DRAFT PROGRAMMATIC ENVIRONMENTAL ASSESSMENT

Area Development Plan at Fort Detrick Forest Glen Annex

U.S. Army Garrison Fort Detrick
Directorate of Public Works, Environmental Division

May 2022

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Area Development Plan at Fort Detrick Forest Glen Annex

Fort Detrick, Maryland

PROGRAMMATIC ENVIRONMENTAL ASSESSMENT

Reviewed by:

U.S. Army Garrison Fort Detrick

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Joseph Gortva

Chief, Environmental Management Division

Recommended for Approval:

U.S. Army Garrison Fort Detrick

_____

Carl Pritchard

Director, Public Works

Approved by:

U.S. Army Garrison Fort Detrick

_____

DANFORD W. BRYANT, II

Colonel, CA

Commanding

Area Development Plan at Fort Detrick Forest Glen Annex

Draft Programmatic Environmental Assessment

U.S. Army Garrison Fort Detrick
Directorate of Public Works, Environmental Division

May 2022

FINDING OF NO SIGNIFICANT IMPACT

AREA DEVELOPMENT PLAN
AT FORT DETRICK FOREST GLEN ANNEX, MARYLAND

Introduction

Fort Detrick includes six non-contiguous land parcels designated as Areas A, B, Area C Water Treatment Plant (WTP), Area C Wastewater Treatment Plant (WWTP), Forest Glen Annex, and Forest Glen Housing Area. The Forest Glen Annex is located 41 miles south of Fort Detrick, seven miles north of Washington D.C in Silver Spring Maryland. Forest Glen Annex is within Montgomery County, Maryland and will be evaluated in this EA. Fort Detrick encompasses 1,552 acres in total; 132 of those acres belong to the Forest Glen Annex.

The Fort Detrick ADP for Forest Glen Annex elicits four primary goals: efficiently manage space; provide sustainable, adaptable, and modernized facilities and infrastructure; ensure a high quality of life; and establish a safe and secure interconnected campus.

The Proposed Action is the preferred alternative and includes the implementation of all projects in the Forest Glen Annex of Fort Detrick as defined in the Forest Glen ADP. These projects in-line with the mission and vision goals put in place by Fort Detrick as well as the overarching Real Property Master Plan (RPMP) aimed at creating a sustainable growth at Army installations.

In accordance with both Council on Environmental Quality (CEQ) and National Environmental Policy Act (NEPA) regulations (40 Code of Federal Regulations [CFR] 1508.13 and 32 CFR Part 651.21, respectively), this Finding of No Significant Impact (FNSI) hereby incorporates the entire Programmatic Environmental Assessment (PEA) by reference.

1. Purpose and Need

The **purpose** of the Proposed Action is to implement the ADP for Fort Detrick's Forest Glen Annex with the intent of creating sustainable and manageable growth. The ADP for Forest Glen Annex was developed in consultation with the RPMP. The ADP addresses the specific developmental needs at Forest Glen Annex to allow development to continue alongside a comprehensive plan addressing infrastructural updates as well as expansion needs.

The Proposed Action is **needed** because the Army must ensure sustainable growth through a comprehensive plan pinpointing areas of distress as Forest Glen Annex is a growing installation that continues to increase in size as well as administrative capacities. The ADP addresses local issues at Forest Glen Annex to achieve vision statement goals of: creating sustainable, adaptable and modernized facilities and infrastructure; a high quality of life; and a safe, interconnected,

campus-like environment. With ADPs, Fort Detrick can improve upon these goals, ensuring operations and missions on the Installation are carried out efficiently and properly.

2. Description of the Proposed Action and Alternatives

Chapter 3 of the PEA presents a discussion of the alternatives evaluated.

The No Action Alternative was also considered.

No Action Alternative - The No Action Alternative is to allow the growth of the Fort Detrick to continue without a plan for future growth and management. The growth and development occurring at Fort Detrick would be unmanaged and chaotic. Strategic updates to infrastructure would not occur. Environmental impacts of development would not be considered for projects and tactical strategies to enhance the quality of life and practicality of the infrastructure at Fort Detrick would be foregone.

The No Action Alternative does not adhere to state or federal regulations requiring the Installation to consider environmental consequences of its development. Antiquated infrastructure, including functionality equipment such as electrical systems, would not be updated and therefore fail to meet the goals of the ADPs set forth for the Forest Glen Annex. Unsustainable growth could create hectic circumstances, leaving the infrastructure of Fort Detrick obsolete and unable to continue their mission in a functional and stream-lined manner. This alternative is not ideal and does not allow Fort Detrick to continue to operate as a functional Installation. This alternative is evaluated further in this PEA.

Proposed Action Alternative - The Proposed Action is the preferred alternative and includes the implementation of all projects in the Forest Glen Annex of Fort Detrick as defined in the Forest Glen ADP. These projects in-line with the mission and vision goals put in place by Fort Detrick as well as the overarching RPMP aimed at creating a sustainable growth at Army installations.

The implementation of the Proposed Action will be evaluated for potential environmental, cultural, socioeconomic impacts, as well as compliance with state and federal regulatory requirements. This alternative is evaluated further in this PEA.

3. Environmental Analysis

Environmental Consequences and Comparison of Alternatives: Chapter 5 of the PEA is organized in tabular format by resource area following the same sequence as in the preceding Section 4.0.

The implementation of the Proposed Action is not anticipated to result in adverse significant environmental impacts. It is anticipated that the use of BMPs and adherence to permit and compliance requirements could alleviate the potential for impacts of individual projects when planned, designed, and implemented.

Cumulative Effects: For the purposes of this PEA, and in accordance with CEQ Regulation 40 CFR 1508.7, cumulative impacts result from the incremental impacts of the action when added to other past, present, and reasonably foreseeable actions, regardless of who undertakes such actions. Cumulative impacts can result from individually minor, but collectively significant, actions taking place over a period of time.

Cumulative effects may result from the presence of multiple projects in the same location (or in close proximity). Table 5-1 of the PEA indicates whether there is a potential for cumulative effects to a resource category based on the co-location of projects. The timing of project implementation has not been taken into account for purposes of this PEA. The potential for impacts to the following resource categories were not evaluated due to the inability to determine impacts to those resources based solely on location of the project(s):

1. Air Quality and Greenhouse Gases
2. Visual Aesthetics
3. Socioeconomics, Environmental Justice, and Protection of Children

Proposed Impact Reduction Measures:

Various permits, plans, and measures have been identified within the PEA analysis that would be undertaken by Fort Detrick to minimize adverse effects.

4. Public Review and Comment:

A Notice of Availability (NOA) was published in the Washington Post and Frederick News Post, on the Fort Detrick website, as well as distributed to federal, state and local agencies via letter. The NOA and publication announces the availability of the official public draft PEA and requested comments from the general public and federal, state, and local agencies. The Draft PEA was made available to the public for 30 days, along with a Draft FONSI. The Draft PEA and FONSI were available by request from Fort Detrick and hardcopies were placed in the following Montgomery and Frederick County Public Libraries:

- Brigadier General Charles E. McGee Library (900 Wayne Ave, Silver Spring, MD 20910)
- Long Branch Library (8800 Garland Avenue, Silver Spring, MD 20901)
- White Oak Library (11701 New Hampshire Avenue, Silver Spring, MD 20904)
- C. Burr Artz Public Library (110 East Patrick Street, Frederick, MD 21701)

Comments received during the 30-day public review period will be addressed and documented in the final PEA. All coordination letters sent and responses received during the preparation of this PEA are located in Appendix A.

5. Finding of No Significant Impact:

I have considered the results of the analysis in the PEA, the comments received during the public comment period, and associated cumulative effects.

Based on these factors, I have decided to proceed with the Proposed Action, a long-term solution that would meet all applicable federal, state, local, and installation regulations, and would be used to enable FGA to continue with a plan for future growth and management at FGA, would meet the mission requirements at FGA, and along with specified permits, plans and measures would not have a significant impact on the quality of human life or the natural environment.

This analysis fulfills the requirements of NEPA, as implemented by the CEQ regulations (40 CFR Parts 1500-1508), as well as the requirements of the *Environmental Analysis of Army Actions* (32 CFR Part 651). Therefore, issuance of a FNSI is warranted, and an Environmental Impact Statement is not necessary.

_____ _____

DANFORD W. BRYANT, II Date

Colonel, CA

Commanding

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1 INTRODUCTION

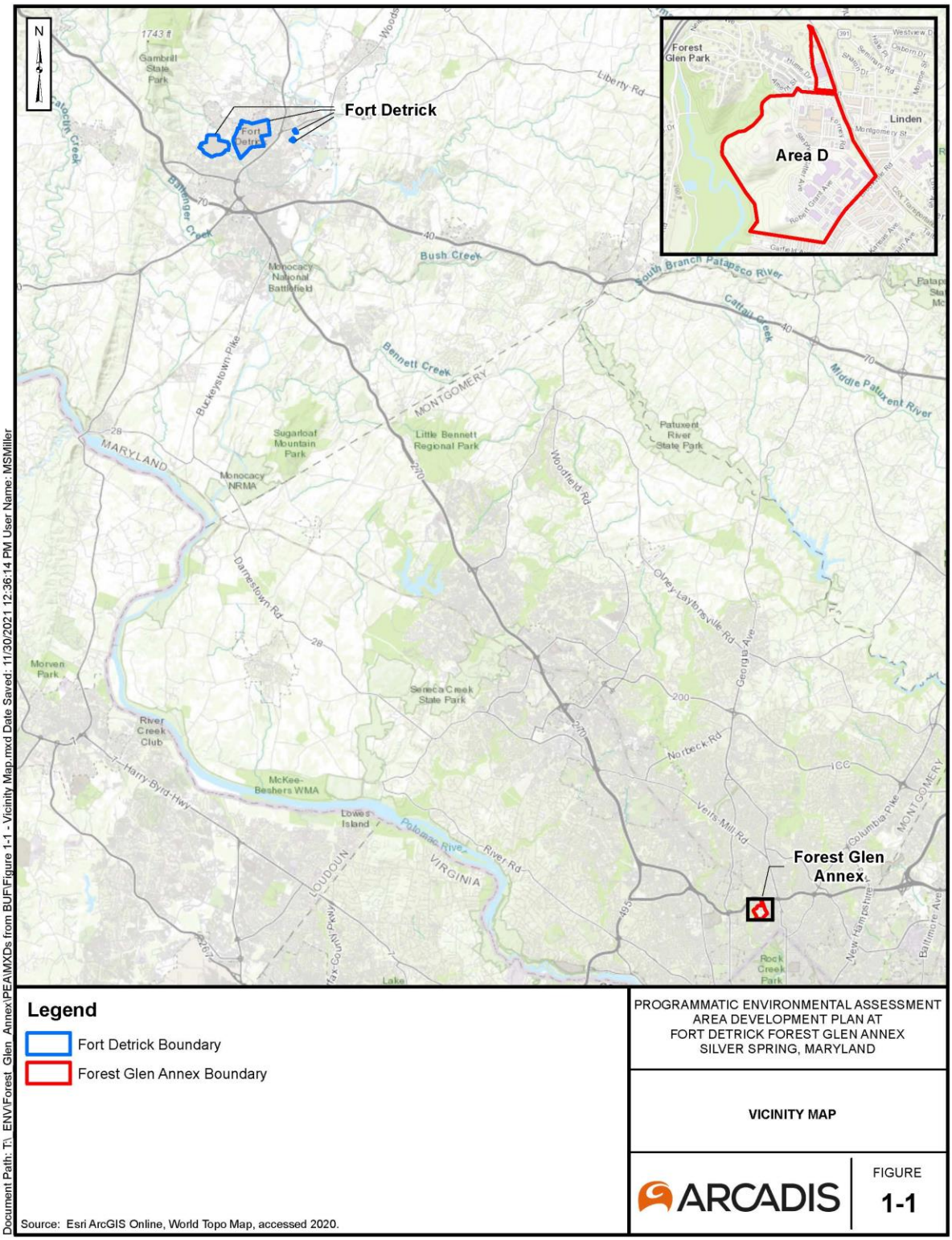
1.1 Project Background

U.S. Army Garrison (USAG) Fort Detrick completed this Programmatic Environmental Assessment (PEA) to evaluate the implementation of the Area Development Plan (ADP) for Forest Detrick's annex property, Forest Glen. Fort Detrick Area A, and Areas B and C have developed separate ADPs which are being evaluated in a separate PEA.

The ADP developed for the Forest Glen Annex is a detailed development plan geared towards the Installation's vision goals that align with the larger Fort Detrick mission. The primary missions at Fort Detrick are biomedical research and development, medical logistics and materiel management, and global Department of Defense (DoD) telecommunications.

Fort Detrick includes six non-contiguous land parcels designated as Areas A, B, Area C Water Treatment Plant (WTP), Area C Wastewater Treatment Plant (WWTP), Forest Glen Annex, and Glen Haven Housing Area. The Forest Glen Annex is located 41 miles south of Fort Detrick, seven miles north of Washington D.C in Silver Spring Maryland (**Figure 1-1**). Forest Glen Annex is within Montgomery County, Maryland and will be evaluated in this EA. Fort Detrick encompasses 1,552 acres in total; 132 of those acres belong to the Forest Glen Annex. The ADP developed for Fort Detrick, Forest Glen Annex will be described in this PEA.

Figure 1-1: Vicinity Map



The Fort Detrick ADP for Forest Glen Annex elicits four primary goals: efficiently manage space; provide sustainable, adaptable, and modernized facilities and infrastructure; ensure a high quality of life; and establish a safe and secure interconnected campus. These goals are further described in more detail in **Table 1-1**.

Table 1-1: ADP Forest Glen Area D Goals and Objectives

Goal 1: Efficiently manage space	Co-locate complementary missions and uses
	Organize the Forest Glen Annex functional zones
	Centralize parking and provide stormwater management
Goal 2: Provide sustainable, adaptable, and modernized facilities and infrastructure	Incorporate reliable technology
	Plan robust infrastructure for current and anticipated needs
	Create energy and space efficient facilities
	Plan flexible, adaptable and multi-story buildings
	Implement net-zero strategies
	Incorporate aesthetically pleasing and maintainable features
Goal 3: Ensure a high quality of life	Encourage and supply opportunities for the creation of a healthy community such as fitness paths with exercise stations and wide sidewalks
	Provide indoor and outdoor gathering spaces
	Encourage a well-connected walkable environment
Goal 4: Ensure a safe and secure interconnected campus	Improve perimeter security and access control points
	Install site elements that reinforce personal safety
	Create well-connected facility relationships with a consistent architectural style

The ADP is broken down into short-, mid-, and long-term phases**.** These projects are planned to begin within the next five years following the end of the NEPA evaluations. Mid-term plans are to be executed within 6-15 years and long-term plans are to be executed within 16-20 years.

The anticipated timeframes associated with each of the projects included in this document located on FGA are shown in Table 1-2 below.

Table 1-2: FGA Projects Timeframes

Project #	Name	Anticipated Timeframe
21	Cap & Pave Landfill	Short Range (0-5 years)
22	Construct ¼ Mile Track	Short Range (0-5 years)
23	Construct POV Parking	Short Range (0-5 years)
24	Improve ACP	Mid-Range (6-15 years)
25	Bldg 159 - Demolition	TBD
26	Bldg 508A - Demolition	TBD

2 PURPOSE AND NEED FOR THE PROPOSED ACTION

2.1 Purpose and Need

The purpose of the Proposed Action is to implement the ADP for Fort Detrick's Forest Glen Annex with the intent of creating sustainable and manageable growth. The ADP for Forest Glen Annex was developed in consultation with the Real Property Master Plan (RPMP). The ADP addresses the specific developmental needs at Forest Glen Annex to allow development to continue alongside a comprehensive plan addressing infrastructural updates as well as expansion needs.

The Proposed Action is needed because the Army must ensure sustainable growth through a comprehensive plan pinpointing areas of distress as Forest Glen Annex is a growing installation that continues to increase in size as well as administrative capacities. The ADP addresses local issues at Forest Glen Annex to achieve vision statement goals of: creating sustainable, adaptable and modernized facilities and infrastructure; a high quality of life; and a safe, interconnected, campus-like environment. With ADPs, Fort Detrick can improve upon these goals, ensuring operations and missions on the Installation are carried out efficiently and properly.

2.2 Scope of the Environmental Assessment

This PEA evaluates the direct and indirect impacts associated with the implementation and correlated development of the Forest Glen Annex in accordance with the NEPA. This document identifies and evaluates the potential environmental, cultural, and socioeconomic effects associated with the Proposed Action as accomplished by implementing the Proposed Action and the No-Action Alternative.

The PEA focuses on impacts likely to occur within the proposed areas of development. The area of development for the Proposed Action is the Forest Glen Annex of Fort Detrick (**Figure 1-1**). There are 6 individual projects encompassed within this PEA. All projects are within the boundaries of the Forest Glen Annex and will be analyzed in this comprehensive PEA describing the Forest Glen Annex ADP, developed at the 2018 Fort Detrick Area Development Plan workshop.

This document analyzes direct effects (those resulting from the alternatives and occurring at the same time and place) and indirect effects (those distant or occurring at a future date) of the implementation of the Forest Glen Annex ADP at Fort Detrick. The potential for cumulative impacts as defined by 40 C.F.R 1508.7 is also addressed. Compliance with applicable state and federal statutes, standards, and directives pertinent to the Proposed Action were considered during the preparation of this PEA.

Under the guidance provided in the NEPA and in 32 C.F.R Part 651, Environmental Analysis of Army Actions, either an Environmental Impact Statement (EIS) or an PEA 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 a PEA or EIS, but the decision and analyses will be documented in a Record of Environmental Consideration if required. A PEA 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 PEA 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, which includes direct, indirect, and cumulative effects, as well as qualitative and quantitative (where possible) assessment of the level of significance of these effects. The PEA results in either a Finding of No Significant Impact (FONSI) or a Notice of Intent (NOI) to prepare an EIS. If Fort Detrick determines that this Proposed Action may have a significant impact on the quality of the human environment, an EIS will be prepared.

2.3 Environmental Laws and Regulations

The NEPA of 1969 requires all federal agencies to give appropriate consideration to potential environmental effects of proposed major actions in planning and decision-making. The Council on Environmental Quality (CEQ) is responsible for issuing regulations (40 C.F.R 1500 *et seq.*) implementing the provisions of NEPA. CEQ regulations in turn are supplemented by procedures adopted on an agency-specific basis. For the Department of the Army (DA), the pertinent regulations are contained in Army Regulation (AR) 200-1 and 32 C.F.R 650, *Environmental Protection and Enhancement,* and 32 C.F.R 651, *Environmental Analysis of Army Actions* (dated March 29, 2002). This PEA was developed pursuant to these laws and regulations.

A PEA is intended to assist agency planning and decision-making. While required to assess environmental impacts and evaluate their significance, it is routinely used as a planning document to evaluate environmental impacts, develop alternatives and mitigation measures, and allow for agency and public participation (32 C.F.R 651.20).

Laws and regulations that may apply to the Proposed Action could include the Clean Air Act of 1970 (CAA) (as amended), Clean Water Act (CWA) (1972, as amended), Toxic Substances Control Act (TSCA) (1976, as amended), Noise Control Act (NCA) (1972), Endangered Species Act (ESA) (1973, as amended), National Historic Preservation Act (NHPA) (1966), Archaeological Resources Protection Act (ARPA) (1979), Resource Conservation and Recovery Act (RCRA) (1976), Executive Order (EO) 11593, *Protection and Enhancement of the Cultural Environment,* dated May 13, 1971; EO 11988, *Floodplain Management*, dated May 24, 1977; EO 11990, *Protection of Wetlands*, dated May 24, 1977; EO 12088, *Federal Compliance with Pollution Control Standards*, dated October 13, 1978; EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations,* dated February 11, 1994; EO 13045, *Protection of Children from Environmental Health Risks and Safety Risks*, dated April 21, 1997; EO 13112, *Invasive Species*, dated February 3, 1999; and EO 13508, *Chesapeake*

Bay Protection and Restoration, dated May 12, 2009. Note that this list is not all-inclusive and other federal, state, and local regulations may apply.

2.4 Public Involvement

Under NEPA regulation 40 C.F.R §1506.6, Fort Detrick will involve the public and all relevant agencies in the process of this PEA. Coordination letters were provided to U.S. Fish and Wildlife Service (USFWS) and Maryland Department of Natural Resources (MDNR). Additionally, the Maryland State Historic Preservation Office (SHPO), Maryland Historical Trust (MHT), and federally recognized Native American Tribes listed in Appendix A were invited to consult under Section 106 of the NHPA. Relevant Native American Tribes were identified based on their geographic association with the area. All correspondence with these parties has been incorporated into this PEA and included in Appendix A.

A Notice of Availability (NOA) was published in the Washington Post and Frederick News Post, on the Fort Detrick website, as well as distributed to federal, state and local agencies via letter. The NOA and publication announced the availability of the official public draft PEA and requested comments from the general public and federal, state, and local agencies. The Draft PEA was made available to the public for 30 days, along with a Draft FONSI. The Draft PEA and FONSI were available by request from Fort Detrick and hardcopies were placed in the following Montgomery and Frederick County Public Libraries:

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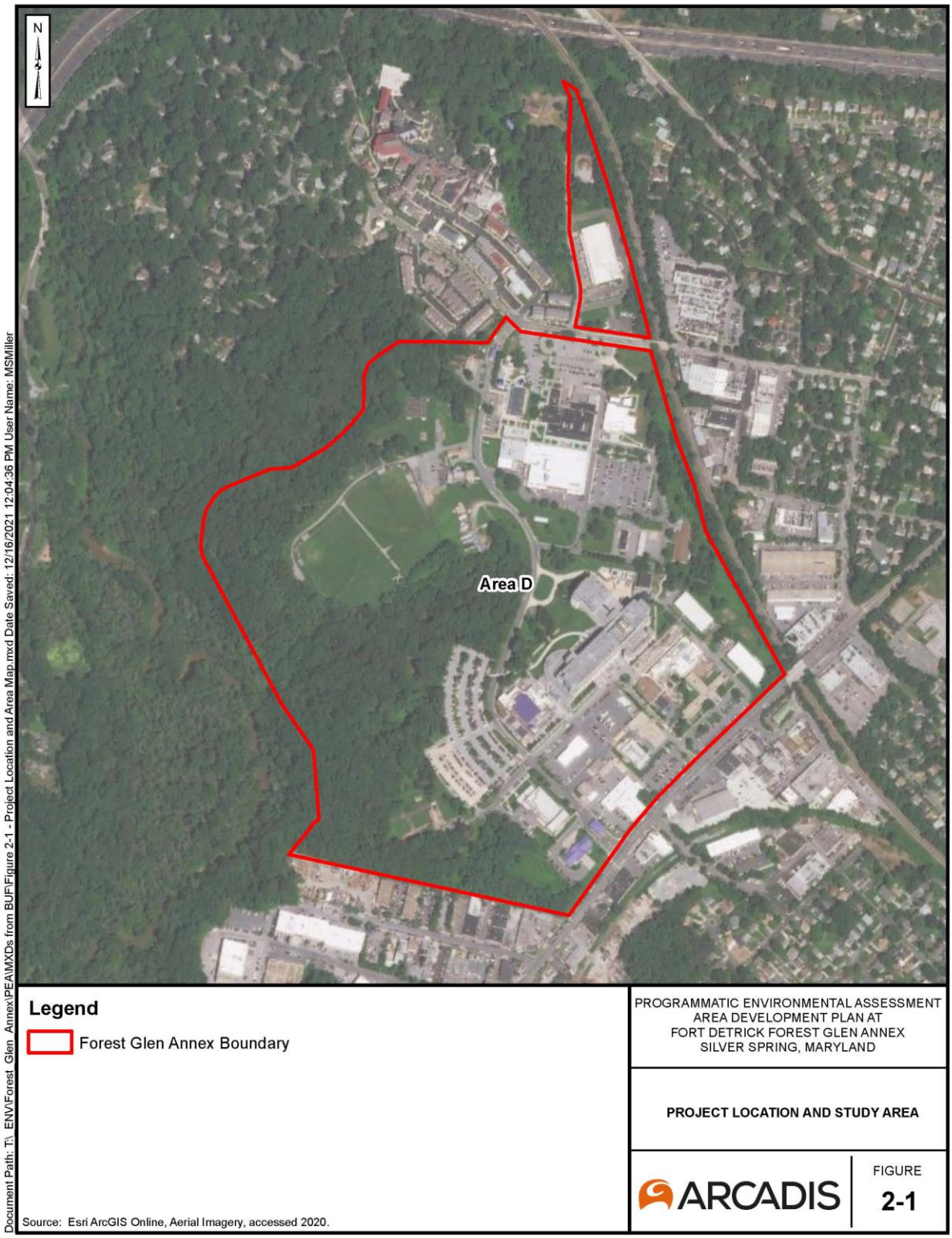
Comments received during the 30-day public review period will be addressed and documented in the final PEA. All coordination letters sent and responses received during the preparation of this PEA are located in Appendix A.

Figure 2-1: Project Location and Study Area



3 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

3.1 Proposed Action

The Proposed Action includes the implementation of all projects in the Forest Glen Annex of Fort Detrick as defined in the Forest Glen ADP. The locations of these projects are shown on Figure 3-1 below. These projects in-line with the mission and vision goals put in place by Fort Detrick as well as the overarching RPMP aimed at creating a sustainable growth at Army installations.

The implementation of the proposed action will be evaluated for potential environmental and cultural impacts, as well as compliance with state and federal regulatory requirements. This alternative is evaluated further in this PEA.

Figure 3-1: FGA Project Locations

3.2 No-Action Alternative

The CEQ requires the analysis of the No Action Alternative even if the agency is under legislative command to act. Analysis of the No Action Alternative provides a benchmark for enabling decision-makers to compare the magnitude of environmental effects of the other action alternatives.

The No Action Alternative is to allow the growth of the Fort Detrick to continue without a plan for future growth and management. The growth and development occurring at Fort Detrick would be unmanaged and chaotic. Strategic updates to infrastructure would not occur. Environmental impacts of development would not be considered for projects and tactical strategies to enhance the quality of life and practicality of the infrastructure at Fort Detrick would be foregone.

The No Action Alternative does not adhere to state or federal regulations requiring the Installation to consider environmental consequences of its development. Antiquated infrastructure, including functionality equipment such as electrical systems, would not be updated and therefore fail to meet the goals of the ADPs set forth for the Forest Glen Annex. Unsustainable growth could create hectic circumstances, leaving the infrastructure of Fort Detrick obsolete and unable to continue their mission in a functional and stream-lined manner. This alternative is not ideal and does not allow Fort Detrick to continue to operate as a functional Installation. This alternative is evaluated further in this PEA.

4 AFFECTED ENVIRONMENT

This section of the PEA describes the existing conditions of the natural and socioeconomic resources affected by the Proposed Action. Each environmental, cultural, and social resource category typically considered in a PEA was reviewed for its applicability to be affected by the Proposed Action. For the purpose of describing existing conditions and environmental effects, the area of influence encompasses study area previously described, and as shown in the following figures.

4.1 Land Use

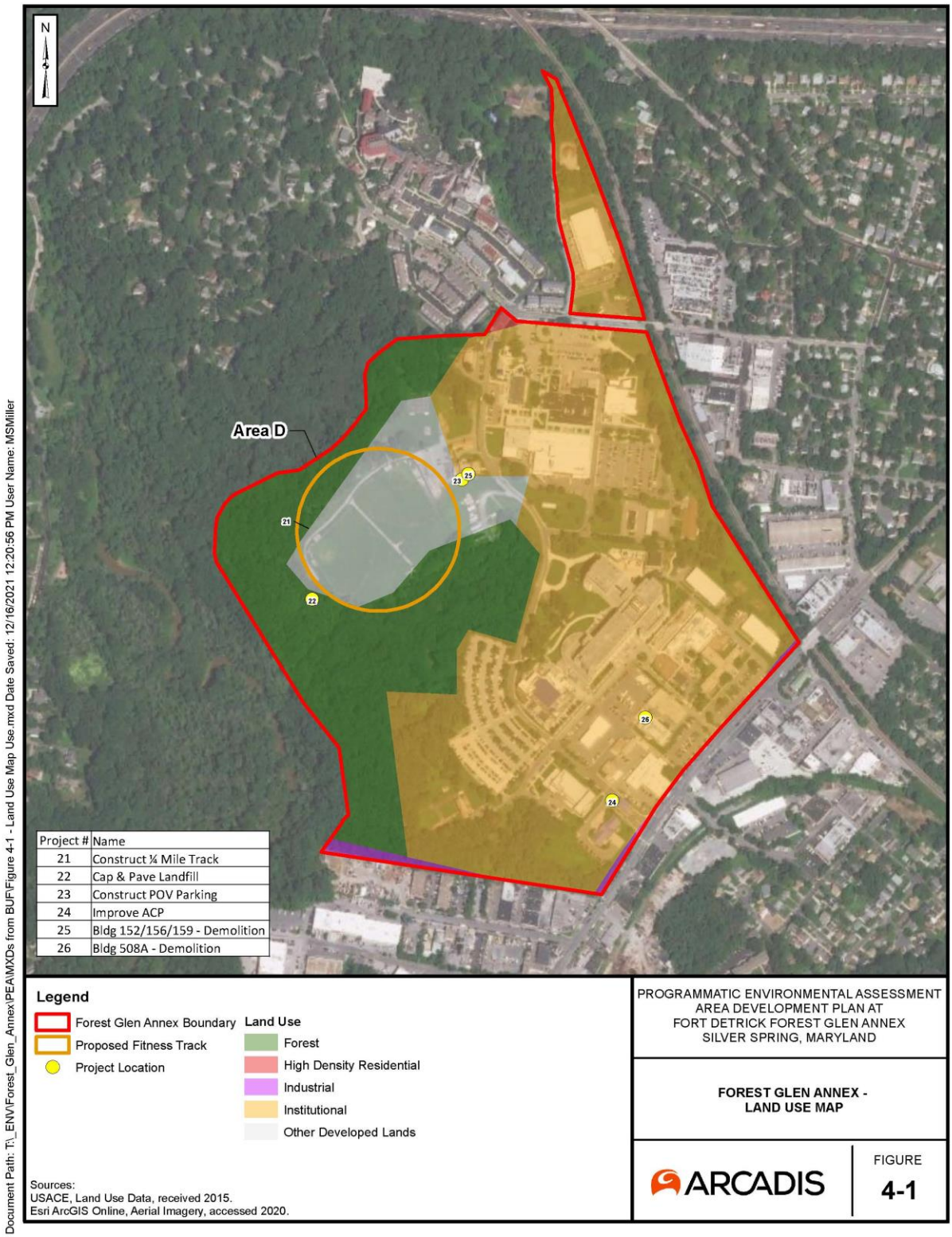
The Forest Glen Annex is situated within the Forest Glen neighborhood of Silver Spring, Montgomery County, Maryland, approximately eight miles north of Washington, District of Columbia (DC). FGA lies approximately one mile south of the Capital Beltway (Interstate 495) and immediately east of the Rock Creek Regional Park. FGA is comprised of approximately 136 acres and is primarily a medical research and development facility, under the authority of the Garrison Commander, Fort Detrick, Maryland (Pika Arcadis JV, 2020). Land uses surrounding FGA is a mix of residential, commercial, industrial, and conserved natural areas. Major transportation arteries, including the Capital Beltway (Interstate 495) and the CSX railroad line pass within its immediate vicinity. The Linden Historic district, consisting of historic and recently constructed residential properties, is located east of FGA, opposite the CSX railroad line. Residential single-family homes and townhouses are the predominant land use to the west of a National Park Seminary property, and to the north opposite Interstate 495 (Pika Arcadis JV, 2020). Within the Installation boundaries (study area), dominant land uses include Forest, High Density Residential, Industrial, Institutional, and Other Developed Lands, as shown on **Figure 4-1** (USACE, 2015).

4.1.1 Land Use Controls

FGA's Installation Action Plan (IAP) outlines the total multiyear cleanup program for the installation. The plan identifies environmental cleanup requirements at each site or area of concern (AOC), and proposes a comprehensive, installation-wide approach, along with the costs and schedules associated with conducting investigations and taking the necessary remedial actions (RA). The IAP incorporates several Land Use Controls (LUC) and land use restrictions for areas included in the IAP, including media specific restrictions which serve to prohibit, or otherwise manage excavation, and landfill restrictions, prohibiting activities that would impact landfill caps or cover systems and associated drainage systems (USAG, 2017). In addition, FGA has an active environmental restoration program to investigate and clean-up past activities that have resulted in environmental contamination. The Superfund Amendments and Reauthorization Act of 1986 (10 U.S.C. 2701) requires DOD to carry out its Defense Environmental Restoration Program in

accordance with the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), as amended, commonly referred to as Superfund (42 U.S.C. 9620). FGA is not on the National Priorities List (NPL).

Figure 4-1: FGA Land Use



4.2 Hazardous and Toxic Materials, and Solid Wastes

A hazardous substance is defined as any substance that is:

1) listed in Section 101(14) of Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA);

2) designated as a biologic agent and other disease causing agent which after release into the environment and upon exposure, ingestion, inhalation, or assimilation into any person, either directly from the environment or indirectly by ingestion through food chains, will or may reasonably be anticipated to cause death, disease, behavioral abnormalities, cancer, genetic mutation, physiological malfunctions (including malfunctions in reproduction) or physical deformations in such persons or their offspring;

3) listed by the U.S. Department of Transportation (DOT) as hazardous materials under 49 CFR 172.101 and appendices; or

4) defined as a hazardous waste per 40 CFR 261.3 or 49 CFR 171 (USAG, 2019a).

The Occupational Safety and Health Administration's (OSHA's) definition of hazardous substance includes any substance or chemical which is a "health hazard" or "physical hazard," including: chemicals which are carcinogens, toxic agents, irritants, corrosives, sensitizers; agents which act on the hematopoietic system; agents which damage the lungs, skin, eyes, or mucous membranes; chemicals which are combustible, explosive, flammable, oxidizers, pyrophorics, unstable-reactive or water-reactive; and chemicals which in the course of normal handling, use, or storage may produce or release dusts, gases, fumes, vapors, mists or smoke which may have any of the previously mentioned characteristics. (Full definitions can be found at 29 CFR 1910.1200.) (USAG, 2019a)

USEPA incorporates the OSHA definition for hazardous substance and adds any item or chemical which can cause harm to people, plants, or animals when released by spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping or disposing into the environment (40 CFR 355).

The DOT defines a hazardous material as any item or chemical which, when being transported or moved in commerce, is a risk to public safety or the environment, and is regulated as such under its Pipeline and Hazardous Materials Safety Administration regulations (49 CFR 100-199), which includes the Hazardous Materials Regulations (49 CFR 171-180). In addition, hazardous materials in transport are regulated by the International Maritime Dangerous Goods Code; Dangerous Goods Regulations of the International Air Transport Association; Technical Instructions of the International Civil Aviation Organization; and U.S. Air Force Joint Manual, Preparing Hazardous Materials for Military Air Shipments (USAG, 2019a).

The NRC regulates materials that are considered hazardous because they produce ionizing radiation, which means those materials that produce alpha particles, beta particles, gamma rays, x-rays, neutrons, high-speed electrons, high-speed protons, and other particles capable of producing ions. This includes "special nuclear material," by-product material, and radioactive substances. (See 10 CFR 20).

FGA follows the U.S. Army's Hazardous Materials Management Policy (HMMP) that fulfills the requirements of the Federal, state, and Army regulations as specified therein. (DA, 2010). The manual includes procedures for maintaining inventory data and for procuring, receiving, and tracking hazardous materials. In addition, Fort Detrick FGA fulfills all requirements of the following federal, state, and Army regulations including:

Federal:

- Comprehensive Environmental Response, Compensation, and Liability Act
- Superfund Amendments and Reauthorization Act (SARA)
- Toxic Substances Control Act
- Occupational Safety and Health Administration Hazard Communication Standard
- 29 CFR 1910.1200, Hazard Communication Standard, 2001
- EO 12580. Superfund Implementation
- Hazardous Waste Regulations (40 CFR Parts 260-279)
- Superfund Amendments and Reauthorization Act (Public Law 99-499)
- Spill Prevention, Control, and Countermeasure Rule (40 CFR Part 112)
- OSHA Hazardous Waste Operations and Emergency Response standard (29 CFR 1910.120 and 1926.65)
- Federal Acquisition Regulation

State:

- COMAR10.06.06, Communicable Disease Prevention – Handling, Treatment, and Disposal of Special Medical Waste
- COMAR 10.10.11, Biological Agents Registry Program
- COMAR 26.13.11, Special Medical Wastes
- COMAR 26.13.12, Standards Applicable to Generators of Special Medical Waste
- COMAR 26.13.13, Standards Applicable to Transporters of Special Medical Waste
- COMAR 26.13.03 Standards Applicable to Generators of Hazardous Waste

Army/DoD:

- DoD Directive 4140.25M, Procedures for the Management of Petroleum Products
- DoD Directive 4150.7, Pest Management Program
- DoD Directive 5030.41, Oil and Hazardous Substances Pollution Prevention and Contingency Program
- Army Regulation 200-1 Environmental Protection and Enhancement
- AR 700-141, Hazardous Materials Information Resource System
- MEDCOM Regulation 40-35

- Fort Detrick Integrated Solid Waste Management Plan

Specific hazardous material guidance is also covered in AR 200-1 which establishes policies and procedures to protect the environment, including environmental responsibilities for the Department of the Army (DA), major commands, and installations. It directs Army staff to follow applicable environmental regulations of final governing standards and Army environmental quality policies pertaining to the Emergency Planning and Community Right-to-Know Act, RCRA, and CERCLA, also known as the Federal Superfund Law. It also defines the Army's goal of continually managing and reducing the generation of hazardous waste, through waste identification and disposal, records management, and training programs (USAG 2019).

4.2.1 Hospital, Medical, and Infectious Waste

Healthcare and medical research functions at FGA generate medical waste, which may contain blood, plasma, pathological wastes, and other derivatives whether dried, dripping, or free flowing. Medical waste generated at the FGA is managed in accordance with all applicable Federal, state, Army Medical Command, and Army regulations. The HQ MEDCOM manages a contracted with a licensed contractor that collects medical waste from the FGA generation points and transports it to an approved disposal facility. WRAIR is the primary generator of medical waste at FGA (USAG, 2014).

The medical waste that is generated at FGA is not transported to Ft. Detrick for processing or disposal. Instead, all medical waste generated at FGA is handled by licenced contract haulers (USAG, 2014). FGA manages their own medical waste in accordance with applicable Federal, DA, USAG, and state regulations for the protection of transporters and the public from potential hazards associated with potential contaminants (USAG, 2014).

All regulated medical waste generated at FGA is managed in accordance with Biosafety in Microbiological and Biomedical Laboratories (BMBL) guidelines and applicable Federal, DA, USAG, and state regulations for the protection of transporters and the public from potential hazards associated with potential contaminants (USAG, 2019). Special Medical Waste, as defined under COMAR 26.13.11.02 includes anatomical material, blood, blood-soiled articles, contaminated material (microbiological laboratory waste, feces of an individual diagnosed as having a disease that may be transmitted to another human being through the feces, or articles that have come into contact with a known infectious agent), microbiological laboratory waste (containing an infectious agent and including cultures or stocks of infectious agents and associated biologicals), and sharps (syringes, needles, surgical instruments, or other articles capable of cutting or puncturing human skin) (USAG, 2019).

4.2.2 Hazardous Waste

The DPW Environmental Management Division Hazardous Materials Management Office (HMMO) extends to FGA. Two full-time government personnel man the HMMO operations at FGA. Hazardous materials typically utilized at FGA include: solvents, paints, strong acids and bases, preservatives, heavy metals, and other materials associated with laboratory research and building maintenance. In addition to carrying out the use, storage, and disposal of hazardous materials and waste in accordance with Federal, state, local, Army regulation, the Fort Detrick Hazardous Materials Management Plan (HMMP) and Fort Detrick Hazardous Waste Management Plan (HWMP) are also followed (USAG, 2014).

FGA adheres to hazardous waste accumulation rules set forth in COMAR 26.13.05.E(3), which allows for satellite accumulation areas. Satellite Accumulation Areas act as a central collection point for hazardous waste or spent hazardous materials on the post, which are then transported to a 90-day collection site to await shipment off site. There are 126 SAAs located on FGA, as well as one "less than 90-day storage" area, Building 615. The Defense Reutilization and Marketing Office (DRMO) arranges for the transport and proper disposal of the hazardous waste stored in Building 615 for less than 90 days. The hazardous waste must be packaged in accordance with DOT regulations, and Federal, State, and TSDF requirements (USAG, 2014).

Fort Detrick's HMMO operates FGA as a "less than 90-day" facility. HMMO handles batteries, fluorescent light tubes, and toner cartridges using in-house personnel (USAG, 2014). The Garrison contracts with the Defense Reutilization Marketing Office for the transportation, and disposal of hazardous waste. The hazardous waste must be packaged in accordance with the U.S. DOT regulations (49 CFR 171-179), Operational Services Command (OSC), Federal, state, and TSDF requirements (USAG, 2019).

4.2.3 Solid Waste

On October 1, 2008, as a result of the closure of the Walter Reed Army Medical Center (WRAMC), the two parcels of land in Montgomery County that comprise FGA became an annexed part of Fort Detrick. FGA hosts a major medical research facility, and several other smaller tenant partners. At the time of the transfer to Fort Detrick, all solid waste services were provided by contract. The Garrison began providing in-house municipal solid waste services on April 1, 2013. The Garrison began providing in-house recycling services on July 1, 2014 (USAG, 2014).

Three former landfill sites are located on FGA, as shown on **Figure 4-2**, as follows:

- FTGL-02 Ballfield/Helipad/Rubble Dump Site

  Located in the vicinity of the installation's ballfields and helipad, waste disposal at FTGL-02 likely occurred form the 1940s until the early 1970s, when the construction of the ballfields started. The materials disposed of in the landfill reportedly included construction

debris, medical waste, incinerator ash, household refuse, and office waste. In 2009, an investigation of a rubble dump adjacent to the ballfields was completed. Based on the results, the rubble dump was determined to be an extension of the landfill and is included as part of the FTGL-02 site (Fort Detrick, 2011).

- FTGL-03 Commissary Landfill

  Located near the installation Commissary, the FTGL-03 landfill site currently has several buildings located within its boundaries, including the National Museum of Health and Medicine (NMHM). Waste disposal at this site likely occurred from the 1940s to the early 1970s, when the construction of the Commissary began. The materials disposed of in the landfill reportedly included construction debris, medical waste, incinerator ash, household waste, and office waste. A 2009 subsurface investigation for the construction of the NMHM found fill material in FTGL-03 to a depth of 22 feet below the ground surface. The fill material encountered in borings consisted mainly of construction debris, such as brick (Fort Detrick, 2011).

- FTGL-04 Building 511 Landfill

  The FTGL-04 landfill site is located in the vicinity of Buildings 511 and 503, and the Motor Pool. Waste disposal at this site likely occurred from the 1940s until the early 1970s, when construction of Building 511 and the Motor Pool were completed. Two incinerators were once operated north of Building 511. The first incinerator was built in 1957 and operated until 1970; it was used to incinerate papers, contaminated wastes, animal bodies, and garbage. From 1970 until 1984, a replacement incinerator was used to incinerate animal bodies and bedding. Ash from the incinerators was reportedly buried in the FGA landfills. Medical wastes were uncovered during excavation associated with the construction of the parking lot southwest of Building 511. During the construction of Building 503 in 1997, it was reported that approximately 1,700 truckloads of waste were removed and transported to the landfill at Fort Meade. However, waste material was reportedly left onsite at Building 503 after it was determined that removal was unnecessary for foundation construction (Fort Detrick, 2011).

4.2.4 Existing Contamination

The DoD's Installation Restoration Program (IRP) was established to provide guidance and funding for the investigation and remediation of hazardous waste sites caused by historical disposal activities at military installations. Fort Detrick FGA has an active IRP established and funded under the Defense Environmental Restoration Program (DERP). The IRP is a comprehensive program to identify, investigate and clean up hazardous substances, pollutants, and contaminants resulting from historical operations and practices on the installation. Although all investigations and clean-up activities are investigated under the CERCLA, also known as Superfund, only the

Area B Groundwater site is included on the National Priorities List. CERCLA authorizes cleanup responses when there is a release or threat of a release of a hazardous substance into the environment resulting in unacceptable risks to the public or the environment and sets a framework for implementing those responses. Investigations and cleanup actions are coordinated with the USEPA and the MDE.

In addition, FGA has an active environmental restoration program to investigate and clean-up past activities that have resulted in environmental contamination. The Superfund Amendments and Reauthorization Act of 1986 (10 U.S.C. 2701) requires DOD to carry out its Defense Environmental Restoration Program in accordance with CERCLA, as amended, commonly referred to as Superfund (42 U.S.C. 9620).

Three former landfills are located within the FGA boundary, as shown on **Figure 4-2**. In accordance with FGA's IAP, landfill restrictions exist to prohibit activities that would impact the landfill cap (or cover system) and drainage system, prohibit excavation on landfill caps or cover systems, and restrict the construction of buildings that may interfere with the landfill cap or cover systems. In addition, plantings that interfere with the landfill cap or cover systems (roots that penetrate the cap or cover system) are restricted, and a restriction to vehicular traffic exists (USAG, 2017).

In September 2009, the Army initiated a site-wide Remedial Investigation (RI) for the known six IRP sites (USACE, 2019). The six IRP sites, and their associated contamination, are as follows:

- FTGL-01 Building 500 Petroleum Release Site
    - Soil and groundwater contamination associated with the release of petroleum fuels (diesel and gasoline) from several underground storage tanks in the vicinity of Building 500. Based on the results of the Site Assessment Report dated October 2012, the Maryland Department of the Environment (MDE) Oil Control Program issued a Case Closure letter in June 2014. The project is closed (USACE, 2019).
- FTGL-02 Ballfield/Helipad/Rubble Dump Site
    - Disposal of landfilled materials including construction debris, medical waste, incinerator ash, household and office waste. Anecdotal information indicates medical testing was done on large animals which were then buried in lead caskets in the landfill. Streams located downgradient known to be impacted by iron precipitation. Metal debris seen in the ground near the discharge points. A Non-Time Critical Removal Action (NTCRA) to install a fence was completed in June 2018. In addition, the Army finalized the Feasibility Study in November 2018 (USACE, 2019). The Final Record of Decision (ROD) is dated March 2019 and long-term monitoring of the site is under contract until September 2025. According to the ROD, the Selected Remedy for FTGL-02 entails installation of a hybrid cover system across the entire site. The cover system will be comprised of several

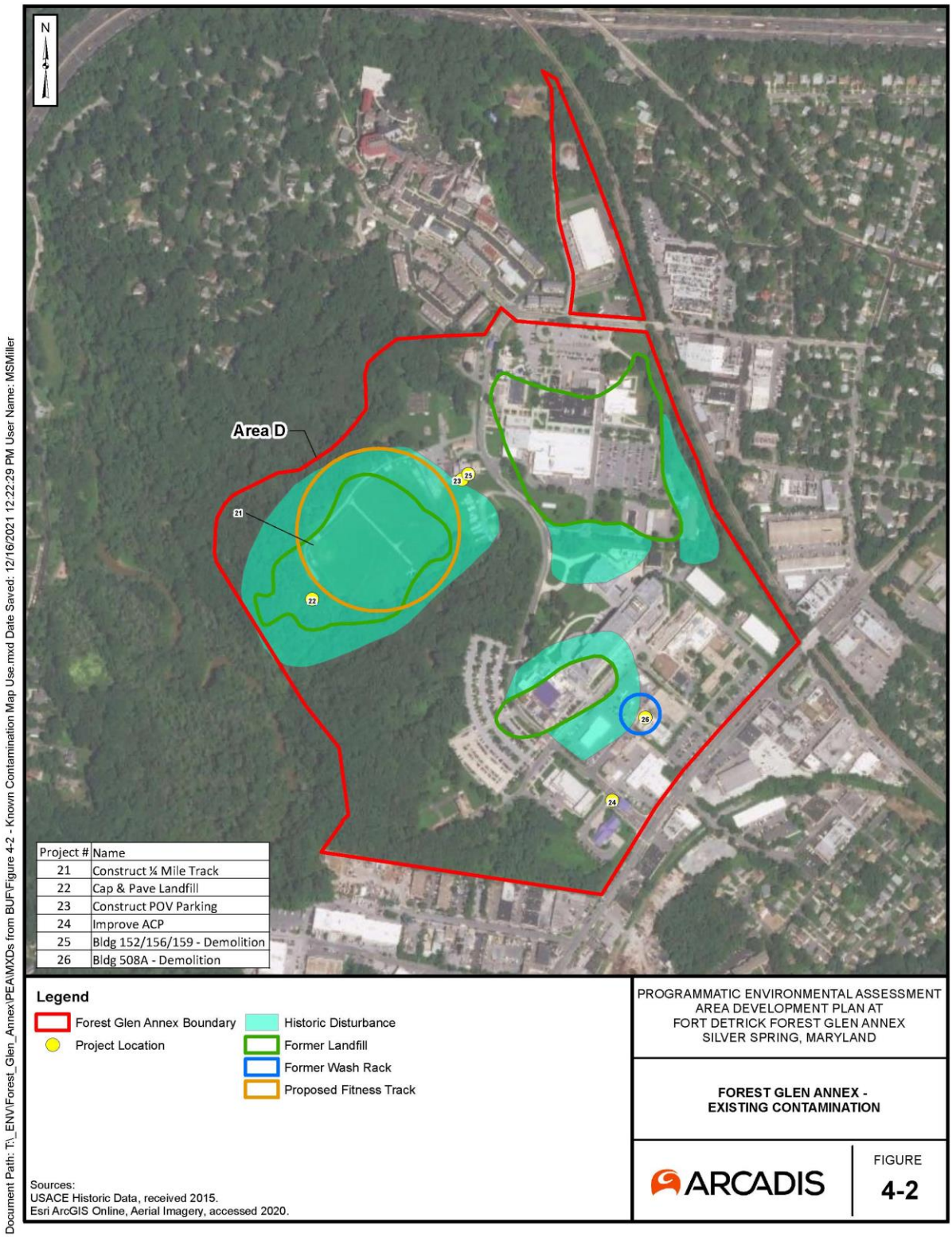
different types of cover including a 2-foot (ft) permeable soil cover, impermeable cover (e.g., pavement or asphalt), and an engineered impermeable cap constructed in accordance with the design requirements outlined in Code of Maryland Regulation (COMAR) 26.04.07.21. Construction of the remedy is planned for 2022.

- FTGL-03 Commissary Landfill Site
    - Landfilled wastes including construction debris, medical waste, incinerator ash, household waste, and office waste. A monitoring well located adjacent to this landfill had high levels of tetracholorethene (PCE) concentrations. An earlier Site Investigation (SI) indicates groundwater migrating from offsite. The site currently includes the PX/Commissary and some associated shops, AAFES Service Station, Childe Development Center, NMHM and parking lots (USACE, 2019). The Final ROD was submitted in March 2019 and long-term monitoring of the site is under contract for until September 2025. This ROD addresses buried waste at FTGL-03 and FTGL-04, and groundwater at FTGL-04. The Selected Remedy for FTGL-03 and FTGL-04 entails long-term maintenance of the existing soil cover, land use controls (LUCs), and long-term monitoring (LTM) of groundwater at FTGL-04.
- FTGL-04 Building 511 Landfill
    - Landfilled materials including construction debris, medical waste, incinerator ash, household waste, and office waste. The site currently includes Building 511 (Animal Medical Research Facility and former incinerator), Building 503 (WRAIR), and Building 605 (Motor Pool) (USACE, 2019). The Final ROD was submitted in March 2019 and long-term monitoring of the site is under contract for until September 2025. This ROD addresses buried waste at FTGL-03 and FTGL-04, and groundwater at FTGL-04. The Selected Remedy for FTGL-03 and FTGL-04 entails long-term maintenance of the existing soil cover, LUCs, and LTM of groundwater at FTGL-04.
- FTGL-05 Building 607 Washdown Rack (Steam E)
    - Primarily associated with Stream E, which predominantly received flows from a stormwater outfall that drained a former wash rack located within the Motor Pool facility (USACE, 2019). A No Further Action (NFA) ROD was completed in April 2019 and the site was closed.
- FTGL-06 PCB Contamination North of Linden Lane
    - PCB and similar contamination detected in office Stream A sediment and surface waste. The sources include a suspected transformer release at former Building 138, and also includes a PCB release adjacent to the FGA Salt Dome on the installation property north of Linden Lane. The Army submitted the Draft Final RI in October 2018, additional sampling, required by the regulator was conducted in 2019 (USACE, 2019). A supplemental RI was completed and recommended NFA. The

NFA Proposed Plan is complete, and the NFA ROD was issued in August 2020. The site is closed.

In 2013, FTGL-07 Building 156 Former Underground Storage Tank (UST) Site was added as an additional IRP site. FTGL-07 involves soil and groundwater contamination associated with a former petroleum UST. The soil removal Site Closure Report was submitted and approved by MDE in July 2018 (USACE, 2019).

Figure 4-2: FGA Existing Contamination



4.3 Noise

Noise is often defined as unwanted sound that interferes with normal activities in a way that reduces the quality of the environment. The human ear experiences sound as a result of pressure variations in the air. The physical intensity or loudness level of noise is expressed quantitatively as the sound pressure level. Sound pressure levels are defined in terms of decibels (dB), which are measured on a logarithmic scale. Sound can be quantified in terms of its amplitude (loudness) and frequency (pitch). Frequency is measured in hertz, which is the number of cycles per second. The typical human ear can hear frequencies ranging from approximately 20 hertz to 20,000 hertz. Typically, the human ear is most sensitive to sounds in the middle frequencies where speech is found and is less sensitive to sounds in the low and high frequencies.

Since the human ear cannot perceive all pitches or frequencies equally, measured noise levels in dB will not reflect the actual human perception of the loudness of the noise. Thus, the sound measures can be adjusted or weighted to correspond to a scale appropriate for human hearing. A-weighting is used most often for high frequency sounds such as vehicle traffic ("hum" sounds). C-weighting is used for low-frequency events such as large arms and explosions ("boom" sounds). Sound levels and their associated dBA levels are listed in **Table 4-1** below.

Table 4-1: Common Sound Levels Relative Loudness of Common Noise Sources

Common Noise Source	Noise Levels, dB(A)	Loudness Relative to a Conversation at a Distance of 1 meter
Threshold of Pain	140	256
Jet taking off (60 meters away)	130	128
Operating heavy equipment	120	64
Night club (with music)	110	32
Construction site	100	16
Boiler room	90	8
Freight train (30 meters away)	80	4
Classroom chatter	70	2
Conversation (1 meter away)	100	1
Urban residence	50	1/2
Soft whisper (1.5 meters away)	40	1/4
North Rim of Grand Canyon	30	1/8
Silent study room	20	1/16
Threshold of human hearing (1,000 Hertz)	0	1/64

Source: U.S. Department of Labor, Occupational Safety and Health Administration 2016

dB(A) = A-weighted decibel

Noise levels decrease (attenuate) with distance from the source. A generally accepted rule is that the sound level from a stationary source would drop approximately 6 dB each time the distance from the sound source is doubled. The sound level from a moving "line" source (e.g., a train or a roadway) would drop 3 dB each time the distance from the source is doubled. Noise levels may be further reduced by natural factors, such as temperature and climate, and are reduced by barriers, both manmade (e.g., sound walls) and natural (e.g., forested areas, hills) (FTA, 2006).

Physical mitigation of noise is generally feasible for higher frequency sounds, such as small arms fire and traffic, whereby the low frequency component of impulsive "boom" noise has wave characteristics that can typically travel through obstacles.

4.3.1 Regulatory Overview

The Noise Control Act of 1972 (P.L. 92-574) directs Federal agencies to comply with applicable Federal, state, interstate, and local noise control regulations to the fullest extent consistent with agency missions. The act requires compliance with state or local noise control regulations in off-post areas only; however, the Army often uses the time restrictions outlined in local ordinances as general guidelines for on-post activities. In 1974, the USEPA provided information suggesting that continuous and long-term noise levels in excess of 65 dBA are normally unacceptable for noise-sensitive land uses such as residences, schools, churches, and hospitals.

The Maryland Environmental Noise Act of 1974 established policy that states the "limitation of noise to that level which will protect the health, general welfare, and property of the people of the State." Effective October 1, 2012, MDE delegated noise enforcement authority to local governments. MDE continues to update noise control standards, but enforcement is handled by local jurisdictions.

Title 26 of the COMAR, MDE, Subtitle 02, Chapter 03 (26.02.03 Control of Noise Pollution) and the Montgomery County Maryland Noise Control Chapter 31B of the Montgomery County Code provides the regulatory structure for noise pollution, hazards, and control. The COMAR and Montgomery County Maryland Noise Control Chapter set maximum allowable noise levels for industrial, commercial, and residential land uses, as depicted in **Table 4-2**.

Table 4-2: Maximum Allowable Noise Levels (dBA)

Time	Industrial	Commercial	Residential
Day	75	67	65
Night	75	62	55

Source: COMAR 26.02.03.02 Environmental Noise Standards; Montgomery County Maryland Noise Control Chapter Sect. 31B-5(a) Maximum allowable noise levels

In addition, COMAR states that noise levels that emanate from construction or demolition site activities cannot exceed 90 dBA during daytime hours. The Montgomery County Noise Control Chapter states that noise levels that emanate from construction activities cannot exceed 85dBA if the Department has approved a noise-suppression plan for the activity or 75dBA if the Department has not approved a noise-suppression plan for the activity. Daytime hours are defined within the regulations as 0700 to 2200 (COMAR) and 0700 to 1700 (Montgomery County), weekdays. The installation has established that noise levels emanating from construction or demolition activities may not exceed 90 dBA at the designated construction (limit of disturbance) property line between the hours of 0700 through 1630. Maximum noise levels cannot exceed regulatory industrial, commercial and residential noise level criteria between the hours of 1630 and 0700 (non-construction hours) as specified in **Table 4-3**. Construction activities may not permit prominent discrete tones and periodic noises (dump truck tail gates banging, etc.) that exceed a level which is 5 dBA lower than the noise criteria established in this requirement. OSHA occupational noise exposure limits for construction workers must be met as detailed in 29 CFR 1926.52. Any construction activities conducted outside the hours specified in this requirement must be pre-approved through the installation command. Weekend construction activities must be pre-approved through the installation command.

4.3.2 Existing Noise Conditions at FGA

The existing urban soundscape is predominantly influenced by car and truck traffic, lawn maintenance equipment, human and bird vocalizations. There are no live-fire training or military aircraft operations at the Annex. There are no incompatible land uses at FGA due to noise. The Capital Beltway (I-495) runs along the northern boundary and provides constant vehicular noise. The CSX railroad along the eastern boundary and intermittent helicopter operations are infrequent sources of noise. Existing noise levels (Leq and ADNL) were estimated using the techniques specified in the American National Standard Quantities and Procedures for Description and Measurement of Environmental Sound Part 3: Short-term measurements with an observer present (USAG, 2019). **Table 4-3** presents the estimated noise levels for FGA.

Table 4-3: Estimated Existing Noise Levels at FGA (dBA)

Leq (daytime)	Leq (nighttime)	ADNL
58	52	60

*Source: USAG,2019

4.4 Geology, Soils and Topography

4.4.1 Geology

FGA lies in the Upland Section of the Piedmont Plateau Physiographic Province (MGS, 1981). The Piedmont Plateau extends from the Fall Line between the Coastal Plain and Piedmont Plateau Physiographic Province in the east to the Catoctin Mountains of the Blue Ridge Physiographic Province in the west (USACE, 2000). The Piedmont Plateau Physiographic Province is comprised of hard crystalline igneous and metamorphic rocks. Bedrock in the eastern part of the Piedmont Plateau consists of schist, gneiss, gabbro, and other highly metamorphosed sedimentary and igneous rocks of probably volcanic origin (MGS, 1981). The entire state of Maryland is classified as a seismic zone 1 area with a low probability of experiencing a damaging earthquake within a 50-year period (USAG, 2003).

The underlying geology of FGA is primarily Kensington Quartz Diorite. This geologic unit is moderately to strongly deformed, has igneous textures generally destroyed, has composition ranges from quartz diorite to granodiorite, and comprises sheets or wedged localized along plunging crest of Baltimore anticlinorium (MGS 1968).

4.4.2 Soils

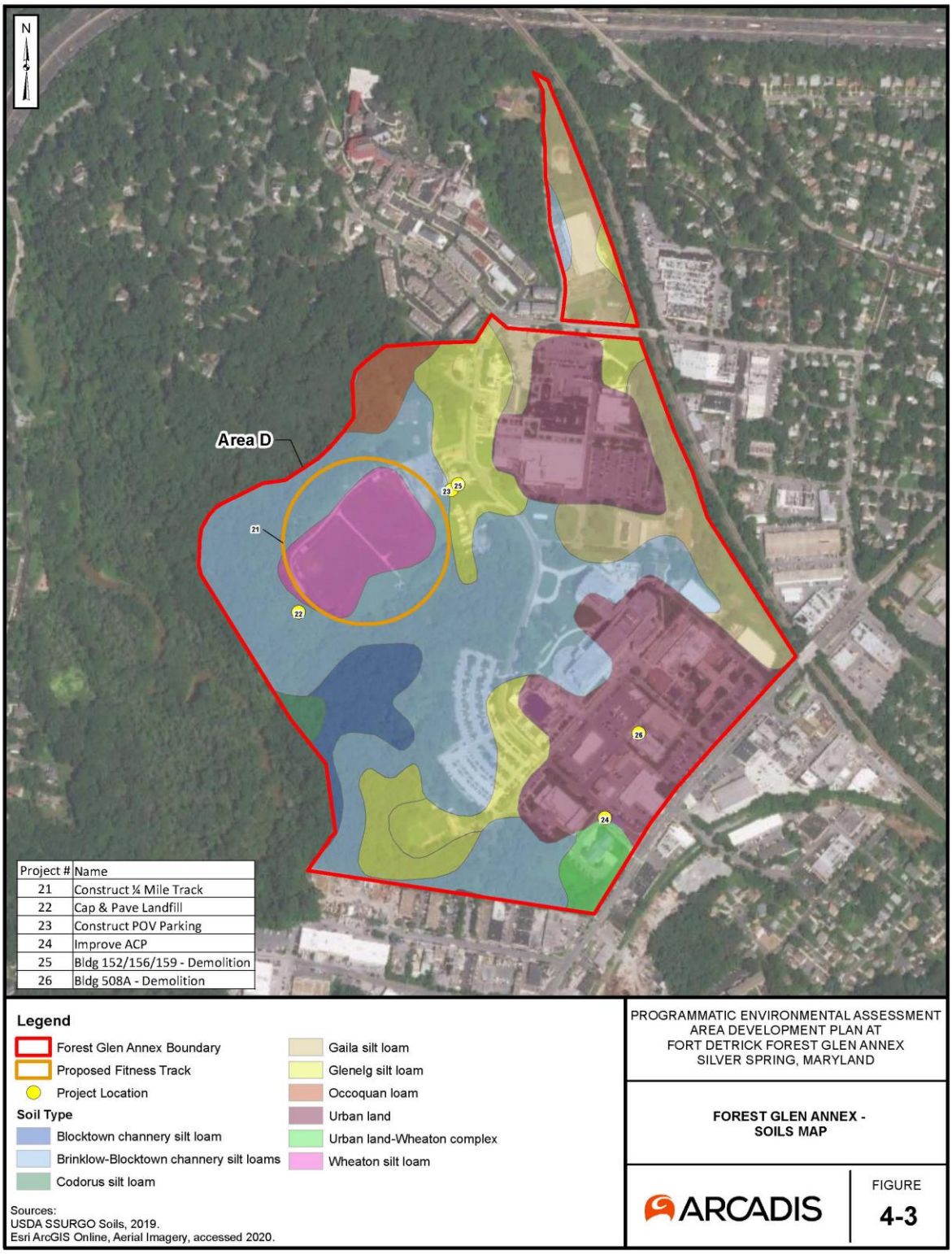
The soils on FGA include the Blocktown, Brinklow, Codorous, Gaila, Glenelg, Occoquan, and Wheaton series, and urban land. A significant amount of FGA is urban land, with the original soil covered by buildings, concrete, asphalt, etc. Urban land, along with the Brinklow and Blocktown series, occupy the majority of FGA.

Urban land is located in two areas along the southeastern side and in the central eastern portion of FGA. Open areas of urban land can be used to grow shade trees, lawn grass, shrubs, and vegetable gardens. Brinklow and Blocktown series soils are found on ridges and side slopes of dissected landscapes of the Piedmont Plateau and are mostly used to grow corn, small grains, and hay. These soils are well drained, have very high runoff, and have very low permeability. These soils are located throughout most of the center and southern portions of FGA, as well as a small portion in the northern section of FGA. Codorus series soils are found in floodplains that are smooth and nearly level. These soils are moderately well drained, have low runoff, and moderately high permeability. Codorus soils are found on the southwest border of FGA in an area where the floodplain of an Rock Creek tributary Reach E is located. Gaila series soils are found in level to steep uplands in the Northern Piedmont Plateau and Blue Ridge Province and are mostly used for oak-hickory and pine forests. These soils are well drained, have moderate runoff, and have moderately high to high permeability. Gaila soils are found along the eastern border of FGA. Gleneg series soils are also found in level to steep uplands in the Northern Piedmont Plateau and the Blue Ridge Province but are primarily used for growing crops such as corn, soybreans, and

small grains. Glenelg soils are well drained, have moderate runoff, and moderately high to high permeability. The soils are found in the center of the northern and southern portions, with a small portion located along the northeastern border of FGA. Occoquan and Wheaton series soils are located on sideslopes and suitable for hardwood forest growth. Occoquan soils are well drained, have moderate runoff, and very low permeability. These soils are found in a small area along the northwest boundary of FGA. Wheaton soils are well drained, have low runoff, and have moderately high to high permeability. These soils are located in the western portion of FGA. There are no soils meeting the definition of hydric soils at FGA (USDA, 2019).

Detailed descriptions of soil series can be found online in the USDA Natural Resources Conservation Service's (NRCS) Soil Survey Geographic Database for Montgomery County. See **Figure 4-3** for mapped soils locations in FGA.

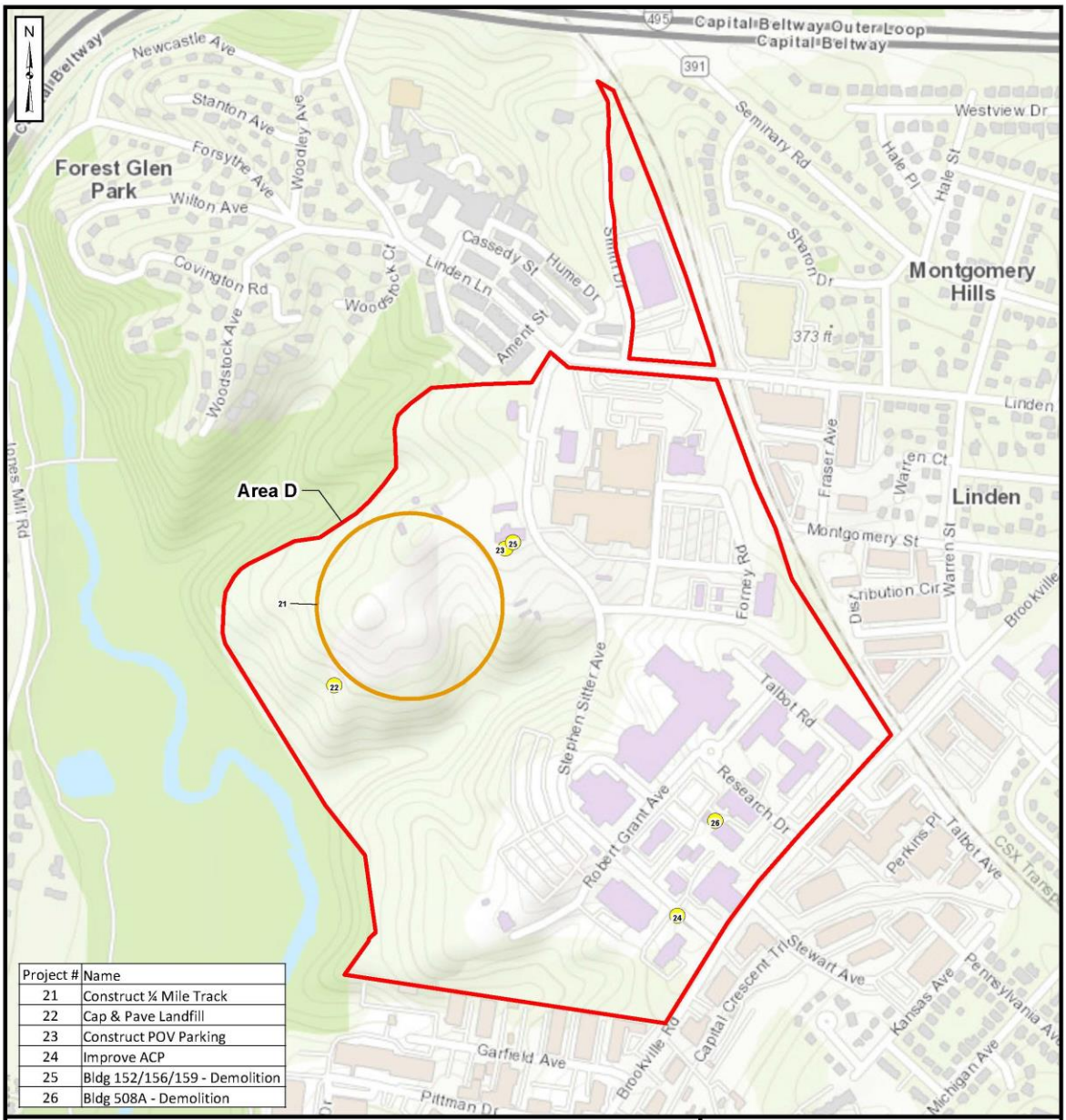
Figure 4-3: FGA Soils Map



4.4.3 Topography

The terrain at FGA ranges in elevation from approximately 200 to approximately 340 feet above mean sea level (msl), while the elevation of Montgomery County ranges from just over 50 to 850 feet above msl. Topography at FGA is shown on **Figure 4-4**.

Figure 4-4: FGA Topographic Map



4.5 Water Resources and Water Quality

4.5.1 Surface Water and Stormwater

FGA is located within the Rock Creek drainage basin, which is a sub-basin of the Middle Potomac River in the Chesapeake Bay watershed. Rock Creek flows begins in Laytonsville, Montgomery County and flows to the south and west of FGA. Rock Creek is approximately 33 miles long and converges with the Potomac River at the Watergate complex in Washington D.C. (Rock Creek Conservancy, 2020).

Primary surface waters on FGA include 10-unnamed tributaries to Rock Creek and 2 stormwater conveyances (Reaches A-L, as named in the U.S. Army Corps of Engineers' (USACE) 2009 Wetland Delineation Report for FGA) and two stormwater ponds (Ponds 1 and 2), as shown on **Figure 4-6** (USACE, 2009). According to MDNR, the 11 streams are designated use IV streams, meaning they are free-flowing, trout streams suitable for recreational use.

Reaches A and B are located in the southern portion of the installation. Reach A is a tributary to Rock Creek and is perennial in the lower part (Reach A1) and intermittent in the upper part (Reach A2), and Reach B is an ephemeral tributary to Reach A. Reach C is also located in the southern portion of the installation and is a conveyance for stormwater to Reach A. Reaches D, E, F, G and H, as named in the report, are located in the central to western portions of FGA. Reach D is an intermittent tributary that feeds into Pond 1, which drains into Reach E. Reach E is a perennial tributary to Rock Creek and it feeds into Rock Creek just west of the FGA boundary. Reaches F and G are ephemeral tributaries to Reach E. Reach H is an intermittent tributary to Rock Creek. Reaches I, J, and K are located on the eastern side of the site. Reach I is located in the eastern portion of the installation and is a conveyance for stormwater from Pond 2 to Wetland 3. Reach J is an intermittent tributary to Reach E and Reach K is an ephemeral tributary to Reach J. Reach L is located in the western portion of FGA and is an ephemeral tributary to Rock Creek (USACE, 2009).

Pond 1, located in the western portion of FGA, is approximately 0.04 acre in size and drains into Reach E. This pond is fed by Reach D flowing in from the northeast. Pond 2, located in the eastern section of FGA, is approximately 0.07 acre in size and is fed by a stormwater pipe.

Stormwater from FGA drains west into Rock Creek, which flows into the Potomac River, and eventually into the Chesapeake Bay. There is no routine monitoring of stormwater runoff quality from FGA. The nearest sampling site on Rock Creek is approximately 11 miles downstream from the Installation. Rock Creek water quality is degraded from sedimentation and other forms of non-point source pollution as well as from limited point source pollutants within its highly urbanized watershed (Woolpert, 2003).

In accordance with Section 402 of the CWA, FGA has a National Pollutant Discharge Elimination System (NPDES) General Discharge Permit for stormwater associated with industrial activities. In addition, FGA also has two discharge permits. The first is a stormwater discharge permit associated with industrial activities which allows runoff from the salt dome area. The second is a "General Permit for Discharges from Tanks, Pipes, and other Liquid Containment Structures at Facilities other than Oil Terminals" which allows FGA to flush the fire hydrants periodically, in accordance with the permit conditions and the FGA Flushing Plan (USACE, 2008).

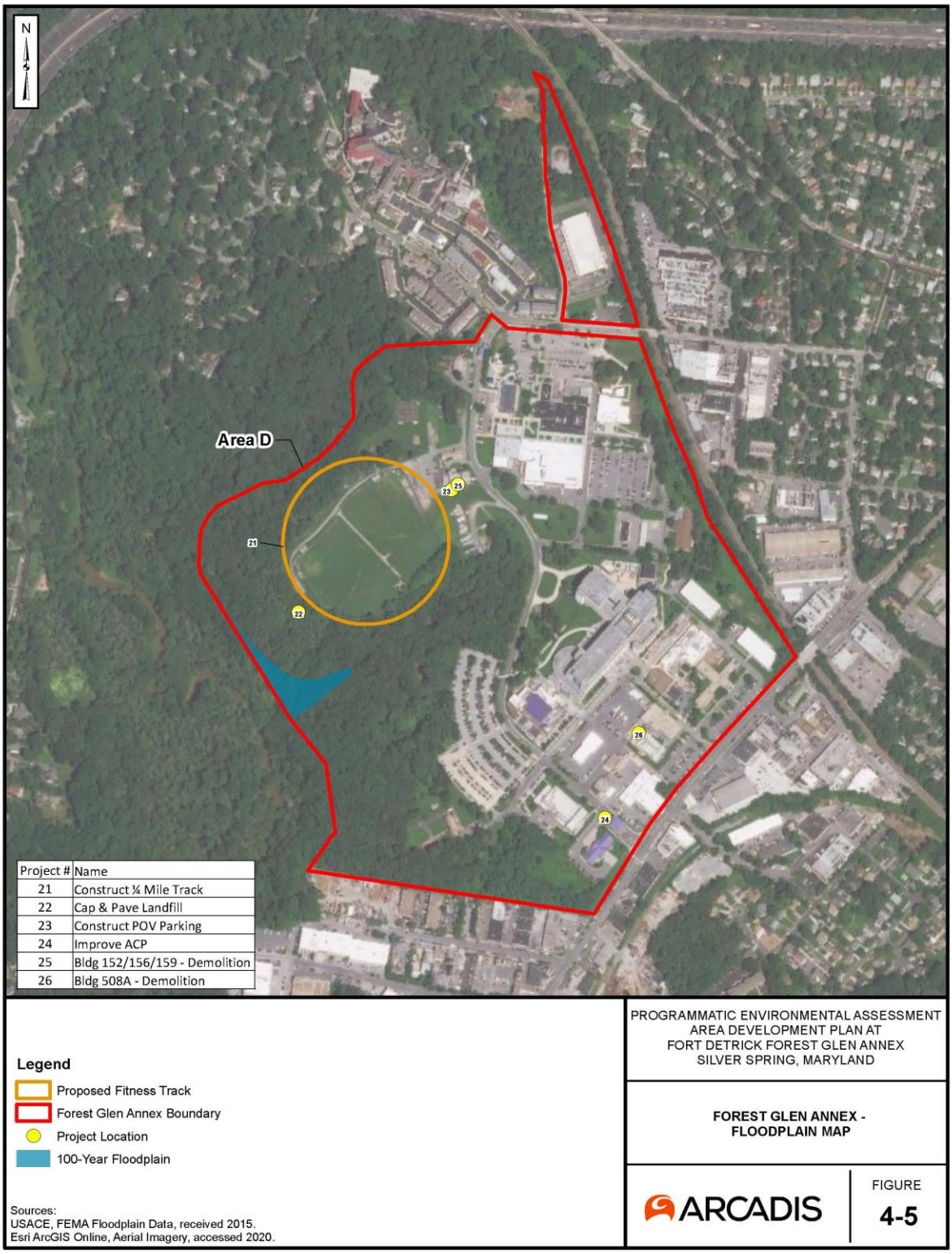
4.5.2 Groundwater

Groundwater in the area of FGA occurs in crystalline rock wells, which yield approximately 10-20 gallons of water per minute (Woolpert, 2003). Wells drilled at the Walter Reed Army Institute of Research indicate that groundwater is found between 10 and 50 feet below the ground surface (Woolpert, 2003). Groundwater in and around FGA is generally of good quality, at one to three thousand parts per million of dissolved minerals, and is drawn from fractures or solution channels located within weathered bedrock (Woolpert, 2000 and 2003).

4.5.3 Floodplains

According to the FEMA, floodplains are defined as those areas that will be inundated by a flood event having a 1% chance of exceedance in any given year. This is also referred as the 100-year floodplain (Zone AE). Based on FEMA's Flood Insurance Rate Maps, a small portion along FGA's western boundary, in the area of Rock Creek tributary Reach E and Wetland 2, is within the 100-year floodplain. **Figure 4-5** shows the locations of the 100-year floodplain at FGA.

Figure 4-5: FGA Floodplain Map



4.5.4 Wetlands

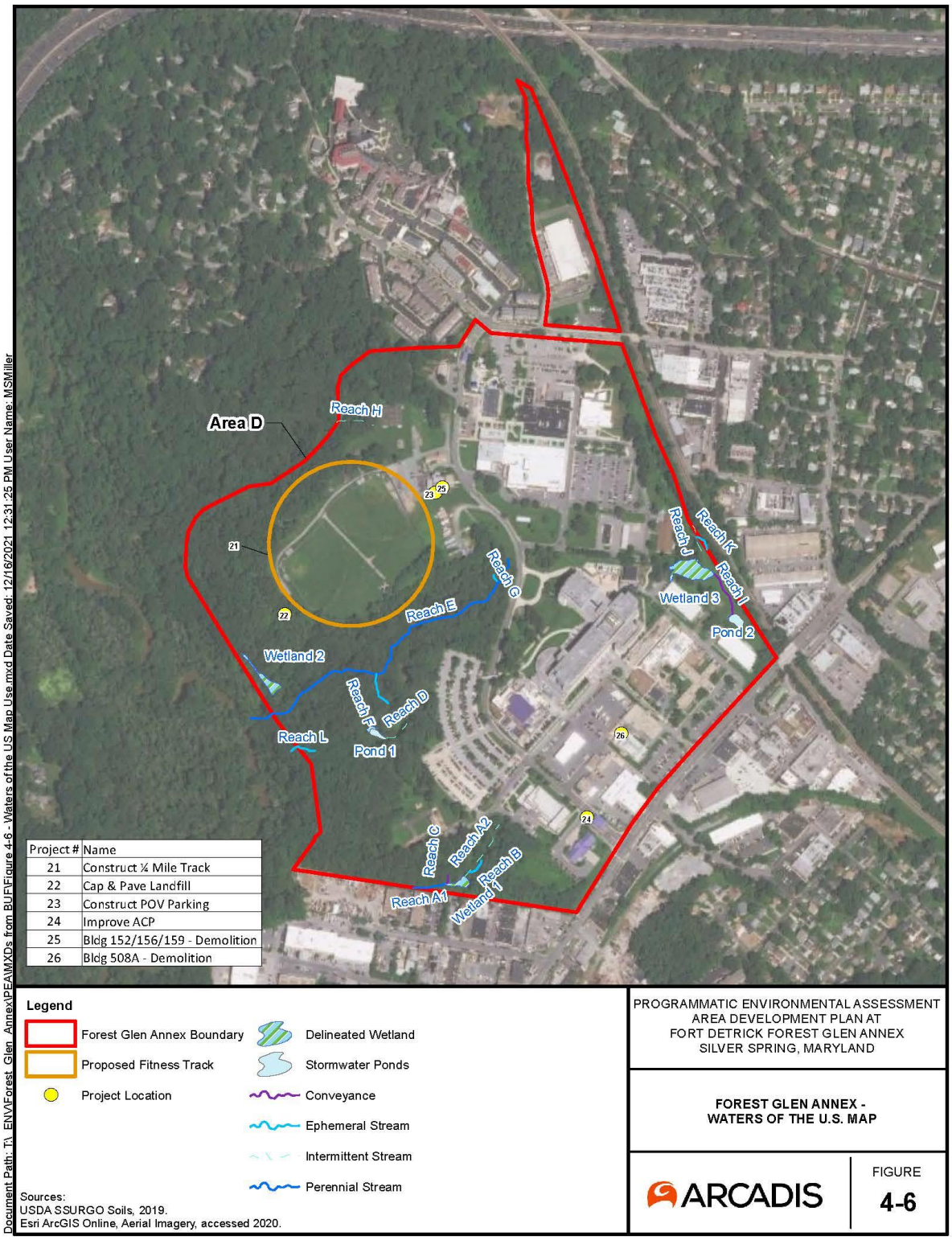
Wetlands are jointly defined by the USEPA and the USACE as "those areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include "swamp marshes, bogs and similar areas" (40 CFR 230.3(t) and 33 CFR 328.3(b)). USACE regulates the discharge of dredged or fill material in waters of the United States, including jurisdictional wetlands pursuant to Section 404 of the CWA. Section 404 of the CWA requires Federal regulation for most activities that impact wetlands.

EO 11990, *Protection of Wetlands*, requires Federal agencies take action to minimize the destruction, loss or degradation of wetlands. The order further requires Federal agencies to ensure that there are no practicable alternatives to such construction and that the Proposed Action includes all practical measures to minimize harm to wetlands which may result from such use. In making this determination agencies may take into account economic, environmental and other pertinent factors (USACE, 2014).

Important wetland functions include water quality improvement, groundwater recharge and discharge, pollution mitigation, storm water attenuation and storage, sediment detention, and erosion protection. Wetlands at FGA are beneficial to stormwater management, erosion, and sediment control. Wetlands provide habitat for wildlife and also support numerous species of annual and perennial herbaceous plants.

There are three jurisdictional wetlands at FGA, approximately 0.5 acre in size combined, delineated under the USACE 2009 Wetland Delineation Report for FGA. Wetland 1 is located along the southern border and is a palustrine emergent wetland, approximately 0.06 acre in size. Dominant vegetation found within Wetland 1 includes rice cutgrass (*Leersia oryzoides*), common rush (*Juncus effusus*), fox sedge (*Carex vulpinoidea*), and green bulrush (*Scirpus atrovirens*). Wetland 2 is located along the western border and is a palustrine forested wetland, approximately 0.12 acre in size. Dominant vegetation found within Wetland 2 includes green ash (*Fraxinus pennsylvanica*), box elder (*Acer negundo*), and poison ivy (*Toxicodendron radicans*). Wetland 3 is located along the eastern border of the installation and is a palustrine forested wetland, approximately 0.31 acre in size. Dominant vegetation within Wetland 3 includes eastern cottonwood (*Populus deltoides*), green ash, American sycamore (*Platanus occidentalis*), box elder, Tartarian honeysuckle (*Lonicera tatarica*), and poison ivy. All three wetlands are surrounded, in part, by deciduous forests (USACE, 2009). There are no additional wetlands mapped by the U.S. Fish and Wildlife (USFWS) National Wetlands Inventory Wetlands Mapper at FGA. Wetlands at FGA are shown on **Figure 4-6**.

Figure 4-6: FGA Waters of the US Map



4.5.5 Water Quality Certification

CWA water quality certifications provide the opportunity to address aquatic resource impacts of federally issued permits and licenses, in order to help protect water quality within the state. Under Section 401, a Federal agency cannot issue a permit or license for an activity that may result in a discharge to Waters of the U.S. until they state where the discharge would originate, or the Federal agency has granted or waived Section 401 certification. The state has the ability to grant, with or without conditions; deny; or waive certification. Granting certification, with or without conditions, allows the Federal permit or license to be issued consistent with any conditions of the certification. Denying certification prohibits the Federal permit or license from being issued. Waiver allows the permit or license to be issued without state comment. States make their decisions to deny, certify, or condition permits or licenses based in part on the proposed project's compliance with USEPA-approved water quality standards.

4.6 Biological Resources

Biological resources include native or naturalized plants and animals, as well as federally protected species and the habitats in which they live. Protected biological resources include plants and animal species listed by the State of Maryland as rare, threatened, or endangered, or by the USFWS as threatened or endangered. Special concern species are not afforded the same level of protection as the protected species, but their presence is taken into consideration by resource agency biologists involved in reviewing projects and permit applications (USACE, 2014).

4.6.1 Vegetation

There are 40 acres of wooded ravines along the western edge of FGA that are designated as part of a Special Protection Area under Maryland's Growth Management Resource Protection and Planning Act of 1992. Some of these wooded slopes are also part of buffer areas surrounding wetlands and streams that must be maintained under the March 1991 *Environmental Management of Development in Montgomery County Maryland Guidelines.*

A Planning Level Survey (PLS) was performed from 8-10 June 2010. The installation was delineated six plant communities, including forested area, old field, mowed and maintained lawn, forested wetland, emergent wetland, and open water (USAG, 2010a). Forested, old field, and mowed and maintained lawn communities are discussed below. Wetland and open water communities are discussed in Section 4.8 above.

Mature, forested upland areas are located along the east and west boundaries of FGA. Common tree species within these areas include box elder, red maple (*Acer rubrum*), green ash, sycamore, black walnut (*Juglans nigra*), tulip poplar (*Liriodendron tulipifera*), black cherry (*Prunus serotina*), Northern red oak (*Quercus rubra*), black locust (*Robinia pseudoacacia*), sassafras (*Sassafras albidum*), and slippery elm (*Ulmus rubra*). Common ground layer species include garlic

mustard (*Alliaria petiolata*), common mugword (*Artemisia vulgaris*), Indian strawberry (*Duchesnea indica*), lady's thumb (*Polygonum persicaria*), bush honeysuckle (*Diervilla lonicera*), multiflora rose (*Rosa multiflora*), wineberry (*Rubus phoenicolasius*), English ivy (*Hedera helix*), Japanese honeysuckle (*L. japonica*), Virginia creeper (*Parthenocissus quinquefolia*), mile-a-minute (*P. perfoliatum*), poison ivy, and summer grape (*Vitis aestivalis*) (USAG, 2010a).

Old field habitat is located near the southwestern portion of the Installation and is a buffer between the forested habitat and the mowed and maintained lawn habitats. Scattered throughout this habitat type are tree and shrub species including Eastern red cedar (*Juniperus virginiana*), box elder, red maple, sweetgum (*Liquidambar styraciflua*), tulip poplar, black locust, bush honeysuckle, and multiflora rose. The ground layer vegetation is dense, diverse, and infested with invasive species. Dominant ground layer species include common ragweed (*Ambrosia artemisiifolia*), Indian hemp (*Apocynum cannabinum*), ground ivy (*Glechoma hederacea*), white clover (*Trifolium repens*), Asiatic bittersweet (*Celastrus orbiculatus*), Japanese honeysuckle, and mile-a-minute (USAG, 2010a).

Existing buildings, parking lots, roadways, and the salt dome are bordered by mowed and maintained lawn and landscape vegetation. This habitat type contains many of the same herbaceous species found within the old field habitat type, including species such as common ragweed, ground ivy, Japanese honeysuckle, plantains (*Plantago* spp.), dandelion (*Taraxacum officinale*), and several clovers (*Trifolium* spp.) (USAG, 2010a).

4.6.2 Wildlife Resources

The PLS performed from 8-10 June 2010 delineated the installation into multiple habitats and fauna species were identified in each habitat. Mammal species observed during the survey include Eastern grey squirrel (*Sciurus carolinensis*), groundhog (*Marmota monax*), and white-tailed deer (*Odocoileus virginianus*). Bird species observed during the survey include Northern cardinal (*Cardinalis cardinalis*), goldfinch (*Carduelis tristis*), Northern mockingbird (*Mimus polyglottos*), chipping sparrow (*Spizella passerina*), and American robin (*Turdus migratorius*). Insects observed during the survey include specimens of honeybee (*Apis mellifera*), spicebush swallowtail (*Papilio troilus*), and cabbage white butterfly (*Pieris rapae*). Amphibian and reptile species observed during the survey include the American toad (*Bufo americanus*) (USAG, 2010a). All full list of fauna species observed during the survey is included in the PLS (Appendix D of the Draft Integrated Natural Resources Management Plan for FGA, 2010-2014).

4.6.3 Rare, Threatened, and Endangered Species

Protected biological resources include plant and animal species listed by the State of Maryland as rare, threatened, or endangered or by the USFWS as threatened or endangered. Special concern species are not afforded the same level of protection, but their presence is taken into consideration by resource agency biologists involved in reviewing projects and permit applications.

Under the Endangered Species Act (ESA), an "endangered species" is defined as any species in danger of extinction throughout all or a significant portion of its range. A "threatened species" is defined as any species likely to become an endangered species in the foreseeable future. The ESA also provides for recovery plans to be developed describing the steps needed to restore a species population. Special status species are listed as threatened or endangered, are proposed for listing, or are candidates for listing by the state and/or federal government.

Critical habitats, as defined by the ESA, are areas with physical or biological features essential to the preservation of a species that may require special management or protection. Federal agencies are required to take precautions to not adversely modify critical habitat. The following considerations are made when determining critical habitat for a species: space for individual and population growth and normal behavior; cover or shelter; food, water, air, light, minerals, or other nutritional or physiological requirements; sites for breeding and rearing offspring; and habitats that are protected from disturbances or are representative of the historic geographical and ecological distributions of a species (USACE, 2014).

Per the Official Species List obtained from the USFWS Information for Planning and Conservation website on 13 November 2020, there are no federally-listed threatened or endangered species in the vicinity of FGA. MDNR did not provide comments in the official recommendation letter provided by the State of Maryland dated 2 March 2021.

4.7 Energy and Utilities

Utility coverage at FGA is concentrated in the eastern quadrant of the district to serve the consolidation of existing development. Utilities available in the district include water, wastewater, gas, electric, and stormwater lines (USAG, 2019).

4.7.1 Energy

Electricity is purchased from the Potomac Electric Power Company (PEPCO). There are three 13.2 kV, three-phase overhead circuits (numbers 14263, 14264 and 14265) that traverse FGA from north to south. There are four principal areas served by these three PEPCO circuits: Building 178, the Community Center Complex, the Research Area, and the industrial area. Based on information provided in the 2003 Master Plan update, the distribution network and electric supply equipment are in good condition. During 2006, electric consumption for FGA totaled 69,850,000 kilowatt hours (kwh) (USACE, 2008). The distribution system at FGA is owned by the Annex. Government-owned emergency generating equipment is available for essential operation during a power failure (Woolpert, 2003).

Washington Gas provides natural gas to FGA and owns the gas distribution system at the Annex. All buildings are individually metered for natural gas consumption. The current natural gas

distribution system and capacity appears to be adequate to support the needs of the current population of FGA.

There are two heating plants located in the Research and Development Area (plant in Building 503) and the Community Center complex (plant in Building 163) that serve FGA. These systems are not inter-connected. The capacity of these heating systems is adequate to serve only the existing buildings that are connected to them. This is also true of the individual heating systems in Buildings 506, 508, 511, 602, and 606. Steam is used at FGA for heating, cooking, sterilizing and production of hot water for domestic and laboratory use (Woolpert, 2003).

4.7.2 Potable Water

The Washington Suburban Sanitary Commission (WSSC) provides potable water to FGA. Water is supplied from two WSSC Patuxent River reservoirs. Potable water is treated using sedimentation, filtration, disinfection and pH adjustment. A secondary source of potable water is from the Robert R. Morse Filtration Plant supplied by the northwest branch of the Anacostia River and part of the Patuxent River. There are no water storage facilities at FGA. (USACE, 2008)

4.7.3 Sanitary Sewage Collection and Treatment

The sanitary sewer system for the Community Center complex currently uses a force main pump-over into the southern sanitary sewer trunk main system. There is also a pump system at Building 156. The southern portion of FGA consists of 6- and 9-inch lateral lines that discharge into the 9-inch WSSC main traversing the southern portion of the property and eventually connects a 10-inch WSSC main.

Sanitary sewage from FGA is discharged to the WSSC's Rock Creek sewer interceptor, which in turn, connects to the District of Columbia's sewage system. No flow records are kept and no contractual agreements limiting the wastewater discharged from the installation to the WSSC sewage system (Woolpert, 2003). The FGA maintains WSSC Discharge Permit 08091 which allows for the discharge of domestic and non-domestic sanitary wastes.

4.7.4 Communications

Telephone services for FGA are provided by Verizon. FGA owns the cable communications plant, but Verizon is contracted to conduct maintenance activities. Telephone service is distributed through underground ducts and overhead lines (Woolpert, 2003).

4.8 Cultural Resources

Cultural resources are "historic properties" as defined by the National Historic Preservation Act of 1966 (NHPA), "cultural items" as defined by the Native American Graves Protection and Repatriation Act of 1979 (NAGPRA), "archaeological resources" as defined by the Archaeological

Resource Protection Act of 1979 (ARPA), "sacred sites" as defined by EO 13007, to which access is afforded under the American Indian Religious Freedom Act of 1987 (AIRFA), and collections and associated records as defined in 36 CFR 79 (USAG, 2019).

Archeological resources consist of locations where prehistoric or historic activity measurably altered the earth or produced deposits of physical remains. Architectural resources include standing buildings, districts, bridges, dams, and other structures of historic significance. Traditional cultural properties include locations of historic occupations and events, historic and contemporary sacred and ceremonial areas, prominent topographical areas that have cultural significance, traditional hunting and gathering areas, and other resources that Native Americans or other groups consider essential for the persistence of their traditional culture (USAG, 2019).

Several federal laws and regulations, including NHPA, ARPA, NAHPRA, and AIRFA, have been established to manage cultural resources. In order for a cultural resource to be considered significant, it must meet one or more of the following criteria for inclusion on the National Register of Historic Places (NRHP):

> The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and associated and: 1) that are associated with events that have made a significant contribution to the broad patterns of our history; or 2) that are associated with the lives or persons significant in our past: or 3) that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or 4) that have yielded, or may be likely to yield, information important to prehistory or history (USAG, 2019).

Cultural resources are finite, non-renewable, and often fragile, and are frequently threatened by development activities. In accordance with AR 200-1, *Cultural Resources Management*, Fort Detrick maintains an Integrated Cultural Resources Management Plan (ICRMP) that serves as a guide for compliance with the NHPA, and other applicable Federal laws and regulations (USAG, 2019), and applies to FGA. This document identifies several historic properties that are known to exist within the study areas.

Fort Detrick/FGA requested information from the Maryland Historical Trust (MHT) in a letter dated January 21, 2021 (see Appendix A), which initiated consultation with the Maryland State Historic Preservation Office (SHPO) pursuant to Section 106 of the National Historic Preservation Act (NHPA) of 1966. In a response letter from SHPO dated February 19, 2021 (see Appendix A), three known historic properties were listed as presently included in the records of Medusa, Maryland's Cultural Resources Information System.

4.8.1 Archaeological Resources

According to FGA's ICRMP dated 2010, The archeological inventory at Forest Glen is, for the most part, complete. Previous archeological surveys on Forest Glen Annex have recorded no prehistoric or historic sites. The Standard Operating Procedures (SOPs) appended to the ICRMP contain information on procedures FGA staff should follow in the event that currently unknown archeological sites are discovered.

No prehistoric or historic archeological sites have been recorded previously on FGA in the archeological files of the Maryland Historical Trust prior to 1990. A Phase I archeological survey was conducted in five areas as directed by master planning activities. Results of the investigations revealed that the five areas had been subjected to ground disturbance activities; no archeological resources were identified (USAG, 2010b).

4.8.2 Architectural Resources

Directly to the north of the project area is the six-acre National Park Seminary which was determined to be eligible for the NRHP as a historic district in 1972 and was placed under a historic preservation easement in 2004. This group of buildings dates to the late 19th, early 20th century and were used as army personnel living quarters and as a convalescent center for Walter Reed Army Hospital (USACE, 2019).

Building 516, the Diamond Ordnance Radiation Facility, (MHT M: 36-59) is located in the southwestern corner of the project area. It was determined to be eligible for the NRHP in 2010. The Metropolitan Branch of the B&O Railroad (MHT M: 37-16) bounds the project area to the east. (USAG, 2019).

As indicated in the letter received from SHPO, the following historic resources are located at FGA:

- Building 152/156, Forest Glen Annex (MIHP #M:36-58) – determined not eligible for the National Register in 2010
- The 0.75-mile Ireland Trail (MIHP M: 30-60) was built in the 1930's as part of the National Park Seminary (USAG, 2019). According to SHPO, it was determined eligible for the NRHP as a contributing resource to the National Park Seminary National Register Historic District (MIHP #M:36-1) in 2010.
- Building 501, Forest Glenn Annex (DOE-MO-0152) – determined not eligible for the National Register in 2010.

4.9 Transportation and Parking

4.9.1 Existing Transportation Network

There are currently two operational access control points (ACP) located on FGA property, as shown **Figure 4-7**. The primary ACP is located at the intersection of Stephen Sitter Avenue and Brookville Road, and serves to monitor the movement of all vehicles and pedestrians entering and exiting FGA 24 hours a day. Brookville Road borders Forest Glen to the south and is classified as an arterial street with one lane of traffic traveling in each direction and a posted speed limit of 25 miles per hour (FGA, 2019).

The second ACP is located on the north side of the Annex, at the intersection of Stephen Sitter Avenue and Linden Lane. This exit-only ACP operates during peak evening hours on Monday through Friday. Linden Lane borders the main campus of the Annex to the north and is classified as an undivided, arterial road with one lane of traffic traveling in each direction and a posted speed limit of 25 miles per hour (FGA, 2019).

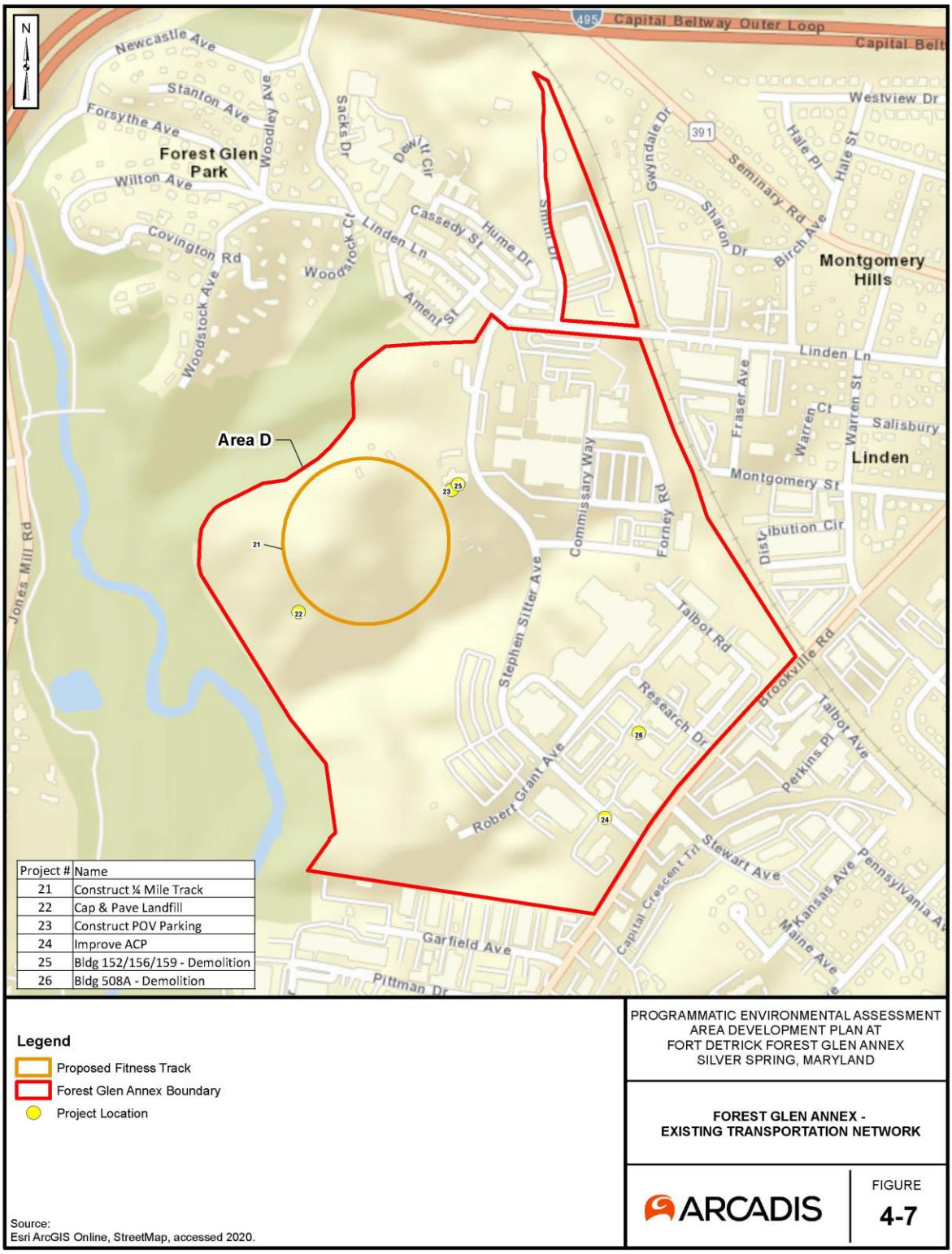
Within FGA, Stephen Sitter Avenue serves as the primary, on-post road and extends north-south through the entire property between Brookville Road to the south and Linden Lane to the north. Stephen Sitter Avenue provides access to all areas in the Annex via two un-signalized intersections. Traveling north from Brookville Road, Stephen Sitter Avenue first intersects with Robert Grant Avenue. Robert Grant Avenue is classified as a local road and provides access to several buildings in the Research and Development Area of the Annex. Other roads in this area include Research Drive and Talbot Road. From Robert Grant Avenue, Stephen Sitter Avenue continues north and intersects with Forney Drive. Forney Drive is classified as a local road and is used to access the Community Center Area (FGA, 2019).

4.9.2 Parking

According to the FGA ADP, FGA is currently deficient in total parking spaces dedicated to personnel by 253 spaces, however, it is anticipated that when the Lyttonsville Station opens, the need for personnel parking will be reduced (USAG, 2019).

Parking provisions at FGA currently consist of one two-story parking facility and several smaller-capacity surface parking lots throughout the property, totaling approximately 1,497 parking spaces. Compared to the current Annex employee count of 2,164 persons, the resulting ratio of parking spaces to employees is 1:1.7. This ratio falls within existing National Capital Planning Commission (NCPC) parking ratios for federal facilities. The future desired NCPC ratio under 2036 high employee conditions is 1:3, so as to encourage the use of alternate modes of transit. The number of parking spaces needed to achieve a future parking ratio of 1:3 would be 1,400. Therefore, approximately 100 parking spaces would need to be removed from the current inventory to meet NCPC standards (FGA, 2019).

Figure 4-7: FGA Existing Transportation Network



5 ENVIRONMENTAL CONSEQUENCES, CUMULATIVE EFFECTS, AND ANTICIPATED REQUIRED FUTURE NEPA ANALYSIS

The following section describes the anticipated environmental impacts associated with implementing the Proposed Action and the No Action Alternative. The No Action alternative acts as a baseline condition, assuming the Proposed Action and implementation of all projects in FGA from the FGA ADP would not take place.

This PEA evaluates 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. 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. Fort Detrick/FGA would conduct additional NEPA analyses (either a Record of Environmental Condition [REC], PEA, or Environmental Impact Statement [EIS]) when project details become available. These analyses may be tiered from this PEA in accordance with 40 CFR Part 1502.20 and 32 CFR Part 651.14(c).

This section is organized in tabular format by resource area following the same sequence as in the preceding Section 4.0.

Cumulative effects may result from the presence of multiple projects in the same location (or in close proximity). Table 5-1 indicates whether there is a potential for cumulative effects to a resource category based on the co-location of projects. The timing of project implementation has not been taken into account for purposes of this PEA. The potential for impacts to following resource categories were not evaluated due to the inability to determine impacts to those resources based solely on location of the project(s):

1. Air Quality and Greenhouse Gases
2. Visual Aesthetics
3. Socioeconomics, Environmental Justice, and Protection of Children

The potential for future required NEPA analysis for each project is indicated in **Table 5-2** below. It is expected that certain projects would require a Record of Environmental Consideration prior to implementation based on the findings of this PEA. All other projects requiring earthwork, expansion, relocation, and/or new construction are expected to require the preparation of a site-specific PEA or EIS in accordance with NEPA prior to implementation. However, information regarding the size, complexity, and nature of the individual projects would be used in the determination of the required future NEPA analysis for each project. Project descriptions are not provided or analyzed in this PEA document, and therefore, the determination of likely required

future NEPA analysis for each project as indicated in the tables below is based on the project name with a cursory assumption as to what the project name implies for the nature of the project itself. When a cursory assumption regarding the likely nature of the project could not be made based on the project name, the future NEPA analysis is indicated as "Unknown".

5.1 FGA Summary of Environmental Consequences

Table 5-1: FGA Summary of Environmental Consequences

Resource Category	Projects[1] Affecting Resource Category	Projects with Potential for Cumulative Effects to Resource Category Due to Co-Location	Potential Compliance Implications
Land Use	• 21 • 22	• N/A	1. Office of Environmental Management requirements for work within restricted area 2. Montgomery County Zoning requirements
Hazardous and Toxic Materials and Solid Wastes	• 21 • 22 • 23 • 25 • 26	• 23 & 25	1. Discovery of previous contamination must be added to IRP and subject to CERCLA process
Noise	All construction and demolition projects	• 23 & 25	1. Adherence to OSHA standards for occupational noise exposure associated with construction 2. Adherence to regulatory limit for construction activities (90 dBA at site boundaries); COMAR 26.02.03.03 A(2)(a); Montgomery County

[1] Indicated by number corresponding to ID numbers located on figures throughout Section 4 of this document

Resource Category	Projects[1] Affecting Resource Category	Projects with Potential for Cumulative Effects to Resource Category Due to Co-Location	Potential Compliance Implications
			Ordinance, Part II, Chapter 31B.
Geology, Soils and Topography[2]	• 21 • 22 • 23 • 24 • 25 • 26	• 23 & 25	1. If disturbance of soils of 5,000 sq ft or more is required, MDE-approved erosion and sediment control plan must be prepared pursuant to COMAR 26.17.01 2. NPDES permit (General Permit for Construction Activities)
Water Resources (Surface & Groundwater	• 21 • 22 • 23 • 24 • 25 • 26	• 23 & 25	1. MDE stormwater management permit (COMAR26.17.02) 2. Section 404 of the CWA
Floodplains	• N/A	• N/A	1. EO 11988, *Floodplain Management*
Wetlands	• N/A	• N/A	1. EO 11990, *Protection of Wetlands* 2. Section 404 of the CWA 3. Maryland's Nontidal Wetlands Protection Act and Program 4. March 1991 *Environmental*

[2] It is assumed projects relocating, consolidating, converting, or with interior-only activities do not include earthwork.

Resource Category	Projects[1] Affecting Resource Category	Projects with Potential for Cumulative Effects to Resource Category Due to Co-Location	Potential Compliance Implications
			Management of Development in Montgomery County Maryland Guideline requires buffers surrounding wetlands and streams to be maintained.
Water Quality Certification	• N/A	• N/A	1. Section 401 of the CWA
Biological Resources	• 21 • 22	• N/A	1. The Forest Conservation Act requires that areas disturbing 40,000 sf or greater must prepare a Forest Conservation Plan requiring the replacement of trees. 2. Fort Detrick policy requires that all trees removed must be replaced at a 2 for 1 ratio. 3. March 1991 *Environmental Management of Development in Montgomery County Maryland Guideline*

Resource Category	Projects[1] Affecting Resource Category	Projects with Potential for Cumulative Effects to Resource Category Due to Co-Location	Potential Compliance Implications
			requires forested buffers surrounding wetlands and streams to be maintained.
Energy and Utilities	All construction and demolition projects	• 23 & 25	1. MDE erosion and sediment control permit (COMAR 26.17.01) 2. MDE stormwater management permit (COMAR26.17.02) 3. NPDES permit (General Permit for Construction Activities) 4. Mark-out of all existing utilities
Cultural Resources	• N/A	• N/A	1. Section 106 NHPA
Transportation and Traffic	• 23 • 24	• N/A	1. Montgomery County Code Chapter 31

6 CONCLUSION

This PEA evaluates the direct and indirect impacts associated with the implementation and correlated development of the FGA in accordance with the NEPA. The purpose of the Proposed Action is to implement the ADP for Fort Detrick's FGA with the intent of creating sustainable and manageable growth. The ADP for FGA was developed in consultation with the RPMP. The ADP addresses the specific developmental needs at FGA to allow development to continue alongside a comprehensive plan addressing infrastructural updates as well as expansion needs. The Proposed Action projects are in-line with the mission and vision goals put in place by Fort Detrick as well as the overarching RPMP aimed at creating a sustainable growth at Army installations.

The PEA was prepared in accordance with the NEPA and implementing regulations issued by the CEQ and 32 CFR Part 651.

The Proposed Action could result in impacts to land use, hazardous and toxic materials and solid wastes, noise, geology and soils, water resources, floodplains, wetlands, biological resources, energy and utilities, and transportation and traffic, based on the location of proposed projects in proximity to known resources. However, it is anticipated that the use of BMPs and adherence to permit and compliance requirements could alleviate the potential for impacts of individual projects when planned, designed, and implemented.

Under the No Action Alternative, the growth at FGA would be allowed to continue without a plan for future growth and management. The No Action Alternative would potentially result in short or long term moderate adverse impacts to all resource categories without the implementation of strategic updates to infrastructure or modifications to compliance requirements. While the nature of the current existing operational functions at FGA are not evaluated in this PEA, it is expected that the No Action Alternative would allow for unsustainable growth at FGA, disallowing FGA to operate as a functional Installation.

Based on the evaluation of locational impacts to known existing resources as described in Chapter 5 and summarized in Error! Reference source not found., 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. Therefore, an EIS will not be necessary for this Proposed Action. This conclusion is documented in the FNSI found at the beginning of this report.

7 LIST OF PREPARERS

US Army Corps of Engineers, Baltimore District		
Name	Project Responsibility	Organization
Elizabeth Shipley	Geographer	Planning Division
Christina Olson	Biologist	Planning Division
Heather Cisar	NEPA Program Manager	Planning Division

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9 ACRONYMS AND ABBREVIATIONS

ADP	Area Development Plan
AIRFA	American Indian Religious Freedom Act of 1987
AOC	Area of Concern
AR	Army Regulation
ARPA	Archaeological Resources Protection Act
BMBL	Biosafety in Microbiological and Biomedical Laboratories
CAA	Clean Air Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
COMAR	Code of Maryland Regulations
CWA	Clean Water Act
DA	Department of the Army
dB	decibels
dBA	A-weighted decibels
DERP	Defense Environmental Restoration Program
DoD	Department of Defense
DOT	Department of Transportation
EA	Environmental Assessment
EIS	Environmental Impact Statement
EO	Executive Order
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FNSI	Finding of No Significant Impact
HMMO	Hazardous Materials Management Operation
HMMP	Hazardous Materials Management Policy

IAP	Installation Action Plan
ICRMP	Integrated Cultural Resources Management Plan
IRP	Installation Restoration Program
LUC	Land Use Controls
MDNR	Maryland Department of Natural Resources
MEDCOM	U.S. Army Medical Command
MDE	Maryland Department of the Environment
MHT	Maryland Historic Trust
NCA	Noise Control Act
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act of 1966
NOI	Notice of Intent
NPL	National Priorities List
NRHP	National Register of Historic Places
OSC	Operational Services Command
OSHA	Occupational Safety and Health Administration
PCE	perchloroethylene
PLS	Planning Level Survey
RA	Remedial Action
RCRA	Resource Conservation and Recovery Act
REC	Record of Environmental Consideration
RI	remedial investigation
SARA	Superfund Amendments and Reauthorization Act
TBD	To Be Determined
TSCA	Toxic Substances Control Act
TSDF	Treatment, Storage, and Disposal Facility
USAG	US Army Garrison
USDA	U.S. Department of Agriculture

USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
WTP	Water Treatment Plant
WWTP	Wastewater Treatment Plant

APPENDIX A

Agency Coordination