3.23.1.12 Socioeconomics, Environmental Justice, and Protection of Children

The existing conditions for socioeconomics, environmental justice, and protection of children as described in Section 3.2.1.12 apply to this project area as well. This project area does not contain any existing schools, playgrounds, CDCs, or other facilities that would put children at a disproportionate risk for any environmental or health risks during development of this proposed project.

3.23.1.13 Safety and Occupational Health

The existing conditions for safety and occupational health as described in Section 3.2.1.13 apply to the D3 project LOD as well. The project LOD for D3 is not within existing ESQD arcs.

3.23.2 Environmental Consequences

This project involves the replacement of and repairs to the east deluge system, which will produce anticipated minor impacts. There are no anticipated impacts to land use, airspace management, geology, topography, surface waters, wetlands, biological resources, cultural resources, transportation, socioeconomics, environmental justice, protection of children, or safety and occupational health. There would be negligible to minor, temporary adverse impacts to air quality, noise, and infrastructure and utilities during renovations. There would also be minor adverse impacts to soils, as there are prime farmland soils and soils of statewide importance within the project LOD; floodplains, as the site falls within the 100- and 500-year floodplains; and HTMW, as there is ongoing remediation for an ERP site, known PFAS contamination in the area, and there are multiple ASTs associated with buildings that could be impacted by the renovations. Because there is known PFAS contamination in the ground water within the D3 project site, JBA should complete soil and ground water testing and consult with the ERP office regarding remediation measures prior to project start. These potential impacts would be reduced through the implementation of appropriate controls and mitigation measures. Necessary coordination would be completed, and permits would be obtained prior to initiating the project.

Based on the expected impacts of project D3, it is anticipated that an AF Form 813 would be the appropriate level of supplemental NEPA once additional project details are determined.

3.24 Project D4 – Former Firestone Building

Project D4 covers the demolition of the former Firestone buildings (Building 1568) and the removal of the surrounding pavement.

3.24.1 Existing Conditions

3.24.1.1 Air Quality

Air quality existing conditions described in Section 3.2.1.1 apply to this project's LOD as well.

3.24.1.2 Land Use

Background information and information on land use adjacent to the main installation described in Section 3.2.1.2 is applicable to this project as well. The existing land use at project site D4 is Administration. Maps of land use for all of the IDP project sites can be found in Appendix A.

3.24.1.3 Airspace Management

Airspace management existing conditions described in Section 3.2.1.3 apply to this project's LOD as well.

3.24.1.4 Noise

Regulations related to noise and existing conditions on JBA as described in Section 3.2.1.4 are applicable to this project as well. The closest NSAs to the D4 project site are several dormitories ranging from 150 feet to 0.3 miles east of the project site. There is also a chapel about 0.3 miles to the southwest and an off-installation residential neighborhood about 0.45 miles to the west of the project site.

3.24.1.5 Geology, Topography, and Soils

The geology and topography existing conditions described in Section 3.2.1.5 apply to this project's LOD as well. A large portion of the main installation is comprised of Beltsville silt loams, Croom gravelly sandy loams, and Grosstown gravelly silt loams. Soil types on project site D4 include: FbB (Fallsington-urban soil complex), UdbB (udorthents), and WoA (Woodstown sandy loam). These soils are moderately well drained to poorly drained sandy loam with medium to high runoff potential and well drained udorthents with high runoff potential. None of these soils are prime farmland or farmland of statewide importance (USDA, 2021). A map of the soils found within the IDP project areas can be found in Appendix A.

3.24.1.6 Water Resources

The existing conditions of water resources as described in Section 3.2.1.6 apply to this project area as well. Project D4 falls within the Tinkers Creek watershed and there are no surface waters or wetlands within the project LOD; however, this project site does fall completely within the 100-year floodplain. Water Resources maps in Appendix A show the surface waters, floodplains, and wetlands in the vicinity of all IDP projects.

3.24.1.7 Biological Resources

The existing conditions described in Section 3.2.1.7 for vegetation, wildlife, and threatened and endangered species within JBA's main installation apply to the project area for D4 as well. This project area is totally developed and mowed lawn and there are no threatened or endangered species known to occur within this LOD. A map of the forest stands and threatened and endangered species within this project area is located in the Biological Resources map in Appendix A.

3.24.1.8 Cultural Resources

Background information and information on JBA's cultural resources described in Section 3.2.1.8 are applicable to this project as well. No architectural or archaeological historic properties are known to be within the D4 LOD, nor are there any known historic properties within the viewshed of the project site.

3.24.1.9 Transportation

Existing conditions regarding transportation as described in Section 3.2.1.9 apply to this proposed project area as well.

3.24.1.10 Infrastructure and Utilities

The existing conditions related to infrastructure and utilities as described in Section 3.2.1.10 apply to this proposed project area as well.

3.24.1.11 HTMW

The majority of the existing conditions described in Section 3.2.1.11 apply to this project area as well. ERP site TU-24 – car care center, Building 1568 – is located within the project LOD for D4. The remediation has been completed for this site and the site has been closed out (JBA, 2018a). There are no MMRP sites within the D4 LOD (JBA, 2018b). While there was a previous UST associated with Building 1568 within the D4 project LOD, this UST was removed; however, there is one existing AST within the project LOD. Based on the age of the building, there is potential for ACM and LBP.

3.24.1.12 Socioeconomics, Environmental Justice, and Protection of Children

The existing conditions for socioeconomics, environmental justice, and protection of children as described in Section 3.2.1.12 apply to this project area as well. This project area does not contain any existing schools, playgrounds, CDCs, or other facilities that would put children at a disproportionate risk for any environmental or health risks during development of this proposed project.

3.24.1.13 Safety and Occupational Health

The existing conditions for safety and occupational health as described in Section 3.2.1.13 apply to the D4 project LOD as well. The project LOD for D4 is not within existing ESQD arcs.

3.24.2 Environmental Consequences

Project D4 includes the demolition of the former Firestone building and associated parking lots, so while there is the potential for impacts, they are expected to be very minor and limited to the

time of demolition. There are no anticipated impacts to land use, airspace management, geology, topography, surface waters, wetlands, stormwater, biological resources, cultural resources, transportation, socioeconomics, environmental justice, protection of children, or safety and occupational health. There would be negligible to minor, temporary adverse impacts to air quality, noise, soils, and infrastructure and utilities during demolition. There would also be minor adverse impacts to floodplains, as the site is entirely within the 100-year floodplain; and HTMW, as the building was built in 1953 and may contain ACM or LBP that would need to be remediated and an AST that would need to be removed. These potential impacts would be reduced through the implementation of appropriate controls and mitigation measures. While there are no known PFAS sites on, or in the immediate vicinity of, the D4 project, the soil and ground water should still be tested prior to any ground disturbing activities.

Based on the expected impacts of project D4, it is anticipated that an AF Form 813 would be the appropriate level of supplemental NEPA once additional project details are determined.

3.25 Project D5 – Former Starbucks

Project D5 covers the demolition of the former Starbucks building (Building 1685) and the removal of the surrounding pavement.

3.25.1 Existing Conditions

3.25.1.1 Air Quality

Air quality existing conditions described in Section 3.2.1.1 apply to this project's LOD as well.

3.25.1.2 Land Use

Background information and information on land use adjacent to the main installation described in Section 3.2.1.2 is applicable to this project as well. The existing land use at project site D5 includes Industrial and Community Service. Maps of land use for all of the IDP project sites can be found in Appendix A.

3.25.1.3 Airspace Management

Airspace management existing conditions described in Section 3.2.1.3 apply to this project's LOD as well.

3.25.1.4 Noise

Regulations related to noise and existing conditions on JBA as described in Section 3.2.1.4 are applicable to this project as well. The closest NSAs to the D5 project site are several dormitories between 150 feet and 0.25 miles to the west and southwest, and the theater 0.15 miles to the south of the project site.

3.25.1.5 Geology, Topography, and Soils

The geology and topography existing conditions described in Section 3.2.1.5 apply to this project's LOD as well. The majority of the main installation is comprised of udorthents and urban soils, which are typically previously disturbed areas with moderately well drained to excessively drained

soils and low to very low runoff potential. Soils within project site D5 are all Un, or developed urban soil, which is not considered prime farmland or farmland of statewide importance (USDA, 2021). A map of the soils found within the IDP project areas can be found in Appendix A.

3.25.1.6 Water Resources

The existing conditions of water resources as described in Section 3.2.1.6 apply to this project area as well. Project D5 falls within the Tinkers Creek watershed and there are no surface waters or wetlands within the project LOD; however, a small portion of the southwestern corner of the project site falls within the 500-year floodplain. Water Resources maps in Appendix A show the surface waters, floodplains, and wetlands in the vicinity of all IDP projects.

3.25.1.7 Biological Resources

The existing conditions described in Section 3.2.1.7 for vegetation, wildlife, and threatened and endangered species within JBA's main installation apply to the project area for D5 as well. This project area is totally developed and mowed lawn and there are no threatened or endangered species known to occur within this LOD. A map of the forest stands and threatened and endangered species within this project area is located in the Biological Resources map in Appendix A.

3.25.1.8 Cultural Resources

Background information and information on JBA's cultural resources described in Section 3.2.1.8 are applicable to this project as well. No architectural or archaeological historic properties are known to be within the D5 LOD, nor are there any known historic properties within the viewshed of the project site.

3.25.1.9 Transportation

Existing conditions regarding transportation as described in Section 3.2.1.9 apply to this proposed project area as well.

3.25.1.10 Infrastructure and Utilities

The existing conditions related to infrastructure and utilities as described in Section 3.2.1.10 apply to this proposed project area as well.

3.25.1.11 HTMW

The majority of the existing conditions described in Section 3.2.1.11 apply to this project area as well. ERP site ST-17 – AAFES Service Station – is located within the project D5 LOD. Remediation of this site has been completed and the site has been closed (JBA, 2018a). There are no MMRP sites within the D5 LOD (JBA, 2018b). While there are no USTs within the D5 project LOD, there is one existing ASTs associated with Building 1685 within the project LOD. Based on the age of the building, there is potential for ACM and LBP.

3.25.1.12 Socioeconomics, Environmental Justice, and Protection of Children

The existing conditions for socioeconomics, environmental justice, and protection of children as described in Section 3.2.1.12 apply to this project area as well. This project area does not contain any existing schools, playgrounds, CDCs, or other facilities that would put children at a

disproportionate risk for any environmental or health risks during development of this proposed project.

3.25.1.13 Safety and Occupational Health

The existing conditions for safety and occupational health as described in Section 3.2.1.13 apply to the D5 project LOD as well. The project LOD for D5 is not within existing ESQD arcs.

3.25.2 Environmental Consequences

This project includes the demolition of the former Starbucks and associated parking lots, so while there is the potential for impacts, they are expected to be very minor and limited to the time of demolition. There are no anticipated impacts to land use, airspace management, geology, topography, surface waters, wetlands, stormwater, biological resources, cultural resources, transportation, socioeconomics, environmental justice, protection of children, or safety and occupational health. There would be negligible to minor, temporary adverse impacts to air quality, noise, soils, and infrastructure and utilities during demolition. There would also be minor adverse impacts to floodplains, as a portion of the site is within the 500-year floodplain; and HTMW, as the building was built in 1972 and may contain ACM or LBP that would need to be remediated and an AST that would need to be removed. These potential impacts would be reduced through the implementation of appropriate controls and mitigation measures. While there are no known PFAS sites on, or in the immediate vicinity of, the D5 project, the soil and ground water should still be tested prior to any ground disturbing activities.

Based on the expected impacts of project D5, it is anticipated that an AF Form 813 would be the appropriate level of supplemental NEPA once additional project details are determined.

3.26 Project E1 – Smart Center Addition

Project E1 includes the construction of an approximately 3,380 sq ft addition to the multi-function room in the existing conference center, construction of an addition to the dining room and office space, and the renovation of portions of the interior of the building.

3.26.1 Existing Conditions

3.26.1.1 Air Quality

Air quality existing conditions described in Section 3.2.1.1 apply to this project's LOD as well.

3.26.1.2 Land Use

Background information and information on land use adjacent to the main installation described in Section 3.2.1.2 is applicable to this project as well. The existing land use at project site E1 includes Administration and Open Space/Buffer Zone. Maps of land use for all of the IDP project sites can be found in Appendix A.

3.26.1.3 Airspace Management

Airspace management existing conditions described in Section 3.2.1.3 apply to this project's LOD as well.

3.26.1.4 Noise

Regulations related to noise and existing conditions on JBA as described in Section 3.2.1.4 are applicable to this project as well. The closest NSAs to the E1 project site are a child care center about 0.1 miles southeast, a recreation center and West Fitness Center about 0.15 miles to the east, an outdoor recreation facility (pool) about 0.1 miles to the northwest, family housing about 0.15 miles to the west and south, and visiting officers' quarters about 0.15 miles to the northwest.

3.26.1.5 Geology, Topography, and Soils

The geology and topography existing conditions described in Section 3.2.1.5 apply to this project's LOD as well. The majority of the main installation is comprised of udorthents and urban soils, which are typically previously disturbed areas with moderately well drained to excessively drained soils and low to very low runoff potential. Soils within project site E1 include: BuB and GuB, which are moderately well drained to well drained silt loams with medium to very low runoff potential. Neither of these soils are prime farmland nor farmland of statewide importance (USDA, 2021). A map of the soils found within the IDP project areas can be found in Appendix A.

3.26.1.6 Water Resources

The existing conditions of water resources as described in Section 3.2.1.6 apply to this project area as well. Project A6 falls within the Tinkers Creek watershed and there are no surface waters or wetlands within the project LOD; however, much of the site falls within the 100- and 500-year floodplains, and the site lies approximately 250 feet east of Meetinghouse Branch. Water Resources maps in Appendix A show the surface waters, floodplains, and wetlands in the vicinity of all IDP projects.

3.26.1.7 Biological Resources

The existing conditions described in Section 3.2.1.7 for vegetation, wildlife, and threatened and endangered species within JBA's main installation apply to the project area for E1 as well. This project area is totally developed and mowed lawn and there are no threatened or endangered species known to occur within this LOD. A map of the forest stands and threatened and endangered species within this project area is located in the Biological Resources map in Appendix A.

3.26.1.8 Cultural Resources

Background information and information on JBA's cultural resources described in Section 3.2.1.8 are applicable to this project as well. No architectural or archaeological historic properties are known to be within the E1 LOD, nor are there any known historic properties within the viewshed of the project site.

3.26.1.9 Transportation

Existing conditions regarding transportation as described in Section 3.2.1.9 apply to this proposed project area as well.

3.26.1.10 Infrastructure and Utilities

The existing conditions related to infrastructure and utilities as described in Section 3.2.1.10 apply to this proposed project area as well.

3.26.1.11 HTMW

The majority of the existing conditions described in Section 3.2.1.11 apply to this project area as well. There are no ERP sites or MMRP sites on the E1 project LOD (JBA, 2018a; JBA, 2018b). There are no existing ASTs or USTs within the E1 project LOD or in its immediate vicinity.

3.26.1.12 Socioeconomics, Environmental Justice, and Protection of Children

The existing conditions for socioeconomics, environmental justice, and protection of children as described in Section 3.2.1.12 apply to this project area as well. There is a child care center to the southeast, an outdoor recreation facility (pool) to the northwest, and family housing to the west and south of the proposed project site. Appropriate measures would need to be taken to ensure the safety of children should this proposed project be developed.

3.26.1.13 Safety and Occupational Health

The existing conditions for safety and occupational health as described in Section 3.2.1.13 apply to the E1 project LOD as well. The project LOD for E1 is not within existing ESQD arcs.

3.26.2 Environmental Consequences

Project E1 involves new construction in the form of an addition to an existing building, so overall anticipated impacts would be limited. There are no anticipated impacts to land use, airspace management, geology, topography, wetlands, biological resources, cultural resources, HTMW, transportation, socioeconomics, environmental justice, protection of children, or safety and occupational health. There would be negligible to minor, temporary adverse impacts to air quality, noise, soils, and infrastructure and utilities during demolition. There would also be minor adverse impacts to surface waters, as the LOD lies immediately adjacent to Meetinghouse Branch; floodplains, as the site falls within the 100- and 500-year floodplains; and stormwater, as the additional impervious surface will change drainage patterns. These potential impacts would be reduced through the implementation of appropriate controls and mitigation measures. While there are no known PFAS sites on, or in the immediate vicinity of, the E1 project, the soil and ground water should still be tested prior to any ground disturbing activities.

Based on the expected impacts of project E1, it is anticipated that an AF Form 813 would be the appropriate level of supplemental NEPA once additional project details are determined.

3.27 Project E2 – Brandywine Annex Gravel Road

Project E2 involves upgrading an existing $\frac{3}{4}$ -mile stretch of road from gravel to asphalt, along with the implementation of necessary roadway drainage.

3.27.1 Existing Conditions

3.27.1.1 Air Quality

Air quality existing conditions described in Section 3.2.1.1 apply to this project's LOD as well.

3.27.1.2 Land Use

The Brandywine Annex became part of JBA in 1967, and while some development has occurred in the vicinity of the site, the annex itself and much of the surrounding lands have remained largely undeveloped. Existing land uses adjacent to the annex are mostly open space or forested, with some residential or commercial areas.

The existing land use at project site E2 includes Open Space/Buffer Zone and Industrial. Maps of land use for all of the IDP project sites can be found in Appendix A.

3.27.1.3 Airspace Management

Airspace management existing conditions described in Section 3.2.1.3 apply to this project's LOD as well.

3.27.1.4 Noise

Regulations related to noise and existing conditions on JBA as described in Section 3.2.1.4 are applicable to this project as well. Existing sources of noise at the Brandywine Annex include road traffic and other noises such as lawn maintenance equipment, construction noise, and bird and animal vocalizations. There are no NSAs within 1 mile of project site E2.

3.27.1.5 Geology, Topography, and Soils

The Brandywine Annex is located between the Blue Ridge Mountains (about 60 miles to the west) and the Chesapeake Bay (about 25 miles to the east). The annex is near the western edge of the Middle Atlantic Coastal Plain physiographic province. This fall line occurs between the Piedmont and Coastal Plain, approximately 12 miles west of the annex. The Brandywine Annex is located on a plateau, situated between the Potomac River to the west and the Patuxent River to the east. The topography is level to gently sloping, with elevations averaging 218 feet above mean sea level.

The majority of the surficial geology on JBA and the Brandywine Annex is comprised of upland deposits approximately 7 million years old and consists of irregularly bedded cobbles, gravel, and fine sand intermixed with silt or clay varying in thickness from 10 to 20 feet. The underlying Calvert Formation is visible where streams have cut deeply through the upland deposits. This formation was deposited during the Miocene Epoch, approximately 19 million years ago, and consists of a mixture of sands, silts, clays, and shell beds.

The Brandywine Annex is primarily comprised of Aquasco silt loams, Beltsville silt loams, and Lenni and Quindocqua soils. The Aquasco and Lenni and Quindocqua soils are all poorly drained with high to very high runoff potential. The Beltsville silt loams are moderately well drained with medium runoff potential. Project site E2 soils include: ApA and LQA, which are poorly drained silt loams with high runoff potential. Neither soils are prime farmland, but ApA are considered farmland of statewide importance (USDA, 2021). A map of the soils found within the IDP project areas can be found in Appendix A.

3.27.1.6 Water Resources

Groundwater underlying the Brandywine Annex occurs at or near the ground surface, with shallow groundwater occurring at depths of less than 20 feet bgs, likely under confined conditions.

Groundwater recharge occurs primarily through precipitation. Groundwater flow is believed to be down-gradient toward local streams or downward toward deeper underlying aquifers. The Brandywine Annex falls within the Piney Branch-Mattawoman Creek watershed and contains about 3 miles of perennial streams that are tributaries to the Mattawoman Creek. It also contains about 100 acres of wetlands – both forested and emergent – and about 44 acres within the 100-year floodplain. As most of the area is undeveloped, the stormwater system on Brandywine Annex is limited.

Project E2 falls within the Piney Branch-Mattawoman Creek watershed and there are no surface waters, wetlands, or floodplains within the project LOD. Water Resources maps in Appendix A show the surface waters, floodplains, and wetlands in the vicinity of all IDP projects.

3.27.1.7 Biological Resources

While some of the existing conditions outlined in Section 3.2.1.7 apply to project area E2 as well, some of the existing conditions on the Brandywine Annex are different. Unlike the main installation, roughly 60 percent of the Brandywine Annex is undeveloped and contains original vegetation, while the remaining approximately 40 percent is developed or mowed fields. A map of the forest stands located on the Brandywine Annex is located in the Biological Resources map in Appendix A.

Any migratory bird species or wildlife species that could be found on the main installation could also be found on the Brandywine Annex; however, MDNR also noted in the initial consultation for this project that there are four additional state listed threatened or endangered species that have the potential to occur on the Brandywine Annex. These four species include the state endangered Pale False Foxglove (*Agalinis skinneriana*), and the state threatened Racemed Milkwort (*Polygala polygama*), Buxbaum's Sedge (*Carex buxbaumii*), and Sandplain Flax (*Linum intercursum*). Additionally, eight rare species have been previously identified on the Brandywine Annex and have the potential to still be located on the site: Allegheny Chinquapin (*Castanea pumila*), Asa Gray's Sedge (*Carex grayi*), Bent Sedge (*Carex styloflexa*), Button Sedge (*Carex bullata*), Claspingleaf St. John's-wort (*Hypericum gymnanthum*), Pale Manna Grass (*Torreyochloa pallida*), Swollen Bladderwort (*Utricularia inflata*), and Tall Bushclover (*Lespedeza stuevei*). A map of the rare, threatened, and endangered species located on the Brandywine Annex is located in the Biological Resources map in Appendix A.

The E2 project LOD does not contain forest stands, and is completely located within developed or mowed areas; however, the endangered Pale False Foxglove and the rare Claspingleaf St. John's-wort have previously been found within the project LOD.

3.27.1.8 Cultural Resources

Background information and information on JBA's cultural resources described in Section 3.2.1.8 are applicable to this project as well. No architectural or archaeological historic properties are known to be within the E2 LOD, nor are there any known historic properties within the viewshed of the project site.

3.27.1.9 Transportation

The Brandywine Annex is located about 15 miles southeast of Washington, D.C. The primary roadways serving the annex and the surrounding Brandywine community are Branch Avenue, Brandywine Road (MD 381) and S. Crain Highway (MD 301). Regional access to the Brandywine Annex is provided by the Capital Beltway. The only access to the Brandywine Annex is via Air Force Road off of Brandywine Road. Air Force Road is also the only paved road on the annex. Roadways surrounding the annex are also generally less congested than those surrounding the main installation.

Existing conditions for regional roadway transportation, air travel, and other modes of public transportation as described in Section 3.2.1.9 apply to the E2 project LOD as well.

3.27.1.10 Infrastructure and Utilities

The existing conditions related to infrastructure and utilities as described in Section 3.2.1.10 apply to this proposed project area as well.

3.27.1.11 HTMW

The majority of the existing conditions described in Section 3.2.1.11 apply to this project area as well. There are no ERP sites or MMRP sites on the E2 project LOD (JBA, 2018a; JBA, 2018b). The only ERP site in the vicinity of the project is AFFF Area 8, where initial ground water testing showed PFAS contamination (AFCEC, 2018). There are no existing ASTs or USTs within the E2 project LOD or in its immediate vicinity.

3.27.1.12 Socioeconomics, Environmental Justice, and Protection of Children

The existing conditions for socioeconomics, environmental justice, and protection of children as described in Section 3.2.1.12 apply to this project area as well. This project area does not contain any existing schools, playgrounds, CDCs, or other facilities that would put children at a disproportionate risk for any environmental or health risks during development of this proposed project.

3.27.1.13 Safety and Occupational Health

The existing conditions for safety and occupational health as described in Section 3.2.1.13 apply to the E2 project LOD as well. The project LOD for E2 is not within existing ESQD arcs.

3.27.2 Environmental Consequences

This project involves paving an existing gravel road, and anticipated impacts are expected to be limited. There are no anticipated impacts to land use, airspace management, geology, topography, surface waters, wetlands, floodplains, cultural resources, infrastructure and utilities, HTMW, socioeconomics, environmental justice, protection of children, or safety and occupational health. There would be negligible to minor, temporary adverse impacts to air quality and noise during development. There would also be minor adverse impacts to soils, as there is farmland of statewide importance within the LOD; stormwater, as there would be additional impervious surface; and biological resources, as the endangered Pale False Foxglove and the rare Claspingleaf St. John's-wort have previously been found within the project LOD. These potential impacts would be reduced through the implementation of appropriate controls and mitigation measures. While there

are no known PFAS sites within the E2 project site, there is known PFAS contamination nearby at AFFF Area 8, so the soil and ground water should still be tested prior to any ground disturbing activities.

Based on the expected impacts of project E2, it is anticipated that an AF Form 813 would be the appropriate level of supplemental NEPA once additional project details are determined.

3.28 Project E3 – DLA Fuel Row Additions

Project E3 includes the installation of three additional in-ground fuel hydrants on the west ramp, and the associated trenching for a pipeline along the west ramp.

3.28.1 Existing Conditions

3.28.1.1 Air Quality

Air quality existing conditions described in Section 3.2.1.1 apply to this project's LOD as well.

3.28.1.2 Land Use

Background information and information on land use adjacent to the main installation described in Section 3.2.1.2 is applicable to this project as well. The existing land use at project site E3 includes Airfield Operations and Maintenance and Airfield Pavement. Maps of land use for all of the IDP project sites can be found in Appendix A.

3.28.1.3 Airspace Management

Airspace management existing conditions described in Section 3.2.1.3 apply to this project's LOD as well.

3.28.1.4 Noise

Regulations related to noise and existing conditions on JBA as described in Section 3.2.1.4 are applicable to this project as well. The closest NSAs to the E3 project site are a theater about 0.35 miles west and several dormitories about 0.5 miles west and southwest of the project site.

3.28.1.5 Geology, Topography, and Soils

The geology and topography existing conditions described in Section 3.2.1.5 apply to this project's LOD as well. The majority of the main installation is comprised of udorthents and urban soils, which are typically previously disturbed areas with moderately well drained to excessively drained soils and low to very low runoff potential. Soils within project site E3 include: UdbB and Un, which are well drained udorthents and urban areas with high runoff potential. Neither of the soils within this project area are prime farmland or farmland of statewide importance (USDA, 2021). A map of the soils found within the IDP project areas can be found in Appendix A.

3.28.1.6 Water Resources

The existing conditions of water resources as described in Section 3.2.1.6 apply to this project area as well. Project E3 falls within the Tinkers Creek watershed and there are no surface waters,

wetlands, or floodplains within the project LOD. Water Resources maps in Appendix A show the surface waters, floodplains, and wetlands in the vicinity of all IDP projects.

3.28.1.7 Biological Resources

The existing conditions described in Section 3.2.1.7 for vegetation, wildlife, and threatened and endangered species within JBA's main installation apply to the project area for E3 as well. This project area is totally developed and there are no threatened or endangered species known to occur within this LOD. A map of the forest stands and threatened and endangered species within this project area is located in the Biological Resources map in Appendix A.

3.28.1.8 Cultural Resources

Background information and information on JBA's cultural resources described in Section 3.2.1.8 are applicable to this project as well. No architectural or archaeological historic properties are known to be within the E3 LOD; however the project site is within the viewshed of Building 1754 (Hangar 3), which is recommended as eligible for listing in the NRHP.

3.28.1.9 Transportation

Existing conditions regarding transportation as described in Section 3.2.1.9 apply to this proposed project area as well.

3.28.1.10 Infrastructure and Utilities

The existing conditions related to infrastructure and utilities as described in Section 3.2.1.10 apply to this proposed project area as well.

3.28.1.11 HTMW

The majority of the existing conditions described in Section 3.2.1.11 apply to this project area as well. ERP sites AOC-26 – a former fuel hydrant system, and SS-28 – fire truck maintenance facility, are located within the LOD for project E3. Remediation of AOC-26 was completed, and a NFRAP was signed. Remediation for SS-28 was completed, but perfluorinated compounds were detected at the site in 2020 and JBA is now in discussions with regulators to determine the next steps (JBA, 2018a). The only PFAS site in the vicinity of the project is AFFF Area 6, associated with Fire Station 1, where initial ground water testing showed PFAS contamination (AFCEC, 2018). There are no MMRP sites within the E3 LOD (JBA, 2018b). There are no existing ASTs or USTs within the E3 project LOD or in its immediate vicinity.

3.28.1.12 Socioeconomics, Environmental Justice, and Protection of Children

The existing conditions for socioeconomics, environmental justice, and protection of children as described in Section 3.2.1.12 apply to this project area as well. This project area does not contain any existing schools, playgrounds, CDCs, or other facilities that would put children at a disproportionate risk for any environmental or health risks during development of this proposed project.

3.28.1.13 Safety and Occupational Health

The existing conditions for safety and occupational health as described in Section 3.2.1.13 apply to the E3 project LOD as well. The project LOD for E3 is not within existing ESQD arcs.

3.28.2 Environmental Consequences

Project E3 involves new construction of several fuel hydrants and some associated trenching in an already developed area, so anticipated impacts are expected to be minor. There are no anticipated impacts to land use, airspace management, geology, topography, soils, water resources, biological resources, cultural resources, transportation, socioeconomics, environmental justice, protection of children, or safety and occupational health. There would be negligible to minor, temporary adverse impacts to air quality, noise, and infrastructure and utilities during development. There would also be minor adverse impacts to HTMW, as there is ongoing remediation for an ERP site within the LOD. These potential impacts would be reduced through the implementation of appropriate controls and mitigation measures. While there are no known PFAS sites within the E3 project site, there is known PFAS contamination nearby at AFFF Area 6, so the soil and ground water should still be tested prior to any ground disturbing activities.

Based on the expected impacts of project E3, it is anticipated that an AF Form 813 would be the appropriate level of supplemental NEPA once additional project details are determined.

3.29 No Action Alternative

Under the No Action Alternative, the IDP would not be implemented and growth and development occurring at JBA would not be tracked or prioritized in an organized manner. Under this alternative, the development of JBA would continue without a plan for future growth and management. Environmental impacts of development would be considered on a case-by-case basis, but impacts would not be looked at in a wholistic manner.

3.29.1 Environmental Consequences

There would be no anticipated environmental consequences associated with the No Action Alternative, as this alternative only pertains to not implementing the IDP. Growth and development within JBA could continue, but the environmental impacts of implementing those projects or not implementing those projects would be considered on a case-by-case basis.

THIS PAGE INTENTIONALLY LEFT BLANK

4.0 CONCLUSION

This EA evaluates the direct and indirect impacts associated with the implementation of JBA's IDP and the associated development of the 27 projects within the IDP. This EA was prepared in accordance with the NEPA and implementing regulations issued by the CEQ and 32 CFR Part 989.

A summary of the expected impacts associated with each of the 27 IDP projects is located in Table 4-1. This table also lists the expected level of future NEPA analysis that would be required for each project.

Table 4-1: Summary of Impacts and Expected Future NEPA Analyses

Site Code	Project Name	Expected Impacts	Anticipated Required Future NEPA Analyses
A1	Renovation/Repair of Hangar 1	Negligible to minor, temporary adverse impacts to: air quality, noise, HTMW, and infrastructure and utilities.	AF Form 813
A2	Renovation/Repair of Hangar 2	Negligible to minor, temporary adverse impacts to: air quality, noise, HTMW, and infrastructure and utilities.	AF Form 813
A3	Aircraft parking ramp modifications and ramp extension	Minor, temporary adverse impacts to: air quality, cultural resources, noise and infrastructure and utilities. Minor adverse impacts to: land use, soils, surface waters, wetlands, floodplains, stormwater, biological resources, and HTMW.	EA
A4	Construct helicopter wash rack	Minor, temporary adverse impacts to: air quality, cultural resources, and noise. Minor adverse impacts to: soils, floodplains, stormwater, and HTMW.	EA
A5	Renovation/Repair of Hangar 4	Negligible to minor, temporary adverse impacts to: air quality, cultural resources, noise, HTMW, and infrastructure and utilities.	AF Form 813
A6	Renovation/Repair of Hangar 5	Negligible to minor, temporary adverse impacts to: air quality, cultural resources, noise,	AF Form 813

		HTMW, and infrastructure and utilities.	
B1	Regrade the airfield	Long-term beneficial impacts to: airspace management. Minor, temporary adverse impacts to: air quality, cultural resources, noise, and safety and occupational health. Minor to moderate adverse impacts to: airspace management, topography, soils, stormwater, infrastructure and utilities, and HTMW. Potentially significant impacts to wetlands, floodplains, and surface waters.	EA or EIS
B2	Virginia Gate	Negligible to minor, temporary adverse impacts to: air quality, noise, soils, and infrastructure and utilities. Long-term beneficial impacts to: transportation. Minor adverse impacts to: floodplains, transportation, and protection of children.	AF Form 813
B3	Storm Drains on Buildings 3447, 3066, & 2487	Negligible to minor, temporary adverse impacts to: air quality, noise, and infrastructure and utilities. Long-term beneficial impacts to: stormwater. Minor adverse impacts to: soils, floodplains, stormwater, and biological resources.	AF Form 813
B4	Stormwater BMP at 21 Point Range	Minor, temporary adverse impacts to: air quality and noise. Long-term beneficial impacts to: stormwater. Minor adverse impacts to: soils, wetlands, floodplains, and biological resources.	AF Form 813
C1	East Runway relocation	Long-term beneficial impacts to: airspace management. Minor, temporary adverse impacts to: air quality, cultural resources, noise, and safety and occupational health. Minor to moderate adverse impacts to:	EA

		airspace management, topography, soils, wetlands, floodplains, stormwater, infrastructure and utilities, and HTMW.	
C2	Crash Rescue Station 2	Negligible to minor, temporary adverse impacts to: air quality, soils, noise, and infrastructure and utilities. Minor adverse impacts to: floodplains and HTMW.	AF Form 813
C3	New dormitory	Negligible to minor, temporary adverse impacts to: air quality, soils, noise, and infrastructure and utilities. Minor adverse impacts to floodplains.	AF Form 813
C4	Compass Calibration Pad	Negligible to minor, temporary adverse impacts to: air quality, noise, and infrastructure and utilities. Minor adverse impacts to: cultural resources, soils, land use, biological resources, wetlands, stormwater, and floodplains.	EA
C5	Second Taxiway for Hangar 21	Negligible to minor, temporary adverse impacts to: air quality, noise, and infrastructure and utilities. Minor adverse impacts to: cultural resources, soils, wetlands, stormwater, and floodplains.	EA
C6	Security Forces Group (SFG) Complex	Negligible to minor, temporary adverse impacts to: air quality, noise, and infrastructure and utilities. Minor adverse impacts to: cultural resources, stormwater, floodplains, and HTMW.	AF Form 813
C7	Passenger Terminal	Negligible to minor, temporary adverse impacts to: air quality, noise, and infrastructure and utilities. Minor adverse impacts to: cultural resources, floodplains, and HTMW.	AF Form 813
C8	West Fitness Center Addition	Negligible to minor, temporary adverse impacts to: air quality,	AF Form 813

		noise, soils, and infrastructure and utilities. Minor adverse impacts to: HTMW, stormwater, and floodplains.	
C9	459 th Readiness Alert Facility	Negligible to minor, temporary adverse impacts to: air quality, noise, soils, and infrastructure and utilities. Minor adverse impacts to stormwater.	AF Form 813
D1	Child Development Center (CDC) #1	Negligible to minor, temporary adverse impacts to air quality, noise, soils, and infrastructure and utilities. Minor adverse impacts to HTMW.	AF Form 813
D2	Suitland Tree Management	Long-term beneficial impacts to: airspace management. Negligible to minor, temporary adverse impacts to: air quality, noise, soils, and transportation. Minor adverse impacts to: cultural resources, surface waters, wetlands, floodplains, and biological resources	EA
D3	East Deluge System	Negligible to minor, temporary adverse impacts to: air quality, noise, and infrastructure and utilities. Minor adverse impacts to: soils, floodplains, and HTMW.	AF Form 813
D4	Former Firestone Building	Negligible to minor, temporary adverse impacts to: air quality, noise, soils, and infrastructure and utilities. Minor adverse impacts to: floodplains and HTMW.	AF Form 813
D5	Former Starbucks	Negligible to minor, temporary adverse impacts to: air quality, noise, soils, and infrastructure and utilities. Minor adverse impacts to: floodplains and HTMW.	AF Form 813
E1	Smart Center Addition	Negligible to minor, temporary adverse impacts to: air quality, noise, soils, and infrastructure and utilities. Minor adverse	AF Form 813

		impacts to: surface waters, floodplains, and stormwater.	
E2	Brandywine Annex gravel road	Negligible to minor, temporary adverse impacts to: air quality and noise. Minor adverse impacts to: soils, stormwater, and biological resources.	AF Form 813
E3	DLA fuel row additions	Negligible to minor, temporary adverse impacts to: air quality, cultural resources, noise, and infrastructure and utilities. Minor adverse impacts to HTMW.	AF Form 813

Based on the evaluation of locational impacts to known existing resources as described in Section 3 and summarized in Table 4-1 the Proposed Action would not result in a significant impact to the environment if all compliance and mitigation measures are met. However, many details are not available to fully analyze the effects of each project, but the projects are included for real property planning and capacity for future development. JBA would conduct additional NEPA analyses (AF Form 813, EA, or EIS) when project details become available. These analyses may be tiered from this EA in accordance with 40 CFR Part 1501.11 and 32 CFR Part 989.

THIS PAGE INTENTIONALLY LEFT BLANK

5.0 REFERENCES

- Air Force Civil Engineer Center. n.d. Air Force Response to PFOS and PFOA. Retrieved from <https://www.afcec.af.mil/WhatWeDo/Environment/Perfluorinated-Compounds/PFOS-PFOA-Overview/>.
- Air Force Civil Engineer Center. 2015. Final Preliminary Assessment Report for Perfluorinated Compounds at Joint Base Andrews, Prince George's County, Maryland. May 2015.
- Air Force Civil Engineer Center. 2018. Final Site Inspections Report of Fire Fighting Foam Usage at Joint Base Andrews, Prince George's County, Maryland. May 2018.
- AirNav. 2020. KDCA: Ronald Reagan Washington National Airport. <https://www.airnav.com/airport/KDCA>.
- American National Standards Institute. 2013. American National Standard Quantities and Procedures for Description and Measurement of Environmental Sound. Part 3: Short-term measurements with an observer present. ANSI S12.9-1993 (R2003)/Part 3.
- B4UFLY. 2021. Airspace Map for Joint Base Andrews. Retrieved from <https://b4ufly.kittyhawk.io/?lat=36.0646&long=-75.7057>. Accessed 26 July 2021.
- Bureau of Economic Analysis. 2018. Total Full-Time and Part-Time Employment by NAICS Industry. <https://apps.bea.gov/iTable/iTable.cfm?reqid=70&step=1&isuri=1>.
- Bureau of Labor Statistics. 2018. Selected Economic Characteristics: 2018 American Community Survey. https://data.census.gov/cedsci/table?q=Prince%20George%27s%20County,%20Maryland&g=0100000US_0400000US24_0500000US24033&hidePreview=true&tid=ACSDP5Y2018.DP03&table=DP03&y=2018.
- Bureau of Labor Statistics. 2019. Selected Economic Characteristics: 2018 American Community Survey. https://planning.maryland.gov/MSDC/Documents/American_Community_Survey/2019/CNTY_24033_acs_2019.pdf
- Centers for Disease Control. 2019. What Noises Cause Hearing Loss? Retrieved from https://www.cdc.gov/nceh/hearing_loss/what_noises_cause_hearing_loss.html.
- Department of the Air Force. 2017. Environmental Assessment for Multiple Projects at Joint Base Andrews-Naval Air Facility, Washington, Maryland. Final. Prepared for the 11th Wing, Joint Base Andrews-Naval Air Facility Washington.
- Federal Aviation Administration. 2019. DC Area Prohibited & Restricted Airspace. Retrieved from https://www.faa.gov/uas/resources/community_engagement/no_drone_zone/dc/.
- Ghigiarelli, E., Jr. 2004. A Guide to Maryland's Coastal Zone Management Program Federal Consistency Process. Maryland Department of the Environment. <https://www.nrc.gov/docs/ML0926/ML092670389.pdf>.
- Harrell, J. M., and E.S. Montagiani. 1984. Historical Archeological Survey Andrews, Air Force Base. On file, Andrews Air Force Base, Maryland.

- Joint Base Andrews. 2014. Integrated Natural Resources Management Plan. Joint Base Andrews – Naval Air Facility, Prince George’s and Anne Arundel Counties, Maryland.
- Joint Base Andrews. 2017a. Joint Base Andrews, Maryland – Air Installation Compatible Use Zones Study. Retrieved from <https://www.jba.af.mil/Portals/38/documents/JBA%20Air%20Installations%20Compatible%20Use%20Zones%20Study.pdf?ver=2018-02-26-151819-397>.
- Joint Base Andrews. 2017b. Updated Integrated Cultural Resources Management Plan. Joint Base Andrews – Naval Air Facility, Prince George’s and Anne Arundel Counties, Maryland.
- Joint Base Andrews. 2018a. Environmental Restoration Program (ERP) Sites. <https://www.jba.af.mil/About-Us/Environmental-Mission/Environmental-Sites/>.
- Joint Base Andrews. 2018b. Military Munitions Response Program (MMRP) Sites. <https://www.jba.af.mil/LinkClick.aspx?fileticket=1Xk36Ve0pZk%3d&portalid=38>.
- Joint Base Andrews. 2019. Final Environmental Assessment for Construction and Operation of the Consolidated Communications Center, Joint Base Andrews – Naval Air Facility, Maryland.
- Joint Base Andrews. 2020. Joint Base Andrews Stormwater Pollution Prevention Plan.
- Maryland Department of the Environment. 2007. *Stormwater Management Act of 2007*. <https://mde.state.md.us/programs/Water/StormwaterManagementProgram/Documents/www.mde.state.md.us/assets/document/act%20-%20a%20state%20perspective.pdf>.
- Maryland Department of the Environment. 2015. *Maryland Stormwater Management and Erosion & Sediment Control Guidelines for State and Federal Projects*. <https://www.mde.maryland.gov/programs/Water/StormwaterManagementProgram/Documents/SWM%20and%20ESC%20Guidelines%20for%20State%20and%20Federal%20Projects%20FEB%202015.pdf>.
- Moeller, K. L., Walitschek, D. A., Greby, M., and I. F. Hoffecker. 1995. An Archaeological and Historic Resources Inventory of Andrews Air Force Base, Maryland. On file, U.S. Air Force/Air Mobility Command, Scott Air Force Base, Illinois.
- Tetra Tech. 1999. Phase II Archeological Investigations, Andrews Air Force Base, Maryland.
- United States Census Bureau. 2019. Quick Facts: Prince George’s County, Maryland. <https://www.census.gov/quickfacts/princegeorgescountymaryland>.
- U.S. Department of Agriculture. N.d. Natural Resources Conservation Service – Soil Data Access (SDA) Prime and Other Important Farmlands. Retrieved from https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcseprd1338623.html. Accessed 27 July 2021.
- U.S. Department of Agriculture. 2021. Natural Resources Conservation Service – Web Soil Survey. Retrieved from <https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>. Accessed 27 July 2021.
- United States Environmental Protection Agency. 2009. *Technical Guidance on Implementing the Stormwater Runoff Requirements for Federal Projects under Section 438 of the Energy*

Independence and Security Act. https://www.epa.gov/sites/production/files/2015-08/documents/epa_swm_guidance.pdf.

THIS PAGE INTENTIONALLY LEFT BLANK

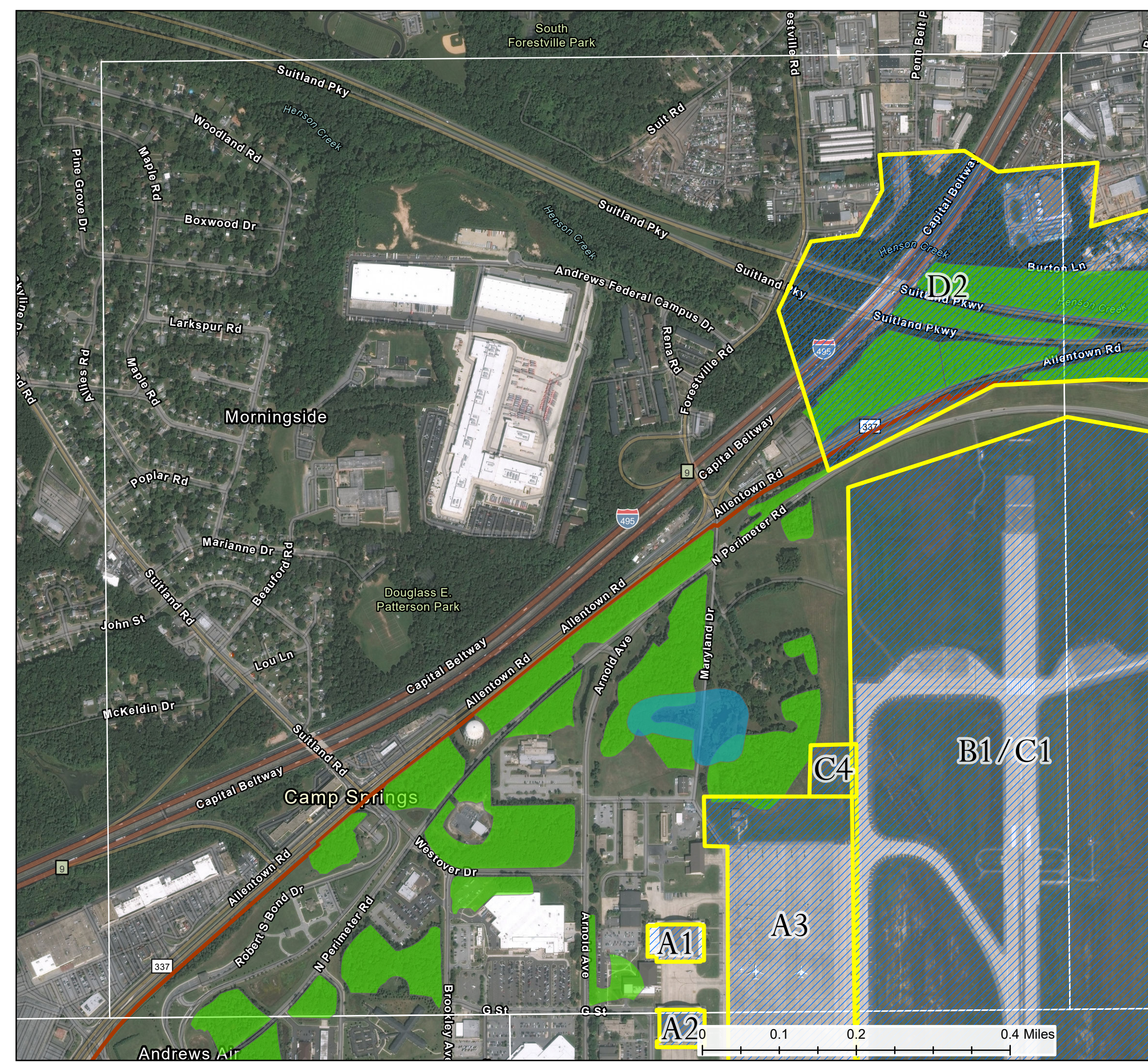
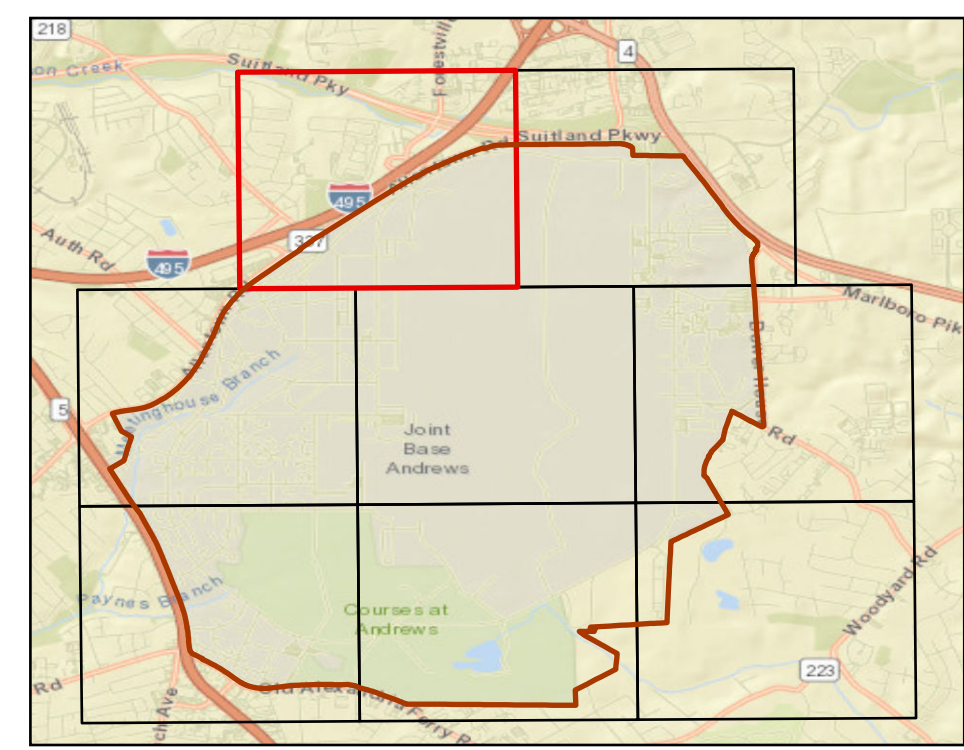
Appendix A: Figures

THIS PAGE INTENTIONALLY LEFT BLANK

Joint Base Andrews Main Installation

Biological Resources

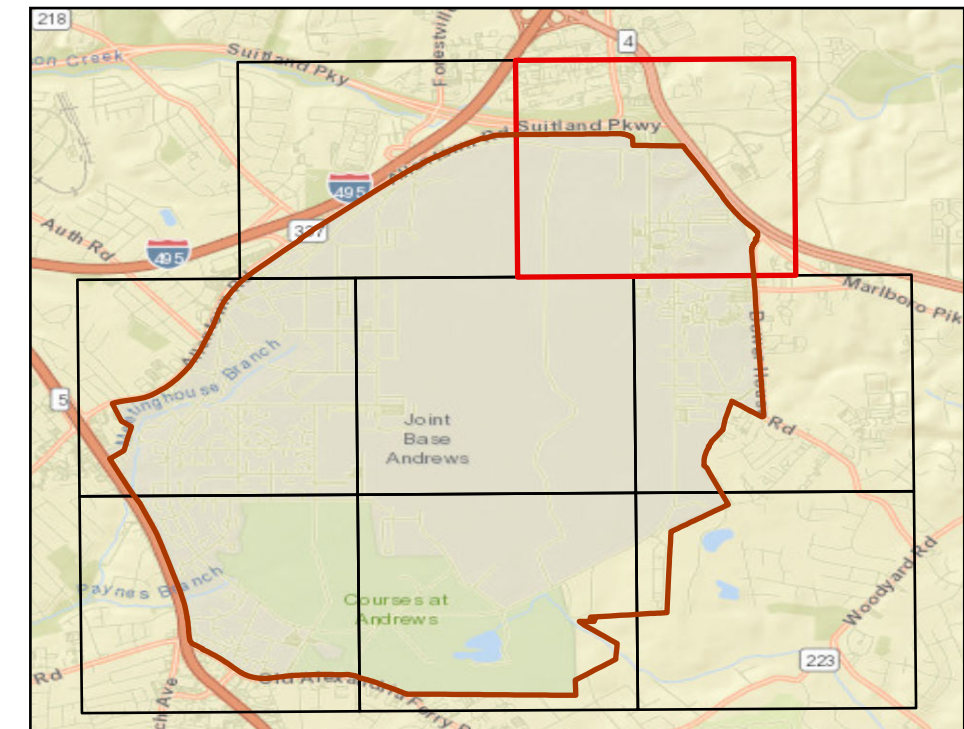
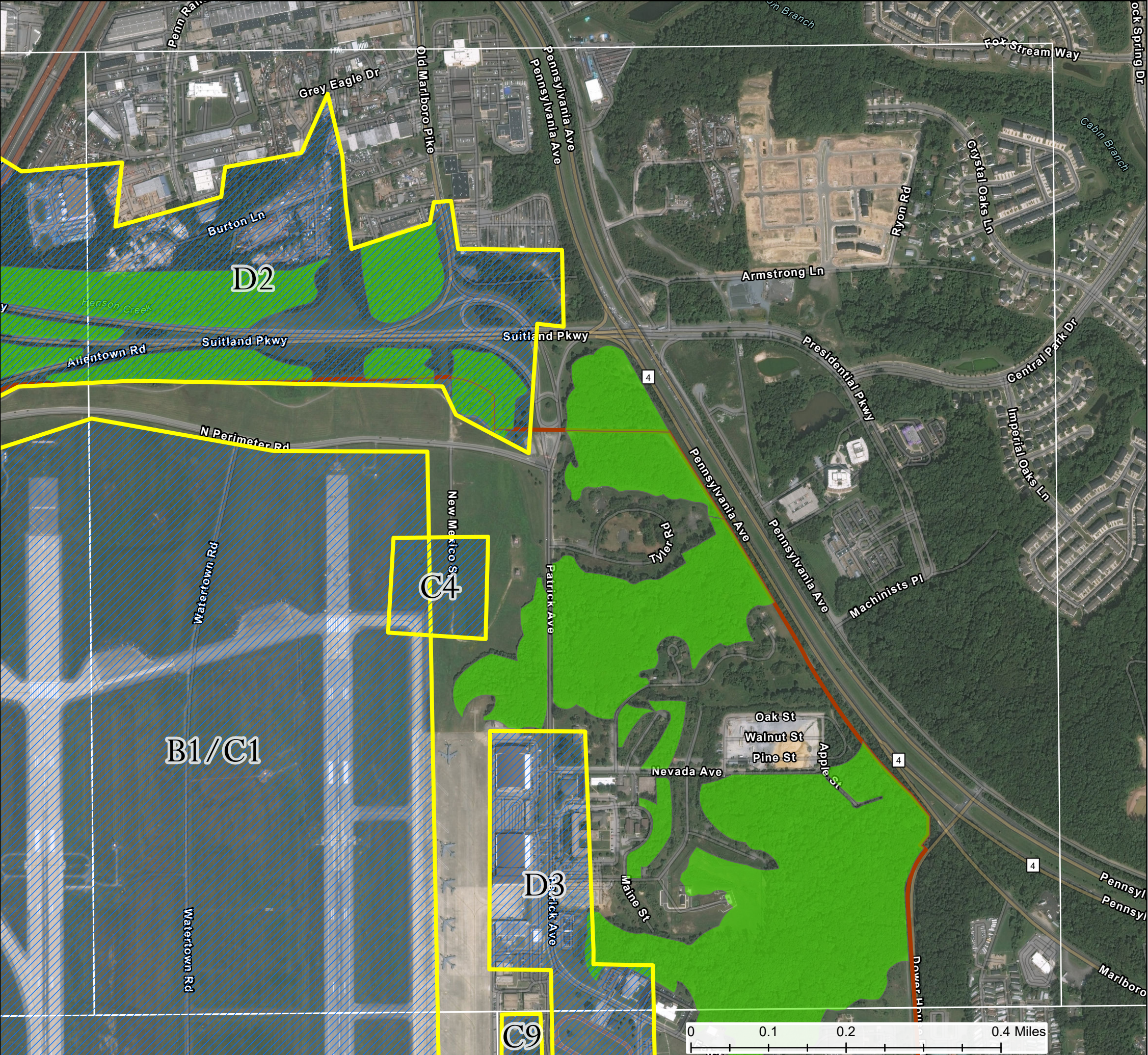
-  JBA Boundary
-  IDP Projects
-  Forest Stands
- RTE Species**
-  Humped Bladderwort



Joint Base Andrews Main Installation

Biological Resources

-  JBA Boundary
-  IDP Projects
-  Forest Stands



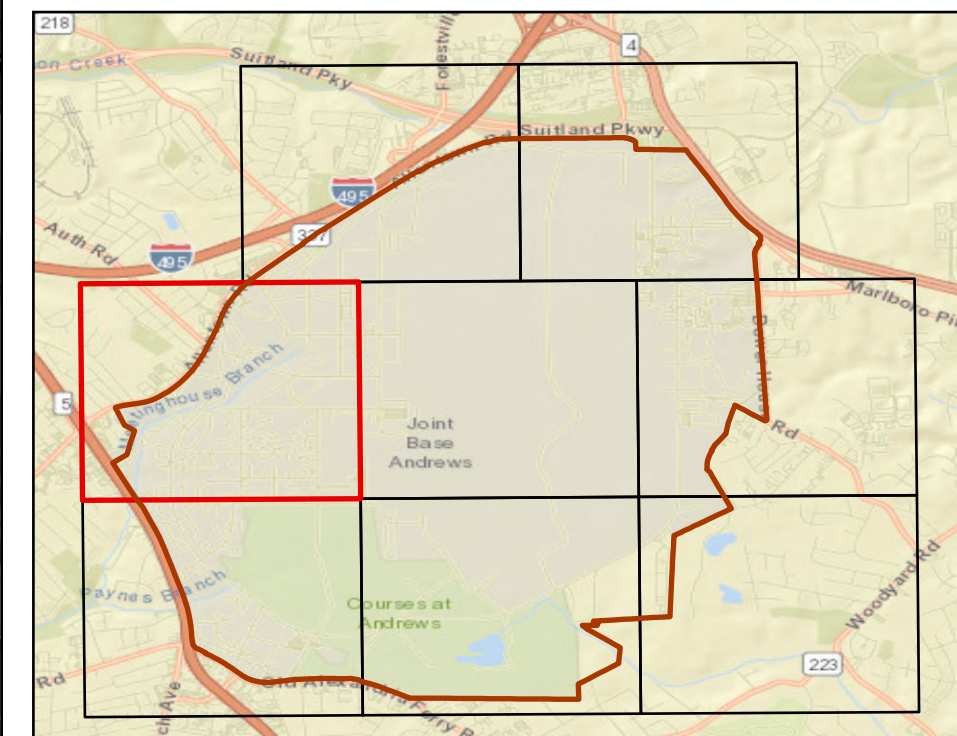
Joint Base Andrews Main Installation

Biological Resources

 JBA Boundary

 IDP Projects

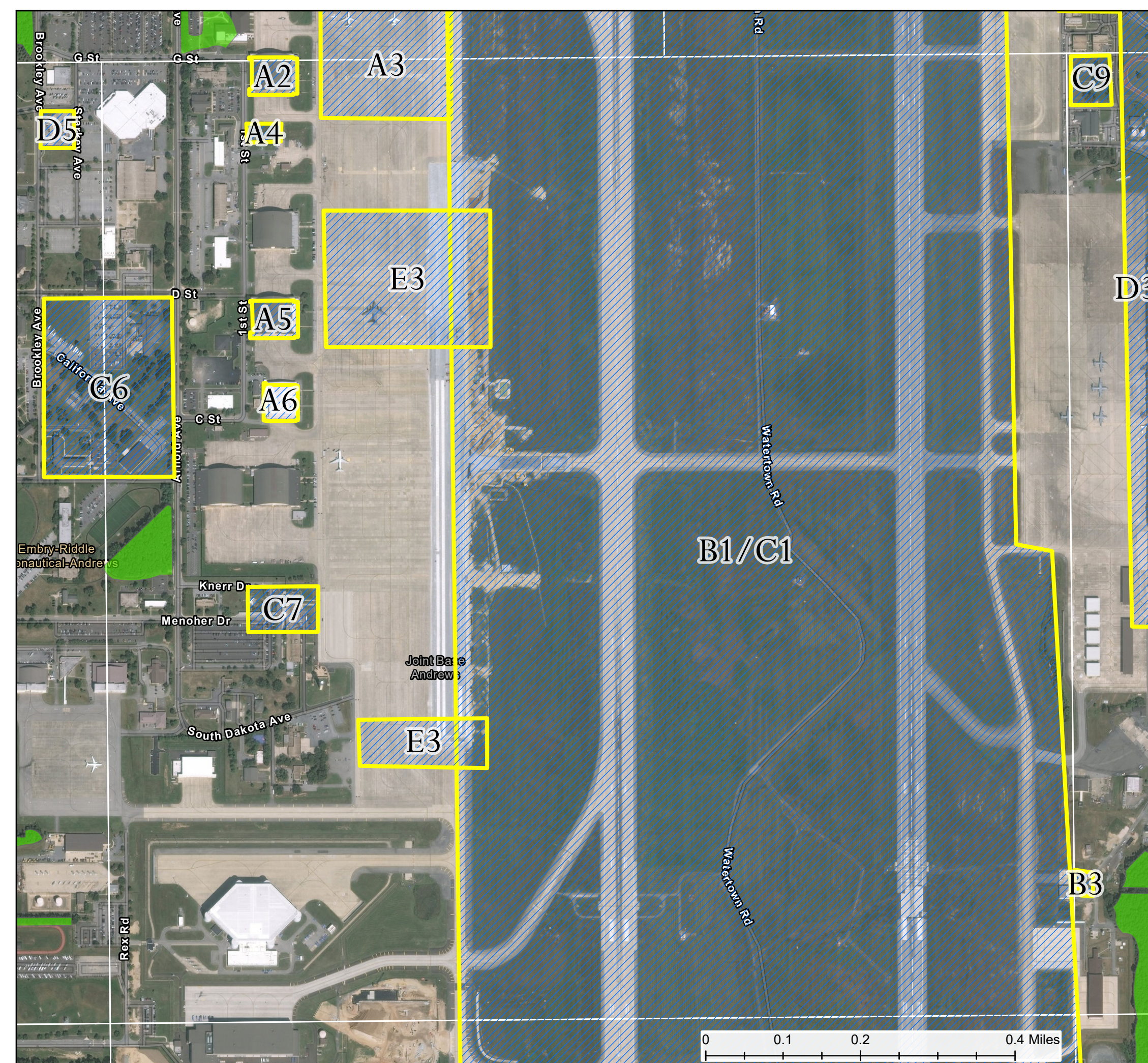
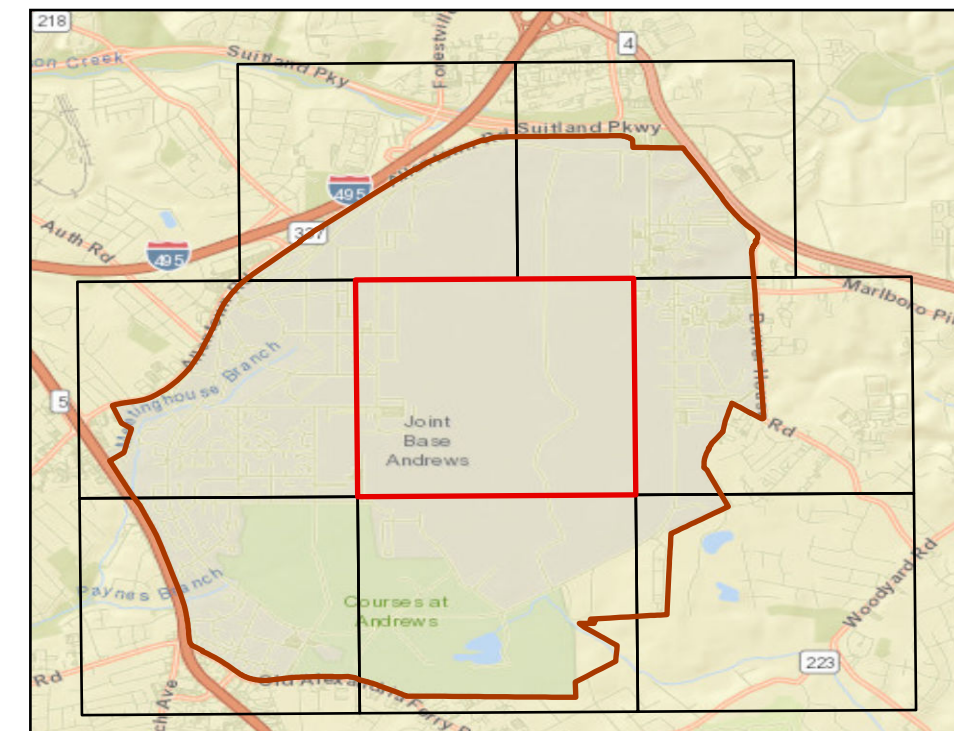
 Forest Stands



Joint Base Andrews Main Installation

Biological Resources

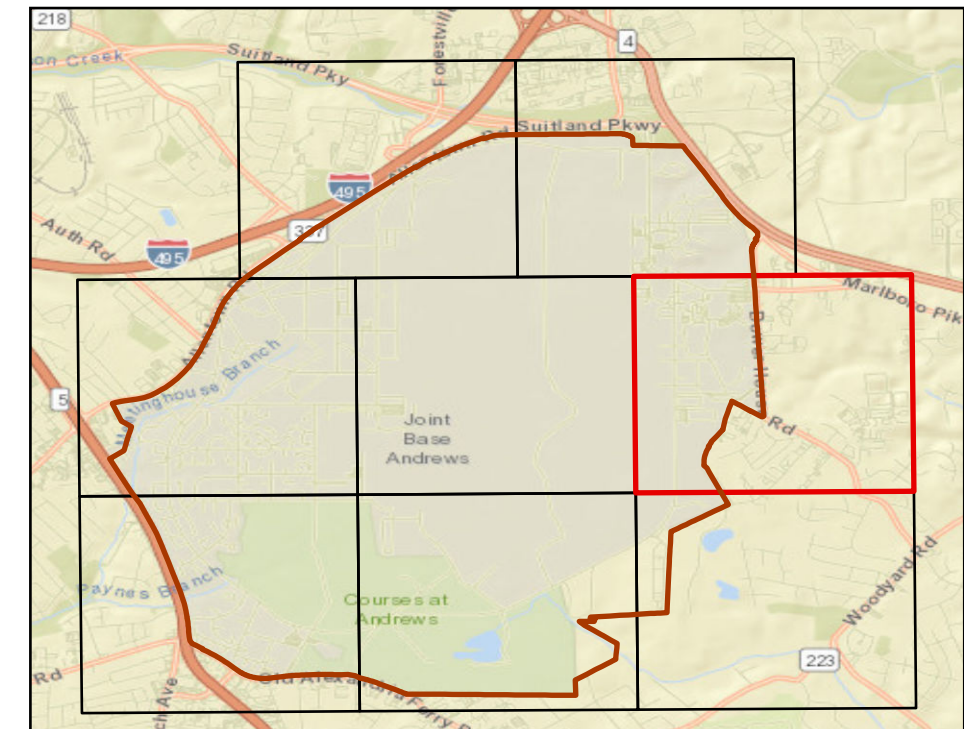
-  JBA Boundary
-  IDP Projects
-  Forest Stands



Joint Base Andrews Main Installation

Biological Resources

-  JBA Boundary
-  IDP Projects
-  Forest Stands



Joint Base Andrews Main Installation

Biological Resources

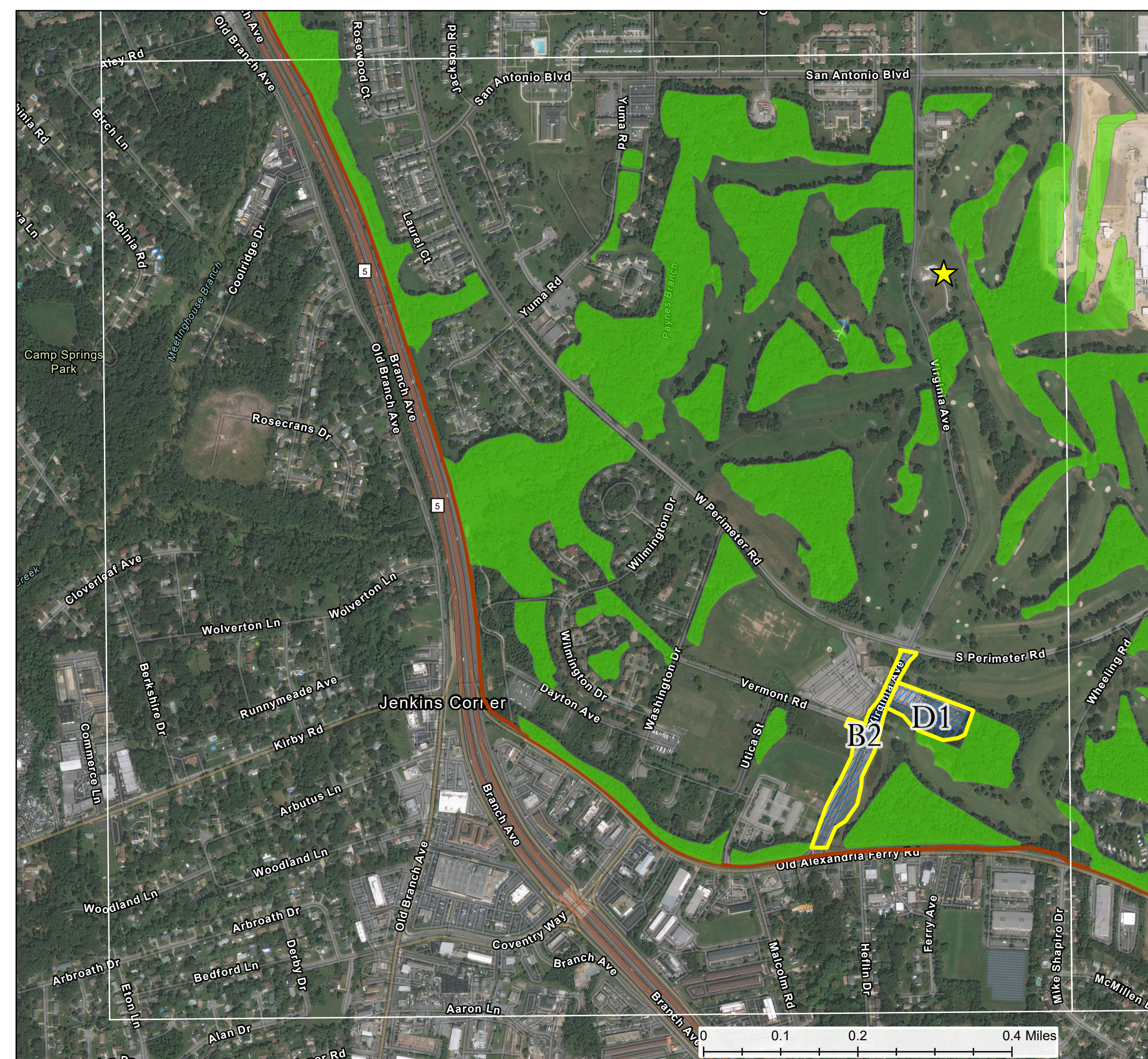
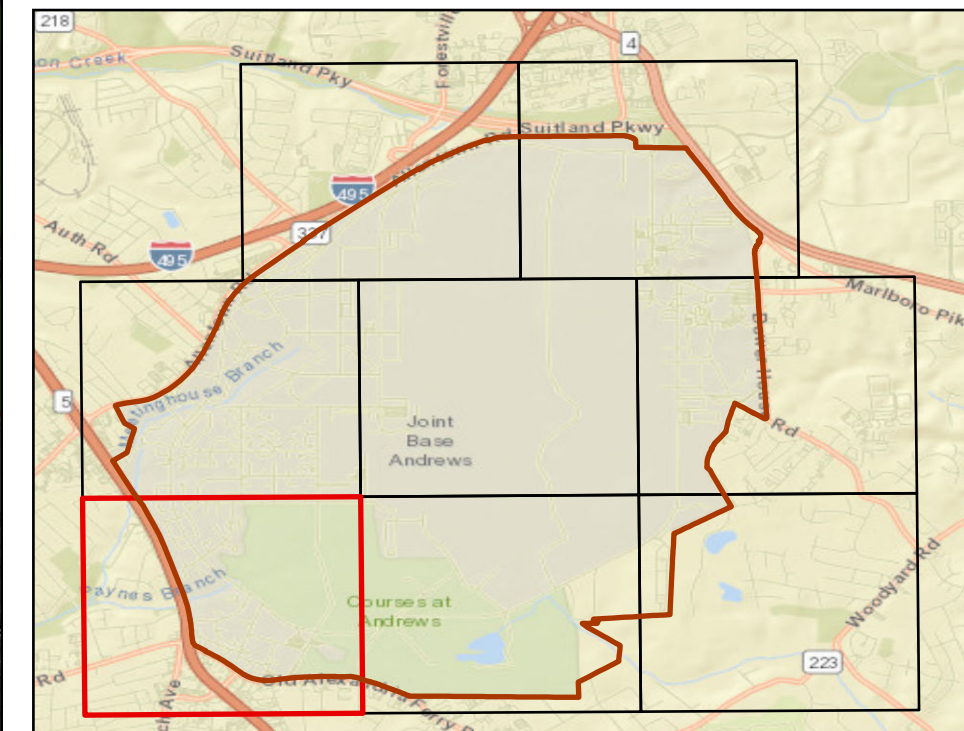
 JBA Boundary

 IDP Projects

 Forest Stands

 Northern Long Eared Bat

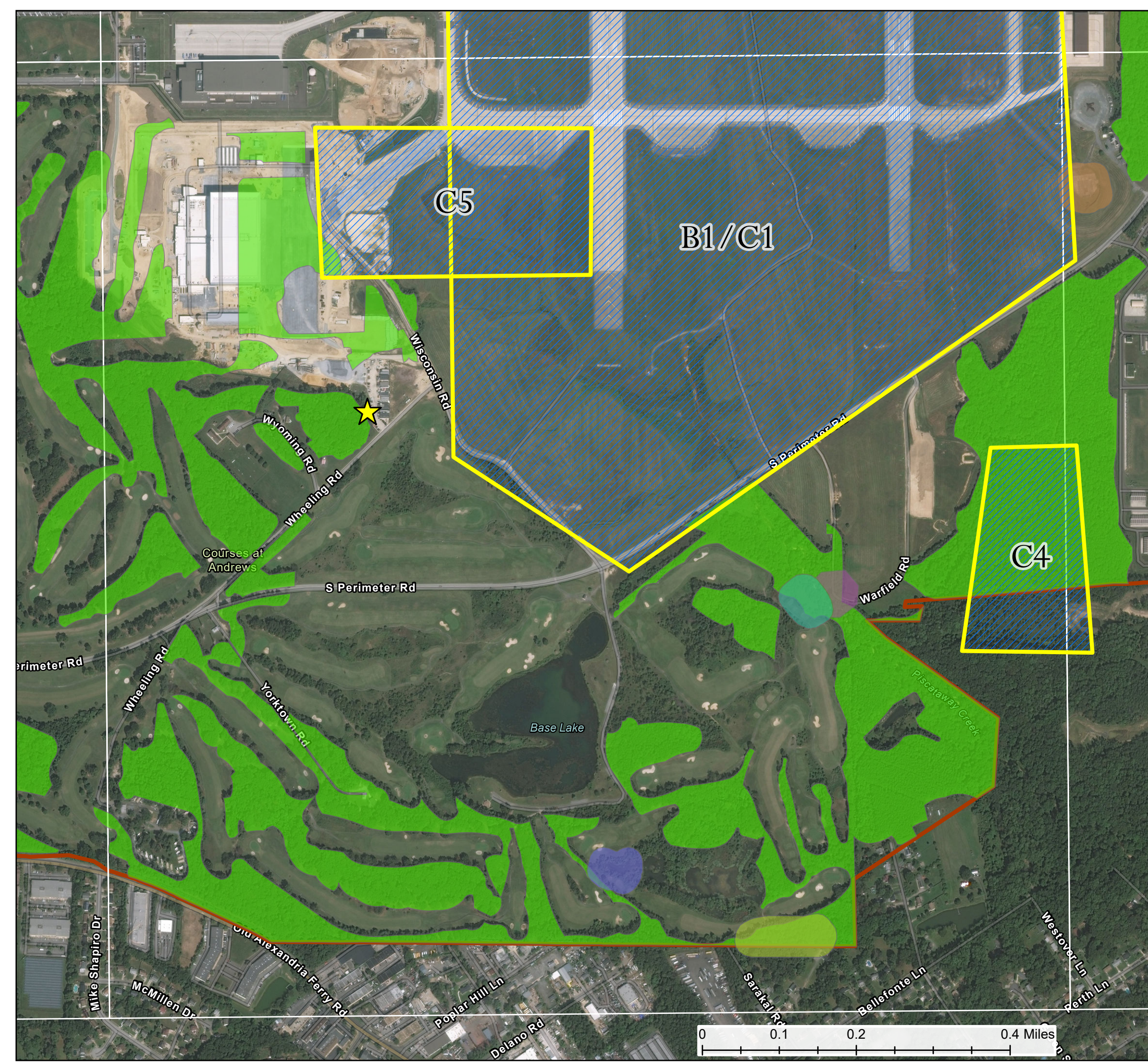
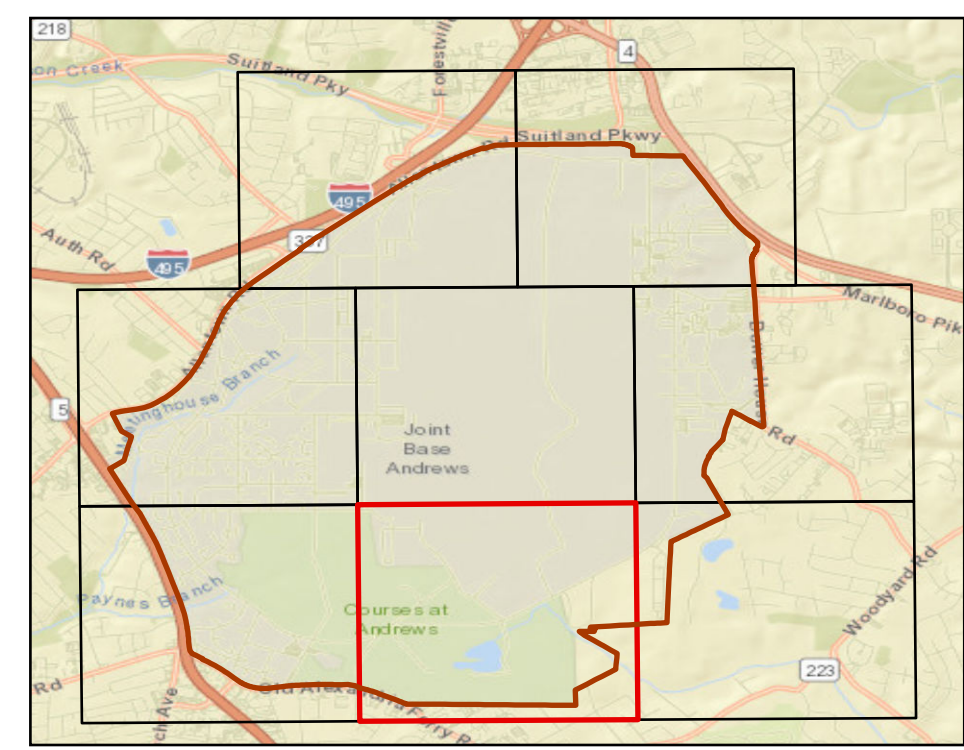
N



Joint Base Andrews Main Installation

Biological Resources

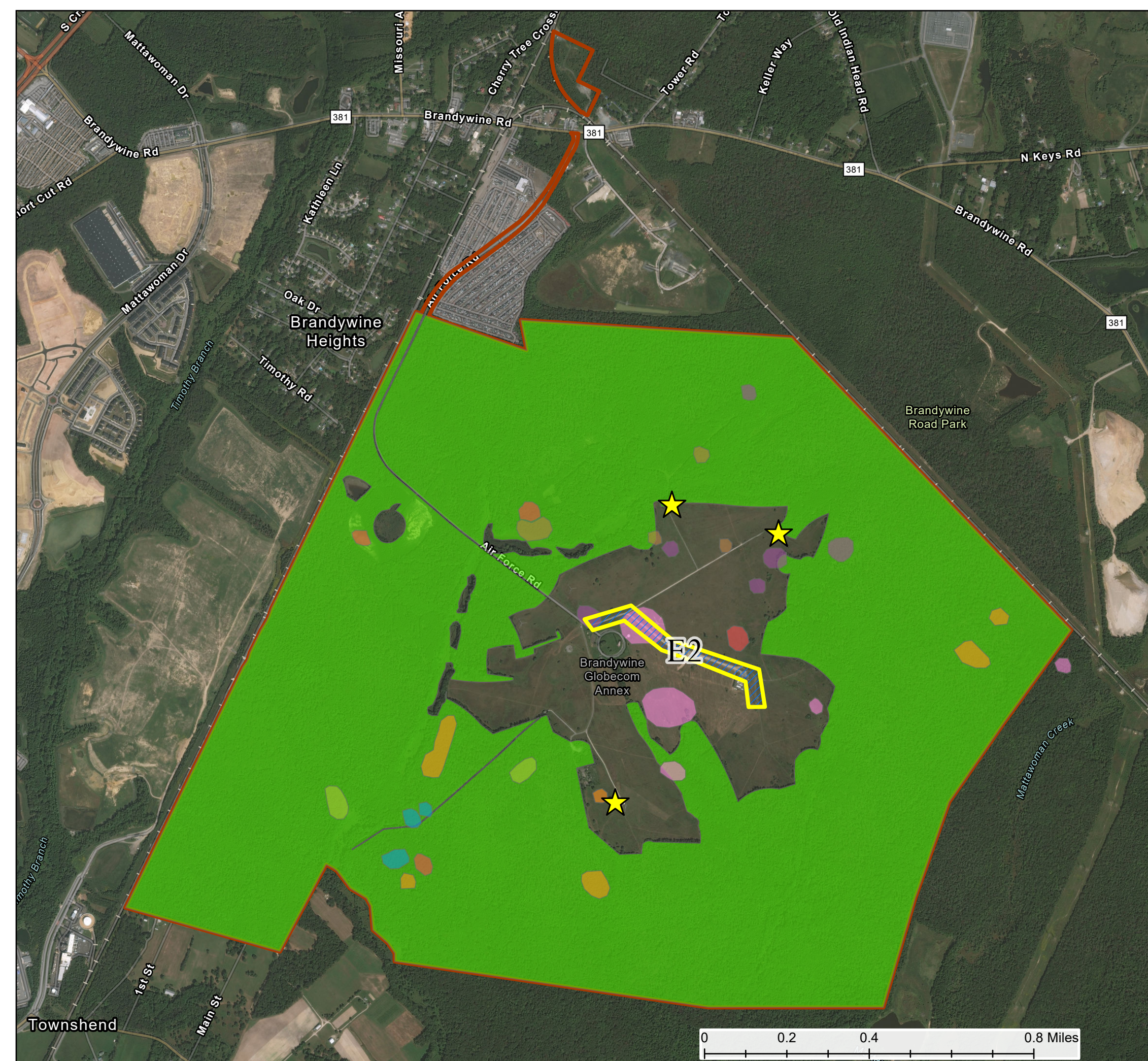
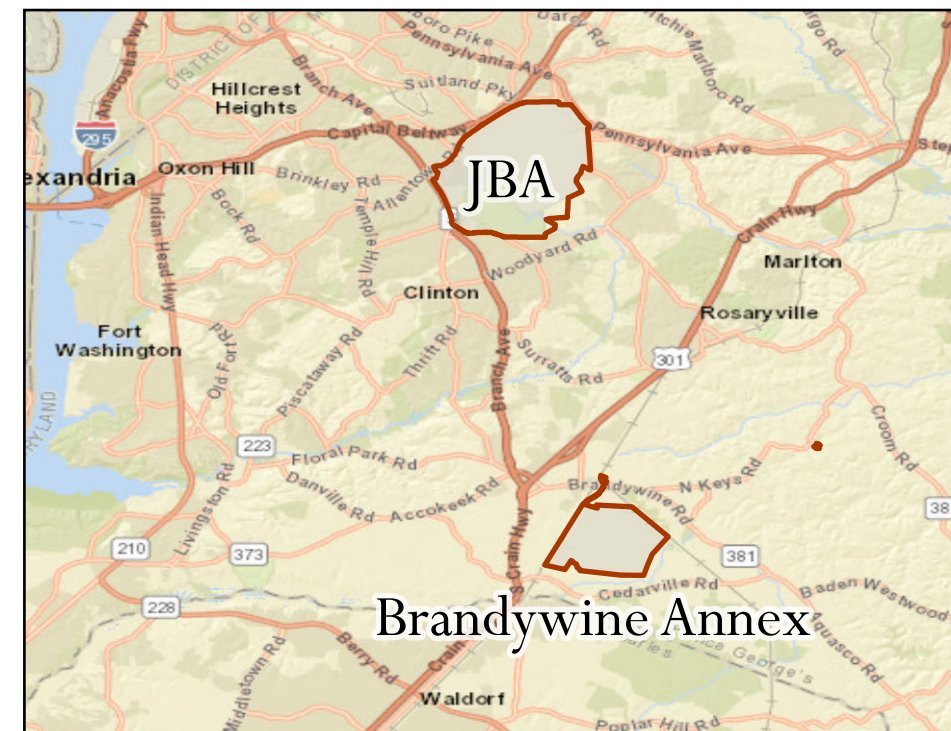
- JBA Boundary
- IDP Projects
- Forest Stands
- ★ Northern Long Eared Bat
- RTE Species**
- Curtiss' Three-awn Grass
- Sandplain Gerardia
- Spiral Pondweed
- Tall Nut-Rush
- Ten-lobed Agalinis



Joint Base Andrews Brandywine Annex

Biological Resources

- | | |
|-------------------------|------------------------------|
| JBA Boundary | Buxbaum's Sedge |
| IDP Projects | Claspingleaf St. John's-wort |
| Forest Stands | Pale False Foxglove |
| Northern Long Eared Bat | Pale Manna Grass |
| RTE Species | Racemed Milkwort |
| Allegheny Chinquapin | Sandplain Flax |
| Asa Gray's Sedge | Swollen Bladderwort |
| Bent Sedge | Tall Bushclover |
| Button Sedge | |

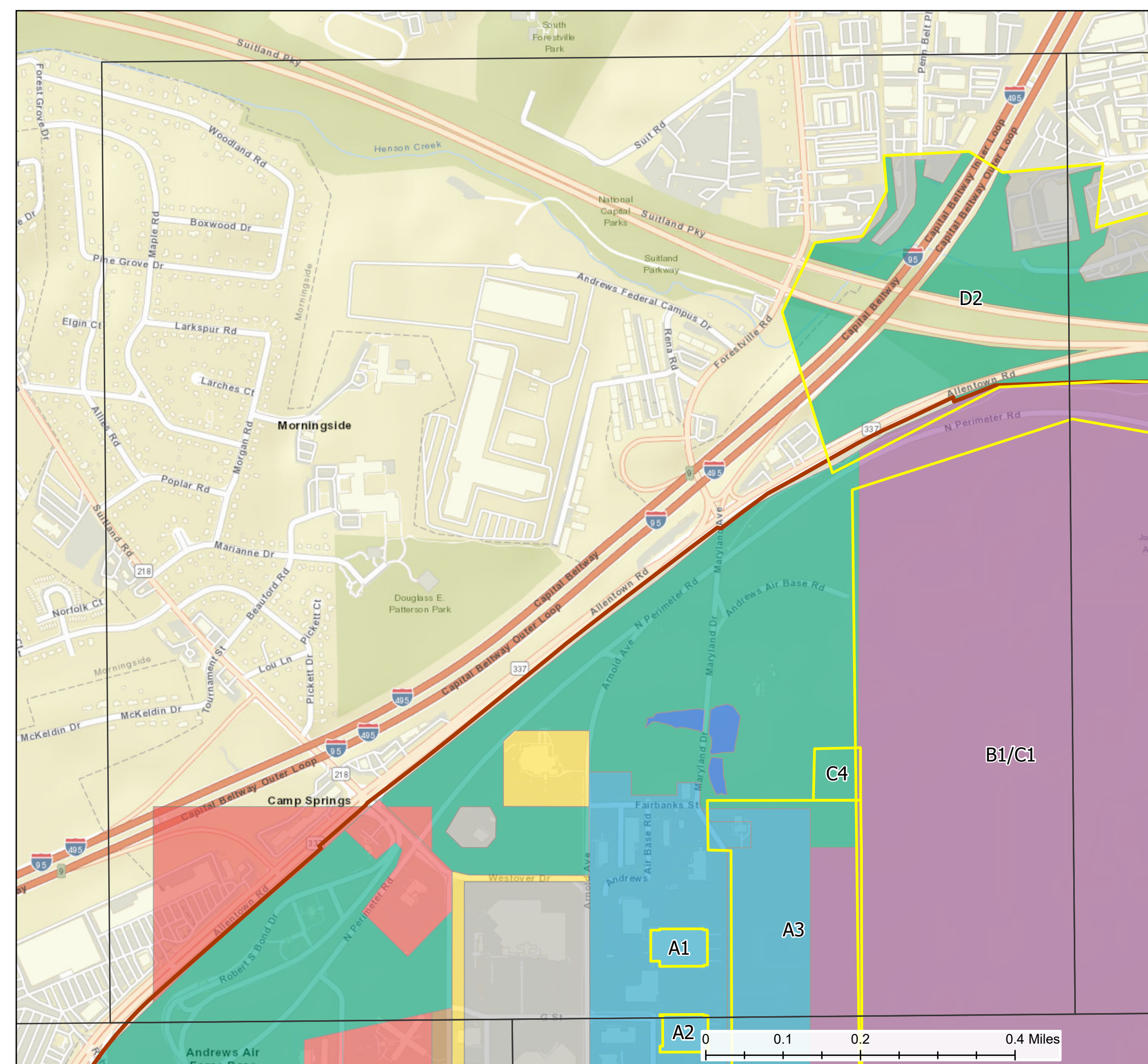
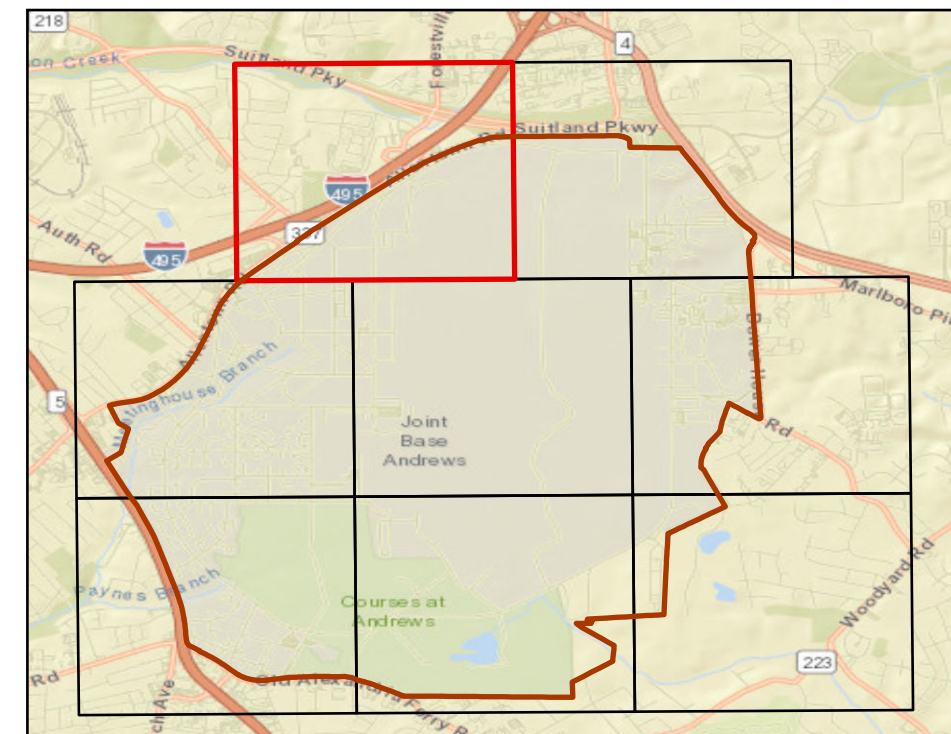


Joint Base Andrews

Main Installation

Land Use

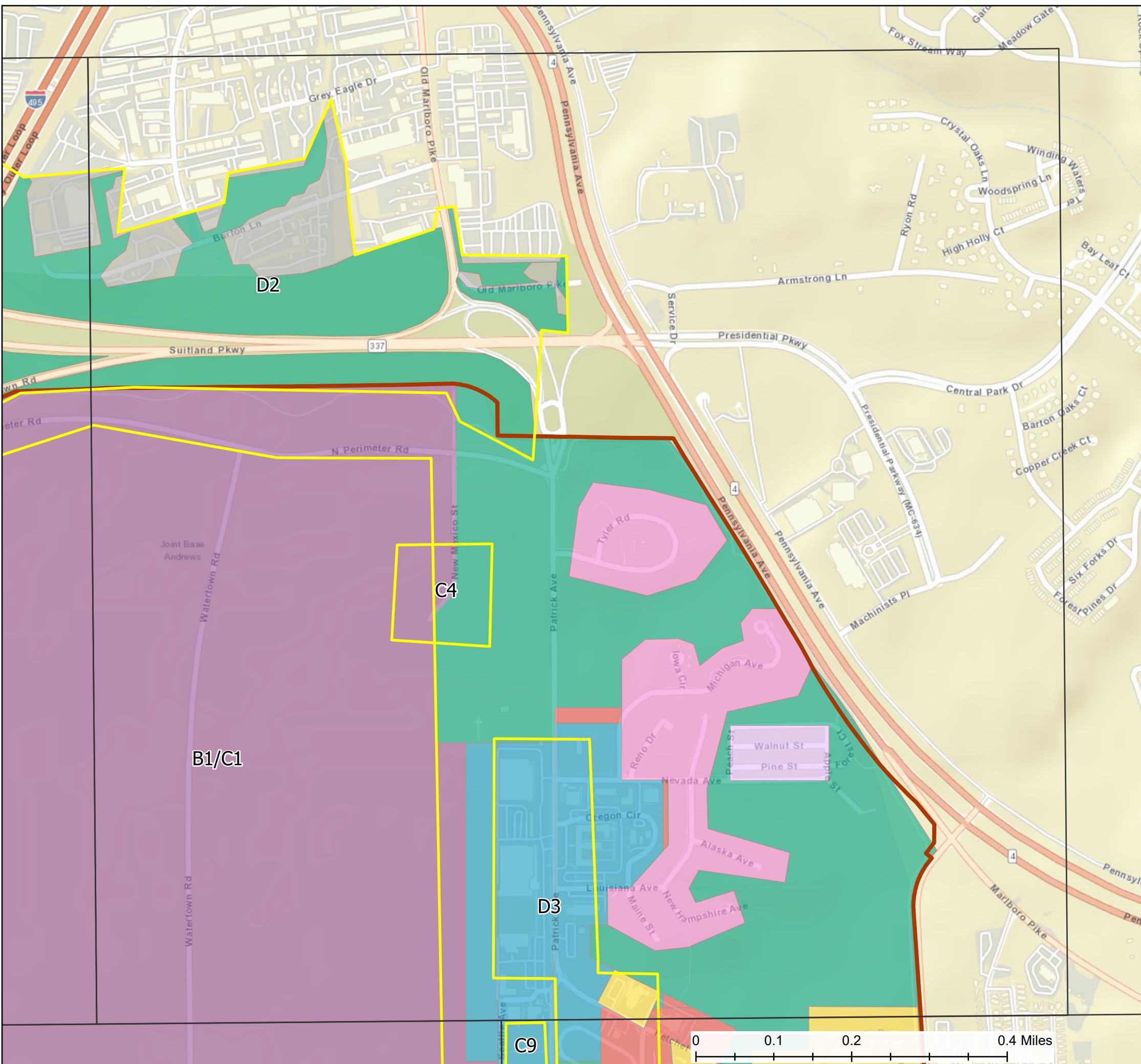
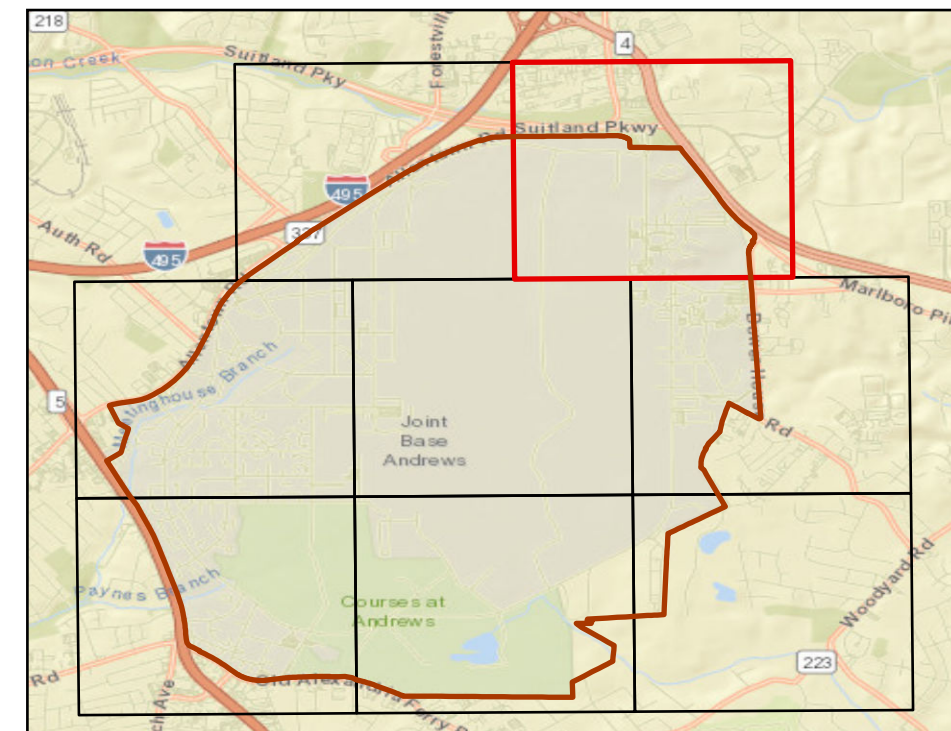
- JBA Boundary
- IDP Projects
- Administration
- Aircraft Operations and Maintenance
- Airfield Pavement
- Community Service
- Housing Unaccompanied
- Industrial Use Area
- Open Space/Buffer Zone
- Water



Joint Base Andrews Main Installation

Land Use

- JBA Boundary
- IDP Projects
- Administration
- Aircraft Operations and Maintenance
- Airfield Pavement
- Community Service
- Housing Accompanied
- Industrial Use Area
- Open Space/Buffer Zone
- Outdoor Recreation

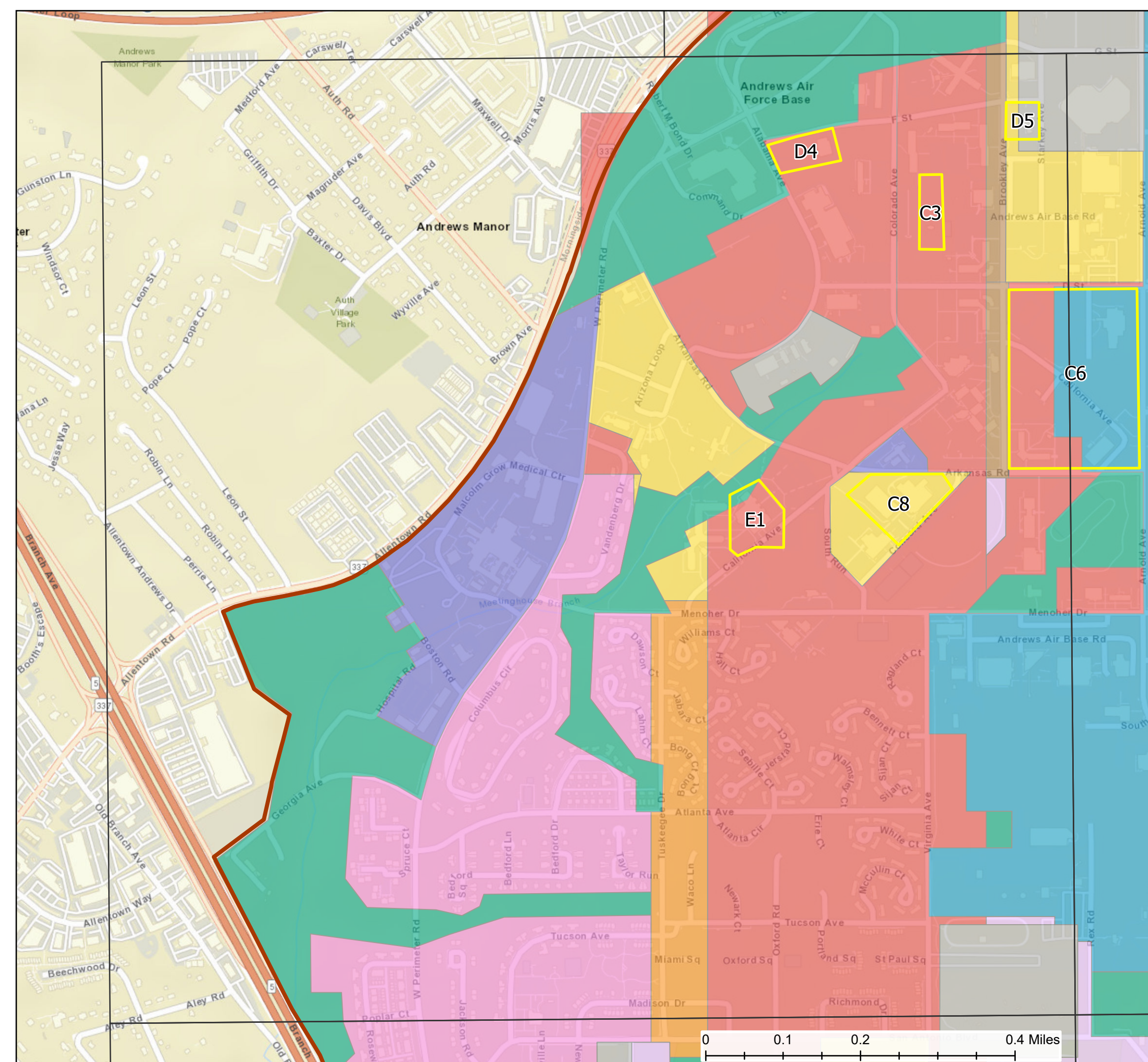
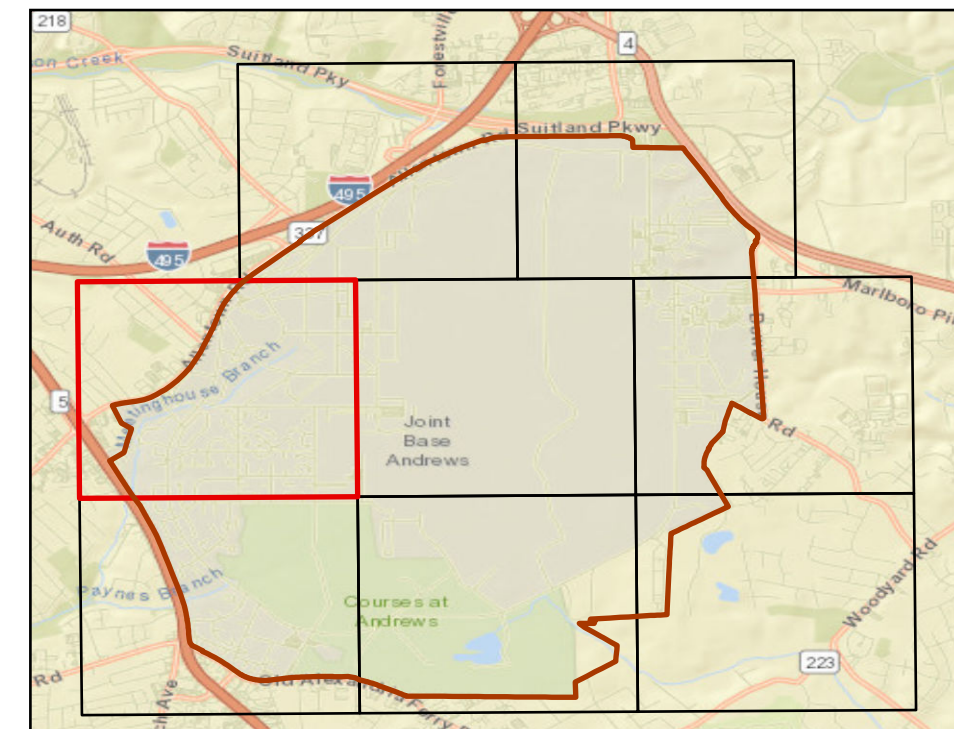


Joint Base Andrews

Main Installation

Land Use

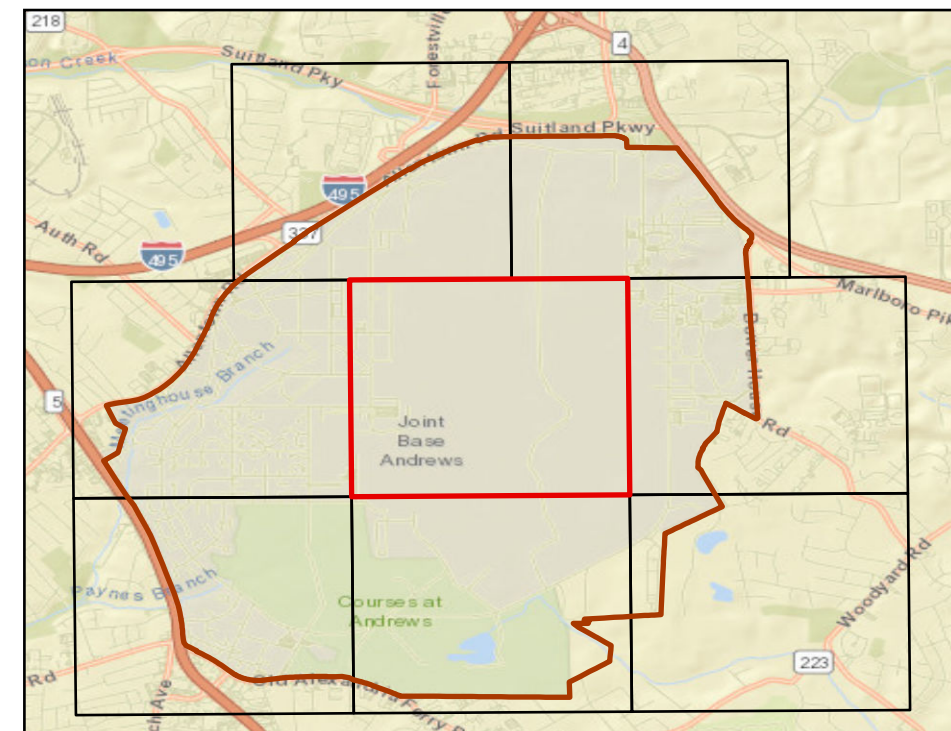
- JBA Boundary
- IDP Projects
- Administration
- Aircraft Operations and Maintenance
- Community Commercial
- Community Service
- Housing Accompanied
- Housing Unaccompanied
- Industrial Use Area
- Medical/dental
- Open Space/Buffer Zone
- Outdoor Recreation



Joint Base Andrews Main Installation

Land Use

- JBA Boundary
- IDP Projects
- Administration
- Aircraft Operations and Maintenance
- Airfield Pavement
- Community Service
- Housing Unaccompanied
- Industrial Use Area
- Open Space/Buffer Zone
- Outdoor Recreation

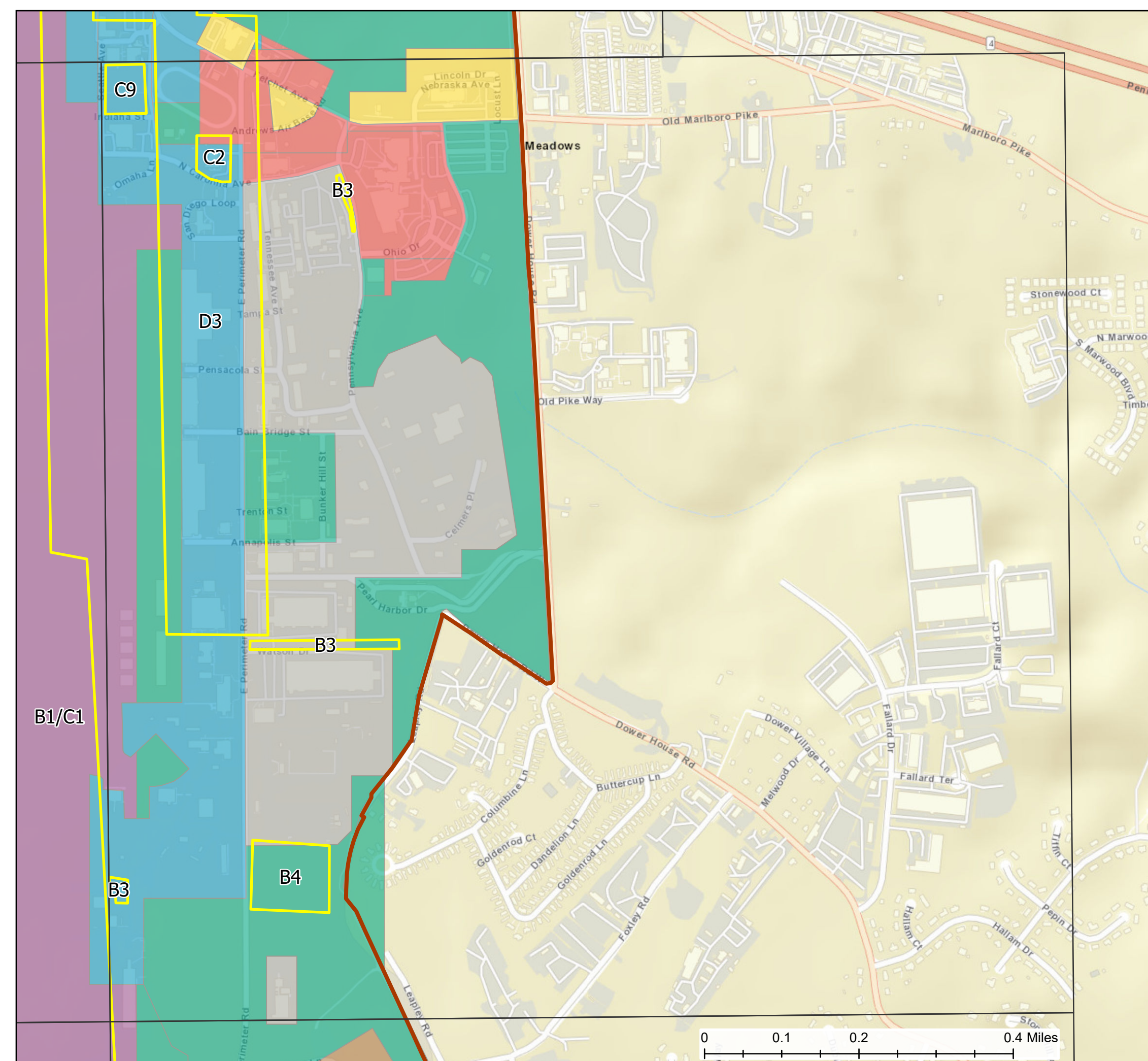
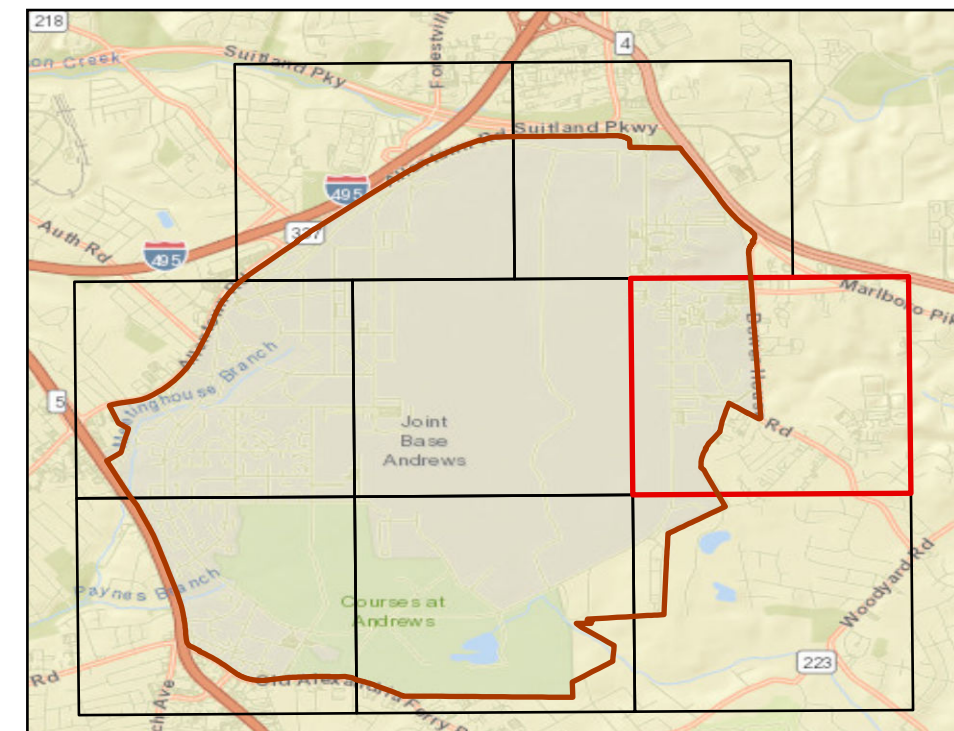


0 0.1 0.2 0.4 Miles

Joint Base Andrews Main Installation

Land Use

- JBA Boundary
- IDP Projects
- Administration
- Aircraft Operations and Maintenance
- Airfield Pavement
- Community Service
- Housing Unaccompanied
- Industrial Use Area
- Open Space/Buffer Zone

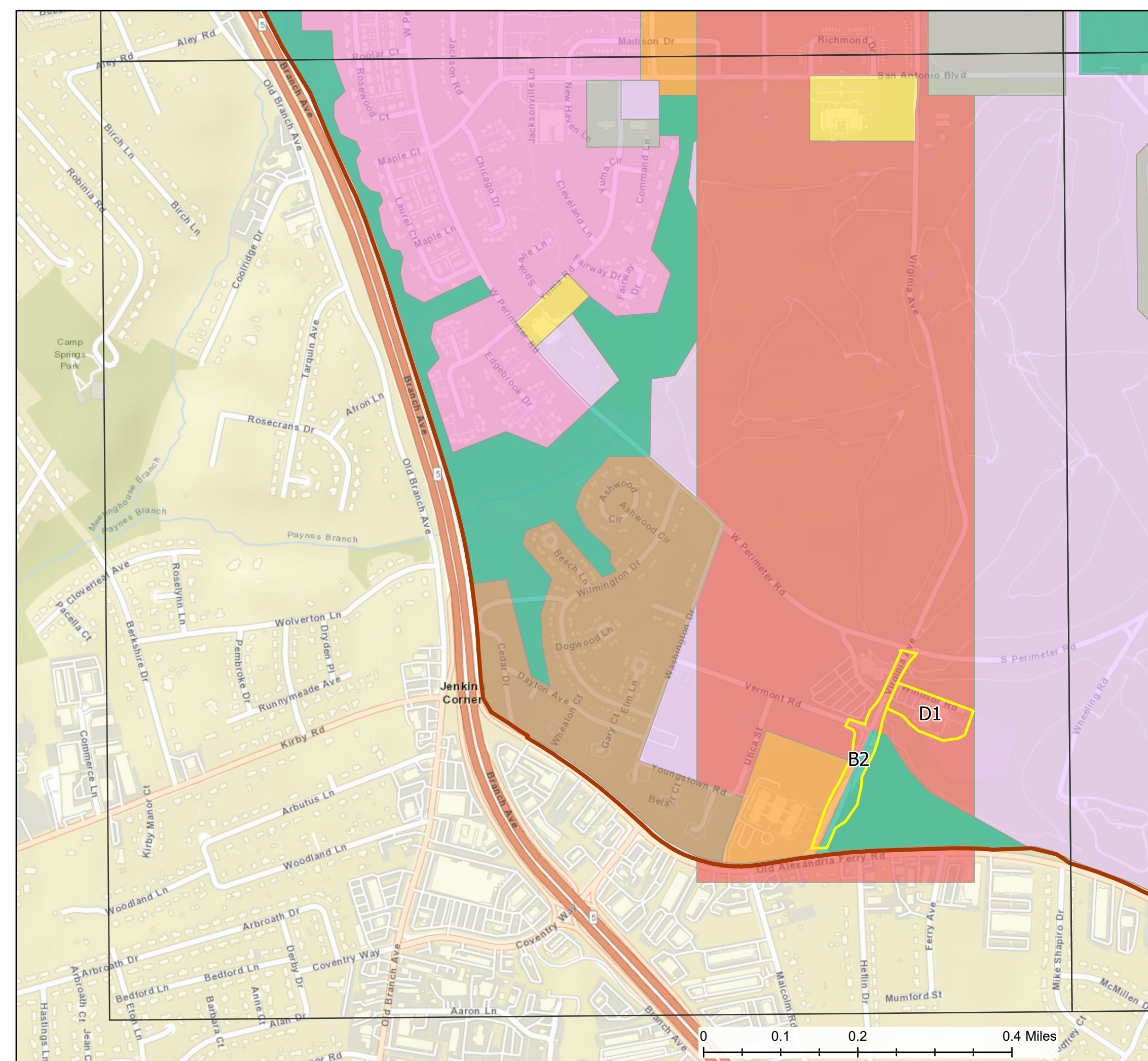
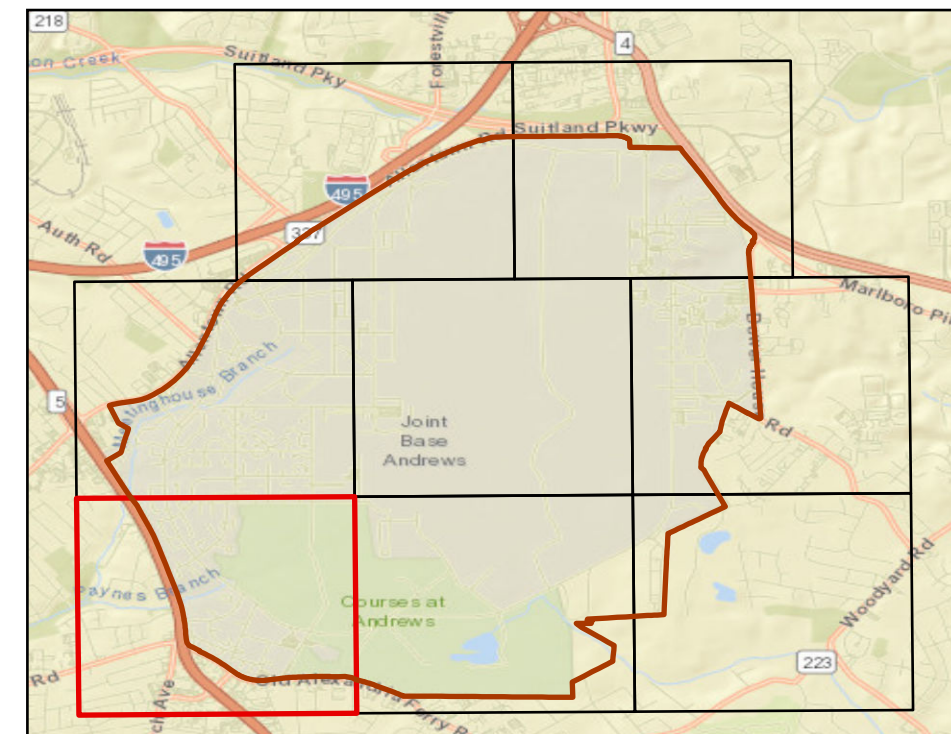


Joint Base Andrews

Main Installation

Land Use

- JBA Boundary
- IDP Projects
- Administration
- Community Commercial
- Community Service
- Housing Accompanied
- Housing Unaccompanied
- Industrial Use Area
- Open Space/Buffer Zone
- Outdoor Recreation



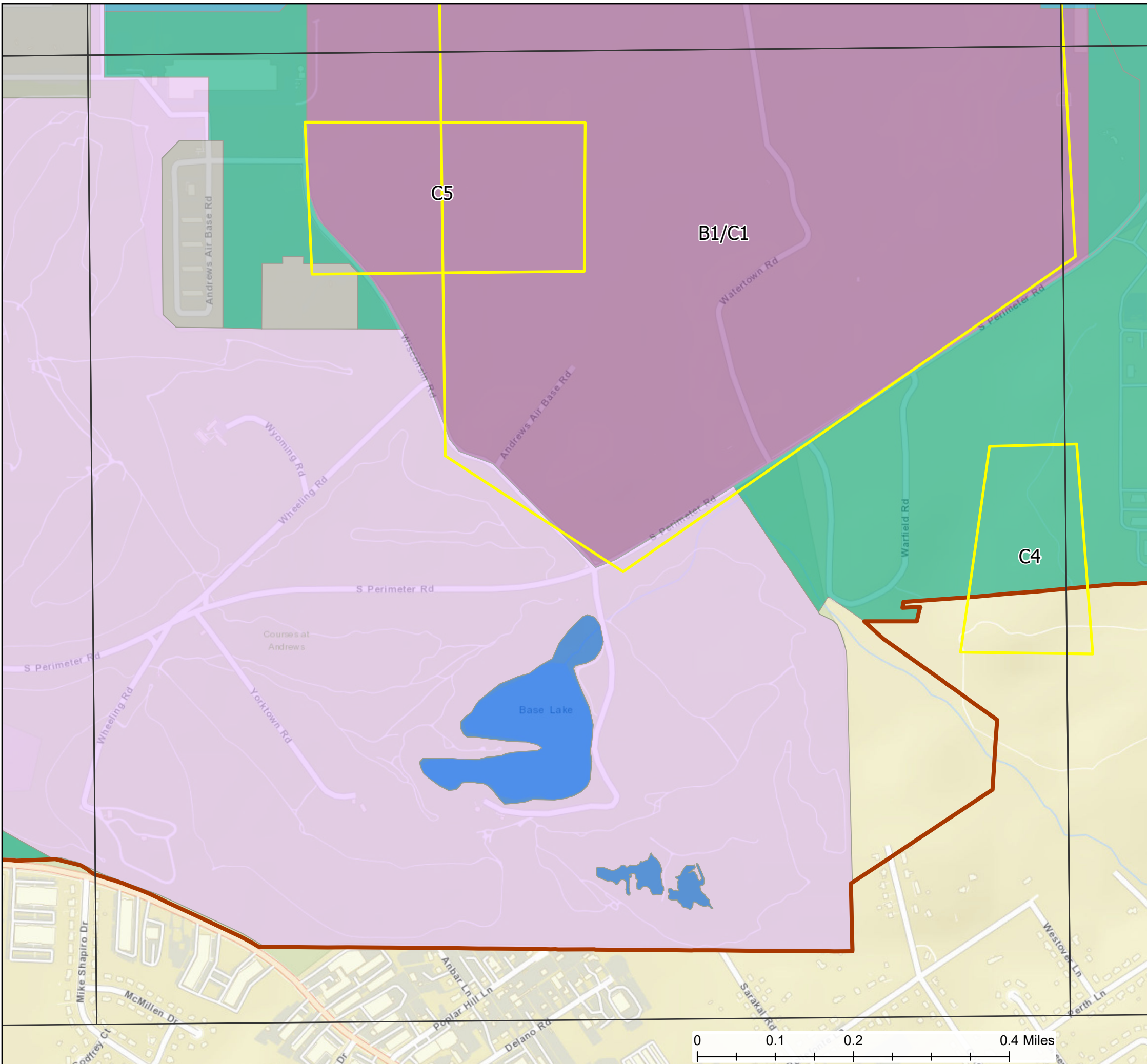
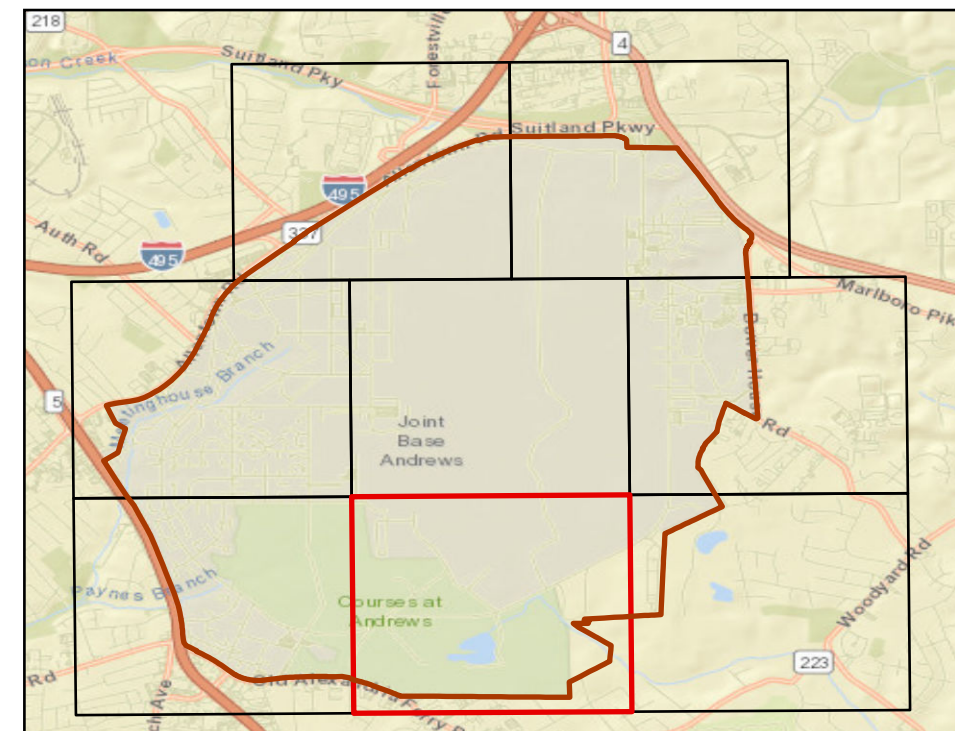
0 0.1 0.2 0.4 Miles

Joint Base Andrews

Main Installation

Land Use

- JBA Boundary
- IDP Projects
- Aircraft Operations and Maintenance
- Airfield Pavement
- Industrial Use Area
- Open Space/Buffer Zone
- Outdoor Recreation
- Water

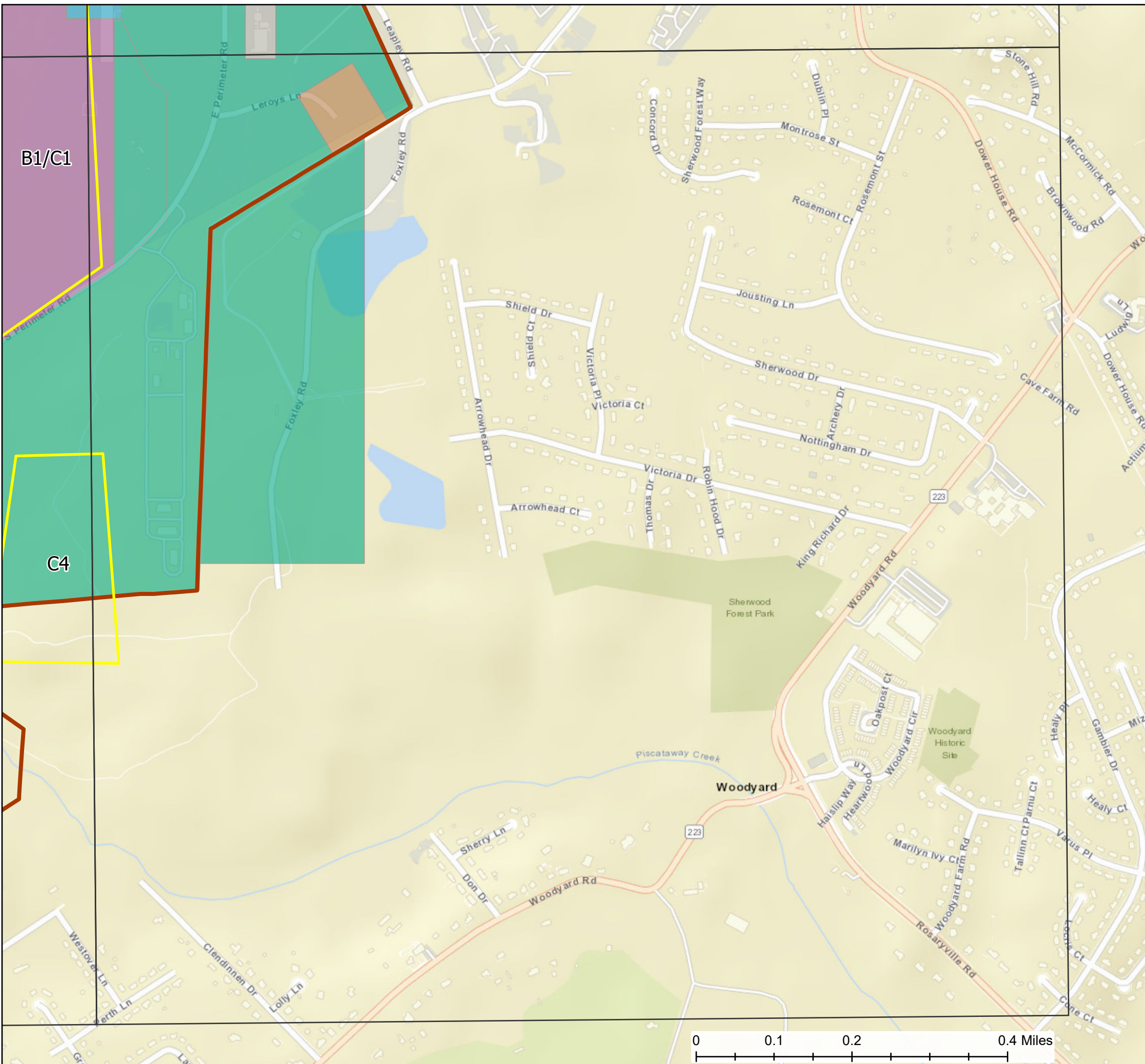
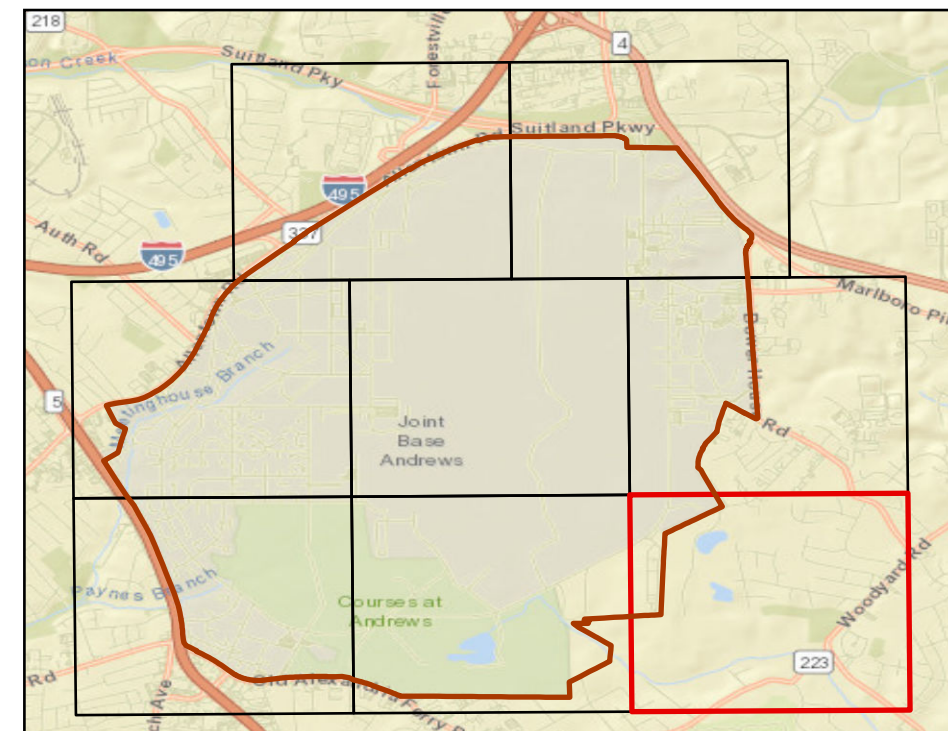


Joint Base Andrews

Main Installation

Land Use

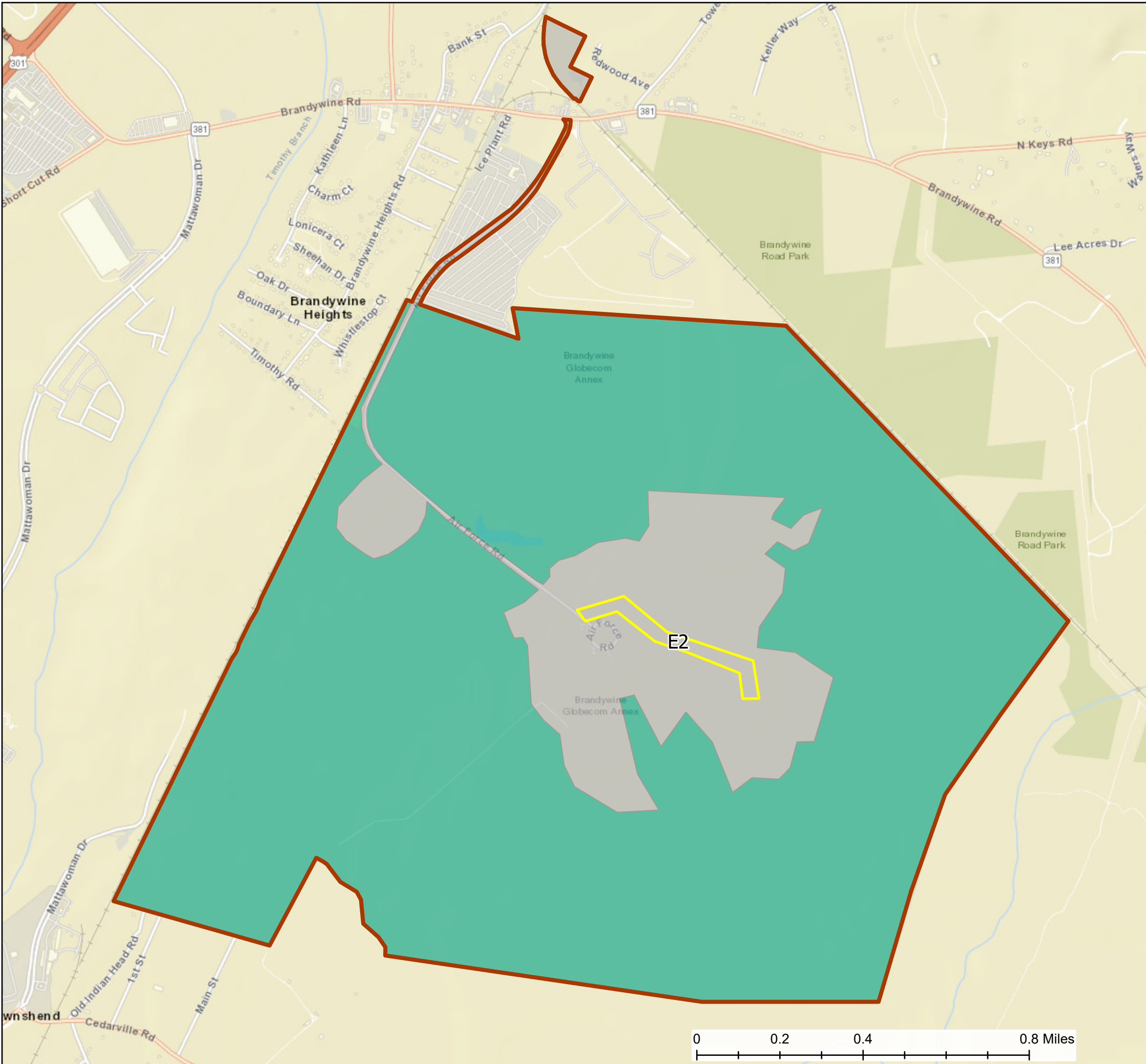
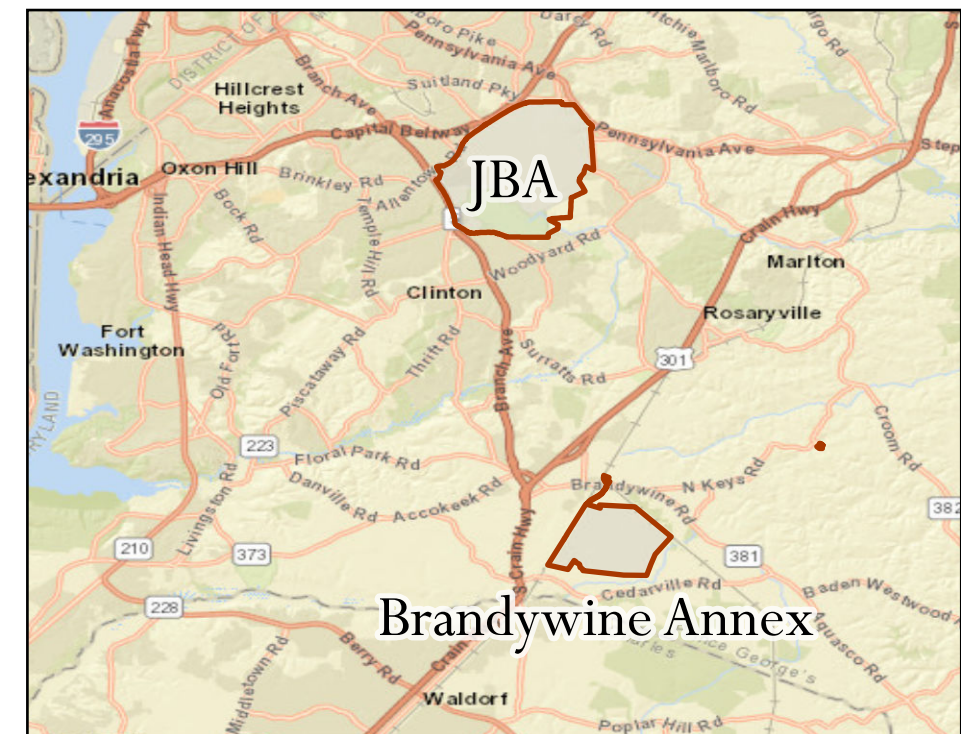
- JBA Boundary
- IDP Projects
- Aircraft Operations and Maintenance
- Airfield Pavement
- Housing Unaccompanied
- Industrial Use Area
- Open Space/Buffer Zone



Joint Base Andrews Brandywine Annex

Land Use

-  JBA Boundary
-  IDP Projects
-  Industrial Use Area
-  Open Space/Buffer Zone

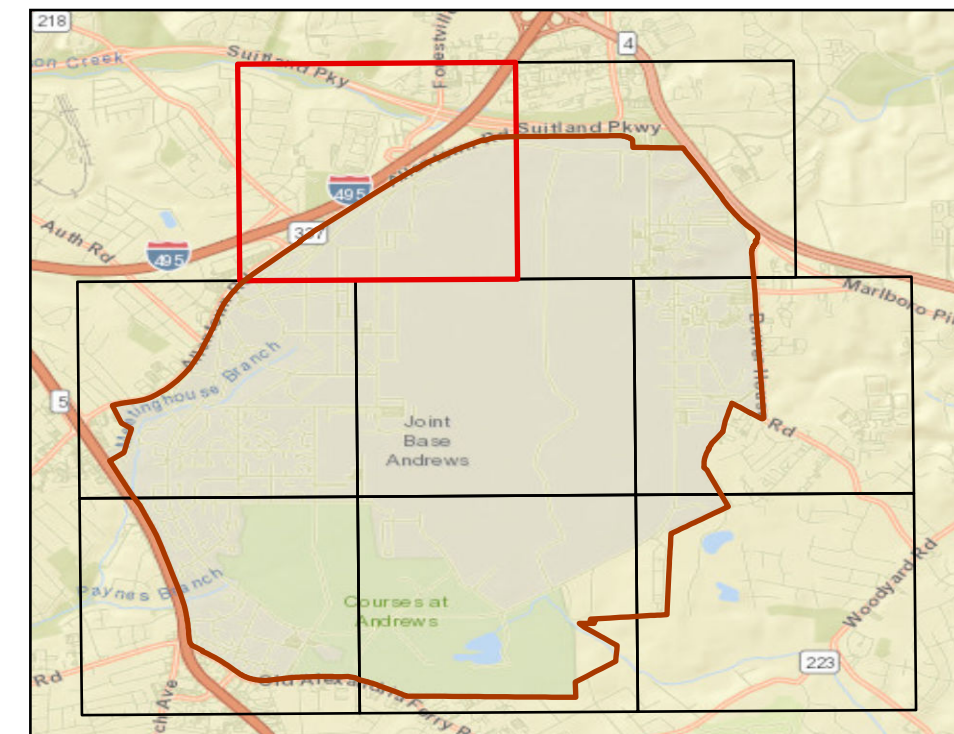
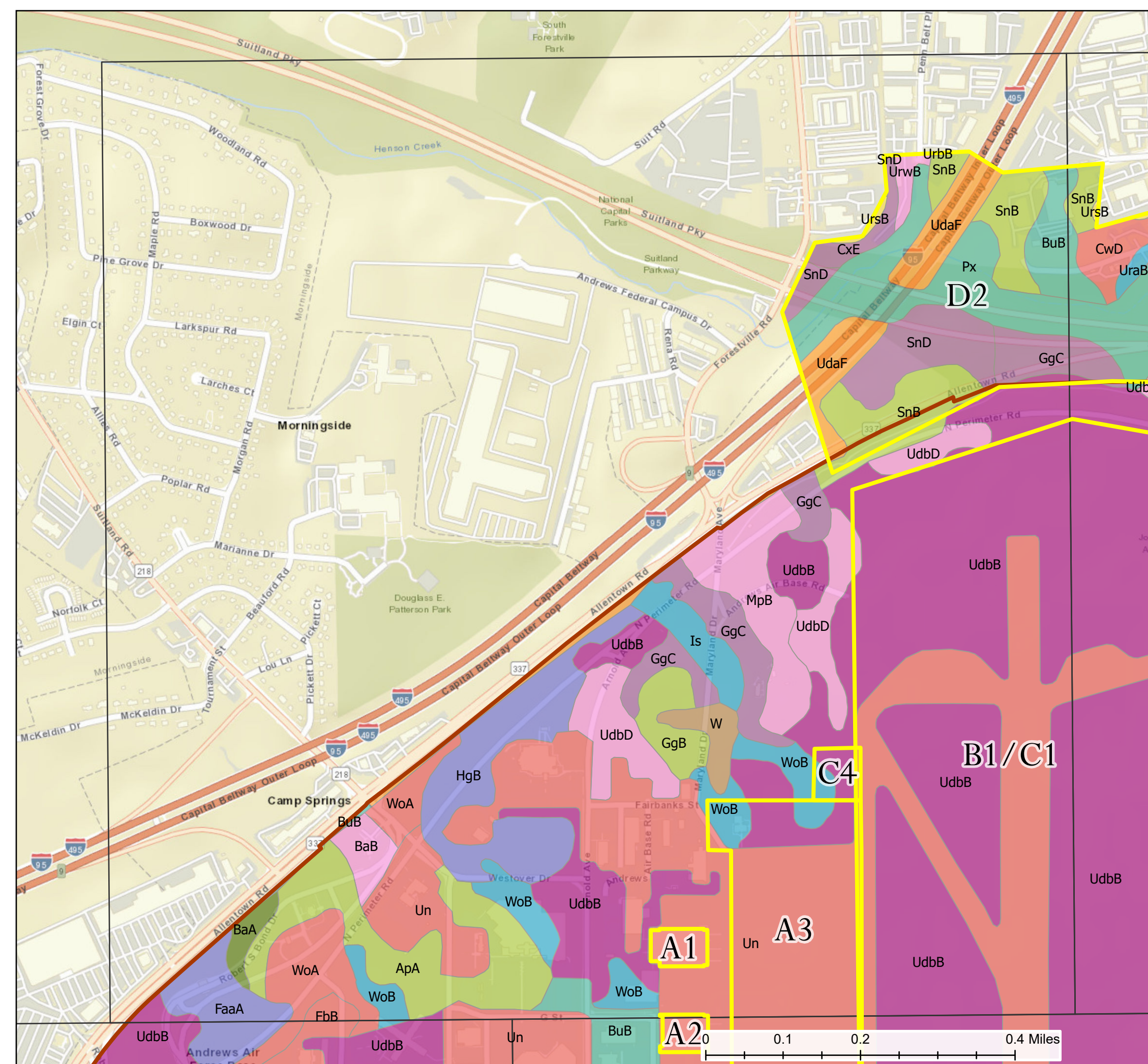


Joint Base Andrews

Main Installation

Soils

JBA Boundary	GgB	UdbD
IDP Projects	GgC	Un
Soil Symbol		
ApA	Is	UrbB
BaA	MpB	UrwB
BaB	Px	W
BuB	SnB	WoA
CxE	SnD	WoB
FaaA	UdaF	
FbB	UdbB	

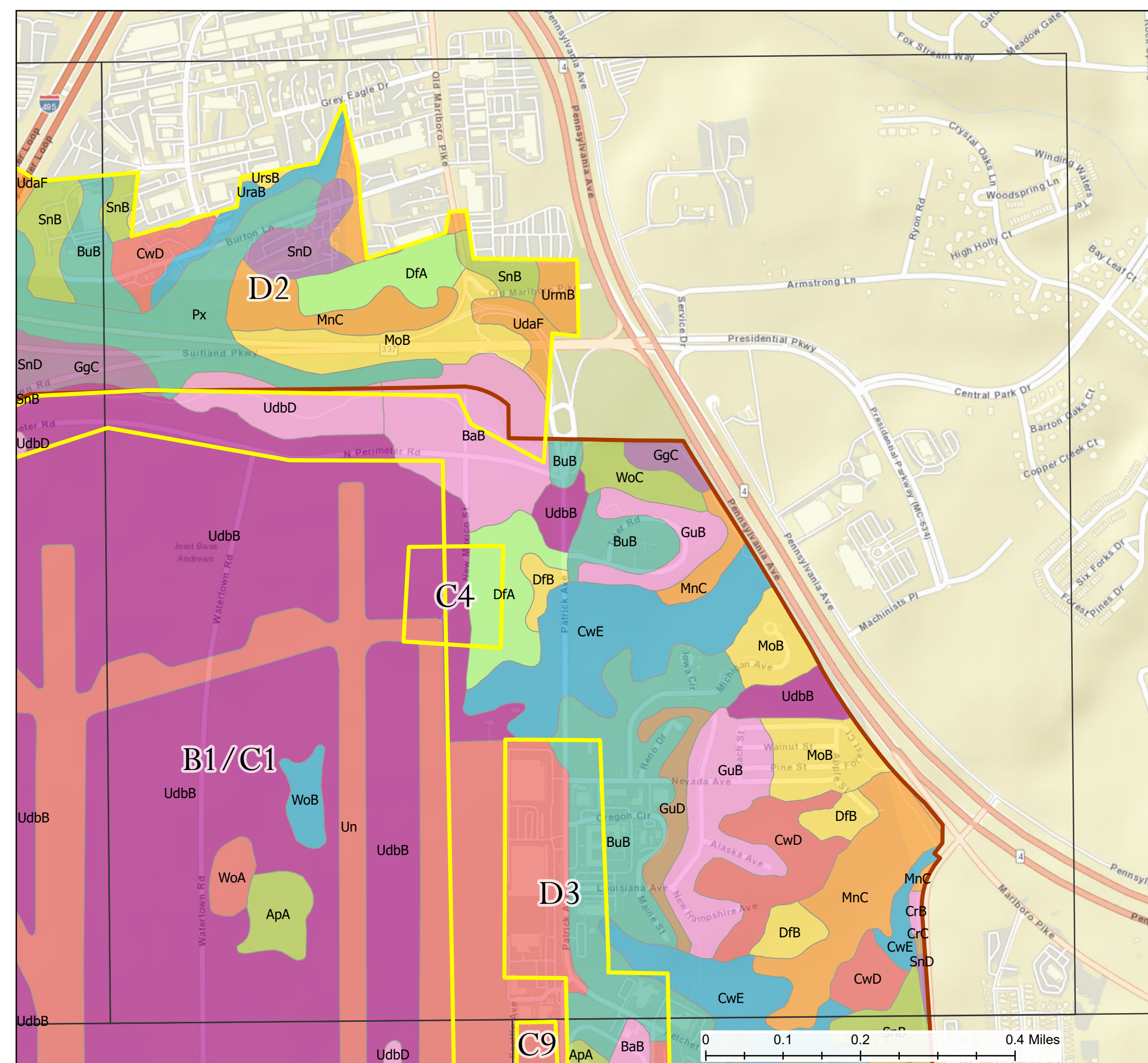
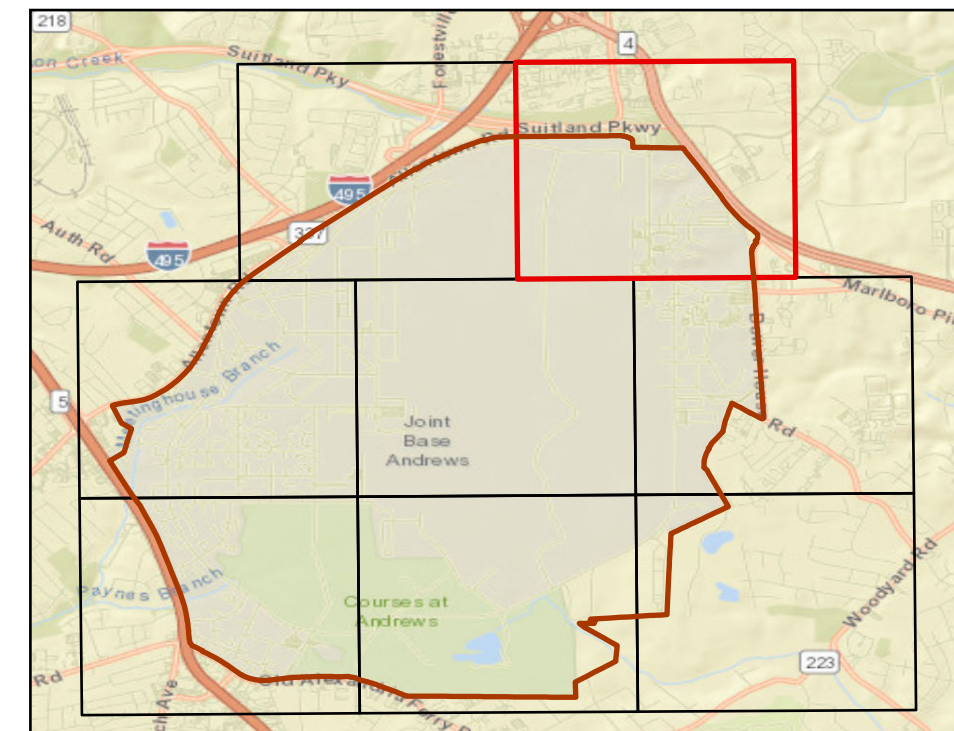


Joint Base Andrews

Main Installation

Soils

JBA Boundary	DfA	UdaF
IDP Projects	DfB	UdbB
Soil Symbol	GgC	UdbD
ApA	GuB	Un
BaB	GuD	UraB
BuB	MnC	UrmB
CrB	MoB	UrsB
CrC	Px	WoA
CwD	SnB	WoB
CwE	SnD	WoC

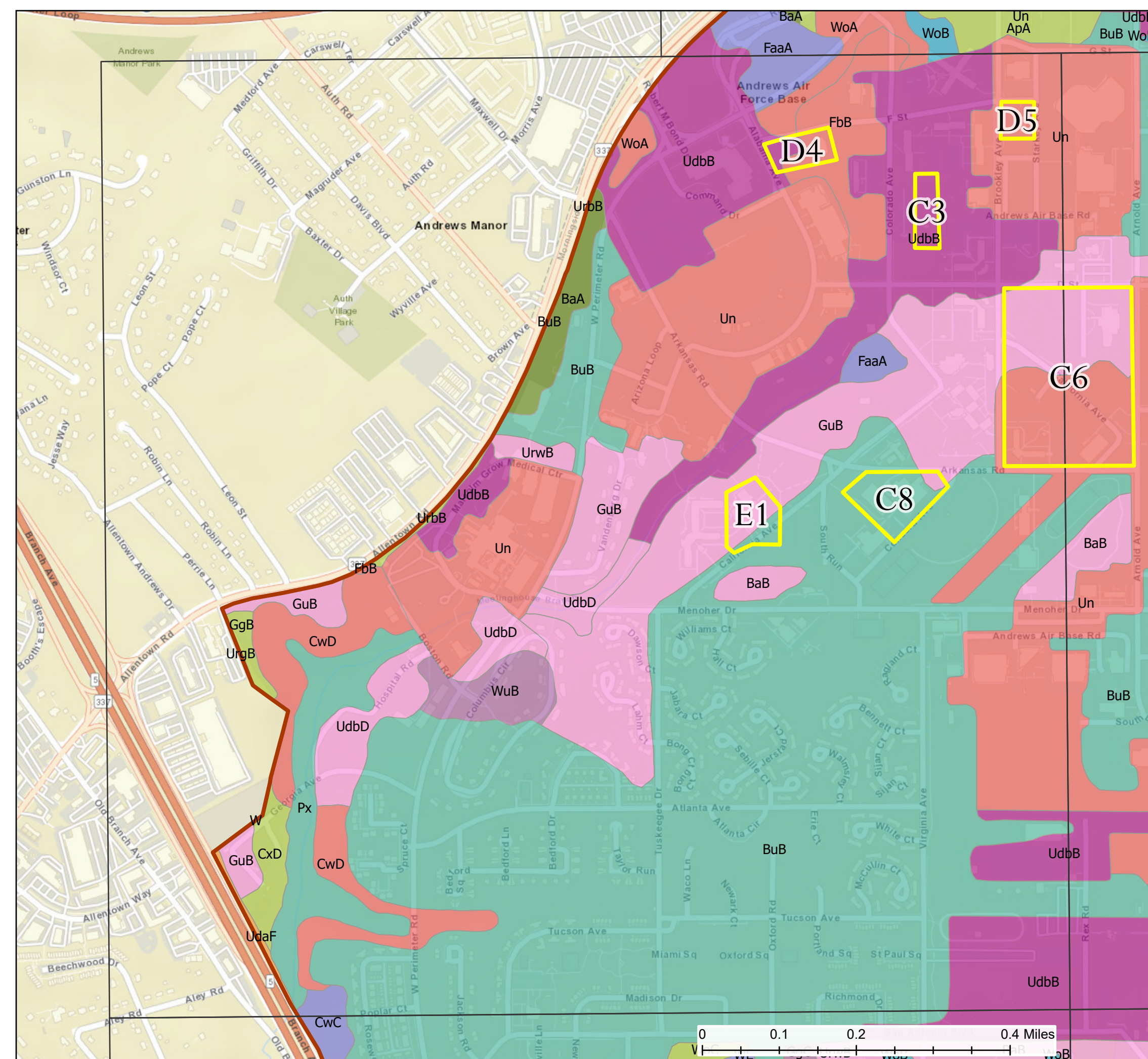
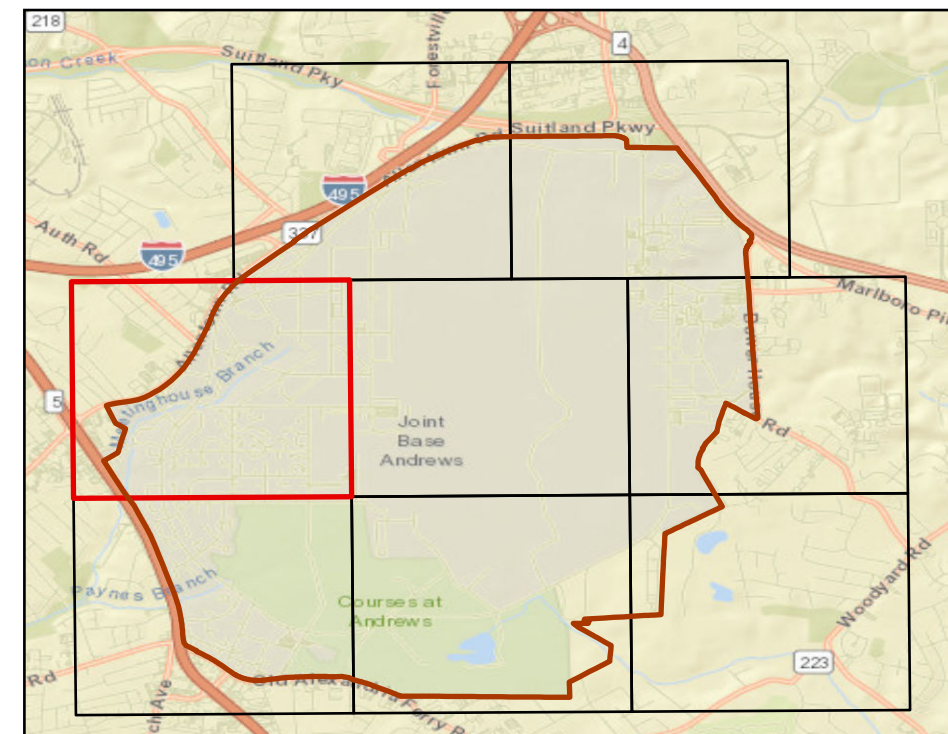


Joint Base Andrews

Main Installation

Soils

 JBA Boundary	 FaaA	 UrbB
 IDP Projects	 FbB	 UrgB
Soil Symbol		
 BaA	 GuB	 W
 BaB	 Px	 WoA
 BuB	 UdaF	 WoB
 CwC	 UdbB	 WuB
 CwD	 UdbD	
 CxD	 Un	

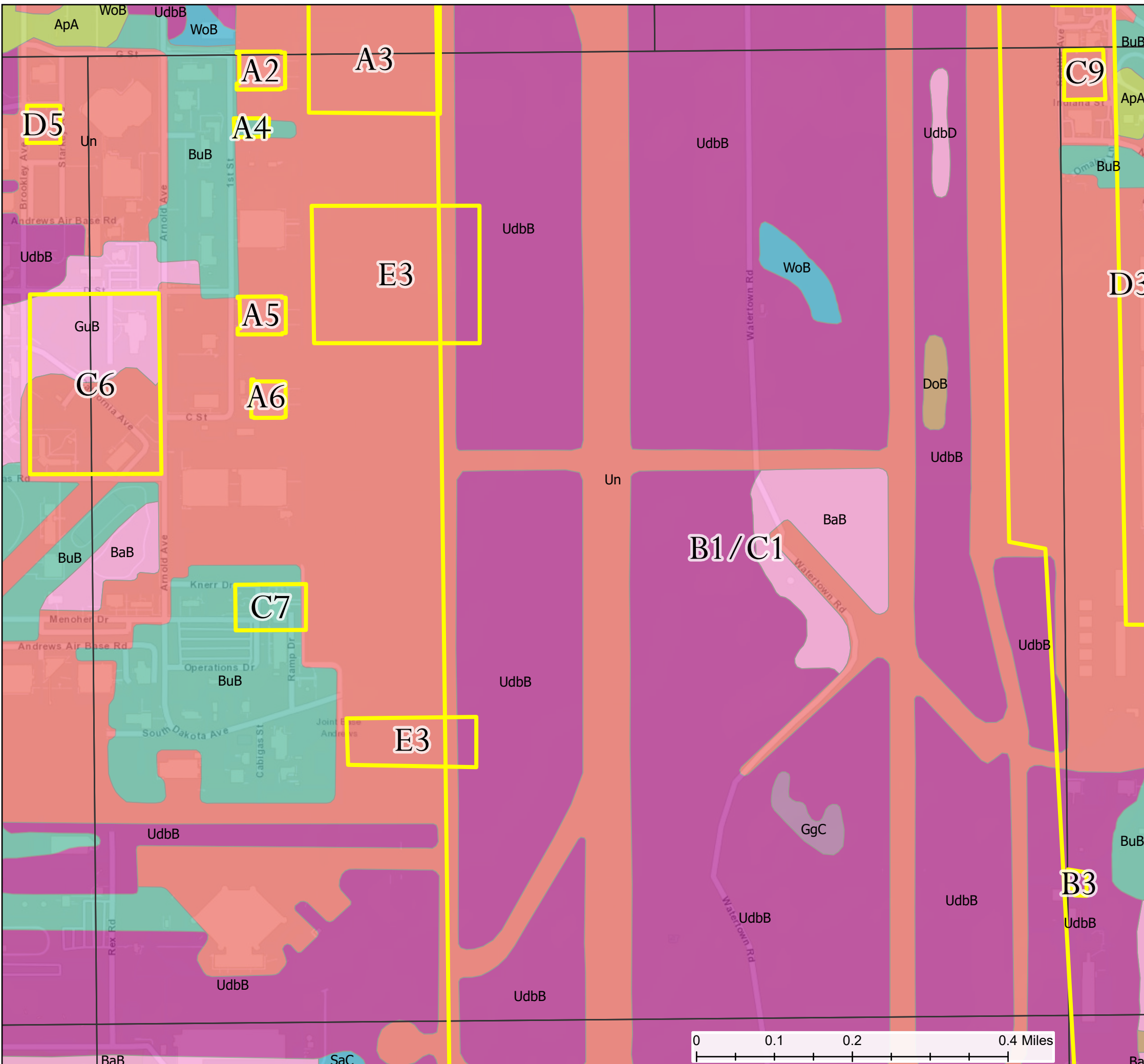
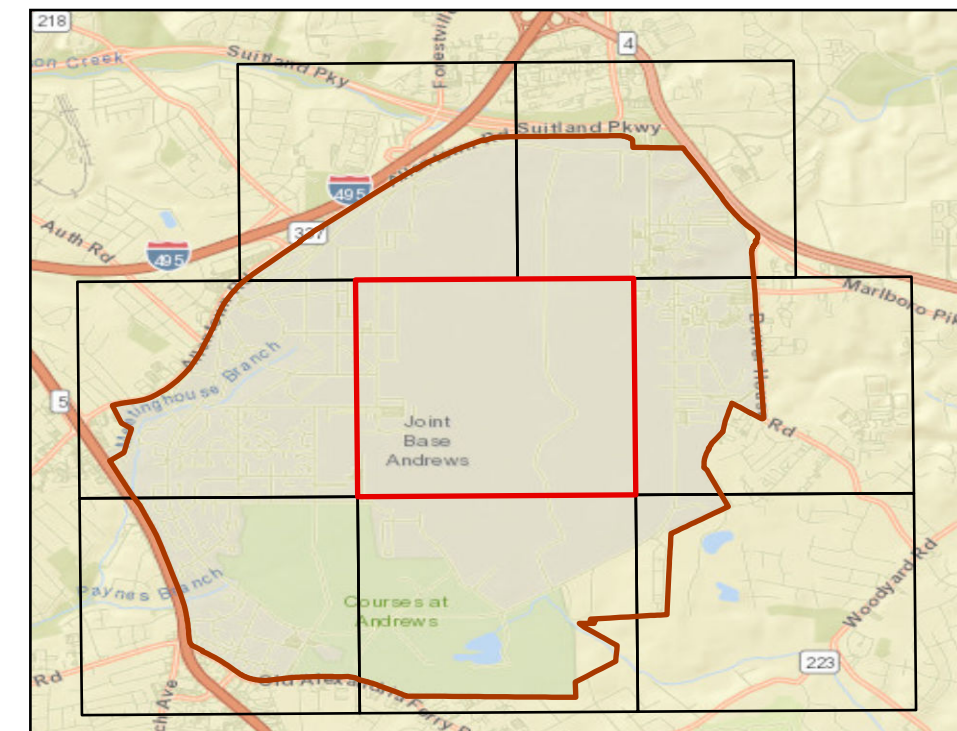


Joint Base Andrews

Main Installation

Soils

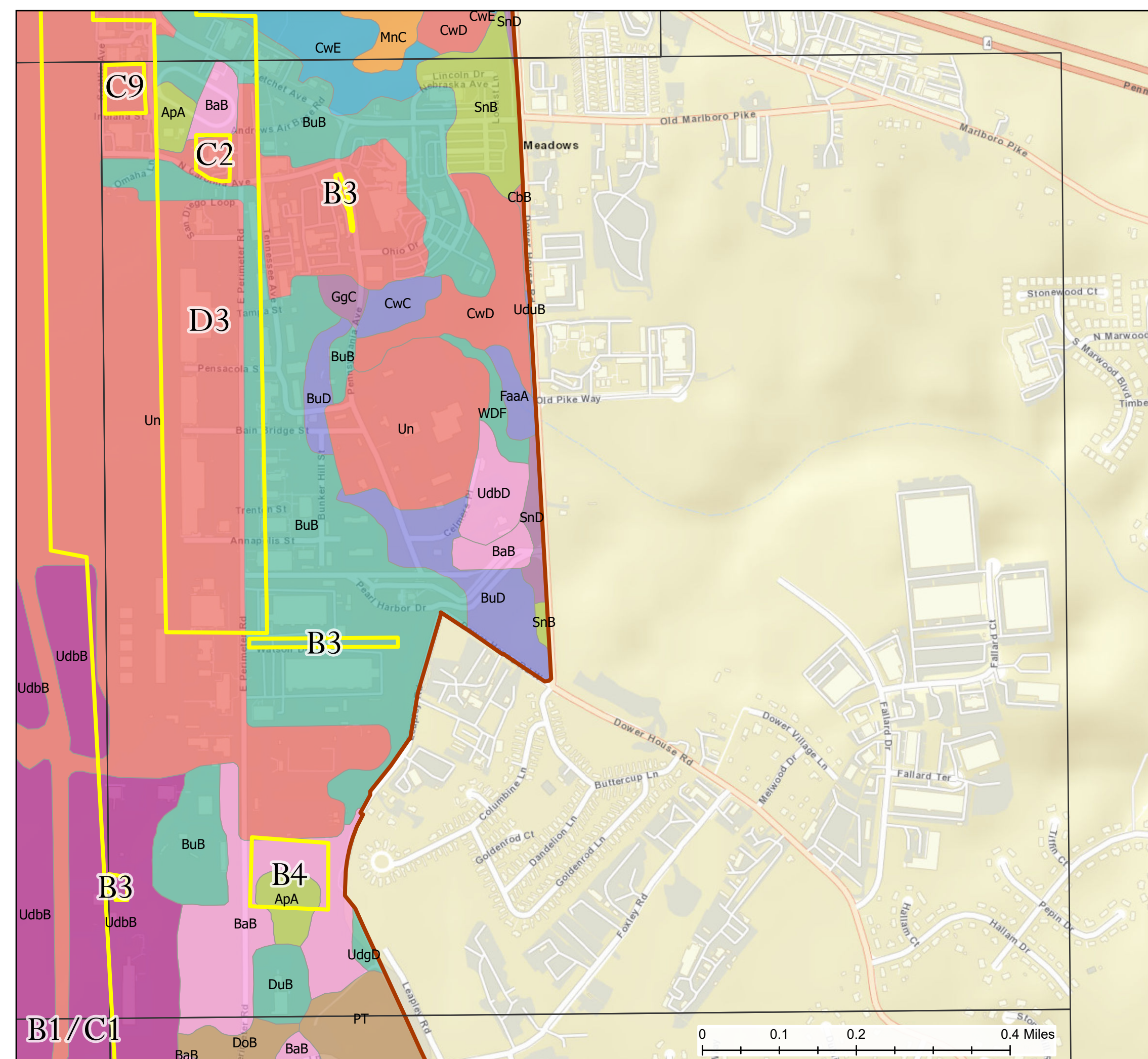
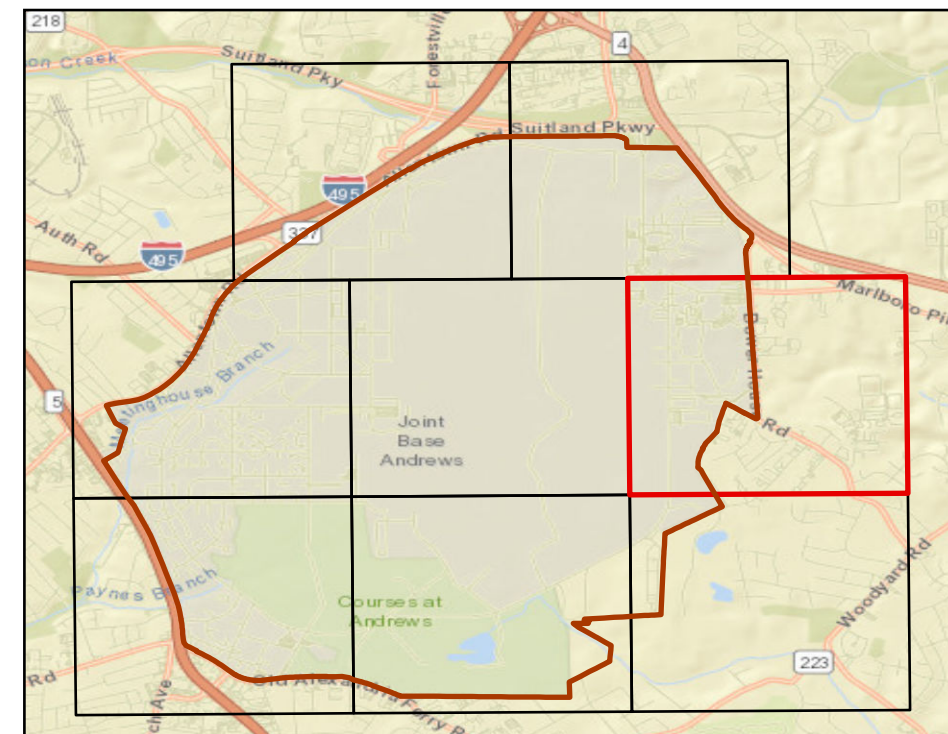
 JBA Boundary	 GgC
 IDP Projects	 GuB
Soil Symbol	 UdbB
 BaB	 UdbD
 BuB	 Un
 DoB	 WoB



Joint Base Andrews Main Installation

Soils

 JBA Boundary	 CwD	 SnD
 IDP Projects	 CwE	 UdbB
Soil Symbol	 DoB	 UdbD
 ApA	 DuB	 UdgD
 BaB	 FaaA	 UduB
 BuB	 GgC	 Un
 BuD	 MnC	 WDF
 CbB	 PT	
 CwC	 SnB	



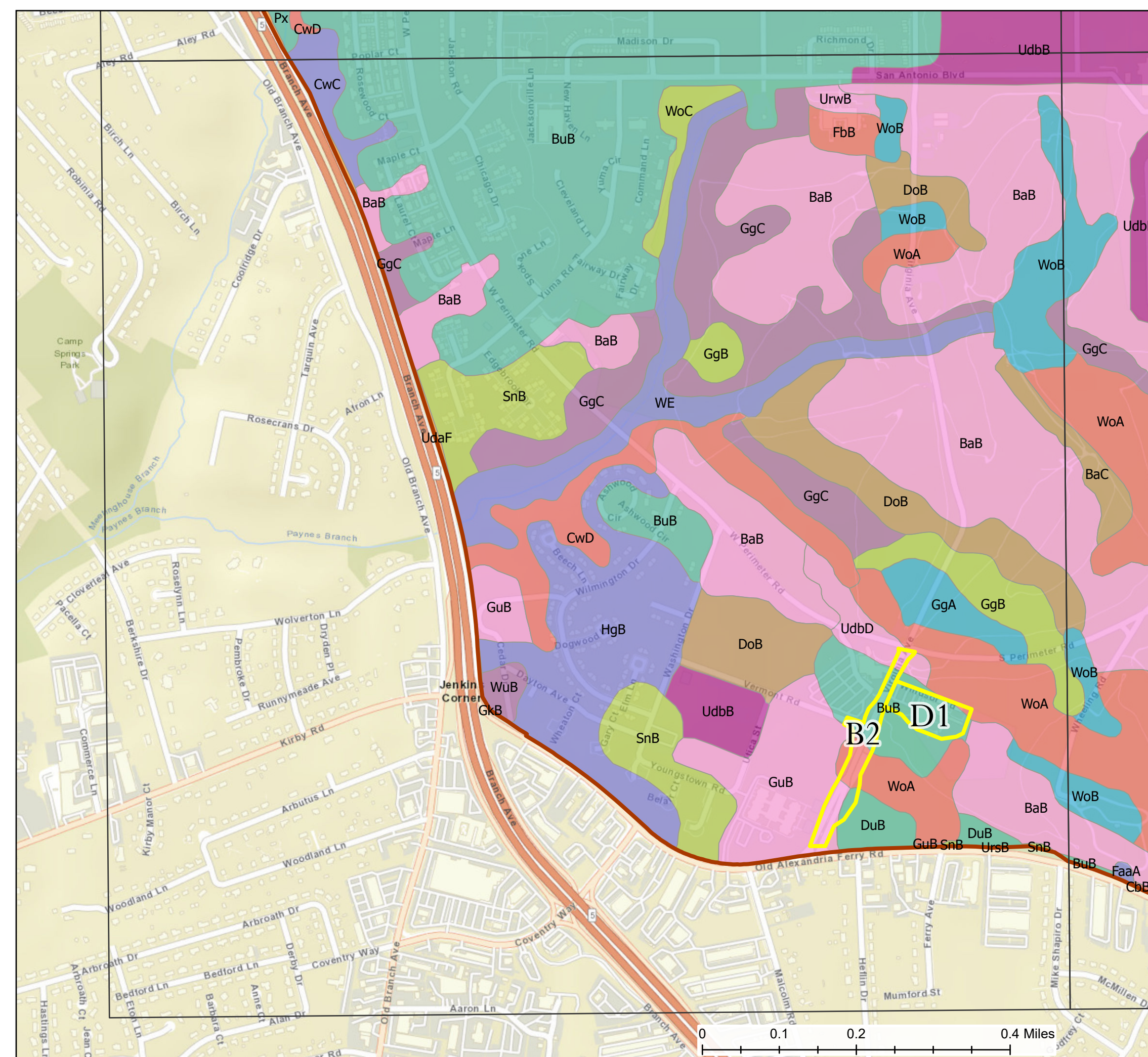
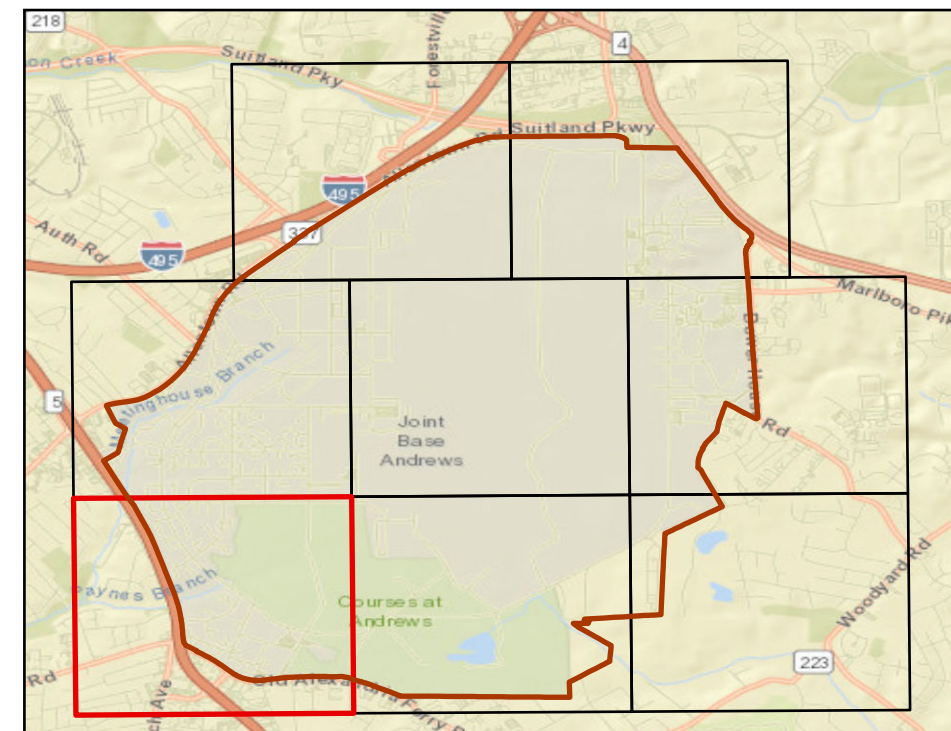
0 0.1 0.2 0.4 Miles

Joint Base Andrews

Main Installation

Soils

 JBA Boundary	 FbB	 UdbD
 IDP Projects	 GgA	 UrsB
Soil Symbol		
 BaB	 GgC	 WE
 BaC	 GkB	 WoA
 BuB	 GuB	 WoB
 CwC	 HgB	 WoC
 CwD	 SnB	 WuB
 DoB	 UdaF	
 DuB	 UdbB	

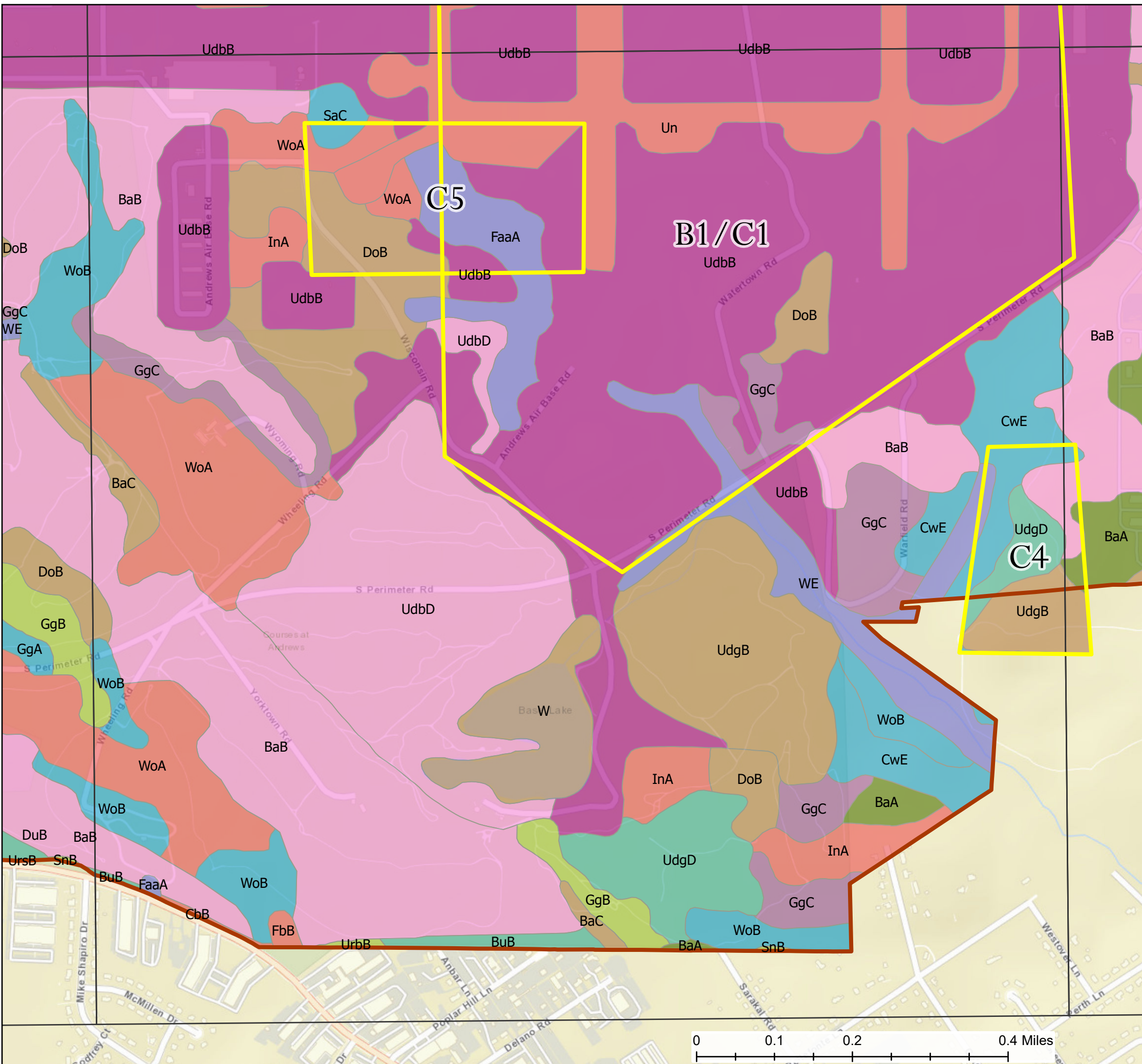
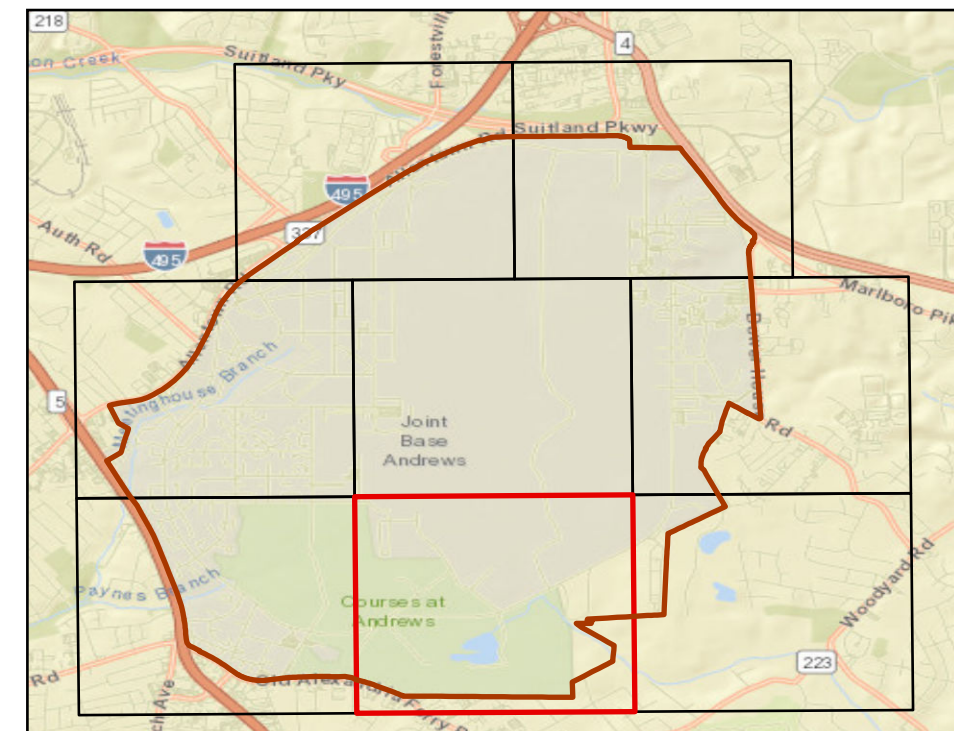


Joint Base Andrews

Main Installation

Soils

JBA Boundary	DoB	UdbD
IDP Projects	FaaA	UdgB
Soil Symbol	FbB	UdgD
BaA	GgB	Un
BaB	GgC	UrbB
BaC	InA	W
BuB	SaC	WE
CbB	SnB	WoA
CwE	UdbB	WoB

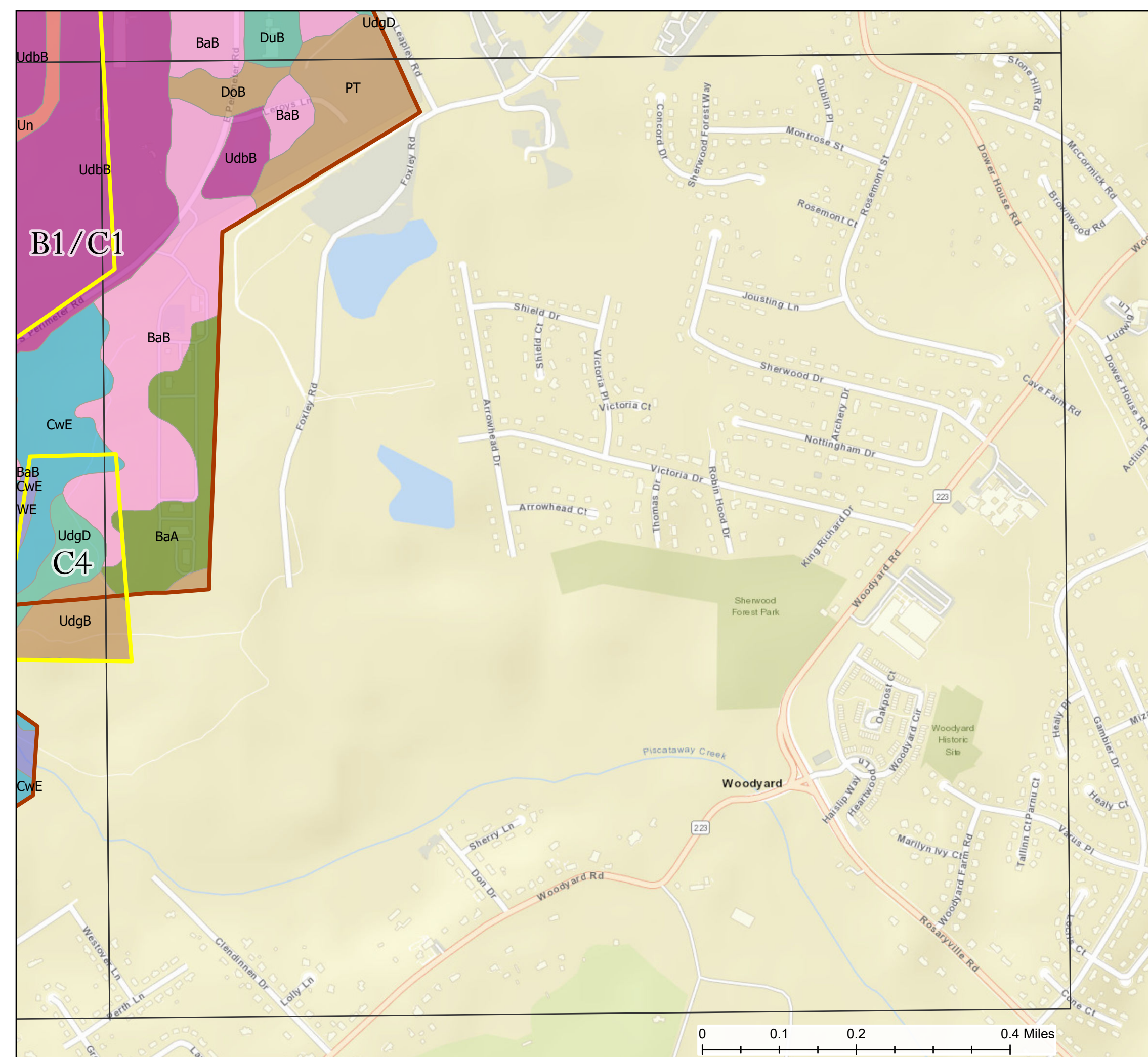
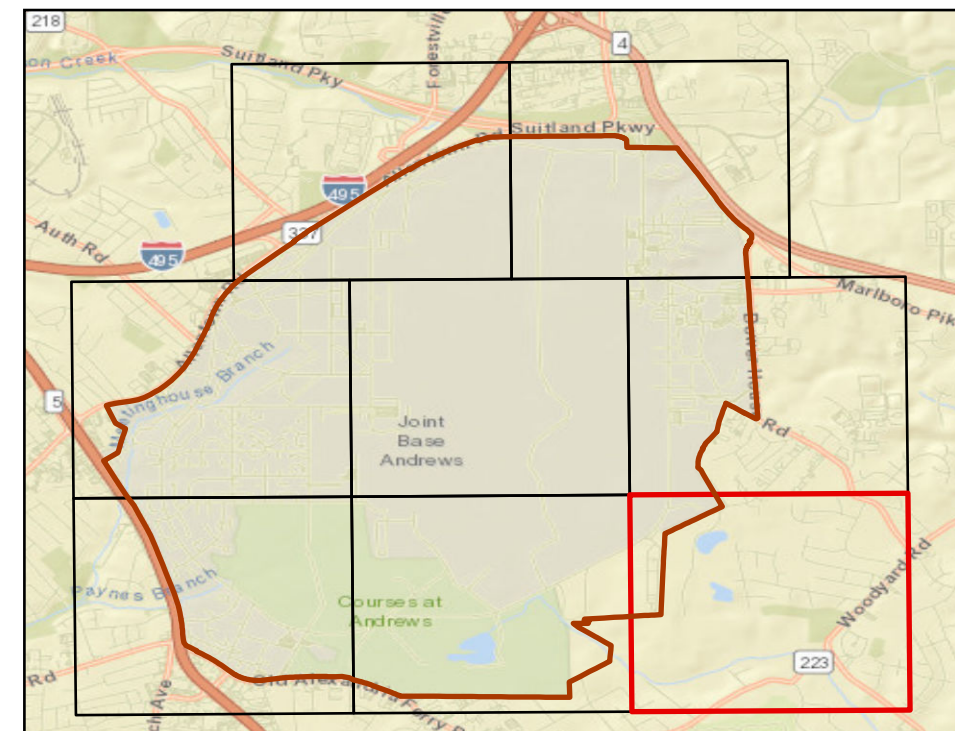
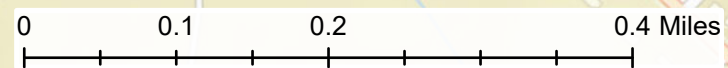


Joint Base Andrews

Main Installation

Soils

 JBA Boundary	 DoB
 IDP Projects	 DuB
Soil Symbol	 PT
 BaA	 UdbB
 BaB	 UdgB
 CwE	 UdgD

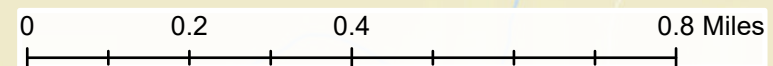
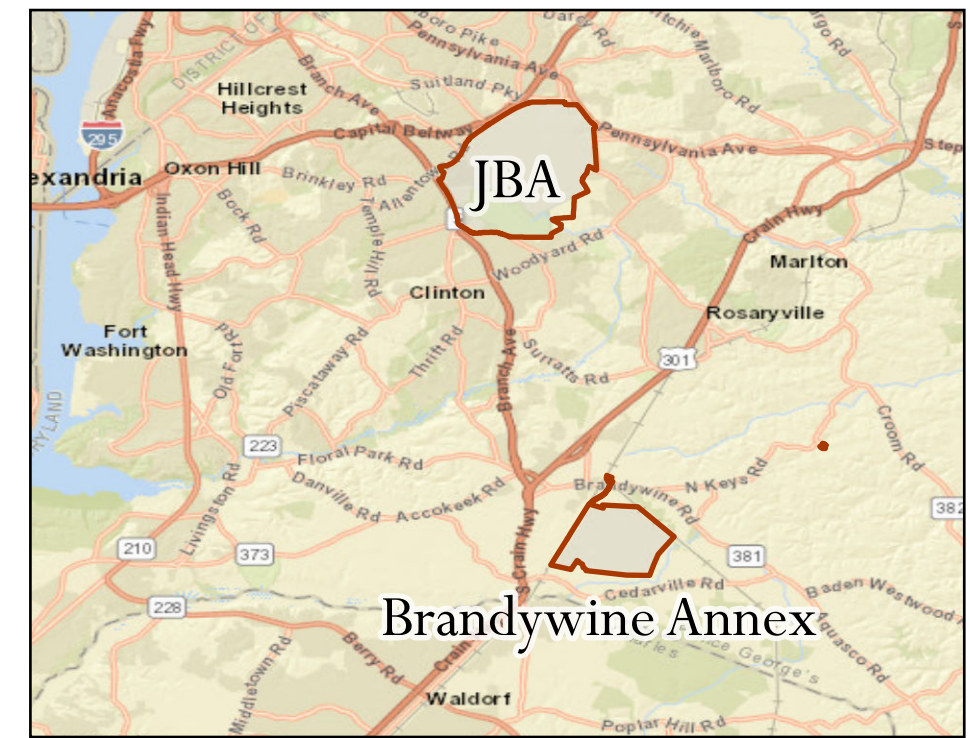


Joint Base Andrews

Brandywine Annex

Soils

	JBA Boundary		BuB		LQA
	IDP Projects		CrB		LsA
Soil Symbol					
	ApA		CrC		Px
	ApB		CrD		SaA
	AuB		GgC		SaB
	BaA		GhC		SaC
	BaB		GwD		WoA
	BaC		HgB		
			Is		



Joint Base Andrews Main Installation

Water Resources

 JBA Boundary

 IDP Projects

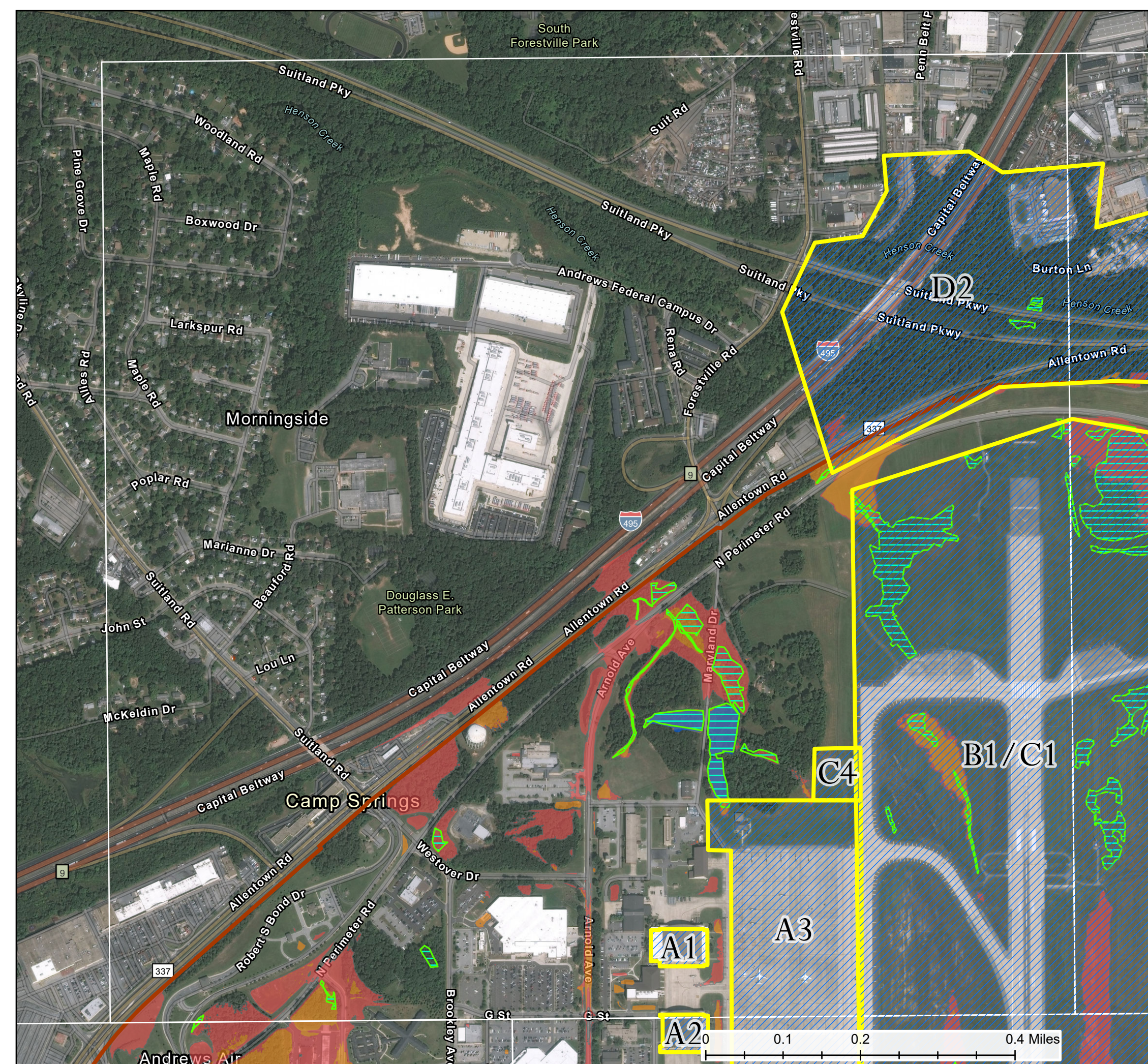
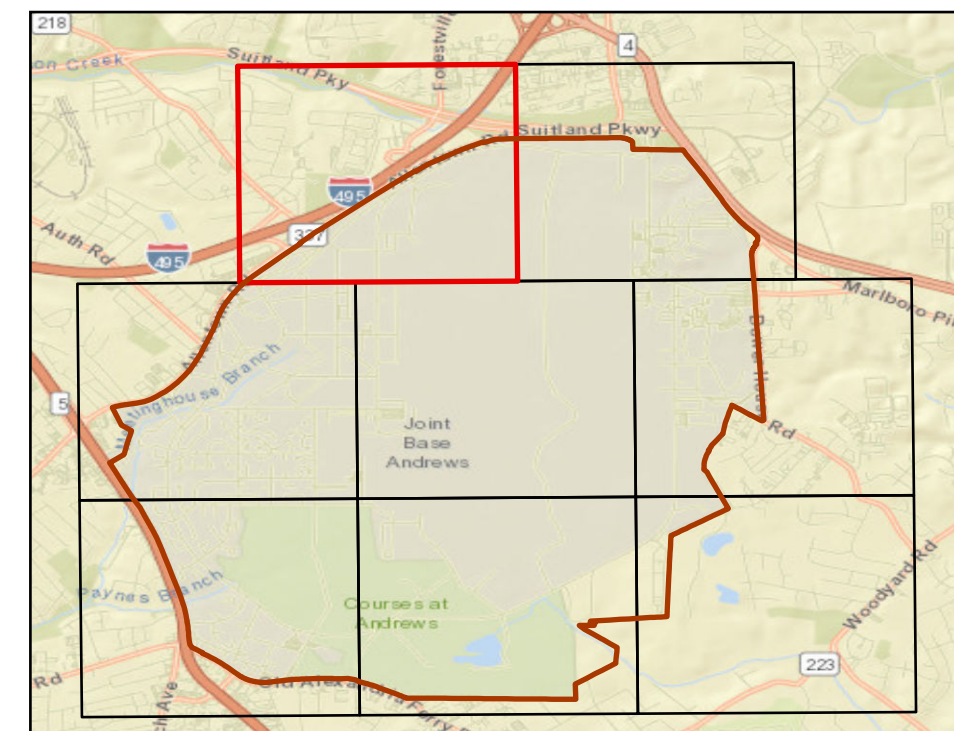
 Lakes and Ponds

 Wetlands

Floodplains

 0.2 percent annual chance flood hazard

 1 percent annual chance flood hazard



Joint Base Andrews Main Installation

Water Resources

 JBA Boundary

 IDP Projects

 Lakes and Ponds

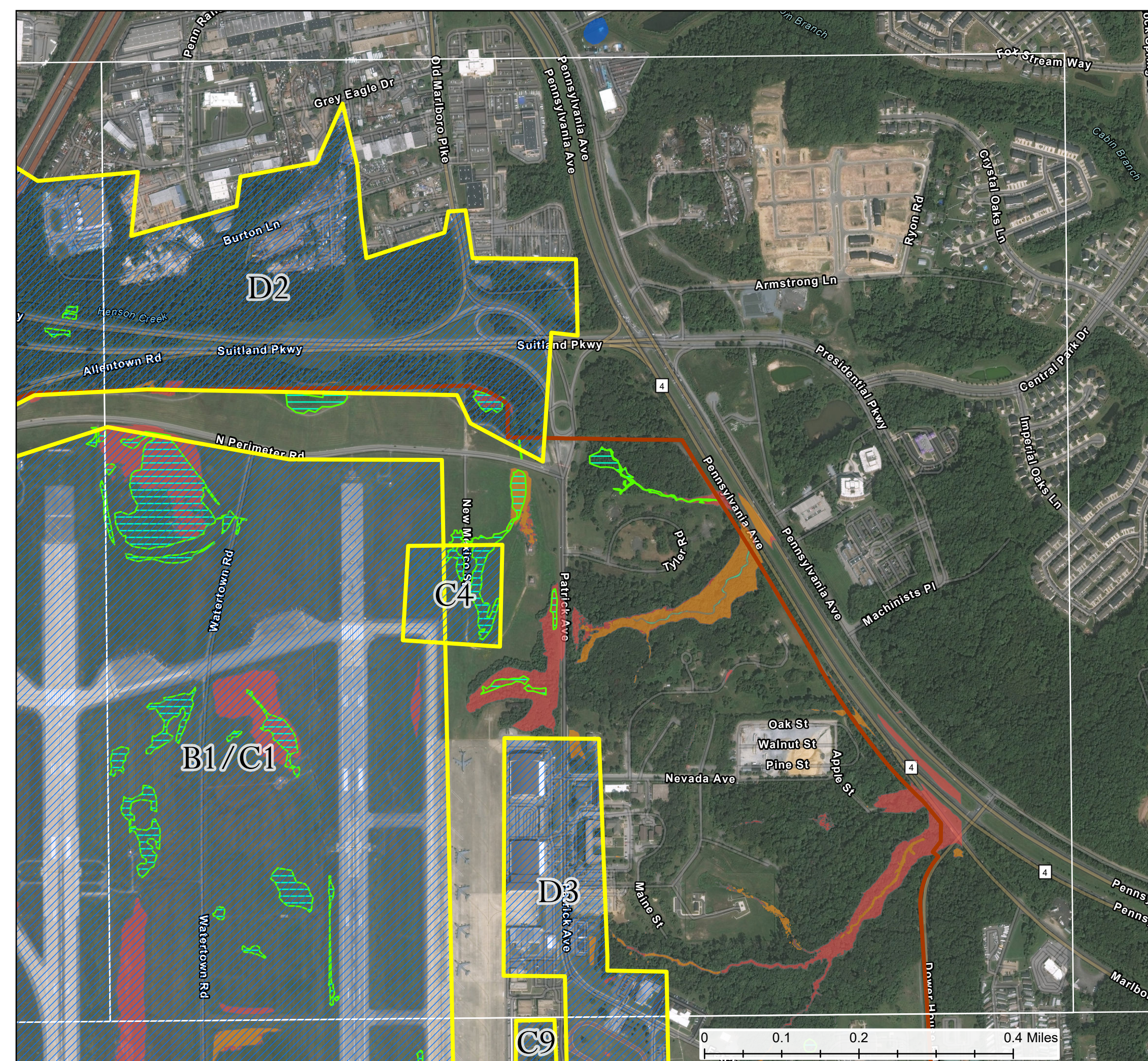
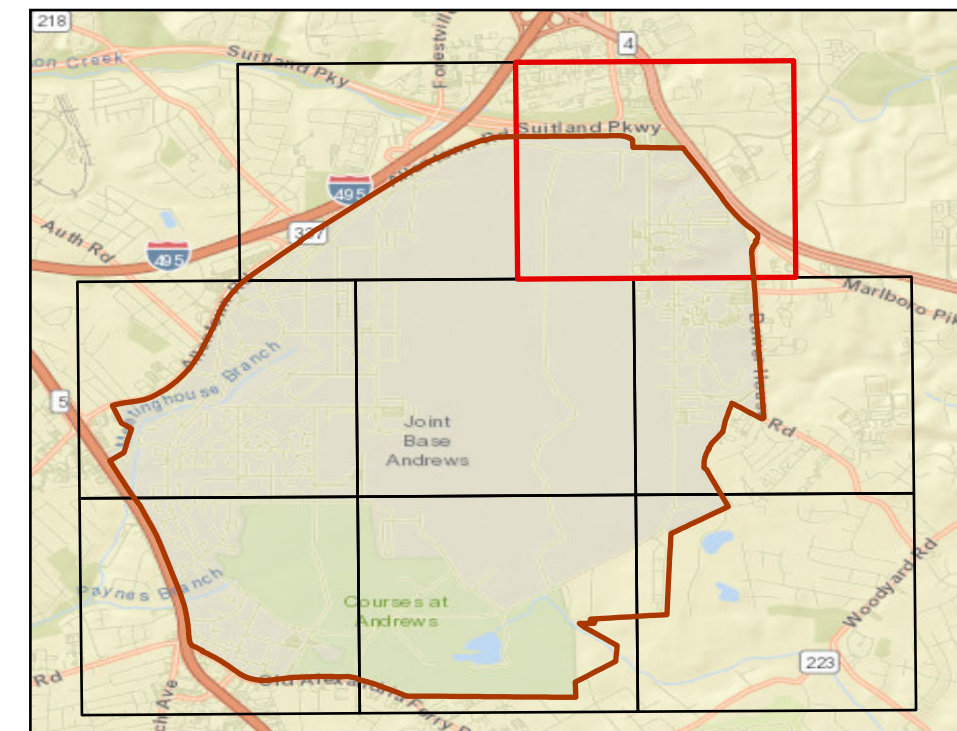
 Rivers and Streams

 Wetlands

Floodplains

 0.2 percent annual chance flood hazard

 1 percent annual chance flood hazard



Joint Base Andrews Main Installation

Water Resources

 JBA Boundary

 IDP Projects

 Lakes and Ponds

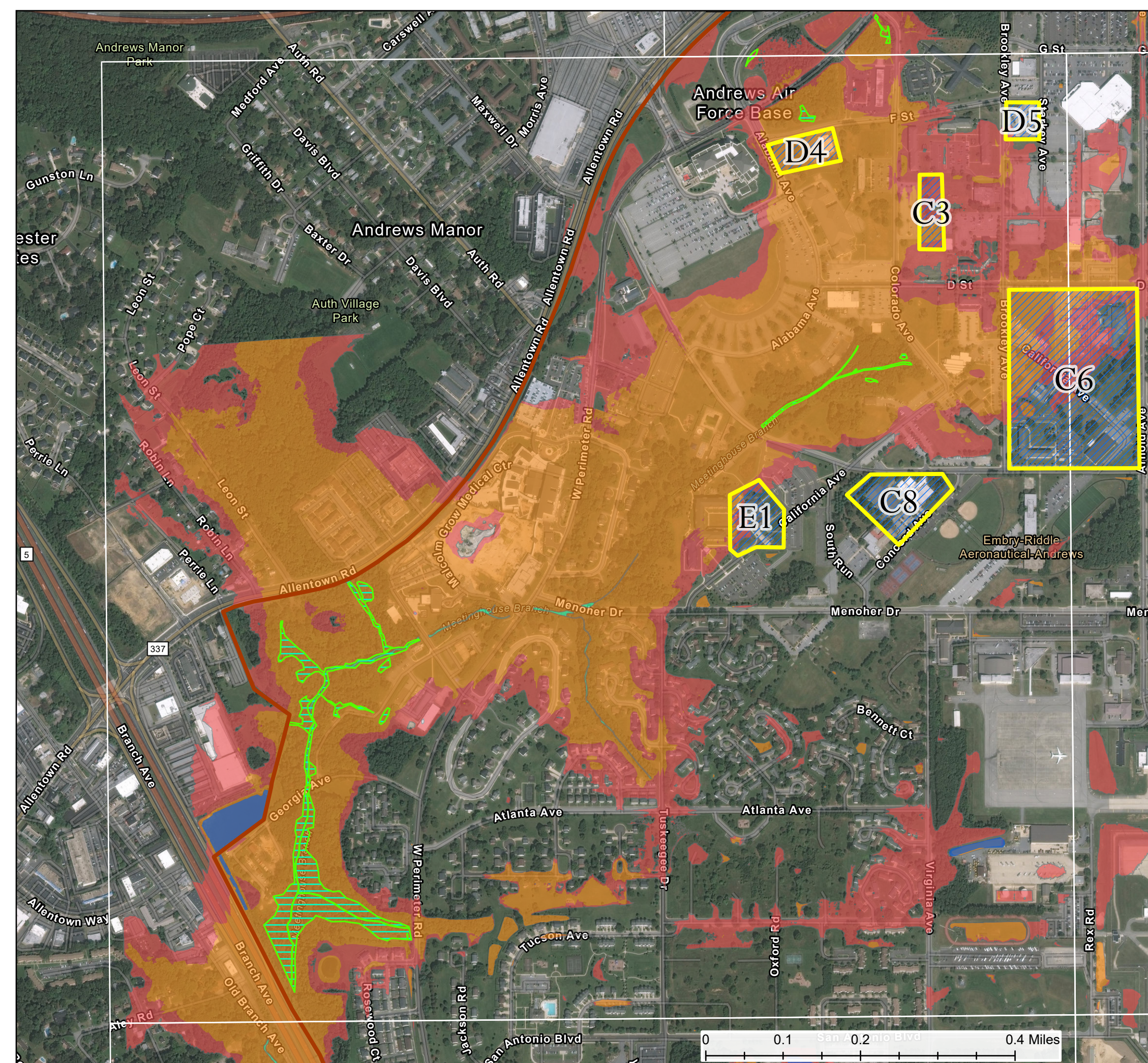
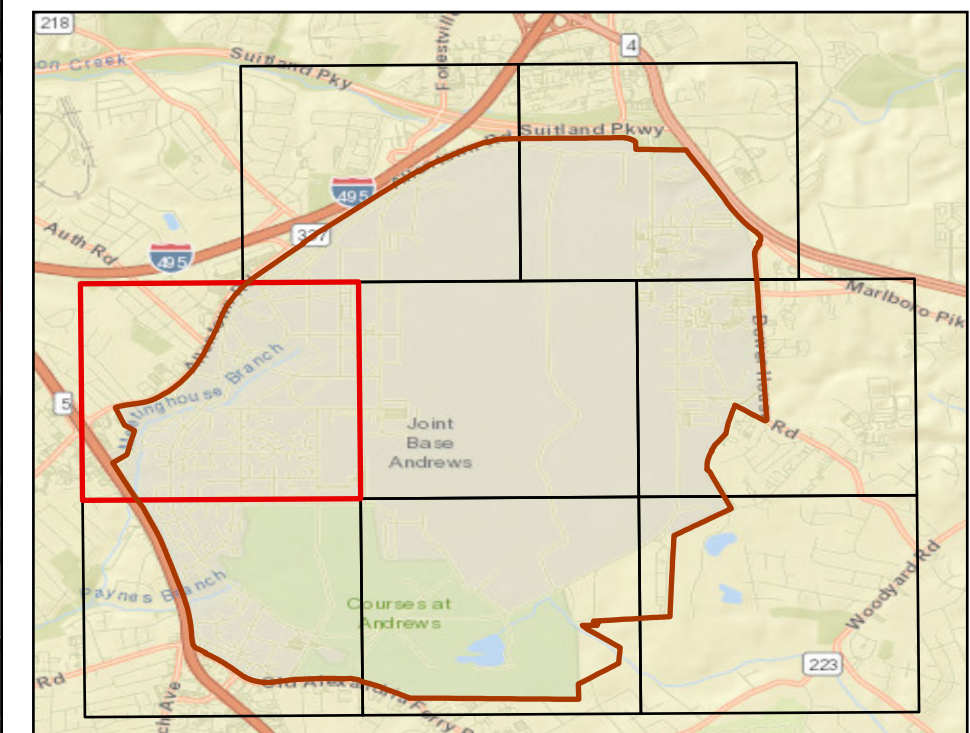
 Rivers and Streams

 Wetlands

Floodplains

 0.2 percent annual chance flood hazard

 1 percent annual chance flood hazard



Joint Base Andrews Main Installation

Water Resources

 JBA Boundary

 IDP Projects

 Lakes and Ponds

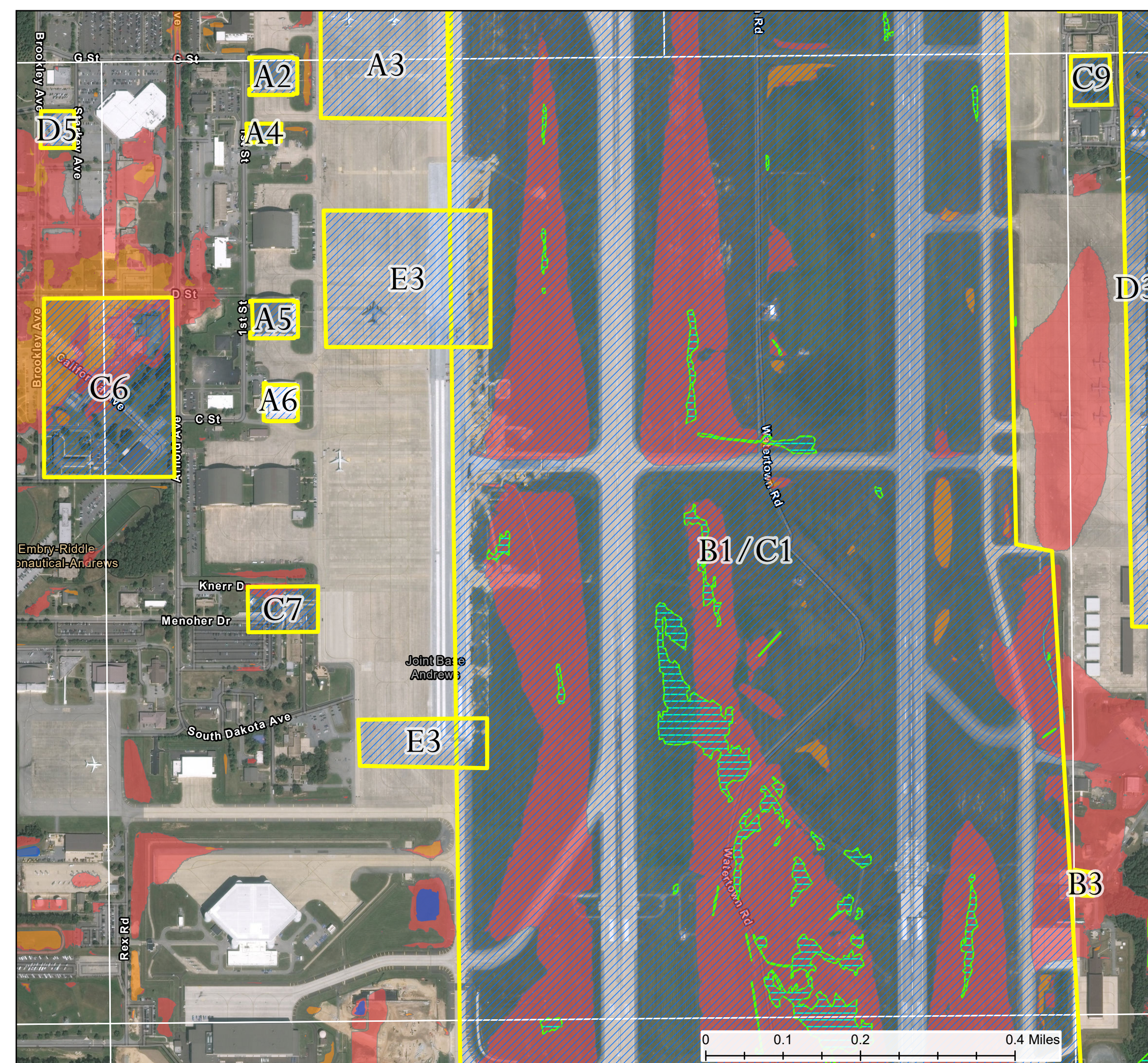
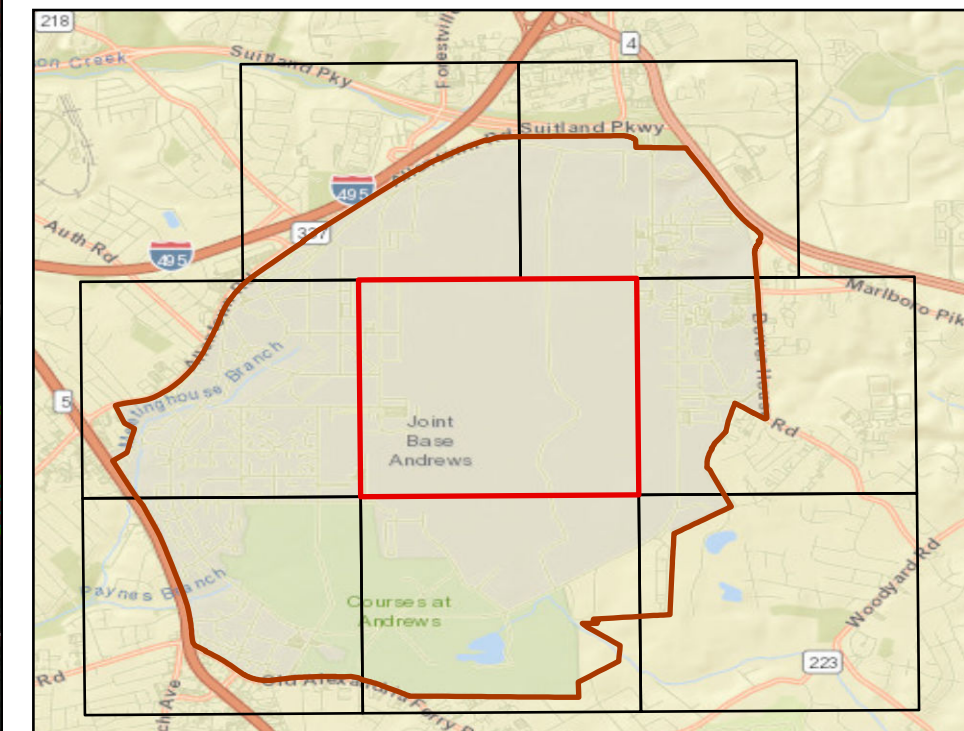
 Rivers and Streams

 Wetlands

Floodplains

 0.2 percent annual chance flood hazard

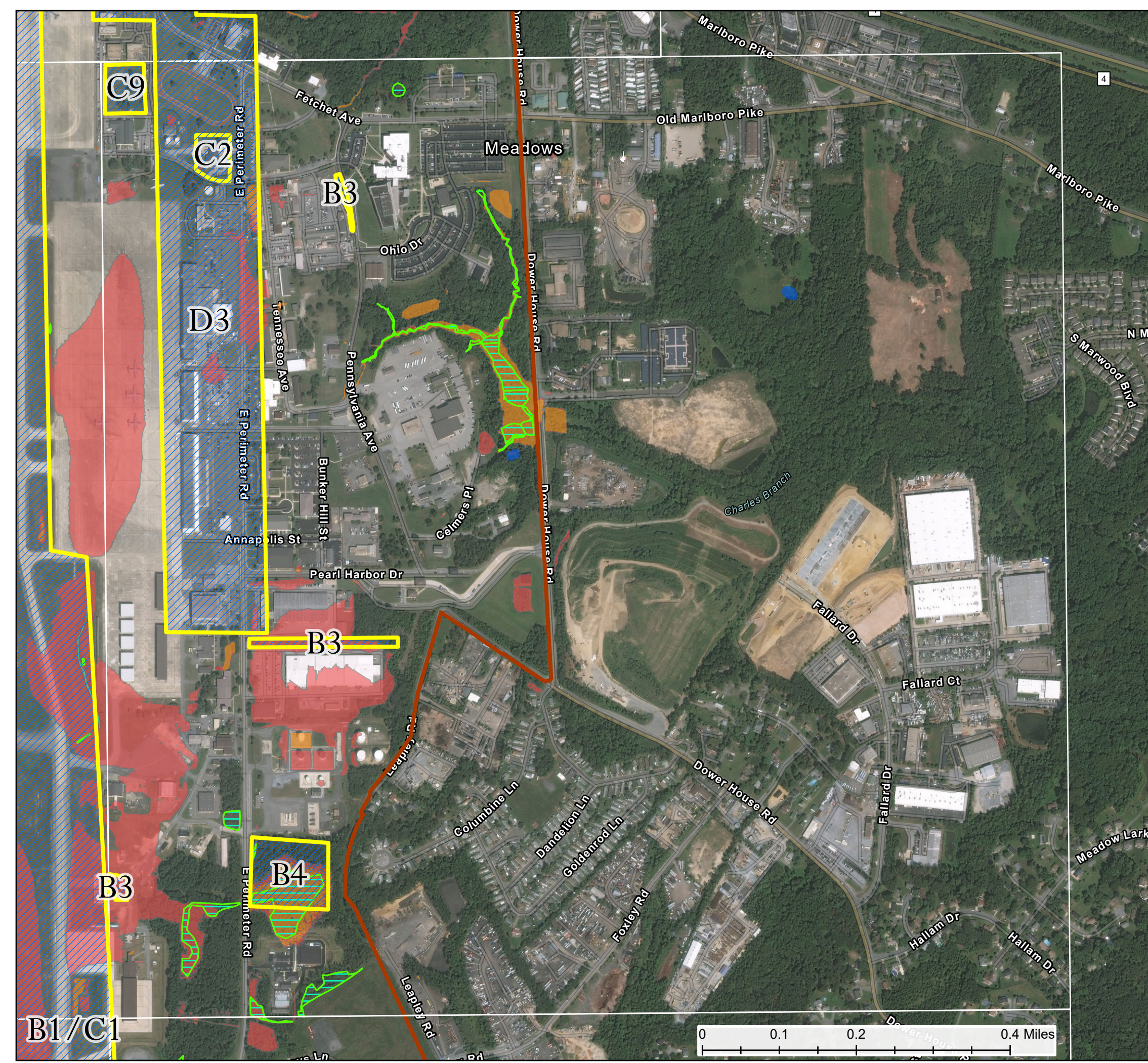
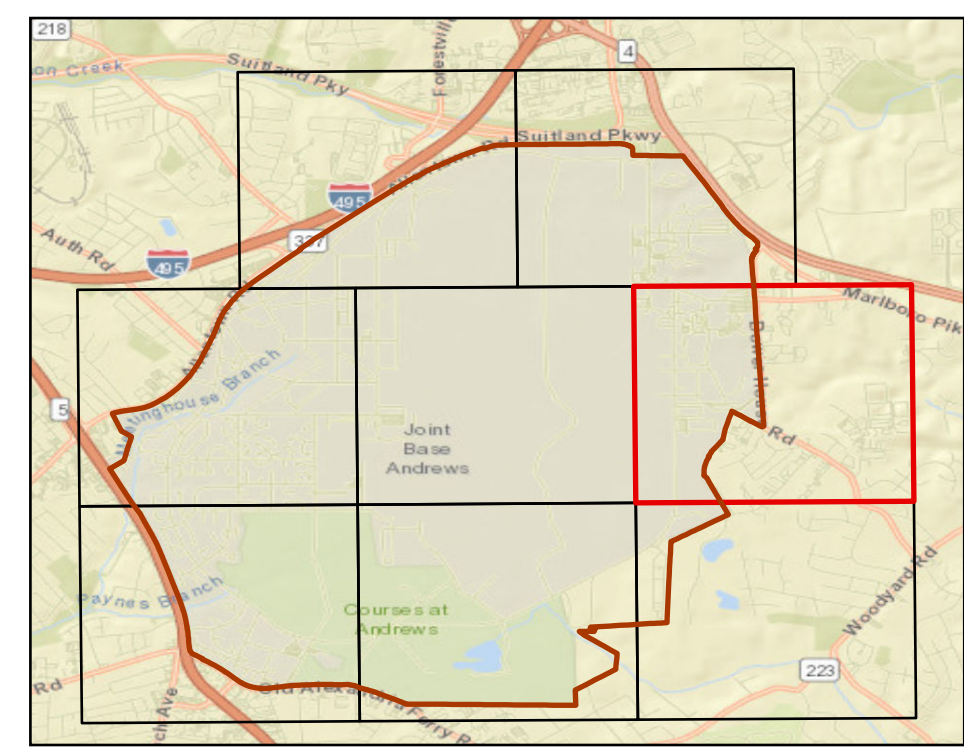
 1 percent annual chance flood hazard



Joint Base Andrews Main Installation

Water Resources

- JBA Boundary
 - IDP Projects
 - Lakes and Ponds
 - Rivers and Streams
 - Wetlands
- ### Floodplains
- 0.2 percent annual chance flood hazard
 - 1 percent annual chance flood hazard



Joint Base Andrews Main Installation

Water Resources

 JBA Boundary

 IDP Projects

 Lakes and Ponds

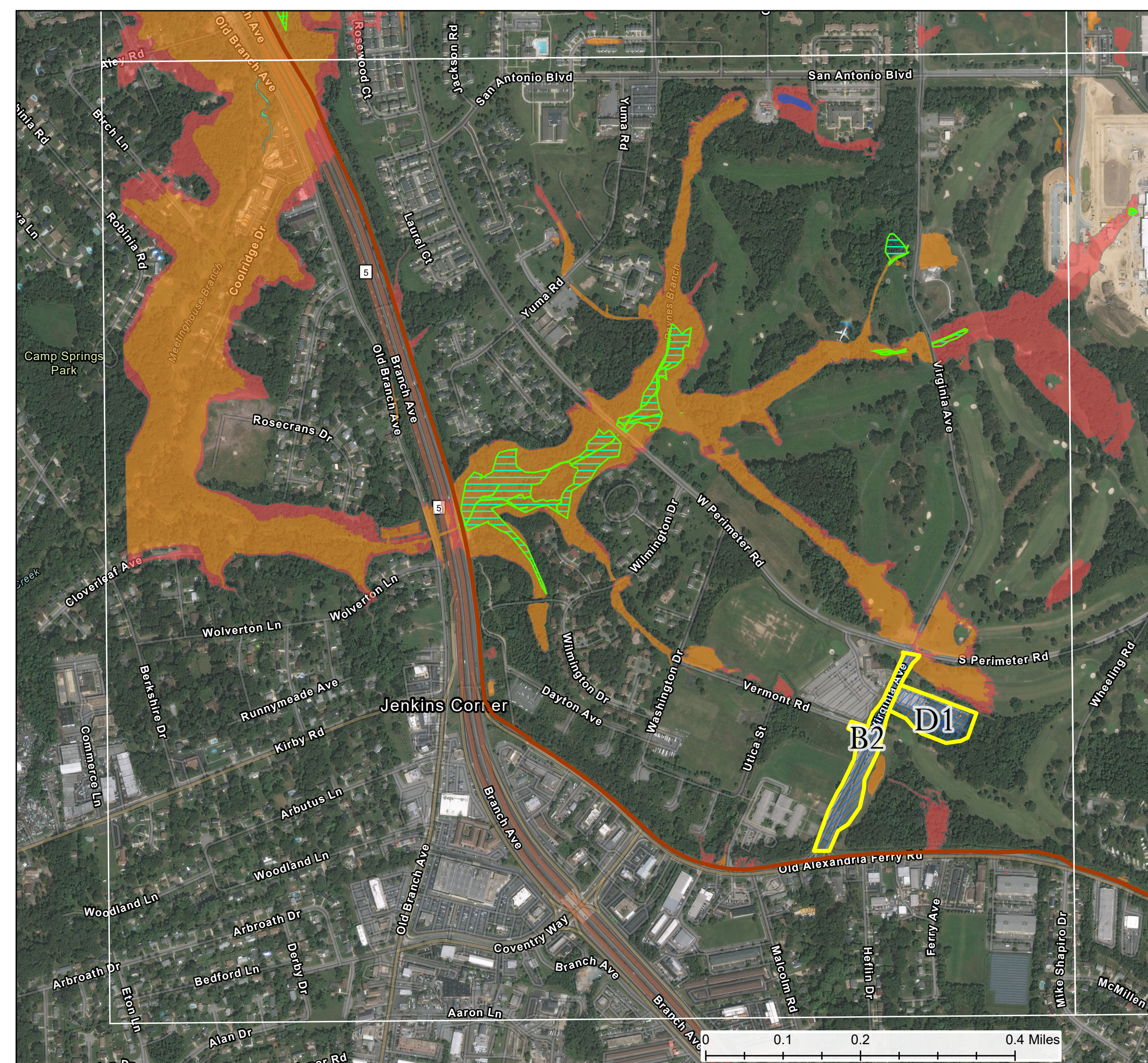
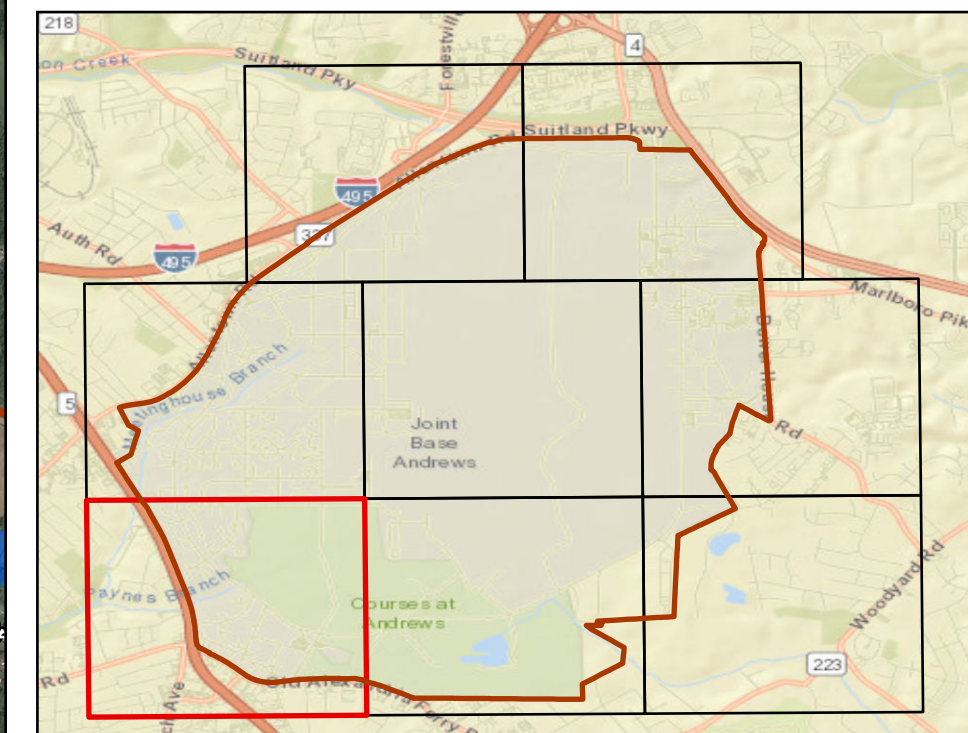
 Rivers and Streams

 Wetlands

Floodplains

 0.2 percent annual chance flood hazard

 1 percent annual chance flood hazard

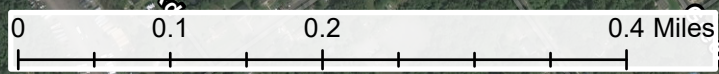
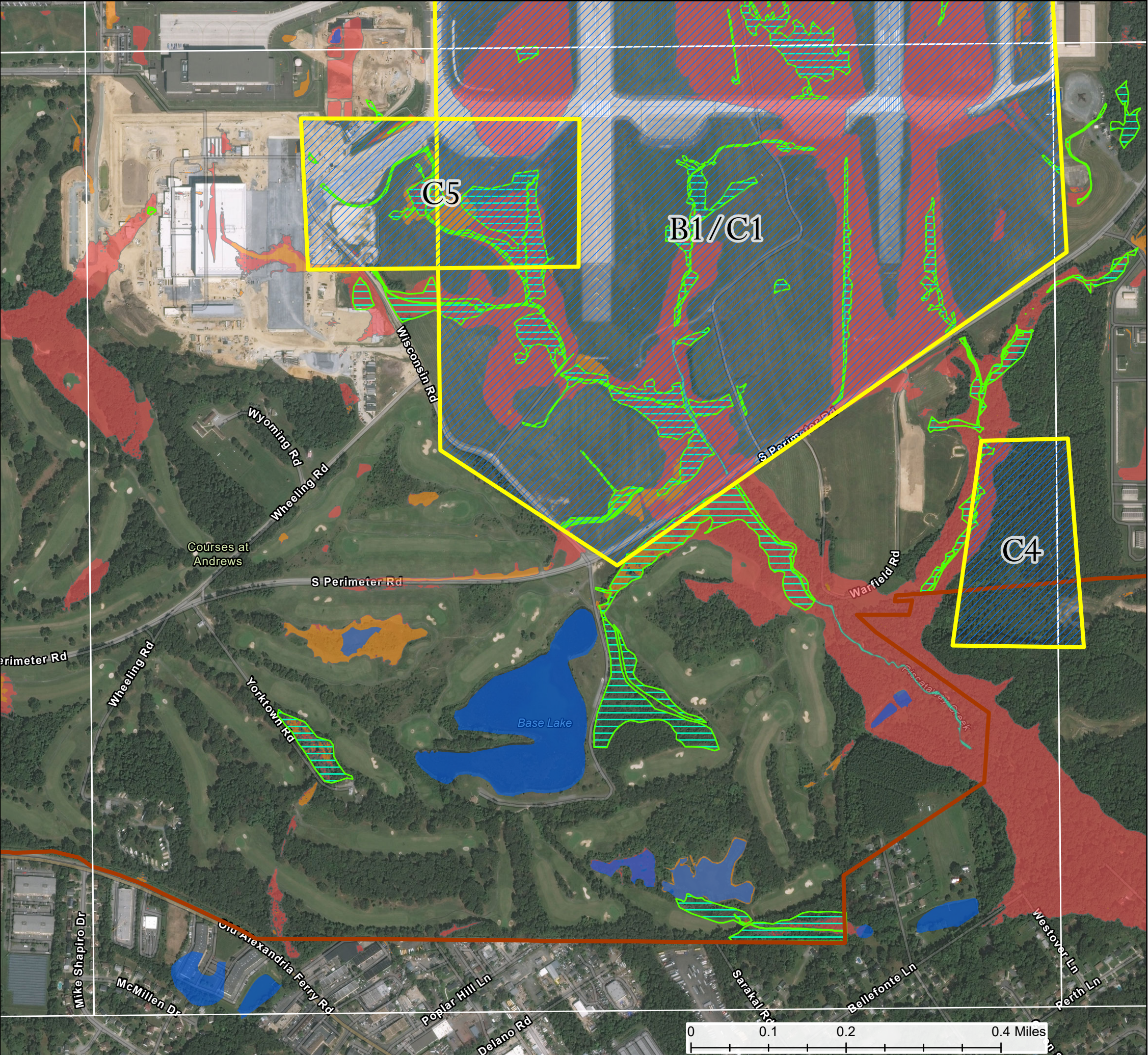
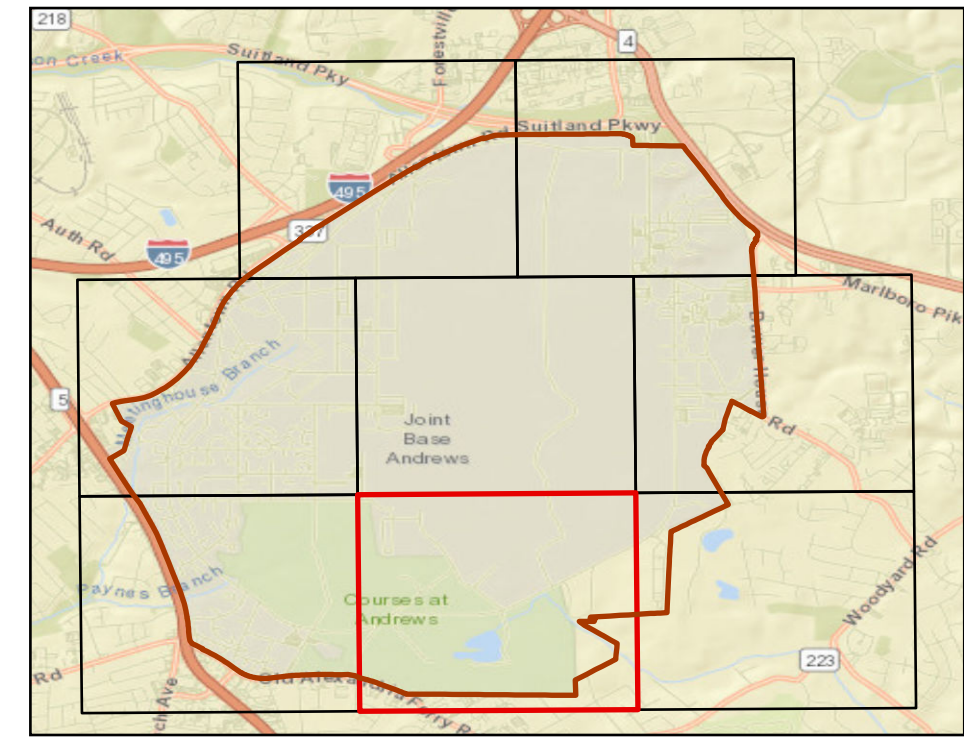


0 0.1 0.2 0.4 Miles

Joint Base Andrews Main Installation

Water Resources

- JBA Boundary
- IDP Projects
- Lakes and Ponds
- Rivers and Streams
- Wetlands
- Floodplains**
 - 0.2 percent annual chance flood hazard
 - 1 percent annual chance flood hazard



Joint Base Andrews Main Installation

Water Resources

 JBA Boundary

 IDP Projects

 Lakes and Ponds

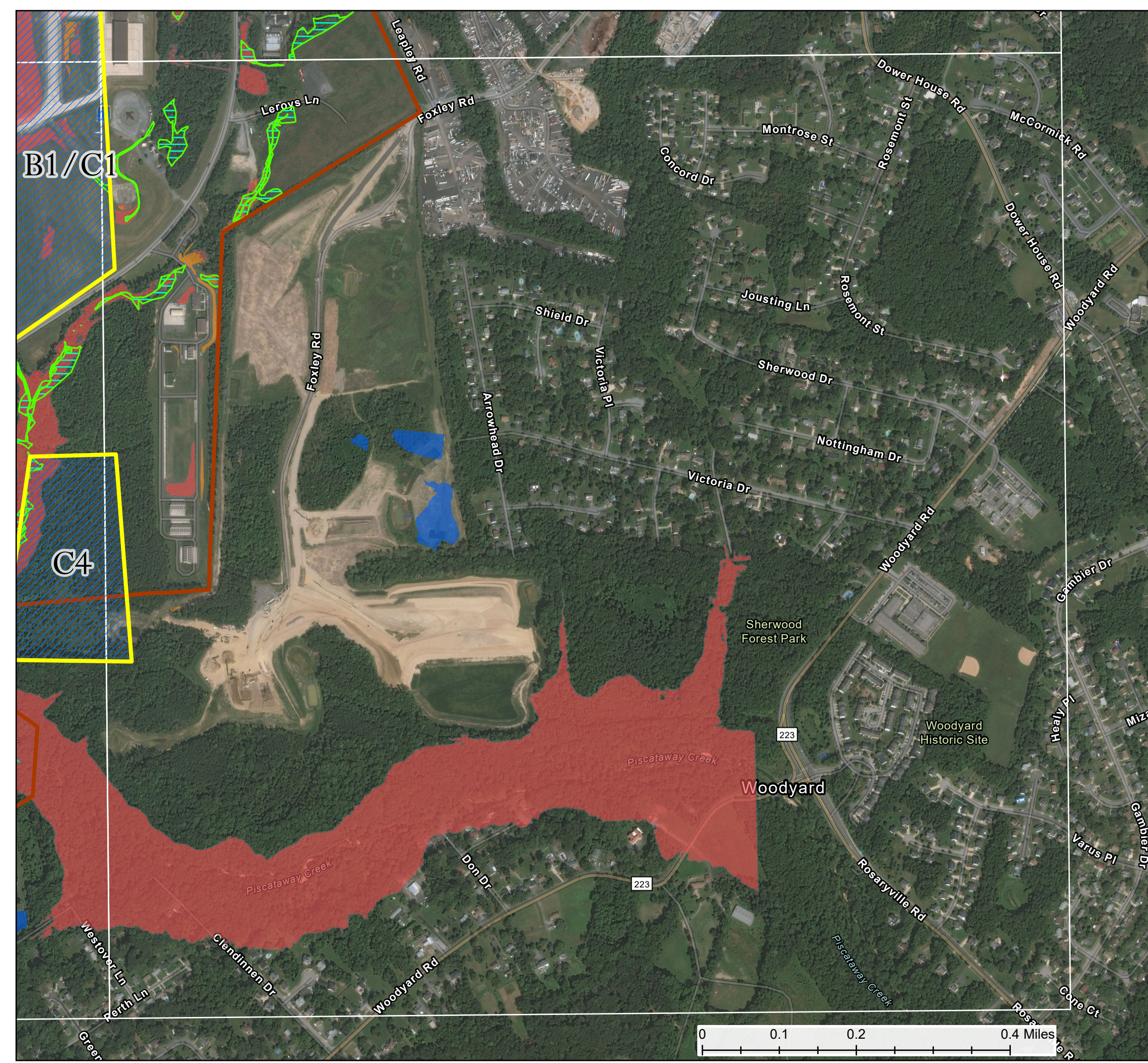
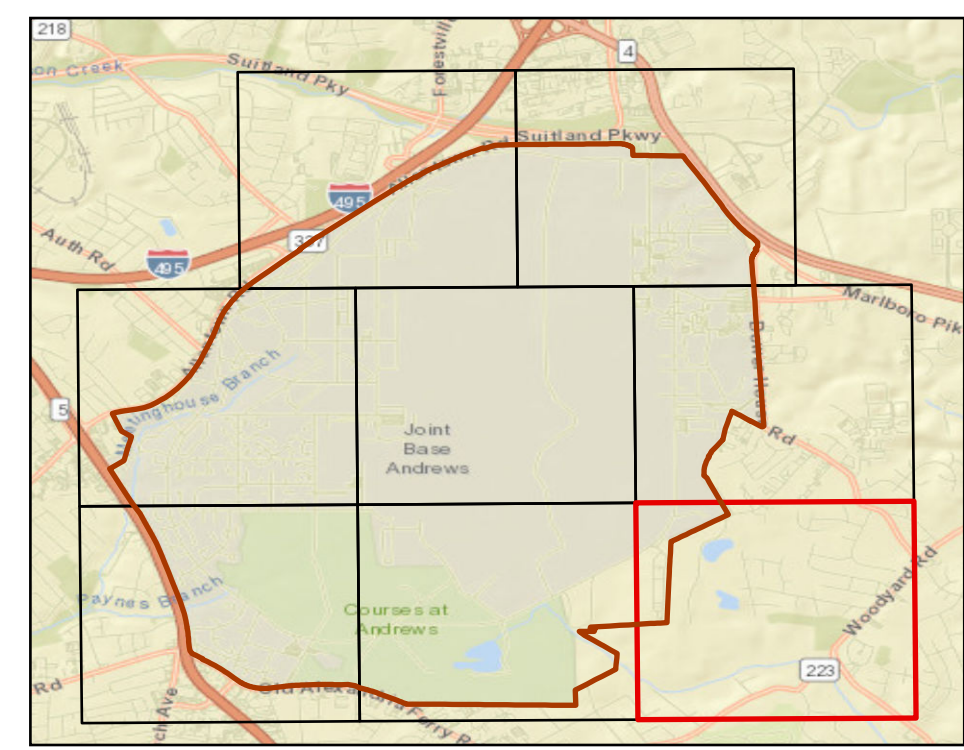
 Rivers and Streams

 Wetlands

Floodplains

 0.2 percent annual chance flood hazard

 1 percent annual chance flood hazard



Joint Base Andrews Brandywine Annex

Water Resources

 JBA Boundary

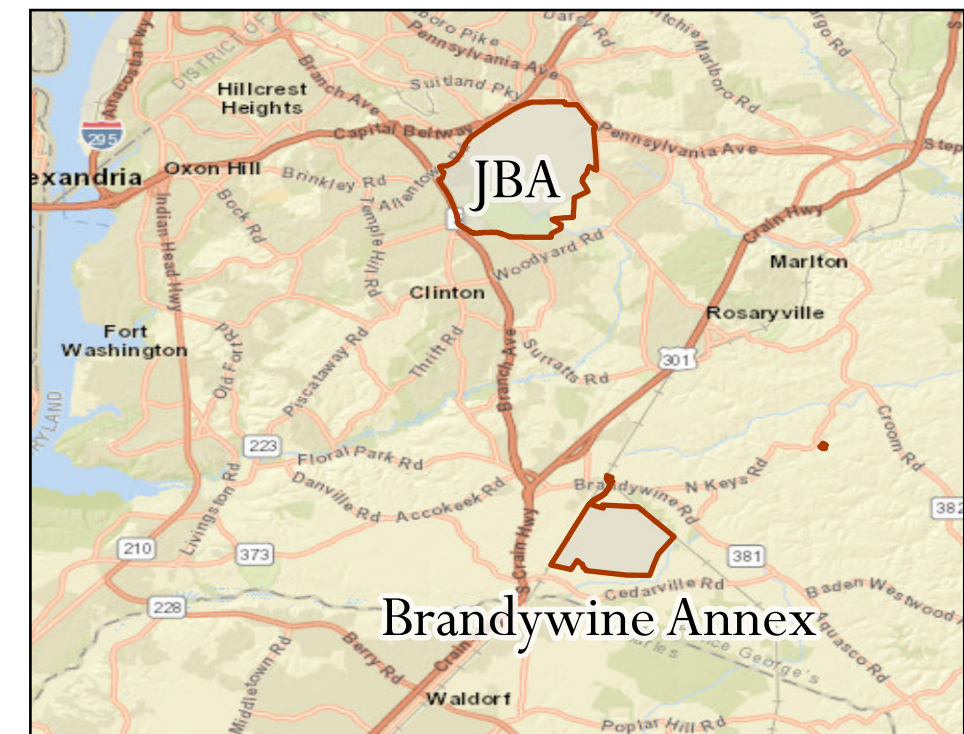
 IDP Projects

 Lakes and Ponds

 Wetlands

Floodplains

 1 percent annual chance flood hazard



Appendix B: Agency Correspondence and Tribal Coordination

THIS PAGE INTENTIONALLY LEFT BLANK



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 316TH WING (AFDW)
JOINT BASE ANDREWS, MARYLAND 20762

August 11, 2021

MEMORANDUM FOR SEE DISTRIBUTION

FROM: 316 CES/CEIE
3466 North Carolina Avenue
Joint Base Andrews, Maryland 20762-4803

SUBJECT: Description of Proposed Action and Site Maps for Installation Development Plan Projects at Joint Base Andrews, Maryland

1. Joint Base Andrews-Naval Air Facility (JBA), Maryland, is preparing an Environmental Assessment (EA) for the implementation of its five-year Installation Development Plan (IDP). Pursuant to the National Environmental Policy Act (NEPA) of 1969 (42 United States Code [USC] 4321-4347), Council on Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations [CFR] Sections 1500-1508) and 32 CFR Part 989, *et seq.*, JBA will prepare an EA that considers the potential consequences to human health and the natural environment of implementing the Proposed Action. The EA will examine the effects of the proposed projects included in the IDP and will include analysis of the required No Action Alternative.
2. In accordance with Executive Order 12372, *Intergovernmental Review of Federal Programs*, we invite your agency to comment on the Proposed Action described below and provide relevant information about resources under your jurisdiction that may be present in the project areas as indicated in Enclosures 1 through 3.
3. Also enclosed is a copy of the distribution list for those Federal, state, and local agencies to be contacted regarding this IDP EA (Enclosure 4). If you know of any additional agencies that should review and comment on this proposal, please feel free to include them in a re-distribution of this letter and the attached materials.
4. The Proposed Action for the implementation of the IDP would involve the implementation of 27 individual projects, including construction, renovation, and demolition projects. Implementation of all of the IDP projects would total 4,756.49 acres of disturbance across the main installation at JBA and the Brandywine Annex. The IDP addresses the specific development needs at JBA within the next five years to provide the infrastructure upgrades and expansions needed to meet mission requirements.
5. This EA evaluates whether the Proposed Action would result in adverse impacts on the human and natural environment. If adverse impacts are identified, JBA would undertake supplemental NEPA analyses for those projects which have expected adverse impacts. This supplemental NEPA documentation would be tiered off of this EA, in accordance with 40 CFR 1501.11. This EA also identifies the actions that JBA would undertake to minimize environmental impacts, as required under NEPA, its implementing regulations from CEQ (40 CFR 1500-1508) and Air Force regulations (32 CFR Part 989).
6. Your assistance in providing information is greatly appreciated. Please provide written comments within 30 days from the date of this letter to Mr. Ryan Soens, 316 CES/CEIE, 3466 North Carolina Avenue, Joint Base Andrews, Maryland 20762 or send via e-mail to ryan.soens.1@us.af.mil. If nothing is heard by this

date, it will be taken as agreement with this action. If you need further information, please contact Mr. Soens at 202-409-8231.

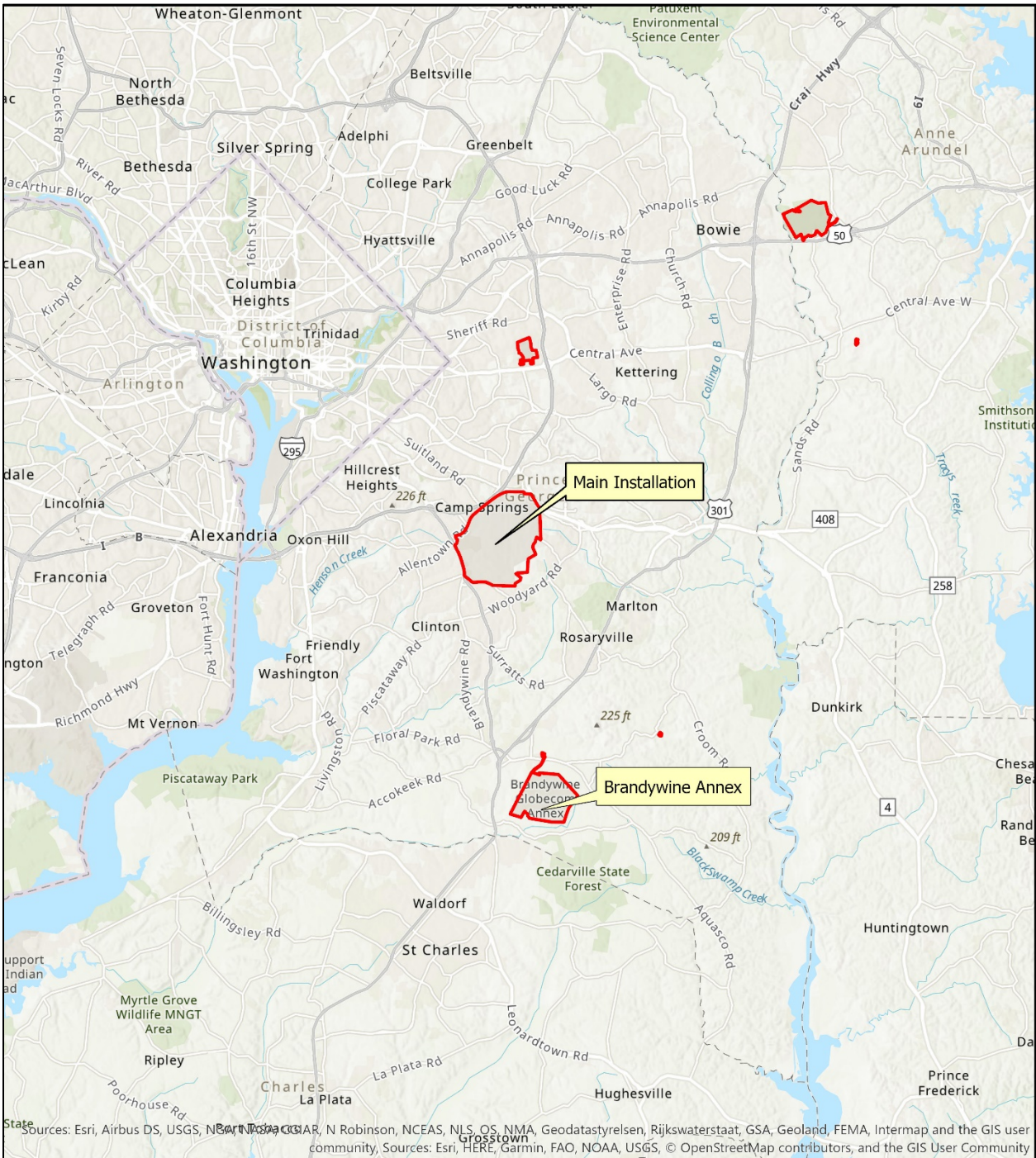
Sincerely,

A handwritten signature in black ink, appearing to be 'RS', with a long horizontal line extending to the right.

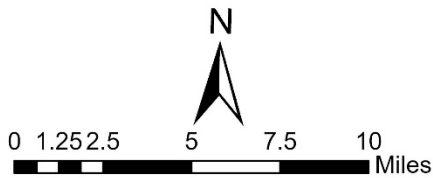
Ryan Soens
Acting Chief, Environmental Compliance

4 Enclosures

Enclosure 1: Location of Joint Base Andrews Main Installation and Brandywine Annex



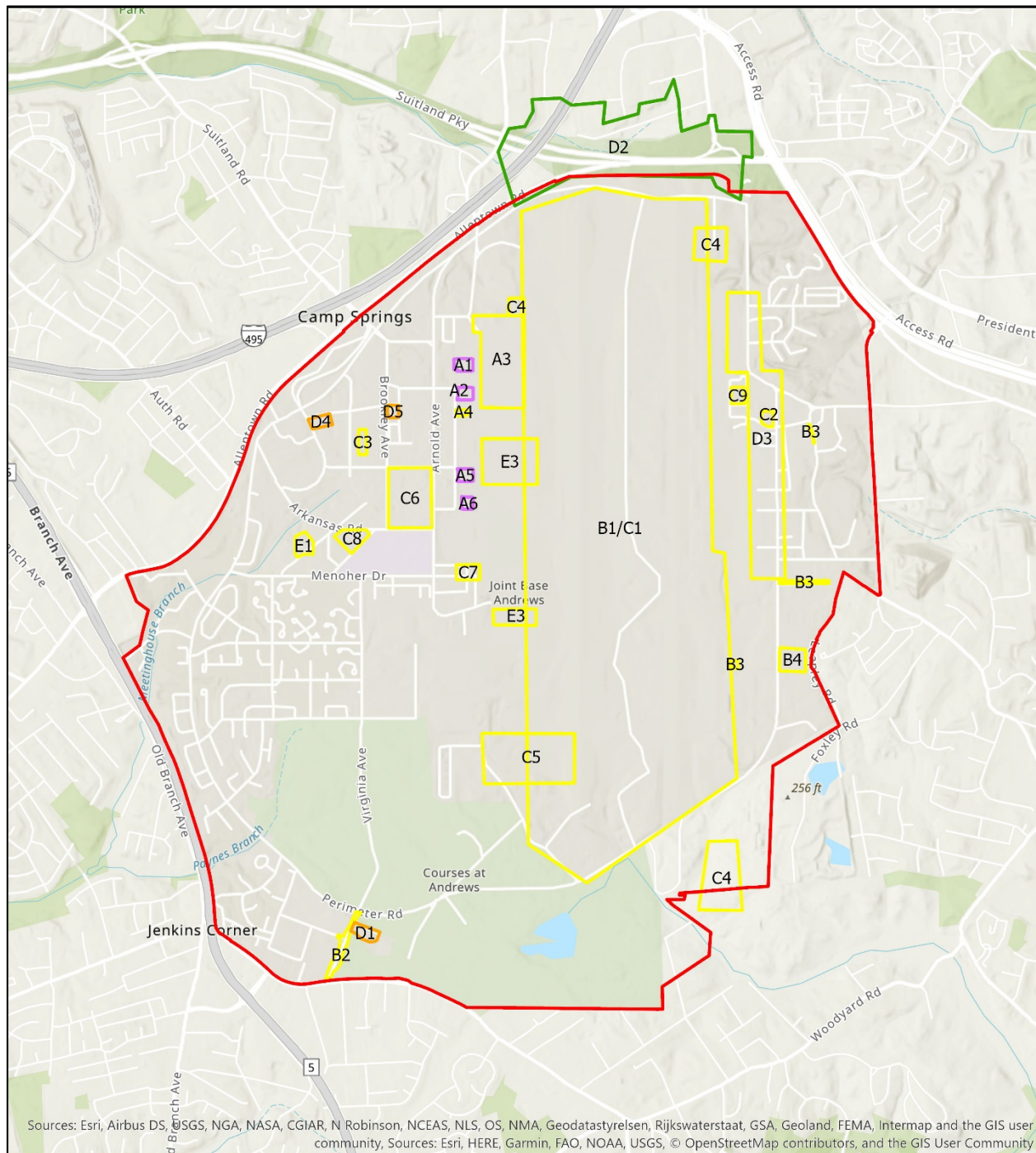
Enclosure 1



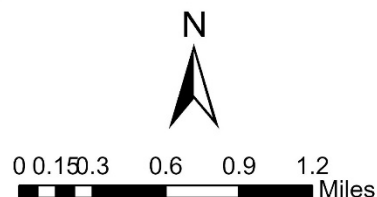
Legend

 JBA Boundary

Enclosure 2: Proposed Limits of Disturbance for IDP Projects – Main Installation



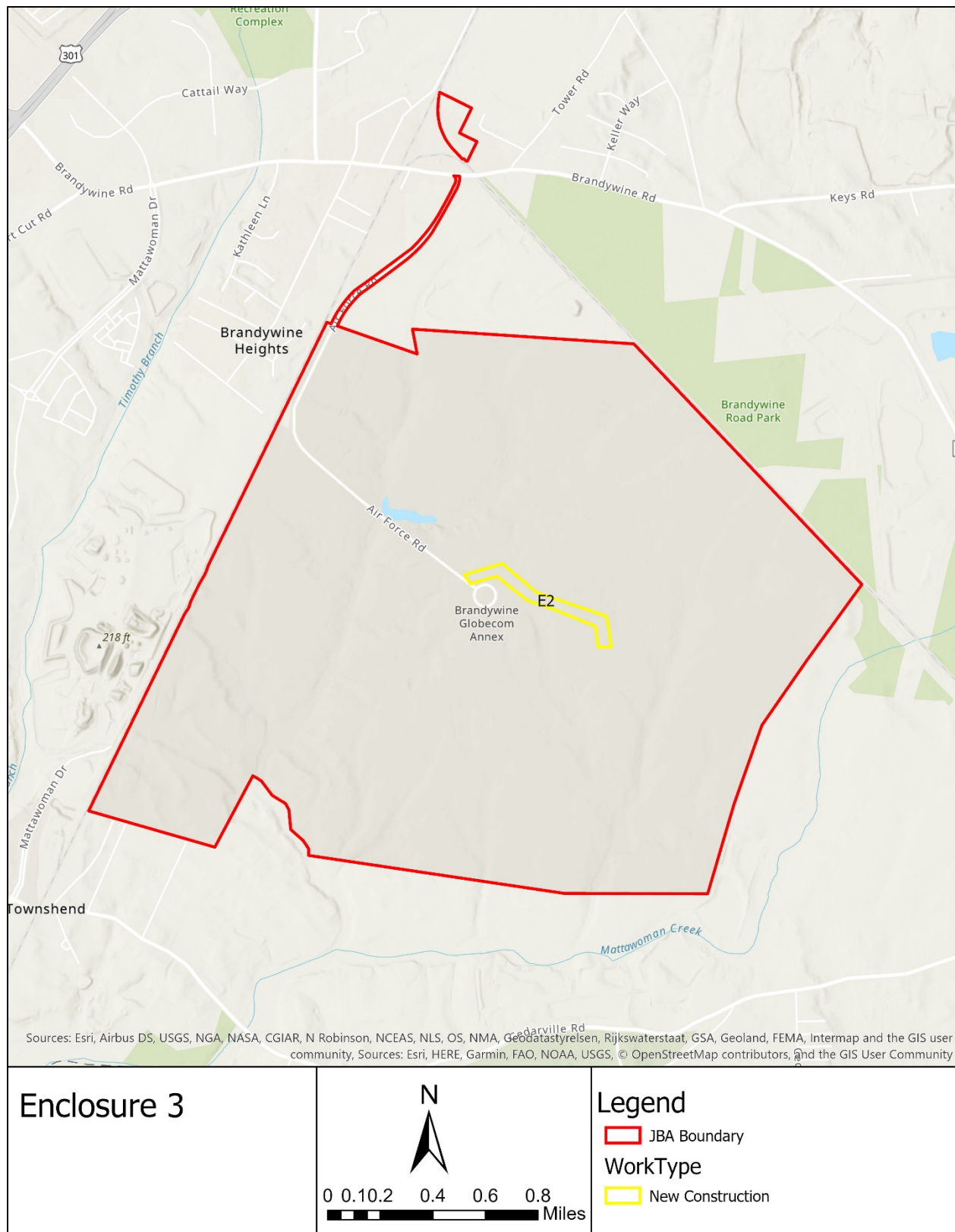
Enclosure 2



Legend

- | | |
|--|--|
| JBA Boundary | Interior Renovations |
| WorkType | New Construction |
| Demolition | Tree Removal |

Enclosure 3: Proposed Limits of Disturbance for IDP Projects – Brandywine Annex



Enclosure 4: Agency Mailing List

Ms. Lori Byrne
Maryland Department of Natural Resources
Tawes State Office Building B-3
580 Taylor Avenue
Annapolis, MD 21401

Ms. Linda C. Janey, J.D.
Director, Maryland State Clearinghouse
Maryland Office of Planning,
Room 1104
301 West Preston Street
Baltimore, MD 21201-2365

Ms. Amanda Redmiles
Interdepartmental Information Liaison
Office of Communications
Maryland Department of the Environment
1800 Washington Blvd
Baltimore, MD 21230

Ms. Beth Cole
Project Review and Compliance
Maryland Historical Trust
100 Community Place, 3rd Floor
Crownsville, MD 21032-2023

Ms. Carrie Traver
Office of Communities, Tribes, &
Environmental Assessment
U.S. Environmental Protection Agency,
Region 3
1650 Arch Street – 3RA10
Philadelphia, PA 19103

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

Ms. Genevieve Larouche
U.S. Dept. of the Interior
Fish & Wildlife Services
Chesapeake Bay Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401

Ms. Andree Green Checkley
Director of Planning
Prince George's County
Department of Planning
14741 Governor Oden
Bowie Drive, Room 4150
Upper Marlboro, MD 20772

Ms. Tara Morrison
National Capital Parks-East
1900 Anacostia Dr., SE
Washington DC 20020

Ms. Diane Sullivan
Director, Urban Design and Plan Review
Division
National Capital Planning Commission
401 9th Street, NW
North Lobby, Suite 500
Washington, DC 20004

Ms. Sherry L. Ayers
Chairman (Lumbee)
Maryland Commission on Indian Affairs
100 Community Place
Crownsville, MD 21032



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 316TH WING (AFDW)
JOINT BASE ANDREWS, MARYLAND 20762

August 11, 2021

Directorate of Public Works

Ms. Beth Cole
Office of Review and Compliance
Maryland Historical Trust
100 Community Place, 3rd Floor
Crownsville, MD 21032

Dear Ms. Cole:

The purpose of this letter is to initiate consultation with the Maryland Historical Trust (MHT) on an undertaking affecting Joint Base Andrews -Naval Air Facility (JBA). This action is pursuant to Section 106 of the National Historic Preservation Act (NHPA) and its implementing regulations 36 CFR Part 800.

Proposed Undertaking: JBA is preparing an Environmental Assessment (EA) for the implementation of its five-year Installation Development Plan (IDP). The Proposed Action for the implementation of the IDP would involve the implementation of 27 individual projects, including construction, renovation, and demolition projects. Implementation of all the IDP projects would total 4,756.49 acres of disturbance across the main installation at JBA and the Brandywine Annex. The IDP addresses the specific development needs at JBA within the next five years to provide the infrastructure upgrades and expansions needed to meet mission requirements.

Pursuant to the National Environmental Policy Act (NEPA) of 1969 (42 United States Code [USC] 4321-4347), Council on Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations [CFR] Sections 1500-1508) and 32 CFR Part 989, *et seq.*, JBA will prepare an EA that considers the potential consequences to human health and the natural environment of implementing the Proposed Action. The EA will examine the effects of the proposed projects included in the IDP and will include analysis of the required No Action Alternative. This EA evaluates whether the Proposed Action would result in adverse impacts on the human and natural environment. If adverse impacts are identified, JBA would undertake supplemental NEPA analyses for those projects which have expected adverse impacts. This supplemental NEPA documentation would be tiered off this EA, in accordance with 40 CFR 1501.11. This EA also identifies the actions that JBA would undertake to minimize environmental impacts, as required under NEPA, its implementing regulations from CEQ (40 CFR 1500-1508) and Air Force regulations (32 CFR Part 989).

Proposed projects identified in the IDP EA with the potential to impact cultural or historic resources will be noted, and additional consultation will be prepared specifically for those projects.

Background: The Proposed Action is needed for the Department of Defense (DoD) to ensure that JBA's airfield meets operational requirements, and to accommodate changing unit and administrative needs on the installation. The IDP will help JBA to track and prioritize the development projects planned for the five-year period between fiscal year 2022 and fiscal year 2026. The IDP will allow JBA to meet installation development goals and ensure that operations and missions on the installation are carried out efficiently and properly.

Elements of the Undertaking: The proposed work will include building repairs and renovations, new construction, building additions, utility and road improvements, security improvements, tree removal, and demolitions of outdated facilities.

Area of Potential Effects (APE): The APE, as defined in 36 CFR 800.16(d), is “the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. The area of potential effects is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking.”

Since there are multiple proposed projects, and multiple alternatives to proposed projects, JBA proposes that any future projects outlined in the IDP EA with a potential to impact cultural or historic resources will have separate Section 106 required coordination prepared prior to project implementation.

Supporting Documents and Determination of Effects: JBA requests that MHT review the enclosed documents including: 1) Installation Location, 2) Project Locations on the Main Installation, 3) Project Locations at the Brandywine Annex, 4) IDP Project List.

We invite your review and comments for this undertaking. Your assistance in providing information is greatly appreciated. Please direct any questions or comments to Ryan Soens at (202) 409-8231 or by email at ryan.soens.1@us.af.mil.

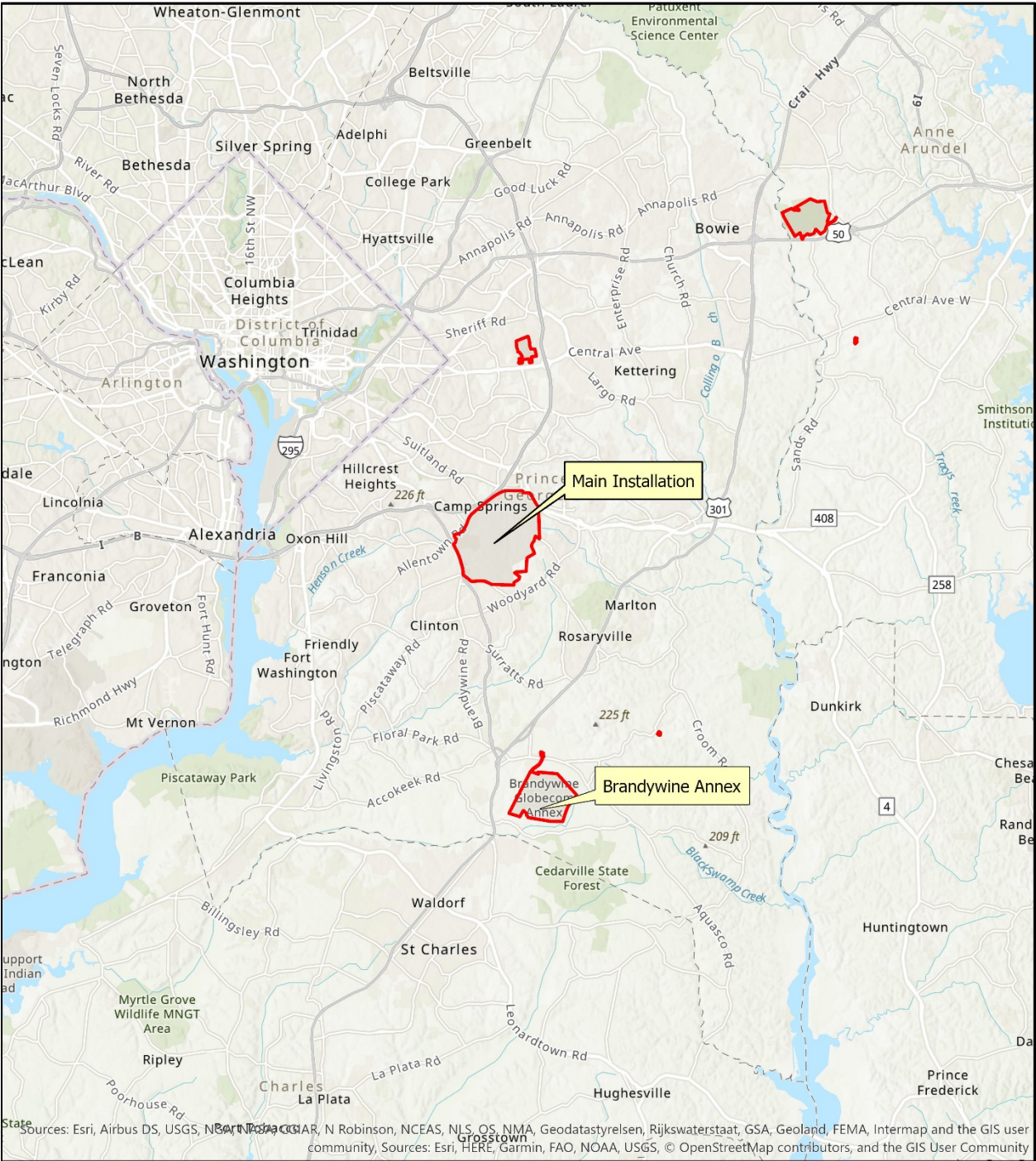
Sincerely,

A handwritten signature in black ink, appearing to read 'R. Soens', with a long horizontal line extending to the right.

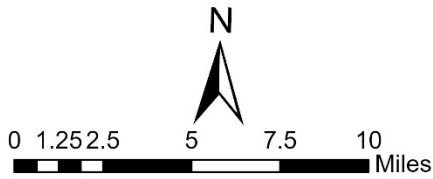
Ryan Soens
Acting Chief
Environmental Compliance

ENCLOSURES

Enclosure 1: Location of Joint Base Andrews Main Installation and Brandywine Annex



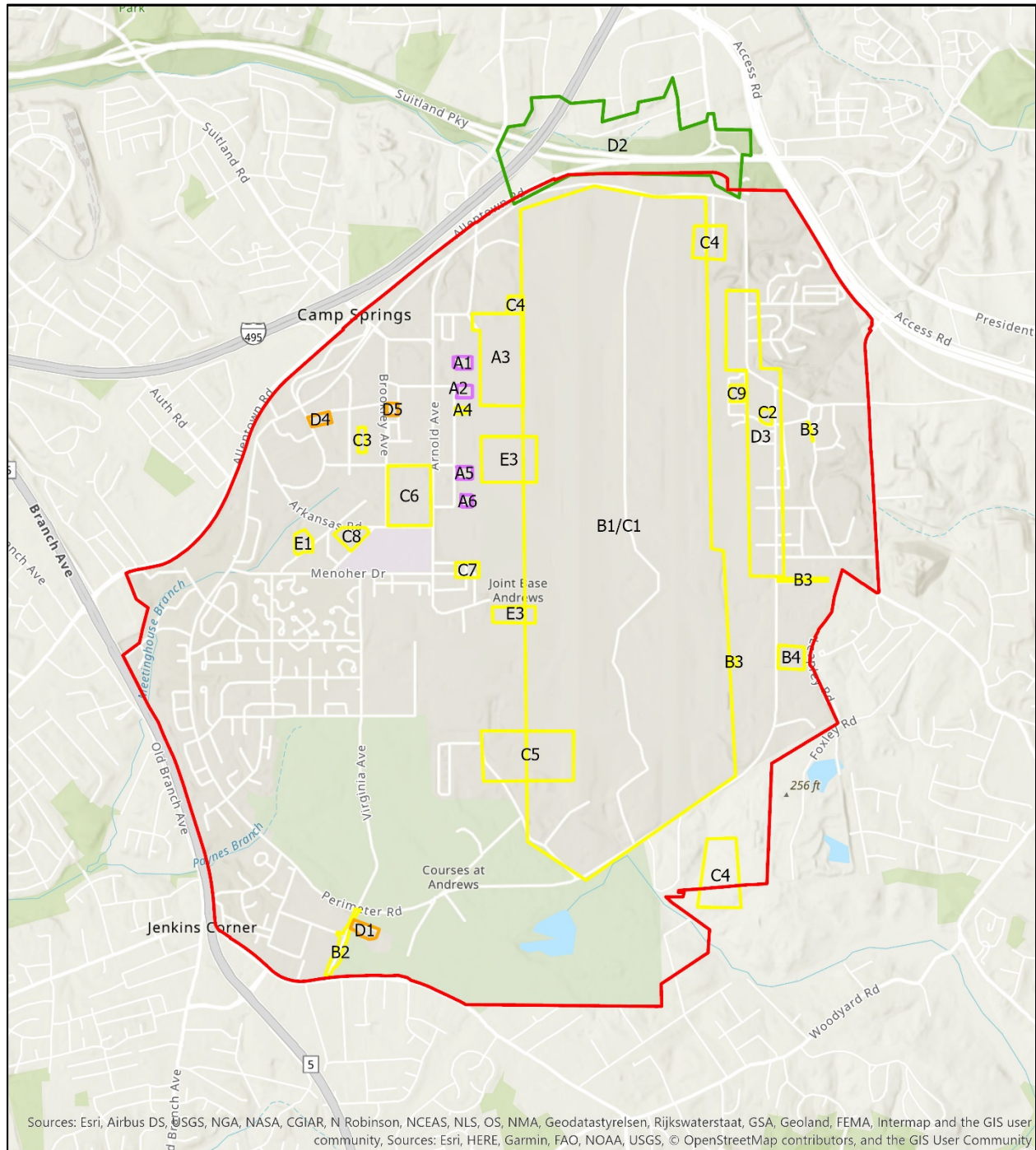
Enclosure 1



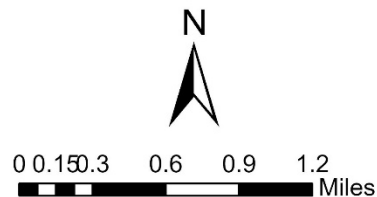
Legend

 JBA Boundary

Enclosure 2: Proposed Limits of Disturbance for IDP Projects – Main Installation



Enclosure 2



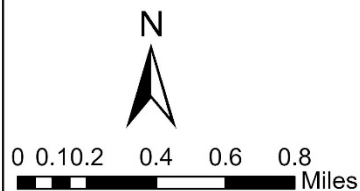
Legend

- ▬ JBA Boundary
- ▬ Interior Renovations
- ▬ New Construction
- ▬ Demolition
- ▬ Tree Removal

Enclosure 3: Proposed Limits of Disturbance for IDP Projects – Brandywine Annex



Enclosure 3



Legend

JBA Boundary

WorkType

New Construction

Enclosure 4: IDP Project List

Site Code	Project Name	Project Description	Size of LOD (acres)
A1	Renovation/Repair of Hangar 1	Renovate interior of Hangar 1, including maintenance and storage functions and the parking of 5 MH-139 aircraft, along with minor drainage work around the building exterior	3.39
A2	Renovation/Repair of Hangar 2	Renovate interior of Hangar 2, including the parking of 9 MH-139 aircraft and the relocation of alert facility into the building lean-to, along with minor drainage work around the building exterior	3.03
A3	Aircraft parking ramp modifications and ramp extension	Add 16 ramp parking spots and 64 mooring points in the West Apron, add a new ~240,000 square foot (sq ft) ramp extension to the north, and demolish Building 1911	65.25
A4	Construct helicopter wash rack	Construct ~4,800 sq ft helicopter wash rack just south of Hangar 2, and potential demolition of access driveway	1.11
A5	Renovation/Repair of Hangar 4	Renovate interior of Hangar 4 for Transient Alert	3.03
A6	Renovation/Repair of Hangar 5	Renovate interior of Hangar 5 for U.S. Army Priority Air Transport (USAPAT)	2.17
B1	Regrade the airfield	Regrade the portions of the legacy airfield that do not meet the Unified Facilities Code (UFC) 3-260-1 requirements for obstructions and drainage	1,978.55
B2	Virginia Gate	Modify and widen road, upgrade guard shack, and install bollards, speed tables, signage, and a gate-controlled drop arm	6.84
B3	Storm Drains on Buildings 3447, 3066, & 2487	Correct ditch line between Buildings 3086 and 3066; Replace storm drain lines and best management practice (BMP) near Building 2487; and replace two drop boxes, 700 ft of pipe, and two head walls next to Building 3447	3.51
B4	Stormwater BMP at 21 Point Range	Repair BMP and outlet structure south of the current firing range and removal of trees from the detention area and along the dam embankment	9.36
C1	East Runway relocation	Shift East Runway, or repair or replace in its current position, and construct associated taxiways, aprons, and drainage	1,978.55
C2	Crash Rescue Station 2	Add an ~5,200 sq ft additional bay and ~3,700 sq ft of crew space, and relocated parking and stormwater features	2.59
C3	New dormitory	Construct new 144 bed dormitory along Colorado Avenue between D Street and F Street	3.10
C4	Compass Calibration Pad	Relocate Compass Calibration Pad, including paving of pad and access taxiway, based on the design of the East Runway	60.54
C5	Second Taxiway for Hangar 21	Construct second taxiway for Hangar 21	72.13
C6	Special Forces Group (SFG) Complex	Construct a total of ~88,000 sq ft of operations and training facilities between four buildings; construct parking lot; and demolish existing car wash facility on site	40.82

Site Code	Project Name	Project Description	Size of LOD (acres)
C7	Passenger Terminal	Construct new passenger terminal or expand existing passenger terminal to address existing size deficiency and provide modern airport security facilities	5.61
C8	West Fitness Center Addition	Add ~25,000 sq ft to existing West Fitness Center	7.70
C9	459 th Readiness Alert Facility	Construct ~17,600 sq ft Readiness Alert Facility and associated parking lot	3.46
D1	CDC #1	Demolish existing CDC #1 (Building 4575) and surrounding parking and pavement	4.96
D2	Suitland Tree Management	Remove trees and vegetation in the approach paths of the two runways; replant with new species over time; 10-year reoccurring program	266.92
D3	East Deluge System	Remove and replace east underground deluge line and valves	152.76
D4	Former Firestone Building	Demolish former Firestone building (Building 1568) and surrounding pavement	3.64
D5	Former Starbucks	Demolish former Starbucks (Building 1685) and surrounding pavement	2.17
E1	Smart Center Addition	Construct ~3,380 sq ft addition to multi-function room in conference center, construct an addition to the dining area and office space, and renovate interior	5.57
E2	Brandywine Annex gravel road	Upgrade existing ~3/4 mile stretch of gravel road to asphalt and develop roadway drainage	18.97
E3	DLA fuel row additions	Install 3 additional in-ground fuel hydrants on west ramp and trenching for pipeline across west ramp	50.76



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 316TH WING (AFDW)
JOINT BASE ANDREWS, MARYLAND 20762

June 11, 2021

Lt. Colonel Stewart L. Roundtree, USAF
Installation Tribal Liaison Officer
1500 West Perimeter Road
Joint Base Andrews, Maryland 20762-4803

Mr. Raymond Johnson
Tribal Governor
Absentee Shawnee Tribe of Indians of Oklahoma
2025 South Gordon Cooper Drive
Shawnee, OK 74801

Dear Mr. Johnson,

I hope my correspondence finds you and your tribal members well. The Absentee Shawnee Tribe of Indians of Oklahoma was identified as a tribe that might have a connection to the area of Joint Base Andrews and is interested in understanding large construction projects on base. It is our understanding that you will review our Section 106 evaluation, Area of Potential Effect, and look at site/construction maps to help determine if the area might have cultural significance or possible remains.

With this in mind, I have enclosed information on a current undertaking: the Installation Development Plan (IDP), which includes 27 planned projects on the Joint Base Andrews main installation and the Brandywine Annex to the southeast. The IDP includes new construction, renovations, and demolition activities related to airfield operations, administrative functions, and infrastructure, such as stormwater features and drainage systems. The majority of the project sites are either currently developed or were previously developed. We want to ensure the Absentee Shawnee Tribe of Indians of Oklahoma has the opportunity to engage in consultation with the Air Force on this project.

We would appreciate a response as to whether the Absentee Shawnee Tribe of Indians of Oklahoma would like to engage in consultation on the IDP projects so that we may have documentation for our records, and to help facilitate a way forward. Please be assured that regardless of the Absentee Shawnee Tribe of Indians of Oklahoma's decision regarding consultation on the IDP projects, the Air Force will fully comply with all applicable laws and regulations in the event of an inadvertent discovery of archaeological or funerary objects and/or human remains.

The Air Force is dedicated to fulfilling its legal and regulatory obligations to engage in government-to-government consultation with the Absentee Shawnee Tribe of Indians of Oklahoma. We will continue to provide pre-construction information and requests for future assistance identifying any historic properties of religious and cultural significance related to

America's Airmen

construction projects or addressing remains which may be encountered during construction. Please provide a response within 30 days from the date of this letter to Mr. Ryan Soens, 316 CES/CEIE, 3466 North Carolina Avenue, Joint Base Andrews, Maryland 20762 or send via e-mail to ryan.soens.1@us.af.mil. If nothing is heard by this date, it will be taken as agreement with this action. If you need further information, please contact Mr. Soens at 202-409-8231.

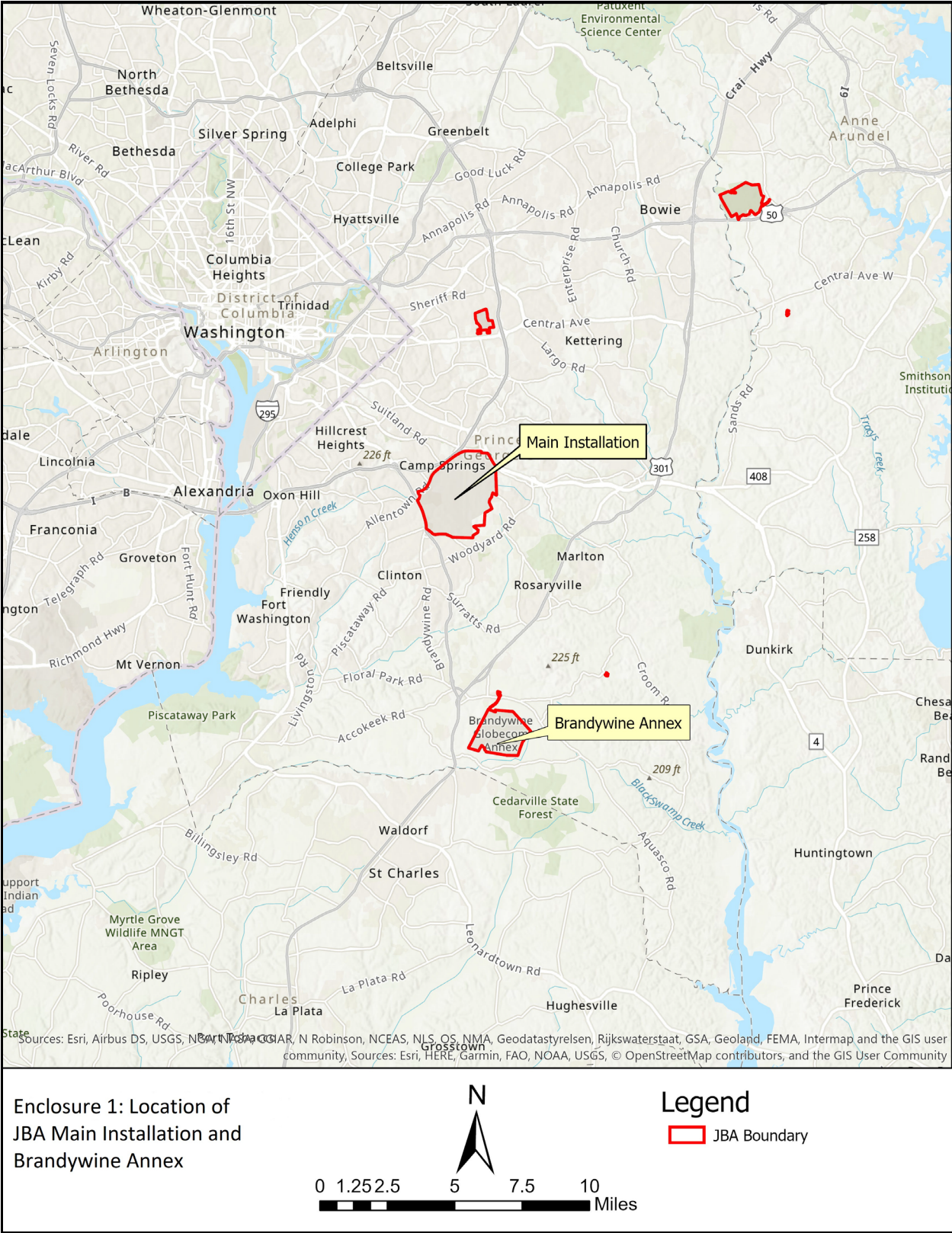
I look forward to having future correspondence with you to enhance the relationship between the base and the Absentee Shawnee Tribe of Indians of Oklahoma. Thank you for your assistance.

Sincerely,

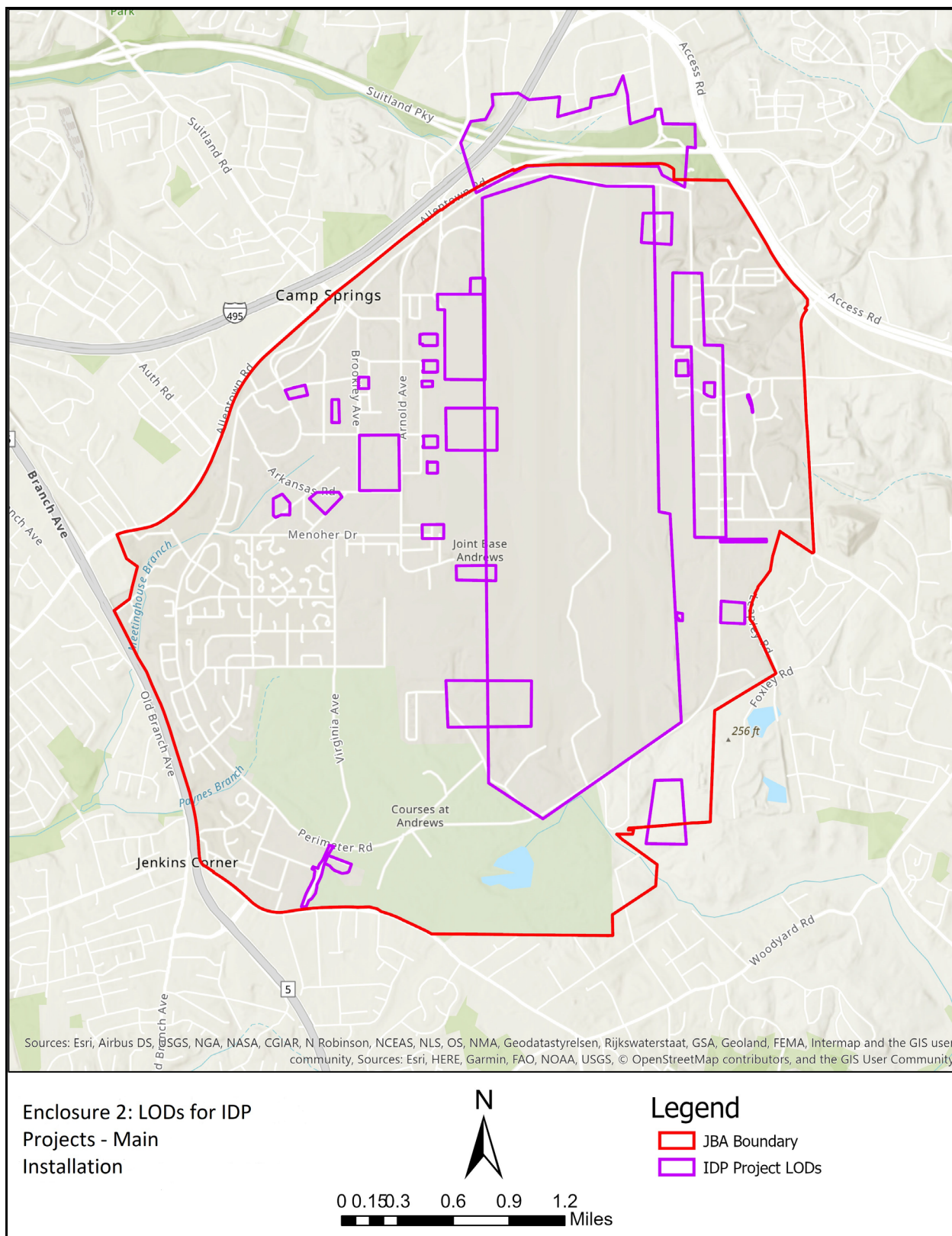
STEWART L. ROUNDTREE, Lt Col, USAF
Deputy Commander, 316th Mission Support Group

4 Enclosures

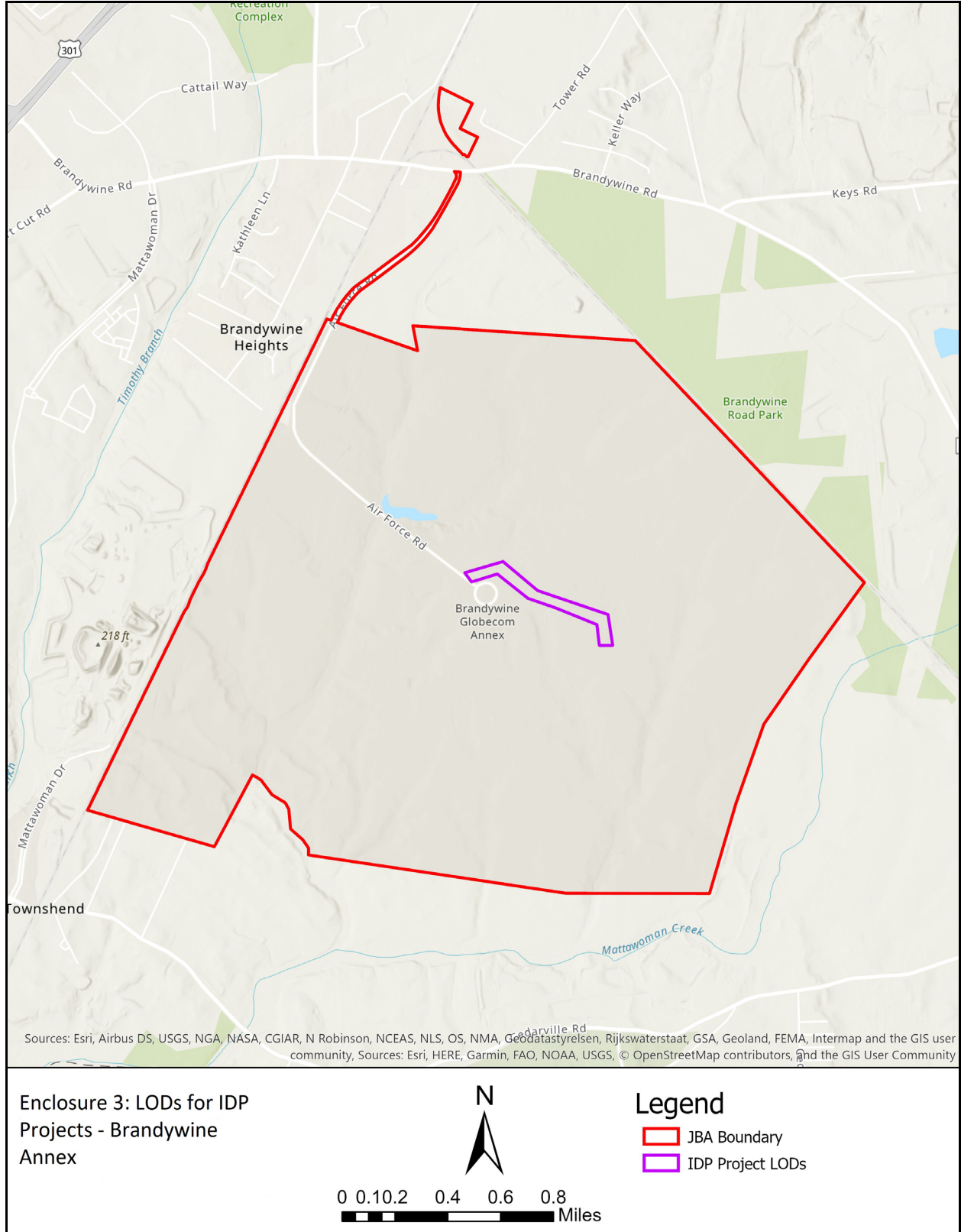
Enclosure 1: Location of Joint Base Andrews Main Installation and Brandywine Annex



Enclosure 2: Proposed Limits of Disturbance for IDP Projects – Main Installation



Enclosure 3: Proposed Limits of Disturbance for IDP Projects – Brandywine Annex



Enclosure 4: Tribal Mailing List

Ms. Deborah Dotson
President, Delaware Nation
31064 State Highway 281
Building 100
Anadarko, OK 73005

Mr. Chester L. Brooks
Chief, Delaware Tribe of Indians
601 High Street
Bartlesville, OK 74006

Mr. Raymond Halbritter
Tribal Representative
Oneida Indian Nation
2037 Dream Catcher Plaza
Oneida, NY 13421

Mr. Tehassi Hill
Tribal Chairman, Oneida Nation
P.O. Box 365
N7210 Seminary Road
Oneida, WI 54155-0365

Mr. Robert Gray
Chief, Pamunkey Indian Tribe
1054 Pocahontas Trail
King William, VA 23086

Mr. Leo R. Henry
Tribal Chief, Tuscarora Nation
2006 Mount Hope Road
Lewiston, NY 14092

Mr. Raymond Johnson
Tribal Governor
Absentee-Shawnee Tribe of Indians of
Oklahoma
2025 South Gordon Cooper Drive
Shawnee, OK 74801

Ms. Glenna Wallace
Tribal Chief
Eastern Shawnee Tribe of Oklahoma
127 W Oneida St.
Seneca, MO 64865

Ms. Sarah Channing
Chief, Seneca-Cayuga Nation
P.O. Box 453220
23701 S. 655 Rd.
Grove, OK 74344



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 316TH WING (AFDW)
JOINT BASE ANDREWS, MARYLAND 20762

June 11, 2021

Lt. Colonel Stewart L. Roundtree, USAF
Installation Tribal Liaison Officer
1500 West Perimeter Road
Joint Base Andrews, Maryland 20762-4803

Ms. Deborah Dotson
President, Delaware Nation
31064 State Highway 281
Building 100
Anadarko, OK 73005

Dear Ms. Dotson,

I hope my correspondence finds you and your tribal members well. The Delaware Nation was identified as a tribe that might have a connection to the area of Joint Base Andrews and is interested in understanding large construction projects on base. It is our understanding that you will review our Section 106 evaluation, Area of Potential Effect, and look at site/construction maps to help determine if the area might have cultural significance or possible remains.

With this in mind, I have enclosed information on a current undertaking: the Installation Development Plan (IDP), which includes 27 planned projects on the Joint Base Andrews main installation and the Brandywine Annex to the southeast. The IDP includes new construction, renovations, and demolition activities related to airfield operations, administrative functions, and infrastructure, such as stormwater features and drainage systems. The majority of the project sites are either currently developed or were previously developed. We want to ensure the Delaware Nation has the opportunity to engage in consultation with the Air Force on this project.

We would appreciate a response as to whether the Delaware Nation would like to engage in consultation on the IDP projects so that we may have documentation for our records, and to help facilitate a way forward. Please be assured that regardless of the Delaware Nation's decision regarding consultation on the IDP projects, the Air Force will fully comply with all applicable laws and regulations in the event of an inadvertent discovery of archaeological or funerary objects and/or human remains.

The Air Force is dedicated to fulfilling its legal and regulatory obligations to engage in government-to-government consultation with the Delaware Nation. We will continue to provide pre-construction information and requests for future assistance identifying any historic properties of religious and cultural significance related to construction projects or addressing remains which may be encountered during construction. Please provide a response within 30 days from the date of this letter to Mr. Ryan Soens, 316 CES/CEIE, 3466 North Carolina Avenue, Joint Base Andrews, Maryland 20762 or send via e-mail to ryan.soens.1@us.af.mil. If nothing is heard by

America's Airmen

this date, it will be taken as agreement with this action. If you need further information, please contact Mr. Soens at 202-409-8231.

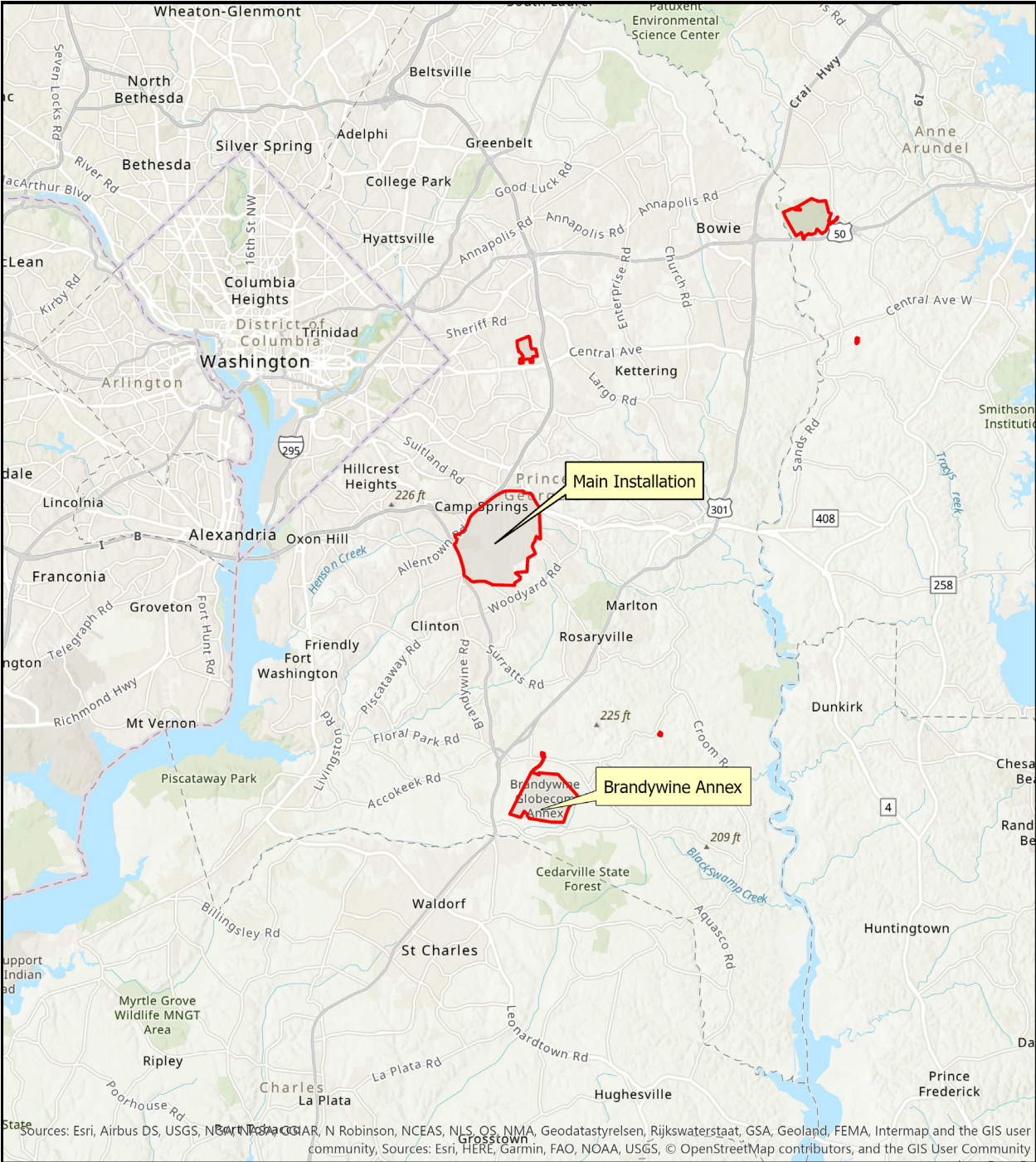
I look forward to having future correspondence with you to enhance the relationship between the base and the Delaware Nation. Thank you for your assistance.

Sincerely,

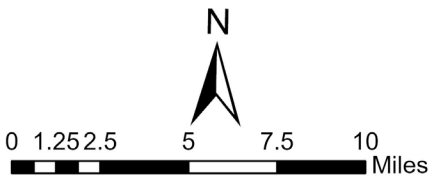
STEWART L. ROUNDTREE, Lt Col, USAF
Deputy Commander, 316th Mission Support Group

4 Enclosures

Enclosure 1: Location of Joint Base Andrews Main Installation and Brandywine Annex

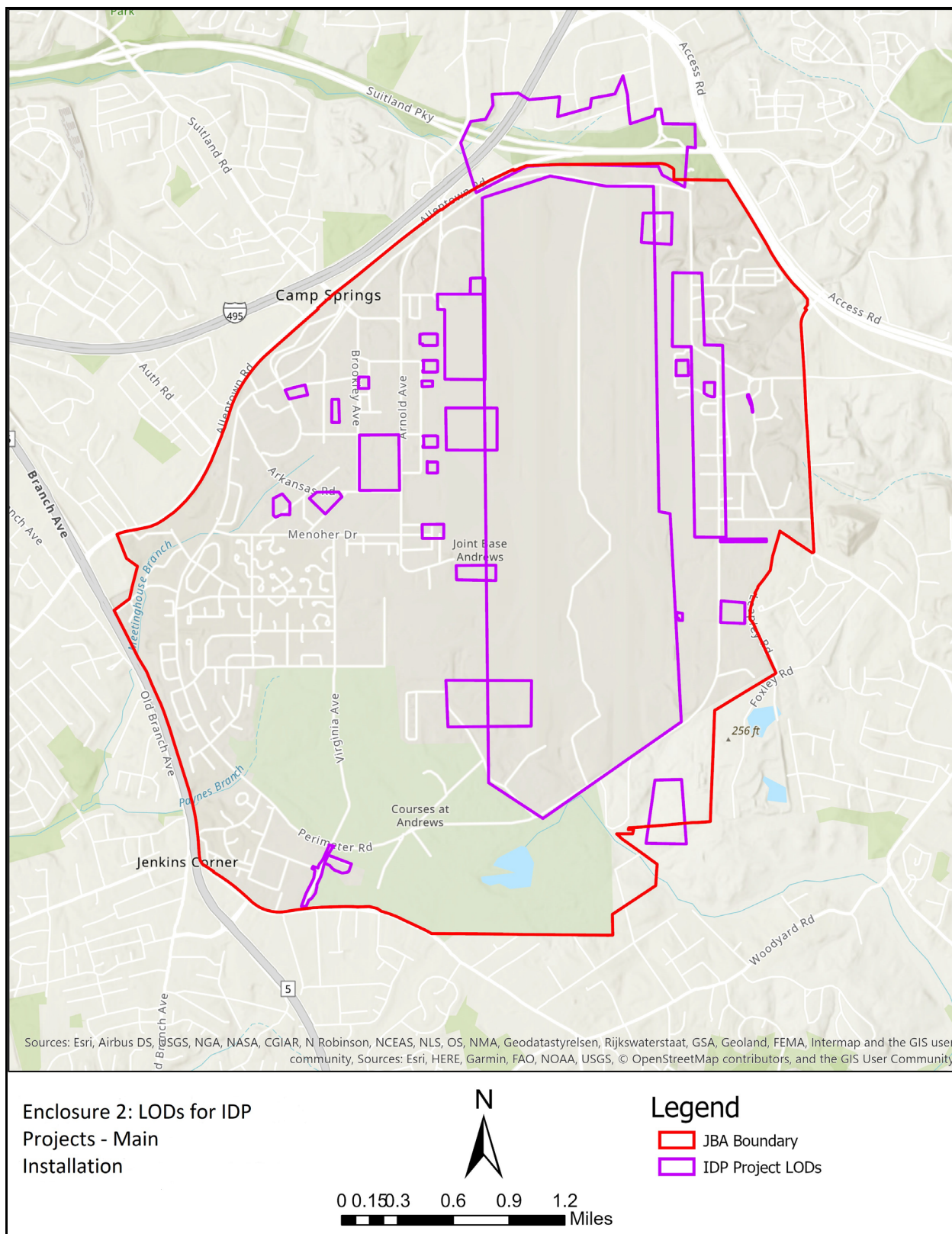


**Enclosure 1: Location of
JBA Main Installation and
Brandywine Annex**

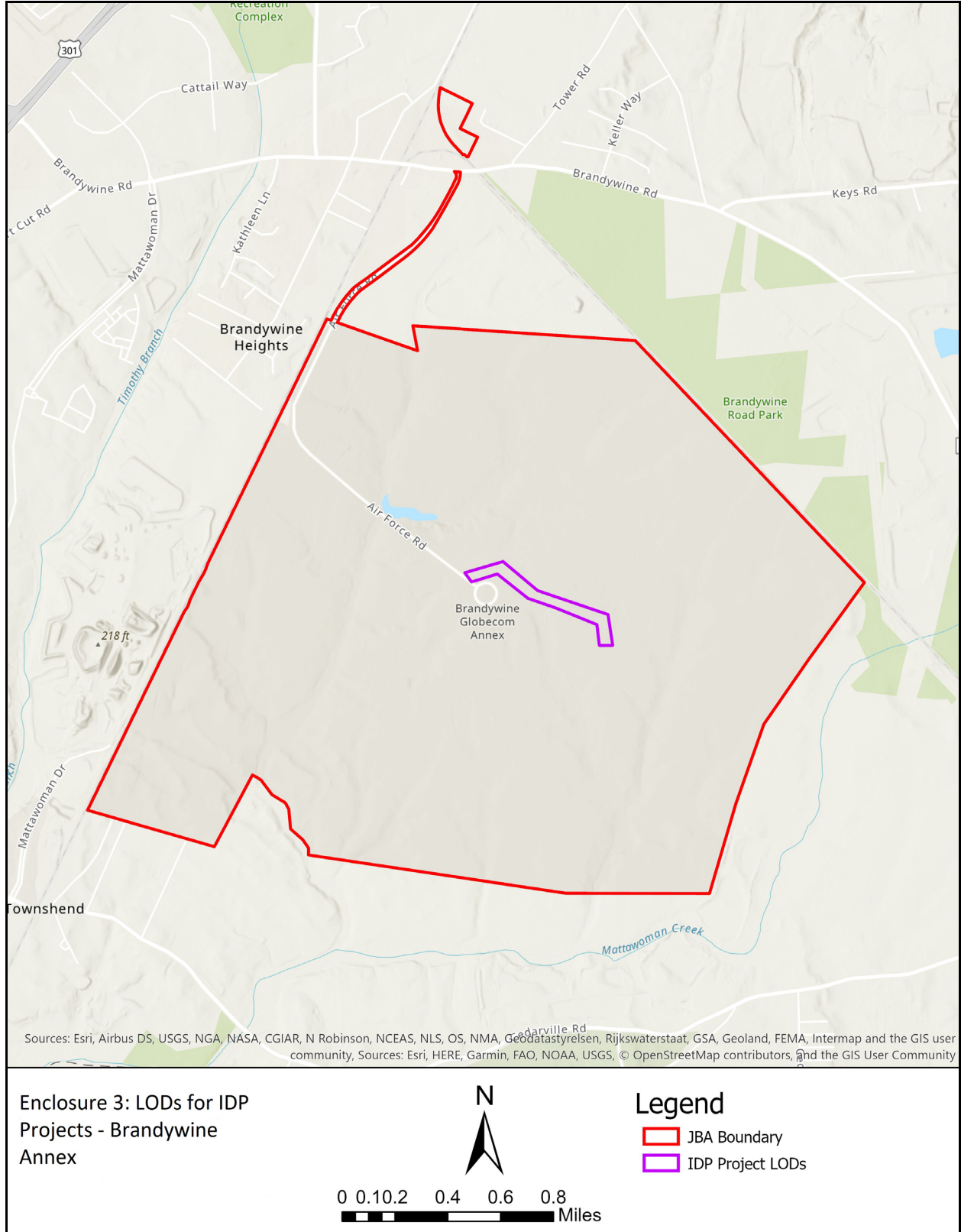


Legend
[Red Outline] JBA Boundary

Enclosure 2: Proposed Limits of Disturbance for IDP Projects – Main Installation



Enclosure 3: Proposed Limits of Disturbance for IDP Projects – Brandywine Annex



Enclosure 4: Tribal Mailing List

Ms. Deborah Dotson
President, Delaware Nation
31064 State Highway 281
Building 100
Anadarko, OK 73005

Mr. Chester L. Brooks
Chief, Delaware Tribe of Indians
601 High Street
Bartlesville, OK 74006

Mr. Raymond Halbritter
Tribal Representative
Oneida Indian Nation
2037 Dream Catcher Plaza
Oneida, NY 13421

Mr. Tehassi Hill
Tribal Chairman, Oneida Nation
P.O. Box 365
N7210 Seminary Road
Oneida, WI 54155-0365

Mr. Robert Gray
Chief, Pamunkey Indian Tribe
1054 Pocahontas Trail
King William, VA 23086

Mr. Leo R. Henry
Tribal Chief, Tuscarora Nation
2006 Mount Hope Road
Lewiston, NY 14092

Mr. Raymond Johnson
Tribal Governor
Absentee-Shawnee Tribe of Indians of
Oklahoma
2025 South Gordon Cooper Drive
Shawnee, OK 74801

Ms. Glenna Wallace
Tribal Chief
Eastern Shawnee Tribe of Oklahoma
127 W Oneida St.
Seneca, MO 64865

Ms. Sarah Channing
Chief, Seneca-Cayuga Nation
P.O. Box 453220
23701 S. 655 Rd.
Grove, OK 74344



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 316TH WING (AFDW)
JOINT BASE ANDREWS, MARYLAND 20762

June 11, 2021

Lt. Colonel Stewart L. Roundtree, USAF
Installation Tribal Liaison Officer
1500 West Perimeter Road
Joint Base Andrews, Maryland 20762-4803

Mr. Chester L. Brooks
Chief, Delaware Tribe of Indians
601 High Street
Bartlesville, OK 74006

Dear Mr. Brooks,

I hope my correspondence finds you and your tribal members well. The Delaware Tribe of Indians was identified as a tribe that might have a connection to the area of Joint Base Andrews and is interested in understanding large construction projects on base. It is our understanding that you will review our Section 106 evaluation, Area of Potential Effect, and look at site/construction maps to help determine if the area might have cultural significance or possible remains.

With this in mind, I have enclosed information on a current undertaking: the Installation Development Plan (IDP), which includes 27 planned projects on the Joint Base Andrews main installation and the Brandywine Annex to the southeast. The IDP includes new construction, renovations, and demolition activities related to airfield operations, administrative functions, and infrastructure, such as stormwater features and drainage systems. The majority of the project sites are either currently developed or were previously developed. We want to ensure the Delaware Nation has the opportunity to engage in consultation with the Air Force on this project.

We would appreciate a response as to whether the Delaware Tribe of Indians would like to engage in consultation on the IDP projects so that we may have documentation for our records, and to help facilitate a way forward. Please be assured that regardless of the Delaware Tribe of Indians's decision regarding consultation on the IDP projects, the Air Force will fully comply with all applicable laws and regulations in the event of an inadvertent discovery of archaeological or funerary objects and/or human remains.

The Air Force is dedicated to fulfilling its legal and regulatory obligations to engage in government-to-government consultation with the Delaware Tribe of Indians. We will continue to provide pre-construction information and requests for future assistance identifying any historic properties of religious and cultural significance related to construction projects or addressing remains which may be encountered during construction. Please provide a response within 30 days from the date of this letter to Mr. Ryan Soens, 316 CES/CEIE, 3466 North Carolina Avenue, Joint Base Andrews, Maryland 20762 or send via e-mail to ryan.soens.1@us.af.mil. If

America's Airmen

nothing is heard by this date, it will be taken as agreement with this action. If you need further information, please contact Mr. Soens at 202-409-8231.

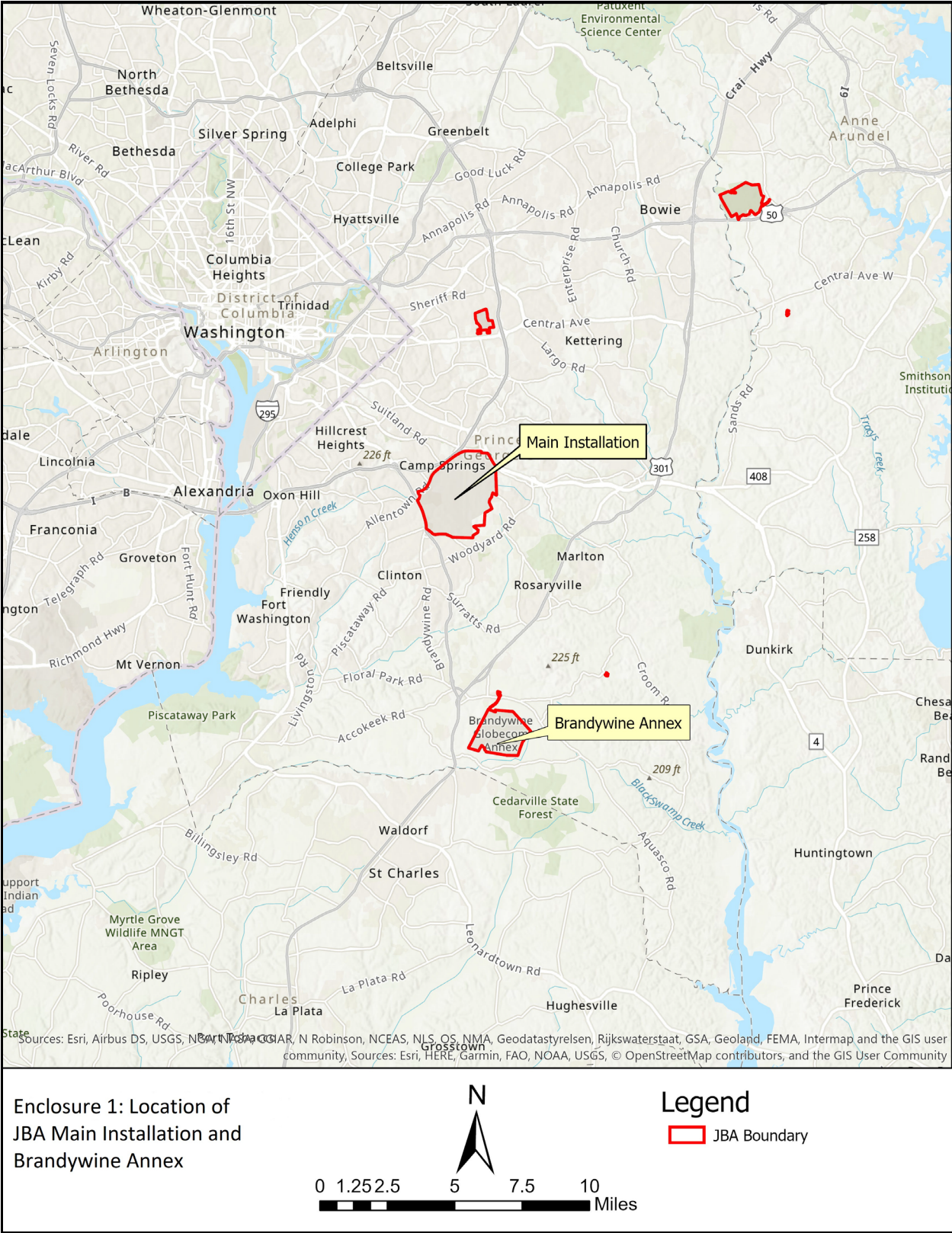
I look forward to having future correspondence with you to enhance the relationship between the base and the Delaware Tribe of Indians. Thank you for your assistance.

Sincerely,

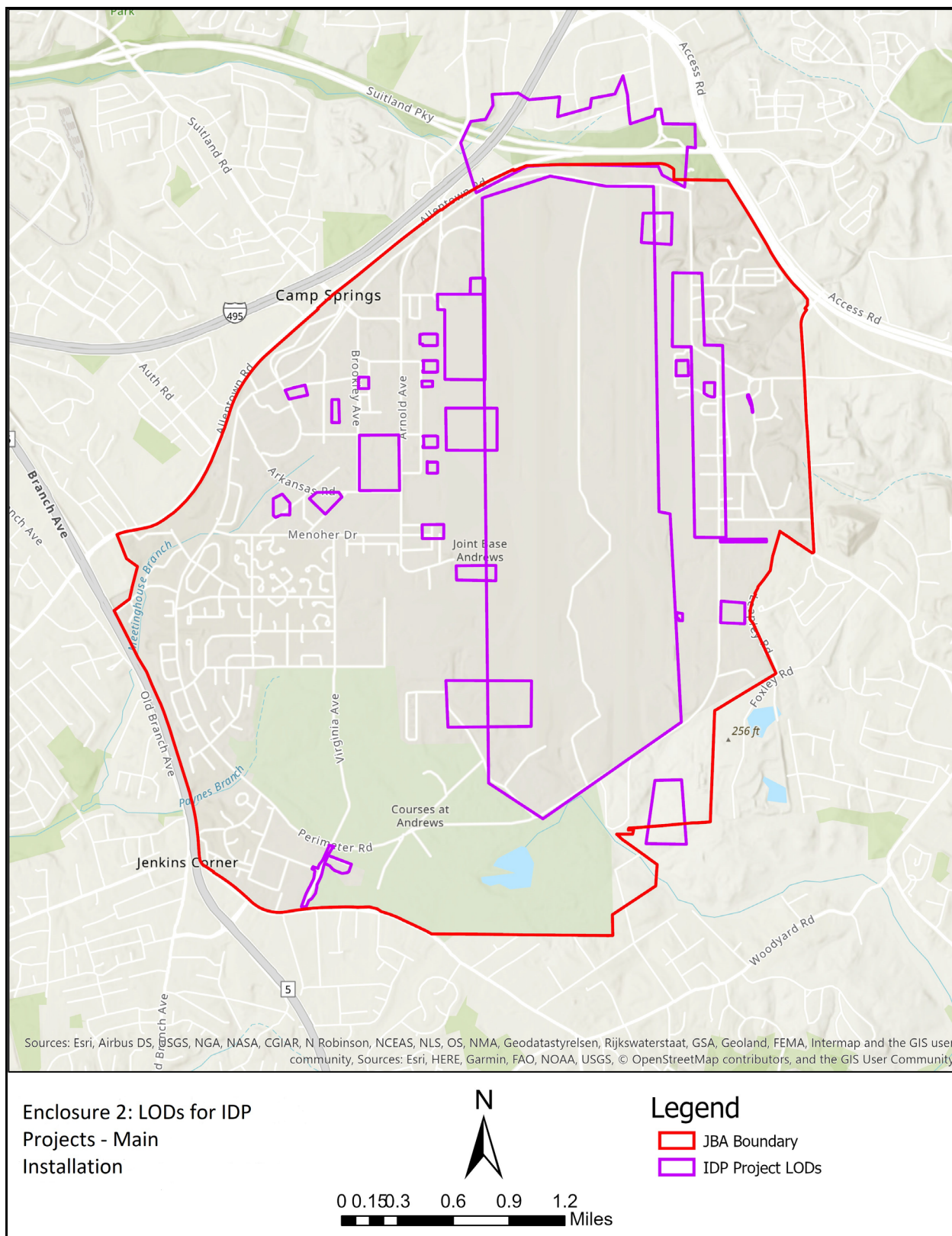
STEWART L. ROUNDTREE, Lt Col, USAF
Deputy Commander, 316th Mission Support Group

4 Enclosures

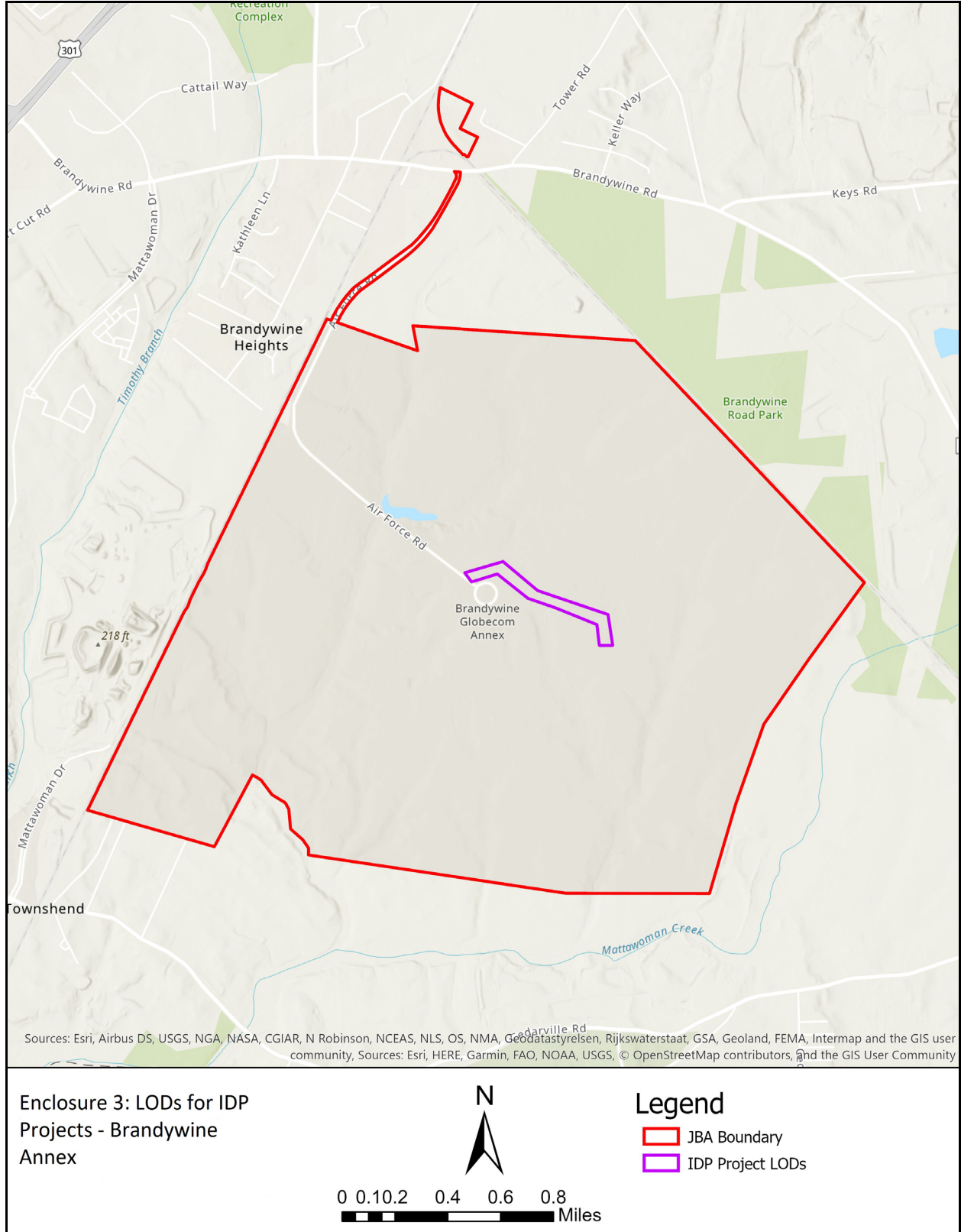
Enclosure 1: Location of Joint Base Andrews Main Installation and Brandywine Annex



Enclosure 2: Proposed Limits of Disturbance for IDP Projects – Main Installation



Enclosure 3: Proposed Limits of Disturbance for IDP Projects – Brandywine Annex



Enclosure 4: Tribal Mailing List

Ms. Deborah Dotson
President, Delaware Nation
31064 State Highway 281
Building 100
Anadarko, OK 73005

Mr. Chester L. Brooks
Chief, Delaware Tribe of Indians
601 High Street
Bartlesville, OK 74006

Mr. Raymond Halbritter
Tribal Representative
Oneida Indian Nation
2037 Dream Catcher Plaza
Oneida, NY 13421

Mr. Tehassi Hill
Tribal Chairman, Oneida Nation
P.O. Box 365
N7210 Seminary Road
Oneida, WI 54155-0365

Mr. Robert Gray
Chief, Pamunkey Indian Tribe
1054 Pocahontas Trail
King William, VA 23086

Mr. Leo R. Henry
Tribal Chief, Tuscarora Nation
2006 Mount Hope Road
Lewiston, NY 14092

Mr. Raymond Johnson
Tribal Governor
Absentee-Shawnee Tribe of Indians of
Oklahoma
2025 South Gordon Cooper Drive
Shawnee, OK 74801

Ms. Glenna Wallace
Tribal Chief
Eastern Shawnee Tribe of Oklahoma
127 W Oneida St.
Seneca, MO 64865

Ms. Sarah Channing
Chief, Seneca-Cayuga Nation
P.O. Box 453220
23701 S. 655 Rd.
Grove, OK 74344



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 316TH WING (AFDW)
JOINT BASE ANDREWS, MARYLAND 20762

June 11, 2021

Lt. Colonel Stewart L. Roundtree, USAF
Installation Tribal Liaison Officer
1500 West Perimeter Road
Joint Base Andrews, Maryland 20762-4803

Ms. Glenna Wallace
Tribal Chief
Eastern Shawnee Tribe of Oklahoma
127 W Oneida St.
Seneca, MO 64865

Dear Ms. Wallace,

I hope my correspondence finds you and your tribal members well. The Eastern Shawnee Tribe of Oklahoma was identified as a tribe that might have a connection to the area of Joint Base Andrews and is interested in understanding large construction projects on base. It is our understanding that you will review our Section 106 evaluation, Area of Potential Effect, and look at site/construction maps to help determine if the area might have cultural significance or possible remains.

With this in mind, I have enclosed information on a current undertaking: the Installation Development Plan (IDP), which includes 27 planned projects on the Joint Base Andrews main installation and the Brandywine Annex to the southeast. The IDP includes new construction, renovations, and demolition activities related to airfield operations, administrative functions, and infrastructure, such as stormwater features and drainage systems. The majority of the project sites are either currently developed or were previously developed. We want to ensure the Eastern Shawnee Tribe of Oklahoma has the opportunity to engage in consultation with the Air Force on this project.

We would appreciate a response as to whether the Eastern Shawnee Tribe of Oklahoma would like to engage in consultation on the IDP projects so that we may have documentation for our records, and to help facilitate a way forward. Please be assured that regardless of the Eastern Shawnee Tribe of Oklahoma's decision regarding consultation on the IDP projects, the Air Force will fully comply with all applicable laws and regulations in the event of an inadvertent discovery of archaeological or funerary objects and/or human remains.

The Air Force is dedicated to fulfilling its legal and regulatory obligations to engage in government-to-government consultation with the Eastern Shawnee Tribe of Oklahoma. We will continue to provide pre-construction information and requests for future assistance identifying any historic properties of religious and cultural significance related to construction projects or addressing remains which may be encountered during construction. Please provide a response

America's Airmen

within 30 days from the date of this letter to Mr. Ryan Soens, 316 CES/CEIE, 3466 North Carolina Avenue, Joint Base Andrews, Maryland 20762 or send via e-mail to ryan.soens.1@us.af.mil. If nothing is heard by this date, it will be taken as agreement with this action. If you need further information, please contact Mr. Soens at 202-409-8231.

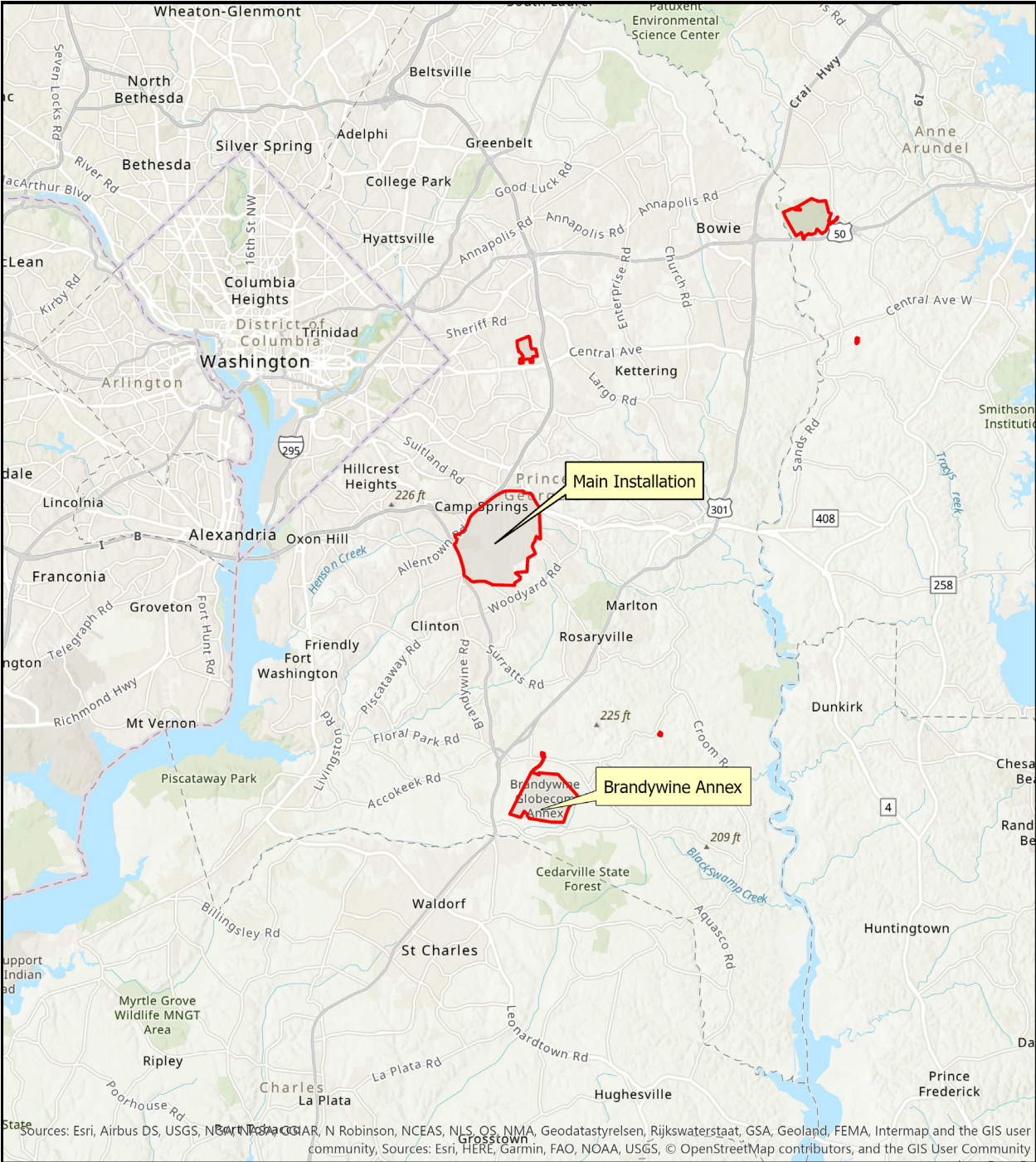
I look forward to having future correspondence with you to enhance the relationship between the base and the Eastern Shawnee Tribe of Oklahoma. Thank you for your assistance.

Sincerely,

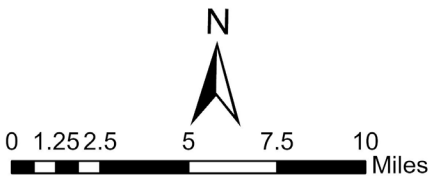
STEWART L. ROUNDTREE, Lt Col, USAF
Deputy Commander, 316th Mission Support Group

4 Enclosures

Enclosure 1: Location of Joint Base Andrews Main Installation and Brandywine Annex

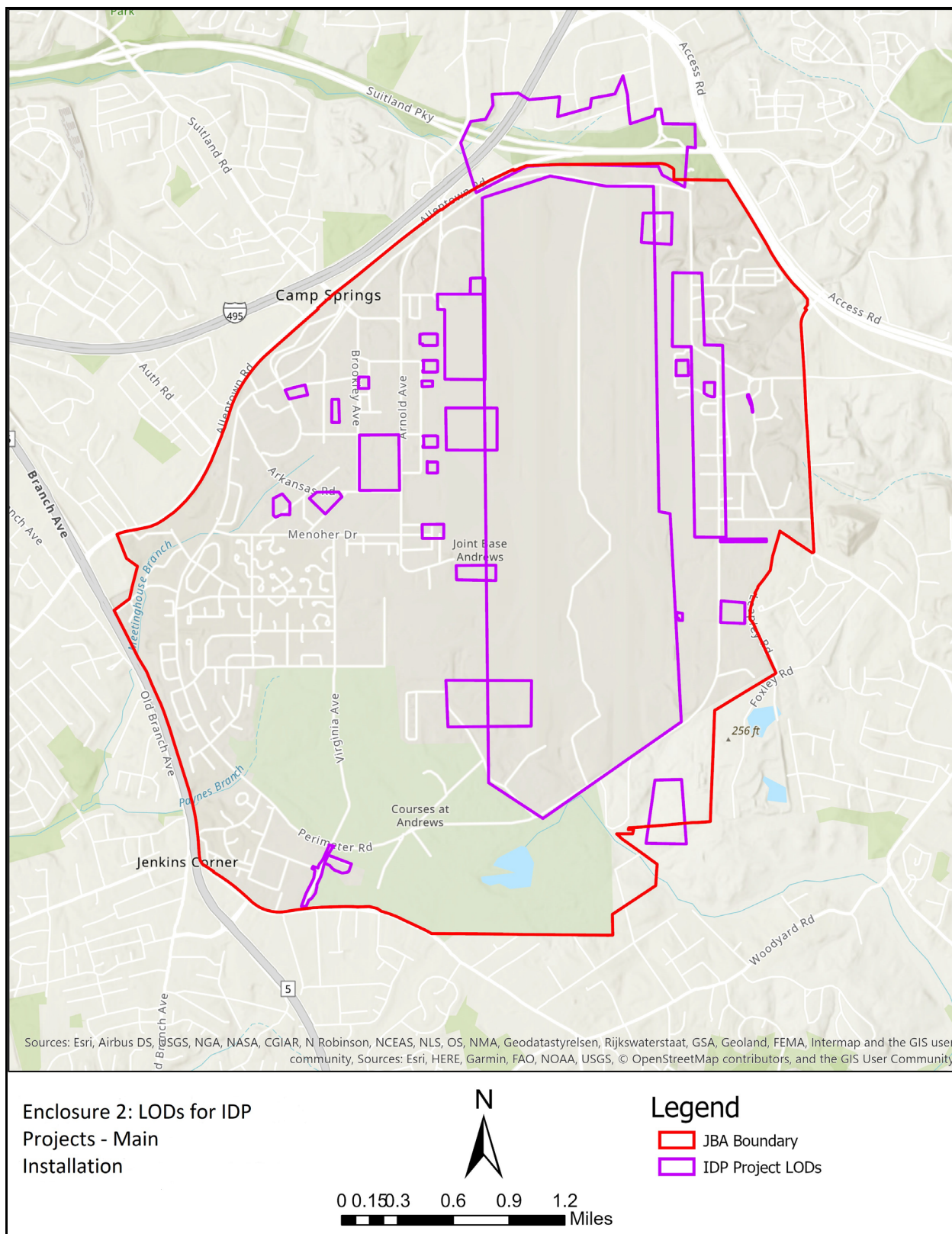


**Enclosure 1: Location of
JBA Main Installation and
Brandywine Annex**



Legend
[Red Outline] JBA Boundary

Enclosure 2: Proposed Limits of Disturbance for IDP Projects – Main Installation



Enclosure 3: Proposed Limits of Disturbance for IDP Projects – Brandywine Annex



Enclosure 4: Tribal Mailing List

Ms. Deborah Dotson
President, Delaware Nation
31064 State Highway 281
Building 100
Anadarko, OK 73005

Mr. Chester L. Brooks
Chief, Delaware Tribe of Indians
601 High Street
Bartlesville, OK 74006

Mr. Raymond Halbritter
Tribal Representative
Oneida Indian Nation
2037 Dream Catcher Plaza
Oneida, NY 13421

Mr. Tehassi Hill
Tribal Chairman, Oneida Nation
P.O. Box 365
N7210 Seminary Road
Oneida, WI 54155-0365

Mr. Robert Gray
Chief, Pamunkey Indian Tribe
1054 Pocahontas Trail
King William, VA 23086

Mr. Leo R. Henry
Tribal Chief, Tuscarora Nation
2006 Mount Hope Road
Lewiston, NY 14092

Mr. Raymond Johnson
Tribal Governor
Absentee-Shawnee Tribe of Indians of
Oklahoma
2025 South Gordon Cooper Drive
Shawnee, OK 74801

Ms. Glenna Wallace
Tribal Chief
Eastern Shawnee Tribe of Oklahoma
127 W Oneida St.
Seneca, MO 64865

Ms. Sarah Channing
Chief, Seneca-Cayuga Nation
P.O. Box 453220
23701 S. 655 Rd.
Grove, OK 74344



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 316TH WING (AFDW)
JOINT BASE ANDREWS, MARYLAND 20762

June 11, 2021

Lt. Colonel Stewart L. Roundtree, USAF
Installation Tribal Liaison Officer
1500 West Perimeter Road
Joint Base Andrews, Maryland 20762-4803

Mr. Raymond Halbritter
Tribal Representative
Oneida Indian Nation
2037 Dream Catcher Plaza
Oneida, NY 13421

Dear Mr. Halbritter,

I hope my correspondence finds you and your tribal members well. The Oneida Indian Nation was identified as a tribe that might have a connection to the area of Joint Base Andrews and is interested in understanding large construction projects on base. It is our understanding that you will review our Section 106 evaluation, Area of Potential Effect, and look at site/construction maps to help determine if the area might have cultural significance or possible remains.

With this in mind, I have enclosed information on a current undertaking: the Installation Development Plan (IDP), which includes 27 planned projects on the Joint Base Andrews main installation and the Brandywine Annex to the southeast. The IDP includes new construction, renovations, and demolition activities related to airfield operations, administrative functions, and infrastructure, such as stormwater features and drainage systems. The majority of the project sites are either currently developed or were previously developed. We want to ensure the Oneida Indian Nation has the opportunity to engage in consultation with the Air Force on this project.

We would appreciate a response as to whether the Oneida Indian Nation would like to engage in consultation on the IDP projects so that we may have documentation for our records, and to help facilitate a way forward. Please be assured that regardless of the Oneida Indian Nation's decision regarding consultation on the IDP projects, the Air Force will fully comply with all applicable laws and regulations in the event of an inadvertent discovery of archaeological or funerary objects and/or human remains.

The Air Force is dedicated to fulfilling its legal and regulatory obligations to engage in government-to-government consultation with the Oneida Indian Nation. We will continue to provide pre-construction information and requests for future assistance identifying any historic properties of religious and cultural significance related to construction projects or addressing remains which may be encountered during construction. Please provide a response within 30 days from the date of this letter to Mr. Ryan Soens, 316 CES/CEIE, 3466 North Carolina

America's Airmen

Avenue, Joint Base Andrews, Maryland 20762 or send via e-mail to ryan.soens.1@us.af.mil. If nothing is heard by this date, it will be taken as agreement with this action. If you need further information, please contact Mr. Soens at 202-409-8231.

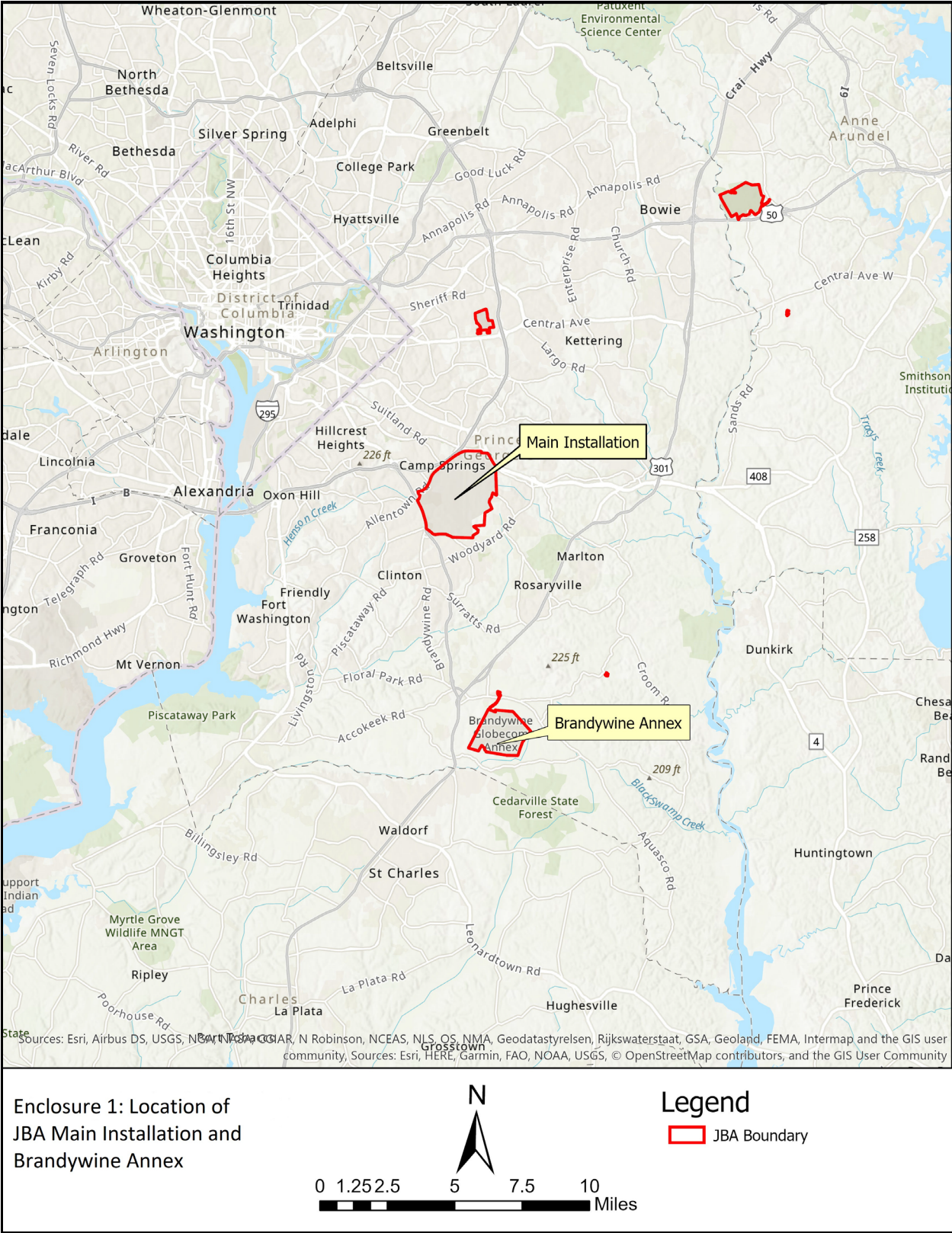
I look forward to having future correspondence with you to enhance the relationship between the base and the Oneida Indian Nation. Thank you for your assistance.

Sincerely,

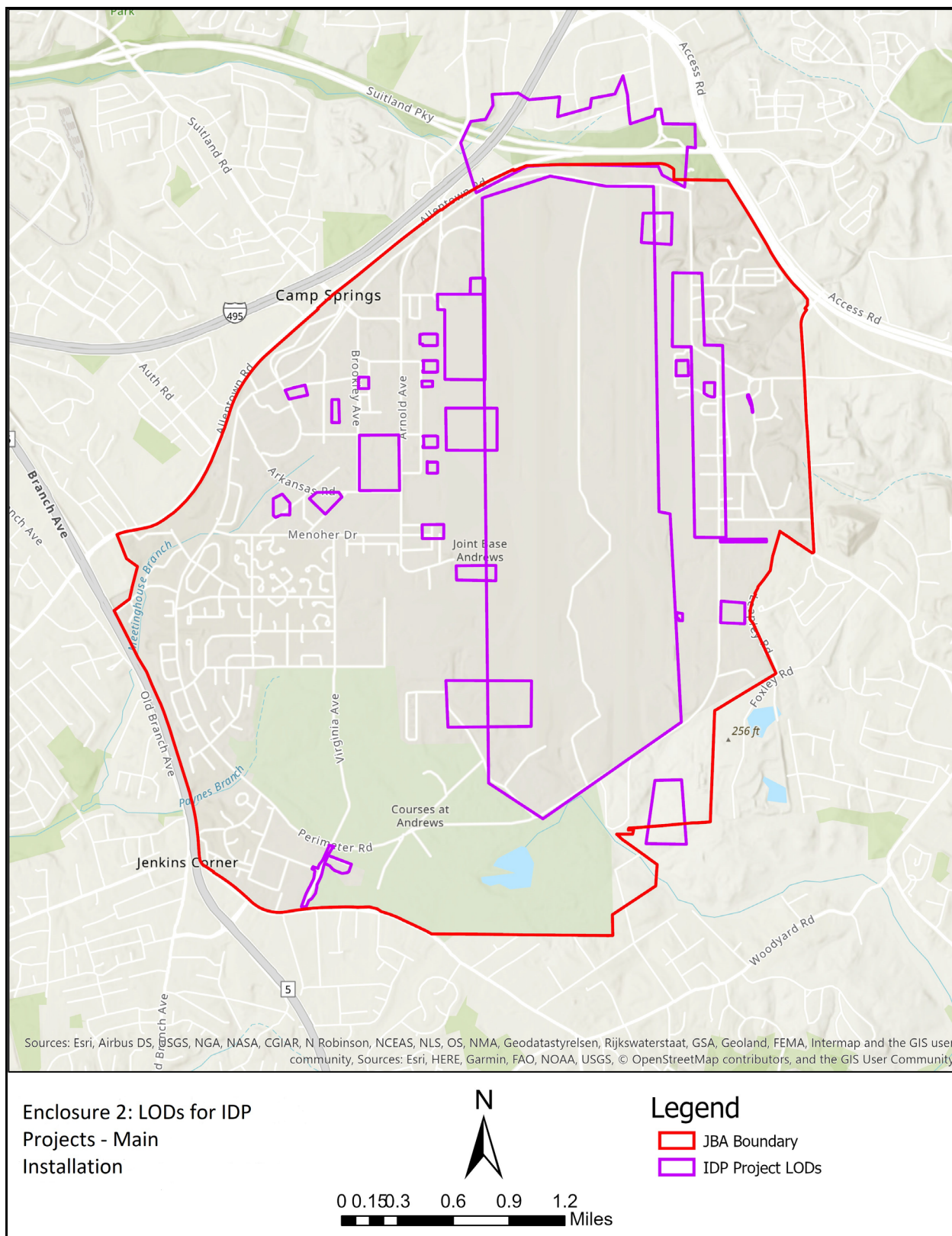
STEWART L. ROUNDTREE, Lt Col, USAF
Deputy Commander, 316th Mission Support Group

4 Enclosures

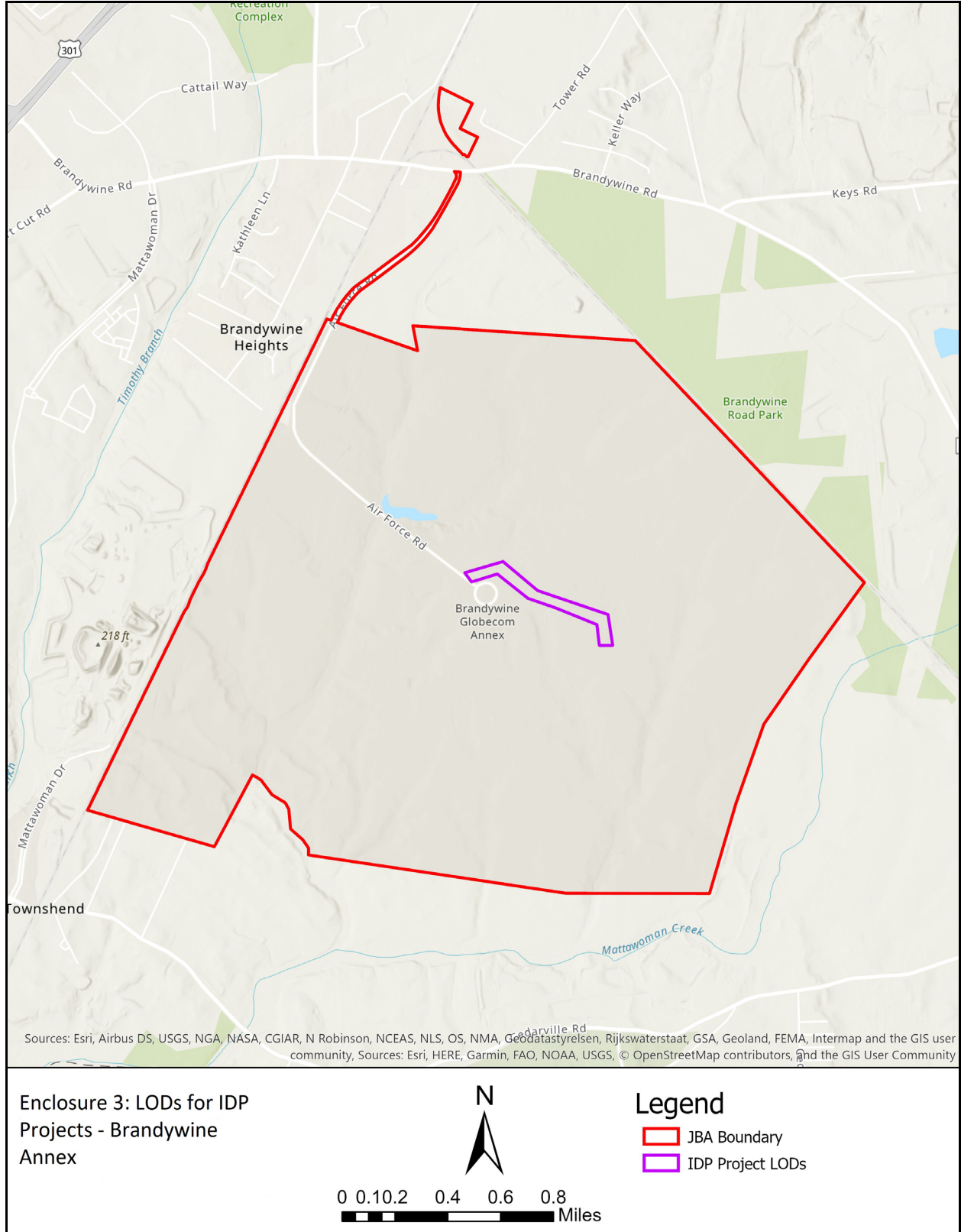
Enclosure 1: Location of Joint Base Andrews Main Installation and Brandywine Annex



Enclosure 2: Proposed Limits of Disturbance for IDP Projects – Main Installation



Enclosure 3: Proposed Limits of Disturbance for IDP Projects – Brandywine Annex



Enclosure 4: Tribal Mailing List

Ms. Deborah Dotson
President, Delaware Nation
31064 State Highway 281
Building 100
Anadarko, OK 73005

Mr. Chester L. Brooks
Chief, Delaware Tribe of Indians
601 High Street
Bartlesville, OK 74006

Mr. Raymond Halbritter
Tribal Representative
Oneida Indian Nation
2037 Dream Catcher Plaza
Oneida, NY 13421

Mr. Tehassi Hill
Tribal Chairman, Oneida Nation
P.O. Box 365
N7210 Seminary Road
Oneida, WI 54155-0365

Mr. Robert Gray
Chief, Pamunkey Indian Tribe
1054 Pocahontas Trail
King William, VA 23086

Mr. Leo R. Henry
Tribal Chief, Tuscarora Nation
2006 Mount Hope Road
Lewiston, NY 14092

Mr. Raymond Johnson
Tribal Governor
Absentee-Shawnee Tribe of Indians of
Oklahoma
2025 South Gordon Cooper Drive
Shawnee, OK 74801

Ms. Glenna Wallace
Tribal Chief
Eastern Shawnee Tribe of Oklahoma
127 W Oneida St.
Seneca, MO 64865

Ms. Sarah Channing
Chief, Seneca-Cayuga Nation
P.O. Box 453220
23701 S. 655 Rd.
Grove, OK 74344



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 316TH WING (AFDW)
JOINT BASE ANDREWS, MARYLAND 20762

June 11, 2021

Lt. Colonel Stewart L. Roundtree, USAF
Installation Tribal Liaison Officer
1500 West Perimeter Road
Joint Base Andrews, Maryland 20762-4803

Mr. Tehassi Hill
Tribal Chairman, Oneida Nation
P.O. Box 365
N7210 Seminary Road
Oneida, WI 54155-0365

Dear Mr. Hill,

I hope my correspondence finds you and your tribal members well. The Oneida Nation was identified as a tribe that might have a connection to the area of Joint Base Andrews and is interested in understanding large construction projects on base. It is our understanding that you will review our Section 106 evaluation, Area of Potential Effect, and look at site/construction maps to help determine if the area might have cultural significance or possible remains.

With this in mind, I have enclosed information on a current undertaking: the Installation Development Plan (IDP), which includes 27 planned projects on the Joint Base Andrews main installation and the Brandywine Annex to the southeast. The IDP includes new construction, renovations, and demolition activities related to airfield operations, administrative functions, and infrastructure, such as stormwater features and drainage systems. The majority of the project sites are either currently developed or were previously developed. We want to ensure the Oneida Nation has the opportunity to engage in consultation with the Air Force on this project.

We would appreciate a response as to whether the Oneida Nation would like to engage in consultation on the IDP projects so that we may have documentation for our records, and to help facilitate a way forward. Please be assured that regardless of the Oneida Nation's decision regarding consultation on the IDP projects, the Air Force will fully comply with all applicable laws and regulations in the event of an inadvertent discovery of archaeological or funerary objects and/or human remains.

The Air Force is dedicated to fulfilling its legal and regulatory obligations to engage in government-to-government consultation with the Oneida Nation. We will continue to provide pre-construction information and requests for future assistance identifying any historic properties of religious and cultural significance related to construction projects or addressing remains which may be encountered during construction. Please provide a response within 30 days from the date of this letter to Mr. Ryan Soens, 316 CES/CEIE, 3466 North Carolina Avenue, Joint Base Andrews, Maryland 20762 or send via e-mail to ryan.soens.1@us.af.mil. If nothing is heard by

America's Airmen

this date, it will be taken as agreement with this action. If you need further information, please contact Mr. Soens at 202-409-8231.

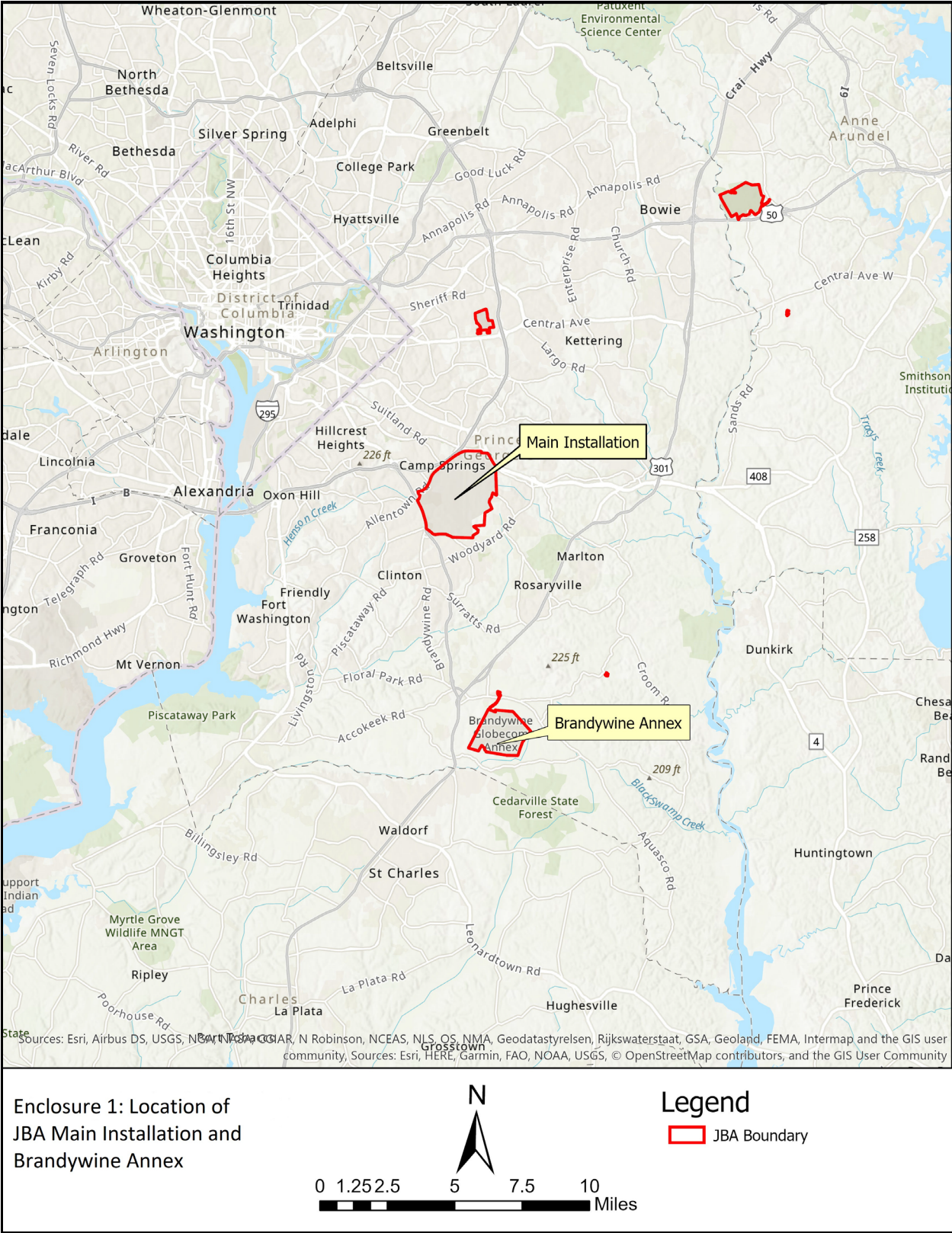
I look forward to having future correspondence with you to enhance the relationship between the base and the Oneida Nation. Thank you for your assistance.

Sincerely,

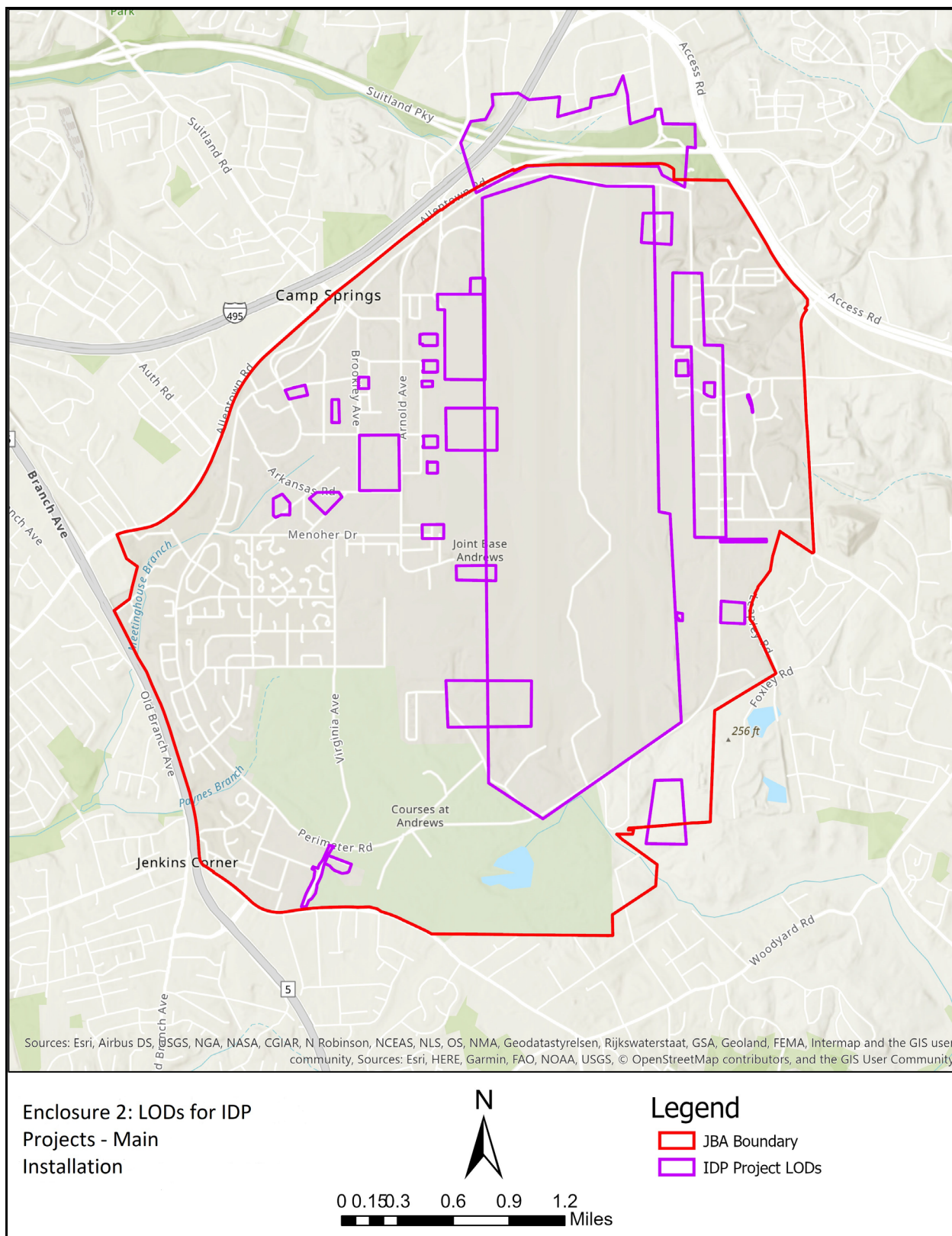
STEWART L. ROUNDTREE, Lt Col, USAF
Deputy Commander, 316th Mission Support Group

4 Enclosures

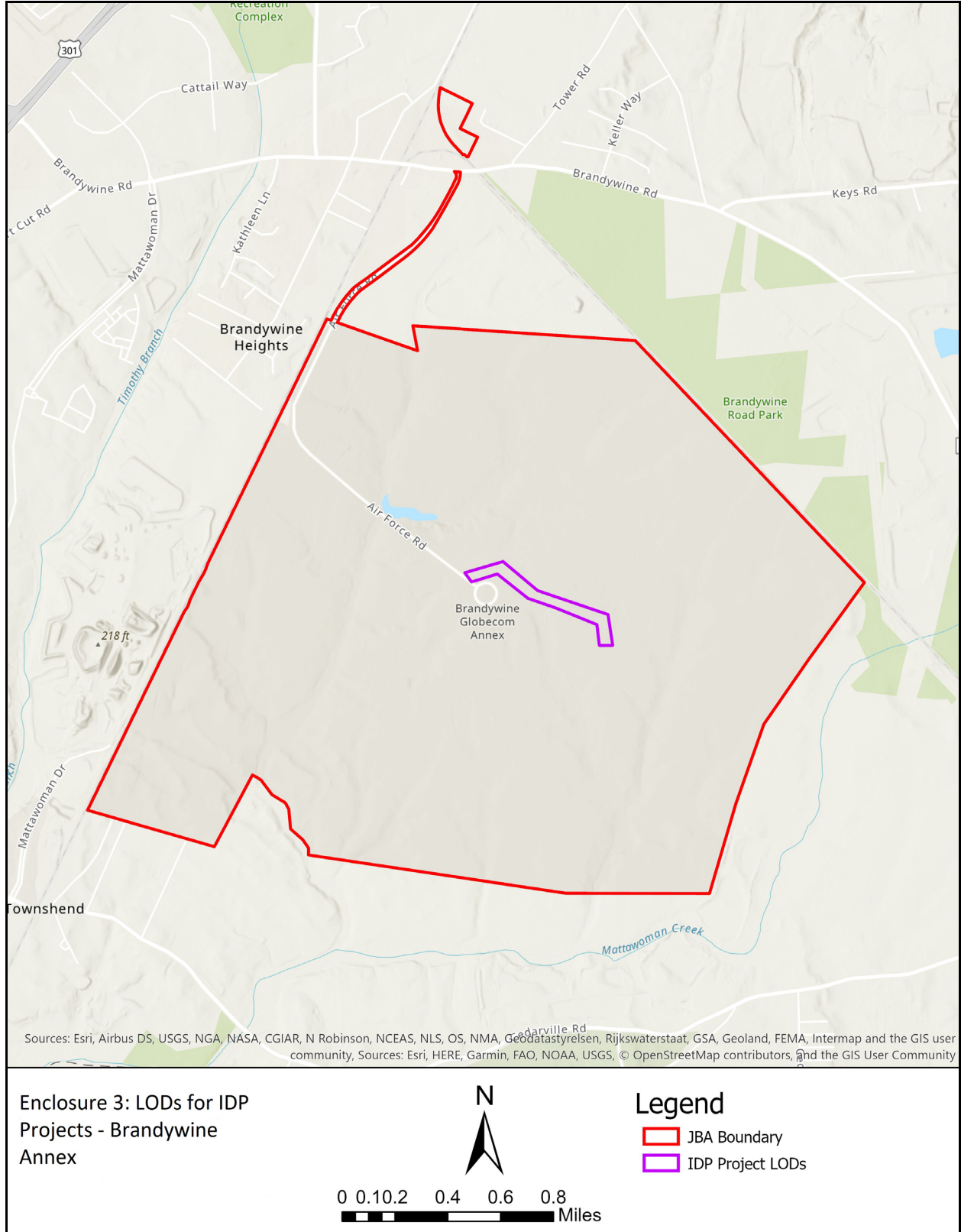
Enclosure 1: Location of Joint Base Andrews Main Installation and Brandywine Annex



Enclosure 2: Proposed Limits of Disturbance for IDP Projects – Main Installation



Enclosure 3: Proposed Limits of Disturbance for IDP Projects – Brandywine Annex



Enclosure 4: Tribal Mailing List

Ms. Deborah Dotson
President, Delaware Nation
31064 State Highway 281
Building 100
Anadarko, OK 73005

Mr. Chester L. Brooks
Chief, Delaware Tribe of Indians
601 High Street
Bartlesville, OK 74006

Mr. Raymond Halbritter
Tribal Representative
Oneida Indian Nation
2037 Dream Catcher Plaza
Oneida, NY 13421

Mr. Tehassi Hill
Tribal Chairman, Oneida Nation
P.O. Box 365
N7210 Seminary Road
Oneida, WI 54155-0365

Mr. Robert Gray
Chief, Pamunkey Indian Tribe
1054 Pocahontas Trail
King William, VA 23086

Mr. Leo R. Henry
Tribal Chief, Tuscarora Nation
2006 Mount Hope Road
Lewiston, NY 14092

Mr. Raymond Johnson
Tribal Governor
Absentee-Shawnee Tribe of Indians of
Oklahoma
2025 South Gordon Cooper Drive
Shawnee, OK 74801

Ms. Glenna Wallace
Tribal Chief
Eastern Shawnee Tribe of Oklahoma
127 W Oneida St.
Seneca, MO 64865

Ms. Sarah Channing
Chief, Seneca-Cayuga Nation
P.O. Box 453220
23701 S. 655 Rd.
Grove, OK 74344



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 316TH WING (AFDW)
JOINT BASE ANDREWS, MARYLAND 20762

June 11, 2021

Lt. Colonel Stewart L. Roundtree, USAF
Installation Tribal Liaison Officer
1500 West Perimeter Road
Joint Base Andrews, Maryland 20762-4803

Mr. Robert Gray
Chief, Pamunkey Indian Tribe
1054 Pocahontas Trail
King William, VA 23086

Dear Mr. Gray,

I hope my correspondence finds you and your tribal members well. The Pamunkey Indian Tribe was identified as a tribe that might have a connection to the area of Joint Base Andrews and is interested in understanding large construction projects on base. It is our understanding that you will review our Section 106 evaluation, Area of Potential Effect, and look at site/construction maps to help determine if the area might have cultural significance or possible remains.

With this in mind, I have enclosed information on a current undertaking: the Installation Development Plan (IDP), which includes 27 planned projects on the Joint Base Andrews main installation and the Brandywine Annex to the southeast. The IDP includes new construction, renovations, and demolition activities related to airfield operations, administrative functions, and infrastructure, such as stormwater features and drainage systems. The majority of the project sites are either currently developed or were previously developed. We want to ensure the Pamunkey Indian Tribe has the opportunity to engage in consultation with the Air Force on this project.

We would appreciate a response as to whether the Pamunkey Indian Tribe would like to engage in consultation on the IDP projects so that we may have documentation for our records, and to help facilitate a way forward. Please be assured that regardless of the Pamunkey Indian Tribe's decision regarding consultation on the IDP projects, the Air Force will fully comply with all applicable laws and regulations in the event of an inadvertent discovery of archaeological or funerary objects and/or human remains.

The Air Force is dedicated to fulfilling its legal and regulatory obligations to engage in government-to-government consultation with the Pamunkey Indian Tribe. We will continue to provide pre-construction information and requests for future assistance identifying any historic properties of religious and cultural significance related to construction projects or addressing remains which may be encountered during construction. Please provide a response within 30 days from the date of this letter to Mr. Ryan Soens, 316 CES/CEIE, 3466 North Carolina

America's Airmen

Avenue, Joint Base Andrews, Maryland 20762 or send via e-mail to ryan.soens.1@us.af.mil. If nothing is heard by this date, it will be taken as agreement with this action. If you need further information, please contact Mr. Soens at 202-409-8231.

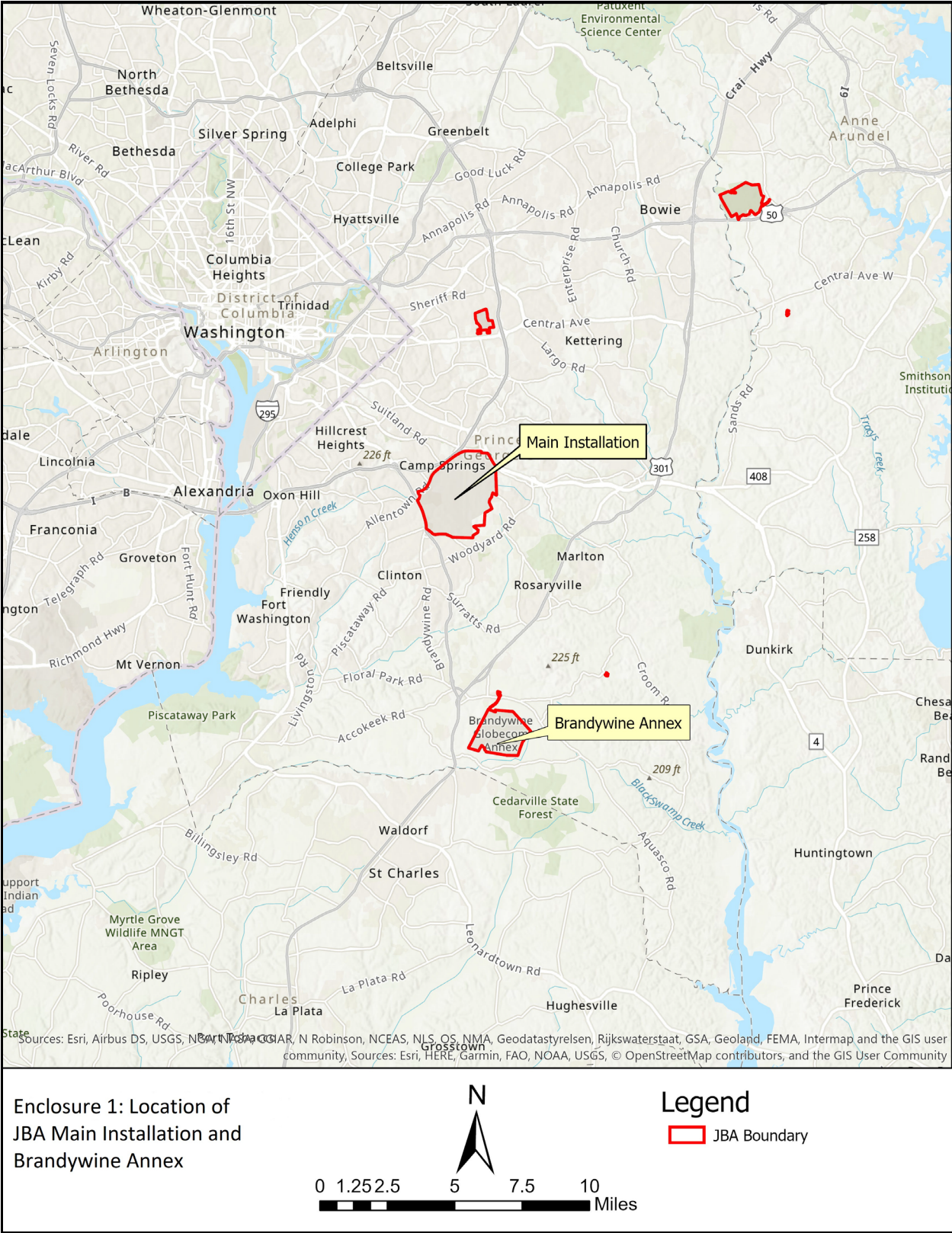
I look forward to having future correspondence with you to enhance the relationship between the base and the Pamunkey Indian Tribe. Thank you for your assistance.

Sincerely,

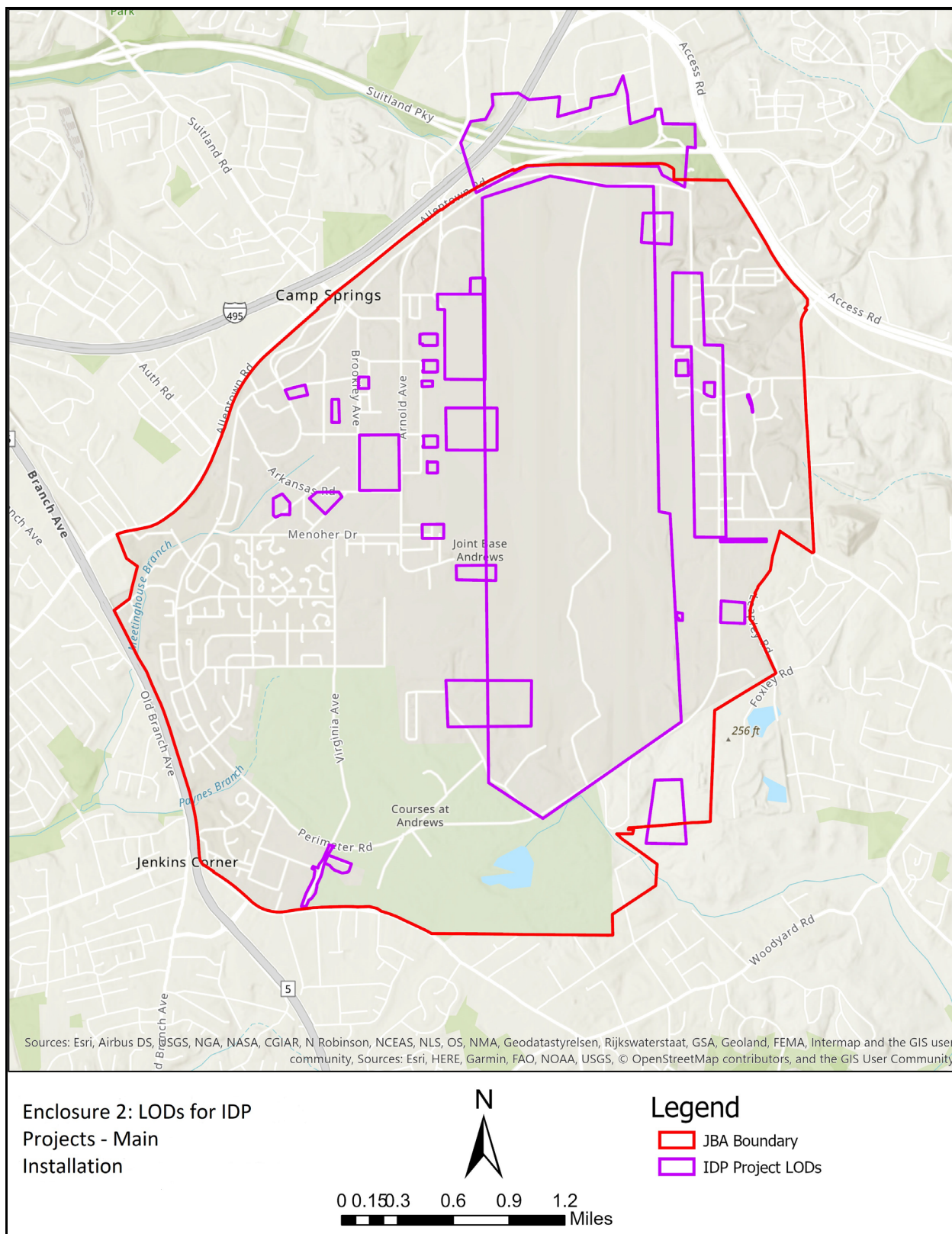
STEWART L. ROUNDTREE, Lt Col, USAF
Deputy Commander, 316th Mission Support Group

4 Enclosures

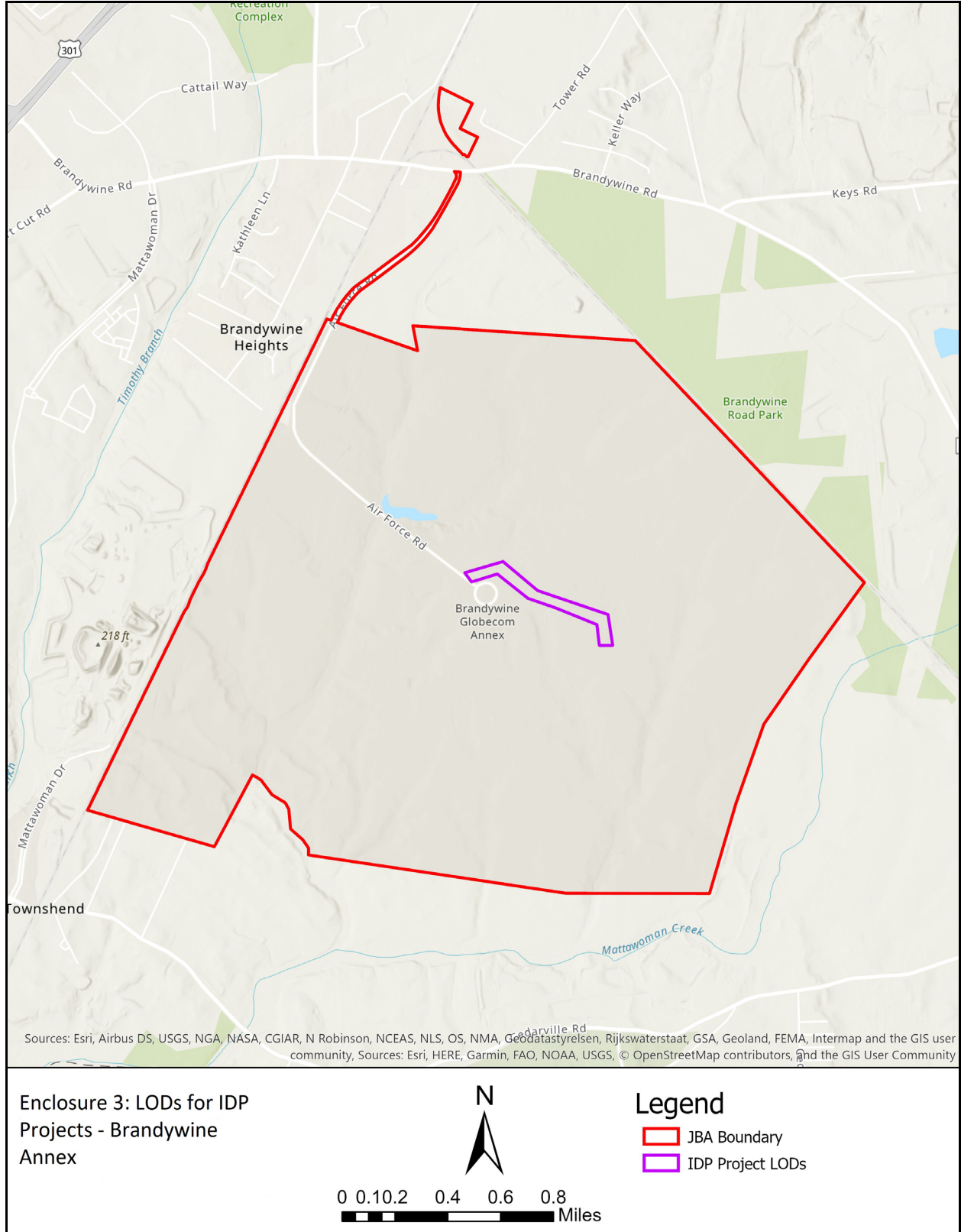
Enclosure 1: Location of Joint Base Andrews Main Installation and Brandywine Annex



Enclosure 2: Proposed Limits of Disturbance for IDP Projects – Main Installation



Enclosure 3: Proposed Limits of Disturbance for IDP Projects – Brandywine Annex



Enclosure 4: Tribal Mailing List

Ms. Deborah Dotson
President, Delaware Nation
31064 State Highway 281
Building 100
Anadarko, OK 73005

Mr. Chester L. Brooks
Chief, Delaware Tribe of Indians
601 High Street
Bartlesville, OK 74006

Mr. Raymond Halbritter
Tribal Representative
Oneida Indian Nation
2037 Dream Catcher Plaza
Oneida, NY 13421

Mr. Tehassi Hill
Tribal Chairman, Oneida Nation
P.O. Box 365
N7210 Seminary Road
Oneida, WI 54155-0365

Mr. Robert Gray
Chief, Pamunkey Indian Tribe
1054 Pocahontas Trail
King William, VA 23086

Mr. Leo R. Henry
Tribal Chief, Tuscarora Nation
2006 Mount Hope Road
Lewiston, NY 14092

Mr. Raymond Johnson
Tribal Governor
Absentee-Shawnee Tribe of Indians of
Oklahoma
2025 South Gordon Cooper Drive
Shawnee, OK 74801

Ms. Glenna Wallace
Tribal Chief
Eastern Shawnee Tribe of Oklahoma
127 W Oneida St.
Seneca, MO 64865

Ms. Sarah Channing
Chief, Seneca-Cayuga Nation
P.O. Box 453220
23701 S. 655 Rd.
Grove, OK 74344



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 316TH WING (AFDW)
JOINT BASE ANDREWS, MARYLAND 20762

June 11, 2021

Lt. Colonel Stewart L. Roundtree, USAF
Installation Tribal Liaison Officer
1500 West Perimeter Road
Joint Base Andrews, Maryland 20762-4803

Ms. Sarah Channing
Chief, Seneca-Cayuga Nation
P.O. Box 453220
23701 S. 655 Rd.
Grove, OK 74344

Dear Ms. Channing,

I hope my correspondence finds you and your tribal members well. The Seneca-Cayuga Nation was identified as a tribe that might have a connection to the area of Joint Base Andrews and is interested in understanding large construction projects on base. It is our understanding that you will review our Section 106 evaluation, Area of Potential Effect, and look at site/construction maps to help determine if the area might have cultural significance or possible remains.

With this in mind, I have enclosed information on a current undertaking: the Installation Development Plan (IDP), which includes 27 planned projects on the Joint Base Andrews main installation and the Brandywine Annex to the southeast. The IDP includes new construction, renovations, and demolition activities related to airfield operations, administrative functions, and infrastructure, such as stormwater features and drainage systems. The majority of the project sites are either currently developed or were previously developed. We want to ensure the Seneca-Cayuga Nation has the opportunity to engage in consultation with the Air Force on this project.

We would appreciate a response as to whether the Seneca-Cayuga Nation would like to engage in consultation on the IDP projects so that we may have documentation for our records, and to help facilitate a way forward. Please be assured that regardless of the Seneca-Cayuga Nation's decision regarding consultation on the IDP projects, the Air Force will fully comply with all applicable laws and regulations in the event of an inadvertent discovery of archaeological or funerary objects and/or human remains.

The Air Force is dedicated to fulfilling its legal and regulatory obligations to engage in government-to-government consultation with the Seneca-Cayuga Nation. We will continue to provide pre-construction information and requests for future assistance identifying any historic properties of religious and cultural significance related to construction projects or addressing remains which may be encountered during construction. Please provide a response within 30 days from the date of this letter to Mr. Ryan Soens, 316 CES/CEIE, 3466 North Carolina

America's Airmen

Avenue, Joint Base Andrews, Maryland 20762 or send via e-mail to ryan.soens.1@us.af.mil. If nothing is heard by this date, it will be taken as agreement with this action. If you need further information, please contact Mr. Soens at 202-409-8231.

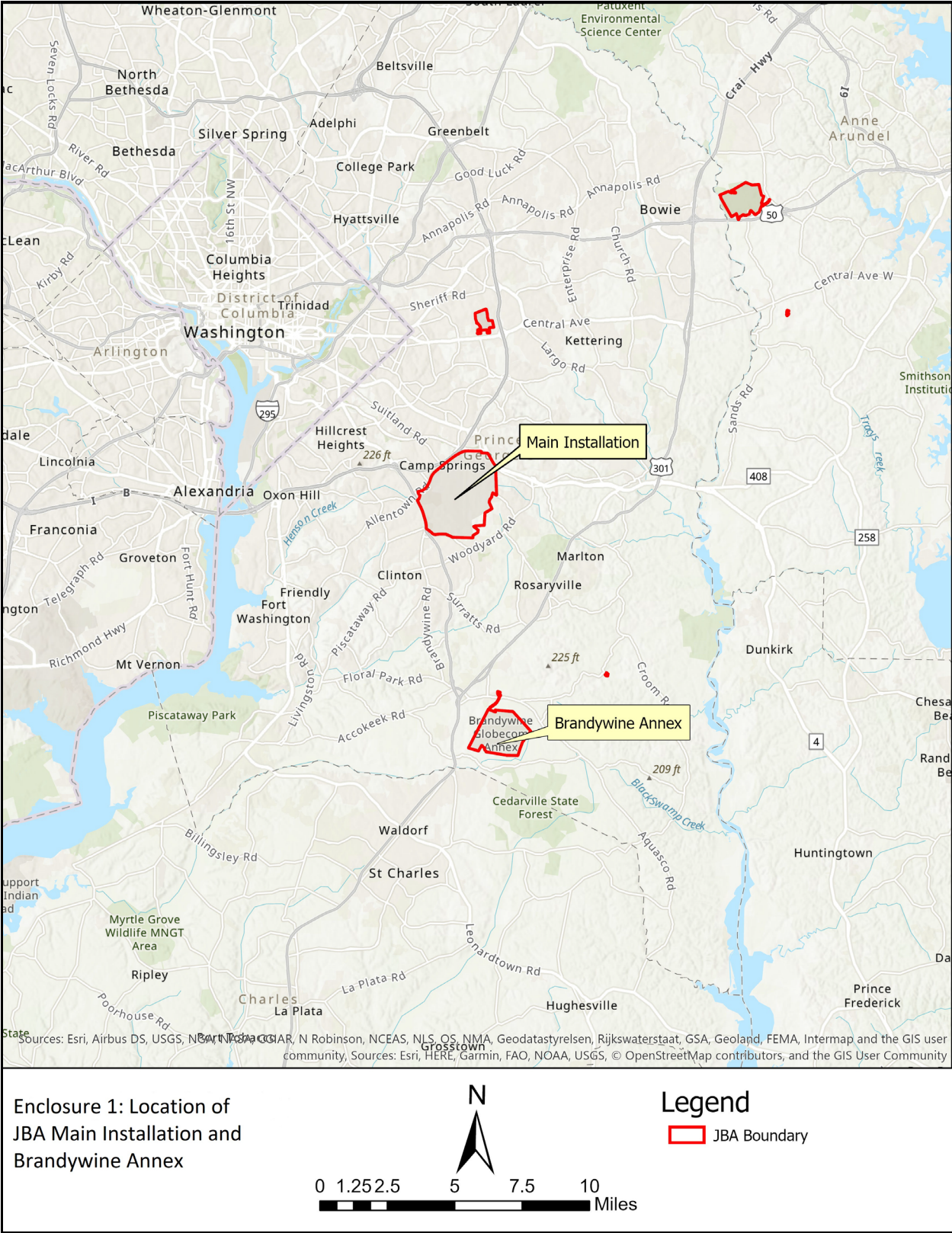
I look forward to having future correspondence with you to enhance the relationship between the base and the Seneca-Cayuga Nation. Thank you for your assistance.

Sincerely,

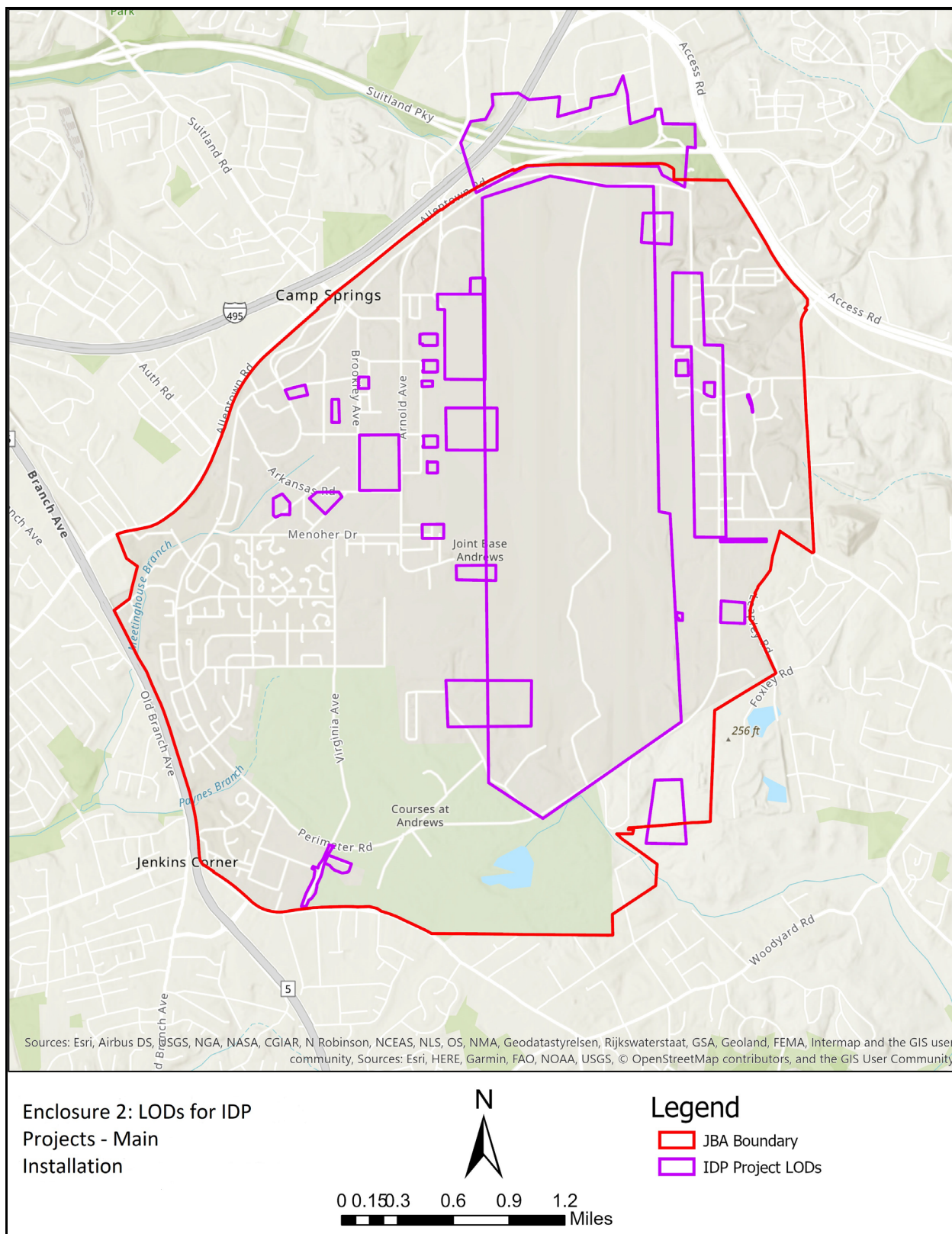
STEWART L. ROUNDTREE, Lt Col, USAF
Deputy Commander, 316th Mission Support Group

4 Enclosures

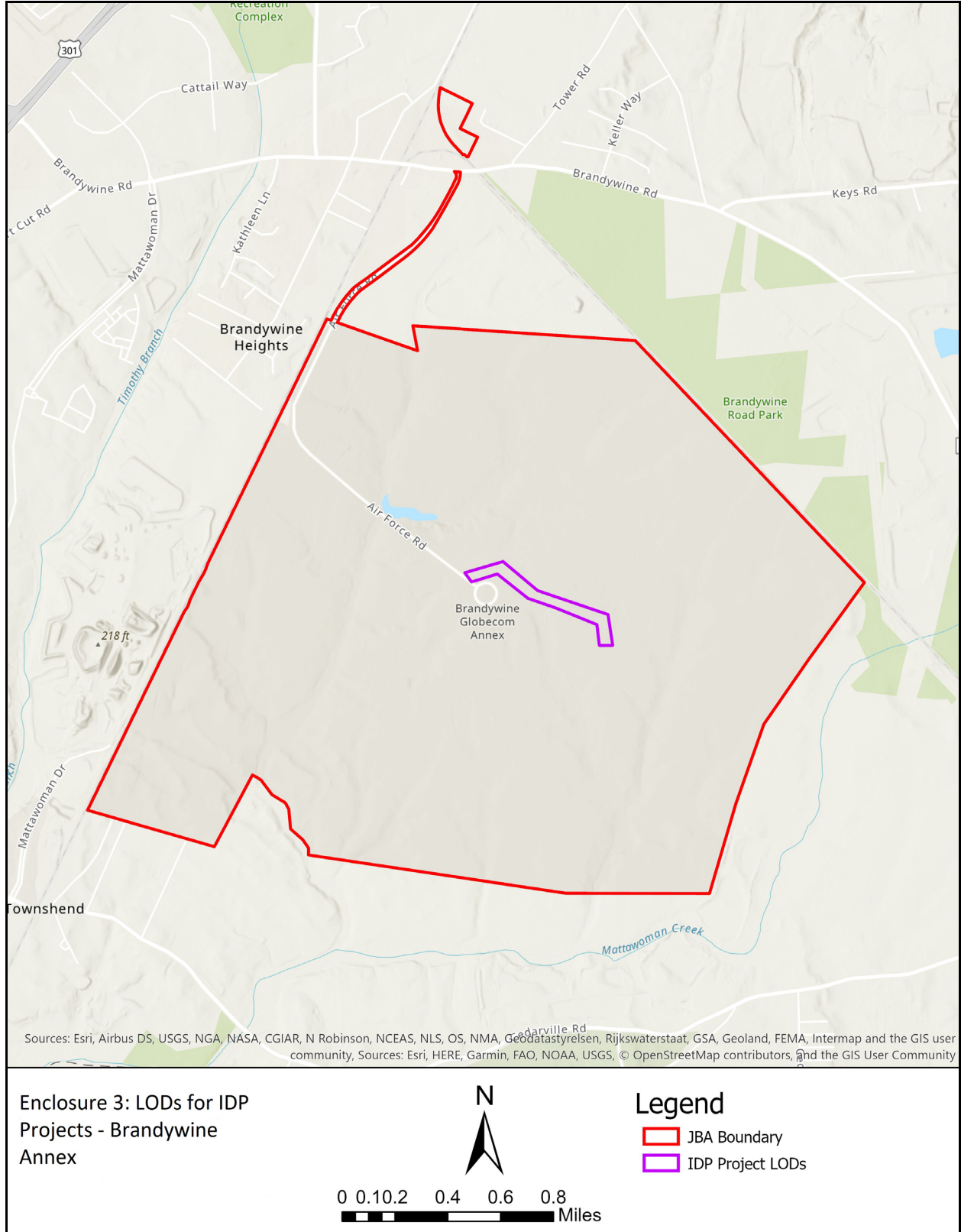
Enclosure 1: Location of Joint Base Andrews Main Installation and Brandywine Annex



Enclosure 2: Proposed Limits of Disturbance for IDP Projects – Main Installation



Enclosure 3: Proposed Limits of Disturbance for IDP Projects – Brandywine Annex



Enclosure 4: Tribal Mailing List

Ms. Deborah Dotson
President, Delaware Nation
31064 State Highway 281
Building 100
Anadarko, OK 73005

Mr. Chester L. Brooks
Chief, Delaware Tribe of Indians
601 High Street
Bartlesville, OK 74006

Mr. Raymond Halbritter
Tribal Representative
Oneida Indian Nation
2037 Dream Catcher Plaza
Oneida, NY 13421

Mr. Tehassi Hill
Tribal Chairman, Oneida Nation
P.O. Box 365
N7210 Seminary Road
Oneida, WI 54155-0365

Mr. Robert Gray
Chief, Pamunkey Indian Tribe
1054 Pocahontas Trail
King William, VA 23086

Mr. Leo R. Henry
Tribal Chief, Tuscarora Nation
2006 Mount Hope Road
Lewiston, NY 14092

Mr. Raymond Johnson
Tribal Governor
Absentee-Shawnee Tribe of Indians of
Oklahoma
2025 South Gordon Cooper Drive
Shawnee, OK 74801

Ms. Glenna Wallace
Tribal Chief
Eastern Shawnee Tribe of Oklahoma
127 W Oneida St.
Seneca, MO 64865

Ms. Sarah Channing
Chief, Seneca-Cayuga Nation
P.O. Box 453220
23701 S. 655 Rd.
Grove, OK 74344



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 316TH WING (AFDW)
JOINT BASE ANDREWS, MARYLAND 20762

June 11, 2021

Lt. Colonel Stewart L. Roundtree, USAF
Installation Tribal Liaison Officer
1500 West Perimeter Road
Joint Base Andrews, Maryland 20762-4803

Mr. Leo R. Henry
Tribal Chief, Tuscarora Nation
2006 Mount Hope Road
Lewiston, NY 14092

Dear Mr. Henry,

I hope my correspondence finds you and your tribal members well. The Tuscarora Nation was identified as a tribe that might have a connection to the area of Joint Base Andrews and is interested in understanding large construction projects on base. It is our understanding that you will review our Section 106 evaluation, Area of Potential Effect, and look at site/construction maps to help determine if the area might have cultural significance or possible remains.

With this in mind, I have enclosed information on a current undertaking: the Installation Development Plan (IDP), which includes 27 planned projects on the Joint Base Andrews main installation and the Brandywine Annex to the southeast. The IDP includes new construction, renovations, and demolition activities related to airfield operations, administrative functions, and infrastructure, such as stormwater features and drainage systems. The majority of the project sites are either currently developed or were previously developed. We want to ensure the Tuscarora Nation has the opportunity to engage in consultation with the Air Force on this project.

We would appreciate a response as to whether the Tuscarora Nation would like to engage in consultation on the IDP projects so that we may have documentation for our records, and to help facilitate a way forward. Please be assured that regardless of the Tuscarora Nation's decision regarding consultation on the IDP projects, the Air Force will fully comply with all applicable laws and regulations in the event of an inadvertent discovery of archaeological or funerary objects and/or human remains.

The Air Force is dedicated to fulfilling its legal and regulatory obligations to engage in government-to-government consultation with the Tuscarora Nation. We will continue to provide pre-construction information and requests for future assistance identifying any historic properties of religious and cultural significance related to construction projects or addressing remains which may be encountered during construction. Please provide a response within 30 days from the date of this letter to Mr. Ryan Soens, 316 CES/CEIE, 3466 North Carolina Avenue, Joint Base Andrews, Maryland 20762 or send via e-mail to ryan.soens.1@us.af.mil. If nothing is heard by

America's Airmen

this date, it will be taken as agreement with this action. If you need further information, please contact Mr. Soens at 202-409-8231.

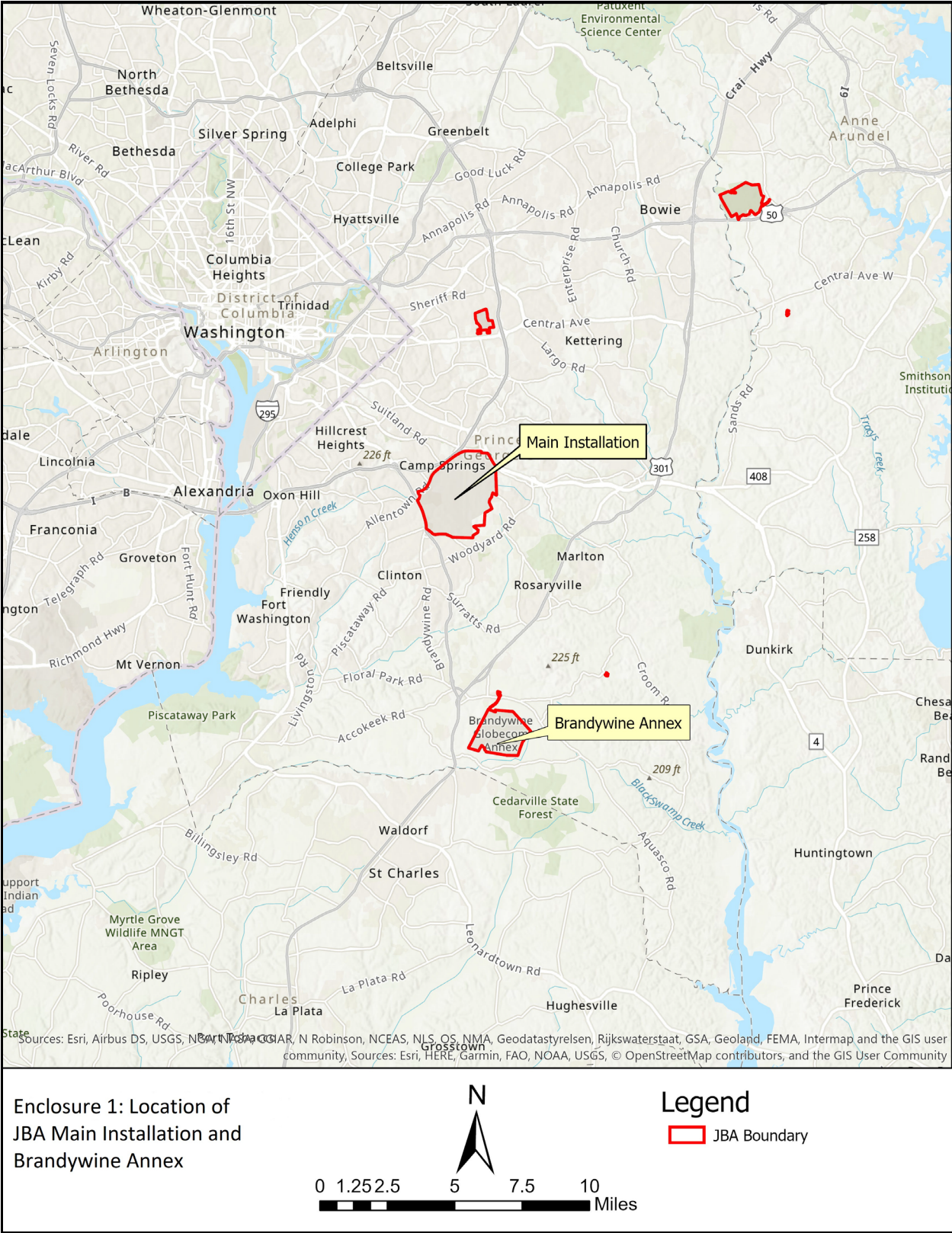
I look forward to having future correspondence with you to enhance the relationship between the base and the Tuscarora Nation. Thank you for your assistance.

Sincerely,

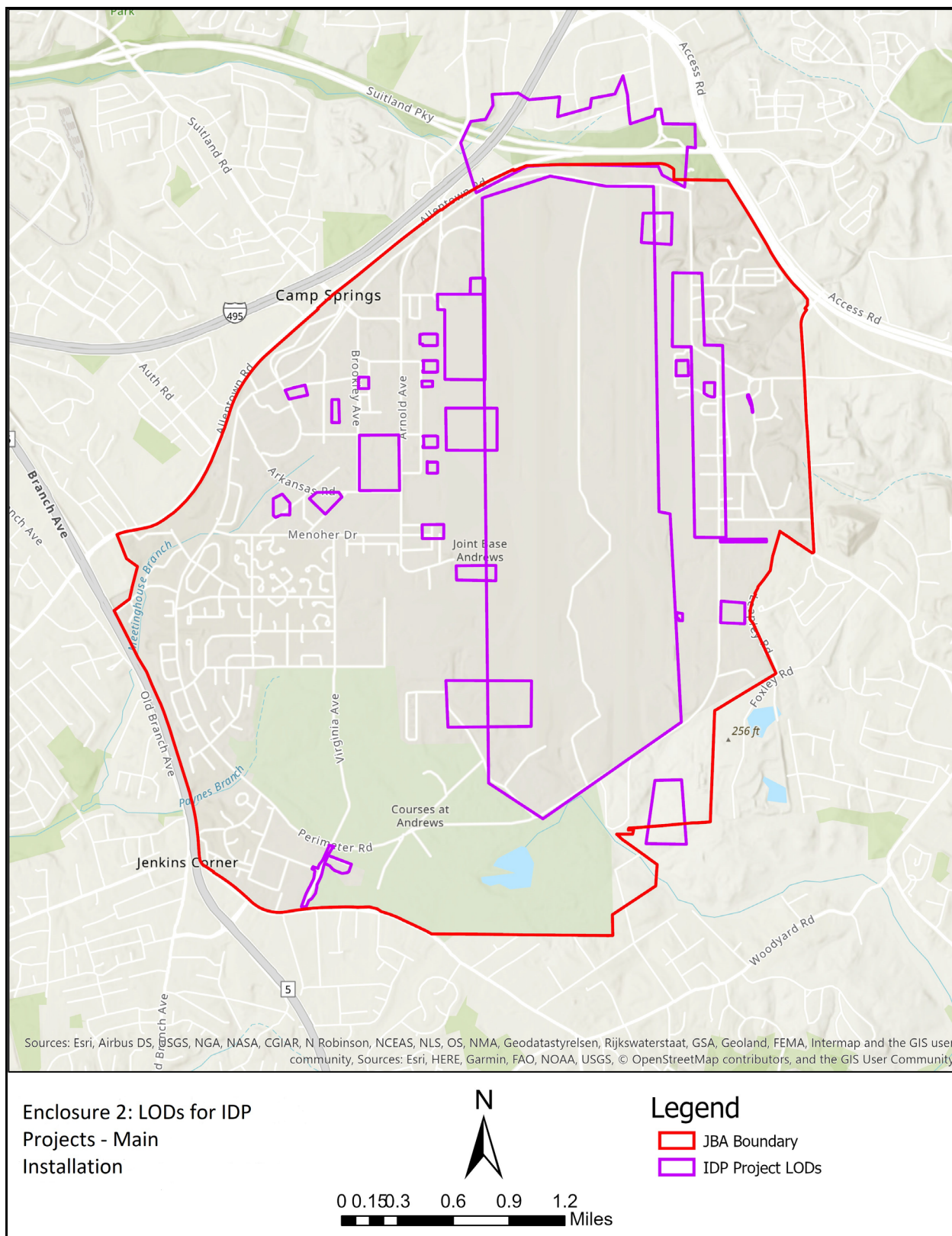
STEWART L. ROUNDTREE, Lt Col, USAF
Deputy Commander, 316th Mission Support Group

4 Enclosures

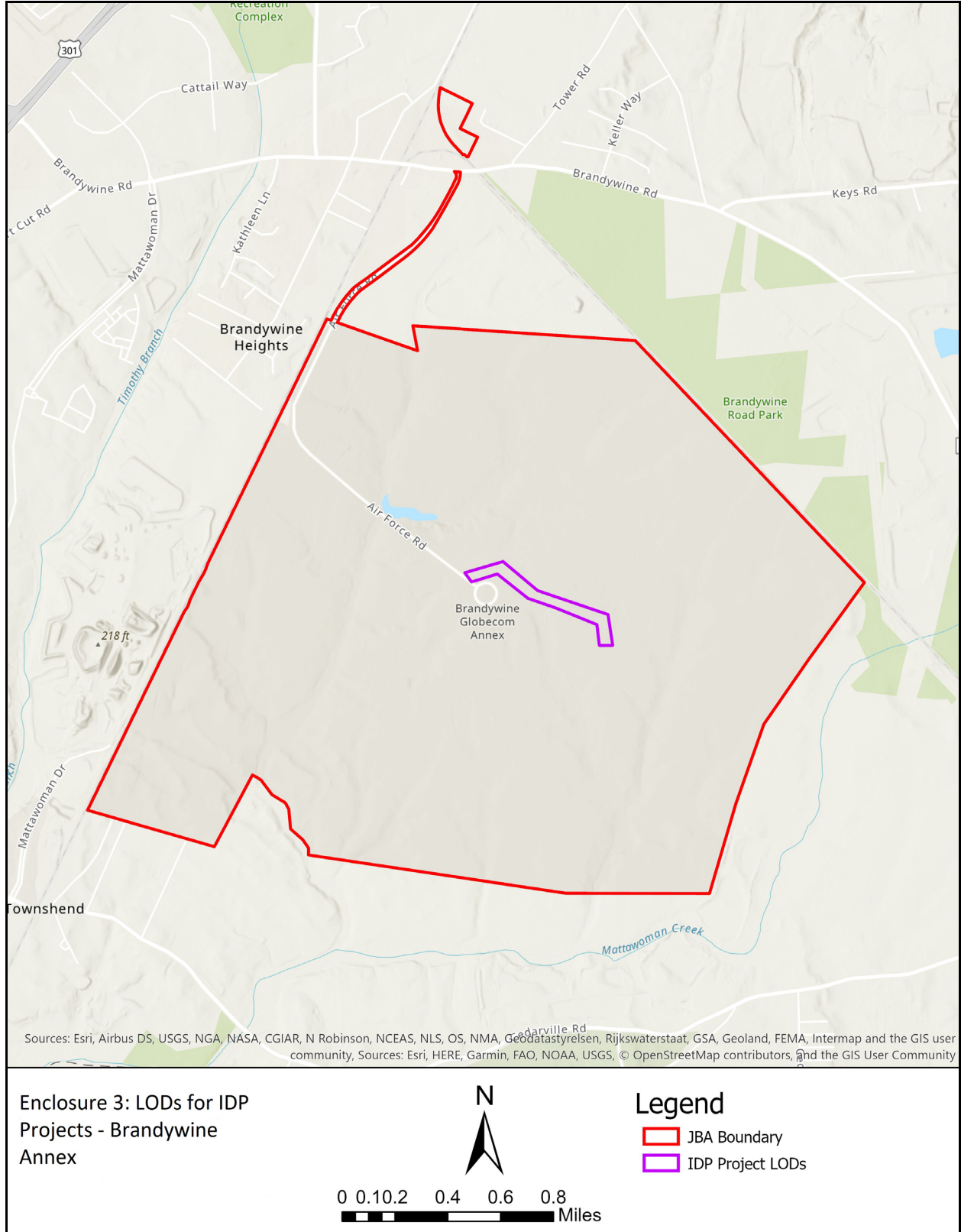
Enclosure 1: Location of Joint Base Andrews Main Installation and Brandywine Annex



Enclosure 2: Proposed Limits of Disturbance for IDP Projects – Main Installation



Enclosure 3: Proposed Limits of Disturbance for IDP Projects – Brandywine Annex



Enclosure 4: Tribal Mailing List

Ms. Deborah Dotson
President, Delaware Nation
31064 State Highway 281
Building 100
Anadarko, OK 73005

Mr. Chester L. Brooks
Chief, Delaware Tribe of Indians
601 High Street
Bartlesville, OK 74006

Mr. Raymond Halbritter
Tribal Representative
Oneida Indian Nation
2037 Dream Catcher Plaza
Oneida, NY 13421

Mr. Tehassi Hill
Tribal Chairman, Oneida Nation
P.O. Box 365
N7210 Seminary Road
Oneida, WI 54155-0365

Mr. Robert Gray
Chief, Pamunkey Indian Tribe
1054 Pocahontas Trail
King William, VA 23086

Mr. Leo R. Henry
Tribal Chief, Tuscarora Nation
2006 Mount Hope Road
Lewiston, NY 14092

Mr. Raymond Johnson
Tribal Governor
Absentee-Shawnee Tribe of Indians of
Oklahoma
2025 South Gordon Cooper Drive
Shawnee, OK 74801

Ms. Glenna Wallace
Tribal Chief
Eastern Shawnee Tribe of Oklahoma
127 W Oneida St.
Seneca, MO 64865

Ms. Sarah Channing
Chief, Seneca-Cayuga Nation
P.O. Box 453220
23701 S. 655 Rd.
Grove, OK 74344



Maryland DEPARTMENT OF PLANNING

August 19, 2021

Mr. Ryan Soens, Acting Chief, Environmental Compliance
Department of the Air Force
316 CES/CEIE
3466 North Carolina Avenue
Joint Base Andrews, MD 20762

STATE CLEARINGHOUSE REVIEW PROCESS

State Application Identifier: MD20210811-0664

Reviewer Comments Due By: September 15, 2021

Project Description: Environmental Assessment (EA): Joint Base Andrews-Naval Air Facility (JBA)
Implementation of its Five-Year Installation Development Plan (IDP) with 27 Individual Projects,
Including Construction, Renovation, and Demolition Projects for a Total of 4,756.49 Acres of
Disturbance

Project Address: Joint Base Andrews-Naval Air Facility, Joint Base Andrews, MD 20762

Project Location: Prince George's County

Clearinghouse Contact: Sylvia Mosser

Dear Mr. Soens:

Thank you for submitting your project for intergovernmental review. Participation in the Maryland Intergovernmental Review and Coordination (MIRC) process helps ensure project consistency with plans, programs, and objectives of State agencies and local governments. MIRC enhances opportunities for approval and/or funding and minimizes delays by resolving issues before project implementation.

Maryland Gubernatorial Executive Order 01.01.1998.04, Smart Growth and Neighborhood Conservation Policy, encourages federal agencies to adopt flexible standards that support "Smart Growth." In addition, Federal Executive Order 12072, Federal Space Management, directs federal agencies to locate facilities in urban areas. Consideration of these two Orders should be taken prior to making final site selections. A copy of Maryland Gubernatorial Executive Order 01.01.1998.04, Smart Growth and Neighborhood Conservation Policy is available upon request.

We have forwarded your project to the following agencies and/or jurisdictions for their review and comments: the Maryland Departments of Transportation, the Environment, Natural Resources, and General Services; the Maryland Military Department; Prince George's County; the Metropolitan Washington Council of Governments; the Maryland-National Capital Park and Planning Commission in Prince George's County; and the Maryland Department of Planning, including the Maryland Historical Trust. A composite review and recommendation letter will be sent to you by the reply due date. Your project has been assigned a unique State Application Identifier that you should use on all documents and correspondence. Please be assured that we will expeditiously process your project.

Mr. Ryan Soens
Page 2
State Application Identifier #: MD20210811-0664

If you need assistance or have questions, contact the State Clearinghouse staff noted above at 410-767-4490 or through e-mail at sylvia.mosser@maryland.gov. Thank you for your cooperation with the MIRC process.

Sincerely,

A handwritten signature in blue ink, appearing to read "Myra A. Barnes", is written over a horizontal line.

Myra A. Barnes
Lead Clearinghouse Coordinator

JD:SM

cc: Ms. Marisa Wetmore, Biologist, U.S. Army Corps of Engineers, Baltimore District

21-0664_NFP.NEW.docx



Maryland
DEPARTMENT OF PLANNING
MARYLAND HISTORICAL TRUST

August 20, 2021

Ryan Soens
Acting Chief, Environmental Compliance
Directorate of Public Works
Department of the Air Force
Headquarters 316th Wing (AFDW)
Joint Base Andrews, MD 20762

Sent via email to: ryan.soens.1@us.af.mil

Re: Joint Base Andrews – Naval Air Facility (JBA)
EA for Implementation of Five-Year Installation Development Plan (IDP)
Prince George's County, MD
Section 106 Historic Preservation Review

Dear Mr. Soens:

Thank you for your recent letter, dated August 11, 2021 and received by the Maryland Historical Trust (Trust) on August 12, 2021, notifying and inviting our agency to comment on the above-referenced action. As noted in your letter, the Trust - as Maryland's State Historic Preservation Office, will be involved in the review of proposed actions within the IDP for effects on historic properties, pursuant to Section 106 of the National Historic Preservation Act. The Trust reviewed the information presented in your letter and offers the following initial comments.

According to your letter, JBA is preparing an Environmental Assessment (EA) for the implementation of its five-year IDP for the facility. The IDP will involve completion of 27 individual projects located at the main installation of JBA and the Brandywine Annex. Actions listed in the IDP Project List, included as Enclosure 4 to your letter, encompass building repairs and renovations, building additions, new construction, utility and road improvements, security improvements, tree removal, and demolitions of outdated facilities. We understand that JBA intends to consult with the Trust for individual actions in the IDP to complete the Section 106 review and coordination prior to implementation. We encourage JBA to initiate its Section 106 consultation early in project planning for these undertakings, to allow sufficient time to consider and resolve any effects on historic and archeological resources, as needed. Early consultation will be particularly beneficial for any actions that involve demolition or substantive alteration of resources that may be eligible for the National Register of Historic Places (National Register) or may need to be evaluated for their National Register eligibility.

We note that the IDP Project List includes the Suitland Tree Management project. Over the last several years, JBA has been actively consulting with the Trust and the National Park Service (NPS) to resolve the adverse effects of this undertaking on the Suitland Parkway (PG:76A-22), which is listed in the National Register. JBA, NPS, and the Trust have been negotiating a Memorandum of Agreement (MOA) that establishes mitigation

Ryan Soens
Joint Base Andrews – Naval Air Facility (JBA)
EA for Implementation of Five-Year Installation Development Plan (IDP)
August 20, 2021
Page 2 of 2

measures that will be completed to resolve the project's adverse effects to the Suitland Parkway. While still under negotiation, the MOA should be finalized and signed by all parties prior to implementation of that action.

We look forward to further consultation with JBA and other involved parties to successfully complete the Section 106 review of proposed projects in the five-year IDP. If you have questions or need further assistance, please contact me at beth.cole@maryland.gov. Thank you for providing us this opportunity to comment.

Sincerely,

Beth Cole Signed electronically

Beth Cole
Administrator, Project Review and Compliance

BC/202103344

cc: Kristofer Zimmerman (kristofer.zimmerman.ctr@us.af.mil)

From: [Davis, Jamie](#)
To: [Wetmore, Marisa L CIV USARMY CENAB \(USA\)](#); ryan.soens.1@us.af.mil
Cc: [Nevshehirlian, Stepan](#)
Subject: [Non-DoD Source] Joint Base Andrews-Naval Air Facility EA scoping comments
Date: Friday, September 10, 2021 10:34:06 AM

Hello Mr. Soens and Ms. Wetmore,

Thank you for providing notice that the Joint Base Andrews-Naval Air Facility (JBA) is preparing an Environmental Assessment (EA) for the implementation of its five-year Installation Development Plan (IDP). The EA is being prepared in accordance with the National Environmental Policy Act (NEPA) of 1969 and the Council on Environmental Quality (CEQ) regulations implementing NEPA (40 CFR 1500-1508) and Section 309 of the Clean Air Act.

The Proposed Action would involve the implementation of 27 individual projects, including construction, renovation, and demolition projects. Implementation of all of the IDP projects would total 4,756.49 acres of disturbance across the main installation at JBA and the Brandywine Annex. The IDP addresses the specific development needs at JBA within the next five years to provide the infrastructure upgrades and expansions needed to meet mission requirements.

Please note that these comments are based only on the limited information provided in the Notice of Intent. The Environmental Protection Agency (EPA) has the following recommendations for consideration in the development of the EA:

Purpose and Need

It is important that the purpose and need for the IDP be clearly identified. We recommend that the EA discuss the existing and proposed conditions of the proposed 27 individual projects, including construction, renovation and demolition projects. The purpose of the EA should be defined in relationship to the need for the actions both individually and cumulatively within the IDP. The need for the actions should identify and describe the underlying problem or deficiency; facts and analyses supporting the problem or deficiency in the particular location at the particular time should be specified; and the context or perspective of the mission in relation to the need for action should be stated.

It would be helpful to discuss operational, security, and safety standards or constraints that may factor into planning and development, such as buffers, security measures, building height restrictions, parking needs, etc.

Alternatives Analysis

The rationale for the selection of the preferred alternative should be clearly stated in the analysis. For those alternatives that are eliminated from consideration, the reasons for their elimination should be given.

We recommend including a detailed evaluation of the alternatives considered, including alternative site locations and designs for the proposed 27 individual projects. Such an analysis would include a discussion of the selected areas of consideration, a discussion of the specific key requirements for the project, a list of sites that have been evaluated, and the reason(s) sites were eliminated from consideration.

Environmental Impacts

The EA should examine the potential direct and indirect impacts of the project on the environment. In addition, mitigation measures for any adverse environmental impacts should be described. Areas that we recommend be addressed are described below.

Air Quality

The EA should identify the attainment status of each National Ambient Air Quality Standards (NAAQS) criteria pollutant and include a general conformity rule analysis according to the guidance provided in Determining Conformity of General Federal Actions to State or Federal Implementation Plans. Under the general conformity rule, reasonably foreseeable direct and indirect emissions associated with all operational and construction activities should be quantified and compared to the de minimis levels in nonattainment or maintenance areas.

We recommend that the EA also include a discussion of current permits, the potential for an increase or decrease of emissions, and potential permits or modifications that may be needed.

Geology

We recommend that the potential for impacts or hazards from the underlying geology be described, including consideration of potential impacts from construction, stormwater management, spills and contamination.

Groundwater

We recommend that the EA identify the principal aquifer in the region and any potential impacts on groundwater supplies.

Water Resources

In accordance with the Section 404 of the Clean Water Act, impacts to streams and wetlands should be avoided or minimized. Once a preferred alternative is identified, more detailed information will be needed to assess impacts. As part of this assessment, all aquatic resources on or immediately surrounding the site should be delineated and characterized. The extent of streams should be mapped and wetlands on the site should be delineated according to the 1987 Corps of Engineers Wetlands Delineation Manual (“the 1987 Manual”) and the Regional Supplement.

For wetlands, the EA should include information such as the total area of the wetland(s), vegetation type, sources of hydrology, and the area of any likely direct or indirect permanent or temporary impacts. If impacts are planned or likely, we suggest an analysis of the wetland’s functions and values be included in the EA. If wetlands are to be permanently impacted, compensation for lost or reduced functions will likely be needed.

The EA should also outline measures to protect surface waters, including erosion and sedimentation control practices during construction and post-construction stormwater management to prevent pollutants and reduce runoff that contributes to flooding. While site-specific best management practices (BMPs) may not be known at this time, general practices (e.g. types of BMPs or monitoring) or requirements that must be met by a selected contractor could be indicated.

Wildlife and Biological Resources

We suggest evaluation of the vegetative communities and habitat functions of existing natural resources on properties studied be included in the EA. Impacts to wildlife could potentially include vegetation clearing and/or maintenance, habitat fragmentation, noise, bird mortality from window strikes, lighting, spread of invasive species, or other concerns. Impacts to species, including state and federally-listed species of special concern, should be evaluated in consultation with appropriate federal and state agencies. We recommend that consultation be documented in the EA.

Hazardous wastes and contamination

We recommend indicating if any of the proposed activities may be located in areas that are known or suspected to be contaminated and whether construction may have the potential to mobilize contaminants or impact remedial actions.

The EA should clarify if hazardous materials such as lead paint and asbestos are known or anticipated to be present in buildings to be demolished or renovated. If unknown, we suggest that the EA include discussion of the plan for testing for hazardous materials.

Utilities

The EA would benefit from a discussion of the utilities that will be required for the IDP (electric, water, sewer, etc.). This would include a discussion of the capacity of existing infrastructure, whether construction or upgraded facilities are needed, and associated impacts.

Cultural Resources

Demolition, renovation, and construction activities have the potential to impact historic resources. The EA should study and determine if any historic resources exist on site. If historic resources are identified within the Area of Potential Effects, an assessment of impacts anticipated from the proposed activities, and mitigative measures that may be taken to avoid or reduce such impact should be provided. It may be useful to include a description or list of cultural surveys and Section 106 of The National Historic Preservation Act consultation for the sites.

Environmental Justice

We recommend that an assessment be conducted to identify whether areas of potential environmental justice (EJ) concern are present and may be disproportionately impacted by IDP activities. This identification should inform appropriate outreach to affected communities to assure that communication regarding the Proposed Action reaches citizens in an appropriate way and feedback from the affected communities is fully considered. Methodologies are discussed by several agencies including CEQ. EPA's environmental justice screening tool, [EJSCREEN](https://www.epa.gov/ejscreen), can be utilized to provide such information. It can be accessed at: <https://www.epa.gov/ejscreen>. EJSCREEN provides demographic information on the census block group level. An assessment of this level can address the question as to whether low-income and/or minority communities may be disproportionately impacted by the activities described in the EA. Specifically, consideration should be given to the block group(s) which contain the communities most impacted by the IDP activities. Additionally, please consider referring to "Promising Practices for EJ Methodologies in NEPA Reviews": <https://www.epa.gov/environmentaljustice/ej-iwgpromising-practices-ej-methodologies-nepa-reviews>.

Stormwater Runoff, Green Infrastructure, and Low Impact Development

We recommend avoiding an increase in overall impervious area of the site as much as practicable to prevent impacts in the downstream watersheds. Please also consider assessing the current stormwater management and identifying any opportunities for improvement. We recommend the incorporation of green infrastructure practices and low impact development design features where possible for building construction, parking, paving, landscaping, and stormwater management to reduce the effects of existing and proposed impervious surfaces.

Technical guidance in implementing green infrastructure practices and LID can be found at: <https://19january2017snapshot.epa.gov/sites/production/files/2015-09/documents/eisa-438.pdf> and www.epa.gov/greeninfrastructure. Other information can be found at www.epa.gov/nps/lid and the International Stormwater BMP Database: <http://www.bmpdatabase.org>

EPA encourages incorporating energy efficient features, lighting, and infrastructure. Please consider recommendations such as those included in the LEED (Leadership in Energy and Environmental Design) Green Building Rating System. LEED is a voluntary, consensus-based national standard for developing high-performance, sustainable buildings. For more information, please review information from the U.S. Green Building Council at: <http://www.usgbc.org/leed>.

Noise and Traffic

Impacts to nearby residences or sensitive receptors should be fully evaluated. We suggest that the

EA include an evaluation of issues such as noise, emissions, safety, and traffic during construction, renovation, and demolition activities and identify best management practices and minimization measures that may be employed.

We recommend the EA assess whether operation of new or upgraded facilities may increase noise, traffic congestion, lighting, or cause other impacts to the surrounding community. We recommend outreach to the community and residences that may be impacted by the project.

Thank you for the opportunity to provide comments. We request that you provide an email copy of the EA when it is complete. We would welcome the opportunity to discuss any of these comments and to work with you as more information becomes available. Feel free to contact me via email or at the phone number below.

Sincerely,
Jamie Davis

Jamie Davis
US EPA Mid Atlantic Region 3
Office of Communities, Tribes and Environmental Assessments
NEPA Review Team
570-351-7192



Maryland DEPARTMENT OF PLANNING

September 23, 2021

Mr. Ryan Soens, Acting Chief, Environmental Compliance
Department of the Air Force
316 CES/CEIE
3466 North Carolina Avenue
Joint Base Andrews, MD 20762

Ms. Marisa Wetmore, Biologist, Planning
U.S. Army Corps of Engineers, Baltimore District
2 Hopkins Plaza, 10-B-01
Baltimore, MD 21201

STATE CLEARINGHOUSE RECOMMENDATION

State Application Identifier: MD20210811-0664

Applicant: Department of the Air Force and U.S. Army Corps of Engineers, Baltimore District

Project Description: Environmental Assessment (EA): Joint Base Andrews-Naval Air Facility (JBA) Implementation of its Five-Year Installation Development Plan (IDP) with 27 Individual Projects, Including Construction, Renovation, and Demolition Projects for a Total of 4,756.49 Acres of Disturbance

Project Address: Joint Base Andrews-Naval Air Facility, Joint Base Andrews, MD 20762

Project Location: Prince George's County

Recommendation: Consistent with Qualifying Comments and Contingent Upon Certain Actions

Dear Mr. Soens and Ms. Wetmore:

In accordance with Presidential Executive Order 12372 and Code of Maryland Regulation 34.02.02.04-.07, the State Clearinghouse has coordinated the intergovernmental review of the referenced project. This letter constitutes the State process review and recommendation.

Review comments were requested from the Maryland Departments of General Services, Natural Resources, Transportation, and the Environment; the Maryland Military Department; Prince George's County; the Maryland National Capital Parks and Planning Commission - Prince George's County; the Metropolitan Washington Council of Governments; and the Maryland Department of Planning, including the Maryland Historical Trust. The Maryland Military Department; Prince George's County; and the Metropolitan Washington Council of Governments did not have comments.

The Maryland Department of General Services and the Maryland Department of Planning found this project to be consistent with their plans, programs, and objectives.

Prince George's County stated that "Review comments will be provided when we receive the Environmental Assessment (EA) from applicant."

The Maryland Department of Planning (Planning/MDP) provided the following comments: “Planning will need to review the EA in its entirety when completed; with specific land use, density and intensity maximums, and environmental disturbances accounted for in the EA.”

The Maryland Department of Transportation (MDOT) found this project to be generally consistent with their plans, programs, and objectives, but included certain qualifying comments summarized below.

“MDOT SHA [State Highway Administration] Comments:

One of the subject sites, the Joint Base Andrews (JBA) Naval Air Facility main installation, is near four MDOT SHA projects listed in the draft FY 2022-2027 MDOT Consolidated Transportation Program:

- I-495 & I-270 P3 Program Managed Lanes Study
- MD 4 interchange construction at Suitland Parkway
- MD 5 corridor study
- MD 223 intersection improvements at Dower House Road

The other subject site, the JBA Brandywine Annex also is located near the MD 5 corridor study and the US 301 corridor transportation study. While the proposed actions at the JBA main installation and the JBA Brandywine Annex could pose operational impacts to nearby MDOT SHA projects due to their proximity, the extent of these impacts cannot be determined from the review materials that were provided. An evaluation of operational impacts of the proposed action on planned and programmed improvements on MDOT SHA roads in the vicinity of both installations should be included in the draft EA and subsequent NEPA [National Environmental Policy Act] documentation to determine what these impacts might be.”

The Maryland Historical Trust stated that their finding of consistency is contingent upon the applicant's completion of the review process required under Section 106 of the National Historic Preservation Act, as follows: “The Maryland Historical Trust, MD's State Historic Preservation Office, awaits further consultation with the Department of the Air Force to complete this historic preservation review of actions proposed in the five-year Installation Development Plan for effects on historic properties, pursuant to Section 106 of the National Historic Preservation Act (BC 202103344).”

The Maryland Department of Natural Resources stated that their finding of consistency is contingent upon the applicant taking the following actions, “Please note that each of the 27 projects identified will likely require individual CZMA [Coastal Zone Management Act] federal consistency reviews to ensure they are consistent to the maximum extent practicable with enforceable policies of the Maryland Coastal Zone Management Program.”

The Maryland Department of the Environment (MDE) stated that their finding of consistency is contingent upon the applicant taking the actions summarized below.

1. “Any above ground or underground petroleum storage tanks, which may be utilized, must be installed and maintained in accordance with applicable State and federal laws and regulations. Underground storage tanks must be registered and the installation must be conducted and performed by a contractor certified to install underground storage tanks by the Land and Materials Administration in accordance with COMAR 26.10. Contact the Oil Control Program at (410) 537-3442 for additional information.

2. If the proposed project involves demolition – Any above ground or underground petroleum storage tanks that may be on site must have contents and tanks along with any contamination removed. Please contact the Oil Control Program at (410) 537-3442 for additional information.
3. Any solid waste including construction, demolition and land clearing debris, generated from the subject project, must be properly disposed of at a permitted solid waste acceptance facility, or recycled if possible. Contact the Solid Waste Program at (410) 537-3315 for additional information regarding solid waste activities and contact the Resource Management Program at (410) 537-3314 for additional information regarding recycling activities.
4. The Resource Management Program should be contacted directly at (410) 537-3314 by those facilities which generate or propose to generate or handle hazardous wastes to ensure these activities are being conducted in compliance with applicable State and federal laws and regulations. The Program should also be contacted prior to construction activities to ensure that the treatment, storage or disposal of hazardous wastes and low-level radioactive wastes at the facility will be conducted in compliance with applicable State and federal laws and regulations.
5. Any contract specifying ‘lead paint abatement’ must comply with Code of Maryland Regulations (COMAR) 26.16.01 - Accreditation and Training for Lead Paint Abatement Services. If a property was built before 1978 and will be used as rental housing, then compliance with COMAR 26.16.02 - Reduction of Lead Risk in Housing; and Environment Article Title 6, Subtitle 8, is required. Additional guidance regarding projects where lead paint may be encountered can be obtained by contacting the Environmental Lead Division at (410) 537-3825.
6. The proposed project may involve rehabilitation, redevelopment, revitalization, or property acquisition of commercial, industrial property. Accordingly, MDE's Brownfields Site Assessment and Voluntary Cleanup Programs (VCP) may provide valuable assistance to you in this project. These programs involve environmental site assessment in accordance with accepted industry and financial institution standards for property transfer. For specific information about these programs and eligibility, please contact the Land Restoration Program at (410) 537-3437.
7. Borrow areas used to provide clean earth back fill material may require a surface mine permit. Disposal of excess cut material at a surface mine may require site approval. Contact the Mining Program at (410) 537-3557 for further details.
8. If the applicant suspects that asbestos is present in any portion of the structure that will be renovated/demolished, then the applicant should contact the Community Environmental Services Program, Air and Radiation Management Administration at (410) 537-3215 to learn about the State's requirements for asbestos handling.
9. Construction, renovation and/or demolition of buildings and roadways must be performed in conformance with State regulations pertaining to ‘Particulate Matter from Materials Handling and Construction’ (COMAR 26.11.06.03D), requiring that during any construction and/or demolition work, reasonable precaution must be taken to prevent particulate matter, such as fugitive dust, from becoming airborne.
10. During the duration of the project, soil excavation/grading/site work will be performed; there is a potential for encountering soil contamination. If soil contamination is present, a permit for soil remediation is required from MDE's Air and Radiation Management Administration. Please contact the New Source Permits Division, Air and Radiation Management Administration at (410) 537-3230 to learn about the State's requirements for these permits.
11. If a project receives federal funding, approvals and/or permits, and will be located in a nonattainment area or maintenance area for ozone or carbon monoxide, the applicant needs to determine whether emissions from the project will exceed the thresholds identified in the federal rule on general conformity. If the project emissions will be greater than 25 tons per year, contact the Air Quality Planning Program of the Air and Radiation Administration, at (410) 537-4125 for further information regarding threshold limits.
12. Additional comments from the Water & Science Administration are enclosed.”

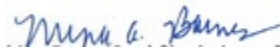
Mr. Ryan Soens and Ms. Marisa Wetmore
September 23, 2021
Page 4
State Application Identifier: **MD20210811-0664**

The Maryland National Capital Parks and Planning Commission - Prince George's County stated that their finding of consistency is contingent upon the applicant taking the following actions: "The Master Plan is expected to be reviewed as a Mandatory Referral. Prince George's County Planning Department staff will provide MDP- Clearinghouse with a comprehensive technical staff report at the conclusion of the review. There are no additional comments at this time."

The State Application Identifier Number must be placed on any correspondence pertaining to this project. Please remember, you must comply with all applicable state and local laws and regulations. If you need assistance or have questions, contact the State Clearinghouse staff person noted above at 410-767-4490 or through e-mail at sylvia.mosser@maryland.gov.

Thank you for your cooperation with the MIRC process.

Sincerely,



Myra Barnes, Lead Clearinghouse Coordinator

MB:SM

Enclosure—MDE Additional Comments

cc:

Ian Beam - MDOT
Amanda Redmiles - MDE
Tony Redman - DNR

Tanja Rucci - DGS
Kirk Yaukey - MILT
Kathleen Herbert - PGEO

Greg Goodwin - MWCOG
Ivy Thompson - MNCPPCP
Joseph Griffiths - MDPL

Beth Cole - MHT

21-0664_CRR.CLS.docx

**(EA): Joint Base Andrews-Naval Air Facility (JBA) Implementation of its Five-Year
Installation Development Plan (IDP) with 27 Individual Projects, Including Construction,
Renovation, and Demolition Projects**

Maryland Department of the Environment – WSA/IWPP

**REVIEW FINDING: R2 Contingent Upon Certain Actions
(MD2021 0811-0664)**

Direct any questions regarding the Antidegradation Review to Angel Valdez via email at angel.valdez@maryland.gov, or by phone at 410-537-3606.

Special protections for high-quality waters in the local vicinity, which are identified pursuant to Maryland's anti-degradation policy.

Anti-degradation of Water Quality: Maryland requires special protections for waters of very high quality (Tier II waters). The policies and procedures that govern these special waters are commonly called "anti-degradation policies." This policy states that "proposed amendments to county plans or discharge permits for discharge to Tier II waters that will result in a new, or an increased, permitted annual discharge of pollutants and a potential impact to water quality, shall evaluate alternatives to eliminate or reduce discharges or impacts." Satisfactory completion of the Tier II Antidegradation Review is required to receive numerous State permits, such as those for wastewater treatment, nontidal wetlands disturbance, waterways construction, and coverage under the general construction permit.

The Tier II review is applicable to all portions of the whole and complete project within the Tier II watersheds of **Mattawoman Creek 1 (Brandywine) and Piscataway Creek 1 (Joint Base Andrews)**. The review is, at a minimum, a two-step alternatives analysis process. The initial analysis considers if the activity can avoid any impacts to Tier II waters (alternative site or potentially by strategic design). The second analysis considers minimization alternatives to limit associated water quality degradation. This includes BMP considerations for erosion and sediment controls, mitigation for net loss of vital resources such as forest cover, and justification for unavoidable impacts. Under certain circumstances, MDE may require a third analysis which justifies the project based on social or economic rationale.

MDE is revising the overall Tier II review procedures by creating or updating forms to assist with the no-discharge alternatives analysis, minimization analysis, temporary impacts, and social and economic justification. Completion of these forms is required for permitting and other approvals.

Tier II No-Discharge Analysis Form V1.2:¹

1. Code of Maryland Regulations (COMAR) 26.08.02.04-1 (G(1)) states that “If a Tier II antidegradation review is required, the applicant shall provide an analysis of reasonable alternatives that do not require direct discharge to a Tier II water body (no-discharge alternative). The analysis shall include cost data and estimates to determine the cost effectiveness of the alternatives”.
2. For land disturbing projects that result in permanent land use change, this ‘no discharge’ analysis specifically evaluates the reasonability of other sites or alternate routes which could be developed to meet the project purpose, but are located *outside* of the Tier II watershed. Reasonability considerations, as applicable, may take into account property availability, site constraints, natural resource concerns, size, accessibility, and cost to make the property suitable for the project.
3. This analysis shall be performed regardless of whether or not the applicant has ownership or lease agreements to a preferred property or route.

Tier II Minimization Alternative Analysis Form V1.1:²

1. Code of Maryland Regulations (COMAR) 26.08.02.04-1 (G(3)) states that “If the Department determines that the alternatives that do not require direct discharge to a Tier II water body are not cost effective, the applicant shall: (a) Provide the Department with plans to configure or structure the discharge to minimize the use of the assimilative capacity of the water body”.
2. This form helps to ensure that water quality impacts due to the proposed project are comprehensively identified, minimized, mitigated, and justified.
3. To demonstrate that appropriate minimization practices have been considered and implemented, applicants must identify any minimization practices used when developing the project, calculate major Tier II resource impacts, consider alternatives for impacts, and adequately justify unavoidable impacts. Further water quality impact minimization such as mitigation or out-of-kind offsets may be required.

Construction Stormwater Antidegradation Checklist - Version 1.1 :³

1. This form replaces the Tier II checklist, *Enhanced Best Management Practices for Tier II Waters*, distributed in the past.

¹ https://mde.maryland.gov/programs/Water/TMDL/WaterQualityStandards/Documents/Tier-II-Forms/TierII_NoDischargeAnalysis_Form_1.2.pdf

² https://mde.maryland.gov/programs/Water/TMDL/WaterQualityStandards/Documents/Tier-II-Forms/TierII_Minimization_Form_1.1.pdf

³ <https://mde.maryland.gov/programs/Water/TMDL/WaterQualityStandards/Documents/Tier-II-Forms/AntiDegradation%20Checklist%20V1.1.pdf>

2. To complete the checklist, applicants are required to coordinate with the County or appropriate approval authority when developing construction plans and stormwater management plans.

3. Applicants are required to provide this form when seeking a NOI/DOI for coverage under the general construction permit. Other forms and documentation materials shall also be uploaded to the general construction permit site at this time.

Mattawoman Creek 1 and Piscataway Creek 1, which are located within the vicinity of the Project, have been designated as a Tier II stream. The Projects are within the Catchment (watershed) of the segment. (See attached maps).

Currently, there is no assimilative capacity in these watersheds. This means that recent data indicates that sometime after designation, the Tier II stream segment has degraded. Therefore, additional social and economic justification is needed. The SEJ is primarily a narrative that justifies the unavoidable impacts to water quality identified by the minimization alternatives analysis. A general outline of information required to complete the SEJ has been provided.

Planners should be aware of legal obligations related to Tier II waters described in the Code of Maryland Regulations (COMAR) 26.08.02.04 with respect to current and future land use plans. Information on Tier II waters can be obtained online at: <http://www.dsd.state.md.us/comar/comarhtml/26/26.08.02.04.htm> and policy implementation procedures are located at <http://www.dsd.state.md.us/comar/comarhtml/26/26.08.02.04-1.htm>

Planners should also note as described in the Code of Maryland Regulations (COMAR) 26.08.02.04-1(C), "Compilation and Maintenance of the List of High Quality Waters", states that "When the water quality of a water body is better than that required by water quality standards to support the existing and designated uses, the Department shall list the water body as a Tier II water body. *All readily available information may be considered to determine a listing. The Department shall compile and maintain a public list of the waters identified as Tier II waters.*"

The public list is available in PDF from the following MDE website: http://mde.maryland.gov/programs/Water/TMDL/WaterQualityStandards/Documents/Tier_II_Updates/Antidegradation-Tier-II-Data-Table.pdf.

The interactive Tier II webmap is located at the following website: (<https://mdewin64.mde.state.md.us/WSA/TierIIWQ/index.html>).

Direct any questions regarding the Antidegradation Review to Angel Valdez via email at angel.valdez@maryland.gov, or by phone at 410-537-3606.

ADDITIONAL COMMENTS

Stormwater

Planners should consider all Maryland Stormwater Management Controls and during Site Design the planner should consider all Environmental Site Design to the Maximum Extent Practicable and “Green Building” Alternatives. Designs that reduce impervious surface and BMPs that increase runoff infiltration are highly encouraged.

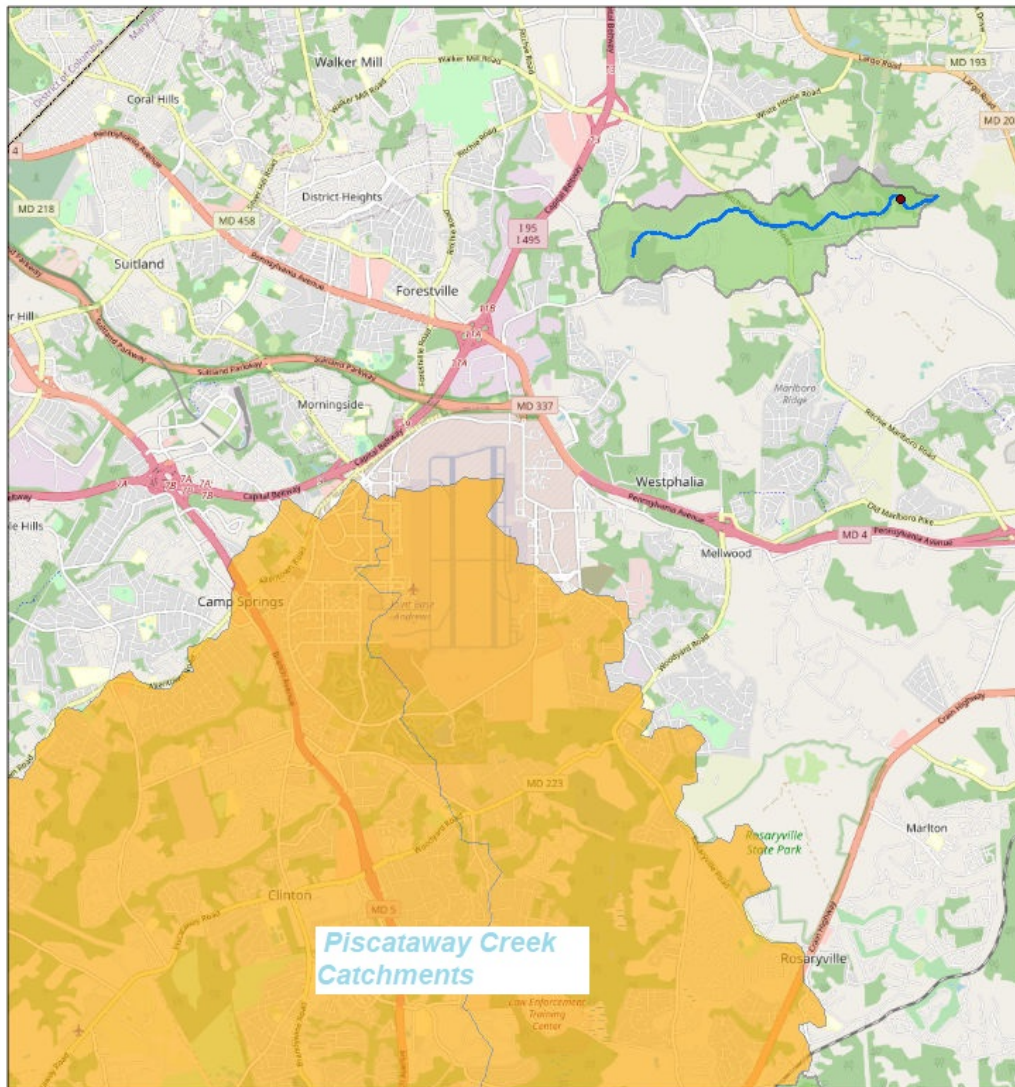
Further Information:

<https://mde.maryland.gov/programs/Water/SSDS/Pages/index.aspx>

Redevelopment Regulations:

<http://www.dsd.state.md.us/comar/comarhtml/26/26.17.02.05.htm>

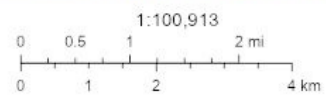
MD2021 0811-0664 - Joint Base Andrews



9/2/2021, 10:32:03 AM

Tier II Catchments 2016

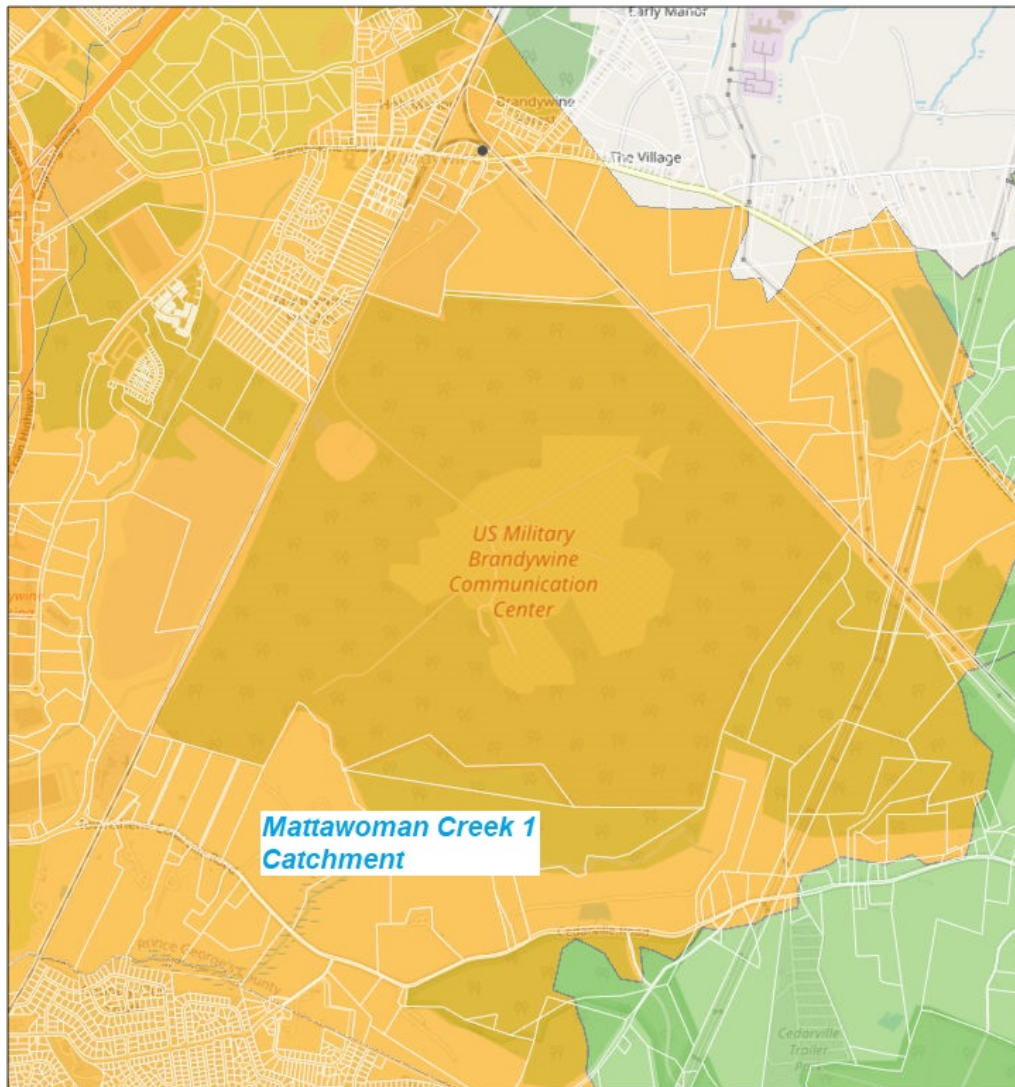
- Assimilative Capacity Remaining
- No Assimilative Capacity Remaining
- Tier II Stream Segments 2016
- Tier II Baseline Stations 2016
- Maryland County Boundaries



© OpenStreetMap (and) contributors, CC-BY-SA, Creator: Maryland Department of the Environment, Water and Science Administration (MDE WSA), MDE

Web AppBuilder for ArcGIS
MDE | Creator: Maryland Department of the Environment, Water and Science Administration (MDE WSA) | MD iMAP, MDP | Map data © OpenStreetMap contributors, CC-BY-SA |

MD2021 0811-0664 - Brandywine

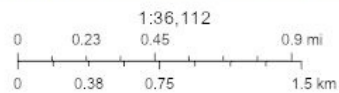


9/2/2021, 10:28:02 AM

MD_ParcelBoundaries - Parcel Boundaries

Tier II Catchments 2016

- Assimilative Capacity Remaining
- No Assimilative Capacity Remaining
- Tier II Stream Segments 2016
- Tier II Baseline Stations 2016
- Maryland County Boundaries



© OpenStreetMap (and) contributors, CC-BY-SA, Creator: Maryland Department of the Environment, Water and Science Administration (MDE WSA), MDE

Web AppBuilder for ArcGIS

MDE | Creator: Maryland Department of the Environment, Water and Science Administration (MDE WSA) | MD MAP, MDP | Map data © OpenStreetMap contributors, CC-BY-SA |

Construction Stormwater Antidegradation Checklist – Version 1.1

This checklist is intended to be used as guidance for evaluating any portion of your construction site that is located with a watershed that is identified by the Department¹ or the EPA, as a Tier II for antidegradation purposes. This Checklist² is acceptable for use in documenting your antidegradation review and ensuring protection of Tier II resources during construction. This form, or other appropriate written evaluation, may be uploaded with your NOI or provided to the Industrial Stormwater Permits Division at the Maryland Department of the Environment. The information provided to the Department addressing the antidegradation review shall be clearly marked on the erosion and sediment control (E&SC) plan and approved by the appropriate approval authority pursuant to COMAR 26.17.01.

Project Name: _____	
General Permit Number (MD): _____ OR, if not available,	
County or State ESC Plan Identifier: _____	
County: _____ Site Map # _____ Parcel # _____	
Applicant Signature: _____ Date Complete: _____	
Do all Tier II watersheds impacted by the proposed activity have assimilative capacity⁽¹⁾? If the proposed activity is to a stream segment which doesn't have assimilative capacity, you will need to consult with the Department's Tier II staff on available options and list the findings here. Comments: _____ _____ _____	Yes/No
Were any waivers granted by the Approval Authority for stormwater controls for this project? For projects in Tier II watersheds, waivers need to be fully justified in light of the potential to impact water quality. A waiver that was granted that could lead to degradation would require modeling or other evidence that the lack of stormwater controls will not impact the receiving waters.	Yes/No
Verify whether you will meet the following minimum Stabilization Criteria. After initial soil disturbance or redistribution, permanent (2011 ESC Handbook Section B-4-5) or temporary (2011 ESC Handbook Section B-4-4) stabilization is required within: i. Three (3) calendar days as to the surface of all perimeter controls, dikes, swales, ditches, perimeter slopes, and all slopes steeper than 3 horizontal to 1 vertical (3:1); and ii. Seven (7) calendar days as to all other disturbed areas on the project site except for those areas under active grading.	Yes/No

¹ Use the interactive Tier II webmap located at:

<https://mde.maryland.gov/programs/Water/TMDL/WaterQualityStandards/Pages/HighQualityWatersMap.aspx> to assist you. On the map, Tier II watersheds colored orange have NO assimilative capacity.

² Alternative forms may be approved by the Department, if they contain the information in this checklist.

Verify Increased Inspection Frequency for activity within Tier II Watershed. For any portion of the site that discharges to a water that is identified by the Department as Tier II for antidegradation purposes, more frequent inspections are beneficial. Will you inspect at least once every four (4) calendar days?	Yes/No
Verify Piles are located outside the Stream Protection Zone. For stockpiles or land clearing debris piles composed, in whole or in part, of sediment and/or soil (2011 ESC Handbook Section B-4-8), locate the piles outside of any Stream Protection Zones.	Yes/No
Were there any E&SC exemptions to the requirements for Protections in the Stream Protection Zone below? Note: The list of potential exemptions are listed at the end of this checklist. If exemptions were applicable make sure to include them in the plan. Comments: _____ _____ _____	Yes/No
Have you Verified your Stream Protection Zone Considerations below? All additional controls selected in Compliance Alternative 2, to meet the Stream Protection Zone Considerations below shall be clearly marked on the erosion and sediment control (E&SC) plan and approved by the appropriate approval authority pursuant to COMAR 26.17.01. You are required to document in your E&SC plan where the natural buffer width that is retained (where you are implementing alternative 1 below) and you must document the reduced width of the buffer you will be retaining and document the additional erosion and sediment controls you will use (where you will be implementing alternative 2 below). Comments: _____ _____ _____	Yes/No
Stream Protection Zone Alternative 1: Provide and maintain an undisturbed natural buffer within the Stream Protection Zone (an average of 100 feet from edge of stream). Comments: _____ _____ _____	Yes/No
Stream Protection Zone Alternative 2: Provide and maintain an undisturbed natural buffer that is less than an average of 100 feet and is supplemented by additional erosion and sediment controls. The acceptable additional erosion and sediment controls include, but are not limited to, those listed in the 2011 ESC Handbook. Those controls are accelerated stabilization, redundant controls, upgraded controls, passive or active chemical treatment, or a reduction in the size of the grading unit. These options are provided below, which are the controls that must be considered and, once selected, implemented when construction activity occurs within these Stream Protection Zones. The local approval authorities may provide additional options that provide similar protection. Check each that apply below. Comments: _____ _____ _____ _____	Yes/No

☐ **a: Accelerated Stabilization Requirements**

Earth disturbance must be stabilized as soon as possible and as dictated by the approved plan (e.g., seed and mulch, soil stabilization matting, rip rap, sod, pavement):

- At a minimum, all perimeter controls (e.g., earth dikes, sediment traps) and slopes steeper than 3:1 require stabilization within three calendar days and all other disturbed areas within seven calendar days
- Accelerated stabilization (e.g., same day stabilization) may be required based on site characteristics or as specified by the approval authority

Comments: _____

☐ **b: Redundant Controls**

Runoff must pass through two sediment control devices in series. The following are examples of possible combinations:

- When dewatering sump areas or sediment traps or basins, discharge sediment laden water first to a portable sediment tank and then a filter bag
- Install parallel rows of a perimeter filtering control or a combination thereof of silt fence, super silt fence, and filter logs (e.g., two rows of parallel silt fence or a row of filter log parallel to a row of super silt fence)

Comments: _____

☐ **c: Upgrade Controls**

The following are examples of possible upgrades:

- Upgrade from silt fence to super silt fence
- Upgrade from temporary stone outlet structure to temporary gabion outlet structure
- Upgrade all sediment traps and basins to control additional storage volume; increase the required storage volume from 3,600 cubic feet/acre to 5,400 cubic feet/acre
- Upgrade standard inlet protection type A to type B and at grade inlet protection to gabion inlet protection

Comments: _____

☐ **d: Passive or Active Chemical Treatment**

The use of chemical additives requires permit coverage and considerations related to potential aquatic toxicity. <https://mdewwp.page.link/ChemAddReview>.

Comments: _____

□ ***e: Reduction in the Size of the Grading Unit***

- Require grading unit limitations to 10 acres of earth disturbance inside the Stream Protection Zone
- Require grading unit limitations to 20 acres for any earth disturbance that is adjacent to and contiguous with earth disturbances inside the Stream Protection Zone

Comments: _____

□ ***f: Prerogative of Approval Authorities***

The additional controls described above for projects in Stream Protection Zones are examples of accelerated stabilization, redundant controls, upgraded controls, passive or active chemical treatment, or a reduction in the size of the grading unit. Approval authorities may use these examples as a guide when approving projects, but may also apply further erosion and sediment control measures based on local site conditions and best professional judgement.

Comments: _____

Exemptions to the requirements for Protections in the Stream Protection Zone:

- The following disturbances within the Stream Protection Zone are exempt from the requirements this guidance:- Construction approved under a CWA Section 404 permit; or- Construction of a water-dependent structure or water access areas (e.g., pier, boat ramp, trail).
- If there is no discharge of stormwater to Waters of this State through the area between the disturbed portions of the site and receiving waters, you are not required to comply with the requirements in this guidance. This includes situations where you have implemented controls measures, such as a berm or other barrier, which will prevent such discharges.
- Where no natural buffer exists due to preexisting development disturbances (e.g., structures, impervious surfaces) that occurred prior to the initiation of planning for the current development of the site, you are not required to comply with the requirements in this guidance.

Where some natural buffer exists but portions of the area within the Stream Protection Zone are occupied by preexisting development disturbances, you are required to comply with the requirements in this guidance. Clarity about how to implement the compliance alternatives for these situations is provided upon request from the Department.

- For “linear construction sites” , you are not required to comply with this requirement if site constraints (e.g., limited right-of-way) make it infeasible to implement one of the above compliance alternatives, provided that, to the extent feasible, you limit disturbances within Stream Protection Zone. You must also document in the Checklist your rationale for why it is infeasible for you to implement one of the above compliance alternatives, and describe any buffer width retained and supplemental erosion and sediment controls installed.



Maryland Department of the Environment

Antidegradation Review Report Form
Alternatives Analysis – Minimization Alternatives



Purpose

This form is designed to help applicants assemble a complete Tier II Review report. This form specifically addresses calculating Tier II resource impacts, and evaluating alternatives that minimize water quality degradation from unavoidable impacts to Tier II watersheds and streams. This analysis is applicable to all areas of the **whole and complete project** within a Tier II watershed.

The Department will use this information to determine whether or not the applicant evaluated all reasonable alternatives to minimize water quality degradation. MDE may provide additional comments, conditions, or requirements, during the course of the review.

Fill in all that apply:

1. **Project Name:** _____
2. **County ESC Plan Identifier:** _____
3. **Nontidal Wetlands & Waterways Construction Tracking Number: 20206_ _ _ _**
4. **General Permit Number:** _____
5. **Other Application Type and Number:** _____

Applicant Signature: _____ **Date Complete:** _____

Background

Code of Maryland Regulations (COMAR) 26.08.02.04-1 (G(3)) states that "If the Department determines that the alternatives that do not require direct discharge to a Tier II water body are not cost effective, the applicant shall: (a) Provide the Department with plans to configure or structure the discharge to minimize the use of the assimilative capacity of the water body".

To demonstrate that appropriate minimization practices have been considered and implemented, applicants must identify any minimization practices used when developing the project, calculate major Tier II resource impacts, consider alternatives for impacts, and adequately justify unavoidable impacts. Further water quality impact minimization such as mitigation or out-of-kind offsets may be required.

Additionally, applicants are required to coordinate with the County or appropriate approval authority when developing construction plans, and incorporate additional practices as indicated by the guidance provided in the *Construction Stormwater Antidegradation Checklist*. This checklist, as well as the other portions of the Tier II Review Report are required prior to receiving many permits and authorizations from MDE.

Instructions and Notes

1. Review all of the information in this document carefully. Prepare a report to address all of the analysis required by this document. Submit all Tier II analysis and documentation together.
2. Do not leave any response blank. Please mark "N/A" for any questions or sections that are not applicable until you reach the end of the document.
3. Provide sufficient supporting documentation for narratives.
4. The level of analysis necessary, and amount of documentation that may be needed to determine if impacts have been adequately addressed, is dependent upon project size, scope, and scale of relative impacts to Tier II resources. Please develop responses accordingly.
5. Reports/responses shall be submitted in electronic format, as well as paper. Full plans are not required unless requested over the course of the review.
6. Direct any questions regarding this form to Angel Valdez at angel.valdez@maryland.gov, or by phone at 410-537-3606.

Minimization Alternative Analysis Final Documentation Checklist

- ☐ Signature & Date MDE Tier II Alternatives Analysis – Minimization Alternative form (page 1)
- ☐ Resource Impact Analysis (**Complete the analysis for each Tier II watershed affected**)
 - ☐ Tier II Stream Buffer Impacts
 - Impact Calculation
 - Impact Minimization
 - Impact Mitigation
 - Impact Justification
 - Stream Buffer Exhibit
 - ☐ Forest Cover Impacts
 - Impact Calculation
 - Impact Minimization
 - Impact Mitigation
 - Impact Justification
 - Forest Cover Exhibit
 - ☐ Impervious Cover
 - Impact Calculation
 - Impact Minimization
 - Impact Mitigation
 - Impact Justification
 - Impervious Cover Exhibit
 - ☐ Mitigation & Other Potential Requirements
 - Plans
 - Signature & Date (Page 8)
- ☐ Construction Stormwater Antidegradation Checklist

Tier II Resource Impacts

Sufficient riparian buffers, ample watershed forest cover, and lower levels of impervious cover are essential to maintaining high quality waters. This project may permanently reduce riparian buffers and forest cover, or increase impervious cover within Tier II watersheds leading to a decrease in water quality. Depending upon project specific impacts, MDE may require monitoring, additional BMPs, expanded buffers in Table 1, and other studies prior to approval. This analysis is applicable to all areas of the **whole and complete project** within a Tier II watershed.

MDE will use the following information to determine **permanent** impacts to Tier II watershed resources. Complete the analysis for each Tier II watershed the proposed project may impact.

A. Tier II Stream Buffers**1. Instructions:**

- a. If no stream buffer impacts are proposed (within 100' of stream), mark this section N/A and proceed to Section B, Forest Cover.
- b. Insert the Tier II watershed name at the top of each box.
- c. "Impacted" stream segments are those disrupted by road crossings, other infrastructure, construction (ex. sewer lines), or otherwise buried
- d. Calculate buffer averages for 2(f) below on a stream segment-by-segment basis.
- e. Explain in detail alternatives considered, and any actions taken

A. Tier II Stream Buffers - - Tier II Watershed: _____

2. Calculation of Permanent Riparian Buffer Impacts to State Regulated Waters	Linear Feet +/-	
	LEFT Bank	Right Bank
a. Combined length of on-site stream segments:		
b. Combined length of <u>EXISTING</u> , pre-development, impacted stream segments:		
c. Combined length of <u>PROPOSED</u> , post-development, impacted stream segments:		
d. Total post-development <u>impacted</u> stream segments $2(b) + 2(c) =$		
e. Total post-development <u>unimpacted</u> stream segments $2(a) - 2(d) =$		
f. Combined length of streams, post-development, with an average 100' buffer, based on the value in 2(e):		
g. Potential Tier II Buffer Impacts $2(e) - 2(f) =$		

A. Tier II Stream Buffers - - Tier II Watershed: _____
3. Buffer Impact Minimization:
Evaluate on-site alternatives for buffer impacts for segments identified in 2(g). Examples include minimizing ROW, narrowing paths, alternate routes for walkways, roads, crossings, etc. to avoid buffer impacts.
4. Buffer Impact Mitigation:
Mitigation or offsets can occur both on and off-site. On-site, the intent is to achieve a 100' average stream buffer width. Per segment, locate areas where impacts to the 100' buffer are unavoidable. Include those impacts in the mitigation/offset alternatives analysis. Conditions under section D shall apply. a) Evaluate on-site alternatives to identify areas where buffers could be expanded beyond the minimum 100' to offset areas of unavoidable buffer width constraints. b) If there are no on-site areas, evaluate off-site areas, within the Tier II watershed, where buffers could be improved, expanded, or established.
5. Buffer Impact Justification:
If there are any remaining unavoidable impacts, provide narrative justification and supporting documentation for impacts. Reasons may include existing infrastructure, clearance necessary to comply with regulation, no alternative location for stormwater management, property boundary, etc.
6. Buffer Exhibit
Prepare a Tier II Buffer Exhibit for on-site streams. Dependent upon the number of segments, multiple sheets (8 ½" by 11") may be used. On an overview, label each segment (a, b, c...) and provide a tabular summary, per bank-segment (e.g., left bank of segment a), of average buffer width. In addition to on-site streams, the exhibit shall display the following information: • 100- foot riparian buffer. (symbolize with a line) • Areas where the post-construction stream buffer are +/- 100 feet. (symbolize with shading, hatches, or dots, etc.) • On-site areas where buffers could be maintained at a distance of greater than a 100' if there are unavoidable constraints in some locations. (symbolize with shading, hatches, or dots, etc.)

Table 1: Expanded Tier II Riparian Buffer

Adjusted Average Optimal Buffer Width Key (in Feet)				
	Slopes (%)			
Soils	0-5%	5-15%	15-25%	>25%
ab	100	130	160	190
c	120	150	180	210
d	140	170	200	230

B. Tier II Forest Cover**1. Instructions:**

- a. If there is no net forest cover loss within the impacted Tier II watershed, mark this section N/A and proceed to Section C, Impervious Cover.
- b. Insert the Tier II watershed name at the top of each box.
- c. "Potential Constraints" include forest loss due to ROW, property boundaries, regulatory requirements, etc.
- d. Explain in detail alternatives considered, and any actions taken

B. Tier II Forest Cover - - Tier II Watershed: _____

2. Calculation of Permanent Forest Cover Impacts	Acres +/-
a. Total on-site forest cover, <u>EXISTING</u> :	
b. Total on-site forest cover, <u>POST-PROJECT</u> :	
c. Total off-site reforestation or restoration, <u>IN</u> the Tier II Watershed listed above:	
d. Permanent forest loss due to <u>potential constraints</u> :	
e. <i>Total forest cover retained in Tier II Watershed</i> $2(b) + 2(c) =$	
f. <i>Total forest cover loss in Tier II Watershed</i> $2(e) - 2(a) =$	

B. Tier II Forest Cover - - Tier II Watershed: _____**3. Forest Cover Loss Minimization**

If 2(d) is greater than 0, or if 2(f) is a negative value, evaluate on-site alternatives for forest cover impact minimization. Examples include minimizing ROW, alternate routes for roads, crossings, etc. to avoid forest cover impacts.

4. Forest Cover Loss Mitigation

To achieve no net negative impact as a result of the proposed activity, the applicant shall consider alternatives to mitigate impacts 'in-kind', for forest cover loss, to the maximum extent economically feasible. Provide additional information regarding the value in 2(c). Once those options are exhausted, applicants shall evaluate out-of-kind alternatives within the Tier II watershed that will help offset water quality impacts. These out-of-kind alternatives include impervious cover disconnection or retrofits, stream restoration, buffer enhancement, etc.

5. Forest Cover Loss Justification

If there are any remaining unavoidable impacts to forest cover, provide narrative justification and supporting documentation for impacts. Reasons may include existing infrastructure, clearance necessary to comply with regulation, no alternative location for stormwater management, property boundary, etc.

6. Forest Cover Exhibit

On an 8 ½" by 11" sheet(s), prepare an on-site Tier II Forest Cover Exhibit. Using varying symbology, show a basic site layout relative to 2(a), 2(b), and 2(d) above. Prepare a separate exhibit regarding any off-site reforestation, or out-of-kind mitigation opportunities in accordance with Section D.

C. Impervious Cover
1. Instructions: - If ESD is used to treat all new, on-site, post-construction stormwater, mark this section N/A and proceed to Section D, Mitigation and Other Potential Requirements. - Insert the Tier II watershed name at the top of each box. - Explain in detail alternatives considered, and any actions taken.

C. Tier II Impervious Cover - - Tier II Watershed: _____	
2. Calculation of Impervious Cover Increase	Acres +/-
a. Total additional (new) impervious cover, <u>POST-PROJECT</u> :	
b. Total additional (new) impervious cover treated with ESD practices, <u>POST PROJECT</u> :	
c. Total impervious cover not treated with ESD practices, <u>POST-PROJECT</u> : $2(a) - 2(b) =$	

C. Tier II Impervious Cover - - Tier II Watershed: _____
3. Impervious Cover Minimization
If 2(c) is greater than 0, evaluate on-site alternatives for impervious cover impact minimization by identifying additional areas where ESD stormwater management practices can be utilized.
4. Impervious Cover Offsets
Add the area-acres of remaining unavoidable impervious cover increases (not treated with ESD) to the total targeted for mitigation under Section B(4). Increases such as these can be mitigated with forest cover restoration/afforestation, or through off-site mitigation alternatives such as impervious cover disconnection or retrofits, stream restoration, buffer enhancement, etc.
5. Impervious Cover Justification
If there is any remaining unavoidable addition of impervious surface acreage (not treated with ESD) and which is not offset, provide narrative justification and supporting documentation for impacts. Reasons may include existing infrastructure, clearance necessary to comply with regulation, no alternative location for stormwater management, property boundary, etc.
6. Impervious Cover Exhibit
On an 8 ½" by 11" sheet(s), prepare an on-site Tier II Impervious Cover Exhibit. Using varying symbology, show a basic site layout relative to 2(a), 2(b), and 2(c) above. Prepare a separate exhibit regarding any off-site reforestation, or out-of-kind mitigation opportunities in accordance with Section D.

D. Tier II Mitigation and Other Potential Requirements

1. If mitigation is necessary:

- a. In-kind mitigation shall occur at a target ratio of 1:1.
- b. In order to satisfy the requirements of the Antidegradation Review, an applicant must demonstrate that they have conducted a robust alternatives analysis, including mitigation as a means for additional minimization of unavoidable impact to Tier II resources.
- c. MDE strongly recommends pre-application meetings.
- d. Regardless of application status, prepare preliminary analysis, including:
 - i. Preliminary site search for potential properties
 - ii. Basic exploration of out-of-kind possibilities, such as restoration, impervious cover retrofit or removal, etc.
- e. Mitigation is required for unavoidable net forest cover loss.
- f. The greater the net loss, the higher the restoration target.

D. Tier II Mitigation and Other Potential Requirements

2. Mitigation Plan Components

- a. Statement of unavoidable impacts to Tier II waters. This is total loss calculated in Section A (2)h, Section A(2)i, Section B (2)f, and Section C (2)c. Identify values specifically associates with stream buffers, forest cover, and impervious cover. Tabular totals shall be broken according to resource type and Tier II watershed impacted. The accompanying narrative shall include a summary of why impacts are considered unavoidable.
- b. Preferred mitigation alternatives analysis within the impacted Tier II watershed. The order of mitigation alternatives is as follows:
 - i. In-kind, on-site
 - ii. In-kind, off-site
 - iii. Out-of-kind, on-site
 - iv. Out-of-kind, off-site
- c. Mitigation site alternative analysis. Establish site search criteria. All locations must be located within the affected Tier II watershed identified for each unavoidable impact calculated in 2(a). Tabular totals shall include the amount of mitigation/offset selected alternatives achieve. Include maps of each mitigation property.
- d. Protection Mechanism. Explain the plan proposed to ensure that all areas identified for mitigation shall be protected in perpetuity. Permittees shall be required to provide documentation in the form of covenants, landowner agreements, deed details, etc. as well as financial assurances. This shall be provided no more than 60 days after completion.
- e. Site Description. Provide site address, name of property if known, map and parcel number, and centroid coordinates in latitude/longitude. Include maps of each mitigation property. Maps shall include natural resources (i.e. existing forest cover, streams, wetlands, etc.), roads, railways, and any other important identifying features. Maps shall include natural resources (i.e. existing forest cover, streams, wetlands, etc.), roads, railways, and any other important identifying features.
- f. Planting plan: Reforestation shall incorporate optimum vegetation selection guidance provided in the *State Forest Conservation Technical Manual, 3rd edition, 1997 by Maryland Department of Natural Resources*.

D. Tier II Mitigation and Other Potential Requirements
2. Mitigation Plan Components, Continued
g. <u>Monitoring Reports</u> . Properties shall be monitored for a minimum of five years to ensure site success. Reports shall provide visuals of establishment progress, as well as narrative descriptions. Include any issues encountered, overcome, and potential changes that may be necessary to meet objectives.

D. Tier II Mitigation and Other Potential Requirements
3. Other Potential Requirements
a. <u>pH Monitoring and Corrective Action Plan</u> . Often associated with in-stream grout activities. b. <u>Compaction Management Plan</u> . Often associated with linear activities, such as pipelines. c. <u>Water Quality Monitoring and Corrective Action Plan</u> . Associated with projects with in-stream impacts. d. <u>Biological Monitoring</u> . Project requirement for complex projects with direct or significant impacts. e. <u>Hydraulic Analysis</u> . Projects may include direct or significant near-stream disturbances, such as grading, vegetative removal, watershed boundary changes, etc. f. <u>Other requirements</u> . To address unique impacts specific to the activity or site. g. <u>Social and Economic Justification</u> . Depending upon the scope of impacts to Tier II resources and streams, applicants may be required to provide additional documentation to justify the permitting of an activity that will degrade Tier II streams, on an socio-economic basis.

Applicant Signature: _____ **Date:** _____

Provide a hardcopy responses to:

Maryland Department of the Environment
Environmental Assessment and Standards Program
Antidegradation Implementation Coordinator
ATTN: Angel D. Valdez
1800 Washington Blvd
Baltimore, Maryland 21230

Provide an electronic response, by CD to the address above, or a way to download the response from secure cloud-based site, email: to Angel Valdez at angel.valdez@maryland.gov.



Maryland Department of the Environment

Antidegradation Review Report Form
Alternatives Analysis - No Discharge Alternative



Purpose

This form is designed to help applicants assemble a complete Tier II Review report. This form specifically addresses evaluating alternatives that avoid impacts to Tier II watersheds and streams. It is strongly recommended that applicants complete this analysis as early in the project planning stages as possible, during initial property site search and screening analysis of purchase and feasibility alternatives.

The Department will use this information to determine whether or not an adequate alternatives analysis was conducted, and to help determine if a reasonable alternative to the proposed activity is available. MDE may provide additional comments during the course of the review.

Fill in all that apply:

1. **Project Name:** _____
2. **County ESC Plan Identifier:** _____
3. **Nontidal Wetlands & Waterways Construction Tracking Number: 20206_ _ _ _**
4. **General Permit Number:** _____
5. **Other Application Type and Number:** _____

Applicant Signature: _____ **Date Complete:** _____

Background

Code of Maryland Regulations (COMAR) 26.08.02.04-1 (G(1)) states that "If a Tier II antidegradation review is required, the applicant shall provide an analysis of reasonable alternatives that do not require direct discharge to a Tier II water body (no-discharge alternative). The analysis shall include cost data and estimates to determine the cost effectiveness of the alternatives".

For land disturbing projects that result in permanent land use change, this 'no discharge' analysis specifically evaluates the reasonability of other sites or alternate routes which could be developed to meet the project purpose, but are located *outside* of the Tier II watershed. Reasonability considerations, as applicable, may take into account property availability, site constraints, natural resource concerns, size, accessibility, and cost to make the property suitable for the project. This analysis shall be performed regardless of whether or not the applicant has ownership or lease agreements to a preferred property or route.

Information from this analysis may be used to inform minimization analysis.

Instructions and Notes

1. Complete the analysis for each Tier II watershed impacted.
2. Review the information in this document carefully. Prepare a report to address all of the analyses required by this document. Submit all Tier II analysis and documentation at one time.
3. To help improve review efficiency and avoid delays, do not leave any response blank. Please use "N/A" for any questions or sections that are not applicable.
4. Provide sufficient supporting documentation for narratives.
5. The level of analysis necessary, and amount of documentation that may be needed to make a decision is dependent upon project size, scope, and scale of relative impacts to Tier II resources. Please develop responses accordingly.
6. Reports/responses shall be submitted in electronic format, as well as paper. Full plans are not required unless requested over the course of the review.
7. Direct any questions regarding this form to Angel Valdez at angel.valdez@maryland.gov, or by phone at 410-537-3606.

No Discharge Alternative Analysis Final Documentation Checklist

- ☐ Signed & Dated MDE Tier II Alternatives Analysis – No Discharge Alternative form (page 1)
- ☐ Qualifying Exemptions with supporting documentation
- ☐ General Project Purpose Statement with relevant definitions
- ☐ Alternative Site Reasonability Analysis
 - ☐ Results of initial site search
 - ☐ Map of alternatives relative to preferred site and Tier II streams/catchment
 - ☐ Alternative Sites Summary Analysis Table Supplementary Information (per site)
 - ☐ Detailed Narrative of Alternate Analysis Outcome
- ☐ Alternative Route Reasonability Analysis
 - ☐ Results of initial site search
 - ☐ Map of all alternatives relative to preferred route and Tier II streams/catchment
 - ☐ Alternative Sites Summary Analysis Table Supplementary Information (per site)
 - ☐ Detailed Narrative of Alternate Analysis Outcome
- ☐ Narrative rationale for final decision of reasonableness

Qualifying Exemptions

For the purposes of the no discharge analysis for land disturbing activities, extenuating circumstances may apply to projects that are developed to address a specific need, may be linked to special funding, or linked to a specific location. Supporting documentation is required before consideration. Please read the following examples and determine whether or not a given situation is applicable.

The applicant must get concurrence from MDE as to the applicability of any special circumstances prior to completing the no discharge alternatives analysis. It is at the Department's discretion to determine whether a special circumstance applies, and whether or not this applicability means that there is not a reasonable alternative that avoids the Tier II watershed.

If none of the special circumstances apply, check "**Not Applicable**".

☐ **Not Applicable**

☐ **Situation 1:** Project is linked to unique or special incentives for State, County, or Municipality

Example: County needs for 1000 units of low-income senior housing in legislative district 7. Documentation must include the request for proposals (RFP) or similar missive to meet the housing need, and unique benefits or incentives lost if the project is moved outside of legislative district 7.

Example: Project is located in a State Designated Priority Funding Area, State Designated Enterprise Zone, or similar area targeted by the State for economic growth, business development, or investment.

☐ **Situation 2:** Project has location specific limitations

Example: College campus extension. Education capital funding limits development to sites that are within 5 miles of the main campus. Documentation should include the RFP or similar documentation.

Example: Project is taking place in an existing right of way, or using an area that is currently operational. Such projects include replacing transmission lines, expanding operations on a working farm or business center.

☐ **Situation 3:** Military project (or similar) with restrictions due to national security, etc.

Example: Construct a new runway and hangar for Air Force 1. The military may identify a certain location or base where this construction shall occur due to existing facilities, support personnel, and security concerns.

☐ **Situation 4:** Project has little to no resource impacts.

Example: Repair or replacement of existing structures, road resurfacing, bridge maintenance using scaffolding, General Waterways Construction Permits, habitat restoration, rehabilitation, and stabilization.

☐ **Situation 5:** Project is a "Grandfathered" development, that meets the specifications within Chapter 1.2, in the *Maryland Model Stormwater Management Ordinance, June 2009 & April 2010*

Administrative waivers, extension documentation, etc. are required documentation.

Note -This exemption does not apply to linear projects like roads or pipelines. Grandfathered projects are not exempt from the minimization alternatives analysis.

General Project Purpose Statement

1. Define the overall project purpose and site selection criteria. To result in a fair and meaningful analysis for the antidegradation review the site selection criteria must fall into the following parameters:
 - a. The statement must not be so narrowly constructed as to limit the results to one site with no other possible alternatives, or
 - b. Likewise, the statement cannot be too broadly written creating too many alternatives to effectively consider.
2. Example Statements
 - a. Too Narrow: To develop a high density residential housing complex consisting of 1000 living units on a 200 acre site adjacent to the Mall of Maryland. -- The likelihood that there are multiple properties other than the desired alternative available are unlikely, and this eliminates the possibility of properties outside of the Tier II watershed.
 - b. Too Broad: To develop a residential housing complex in Charles County. -- This will yield hundreds of results, creating a burdensome and unrealistic amount of work to evaluate each alternative.**
 - c. Reasonable: To develop a residential housing complex near a major shopping center in Northern Charles County. -- This will reduce the number of available properties to a more manageable amount, while still meeting the overall purpose of providing housing near a retail center in a target geographic area. The applicant can further refine the statement by defining "near", "major shopping center", and "Northern Charles County".
3. The applicant must craft a statement that yields at least 3 available alternative properties for further evaluation.
4. The level of detail for the alternative analysis process should appropriately match the complexity of the project taking into consideration factors such as resource impacts to Tier II watersheds in terms of impervious cover, forest cover loss, riparian buffer impacts, public comment, etc. For example, the amount of documentation provided for 3 alternatives to place a single dwelling on one acre is expected to be significantly less than the documentation expected for a 300 acre mixed-use development.

**Based on comments received during the review or other mitigating circumstances, the Department may require the applicant to evaluate additional alternatives, or provide a more in-depth analysis.

Table 1: Alternative Site Evaluation Summary Analysis Table			
Evaluate each criteria listed in the left hand column for each alternative site. Populate each box with the appropriate conditions, i.e. either yes/no, or by listing one or more of the options provided (a, b, c...), such as types of utilities available at a given site.			
	Site 1	Site 2	Site 3
Availability: a. Owned by applicant b. For sale c. Special, please explain (example: remediation required)			
Sizing appropriate: a. As is b. Purchase of adjoining property/ROW required			
Accessible Utilities: a. Electric b. Water c. Sewer d. Site access (existing road/bridge, etc.). e. None			
Development Resources: a. Existing SWM b. Existing buildings/structures c. Site cleared			
Zoning: a. Appropriate b. Waiver required			
Resource Impacts: a. Streams b. Forest c. Wetlands/wetlands buffer d. 100-yr flood plain			
Cost to Acquire is Reasonable: Yes or No			

Alternative Sites Summary Analysis Table Supplementary Information:

1. Explanation of site search criteria and rationale.
 - a. Relate project requirements to the criteria in Table 1.
 - b. Include any additional critical criteria not identified in the above table.
2. Results of initial site search.
 - a. List the available sites for consideration before the applicant chose 3 for further evaluation.
 - b. Include a brief narrative description of each site.
 - c. Include a table listing basic site address, lot size, parcel and map.
 - d. Include an overview map showing sites and their relative location to the preferred property.
 - e. If available, include Real Property Search Data (From Maryland Department of Assessments and Taxation (<http://sdat.dat.maryland.gov/RealProperty/Pages/default.aspx>), or MLS (Multiple Listing Service) information.
3. Expand upon the responses in Table 1.
 - a. Include a narrative that clearly explains how the applicant determined the final 3 sites for further consideration in Table 1.
 - b. Provide basic information about each site, i.e. land use, land cover, unique features, on-site resources such as streams, wetlands, relevant geology and/or hydrology, etc.
 - c. Discuss specific resource impacts.
 - i. Include a table that further breaks down the resource impacts associated with the 3 alternative sites.
 - ii. Include a narrative that further details whether resources could be avoided. For example, an on-site stream that will most likely be crossed to accommodate site access would make that site less favorable when compared to another option.
4. Justify final site decision.

Table 1: Alternative Route Evaluation Summary Analysis Table (use for linear projects such as roads, utility lines, etc)			
Evaluate each criteria listed in the left hand column for each alternative site. Populate each box with the appropriate conditions, i.e. either yes/no, or by listing one or more of the options provided (a, b, c...), such as types of utilities available at a given site.			
	Site 1	Site 2	Site 3
Availability: a. ROW Owned by applicant b. ROW can be acquired or leased c. Other, please explain			
Accessible Utilities (i.e. where connecting infrastructure is required): a. Electric b. Water c. Sewer or pipeline d. Site access (existing road/bridge, etc.). e. None			
Zoning: a. Appropriate b. Waiver required			
Resource Impacts: a. Streams b. Forest c. Wetlands/wetlands buffer d. 100-yr flood plain			
Cost to Acquire is Reasonable: Yes or No			

Alternative Route Summary Analysis Table Supplementary Information:

1. Explanation of route search criteria and rationale.
 - a. Relate project requirements to the criteria in Table 1.
 - b. Include any additional critical criteria not identified in the above table. For example, if the purpose of the project is to improve public safety, documentation must be provided to support this claim. For a new road this may include data on accidents, visibility issues, or geometric design issues that can complicate travel.
2. Results of initial route search.
 - a. List the available routes for consideration before the applicant chose 3 for further evaluation.
 - b. Include a brief narrative description of each route.
 - c. Include a table listing route start and end addresses, parcel and map, land use (i.e. residential neighborhood, commercial district, etc.)
 - d. Include an overview map showing results and their relative location within the impacted Tier II watershed.
3. Expand upon the responses in Table 1.
 - a. Include a narrative that clearly explains how the applicant determined the final 3 sites for further consideration in Table 1.
 - b. Provide basic information about each site, i.e. land use, land cover, unique features, on-site resources such as streams, wetlands, etc.
 - c. Discuss specific resource impacts.
 - i. Include a table that further breaks down the resource impacts associated with the 3 alternative routes. For example identify the number of streams on-site, potential forest loss for site clearing, etc.
 - ii. Include a narrative that further details whether resources could be avoided. For example, an on-site stream that will most likely be crossed to accommodate site access would make that site less favorable when compared to another option. Note: In making a final decision, MDE may take into consideration whether or not the project can avoid the impact by going over it (i.e. bridge) or under it (i.e. drilling). Consider this in the resource impact evaluation. The method of crossing may be a special permit condition.
4. Justify final route decision.

Provide a hardcopy responses to:

Maryland Department of the Environment
Environmental Assessment and Standards Program
Antidegradation Implementation Coordinator
ATTN: Angel D. Valdez
1800 Washington Blvd
Baltimore, Maryland 21230

Provide an electronic response, by CD to the address above, or a way to download the response from secure cloud-based site, email: to Angel Valdez at angel.valdez@maryland.gov.



Maryland Department of the Environment Antidegradation Review Report Form **Social and Economic Justification – Outline for Basic Projects**



Purpose

This form is designed to help applicants assemble a complete social and economic justification (SEJ) to complete the Antidegradation Tier II Review when there are certain unavoidable impacts to water quality. Pursuant to COMAR 26.08.02.04-1 (J), applicants must submit an SEJ if “(a) No cost effective alternative to the discharge is available; or (b) The cumulative degradation resulting from nonpoint source pollution and any other permitted discharges would diminish water quality”. Therefore, if impacts cannot be fully avoided, minimized, or mitigated, the applicant may have to provide MDE with an SEJ. The SEJ must demonstrate that an economic hardship and/or public benefit overrides the value of the ecological services or water quality benefit that the Tier II water segment provides. The applicant must also provide documentation to show that all reasonable avoidance, minimization, and mitigation alternatives have been considered, and where economically feasible, implemented.

The Department will use this information to determine whether or not the SEJ is complete, if it adequately justifies the impact to water quality, and to make a final permit determination. MDE may provide additional comments during the course of the review.

- **Introduction**
 - Project Summary
 - Impacts
 - Antidegradation Policy
 - Document purpose
- **Socioeconomic Contributions of the Project**
 - Economic Importance and Benefit
 - Economic Impacts- During Construction
 - Economic Impacts –During Operations
 - Fiscal Impacts –Development Phase
 - Fiscal Impacts –During Operations
 - Social Importance and Benefit
 - Widespread social benefits to the community affected
 - Contributions to environment
- **Socioeconomic Benefits of High Quality Waters (as applicable)**
 - Social importance and benefit
 - Impacts on property value
 - Recreation value
 - Other quality of life benefits
 - General Evaluation of Economic Impacts of Restoring Degraded Stream Resources, including impacts to resources necessary to maintain high quality waters
 - Costs of 1:1 in-kind mitigation for all net forest cover loss based on area market value
 - Estimated cost of stream restoration, per linear foot, based on area market value
- **Conclusion**
- **References & Appendices as needed**



Larry Hogan, Governor
Boyd Rutherford, Lt. Governor
Jeannie Haddaway-Riccio, Secretary
Allan Fisher, Acting Deputy Secretary

October 13, 2021

Mr. Ryan Soens
316 CES/CEIE
3466 North Carolina Avenue
Joint Base Andrews, MD 20762

RE: Environmental Review for Installation Development Plan Projects at Joint Base Andrews - Main Installation and Brandywine Annex, Prince George's County, Maryland.

Dear Mr. Soens:

For the Main Installation, the Wildlife and Heritage Service has determined that there is a record of the state-listed endangered Blue Ridge False Foxglove (*Agalinis decemloba*) documented in the southeastern corner of the property. It is important to note that while there are no known occurrences of this species in the proposed limits of disturbance as shown on your map, there is the possibility that this species could occur in the proposed work areas if there is suitable habitat.

For the Brandywine Annex, the Wildlife and Heritage Service has determined that there are the following records for rare, threatened or endangered plant and animal species:

<u>Scientific Name</u>	<u>Common Name</u>	<u>State Status</u>
<i>Polygala polygama</i>	Racemed Milkwort	Threatened
<i>Carex buxbaumii</i>	Buxbaum's Sedge	Threatened
<i>Linum intercursum</i>	Sandplain Flax	Threatened
<i>Agalinis skinneriana</i>	Pale False Foxglove	Endangered

It is important to note that while there are no known occurrences of these species in the proposed limits of disturbance as shown on your map, there is the possibility that these species could occur in the proposed work areas if there is suitable habitat.

Please be sure to let us know if the limits of proposed disturbance or overall site boundaries change and we will provide you with an updated evaluation. Thank you for allowing us the opportunity to review this project. If you should have any further questions regarding this information, please contact me at (410) 260-8573.

Sincerely,

Lori A. Byrne,
Environmental Review Coordinator
Wildlife and Heritage Service
MD Dept. of Natural Resources

ER# 2021.1284.pg
Cc: K. McCarthy, DNR

Appendix C: USFWS Information for Planning and Conservation (IPaC) and Migratory Bird Reports

THIS PAGE INTENTIONALLY LEFT BLANK



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Chesapeake Bay Ecological Services Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401-7307
Phone: (410) 573-4599 Fax: (410) 266-9127

<http://www.fws.gov/chesapeakebay/>
<http://www.fws.gov/chesapeakebay/endsppweb/ProjectReview/Index.html>

In Reply Refer To:

October 21, 2021

Consultation code: 05E2CB00-2021-TA-1978

Event Code: 05E2CB00-2022-E-00409

Project Name: Joint Base Andrews Installation Development Plan

Subject: Verification letter for the 'Joint Base Andrews Installation Development Plan' project under the January 5, 2016, Programmatic Biological Opinion on Final 4(d) Rule for the Northern Long-eared Bat and Activities Excepted from Take Prohibitions.

Dear Marisa Wetmore:

The U.S. Fish and Wildlife Service (Service) received on October 21, 2021 your effects determination for the 'Joint Base Andrews Installation Development Plan' (the Action) using the northern long-eared bat (*Myotis septentrionalis*) key within the Information for Planning and Consultation (IPaC) system. This IPaC key assists users in determining whether a Federal action is consistent with the activities analyzed in the Service's January 5, 2016, Programmatic Biological Opinion (PBO). The PBO addresses activities excepted from "take"^[1] prohibitions applicable to the northern long-eared bat under the Endangered Species Act of 1973 (ESA) (87 Stat.884, as amended; 16 U.S.C. 1531 et seq.).

Based upon your IPaC submission, the Action is consistent with activities analyzed in the PBO. The Action may affect the northern long-eared bat; however, any take that may occur as a result of the Action is not prohibited under the ESA Section 4(d) rule adopted for this species at 50 CFR §17.40(o). Unless the Service advises you within 30 days of the date of this letter that your IPaC-assisted determination was incorrect, this letter verifies that the PBO satisfies and concludes your responsibilities for this Action under ESA Section 7(a)(2) with respect to the northern long-eared bat.

Please report to our office any changes to the information about the Action that you submitted in IPaC, the results of any bat surveys conducted in the Action area, and any dead, injured, or sick northern long-eared bats that are found during Action implementation. If the Action is not completed within one year of the date of this letter, you must update and resubmit the information required in the IPaC key.

This IPaC-assisted determination allows you to rely on the PBO for compliance with ESA Section 7(a)(2) only for the northern long-eared bat. It **does not** apply to the following ESA-protected species that also may occur in the Action area:

- Monarch Butterfly *Danaus plexippus* Candidate

If the Action may affect other federally listed species besides the northern long-eared bat, a proposed species, and/or designated critical habitat, additional consultation between you and this Service office is required. If the Action may disturb bald or golden eagles, additional coordination with the Service under the Bald and Golden Eagle Protection Act is recommended.

[1]Take means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct [ESA Section 3(19)].

Action Description

You provided to IPaC the following name and description for the subject Action.

1. Name

Joint Base Andrews Installation Development Plan

2. Description

The following description was provided for the project 'Joint Base Andrews Installation Development Plan':

Implementation of Joint Base Andrews's (JBA's) Installation Development Plan, which includes the implementation of 27 projects, including construction, renovation, and demolition projects, over a 5-year timeframe. These projects would take place on JBA's main installation and Brandywine Annex, both in Prince George's County, Maryland. The total potential impacted acreage across all 27 projects is 4,756.49 acres.

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@38.8056612,-76.87741169049968,14z>

**Determination Key Result**

This Federal Action may affect the northern long-eared bat in a manner consistent with the description of activities addressed by the Service's PBO dated January 5, 2016. Any taking that may occur incidental to this Action is not prohibited under the final 4(d) rule at 50 CFR §17.40(o). Therefore, the PBO satisfies your responsibilities for this Action under ESA Section 7(a)(2) relative to the northern long-eared bat.

Determination Key Description: Northern Long-eared Bat 4(d) Rule

This key was last updated in IPaC on May 15, 2017. Keys are subject to periodic revision.

This key is intended for actions that may affect the threatened northern long-eared bat.

The purpose of the key for Federal actions is to assist determinations as to whether proposed actions are consistent with those analyzed in the Service's PBO dated January 5, 2016.

Federal actions that may cause prohibited take of northern long-eared bats, affect ESA-listed species other than the northern long-eared bat, or affect any designated critical habitat, require ESA Section 7(a)(2) consultation in addition to the use of this key. Federal actions that may affect species proposed for listing or critical habitat proposed for designation may require a conference under ESA Section 7(a)(4).

Determination Key Result

This project may affect the threatened Northern long-eared bat; therefore, consultation with the Service pursuant to Section 7(a)(2) of the Endangered Species Act of 1973 (87 Stat.884, as amended; 16 U.S.C. 1531 et seq.) is required. However, based on the information you provided, this project may rely on the Service's January 5, 2016, *Programmatic Biological Opinion on Final 4(d) Rule for the Northern Long-Eared Bat and Activities Excepted from Take Prohibitions* to fulfill its Section 7(a)(2) consultation obligation.

Qualification Interview

1. Is the action authorized, funded, or being carried out by a Federal agency?
Yes
2. Have you determined that the proposed action will have "no effect" on the northern long-eared bat? (If you are unsure select "No")
No
3. Will your activity purposefully **Take** northern long-eared bats?
No
4. [Semantic] Is the project action area located wholly outside the White-nose Syndrome Zone?
Automatically answered
No
5. Have you contacted the appropriate agency to determine if your project is near a known hibernaculum or maternity roost tree?

Location information for northern long-eared bat hibernacula is generally kept in state Natural Heritage Inventory databases – the availability of this data varies state-by-state. Many states provide online access to their data, either directly by providing maps or by providing the opportunity to make a data request. In some cases, to protect those resources, access to the information may be limited. A web page with links to state Natural Heritage Inventory databases and other sources of information on the locations of northern long-eared bat roost trees and hibernacula is available at www.fws.gov/midwest/endangered/mammals/nleb/nhisites.html.

Yes

6. Will the action affect a cave or mine where northern long-eared bats are known to hibernate (i.e., hibernaculum) or could it alter the entrance or the environment (physical or other alteration) of a hibernaculum?
No
 7. Will the action involve Tree Removal?
Yes
-

8. Will the action only remove hazardous trees for the protection of human life or property?

No

9. Will the action remove trees within 0.25 miles of a known northern long-eared bat hibernaculum at any time of year?

No

10. Will the action remove a known occupied northern long-eared bat maternity roost tree or any trees within 150 feet of a known occupied maternity roost tree from June 1 through July 31?

No

Project Questionnaire

If the project includes forest conversion, report the appropriate acreages below. Otherwise, type '0' in questions 1-3.

1. Estimated total acres of forest conversion:

261.5

2. If known, estimated acres of forest conversion from April 1 to October 31

0

3. If known, estimated acres of forest conversion from June 1 to July 31

0

If the project includes timber harvest, report the appropriate acreages below. Otherwise, type '0' in questions 4-6.

4. Estimated total acres of timber harvest

0

5. If known, estimated acres of timber harvest from April 1 to October 31

0

6. If known, estimated acres of timber harvest from June 1 to July 31

0

If the project includes prescribed fire, report the appropriate acreages below. Otherwise, type '0' in questions 7-9.

7. Estimated total acres of prescribed fire

0

8. If known, estimated acres of prescribed fire from April 1 to October 31

0

9. If known, estimated acres of prescribed fire from June 1 to July 31

0

If the project includes new wind turbines, report the megawatts of wind capacity below. Otherwise, type '0' in question 10.

10. What is the estimated wind capacity (in megawatts) of the new turbine(s)?

0

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Project information

NAME

Joint Base Andrews Installation Development Plan

LOCATION

Prince George's County, Maryland



DESCRIPTION

Some(Implementation of Join Base Andrews's (JBA's) Installation Development Plan, which includes the implementation of 27 projects, including construction, renovation, and demolition projects, over a 5-year timeframe. These projects would take place on JBA's main installation and Brandywine Annex, both in Prince George's County, Maryland. The total potential impacted acreage across all 27 projects is 4,756.49 acres.)

Local office

Chesapeake Bay Ecological Services Field Office

☎ (410) 573-4599

📠 (410) 266-9127

177 Admiral Cochrane Drive

Annapolis, MD 21401-7307

<http://www.fws.gov/chesapeakebay/>

<http://www.fws.gov/chesapeakebay/endsppweb/ProjectReview/Index.html>

NOT FOR CONSULTATION

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Log in to IPaC.
2. Go to your My Projects list.
3. Click PROJECT HOME for this project.
4. Click REQUEST SPECIES LIST.

Listed species¹ and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries²).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

1. Species listed under the [Endangered Species Act](#) are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME

STATUS

Northern Long-eared Bat *Myotis septentrionalis***Threatened**

Wherever found

This species only needs to be considered if the following condition applies:

- Projects with a federal nexus that have tree clearing = to or > 15 acres: 1. REQUEST A SPECIES LIST 2. NEXT STEP: EVALUATE DETERMINATION KEYS 3. SELECT EVALUATE under the Northern Long-Eared Bat (NLEB) Consultation and 4(d) Rule Consistency key

No critical habitat has been designated for this species.

<http://ecos.fws.gov/ecp/species/9045>

Insects

NAME

STATUS

Monarch Butterfly *Danaus plexippus***Candidate**

Wherever found

This species only needs to be considered if the following condition applies:

- The monarch is a candidate species and not yet listed or proposed for listing. There are generally no section 7 requirements for candidate species (FAQ found here: <https://www.fws.gov/savethemonarch/FAQ-Section7.html>).

No critical habitat has been designated for this species.

<http://ecos.fws.gov/ecp/species/9743>

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern <http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php>
- Measures for avoiding and minimizing impacts to birds <http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php>
- Nationwide conservation measures for birds <http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf>

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern](#) (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME

BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)

Bald Eagle *Haliaeetus leucocephalus*

Breeds Oct 15 to Aug 31

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

<http://ecos.fws.gov/ecp/species/1626>

Bobolink *Dolichonyx oryzivorus*

Breeds May 20 to Jul 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Kentucky Warbler *Oporornis formosus*

Breeds Apr 20 to Aug 20

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Lesser Yellowlegs *Tringa flavipes*

Breeds elsewhere

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<http://ecos.fws.gov/ecp/species/9679>

Prairie Warbler *Dendroica discolor*

Breeds May 1 to Jul 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Red-headed Woodpecker *Melanerpes erythrocephalus*

Breeds May 10 to Sep 10

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Rusty Blackbird *Euphagus carolinus*

Breeds elsewhere

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Wood Thrush *Hylocichla mustelina*

Breeds May 10 to Aug 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

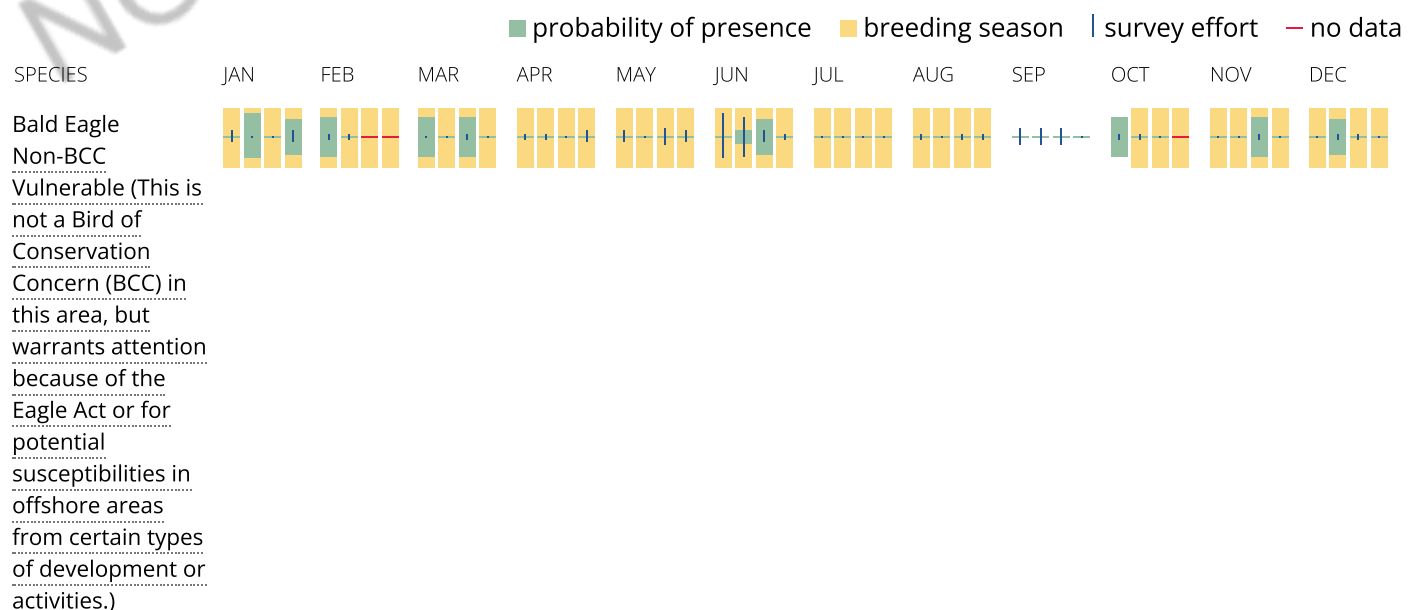
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (—)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.





Rusty Blackbird
BCC - BCR (This is a
Bird of
Conservation
Concern (BCC) only
in particular Bird
Conservation
Regions (BCRs) in
the continental
USA)



Wood Thrush
BCC Rangewide
(CON) (This is a
Bird of
Conservation
Concern (BCC)
throughout its
range in the
continental USA
and Alaska.)



Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [AKN Phenology Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: [The Cornell Lab of Ornithology All About Birds Bird Guide](#), or (if you are unsuccessful in locating the bird of interest there), the [Cornell Lab of Ornithology Neotropical Birds guide](#). If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting

point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

FRESHWATER EMERGENT WETLAND

[PEM1Ad](#)

[PEM1A](#)

[PEM1C](#)

[PEM1Cb](#)

[PEM1Fh](#)

[PEM1Fb](#)

[PEM1Cd](#)
[PEM1Ax](#)
[PEM5Ax](#)
[PEM1Fx](#)
[PEM1Ch](#)
[PEM5A](#)
[PEM1Cx](#)

FRESHWATER FORESTED/SHRUB WETLAND

[PFO1A](#)
[PFO1C](#)
[PSS1C](#)
[PSS1/EM1Fh](#)
[PSS1A](#)
[PFO1Ch](#)
[PSS1/FO1Fh](#)
[PSS1Cb](#)
[PFO1Fh](#)
[PFO1E](#)
[PFO/SS1A](#)
[PSS1Ah](#)
[PSS1/EM5A](#)

FRESHWATER POND

[PUBHx](#)
[PUBHh](#)
[PUBHb](#)
[PUBFb](#)
[PUBFh](#)
[PUSCx](#)
[PUBFx](#)
[PABHx](#)
[PABFx](#)

RIVERINE

[R5UBH](#)
[R4SBC](#)

A full description for each wetland code can be found at the [National Wetlands Inventory website](#)

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted.

Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

NOT FOR CONSULTATION

Appendix D: Notice of Availability

THIS PAGE INTENTIONALLY LEFT BLANK