



DRAFT FINAL
ENVIRONMENTAL ASSESSMENT

FORT GEORGE G. MEADE
ROADWAY IMPROVEMENTS

Fort George G. Meade
Anne Arundel County, Maryland

March 2010

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Ann Arundel County, Maryland
20755-5115

EXECUTIVE SUMMARY

INTRODUCTION

Pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended, Fort George G. Meade has prepared an Environmental Assessment (EA) to evaluate potential environmental, cultural, transportation, and socioeconomic effects associated with the proposed construction associated with seven projects to improve traffic associated with Base Realignment and Closure (BRAC) at the installation.

The Proposed Action includes several road changes including the construction of access control points, road widening, moving intersections, and changing signs and traffic signals at control points. The improvements are located along the eastern edge of the installation at: (A) Rockenbach Road and Clark Road, (B) Mapes Road and MD 175, (C) Reece Road and Ernie Pyle Street, (D) Mapes Road and Cooper Avenue, (E) Rockenbach Road and Cooper Avenue, (F) Mapes Road and Ernie Pyle Street, and (G) North section of Mapes Road. The proposed actions will enhance the security of access control points (ACPs) and provide an adequate infrastructure to support the traffic on the installation.

BACKGROUND AND SETTING

Fort George G. Meade, Maryland is a permanent U.S. Army installation located about midway between Baltimore, Maryland, and Washington, DC, encompassing 5,101.9 acres in Anne Arundel County, Maryland. Fort Meade supports over 80 tenant organizations from all military services, and several federal agencies. On September 8, 2005, the Defense Base Closure and Realignment Commission (BRAC Commission) recommended a set of domestic realignment and closure actions, including the relocation of three major activities to Fort Meade: the Defense Information Systems Agency (DISA), the Department of Defense (DoD) Media Activities, and the Adjudication and Office of Hearing and Appeals Offices. All BRAC realignment activities are to relocate to Fort Meade by 2011. It is anticipated that approximately 5,700 personnel will be relocated to Ft. Meade.

PROPOSED ACTION/PREFERED ALTERNATIVE

The Proposed Action is to provide improvements to the traffic flow in and around Ft. Meade to alleviate existing and expected increased traffic congestion associated with the additional vehicles expected at the installation as a result of the BRAC. The improvements are located along the eastern edge of the installation at: (A) Rockenbach Road and Clark Road, (B) Mapes Road and MD 175, (C) Reece Road and Ernie Pyle Street, (D) Mapes Road and Cooper Avenue, (E) Rockenbach Road and Cooper Avenue, (F) Mapes Road and Ernie Pyle Street, and (G) North section of Mapes Road. The proposed actions will enhance the security of access control points (ACPs) and provide an adequate infrastructure to support the traffic on the installation.

NO-ACTION ALTERNATIVE

The No-Action Alternative would be to forego the proposed road and access control point improvements, thereby maintaining the current inadequate infrastructure at Fort Meade.

SUMMARY

The Proposed Actions are expected to disturb approximately 16 acres of land, of which approximately half are currently paved. The remaining acreage is composed of open grass and woods. Approximately six acres of this would be permanently impacted by the road projects. Short-term impacts to surface waters, floodplains, aquatic habitat, wildlife, air, utilities, and noise could be expected during construction of the projects. Short-term and long-term impacts to land use, soils, topography, wetlands, vegetation, and aesthetics would be expected through the construction of new Access Control Points and roadway widening. Long-term beneficial impacts to traffic flow are expected from this work.

Two tables summarize the analyses performed in the EA. Table ES-1 presents a list of Federal environmental statutes and executive orders that are applicable to the proposed project, as well as the status of compliance with each. Table ES-2 summarizes the potential consequences that the Proposed Action and No Action Alternative would have on environmental resources.

CONCLUSION

Based on the evaluation of environmental consequences accomplished by this EA, a Finding of No Significant Impacts (FNSI) has been prepared.

**TABLE ES-1: COMPLIANCE WITH FEDERAL ENVIRONMENTAL STATUTES
AND EXECUTIVE ORDERS**

Acts	Compliance
Clean Air Act, as amended (Public Law 88-206)	FULL
Clean Water Act, as amended (Public Law 95-217)	Pending
Coastal Zone Management Act	FULL
Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended by the Superfund Amendments and Reauthorization Act of 1986 (42 U.S.C. §9601 et seq.)	FULL
Endangered Species Act of 1973, as amended (Public Law 93-205)	FULL
Farmland Protection Policy Act (Public Law 97-98)	FULL
Fish and Wildlife Coordination Act, as amended (16 United States Code [U.S.C.] 661, et seq.)	FULL
National Environmental Policy Act of 1969 (Public Law 91-190)	FULL
National Historic Preservation Act of 1966, as amended (Public Law 89-665)	FULL
Noise Control Act of 1972, as amended (Public Law 92-574)	FULL
Resource Conservation and Recovery Act (Public Law 94-580)	FULL
Safe Drinking Water Act, as amended (Public Law 93-523)	FULL
Solid Waste Disposal Act of 1965, as amended (Public Law 89-272, Title II)	FULL
Toxic Substances Control Act of 1976 (Public Law 94-469)	FULL
Watershed Protection and Flood Prevention Act of 1954 (16 U.S.C. §1101, et seq.)	FULL
Wetlands Conservation Act (Public Law 101-233)	FULL
Wild and Scenic Rivers Act (Public Law 90-542, as amended)	FULL
Sikes Act, Energy Policy Act of 2005, Archaeological Resources Protection Act	FULL
Executive Orders	
Floodplain Management (Executive Order 11988)	FULL
Protection of Wetlands (Executive Order 11990)	FULL
Environmental Justice in Minority Populations and Low-Income Populations (Executive Order 12898)	FULL

TABLE ES-2: SUMMARY OF POTENTIAL INDIVIDUAL AND CUMULATIVE EFFECTS ON ENVIRONMENTAL RESOURCES		
	Environmental Consequences	
Resource Area	Proposed Action	No-Action
Land Use	Short-term and Long-term Minor Adverse Impacts	No Impacts
Soils	Short-term and Long-term Minor Adverse Impacts	No Impacts
Prime and Unique Farmland	No Impacts	No Impacts
Topography and Geology	Short-term and Long-term Minor Adverse Impacts	No Impacts
Air Quality	Short-term Minor Adverse Impacts	No Impacts
Water Resources		
Surface Water	Short-term Minor Adverse Impacts	No Impacts
Floodplains	Short-term Minor Adverse Impacts	No Impacts
Groundwater	No Impacts	No Impacts
Coastal Zone	No Impacts	No Impacts
Biological Resources		
Wetlands	Short-term and Long-term Minor Adverse Impacts	No Impacts
Vegetation	Short-term and Long-term Minor Adverse Impacts	No Impacts
Wildlife Resources	Short-term Minor Adverse Impacts	No Impacts
Rare, Threatened, or Endangered Species	No Impacts	No Impacts
Aquatic Habitat	Short-term Minor Adverse Impacts	No Impacts
Wild and Scenic Rivers	No Impacts	No Impacts
Cultural Resources	No Impacts	No Impacts
Hazardous, Toxic, and Radioactive Substances	No Impacts	No Impacts
Infrastructure and Utilities		
Traffic, Roadways, and Transportation Systems	Short Term Minor Adverse Impacts. Long-term beneficial effects	Long-term adverse Impacts
Potable Water	Short-term Minor Adverse Impacts	No Impacts
Sanitary Sewer/Wastewater	Short-term Minor Adverse Impacts	No Impacts
Electrical Power	Short-term Minor Adverse Impacts	No Impacts
Socioeconomic	Short-term Beneficial Impacts	No Impacts
Noise	Short-term Minor Adverse Impacts	No Impacts
Visual and Aesthetic Value	Short-term and Long-term Minor Adverse Impacts	No Impacts
Environmental Justice/Protection of Children	No Impacts	No Impacts
Cumulative Impacts	No Impacts	No Impacts

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1.0 PURPOSE, NEED, AND SCOPE

1.1 INTRODUCTION

Fort George G. Meade, Maryland (hereinafter “Fort Meade”) is a permanent U.S. Army installation located about midway between Baltimore, Maryland, and Washington, DC, encompassing 5,101.9 acres in Anne Arundel County, Maryland (Figure 1-1). Fort Meade supports over 80 tenant organizations from all military services, and several federal agencies. The major tenants include the National Security Agency (NSA), the Defense Information School (DINFOS), the 704th Military Intelligence Brigade, 902nd Military Intelligence Group, the U.S.EPA Science Center, Asymmetric Warfare Group, and 1st Army Division East.

On September 8, 2005, the Defense Base Closure and Realignment (BRAC) Commission recommended a set of domestic realignment and closure actions. As part of their actions, the BRAC Commission recommended that three major activities relocate to Fort Meade: the Defense Information Systems Agency (DISA), the Department of Defense (DoD) Media Activities, and the Adjudication and Office of Hearing and Appeals Offices. The recommendation realigns and relocates DISA activities to Fort Meade, and it establishes joint command, control, communications, computers, intelligence, surveillance and reconnaissance, development and acquisition capability at the Army post. DISA activities at leased and government installations in Louisiana, Florida, and Virginia are to be relocated to Fort Meade. The recommendation also realigns and relocates DoD Media Activities into a new agency for Media Publications at Fort Meade. Finally, the recommendation realigns and relocates Adjudication and Office of Hearing and Appeals Offices activities in the Washington DC Navy Yard and Pentagon and in leased facilities in Arizona, California, Massachusetts, Maryland, Ohio, and Virginia to Fort Meade. All BRAC realignment activities are to relocate to Fort Meade by 2011. It is anticipated that approximately 5,700 personnel will be relocated to Ft. Meade.

An Environmental Impact Statement (EIS) for Implementation of Base Realignment and Closure 2005 and Enhanced Use Lease Actions at Fort George G. Meade, Maryland was finalized in 2007.

1.2 PURPOSE AND NEED FOR THE PROPOSED ACTION

The purpose of this action is to provide improvements to the traffic flow in and around Fort Meade to alleviate existing and expected increased traffic congestion associated with the additional vehicles expected at the installation as a result of the BRAC. While the BRAC Environmental Impact Statement prepared in August 2007 (USACE, 2007) addressed many of the traffic issues and identified the need for on post work to reduce traffic flow issues, the specific roadwork discussed in this EA was not dealt with. The improvements are located along the eastern edge of the installation at: (A) Rockenbach Road and Clark Road, (B) Mapes Road and MD 175, (C) Reece Road and Ernie Pyle Street, (D) Mapes Road and Cooper Avenue, (E) Rockenbach Road and Cooper Avenue, (F) Mapes Road and Ernie Pyle Street, and (G) North section of Mapes Road. The proposed actions will enhance the security of access control points (ACPs) and provide an adequate infrastructure to support the traffic on the installation.



Figure 1-1: Fort Meade Vicinity Map

This project is necessary to provide secured access to Fort Meade and to improve traffic flow in and around the installation as more personnel are transferred to the base under BRAC. This project will provide infrastructure to support Defense Information Systems Agency, Defense Media Agency, Adjudication Office, agencies moving out of leased space, agencies relocating from other government installations and Fort George G. Meade base support functions.

1.3 SCOPE OF THE ENVIRONMENTAL ASSESSMENT

This EA was prepared in accordance with the National Environmental Policy Act (NEPA), the Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500 – 1508), Army Regulation 200-1 (*Environmental Protection and Enhancement*), Army Regulation (AR) 200-2, *Environmental Analysis of Army Actions* and 32 CFR Part 651 (*Environmental Analysis of Army*

Actions) to assess the environmental consequences of seven road improvement projects at Fort Meade.

This EA identifies, documents, and evaluates environmental effects of the proposed project at Fort Meade, Maryland. Environmental effects include those related to construction and operation of the proposed action. The proposed action is described in Section 2.0, and alternatives, including the no action alternative, are described in Section 3.0. Conditions existing as of 2008, considered to be the “baseline” conditions, are described in Section 4.0, Affected Environment. The expected effects of the proposed action are described in Section 5.0, Environmental Consequences. Section 5.0 also addresses the potential for cumulative effects, and mitigation measures are identified where appropriate. Findings and conclusions are presented in Section 6.0.

The EA focuses on impacts likely to occur within the areas of potential effect. The document analyzes direct effects (those resulting from the alternatives and occurring at the same time and place) and indirect effects (those distant or occurring at a future date). The potential for cumulative impacts as defined by 40 CFR 1508.7 is also addressed. In addressing environmental considerations, Fort Meade is guided by relevant statutes (and their implementing state and federal regulations) and Executive Orders that establish standards and provide guidance on environmental and natural resources management and planning.

1.4 PUBLIC INVOLVEMENT

Coordination with the US Fish and Wildlife Service (USFWS) and the Maryland Department of Natural Resources was initiated for the Proposed Action in September 2009. In addition, Public Notice was released in September 2009 to appropriate local, state, and federal agencies. Copies of coordination letters, the Public Notice and mailing list, as well as public/agency responses are located in Appendix C – Agency Coordination.

Public participation opportunities with respect to this EA and decision making on the proposed action are guided by 32 CFR Part 651. Upon completion, the EA will be made available to the public for 30 days, along with a draft Finding of No Significant Impact (FNSI). Availability will be noticed in the *Federal Register*, Fort Meade’s EMS Webpage, and the following local newspapers: Fort Meade’s OUTLOOK, *Baltimore Sun*, *Annapolis Capital*, and *Laurel Leader*. At the end of the 30-day public review period, the Army will consider any comments submitted by individuals, agencies, or organizations on the proposed action, the EA, or draft FNSI. As appropriate, the Army may then execute the FNSI and proceed with implementation of the proposed action. If it is determined prior to issuance of a final FNSI that implementation of the proposed action would result in significant impacts, the Army will publish in the *Federal Register* a notice of intent to prepare an environmental impact statement, commit to mitigation actions sufficient to reduce impacts below significance levels, or not take the action.

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2.0 PROPOSED ACTION

There are seven proposed actions involved in the road improvement project. Actions A, located at Rockenbach Road and Clark Road; and B, located at Mapes Road and MD175, both involve the construction of access control points for the installation. Actions C, located at Reece Road and Ernie Pyle Street; D, located at Mapes Road and Cooper Avenue; E, located at Rockenbach Road and Cooper Avenue; F, located at Mapes Road and Ernie Pyle Street; and G, located at the North section of Mapes Road, all involve widening roads and changing lane directions and traffic signals. Locations of these sites are shown in Figure A-1 and details of the proposed actions can found in Appendix B. The area of disturbance for each project is summarized in Table 2-1.

Action C is scheduled to be designed in early 2010. Action E has been inserted into the FY2010 Military Construction program by Congress, but design has not yet started. No design work has commenced on the remaining actions.

Action A- Rockenbach ACP

Action A is proposed to reconstruct access control points (ACP) at Rockenbach Road. The existing 9,594 square foot (SF) masonry guardhouse would be demolished and a new ACP would be constructed. The new control point would consist of, but not be limited to, vehicular gates; fencing; bermed or revetted access roads; insurmountable curbing, paving and widening of existing roadways; popup anti-vehicular mechanisms; hardened, protective guard shelter with sanitary facilities; heat; air conditioning; information systems; area and security lighting; emergency power; defensive fighting positions; area duress alarm systems traffic control features; signage; and road widening and improvement. Supporting facilities would include electric service, water, sewer, paving, walks, curbs, and gutters, parking (5 spaces), storm drainage, site improvements, and landscaping.

Action B- Mapes Road/MD Route 175 ACP

The work proposed under Action B is the reconstruction of the access control point (ACP) at Mapes Road by MD Route 175. The existing 8,340 SF masonry guardhouse would be demolished and a new ACP would be constructed. The new control points would consist of, but not be limited to, vehicular gates; fencing; bermed or revetted access roads; insurmountable curbing, paving and widening of existing roadways; popup anti-vehicular mechanisms; hardened, protective guard shelter with sanitary facilities; heat; air conditioning; information systems; area and security lighting; emergency power; defensive fighting positions; area duress alarm systems traffic control features; signage; and road widening and improvement. Supporting facilities would include electric service, water, sewer, paving, walks, curbs, and gutters, parking (5 spaces), storm drainage, site improvements, and landscaping.

Action C- Reece Road at Ernie Pyle Street

Action C includes plans to relocate the intersection of Reece Road and Ernie Pyle Street westward along Reece Road so that it is further inside the installation. This would allow the appropriate Automated Vehicle Barrier (AVB) response zone distance and would minimize potential intersection queuing to checkpoint. This action also includes plans to provide traffic

signals at the intersection. The project at this site would also provide left-turn lanes on Reece Road and both Ernie Pyle Street approaches.

Action D – Mapes Road and Cooper Avenue

Action D includes interconnecting the traffic signal at this intersection with that at the Mapes Road and MacArthur Road intersection. It also proposes providing dual left-turn bays eastbound on Mapes Road and widening the north leg of Cooper Avenue to provide two receiving lanes for eastbound dual lefts.

Action E – Rockenbach Road and Cooper Avenue

The Proposed Action at this site includes providing separate left-turn lanes on both Rockenbach Road approaches. A small stream is located at this intersection.

Action F-Mapes Road and Ernie Pyle Street

The proposed work at this site includes: installing of an actuated controller, providing one left turn bay on northbound Ernie Pyle Street; and installing right-turn lane on south bound Ernie Pyle Street.

Action G- Mapes Road Corridor

Action G proposes widening the North section (South of Ernie Pyle to and including Cooper Avenue) of Mapes Road from two to four lanes.

Table 2-1: Proposed Road Improvement Projects

Project ID	Description	Total Project Area (acres)	Existing Pavement (acres)	Disturbed area of woods (acres)	Disturbed area of grass (acres)	Environmental Notes
A	Controlled Access Point at Rockenbach Rd.	3.1	2.7	0.25	0.13	Near stream In 100-yr. floodplain
B	Mapes Road /MD 175 ACP	5.2	3.0	0	2.2	Near stream
C	Ernie Pyle Relocation	6.0	3.7	1.2	1.2	Near stream Near 100-yr floodplain
D	Mapes Road and Cooper Avenue	0.5	0.25	0	0.25	
E	Rockenbach Road and Cooper Avenue	0.5	0.25	0	0.25	Near stream In 100-yr. floodplain
F	Traffic lights/signs	0.20	0.1	0	0.1	
G	Provide 4 lane section along portion of Mapes Road	0.30	0.05	0	0.25	Near stream
	TOTAL	15.8	10.0	1.45	4.35	

3.0 ALTERNATIVES CONSIDERED

3.1 INTRODUCTION

This chapter describes the alternatives, and summarizes the environmental impacts. In accordance with CEQ guidance in 40 CFR 1502.14, the heart of this chapter is to sharply define the differences between the alternatives.

3.2 NO-ACTION ALTERNATIVE

NEPA documents refer to the continuation of the present course of action without the implementation of or in the absence of, the changes to the current action, as the “No Action Alternative.” Inclusion of the No-Action Alternative is the baseline against which Federal actions are evaluated, and is prescribed by the CEQ regulations and Army Regulation 200-2.

Under the No-Action Alternative, Fort Meade would forego the proposed road and access control point improvements, thereby maintaining the current inadequate infrastructure at Fort Meade. The potential for traffic and security problems would remain.

Implementing the No-Action Alternative would have no environmental impacts at Fort Meade except for adverse impacts to traffic, roadways and the transportation system.

3.3 OTHER ALTERNATIVES CONSIDERED

No other alternatives have been identified for evaluation in the EA. In developing its plan for the proposed project, the Installation determined that the proposed project was the only feasible alternative because there were no other methods to resolve traffic issues.

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4.0 AFFECTED ENVIRONMENT

This section describes the affected environment or existing conditions of the natural, infrastructure, and community resources within the project area. The project area is defined as Fort Meade and the immediately surrounding jurisdictions. These descriptions serve as the baseline against which the potential effects of the Proposed Action and the No-Action Alternative are evaluated.

4.1 LAND USE

4.1.1 Regional Land Use

Fort Meade encompasses 5,101.9 acres and is a permanent U.S. Army installation located in the northwest corner of Anne Arundel County, Maryland. The installation is located 17 miles southwest of downtown Baltimore, Maryland, and 24 miles northeast of Washington, DC. The city of Annapolis, which is both the Anne Arundel county seat and the Maryland state capital, is 14 miles southeast of the installation. The southeastern part of Howard County extends within 2 miles of Fort Meade. Figure A-1 in Appendix A depicts the regional location of Fort Meade.

Fort Meade is bounded by the Baltimore-Washington Parkway (MD 295) to the northwest, Annapolis Road (MD 175) to the east, Patuxent Freeway (MD 32) to the south and west, and the MARC Penn Line and AMTRAK Line to the southeast. Other significant nearby transportation arteries include US Route 1 and Interstate 95, which run parallel to and just to the north of the Baltimore-Washington Parkway. Interstate 97, which connects Baltimore and Annapolis is located several miles east of Fort Meade and can be reached by taking MD 175 or MD 32 east.

The installation is predominately surrounded to the north, west, and east by residential areas, commercial centers, a mix of light industrial uses, and open space and undeveloped areas. Directly to the south of Fort Meade are the Tipton Airport and 12,750-acre Patuxent Research Refuge, part of the U.S. Fish and Wildlife Service's National Wildlife Refuge System. To the southwest of Fort Meade is the 800 acre parcel that houses the District of Columbia (DC) Oak Hill juvenile detention facility.

4.1.2 Installation Land

Land use categories at Fort Meade include operations, tenant agency, housing, community, school (Anne Arundel County), and open space. Table 4-1 provides the total number of acres by land use category. The land use categories are summary and further described as follows:

- **Operations** – Land use that facilitates installation and tenant operations including administrative, training and education, and industrial operations. Includes those areas used by the Environmental Protection Agency (EPA) and Architect of the Capitol.
- **Tenant Agency** – Not available.
- **Housing** – Land use that includes family housing, unaccompanied troop housing, and troop dining, and personnel support.

- **Community** – Land use that accommodates morale, welfare, and recreation and related functions such as retail, recreation, fitness, and school age services.
- **School** – Land use that includes Anne Arundel County elementary, middle, and high schools.
- **Open Space** – Land use that includes undeveloped areas, forested areas, and golf courses. Roads, paved areas (including parking), and small structures may be included.

Table 4-1: Land Use at Fort Meade

Land Use	Acres	Percent
Operations	458	9%
Tenant Agency	429	8%
Housing	1,119	22%
Community	137	3%
School (County)	156	3%
Open Space	2,768	55%
Total	5,067	100%

* Information depicted in this table is for Land Use at Fort Meade within Fenceline boundaries

4.2 SOILS

At Fort Meade there are 39 distinct soil mapping units (USACE, 2007). Most of the soil types are part of the Evesboro complex. Evesboro soil is a very deep, well-drained to excessively-drained, sandy loam soil on uplands. These soils are easily worked over a wide range of moisture content. These soils are subject to erosion, particularly soil blowing, when their surface becomes dry and is not covered by protective vegetation. These soils make good building sites, but may be unstable on steep cuts or slopes where the sand is not confined (USDA, 1973). Modified soils within Fort Meade include loamy and clayey land, urban land, cut and fill areas, and gravel and borrow pit operations. Loamy and clayey land consists of mantles of various kinds of soil that overlie clay deposits, but which are unrelated to the underlying subsoil. Urban land comprises those areas in the vicinity of pavement and buildings.

4.3 PRIME AND UNIQUE FARMLAND

Of the soils identified at Fort Meade, only the Woodstown Sandy Loam, which covers approximately 1.8 percent of the installation is considered either prime farmland soil, or farmland soil of statewide importance, as determined by the NRCS (NRCS, 2005). Prime farmland, as defined by the U.S. Department of Agriculture (USDA), is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses. This land could be cultivated land, pastureland, forestland, or other land, but it is not urban or built-up land or water areas. While there are soils within the Installation classified as Prime Farmland soils, acquisition or use of farmland by a Federal agency for national defense purposes is exempted by section 1547(b) of the Farmland Protection Policy Act, and as a result, it is not regarded as prime farmland.

4.4 TOPOGRAPHY AND GEOLOGY

Fort Meade has approximately 210 feet of topographic relief. The highest point, 310 feet mean sea level (msl), occurs at the First Army Radio Station Tower, located in the northern most central portion of the installation. The lowest elevation, less than 100 feet, occurs in the southwestern corner of Fort Meade, along the Little Patuxent River. Most of the installation slopes gradually to the south and southwest. Slopes exceeding ten percent are rare and occur primarily in pockets in the north-central and central parts of the installation and along stream corridors. These steep slopes usually occur in natural wooded areas, and are ideally suited as vegetated buffer zones for more developed areas.

Fort Meade is in the Atlantic Coastal Plain Physiographic Province. It is underlain by a wedge-shaped mass of unconsolidated sediments that thickens to the southeast. The unconsolidated sediments overlie crystalline rock of Precambrian to early Cambrian age. The crystalline bedrock underlying Fort Meade consists of gabbro, diorite, and other igneous and metamorphic rocks. The surface of these rocks dips to the southeast and acts as a lower confining layer for the Potomac Group.

4.5 AIR QUALITY

The EPA defines ambient air in 40 CFR Part 50 as “that portion of the atmosphere, external to buildings, to which the general public has access.” In compliance with the 1970 Clean Air Act (CAA) and the 1977 and 1990 Clean Air Act Amendments (CAAA), the EPA has promulgated ambient air quality standards and regulations. The National Ambient Air Quality Standards (NAAQS) were enacted for the protection of the public health and welfare, allowing for an adequate margin of safety. To date, the EPA has issued NAAQS for six criteria pollutants: carbon monoxide (CO), sulfur dioxide (SO₂), particles with a diameter less than or equal to a nominal 10 micrometers (PM₁₀), particles with a diameter less than or equal to a nominal 2.5 micrometers (PM_{2.5}), ozone (O₃), nitrogen dioxide (NO₂), and lead (Pb). Areas that do not meet NAAQS are called non-attainment areas.

To regulate the emission levels resulting from a project, federal actions located in non-attainment areas are required to demonstrate compliance with the general conformity guidelines established in 40 CFR Part 93 *Determining Conformity of Federal Actions to State or Federal Implementation Plans* (the Rule). The Proposed Actions are located within a moderate non-attainment area for ozone and non-attainment for PM_{2.5}; therefore, a General Conformity Rule applicability analysis would be warranted.

The Fort Meade BRAC EIS provides the analysis performed for the installation (USACE, 2007). Environmental analysis under the General Conformity Rule of the CAA shows that emissions increases for NO_x under the Proposed Action would be less than *de minimis* levels, and that the work is not subject to the General Conformity Rule requirements.

4.6 WATER RESOURCES

4.6.1 Surface Water

Within the Fort Meade boundaries there are approximately 38,000 linear feet (7.2 miles) of perennial stream channel as well as other intermittent channels. The majority of the installation is drained by Midway Branch and its primary tributary, Franklin Branch. Midway Branch is a tributary to the Little Patuxent River. The installation also includes smaller sized drainage areas associated with tributaries to the Little Patuxent River and Severn River. The Chesapeake Bay is approximately 12 miles to the east. Actions A and E are located near Midway Branch and Action C is located near Franklin Branch.

4.6.2 Floodplains

Executive Order 11988, Floodplain Management, instructs federal agencies to consider the risks, danger, and potential impacts of locating projects within floodplains. Floodplains are typically described as areas likely to be inundated by a particular flood. For example, a flood that has a one percent chance of occurring in any one year is the 100-year flood. The report titled “Floodplain Analysis And Mapping U.S. Army Garrison Fort George G. Meade, Anne Arundel County, Maryland”, prepared by the US Army Corps of Engineers, Baltimore District (USACE, 2008a), provides a detailed floodplain analysis indicating reaches along Franklin Branch and Midway Branch that are prone to flooding. This report is to be used by FEMA as the official floodplain mapping for the area. As such, floodplain regulations regarding construction, fill, and storage of materials should be adhered to. Areas that are near the Proposed Action sites are shown in the maps in Appendix E.

4.6.3 Groundwater

The primary sources of potable water at Fort Meade are five groundwater wells located on the south side of the installation. Additional information regarding Fort Meade’s potable water supply is located in the Utilities section of this report. Fort Meade complies with standards in the Safe Drinking Water Act (SDWA) and Code of Maryland Regulations (COMAR). Drinking water is tested according to permit requirements.

4.6.4 Coastal Zone

All of Fort Meade is located within the Maryland Coastal Zone Management (CZM) Program. Established by an Executive Order and approved in 1978, CZM Program is a network of state laws and policies designated to protect coastal and marine resources. This includes the Chesapeake Bay, into which water from streams and their tributaries on Fort Meade flow. The Maryland Department of the Environment (MDE) regulates activities that are proposed within the CZM Program through federal consistency requirements. Under these requirements, applicants for federal and state licenses or permits (including Section 404 permits) to conduct an activity in the Coastal Management Zone must certify that their proposed activity will be conducted in a manner consistent with the State’s CZM Program. If a state permit is not required for a project, MDE has the authority to “concur” or “object” to the federal consistency determination. The state’s consistency decision is required prior to the federal consistency

determination being issued. If the state objects, the federal agency may only proceed if federal law prohibits the agency from being fully consistent. Action A, E, and C are located near streams, and Action E may be located near a wetland.

4.7 BIOLOGICAL RESOURCES

4.7.1 Wetlands

Wetlands are jointly defined by the EPA and the USACE as “those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include “swamp marshes, bogs and similar areas” (40 CFR 230.3(t) and 33 CFR 328.3(b)). The USACE regulates the discharge of dredged or fill material in waters of the United States, including jurisdictional wetlands pursuant to Section 404 of the Clean Water Act.

Section 404 of the Clean Water Act requires Federal regulation of most activities that impact wetlands. The Section 404 requirements support the goal of no net loss of wetlands. Wetlands protection and management applies to all Army facilities’ engineering activities. Fort Meade lies within the Chesapeake Bay watershed, a region supporting some of the most important wetland areas in the United States.

For activities impacting wetlands, the Coastal Zone Consistency determination is issued as part of the State’s wetland authorization. Anyone wishing to engage in an activity that would result in discharge of material into a protected water body must obtain a Section 404 permit. Additionally, under Section 401 of the Clean Water Act, an applicant for a permit to discharge dredged or fill material into wetlands is also required to obtain a certification from the State where the activity is located that the proposed discharge will not result in the violation of the states water quality standards.

Wetlands have not been completely delineated at Fort Meade, and no delineations have been made within the proposed project areas. Based upon a study by the Corps of Engineers in 2008, there may be wetlands located in or near project E (USACE, 2008b).

4.7.2 Vegetation

Extensive development at Fort Meade has resulted in few areas retaining their native vegetation. Most areas with existing native vegetation are associated with stream corridors. Vegetative cover at Fort Meade consists of forest land, open land/meadow, and developed areas with mowed lawn. Fort Meade has inventoried much of the forested lands on post. Currently about 1,795 acres of Fort Meade’s 5,101.9 acres are forest lands (USACE, 2007).

Forest cover within Fort Meade consists mainly of a mixture of softwood Pitch Pine (*Pinus rigida*) and Virginia Pine (*Pinus virginiana*) and hardwoods consisting of Scarlet Oak (*Quercus coccinea*), White Oak (*Quercus alba*), Southern Red Oak (*Quercus falcata*), Chestnut Oak

(*Quercus montana*), Willow Oak (*Quercus phellos*), Black Oak (*Quercus velutina*), and other oaks (*Quercus* spp.), Black Gum/Tupelo (*Nyssa sylvatica*), Tulip Poplar (*Liriodendron tulipifera*), Pignut Hickory (*Carya glabra*), American Beech (*Fagus grandifolia*), Black Walnut (*Juglans nigra*), American Linden/Basswood (*Tilia americana*), American Holly (*Ilex opaca*), American Hornbeam (*Ostrya virginiana*), Redbud (*Cercis canadensis*), Flowering Dogwood (*Cornus florida*), Persimmon (*Diospyros virginiana*), Sassafras (*Sassafras albidum*), American sycamore (*Platanus occidentalis*), willow (*Salix* sp.), Sweetgum (*Liquidambar styraciflua*), birch (*Betula* sp.), and maple (*Acer* sp.).

Developed areas with mowed lawn areas of the installation have been landscaped using a combination of turfgrasses and native and exotic trees and shrubs, including elm (*Ulmus* sp.), maple, cherry (*Prunus* sp.), black willow (*Salix nigra*), flowering dogwood, and assorted holly cultivars (*Ilex* sp.) (USACE, 2007).

Fort Meade complies with the Maryland Forest Conservation Act (FCA) to the maximum extent practicable and manages its Forest Conservation Program (FCP) in agreement with the Maryland Department of Natural Resources (MDNR). The installation supports Department of Army, Federal, State and local laws, regulations, policies, and initiatives to the fullest extent possible. Forested areas on the installation are designated as Forest Conservation Areas. These areas are those where Forest Conservation Mitigation Areas can be sited to mitigate the effects of projects, thus complying with the FCA requirement of mitigation at 20% of the project area. Forest Conservation areas are located near Actions A, E, F, and G.

4.7.3 Wildlife Resources

Wildlife species found on Fort Meade are typical of those found in urban-suburban areas. White-tail deer (*Odocoileus virginianus*) and groundhogs (*Marmota monax*) occur on the installation, particularly along the Little Patuxent River. Other mammals include, gray squirrel (*Sciurus carolinensis*), raccoon (*Procyon lotor*), opossum (*Didelphis virginiana*), eastern chipmunk (*Tamias striatus*), field mouse and vole (*Microtus* spp.), mole (*Scalopus aquaticus*), and fox (*Vulpes vulpes*). Birds common to the installation are limited to those species that have adapted to an urban-suburban habitat, such as American robin (*Turdus migratorius*), catbird (*Dumetella carolinensis*), mockingbird (*Mimus polyglottos*), Carolina chickadee (*Poecile carolinensis*), Carolina wren (*Thryothorus ludovicianus*), house wren (*Troglodytes aedon*), downy woodpecker (*Picoides pubescens*), common flicker (*Colaptes auratus*), European starling (*Sturnus vulgaris*), house sparrow (*Passer domesticus*), rock dove (*Columba livia*), mourning dove (*Zenaidura macroura*), and song sparrow (*Melospiza melodia*) (USACE, 2007).

4.7.4 Rare, Threatened, or Endangered (RTE) Species

The 1973 Endangered Species Act (ESA) requires Fort Meade to conserve any threatened and endangered species found within its property. Section 7 of the ESA requires federal agencies to consult with the United States Fish and Wildlife Service (USFWS) on any action that may affect endangered or threatened species or candidate species, or that may result in adverse modification of critical habitat. 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 destroy or harm areas designated as 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.

An Integrated Natural Resource Management Plan (INRMP) was prepared for Fort Meade in 2007. As of that time, there were no federally listed rare, threatened, or endangered species found on the Installation. Coordination with the Maryland Natural Heritage Program (MNHP) for the INRMP indicated that Fort Meade does contain a few Maryland species of concern which include the following:

- Glassy darter (*Etheostoma vitreum*) – Maryland Threatened
- Downy bushclover (*Lespedeza stuevei*) – Maryland Watchlist
- Pubescent sedge (*Carex hirtifolia*)-- Maryland Watchlist
- Purple chokeberry (*Aronia prunifolia*) – Maryland Watchlist
- Roughish panicgrass (*Panicum leucothrix*) – Maryland status uncertain

In addition, the INRMP identifies nine plant species of state importance that may occur in or around Fort Meade. These include: shaved sedge, (*Carex tonsa*), Asa Gray's cyperus, (*Cyperus grayi*), Leavenworth's sedge (*Carex leavenworthii*), downy bushclover (*Lespedeza stuevei*), eastern sedge (*Carex atlantica*), dwarf azalea (*Rhododendron atlanticum*), Small's ragwort (*Senecio anonymus*), purple chokeberry (*Aronia prunifolia*), and weak stellate sedge (*Carex seorsa*).

Correspondence from USFWS in September 2009 indicated that except for occasional transient individuals, no federally proposed or listed endangered or threatened species are known to exist within the project impact area (Appendix C). Correspondence from the MDNR in October 2009 indicated that there are no State or Federal records for rare, threatened or endangered species within the boundaries of the project sites as delineated (Appendix C). The agency went on to note that if appropriate habitat is available within the area, certain species could be present without documentation because no completed surveys have been conducted.

4.7.5 Aquatic Habitat

Waterbodies that flow through Fort Meade provide habitat for a number of aquatic organisms (USACE, 2007). A list of species found in the surface waters on the installation is provided below in Table 4-2. Action A, C, and E are located near streams providing aquatic habitat.

Table 4-2: Fish Species Found at Fort Meade, Maryland

Common Name	Scientific Name
Creek chubsucker	<i>Erimyzon oblongu</i>
Tessellated darter	<i>Etheostoma olmstedii</i>
Glassy darter	<i>Etheostoma vitreum</i>
Mummichog	<i>Fundulus heteroclitus</i>
Cutlips minnow	<i>Exoglossum maxillingua</i>
Northern hogsucker	<i>Hypentelium nigricans</i>
Least brook lamprey	<i>Lampetra aepyptera</i>
America brook lamprey	<i>Lampetra appendix</i>
Redbreast sunfish	<i>Lepomis auritus</i>
Pumpkinseed	<i>Lepomis gibbosus</i>
Bluegill	<i>Lepomis macrochirus</i>
Smallmouth bass	<i>Micropterus dolomieu</i>
Largemouth bass	<i>Micropterus salmoides</i>
Blueback herring	<i>Alosa aestivalis</i>
American eel	<i>Anguilla rostrata</i>
White sucker	<i>Catostomus commersoni</i>
Satinfin shiner	<i>Cyprinella analostana</i>
Gizzard shad	<i>Dorosoma cepedianum</i>
Bluespotted sunfish	<i>Enneacanthus gloriosus</i>
Comely shiner	<i>Notropis amoenus</i>
Swallowtail shiner	<i>Notropis procne</i>
Shield darter	<i>Percina peltata</i>
Blacknose dace	<i>Rhinichthys atratulus</i>
Longnose dace	<i>Rhinichthys cataractae</i>
Fallfish	<i>Semotilus corporalis</i>
Eastern mudminnow	<i>Umbra pygmaea</i>

4.8 WILD AND SCENIC RIVERS

The Wild and Scenic Rivers Act (Public Law 90-542, as amended; 16 U.S.C 1271-1287) was enacted by Congress in 1968, to preserve and protect wild and scenic rivers and their nearby environments for the benefit and use of present and future generations. Wild rivers are defined as rivers that are free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and unpolluted. Scenic rivers have the same characteristics but they are accessible by road. There are no wild or scenic rivers on or near Fort Meade (NPS, 2009).

4.9 CULTURAL RESOURCES

Section 106 of the National Historic Preservation Act (NHPA) of 1966 (as amended) requires federal agencies to consider the effects of any undertaking on properties listed in or eligible for listing in the National Register of Historic Places. This process is known as Section 106 review. The NHPA also requires each state and the District of Columbia to designate a State Historic

Preservation Officer (SHPO) to coordinate local participation in the implementation of the NHPA and to serve as a key participant in the analysis of and protection of historic resources.

Cultural resources include archaeological or cultural sites, standing structures, and other historic properties considered to be eligible for or listed on the National Register of Historic Places (NRHP). Section 106 of the National Historic Preservation Act (NHPA) mandates that Federal agencies consider the impact of their undertakings on historic properties within the project's Area of Potential Effect (APE). If adverse effects on historic, archaeological, or cultural properties are identified, then agencies must attempt to avoid, minimize, or mitigate these impacts to resources considered important in our nation's history.

The most recent Integrated Cultural Resources Management Plan (ICRMP) for Fort Meade was prepared in 2006 by the Baltimore District of the U. S. Army Corps of Engineers (USACE, 2006). All of the known resources at Fort Meade that are fifty years old, or older, have been evaluated for National Register eligibility. Fort Meade has one archeological site and 17 architectural resources that are eligible for listing in the NRHP. No sites are located in or near the proposed project areas.

4.10 HAZARDOUS, TOXIC, AND RADIOACTIVE SUBSTANCES

4.10.1 Hazardous Materials, Hazardous Substances, and Toxic Chemicals

Hazardous materials are used at Fort Meade. This includes small quantities of cleaners and printing supplies to larger quantities of fuels, oils, and chemicals. The hazardous waste generated is identified and classified, and handled in accordance all applicable Federal and State hazardous waste regulations. Pesticides are stored and used at the golf course.

4.10.2 Site Contamination

Past investigations at Fort Meade have identified soil and groundwater contamination (USACE, 2007). Contaminants include pesticides, metals, volatile organic compounds (VOCs) and polychlorinated biphenyls (PCBs). Actions C, D, and E are located in or near sites that have been identified as contaminated.

4.11 TRAFFIC AND ROADWAYS

The Fort Meade BRAC EIS (USACE, 2007) reviewed the impacts of the additional personnel on the transportation in and around Fort Meade. Extensive data collection and in-depth analyses were conducted in the area and determined that Fort Meade's BRAC-related growth is anticipated to have some impact on traffic beyond the immediate confines of the study area and direct region of influence. A summary is provided in the paragraphs below.

Fort Meade is located in the western part of Anne Arundel County and is served by the surrounding roadway network:

- Baltimore-Washington Parkway (MD Route 295), located west of Fort Meade, provides north-south access between Baltimore and Washington, D.C. No trucks are permitted on the parkway south of MD Route 175.
- Interstate 95, located west of Fort Meade, provides north-south access to the installation for all vehicular traffic.
- MD Route 175, located along the eastern boundary of Fort Meade, provides access from Interstate 95 and MD Route 295, west of Fort Meade, and from MD Route 3, east of Fort Meade.
- MD Route 32 (Patuxent Freeway) is located along the southern boundary of Fort Meade and provides access to Fort Meade and Odenton from Interstate 95 and the Baltimore-Washington Parkway from the west and Interstate 97 from the east of Fort Meade.

Direct access to Fort Meade is via several entrances from MD Route 175, MD Route 32, and MD Route 295. From the east, Fort Meade can be accessed from MD Route 175 at Rockenbach Road, Reece Road, Mapes Road, and Llewellyn Avenue. From the south, Fort Meade can be accessed from Pepper Road after it crosses MD Route 32, from the Mapes Road intersection with MD Route 32, and from two locations near the NSA facility in the southwest corner of the base. NSA can be accessed directly from MD Route 295. Except for the NSA entrances, the existing installation entrances are not manned and are open 24 hours.

Most of the internal roadways are two-lane roads, one lane in each direction, with signals or stop signs (two-way, three-way or four-way stops) at most intersections. The main on post roadways include Rockenbach Road, Mapes Road, Ernie Pyle Street, MacArthur Road, Cooper Avenue and Reece Road, among others.

4.11.1 Existing Traffic and Roadway Volumes

At roadways with intersections, such as MD 175, roadway capacity and traveler movements are greatly affected by intersection performance and turning movement volumes, as well as by the capacity of the roadway for through traffic. Traffic and turning movement counts from 2004 were available for a few intersections in the study area; new counts were commissioned and performed for other intersections along MD 175 and at major intersections on the installation itself. An analysis performed for the Fort Meade BRAC EIS included 24 hour volume and vehicle classification counts at four locations (two on MD 32 and two on MD 175), and turning movement counts at thirteen locations within the installation, six on the perimeter, and seven external locations movement counts at thirteen locations within the installation, six on the perimeter, and seven external locations (USACE, 2007).

Traffic conditions are typically evaluated using capacity and Level of Service (LOS) as a method of evaluation. Level of Service (LOS) uses qualitative measures that characterize operational conditions within a traffic stream and their perception by motorists and passengers. The descriptions of individual “levels of service” characterize these conditions in terms of such factors as speed and travel time, freedom to maneuver, traffic interruptions, and comfort and convenience. Six levels of service are defined for each type of facility for which analysis procedures are available. They are given letter designations, from A to F, with LOS-A representing the best operating conditions and LOS-F the worst. Each level of service represents

a range of operating conditions. The volume of traffic that can be served under the stop-and-go conditions of LOS-F is generally accepted as being lower than that possible at LOS-E; consequently, LOS-E is the value that corresponds to the maximum flow rate, or capacity, of the facility. For most analysis purposes, LOS-D is usually considered to be the lowest level of service considered acceptable to the facility users.

Table 4-3: Level of Service for Traffic Analysis/Critical Lane Volumes

LOS Rating	Definition	Lane Loading of Vehicles	
		Min #	Max #
LOS-A	Free flowing traffic. Individual vehicles are virtually unaffected by the presence of others in the traffic stream. Freedom to maneuver within the traffic stream is extremely high. The general level of comfort and convenience provided to motorist, passenger, or pedestrian is excellent.	0	1000
LOS-B	Relatively stable flow of traffic, but the presence of others in the stream of traffic begins to be noticeable. Freedom to select desired speeds is relatively unaffected, but there is a slight decline in the freedom to maneuver within the traffic stream from LOS-A. The level of comfort and convenience is somewhat less than at LOS-A, because the presence of others begins to affect individual behavior.	1001	1150
LOS-C	Traffic is in the range of stable flow, but marks the beginning of conditions where individual drivers become significantly affected by others in the traffic stream. Speed and maneuverability are affected by the presence of other vehicles and substantial vigilance is required on the part of drivers. The general level of comfort and convenience declines noticeably at this level.	1151	1300
LOS-D	Represents high density traffic, but stable flow. Speed and freedom to maneuver are severely restricted, and the driver or pedestrian experiences a generally poor level of comfort and convenience. Small increases in traffic flow will often cause operational problems at this level.	1301	1450
LOS-E	Represents operating conditions at or near the capacity level. All speeds are reduced to a low, but relatively uniform, rate. Freedom to maneuver within the traffic stream is extremely difficult, it is frequently accomplished by forcing other vehicles or pedestrians to “give way” to accommodate such maneuvers. Comfort and convenience levels are extremely poor and driver or pedestrian frustration is generally high. Operations at this level are usually unstable, because small increases in flow or minor perturbations within the traffic stream will cause stopping and delays.	1451	1600
LOS-F	This condition is forced flow or stop-and-go traffic that creates a “breakdown” situation. It exists wherever the rate of traffic flow exceeds the capacity of a section of roadway to accommodate the flow past a given point. Queues form behind such locations. Operations within the queue are characterized by stop-and-go waves, and they are extremely unstable. Vehicles may progress at reasonable speeds for several hundred feet or more, then be required to stop in a cyclic fashion. It should be noted, however, that in many cases operating conditions of vehicles or pedestrians discharged from the queue may be quite good. Nevertheless, because it is the point at which arrival flow exceeds discharge flow that queues forms, LOS-F is an appropriate designation for such points.	1601	1602+

(Source: USACE, 2007)

The study determined that the multi-lane section of MD 175 from Reece Road to east of Mapes Road is operating at good LOS-A or LOS-B conditions during both the weekday morning and evening peak hours. The study also found that traffic at proposed project sites A, B, and C currently operate at LOS-C or lower. The study determined that the influx of vehicular traffic

from the BRAC would impact the traffic flow around the base and that projects to improve traffic flow would be recommended. A detailed description of the findings can be found in the Fort Meade BRAC EIS (USACE, 2007).

4.12 INFRASTRUCTURE AND UTILITIES

4.12.1 Potable Water

The primary sources of potable water at Fort Meade are five groundwater wells located on the south side of the installation. There is a sixth well that is inactive, however, a replacement well is under construction. Individual wells range in capacity from 720 gallons per minute (gpm) to 1,000 gpm (Fort Meade, 2006b). Water is pumped from the wells to Fort Meade's water treatment plant (WTP), which is located in the southwest quadrant of the cantonment area near the intersection of Mapes and O'Brien Roads. The present day design capacity is 7.2 million gallons per day (mgd). Treated water is pumped from the clearwells into the distribution system through two High Lift Pump Stations (HLPS No. 1 and No.2) that have a combined pumping capacity of approximately 17.1 mgd.

4.12.2 Domestic and Industrial Wastewater

Sanitary sewer collection and pumping system at Fort Meade is comprised of 58 miles of piping on and around the installation, 55 miles of gravity sewers, three miles of force mains, and nine pumping stations. The pipe diameter of the gravity sewers, installed between 1941 and 1987, range from four inches to 30 inches. The force mains have pipe diameters that range from three inches to 24 inches. Wastewater from the gravity sewers and force mains flow to two major pump stations, the Leonard Wood and the East Side pump stations. Each station has three (3) pumps, each rated at approximately 1500 GPM, at average operating head, thereby providing total station capacity of 4500 GPM (9000 GPM between the two stations.)

4.12.3 Electric and Gas

Electrical power is supplied to the installation by Baltimore Gas and Electric (BG&E) through four distribution substations. The primary source for Fort Meade (non-NSA) is a 110 kV redundant feeder pair from the BG&E Waugh Chapel Power Station along the south and east sides of the installation (along MD Route 32) on steel towers and terminate at substation #3. A second pair of 110 kV feeders originates in the BG&E High Ridge Power Station west of the installation and back feeds the substation utilizing the Waugh Chapel distribution line. Several secondary sources of electrical power consisting of 18 engine-driven emergency standby generators at 15 locations exist on Fort Meade.

Natural gas is supplied by BG&E to the Defense Energy Support Center, a DoD agency, which in turn provides it to Fort Meade. Natural gas is supplied via high pressure (100 psig) mains owned by BG&E, which form a loop on the installation. The extensive natural gas distribution system includes BG&E and government owned systems loop the entire installation. Most buildings are within a few hundred feet of an active supply line (Fort Meade, 2005a).

4.13 SOCIOECONOMIC

The socioeconomic region of influence (ROI) for Fort Meade consists of Anne Arundel County, Howard County, Montgomery County, and Prince George’s County in Maryland. These counties comprise the area in which the predominant socioeconomic effects of the Proposed Action would take place. This is based on residential distribution of the installation’s military, civilian, and contracting personnel, and the location of businesses that provide goods and services to the installation and its employees.

Fort Meade employs over 30,000 personnel. The average annual salary for civilian workers at Fort Meade is \$80,425. Salaries for permanent military personnel at Fort Meade averaged \$66,000 in 2007. Relative to size of the ROI, Fort Meade’s overall contribution to the regional economy is modest. Fort Meade provides only 2 percent of the ROI total employment, although the Fort’s activities likely generate a substantial number of additional indirect and induced jobs. Given the large size and stability of Fort Meade’s workforce over time, the installation is well-integrated into the local economy.

4.14 NOISE

Noise is traditionally defined as unwanted sound that interferes with normal activities in a way that reduces the quality of the environment. Magnitudes of sound, whether wanted or unwanted, are usually described by sound pressure. The two primary types of sources of sound that generate noise are: stationary and transient. Sounds produced by these sources can be intermittent or continuous. A stationary source is usually associated with specific land use or site, such as construction activities or the operation of generators. Transient sound sources, such as vehicles and aircraft, move through the area. The human auditory system is sensitive to fluctuations in air pressure above and below the barometric static pressure. The loudness of sound as heard by the human ear is measure on the A-weighted decibel (dBA) scale. Examples can be found in Table 4-1 below.

Table 4-4: Common Noise Levels

<u>Source</u>	<u>Decibel Level</u>	<u>Exposure Concern</u>
Soft Whisper	30	Normal safe levels.
Quiet Office	40	
Average Home	50	
Conversational Speech	65	
Highway Traffic	75	May affect hearing in some individuals
Noisy Restaurant	80	
Average Factory	80-90	
Pneumatic Drill	100	
Automobile Horn	120	
Jet Plane	140	Noises at or over 140 dB may cause pain.
Gunshot Blast	140	

Source: EPA Pamphlet, “Noise and Your Hearing,” 1986.

4.15 VISUAL AND AESTHETIC VALUE

Visual resources comprise the natural and artificial features that give a particular environment its aesthetic qualities. Aesthetics may be defined as the visibility and appearance of the physical environment, which may be of concern to the public under certain conditions. These features form the overall impression that a viewer receives of an area, or its landscape character.

Fort Meade has several visual/aesthetic themes. The installation has six visual zones based on the architectural character and land use patterns: Administrative, Unaccompanied Personnel Housing, Residential, Recreational, Community Support, and Industrial Zones. These zones are different from land use categories discussed in a previous section. In addition, there are three overlaying visual themes; the Georgian Revival, community life, and industrial.

4.16 ENVIRONMENTAL JUSTICE

In February, 1994 President Clinton signed Executive Order 12898, entitled “Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations.” This EO directs Federal agencies “to make achieving environmental justice part of its mission by identifying and addressing, as appropriate disproportionately high and adverse human health or environmental effects of programs, policies, and activities on minority populations and low income populations in the United States....” The purpose of this order is to avoid the disproportionate placement of adverse environmental economic, social, or health impacts from Federal actions and policies on minority and low-income populations. In order to prevent the potential for discrimination and disproportionately high and adverse effects on specific populations, a process must identify minority and low-income populations that might be affected by the implementation of a proposed action or alternatives.

As defined by the “Environmental Justice Guidance Under NEPA” (CEQ, 1997), “minority populations” includes persons who identify themselves as Asian or Pacific Islander, Native American or Alaskan Native, black (not of Hispanic origin), or Hispanic. Race refers to Census respondents’ self-identification of racial background. Hispanic origin refers to ethnicity and language, not race, and may include persons whose heritage is Puerto Rican, Cuban, Mexican, Central or South American.

A minority population exists where the percentage of minorities in an affected area either exceeds 50 percent or is meaningfully greater than in the general population. Low-income populations are identified using the Census Bureau’s statistical poverty threshold, which is based on income and family size. The Census Bureau defines a “poverty area” as a census tract with 20 percent or more of its residents below the poverty threshold and an “extreme poverty area” as one with 40 percent or more below the poverty level.

The 2000 Census defines the poverty level as \$8,794 of annual income, or less, for an individual, and \$17,603 of annual income, or less, for a family of four. In 2003, the median household income was \$64,329 for Anne Arundel County residents compared to \$53,659 for Prince George’s County, \$76,546 for Montgomery County and \$79,455 for Howard County.

The average poverty rate for the ROI in 2003 was 6.7 percent- less than the national poverty rate of 12.5 percent, and less than Maryland's poverty rate of 8.8 percent (US Census, 2009).

The ROI's population is very diverse, and there are significant differences in the ethnic make up among the four counties. According to 2005 population estimates, the ROI's population was approximately comprised of the following ethnic groups: 57 percent white, 32 percent black, 9 percent Hispanic and 8 percent Asian (Stats Indiana, 2006b). Anne Arundel County's population is primarily non-minority, while Prince George's County's population is majority minority. Montgomery County is arguably the most diverse county within the ROI.

4.17 CHILDREN'S SAFETY

EO 13045, Protection of Children from Environmental Health and Safety Risk, requires Federal agencies, to the extent permitted by law and mission, to identify and assess environmental health and safety risks that might disproportionately affect children. This EO, dated 21 April 1997, further requires Federal agencies to ensure that their policies, programs, activities, and standards address these disproportionate risks. EO 13045 defines environmental health and safety risks as "risks to health or to safety that are attributable to products or substances that the child is likely to come in contact with or ingest (such as the air we breathe, the food we eat, the water we drink and use for recreation, the soil we live on and the products we use or are exposed to)."

5.0 ENVIRONMENTAL CONSEQUENCES

This section of the EA identifies and evaluates the anticipated environmental consequences/impacts associated with the Proposed Action. The terms impact and effect are used interchangeably in this section. Impacts may be discussed as positive, negative, significant, and insignificant as appropriate to the resource area. Positive impacts occur when an action results in a beneficial change to the resource. A negative impact occurs when an action results in a detrimental change to the resource. Significant impacts occur when an action substantially or permanently changes or affects the resource. An insignificant impact occurs when an action causes impact, but the resource is not permanently or substantially changed. Impacts are also discussed as short- and long-term impacts, and are not associated with rigid time frames but relative time frames. Short-term impacts are typically short in duration and long-term impacts are usually more permanent in nature and occur as the direct result of the action. This section is organized by resource area following the same sequence as in the preceding Section 4.0. However, this section includes discussions on cumulative impacts, irretrievable commitment of resources, and summary of environmental consequences.

5.1 LAND USE

Proposed Action

Implementation of the Proposed Action is not expected to impact land use around Fort Meade. All projects would occur within the Fort Meade boundary.

Within Fort Meade, no significant changes to the current land use zones within Fort Meade are expected from the road improvements proposed. Minor short-term and long-term adverse impacts are expected from the change in up to approximately six acres of open space (grass and woods) to pavement.

No-Action Alternative

Implementation of the No-Action Alternative would not alter the existing land use at the sites being considered under the proposed action.

5.2 SOILS

Proposed Action

The implementation of the Proposed Action is expected to have short-term and long-term minor adverse impact on the soils at Fort Meade. Soil disturbances in the form of excavations, grading, earthmoving, and compaction will result from new construction activities. As a result, soils would be compacted, soil layer structure would be disturbed and modified, and soils would be exposed, increasing the overall potential for erosion in a total of approximately 14 acres. Soil productivity (i.e., the capacity of the soil to produce vegetative biomass) would decline in disturbed areas and be completely eliminated for those areas within the footprint of building structures, access road, and parking facilities. Adverse impacts to soils from the proposed construction activities would be minimized by proper construction management and planning,

and the use of appropriate site-specific Best Management Practices (BMPs) for controlling runoff, erosion, and sedimentation during construction activities. Appropriate erosion and sediment controls will be installed while construction is under way. Areas disturbed outside of the footprints of the new construction would be reseeded, replanted, and/or re-sodded following construction activities, which would decrease the overall erosion potential of the site and improve soil productivity.

Table 5-1: Project Estimated Disturbed Areas

Project ID	Description	Total Project Area (acres)	Existing Pavement (acres)	Permanently disturbed area of woods (acres)	Permanently disturbed area of grass (acres)
A	Controlled Access Point at Rockenbach Rd.	3.1	2.7	0.25	0.13
B	Mapes Road /MD 175 ACP	5.2	3.0	0	2.2
C	Ernie Pyle Relocation	6.0	3.7	1.2	1.2
D	Mapes Road and Cooper Avenue	0.5	0.25	0	0.25
E	Rockenbach Road and Cooper Avenue	0.5	0.25	0	0.25
F	Traffic lights/signs	0.20	0.1	0	0.1
G	Provide 4 lane section along portion of Mapes Road	0.30	0.05	0	0.25
	TOTAL	15.8	2.7	1.45	4.35

It is estimated that the total project area of approximately 16 acres could be temporarily disturbed by the Proposed Actions. Nearly half of this is covered by existing pavement. Approximately six acres of this would be permanently impacted by the construction of additional pavement. Approximately 2.5 acres of open grass and woodland would be regraded and reseeded at the end of construction.

No-Action Alternative

No impacts are expected as a result of implementing the No- Action Alternative. There would be no new construction, and as a result, there would be no impacts to soils.

5.3 PRIME AND UNIQUE FARMLAND

Proposed Action

As stated in Section 4.3, while there is one soil within the Installation classified as Prime Farmland soils, acquisition or use of farmland by a Federal agency for national defense purposes

is not regarded as prime farmland (USDA, 1994). Therefore, the implementation of the Proposed Action would be expected to have no impact on prime or unique farmland.

No-Action Alternative

Implementation of the No-Action Alternative would not alter existing conditions at the depot. Therefore, there would be no impacts.

5.4 TOPOGRAPHY AND GEOLOGY

Proposed Action

Under the Proposed Action, construction activities related to the implementation of the projects are not expected to impact the geology at Fort Meade. Some localized grading would be performed at construction sites. No significant impacts to the general topographic character of the sites would occur. Minor short-term and long-term impacts to topography and drainage could occur due to the grading operations and creation of impervious areas.

No-Action Alternative

The No-Action Alternative would not be expected to involve any site preparation work for new construction or demolition at any location and would, therefore have no impact on topography or geology.

5.5 AIR QUALITY

Proposed Action

The Proposed Action would have minor, short-term effects on the air quality in the region. There would be a temporary increase in vehicle traffic during construction activity at the project locations. There would be a temporary increase in emissions from vehicles and construction equipment. It is anticipated that the emissions associated with the construction and operation of the proposed projects would be below the *de minimis* levels of 100TPY for NO_x and VOCs. Therefore, the Proposed Actions are not subject to the General Conformity Rule requirements.

No-Action Alternative

Implementation of this alternative would not be expected to impact the current air quality conditions in the region.

5.6 WATER RESOURCES

5.6.1 Surface Water

Proposed Action

Minor short-term impacts on surface water would be possible as a result of the implementation of the Proposed Actions. A small stream is located at the intersection of the roads in Action E.

Streams are also located near Actions A, B, C, and G. During construction, sediment could enter the streams and turbidity could impact the benthos.

During the design of each separate project appropriate Soil Erosion and Sediment Control Plans will be developed and necessary permits obtained by Fort Meade. Where possible, the designs would be developed to avoid or minimize impacts to these resources.

No-Action Alternative

Site conditions would not change with the implementation of this alternative. Implementation of the No-Action Alternative would not be expected to have an impact on stormwater runoff or hydrology.

5.6.2 Floodplains

Proposed Action

The Proposed Action could have a short-term minor impact on this resource. Floodplain mapping indicates that Actions A and E lie within the mapped 100-year floodplain for Middle Branch. In addition, the proposed Ernie Pyle Street relocation in Action C lies close to the mapped 100-year floodplain for Franklin Branch.

The designs would be developed to avoid or minimize impacts to this resource. As no fill or construction that could impact the floodplain is allowed, the designs would include analysis to ensure that no impacts to flood storage are caused by the Proposed Actions.

No-Action Alternative

The No-Action Alternative will have no impacts on this resource

5.6.3 Groundwater

Proposed Action

The Proposed Action will have no impacts on this resource

No-Action Alternative

The No-Action Alternative will have no impacts on this resource

5.6.4 Coastal Zone

Proposed Action

No impacts are anticipated. As some of the projects may impact waterways or wetlands at Fort Meade, compliance with Maryland's Coastal Zone Management Program is required. Fort Meade would coordinate with MDE during design and permits would be obtained for any area that would impact wetlands and streams. No construction would begin until compliance requirements are met.

No-Action Alternative

The No-Action Alternative will have no impacts on this resource

5.7 BIOLOGICAL RESOURCES

5.7.1 Wetlands

Proposed Action

Possible short-term and long-term minor impacts could be expected. Wetlands are located near Action E. During design, Fort Meade would perform wetland delineation and obtain jurisdictional determination for any possible wetland sites that would be impacted and would ensure that all Federal and state regulations as well as Fort Meade's NPDES permit stipulations are followed during construction. During the design, appropriate Soil Erosion and Sediment Control Plans will be developed and necessary permits would be obtained by Fort Meade. Where possible, the designs would be developed to avoid or minimize impacts to this resource.

No-Action Alternative

This alternative would have no impact on jurisdictional wetlands because existing site conditions would not change.

5.7.2 Vegetation

Proposed Action

Minor short-term and long-term adverse impacts would be anticipated as a result of the future development proposed construction. Removal of grasses, landscaping, brush, and trees could be expected. Construction would disturb the plant ecology, particularly grasses and herbaceous areas, in the immediate vicinity of project sites. Temporary impacts to approximately 2.5 acres of vegetation, such as disturbance to plant ecology, would not be significant and could be mitigated by adherence to BMPs. Long-term impacts to approximately six acres of grass and woodland for the construction of paved areas are considered to minor.

No-Action Alternative

The No-Action Alternative would not include and construction or demolition activities and would not be expected to have any impact on vegetation.

5.7.3 Wildlife Resources

Proposed Action

Implementation of the Proposed Action has the potential to displace wildlife. Construction could disturb wildlife in the immediate area of project locations. Some species, particularly birds, would be temporarily discouraged from the area through destruction of habitat, noise, and/or dust. Wildlife would scatter to adjacent wooded areas and open fields and gradually return once construction is complete. The impact on wildlife is expected to be temporary and short term for each project location.

No-Action Alternative

The No-Action Alternative would not be expected to have an impact on local wildlife species inhabiting the project areas. Trees and other vegetation would be undisturbed and would continue to provide cover and food for wildlife.

5.7.4 Rare, Threatened, or Endangered Species

Proposed Action

The proposed work is not expected to impact State or Federal listed rare, threatened or endangered species as none are known to exist at Fort Meade.

No-Action Alternative

The No-Action Alternative would have no impact on these species, the existing conditions at Fort Meade would remain the same and there would be no change to any habitat areas.

5.7.5 Aquatic Habitat

Proposed Action

Short-term, minor adverse impacts to aquatic habitats could be encountered during the construction of projects due to sediment entering streams. Best management practices would be employed to minimize any impacts. Where possible, the designs would be developed to avoid or minimize impacts to this resource.

No-Action Alternative

The No-Action Alternative would have no impact on aquatic habitats. The existing conditions at Fort Meade would remain the same and there would be no change to any habitat areas.

5.8 WILD AND SCENIC RIVERS

Proposed Action

Wild and scenic rivers, listed under the Wild and Scenic Rivers Act, do not occur at the Installation. Therefore, there would be no impacts to wild and scenic rivers by the Proposed Action.

No-Action Alternative

This alternative would have no impacts to the Wild and Scenic Rivers since none occur at the depot.

5.9 CULTURAL RESOURCES

Proposed Action

No impacts are anticipated from the Proposed Actions. While the ICRMP identified many potential archeological sites at Fort Meade, there are no known archeological sites at the proposed project locations.

No-Action Alternative

The No-Action Alternative would have no effect on cultural resources at Fort Meade.

5.10 HAZARDOUS, TOXIC, AND RADIOACTIVE SUBSTANCES

5.10.1 Hazardous Materials, Hazardous Substances, and Toxic Chemicals

Proposed Action

Hazardous, toxic and radioactive substances are not currently stored at any of the project locations. These substances will not be used during the construction of proposed projects. As requested by the MDE in their letter dated October 6, 2009, any solid waste including construction, demolition, and land clearing debris that may be generated shall be properly disposed of at a permitted solid waste acceptance facility or recycled if possible.

No impact on hazardous, toxic, or radioactive substances is expected as a result of the implementation of the Proposed Action.

No-Action Alternative

The No-Action Alternative would not be expected to have any impacts on the handling and disposal of hazardous materials/wastes.

5.10.2 Site Contamination

Proposed Action

Projects C, D, and E may lie in or near contaminated sites. The MDE, in their letter dated October 6, 2009, indicated that they should be contacted to ensure that the proposed improvements will not exacerbate contamination of soils, groundwater, and surface water at Fort Meade.

No-Action Alternative

The No-Action Alternative would not be expected to have any impacts on the site contamination.

5.11 TRAFFIC AND ROADWAYS

Traffic is projected to increase at a constant annual rate of 2.9 percent that reflects the estimated traffic growth in the surrounding area from 2006-2011. The population and employment growth forecasts (2000-2030) for the region were provided by SHA. The average of the population and employment growth rates in region (excluding Fort Meade) was estimated as a reasonable value for the traffic growth rate (USACE, 2007).

Proposed Action

The Proposed Action may have short term minor impacts on the traffic at Fort Meade. There would be a slight increase in traffic during construction with the temporary influx of construction

vehicles and personnel. This increased traffic would be associated with construction workers and trucks hauling debris off post and construction materials on post. Possible localized road closures and detours are also possible during construction.

Long-term beneficial impacts are expected from this project. The Proposed Action is anticipated to relieve traffic congestion at the proposed project intersections at Fort Meade.

No-Action Alternative

The No-Action Alternative would be expected to have a long-term adverse impact on the existing traffic and roadway systems. The traffic flow at the seven proposed project sites would deteriorate and increased traffic delays would be encountered.

5.12 INFRASTRUCTURE AND UTILITIES

5.12.1 Potable Water

Proposed Action

An adequate supply of water currently exists at Fort Meade. No long-term impacts are anticipated from the construction or operation of the Proposed Action. Possible localized short-term disruptions to service could result from construction activities. Any affected personnel would be notified prior to any disruption.

No-Action Alternative

No impacts are expected as a result of implementing the No-Action Alternative. Existing conditions would remain the same with the No-Action Alternative.

5.12.2 Domestic and Industrial Wastewater

Proposed Action

The Proposed Action would have no long-term impact on the sanitary sewer/wastewater facilities at Fort Meade. Additional restroom facilities would be constructed as needed at the project areas. This would result in a negligible increase in sewage loads to the sewage treatment system at Fort Meade. Possible localized short-term disruptions to service could result from construction activities. Any affected personnel would be notified prior to any disruption.

No-Action Alternative

No impacts are expected as a result of implementing the No-Action Alternative. Existing conditions would remain the same with the No-Action Alternative.

5.12.3 Electric and Gas

Proposed Action

The Proposed Action will have no long-term impacts on the electrical system at Fort Meade. The distribution system is currently operating below capacity and the new demand will not exceed this capacity. Possible short-term impacts associated with construction and the relocation

of electrical and gas lines could occur as services could be shut temporarily down for the action. These would cease with the completion of construction activities.

No-Action Alternative

The No-Action Alternative would not be expected to impact the existing electrical distribution systems.

5.13 SOCIOECONOMIC

Proposed Action

Implementation of the Proposed Action would be expected to result in a minor short term positive impact on socioeconomic benefits. Construction workers will be hired for construction activities. This will have a short-term minor beneficial impact on the regional economy.

No-Action Alternative

The No-Action Alternative would not be expected to impact the socioeconomics of the region.

5.14 NOISE

Proposed Action

Minor short term adverse impacts would be expected. The various activities that would take place include trucks delivering building supplies and construction equipment, and heavy equipment needed for construction. Table 5-2 provides a representation of construction noise levels associated new construction. Confining construction activities to normal working hours and employing noise-controlled construction equipment to the extent possible would mitigate noise impacts during the construction phase.

No-Action Alternative

The No-Action Alternative would not be expected to change the noise levels that are generated at Fort Meade.

TABLE 5-2: Typical Noise levels of Construction Equipment

(noise Level in dBA at 50 Feet)	
Construction Vehicle Type	dBA
Bulldozers	80
Backhoe	72-93
Bobcat	72-93
Jack Hammer	81-98
Crane	75-77
Pick-Up Truck	83-94
Dump Truck	83-94

5.15 VISUAL AND AESTHETIC VALUE

Proposed Action

The Proposed Action will have a short-term minor visual impact resulting from the removal of vegetation for new construction. Once construction is complete the affected areas will be landscaped and restored to the extent possible. Long-term minor impacts to the visual environment for motorists and pedestrians using the roadways would be expected from the construction of the wider roadways and the ACPs. Landscaping is anticipated to reduce these impacts.

No-Action Alternative

The No-Action Alternative will involve no new construction or any alteration of the existing views. This alternative would not impact visual or aesthetic values at or around Fort Meade.

5.16 ENVIRONMENTAL JUSTICE

Proposed Action

Implementation of the Proposed Action would be expected to result in a minor short term positive impact on socioeconomic benefits. Construction workers will be hired to construct the new facilities. This will have a minor beneficial impact on the regional economy. Implementation of the Proposed Action would not be expected to impact any demographic group working or living in the economic ROI. Therefore, there would be no disproportionately high adverse human health concerns for minority or low-income populations at Fort Meade or in the surrounding community.

No-Action Alternative

The No-Action Alternative would not be expected to impact the socioeconomic or create disproportionately high and adverse human health or environmental effects to minority or low-income populations at Fort Meade or in the surrounding area.

5.17 CHILDREN'S SAFETY

Proposed Action

The Proposed Action would not be expected to impact children's safety. All applicable local jurisdictional safety requirements would be implemented during construction to ensure the protection of the public, including children. All proposed construction would be carried out in areas where few or no children reside or visit. In all cases, proper precautions including the placement of fencing and other types of barriers would be used to prevent potential harm to all civilians, including children.

No-Action Alternative

The No-Action Alternative would not be expected to impact children's safety.

5.18 CUMULATIVE IMPACTS

A cumulative impact is defined as “the impact on the environment which results from the incremental impact of the action when added to other past, present, or reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions” (40 CFR 1508.7). The CFR also notes that “such impacts can result from individually minor but collectively significant actions taking place over a period of time.”

Evaluations of cumulative impacts include consideration of the proposed action with past and present actions, as well as reasonably foreseeable future actions. Compliance with all applicable Federal, state, local, and Army regulations would assist in ensuring that implementation of the renovation program would minimize the incremental impacts of past, present, and future actions.

Proposed Action

Preliminary analysis indicated that the potential direct environmental and socioeconomic effects associated with the Proposed Action would be minor, while there would be no anticipated cumulative effect to environmental justice and protection of children. During construction, effects to resources such as air quality, noise, and vegetation would be short-term and temporary. When the construction and operation of the Proposed Action is analyzed together with past, ongoing, and potential future actions there would be the potential, when combined with other on-Post construction projects, for a short-term localized cumulative effect.

However, adverse cumulative impacts could result at Fort Meade if multiple on-post projects were completed at the same time. For example, during the implementation of the Proposed Action, Fort Meade could proceed with other construction projects; such as the restoration or construction of other on-post facilities. Types of environmental resources and/or attributes affected by multiple projects could consist of: air quality, noise, infrastructure (transportation, utilities), and socioeconomics.

Impacts to geology, topography, soils, and prime farmlands are site-specific and are not affected by cumulative development in the region.

Cumulative impacts to air quality and noise would occur if projects were done concurrently. Any impacts would be temporary in nature and last for the duration of construction activity.

Outside of Fort Meade, non-federal projects could contribute additional traffic to the nearby transportation system. The combined traffic generation from such development could impact traffic flow during the AM and PM peak hours. The incremental effect that the cumulative projects would have in addition to the action alternative could potentially be significant.

The quantities of hazardous material required for and hazardous waste generated from the proposed action would be minimal and are not anticipated to contribute to the cumulative impacts.

The recent past and present and future projects are not expected to have a cumulative impact on the ability of the providers to continue to provide ample utility services to the installation.

Cumulative projects would be expected to have a positive effect on economic development due to increased construction spending over current proposed levels. Increased construction spending will contribute to raised incomes, higher sales volume, and increased employment. Long-term impacts associated with job growth could be realized within the region.

No-Action Alternative

Implementation of the No-Action Alternative would not result in any cumulative environmental impacts.

5.19 IRRETRIEVABLE COMMITMENT OF RESOURCES

Proposed Action

Regulations for the preparation of EA's require that they address irreversible and irretrievable commitments of resources associated with the Proposed Action. In this instance, it should be noted that the implementation of the Proposed Action would result in both direct and indirect commitments of resources.

The proposed project would require the use of an amount of fossil fuel, electrical energy, and other energy sources during the renovation/demolition and new construction at the project areas. These resources would be irretrievably committed to the projects.

No-Action Alternative

The No-Action Alternative would not result in any commitment of resources other than those currently used in day to day activities at Fort Meade.

5.20 SUMMARY OF ENVIRONMENTAL CONSEQUENCES

Table 5-3 provides a summary of the potential environmental and cumulative impacts associated with the implementation of the Proposed Action. Short-term minor adverse impacts to air quality, noise, surface waters, wetlands, utilities, floodplains, wildlife resources, traffic would be expected from the construction of the projects. Short-term and long-term minor impacts could occur to land use, soils, topography, aesthetics, and vegetation. Beneficial impacts to traffic and transportation are expected.

TABLE 5-3: SUMMARY OF POTENTIAL ENVIRONMENTAL AND CUMULATIVE EFFECTS ON RESOURCE AREAS		
	Environmental Consequences	
Resource Area	Proposed Action	No-Action
Land Use	Short-term and Long-term Minor Adverse Impacts	No Impacts
Soils	Short-term and Long-term Minor Adverse Impacts	No Impacts
Prime and Unique Farmland	No Impacts	No Impacts
Topography and Geology	Short-term and Long-term Minor Adverse Impacts	No Impacts
Air Quality	Short-term Minor Adverse Impacts	No Impacts
Water Resources		
Surface Water	Short-term Minor Adverse Impacts	No Impacts
Floodplains	Short-term Minor Adverse Impacts	No Impacts
Groundwater	No Impacts	No Impacts
Coastal Zone	No Impacts	No Impacts
Biological Resources		
Wetlands	Short-term and Long-term Minor Adverse Impacts	No Impacts
Vegetation	Short-term and Long-term Minor Adverse Impacts	No Impacts
Wildlife Resources	Short-term Minor Adverse Impacts	No Impacts
Rare, Threatened, or Endangered Species	No Impacts	No Impacts
Aquatic Habitat	Short-term Minor Adverse Impacts	No Impacts
Wild and Scenic Rivers	No Impacts	No Impacts
Cultural Resources	No Impacts	No Impacts
Hazardous, Toxic, and Radioactive Substances	No Impacts	No Impacts
Infrastructure and Utilities		
Traffic, Roadways, and Transportation Systems	Short Term Minor Adverse Impacts. Long-term beneficial effects	Long-term adverse Impacts
Potable Water	Short-term Minor Adverse Impacts	No Impacts
Sanitary Sewer/Wastewater	Short-term Minor Adverse Impacts	No Impacts
Electrical Power	Short-term Minor Adverse Impacts	No Impacts
Socioeconomic	Short-term Beneficial Impacts	No Impacts
Noise	Short-term Minor Adverse Impacts	No Impacts
Visual and Aesthetic Value	Short-term and Long-term Minor Adverse Impacts	No Impacts
Environmental Justice/Protection of Children	No Impacts	No Impacts
Cumulative Impacts	No Impacts	No Impacts

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6.0 CONCLUSION

The Proposed Actions are expected to disturb approximately 16 acres of land, of which approximately half is currently paved. The remaining acreage is composed of open grass and woods. Approximately six acres of this would be permanently impacted by the road projects. Short-term impacts to surface waters, floodplains, aquatic habitat, wildlife, air, utilities, and noise could be expected during construction of the projects. Short-term and long-term impacts to land use, soils, topography, wetlands, vegetation, and aesthetics would be expected through the construction of new Access Control Points and roadway widening. Long-term beneficial impacts to traffic flow are expected from this work.

The Proposed Actions are not expected to have any significant adverse effects on environmental resources or socioeconomic conditions at Fort George G. Meade. The implementation of the Proposed Actions will enhance traffic flow and security. All agency coordination and permitting requirements for the Proposed Actions will be completed prior to construction of the projects.

Under the No-Action Alternative, Fort Meade would suffer increased traffic congestion as personnel are transferred to the Installation under BRAC.

Based on the evaluation of the environmental consequences accomplished by this Environmental Assessment a Finding of No Significant Impacts (FNSI) shall be issued.

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7.0 REFERENCES

Council on Environmental Quality (CEQ), 1997. Environmental Justice Guide – Guidance under the National Environmental Policy Act.

National Park Service (NPS). 2009. Wild & Scenic Rivers by State. Web site:
<http://www.nps.gov/rivers>

(NRCS, 2005). U.S. Department of Agriculture, Natural Resources Conservation Service. 2005. Prime and other Important Farmlands: Anne Arundel County, Maryland Tabular Data Version
Website: <http://soildatamart.nrcs.usda.gov/Report.aspx?Survey=MD003&UseState=MD>

(USACE, 2006) U.S. Army Corps of Engineers, Baltimore District. March, 2006. *Integrated Cultural Resources Management Plan, Fort Meade*

(USACE, 2007) U.S. Army Corps of Engineers, Mobile District 2007. Environmental Impact Statement Implementation of Base Realignment and Closure 2005 and Enhanced Use Lease Actions at Fort George G. Meade, Maryland.

(USACE, 2008a) U.S. Army Corps of Engineers, Baltimore District, March 2008. Floodplain Analysis And Mapping U.S. Army Garrison Fort George G. Meade, Anne Arundel County, Maryland.

(USACE, 2008b) U.S. Army Corps of Engineers, Baltimore District, July 2008. Existing Conditions and Preliminary Assessment of Water Resources Impacts, Installation Information Infrastructure Modernization Program (13MP), Fort Meade, Maryland.

U.S. Census Bureau. 2009. State and County Quickfacts for Maryland.
<http://quickfacts.census.gov/qfd/> Accessed 10 November 2009.

(USDA, 1994). United States Department of Agriculture. Farmland Protection Policy Act, 1981. Updated in 1994

(USEPA) United States Environmental Protection Agency. 1986. *Noise and your hearing*

(USEPA) US EPA Green Book. 2009. Nonattainment Status for Each County by Year. Website:
<http://www.epa.gov/oar/oaqps/greenbk/anay.html>

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APPENDIX A

MAPS

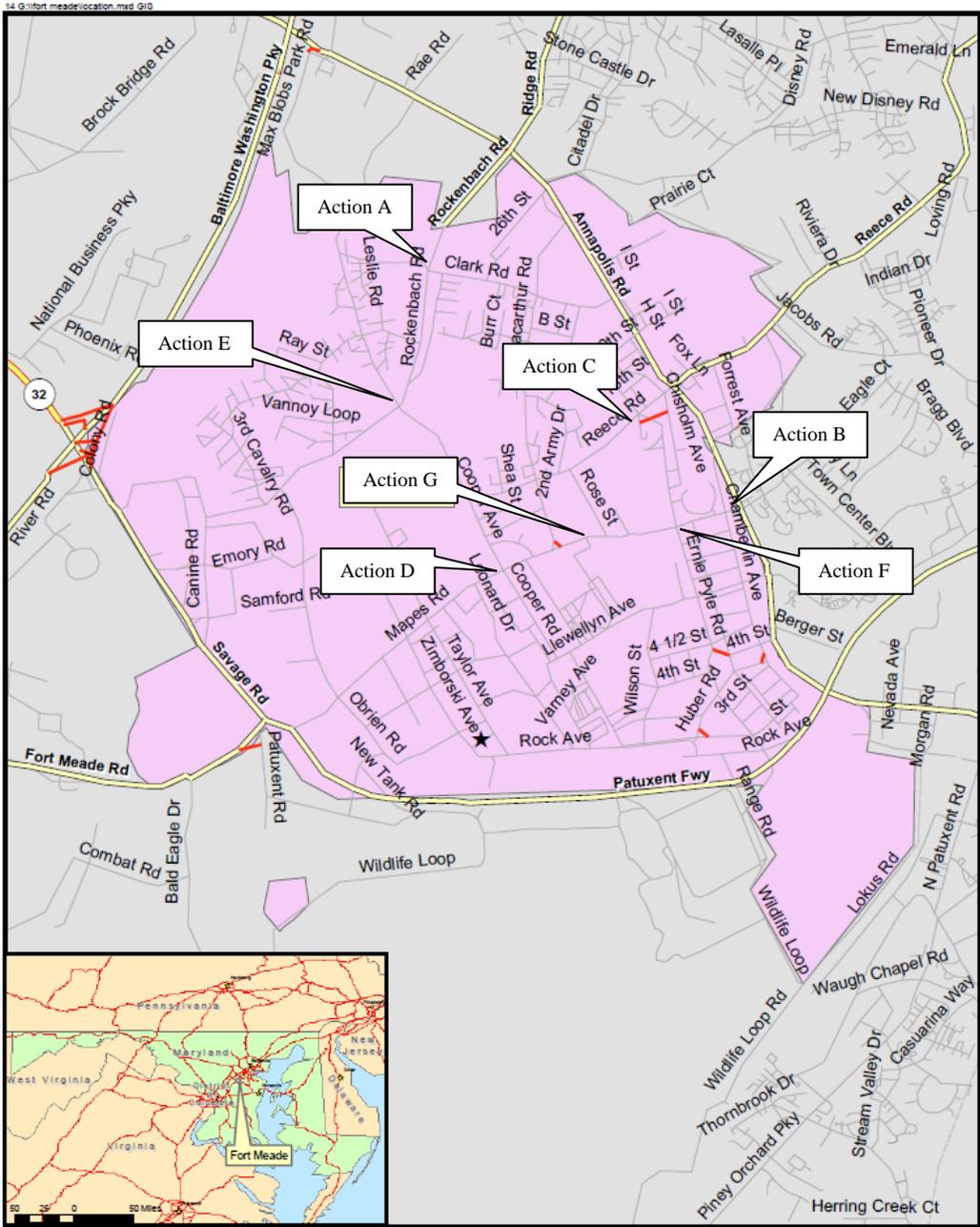
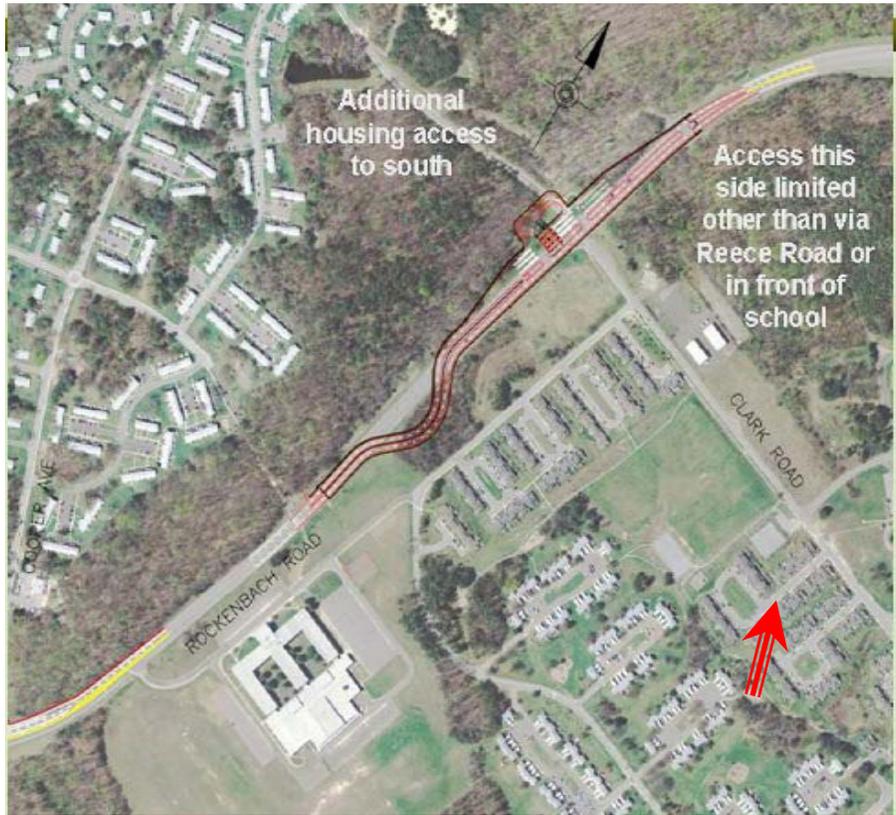


Figure A-2: Road Improvements Location Map

APPENDIX B

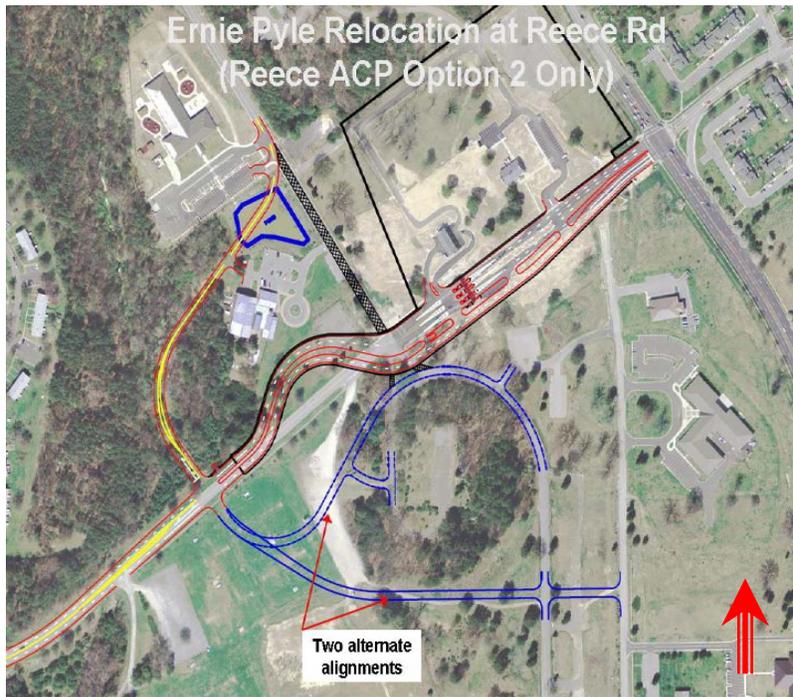
PROPOSED ACTIONS



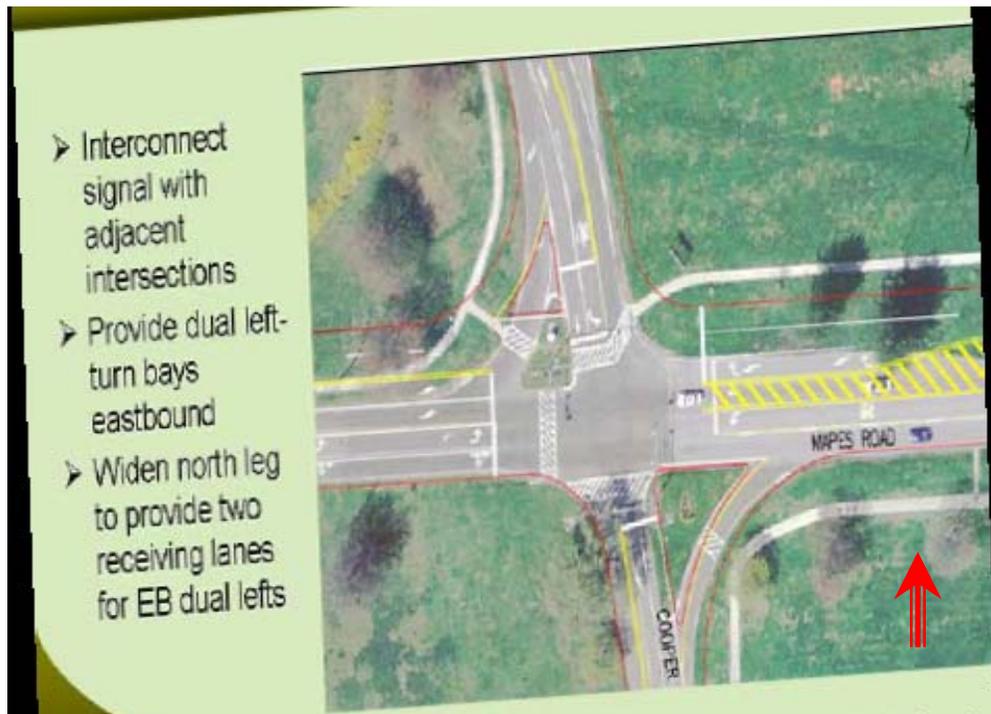
ACTION A – ROCKENBACH ACP



ACTION B – MAPES ROAD/MD ROUTE 175 ACP



ACTION C – ERNIE PYLE AND REECE ROAD

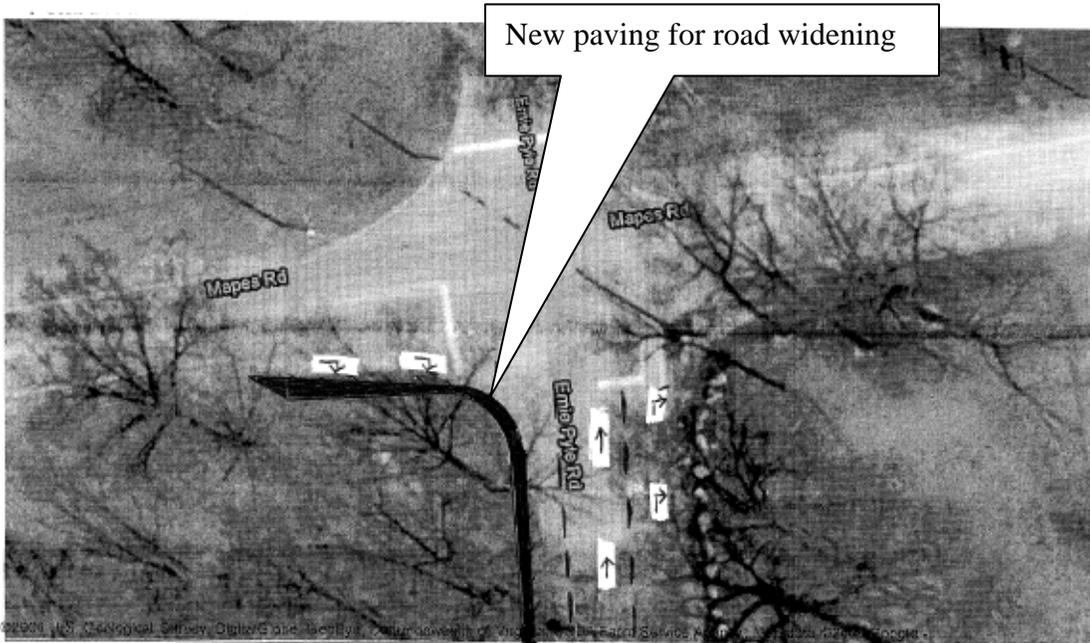


ACTION D – MAPES ROAD AND COOPER AVENUE

- Provide separate left-turn lanes on both Rockenbach Road approaches



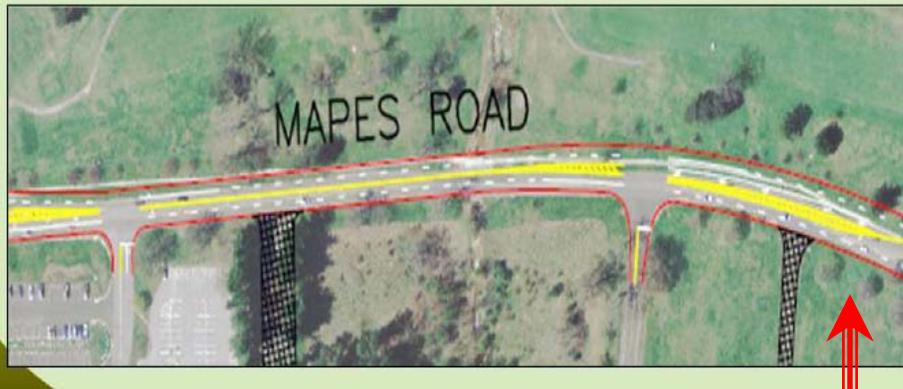
ACTION E – ROCKENBACH ROAD AND COOPER AVENUE



ACTION F – MAPES ROAD AND ERNIE PYLE STREET

❖ Provide a 4-lane section along Mapes Road from the ACP at MD 175 to the ACP at MD 32

- Section should consist of 4-ft minimum shoulders/bike lanes
- Sidewalk should be provided



ACTION G – MAPES ROAD CORRIDOR

APPENDIX C

AGENCY COORDINATION



US Army Corps
of Engineers
Baltimore District

Public Notice

Environmental Assessment Roadway Improvements Fort George G. Meade Anne Arundel County, Maryland

On behalf of Fort George G. Meade, the U.S. Army Corps of Engineers, Baltimore District, is preparing an Environmental Assessment (EA) for the construction associated with seven projects to improve traffic problems associated with Base Realignment and Closure (BRAC). The base, which encompasses 5,506 acres, is located in northern Anne Arundel County, Maryland, southeast of the Baltimore-Washington Parkway and west of I-97 (Enclosure 1).

The Proposed Action includes several road changes including the construction of access control points, road widening, moving intersections, and changing signs and traffic signals at control points. The roads that will be affected include Rockenbach Road, Ernie Pyle Road, Reece Road, Mapes Road, Cooper Avenue, and MD 175 (Sites A-G on Enclosure 2).

This EA will evaluate the potential environmental effects that may occur as a result of the Proposed Action and will be prepared in accordance with the National Environmental Policy Act (NEPA) of 1969, as amended.

Interested parties are invited to submit written comments for consideration within 15 days of this notice. Any comments received will be considered in the preparation of the EA. This public notice is being distributed to organizations and individuals that are known to have an interest in this project (Enclosure 3). Please bring this matter to the attention of any other organizations or individuals with an interest in this matter. Comments must be submitted within 15 days of the date of this notice to: U.S. Army Corps of Engineers, Baltimore District, ATTN: CENAB-PL-E (Fort George G. Meade Road Improvement EA), P.O. Box 1715, Baltimore, Maryland 21203-1715.

R. F. Gore
for Robert F. Gore
Deputy Chief, Planning Division
Date: 9-15-09

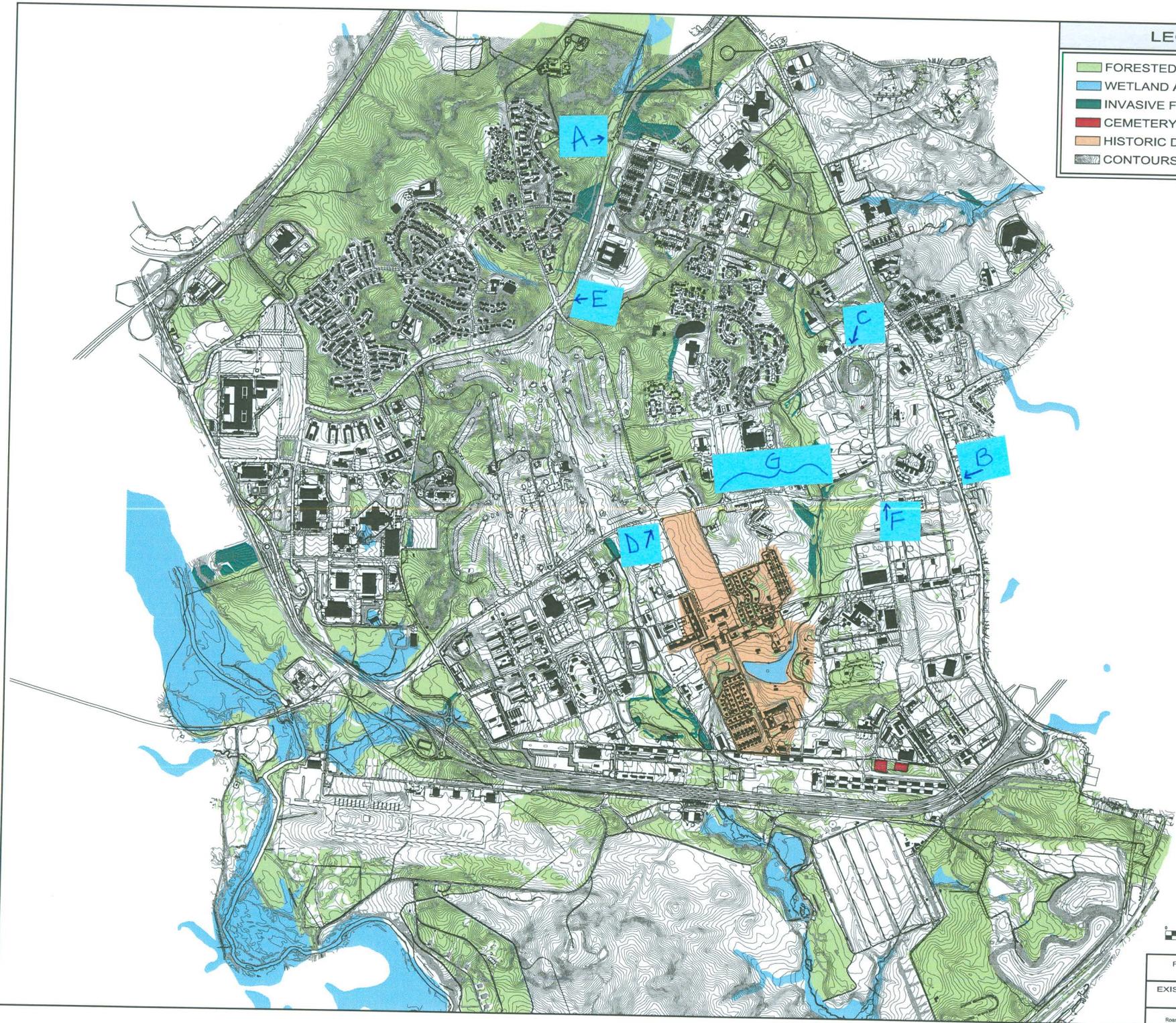
Enclosures

Regional Area Map, Ft. Meade, Maryland



LEGEND

- FORESTED AREA
- WETLAND AREA
- INVASIVE FLORA
- CEMETERY AREA
- HISTORIC DISTRICT
- CONTOURS



Enclosure 2



FORT GEORGE G MEADE
MARYLAND
EXISTING CONDITIONS MAP
MAY 2005
Prepared By: R & K Engineering, Inc.
Roanoke, Va., Alexandria, Va., San Antonio, Tx.

**Public Notice Mail List for FGGM Roadway Improvements
for Fort George G. Meade**

Libraries

State and Federal Agencies

Ms. Lori Byrne
Maryland Dept. of Natural Resources
Tawes State Office Building
580 Taylor Avenue
Annapolis, MD 21401

Ms. Joanne Muller
Maryland Dept. of Environment
Clearinghouse Coordinator
1800 Washington Blvd
Baltimore, MD 21230

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

Mr. William Arguto
USEPA Region III
1650 Arch Street
Philadelphia, PA 19103
Mail Code EA30

Regional and Local Offices

Ms. Ginger Ellis
Anne Arundel County Maryland
Office of Environmental & Cultural
Resources
2664 Riva Rd
Annapolis, MD 21401

Mr. Joseph A. Haamid
Resource Conservationist
Anne Arundel Soil Conservation District
Heritage Office Center
2662 Riva Road, Suite 150, MS #7001
Annapolis, MD 21401-7377

Ms. Cynthia Bischoff
West County Area Library
1325 Annapolis Rd
Odenton, MD 21113

Ms. Ruby Jaby
Crofton Branch Library
1681 Riedel Rd
Crofton, MD 21114

Fort Meade Post Library
Building 4418
Fort Meade, MD 20755

U.S. Dept. of the Interior Fish & Wildlife Services
Chesapeake Bay Field Office
ATTN: Devin Ray
177 Admiral Cochrane Drive
Annapolis, MD 21401

Maryland Dept. of Housing & Community
Development Maryland Historical Trust
Division of Historical and Cultural Programs
ATTN: Elizabeth J. Cole
100 Community Place
Crownsville, MD 21032-2023

State of Maryland Dept. of Agriculture
ATTN: Ms. Joe Oberg
Public Information Officer
50 Harry S. Truman Parkway
Annapolis, Maryland 21401

Maryland Department of Planning
ATTN: Mr. Bob Rosenbush, Planner
301 West Preston Street, Suite 1101
Baltimore, MD 21201

Maryland Dept of Transportation
State Highway Administration
ATTN: Lee Johnston
707 North Calvert Street
Mail Stop C303
Baltimore, Maryland 21202



MARYLAND DEPARTMENT OF THE ENVIRONMENT

1800 Washington Boulevard • Baltimore, Maryland 21230

410-537-3000 • 1-800-633-6101 • <http://www.mde.state.md.us>

Martin O'Malley
Governor

Shari T. Wilson
Secretary

Anthony G. Brown
Lieutenant Governor

Robert M. Summers, Ph.D.
Deputy Secretary

October 6, 2009

Mr. Robert Gore
Planning Division
U.S. Army Corps of Engineers
ATTN: CENAB-PL-E
P.O. Box 1715
Baltimore, MD 21203

RE: State Application Identifier: MD20090918-1289
Project: Projects to Improve Traffic ... Fort George G. Meade

Dear Mr. Gore:

Thank you for the opportunity to review the above referenced project. The document was circulated throughout the Maryland Department of the Environment (MDE) for review, and the following comments are offered for your consideration.

1. Contact Mr. John Fairbank, Hazardous Waste Program at (410) 537-3343 to ensure that the proposed traffic improvements will not exacerbate contamination of soils, groundwater, and surface water at Fort Meade.
2. Any solid waste including construction, demolition and land clearing debris that may be generated from the proposed project, must be properly disposed of at a permitted solid waste acceptance facility, or recycled if possible. Contact the Solid Waste Program at (410) 537-3318 for additional information.

Again, thank you for giving MDE the opportunity to review this project. If you have any questions or need additional information, please feel free to call me at (410) 537-4120.

Sincerely,

Joane D. Mueller
MDE Clearinghouse Coordinator
Office of Communications

cc: Bob Rosenbush, State Clearinghouse



Martin O'Malley, Governor
Anthony G. Brown, Lt. Governor
John R. Griffin, Secretary
Eric Schwaab, Deputy Secretary

October 15, 2009

Robert Gore
USACOE – Baltimore District
PO Box 1715
Baltimore, MD 21201

RE: Environmental Review for EA Roadway Improvements Fort George G. Meade, 7 projects to improve traffic from BRAC, Anne Arundel County, MD.

Dear Mr. Gore:

The Wildlife and Heritage Service has determined that there are no State or Federal records for rare, threatened or endangered species within the boundaries of the project site as delineated. As a result, we have no specific comments or requirements pertaining to protection measures at this time. This statement should not be interpreted however as meaning that rare, threatened or endangered species are not in fact present. If appropriate habitat is available, certain species could be present without documentation because adequate surveys have not been conducted.

Thank you for allowing us the opportunity to review this project. If you should have any further questions regarding this information, please contact me at (410) 260-8573.

Sincerely,

Lori A. Byrne,
Environmental Review Coordinator
Wildlife and Heritage Service
MD Dept. of Natural Resources

ER# 2009.1646



Maryland Department of Planning

Martin O'Malley
Governor
Anthony G. Brown
Lt. Governor

Richard Eberhart Hall
Secretary
Matthew J. Power
Deputy Secretary

September 28, 2009

Mr. Robert Gore
Deputy Chief, Planning Division
U.S. Army Corps of Engineers
ATTN: CENAB-PL-E
P.O. Box 1715
Baltimore, MD 21203-1715

STATE CLEARINGHOUSE REVIEW - ADDITIONAL REVIEWER COMMENTS RECEIVED

State Application Identifier: MD20090918-1289

Project Description: Scoping prior to preparation of Environmental Assessment: projects to improve traffic associated with Base Realignment and Closure Activities: Fort George G. Meade

Project Location: Anne Arundel County

Clearinghouse Contact: Bob Rosenbush

Dear Mr. Gore:

We are forwarding the comments made by the Maryland Department of Natural Resources, and this Department, including the Maryland Historical Trust regarding the referenced project for your information. The Maryland Department of Natural Resources stated that the project area includes sensitive resources. The Applicant may wish to contact Ms. Pamela Bush (410-260-8334 telephone) for further information.

This Department commented that the project supports Base Realignment and Closure needs in and around Fort Meade.

Should you have any questions, contact the State Clearinghouse staff person noted above at 410-767-4490 or through e-mail at brosenbush@mdp.state.md.us. Your cooperation and attention to the review process is appreciated.

Sincerely,

[Handwritten signature of Linda C. Janey]

Linda C. Janey, J.D., Assistant Secretary
for Clearinghouse and Communications

LCJ:BR

cc: Roland Limpert - DNR

09-1289_OLRR.OTH.doc

Handwritten notes: need to check + follow up w/ fws



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Chesapeake Bay Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401
410/573-4575



September 30, 2009

Department of the Army
Baltimore District, Corps of Engineers
P.O. Box 1715
Baltimore, MD 21203-1715

RE: Fort George G. Meade Environmental Assessment for BRAC

Dear: Robert F. Gore

This responds to your letter, received September 10, 2009, requesting information on the presence of species which are federally listed or proposed for listing as endangered or threatened within the vicinity of the above reference project area. We have reviewed the information you enclosed and are providing comments in accordance with section 7 of the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*).

Except for occasional transient individuals, no federally proposed or listed endangered or threatened species are known to exist within the project impact area. Therefore, no Biological Assessment or further section 7 Consultation with the U.S. Fish and Wildlife Service is required. Should project plans change, or if additional information on the distribution of listed or proposed species becomes available, this determination may be reconsidered.

This response relates only to federally protected threatened or endangered species under our jurisdiction. For information on the presence of other rare species, you should contact Lori Byrne of the Maryland Wildlife and Heritage Division at (410) 260-8573.

Effective August 8, 2007, under the authority of the Endangered Species Act of 1973, as amended, the U.S. Fish and Wildlife Service (Service) removed (delist) the bald eagle in the lower 48 States of the United States from the Federal List of Endangered and Threatened Wildlife. However, the bald eagle will still be protected by the Bald and Golden Eagle Protection Act, Lacey Act and the Migratory Bird Treaty Act. As a result, starting on August 8, 2007, if your project may cause "disturbance" to the bald eagle, please consult the "National Bald Eagle Management Guidelines" dated May 2007.

If any planned or ongoing activities cannot be conducted in compliance with the National Bald Eagle Management Guidelines (Eagle Management Guidelines), please contact the Chesapeake Bay Ecological Services Field Office at 410-573-4573 for technical assistance. The Eagle Management Guidelines can be found at:

<http://www.fws.gov/migratorybirds/issues/BaldEagle/NationalBaldEagleManagementGuidelines.pdf>

In the future, if your project can not avoid disturbance to the bald eagle by complying with the Eagle Management Guidelines, you will be able to apply for a permit that authorizes the take of bald and golden eagles under the Bald and Golden Eagle Protection Act, generally where the take to be authorized is associated with otherwise lawful activities. This proposed permit process will not be available until the Service issues a final rule for the issuance of these take permits under the Bald and Golden Eagle Protection Act.

An additional concern of the Service is wetlands protection. Federal and state partners of the Chesapeake Bay Program have adopted an interim goal of no overall net loss of the Basin's remaining wetlands, and the long term goal of increasing the quality and quantity of the Basin's wetlands resource base. Because of this policy and the functions and values wetlands perform, the Service recommends avoiding wetland impacts. All wetlands within the project area should be identified, and if construction in wetlands is proposed, the U.S. Army Corps of Engineers, Baltimore District, should be contacted for permit requirements. They can be reached at (410) 962-3670.

We appreciate the opportunity to provide information relative to fish and wildlife issues, and thank you for your interests in these resources. If you have any questions or need further assistance, please contact Devin Ray at (410) 573-4531.

Sincerely,



Leopoldo Miranda
Field Supervisor

APPENDIX D

ACRONYMS AND ABBREVIATIONS

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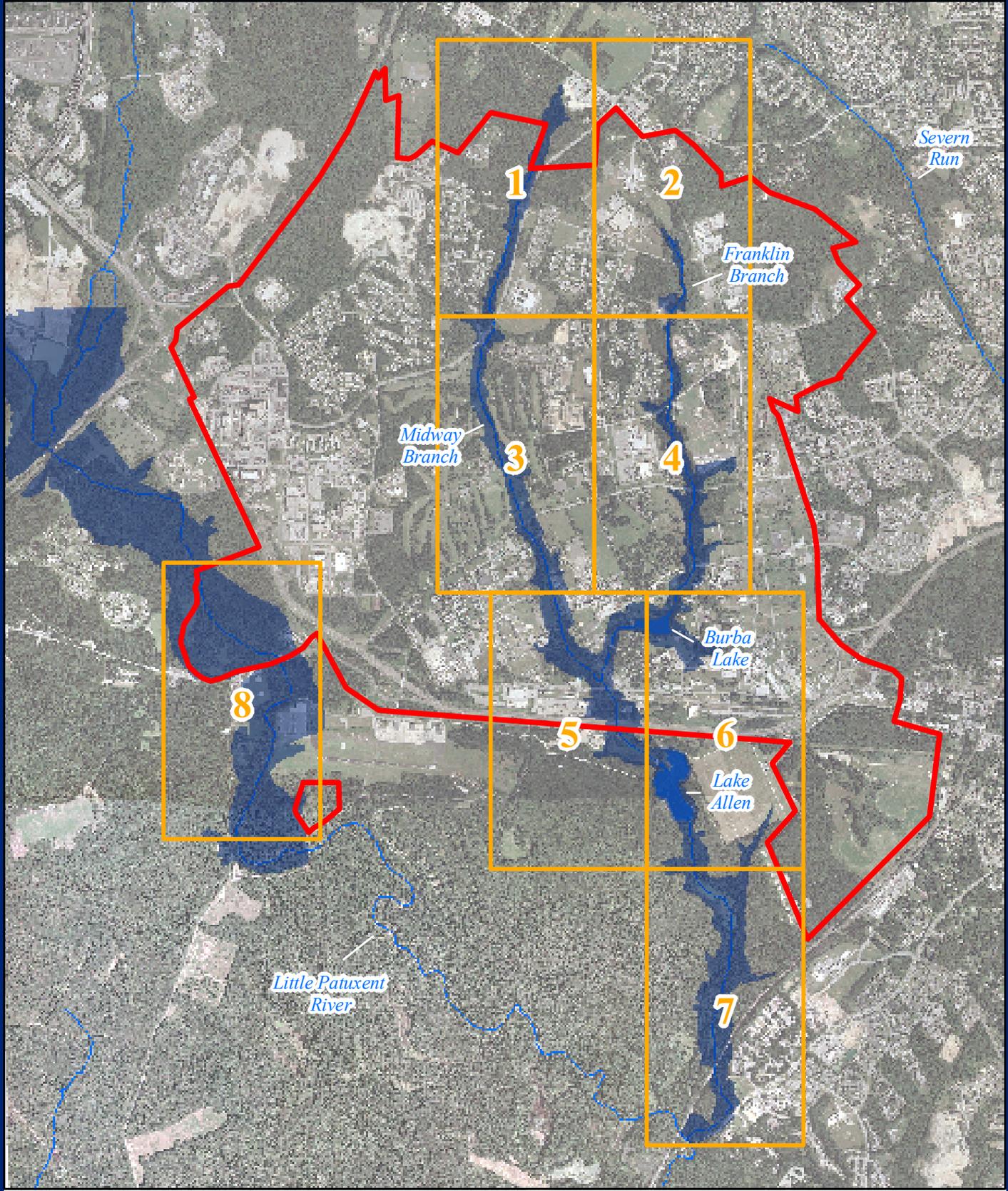
ACRONYMS AND ABBREVIATIONS

ACP	Access Control Point
AR	Army Regulation
AIRFA	American Indian Religious Freedom Act
AST	Aboveground Storage Tank
AT/FP	Anti-Terrorism/Force Protection
BMP	Best Management Practice
BRAC	Base Realignment and Closure
CAA(A)	Clean Air Act (Amendments)
CEQ	Council of Environmental Quality
CFR	Code of Federal Regulations
CMZ	Coastal Management Zone
CO	Carbon Monoxide
COMAR	Code of Maryland Regulations
DA	Department of Army
dBA	Decibel
DISA	Defense Information Systems Agency
DoD	Department of Defense
EA	Environmental Assessment
EIS	Environmental Impact Statement
EO	Executive Order
EPA	U.S. Environmental Protection Agency
ES	Executive Summary
FNSI	Finding of No Significant Impact
HQ	Headquarters
ICRMP	Integrated Cultural Management Plan
INRMP	Integrated Natural Resources Management Plan
MCA	Military Construction Army
MD	Maryland
MDE	Maryland Department of the Environment
MSL	Mean Sea Level
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Protection Act
NHPA	National Historic Preservation Act
NO ₂	Nitrogen Dioxide

NPS	National Park Service
NRCS	Natural Resource Conservation Service
NRHP	National Register of Historic Places
OSHA	Occupational Safety and Health Administration
Pb	Lead
PCB	Polychlorinated Biphenyls
PM	Particulate Matter
ROI	Region of Influence
RTE	Rare, Threatened, or Endangered
SDWA	Safe Drinking Water Act
SF	Square Foot (Feet)
SHPO	State Historic Preservation Officer
SO _x	Sulfur Oxide
SY	Square Yard
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
VOC	Volatile Organic Compound

APPENDIX E

FLOODPLAIN MAPS



US Army Corps
of Engineers
Baltimore District

MAP PANEL INDEX



Map Number



Fort Meade Boundary

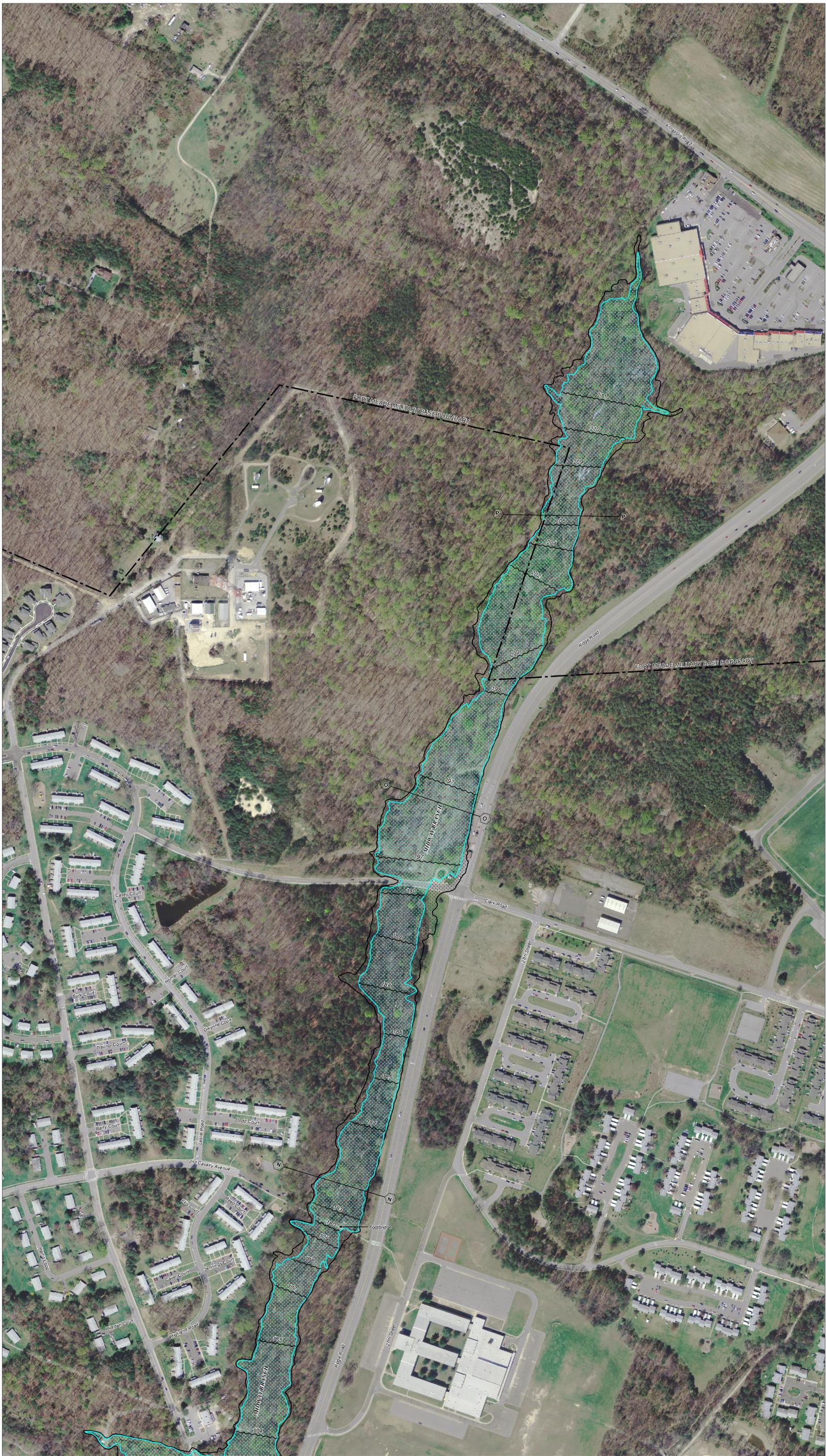


Watercourses



0 1,600 3,200
Feet

1 inch equals 3,400 feet



LEGEND

-  100-Year (1% Annual Chance Flood) Flood Area
The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year.
-  500-Year (0.2% Annual Chance Flood) Flood Area
-  100-Year (1% annual chance) floodplain boundary
-  500-Year (0.2% annual chance) floodplain boundary
-  100-Year flood line and value; elevation in feet (EL 987)
-  100-Year flood for lakes and ponds
-  Cross section line


MAP SCALE 1" = 200'


125 0 200 400 FEET

*Referenced to the North American Vertical Datum of 1988
*Aerial Photograph dated 2005
*Floodplain limits reflect existing conditions as of September 2007

JOINS PANEL 2

JOINS PANEL 3

PANEL 1

FLOODPLAIN MAP
FORT MEADE,
MARYLAND

PANEL 1 OF 8

MARCH 2008

MAP NUMBER
1


US Army Corps
of Engineers
Baltimore District

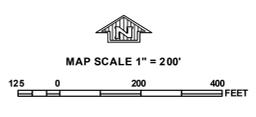
JOINS PANEL 1



JOINS PANEL 4

LEGEND

-  100-Year (1% Annual Chance Flood) Flood Area
The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year.
-  500-Year (0.2% Annual Chance Flood) Flood Area
-  100-Year (1% annual chance) floodplain boundary
-  500-Year (0.2% annual chance) floodplain boundary
-  100-Year flood line and value; elevation in feet (EL. 987)
-  100-Year flood for lakes and ponds
-  Cross section line



*Referenced to the North American Vertical Datum of 1988
 *Aerial Photograph dated 2005
 *Floodplain limits reflect existing conditions as of September 2007

PANEL 2

FLOODPLAIN MAP
FORT MEADE,
MARYLAND

PANEL 2 OF 8

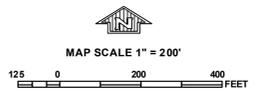
MARCH 2008

 **MAP NUMBER**
2
US Army Corps of Engineers
Baltimore District



LEGEND

-  100-Year (1% Annual Chance Flood) Flood Area
The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year.
-  500-Year (0.2% Annual Chance Flood) Flood Area
-  100-Year (1% annual chance) floodplain boundary
-  500-Year (0.2% annual chance) floodplain boundary
-  100-Year flood line and value; elevation in feet
(EL 987) 100-Year flood for lakes and ponds
-  Cross section line



*Referenced to the North American Vertical Datum of 1988
 *Aerial Photograph dated 2005
 *Floodplain limits reflect existing conditions as of September 2007

JOINS PANEL 4

PANEL 3

FLOODPLAIN MAP
FORT MEADE,
MARYLAND

PANEL 3 OF 8

MARCH 2008



US Army Corps
of Engineers
Baltimore District

MAP NUMBER
3

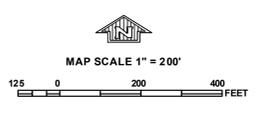


JOINS PANEL 3

JOINS PANEL 6

LEGEND

-  100-Year (1% Annual Chance Flood) Flood Area
The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year.
-  500-Year (0.2% Annual Chance Flood) Flood Area
-  100-Year (1% annual chance) floodplain boundary
-  500-Year (0.2% annual chance) floodplain boundary
-  100-Year flood line and value; elevation in feet (EL 987)
-  Cross section line



*Referenced to the North American Vertical Datum of 1988
 *Aerial Photograph dated 2005
 *Floodplain limits reflect existing conditions as of September 2007

PANEL 4

FLOODPLAIN MAP
FORT MEADE,
MARYLAND

PANEL 4 OF 8

MARCH 2008



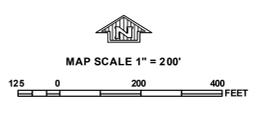
MAP NUMBER
4

US Army Corps
of Engineers
Baltimore District



LEGEND

-  100-Year (1% Annual Chance Flood) Flood Area
The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year.
-  500-Year (0.2% Annual Chance Flood) Flood Area
-  100-Year (1% annual chance) floodplain boundary
-  500-Year (0.2% annual chance) floodplain boundary
-  100-Year flood line and value; elevation in feet (EL. 987)
-  100-Year flood for lakes and ponds
-  Cross section line



*Referenced to the North American Vertical Datum of 1988
 *Aerial Photograph dated 2005
 *Floodplain limits reflect existing conditions as of September 2007

PANEL 5

FLOODPLAIN MAP
FORT MEADE,
MARYLAND

PANEL 5 OF 8

MARCH 2008

 **MAP NUMBER**
5
US Army Corps
of Engineers
Baltimore District

JOINS PANEL 6



LEGEND

-  100-Year (1% Annual Chance Flood) Flood Area
The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year.
-  500-Year (0.2% Annual Chance Flood) Flood Area
-  100-Year (1% annual chance) floodplain boundary
-  500-Year (0.2% annual chance) floodplain boundary
-  100-Year flood line and value; elevation in feet
-  100-Year flood for lakes and ponds
-  Cross section line



*Referenced to the North American Vertical Datum of 1988
 *Aerial Photograph dated 2005
 *Floodplain limits reflect existing conditions as of September 2007

PANEL 6

FLOODPLAIN MAP
FORT MEADE,
MARYLAND

PANEL 6 OF 8

MARCH 2008



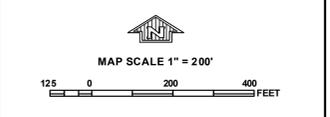
US Army Corps
of Engineers
Baltimore District

MAP NUMBER
6



LEGEND

-  100-Year (1% Annual Chance Flood) Flood Area
The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year.
-  500-Year (0.2% Annual Chance Flood) Flood Area
-  100-Year (1% annual chance) floodplain boundary
-  500-Year (0.2% annual chance) floodplain boundary
-  100-Year flood line and value; elevation in feet
(EL 987) 100-Year flood for lakes and ponds
-  Cross section line



*Referenced to the North American Vertical Datum of 1988
 *Aerial Photograph dated 2005
 *Floodplain limits reflect existing conditions as of September 2007

PANEL 7

FLOODPLAIN MAP
FORT MEADE,
MARYLAND

PANEL 7 OF 8

MARCH 2008



MAP NUMBER
7

US Army Corps
of Engineers
Baltimore District



LEGEND

-  100-Year (1% Annual Chance Flood) Flood Area
The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year.
-  500-Year (0.2% Annual Chance Flood) Flood Area
-  100-Year (1% annual chance) floodplain boundary
-  500-Year (0.2% annual chance) floodplain boundary
-  100-Year flood line and value; elevation in feet
(EL 987) 100-Year flood for lakes and ponds
-  Cross section line



*Aerial Photograph dated 2005
 *Floodplain limits shown on this panel taken directly from effective FEMA Flood Insurance Rate Map and Flood Insurance Study dated July 18, 1985.
 Elevations shown are in NGVD29 datum.

PANEL 8

**FLOODPLAIN MAP
 FORT MEADE,
 MARYLAND**

PANEL 8 OF 8

MARCH 2008

 **MAP NUMBER**
8
 US Army Corps
 of Engineers
 Baltimore District