Final

Environmental Impact Statement

for the

East Campus Integration Program

Fort Meade, Maryland

March

2017

FINAL

ENVIRONMENTAL IMPACT STATEMENT
FOR THE
EAST CAMPUS INTEGRATION PROGRAM
FORT MEADE, MARYLAND

PROPONENT:

DR. CALVIN MARTIN — DATE
Chief, Master Planning
National Security Agency

RECOMMEND APPROVAL:

JAMES MALEY — DATE
Chief, Occupational Health, Environmental, and Safety Services
National Security Agency

RECOMMEND APPROVAL:

THOMAS S. RICKARD — DATE
Colonel, U.S. Army
Garrison Commander
Fort George G. Meade

APPROVED:

MICHAEL S. ROGERS — DATE
Admiral, U.S. Navy
Director, National Security Agency/Central Security Service

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ENVIRONMENTAL IMPACT STATEMENT

FOR THE

EAST CAMPUS INTEGRATION PROGRAM

FORT MEADE, MARYLAND

NATIONAL SECURITY AGENCY
FORT GEORGE G. MEADE, MARYLAND

MARCH 2017

COVER SHEET

FINAL ENVIRONMENTAL IMPACT STATEMENT FOR THE EAST CAMPUS INTEGRATION PROGRAM FORT MEADE, MARYLAND

Proponent: U.S. Department of Defense (DoD), National Security Agency (NSA)

Affected Location: Fort George G. Meade, Maryland

Report Designation: Final Environmental Impact Statement (EIS)

Proposed Action: The DoD proposes to continue to integrate the NSA East Campus with the NSA Main Campus through development of operational complex and headquarters space in the northern portion of the East Campus and in the 9800 Troop Support Area.

Abstract: The DoD has considered implementation of the East Campus Integration Program (ECIP). The ECIP consists of construction and operation of approximately 2.9 million square feet of new facilities for operations and headquarters space, and demolition of 1.9 million square feet of buildings and infrastructure. The NSA would consolidate mission elements, which would enable grouping services and support services across the NSA Campus based on function; facilitate a more collaborative environment and optimal adjacencies; and provide administrative capacity for an increase of 7,200 personnel currently located offsite. The Proposed Action would also consist of infrastructure supporting the proposed operational complex and headquarters space, including electrical substation emergency generator capacity providing 121 megawatts of electricity; life-safety generators; building heating systems; utilities, including water, natural gas, and communications services; transportation infrastructure, including roads, parking structures, and sidewalks; and stormwater management facilities. Use of multi-level parking facilities were considered in lieu of surface parking.

The ECIP takes into account several factors, including mission requirements, the condition of current facilities (both on and off the NSA's Campus at Fort Meade), space planning, land availability, utility requirements, traffic and parking, and environmental impacts. A key factor is the mission co-location to provide a more efficient and effective work environment for mission-critical functions of the entire Intelligence Community.

The analysis in this EIS considers various alternatives to the Proposed Action, including the No Action Alternative, emergency power generation alternatives, building heating system alternatives, parking facility location alternatives, and location alternatives for the various proposed facilities.

For additional information, contact Mr. Jeffrey Williams, Office of Occupational Health, Environmental, and Safety Services, 9800 Savage Road, Suite 6218, Fort Meade, Maryland 20755, by telephone at 301-688-2970, or email at *jdwill2@nsa.gov*.

EXECUTIVE SUMMARY

Executive Summary

Introduction

This Environmental Impact Statement (EIS) has been prepared to address the proposal by the Department of Defense (DoD) for implementation of the East Campus Integration Program (ECIP) and the construction and operation of associated facilities for the National Security Agency (NSA) complex at Fort George G. Meade (Fort Meade), Maryland. The National Security Agency/Central Security Service (NSA/CSS) is an intelligence agency within the DoD. It is responsible for the collection and analysis of foreign communications and foreign signals intelligence. For NSA/CSS to continue leading the Intelligence Community into the next 50 years with state-of-the-art technologies and productivity, its mission elements require new, centralized facilities and infrastructure.

This EIS has been prepared through coordination with Federal and state agencies and will support DoD decisionmaking. This EIS identifies and assesses the potential impacts associated with the Proposed Action and has been prepared to fulfill the requirements of the National Environmental Policy Act of 1969 (NEPA).

Purpose and Need

DoD proposes to continue developing operational complex and headquarters space at the NSA's East Campus and the 9800 Troop Support Area on Fort Meade for use by the NSA and the Intelligence Community. The purpose of the Proposed Action is to provide facilities that are fully supportive of the Intelligence Community's function and to continue integrating the East Campus with the NSA Main Campus. The need for the action is to meet mission requirements, both internally at the NSA and within the Intelligence Community.

Scope of the Environmental Impact Statement

The scope of the analysis in this EIS includes evaluation of the Proposed Action and the range of alternatives and impacts in accordance with NEPA. The purpose of the EIS is to inform decisionmakers and the public of the likely environmental consequences of the Proposed Action and alternatives.

Interagency and Public Involvement

Agency and public participation in the NEPA process promotes open communication between the proponent and regulatory agencies, the public, and potential stakeholders. All persons and organizations having a potential interest in the Proposed Action are encouraged to participate in the public involvement process.

The DoD initiated the public scoping process for this EIS with the publication of the Notice of Intent to prepare an EIS (80 *Federal Register* 209) on January 5, 2015. A letter was also distributed at this time to approximately 100 potentially interested Federal, state, and local agencies; Native American tribes; and other stakeholder groups or individuals. Announcements were also published in the *Baltimore Sun* and the *Washington Post* on January 11, 2015, notifying the public of the intent to prepare an EIS, identifying the public scoping meeting date, and requesting scoping comments on the Proposed Action. The scoping

meeting was held on January 27, 2015, at the Severn Community Library near Fort Meade to provide a forum for the public and governmental and regulatory agencies to obtain information and to provide scoping comments. Scoping comments were officially accepted through February 27, 2015. All scoping comments received were considered during preparation of the Draft EIS. Substantive concerns identified during scoping included presence of and impacts on potential historic resources in the project area; impacts on the regional transportation network systems and a recommendation to conduct a traffic study, including identification of potential improvements; impacts on resources in the coastal zone; consideration of sustainable options; and impacts on National Park Service resources, including the Baltimore-Washington Parkway.

A Notice of Availability (NOA) for the Draft EIS was published in the *Federal Register* on July 8, 2016. The Draft EIS was circulated to 106 potentially interested parties, including 46 Federal, state, and local agencies having jurisdiction by law or special subject matter expertise and to any person, organization, stakeholder group, or agency that requested a copy. Additionally, 20 interested parties, including 4 agencies, requested copies during the public review period for the Draft EIS. A public meeting was held on August 3, 2016, at the Severn Community Library near Fort Meade to offer a forum for providing information to the public and agencies and for receiving comments. The meeting was advertised in the *Baltimore Sun* and the *Washington Post* on July 10, 2016. The public meeting was attended by approximately 15 individuals. The Draft EIS public comment period was open through August 22, 2016. In total, 19 sets of comments were received during the public comment period for the Draft EIS.

Description of the Proposed Action

The DoD proposes to continue integrating the NSA East Campus with the NSA Main Campus through implementation of the ECIP, which would develop operational complex and headquarters space in the northern portion of the East Campus and in the 9800 Troop Support Area (i.e., the Proposed Action).

The Proposed Action entails construction and operation of 2,880,000 square feet (ft^2) of new operational complex and headquarters space consisting of five buildings and supporting infrastructure within the 150-acre ECIP project area, and demolition of approximately 1.9 million ft^2 of buildings and infrastructure on the NSA Main Campus (1,291,206 ft^2) and the 9800 Troop Support Area (592,269 ft^2). The ECIP project area includes the locations being considered for development of operations and headquarters space; some parking facility location alternatives and locations of buildings proposed for demolition are outside of this project area. The proposed infrastructure would include electrical substation emergency generator capacity providing 121 megawatts (MW) of electricity; life-safety generators; building heating systems; utilities, including water, natural gas, and communications services; transportation infrastructure, including roads, parking structures, and sidewalks; and stormwater management facilities. Additionally, use of multi-level parking facilities would be considered in lieu of surface parking.

The DoD proposes to develop the ECIP over a period of approximately 10 years (fiscal year [FY] 2019 to 2029).

Alternatives Analysis

This EIS considers various alternatives to the Proposed Action consisting of operational/headquarters complex location alternatives, emergency power generation alternatives, building heating system alternatives, parking facility location alternatives, and the No Action Alternative. Details on the alternatives carried forward for further detailed analysis in this EIS are provided in the subsections that follow.

Operational/Headquarters Complex Location Alternatives

Location Alterative on Fort Meade

Continued development and expansion of the NSA Campus would occur in the northern portion of the East Campus and the 9800 Troop Support Area. This alternative is the Proposed Action.

Location Alternatives Outside of Fort Meade

Alternative sites outside of Fort Meade are being considered to allow for planning flexibility in the event that the 9800 Troop Support Area is not available in the future for the ECIP. Under these alternatives, Building 9800A on the NSA Main Campus and all nine buildings in the 9800 Troop Support Area would not be demolished; and no proposed facilities would be constructed in the 9800 Troop Support Area. These alternatives are assumed to require space sufficient for 4,400 personnel that would relocate from space vacated by demolition of buildings on the NSA Main Campus and terminating leases at some leased Intelligence Community space in the Baltimore-Washington metropolitan area. Under these alternatives, a total of 81 MW of onsite emergency power generation would be required. Life-safety generators would also be installed onsite. Construction of an 800,000-ft^2 building, other smaller buildings, and associated parking facilities on the northern portion of the East Campus would still occur under these alternatives.

National Business Park/East Campus (Alternative 1). Personnel and functions proposed to be located in the ECIP project area would instead occur in a leased administrative facility at National Business Park, which is on the west side of the Baltimore-Washington Parkway. This alternative would involve leasing existing or newly constructed Unified Facilities Criteria-qualified buildings at the northern end of National Business Park. The buildings would consist of up to 1 million ft^2 of space. The leased facilities would already have been constructed. Any environmental requirements and permits would have been the responsibility of the facility developers and owners, and are assumed to have been complied with and obtained prior to formal leasing arrangements.

Annapolis Junction Business Park/East Campus (Alternative 2). Under this alternative, personnel and functions would occur in a leased administrative facility at the southern end of Dorsey Run Road in Annapolis Junction Business Park. Facility and leasing requirements would be similar to those discussed under National Business Park.

Parking Facility Location Alternatives

The Proposed Action would require additional parking to accommodate the increase of personnel on the East Campus. The amount of parking that would be constructed is based on the assumed capacity required for full occupancy of the proposed buildings. The exact space requirements will become more

refined as the detailed design process progresses. However, because the existing NSA Campus has limited developable land, multi-level (i.e., at least four levels) parking structures are being considered in lieu of surface parking.

The DoD considered several locations for the proposed parking facilities, and identified criteria to compare and determine the feasibility of parking facility location alternatives. For a location to be considered reasonable, it must have sufficient square footage to accommodate required project components, avoid disturbing environmentally sensitive areas, minimize impacts on adjacent land uses, minimize the distance employees would have to walk, and be cost-effective. Four parking location alternatives were identified as meeting these criteria. Depending on which operational/headquarters location alternative would be implemented, at least three of the parking facility location alternatives would be constructed if the ECIP is fully implemented. At least one of the parking facility location alternatives would be constructed if off-post alternative(s) were implemented. Following are the location alternatives for the proposed parking facilities for the ECIP.

East Campus Parking Structure 2. The East Campus Parking Structure 2 would be located in the northeastern portion of the East Campus between Rockenbach Road and Venona Road, which is a road under construction that would generally run west-east through the northern portion of the East Campus.

Bravo Parking Lot. The Bravo parking lot is a 4.5-acre, surface parking lot on the NSA Main Campus. It is located south of the 9800 Troop Support Area at the southeastern corner of Emory Road and Wenger Road. The Bravo parking lot would be demolished and a multi-level parking facility would be constructed on all or part of the site.

N8/N9 Parking Lot. The N8/N9 parking lot is a 7.1-acre surface parking lot on the NSA Main Campus located northwest of the intersection of Canine Road (access point to Maryland State Route [MD] 32) and Connector Road (access point to the Baltimore-Washington Parkway). All or part of this lot could be redeveloped as a parking facility.

Building 9817. Building 9817 is proposed for demolition as part of the Proposed Action. It is located on the NSA Main Campus, on the northern side of Erskine Road and bordered by Canine Road to the west and Wenger Road to the east. Following demolition of Building 9817, a parking facility could be constructed on all or part of the 8.2-acre footprint.

Emergency Power Generation Alternatives

The DoD proposes to construct 121 MW of emergency generator facilities to ensure a redundant power supply for the proposed facilities. Alternatives to supply emergency power that were considered to be potentially viable included generators, combustion turbines, a combination of generators and combustion turbines, and microturbines.

The DoD identified operational, environmental, and economic evaluation criteria to compare alternative methods of providing emergency power. For an emergency power system to be considered reasonable, at a minimum, it must meet the following five operational criteria: proven and commercially available technology, reliable equipment, sufficient start-up time, sufficient energy output, and integrates with existing emergency generators. Any alternative DoD selects would need to comply with Federal policy for energy efficiency and cost effectiveness in accordance with the Energy Independence and Security Act, Executive Order (EO) 13221, *Energy Efficient Standby Power Devices*, EO 13693, *Planning for*

Federal Sustainability in the Next Decade, and the DoD Sustainable Buildings Policy requirements. Therefore, in addition to the operational evaluation criteria, each emergency power generation technology was screened based on the following four environmental and economic evaluation criteria: limiting air emissions, physical space requirements, cost effectiveness, and energy efficiency. **Table ES-1** compares the evaluation criteria ratings among generators, combustion turbines, microturbines, and a hybrid emergency power generation system. Based on the information shown in the table, only the generator and the combined generator and combustion turbine alternatives were carried forward for further detailed analysis in this EIS.

Table ES-1. Comparison of Emergency Power Generation System Alternatives

	Operational Evaluation Criteria						**Environmental and Economic Evaluation Criteria**				
Emergency Power Generation System	**Proven and commercially available technology**	**Reliable equipment**	**Sufficient start-up**	**Sufficient energy output**	**Integrates with existing generator plants**	**Meets Evaluation Criteria**	**Limiting air emissions**	**Physical space requirements**	**Cost effectiveness**	**Energy efficiency**	**Alternative Scoring[1]**
Generators	Yes	Yes	Yes	Yes	Yes	**Yes**	1	2	2	1	**6**
Combustion turbines	Yes	Yes	Yes	Yes	No	**No**	4	4	4	4	**16**
Generators and combustion turbines	Yes	Yes	Yes	Yes	Yes	**Yes**	2	3	3	2	**10**
Microturbines	No	No	Yes	Yes	Yes	**No**	3	1	1	3	**8**

Note:

1. Systems are ranked 1-4. Higher numbers reflect better criteria scores.

Building Heating System Alternatives

The DoD would install heating systems for the proposed 2.9 million ft^2 of operations and headquarters space. Alternatives for building heating systems considered include packaged boilers, ground source heat pumps (GSHPs), and a hybrid heating system consisting of both boilers and GSHPs. The DoD identified operational, environmental, and economic evaluation criteria to compare alternative methods of providing building heating. For a building heating system to be considered reasonable, at minimum, it must meet the following three operational criteria: proven and commercially available technology, reliable equipment, and sufficient heat output. Any alternative DoD selects would need to comply with Federal policy for energy efficiency and cost effectiveness in accordance with EO 13693. Therefore, in addition to the operational evaluation criteria, each building heating system technology was screened based on the following four environmental and economic evaluation criteria: limiting air emissions, physical space requirements, cost effectiveness, and energy efficiency. **Table ES-2** compares stand-alone packaged boilers, stand-alone GSHPs, and a hybrid heating system consisting of boilers and GSHPs to all evaluation criteria outlined above. Based on the information shown in the table, only the packaged boiler and hybrid building heating system alternatives were carried forward for analysis in the EIS.

Table ES-2. Comparison of Building Heating System Alternatives

	Operational Evaluation Criteria				Environmental and Economic Evaluation Criteria				
Building Heating System	**Proven and commercially available technology**	**Reliable equipment**	**Sufficient heat output**	**Meets Evaluation Criteria**	**Limiting air emissions**	**Physical space requirements**	**Cost effectiveness**	**Energy efficiency**	**Alternative Scoring[1]**
Packaged Boilers	Yes	Yes	Yes	**Yes**	1	3	3	1	**8**
GSHPs	Yes	Yes	No	**No**	3	1	1	3	**8**
Hybrid System	Yes	Yes	Yes	**Yes**	2	2	2	2	**8**

Note:
1. Systems are ranked 1-3. Higher numbers reflect better criteria scores.

No Action Alternative

Council on Environmental Quality regulations specify the inclusion of the No Action Alternative in the alternatives analysis of an EIS (40 Code of Federal Regulations 1502.14). Because DoD has identified a need for the Proposed Action (i.e., to meet mission requirements of the NSA and Intelligence Community), it is understood that taking no action does not meet the project purpose and need. The No Action Alternative is analyzed to provide a baseline of the existing conditions against which potential environmental and socioeconomic impacts of the Proposed Action and alternative actions can be compared. Under the No Action Alternative, DoD would not construct and operate approximately 2.9 million ft^2 of operations and headquarters facilities on the northern portion of the East Campus and the 9800 Troop Support Area. The baseline for the No Action Alternative includes build-out of the 1.8 million ft^2 of facilities, electrical substation and generator plants providing 50 MW of electricity, and 6,500 NSA personnel in the southern portion of the NSA East Campus, as discussed in the Record of Decision for the 2010 *Final Environmental Impact Statement Addressing Campus Development at Fort George G. Meade, Maryland*. NSA/CSS operations and similar or related operations of other Intelligence Community agencies would continue at their present locations.

Summary of Environmental Impacts

The level of environmental impacts potentially resulting from the Proposed Action and alternatives would primarily be dependent on the alternative ultimately selected. **Table ES-3** summarizes the potential impacts from the Proposed Action and each alternative. Environmental impacts would generally be slightly more adverse for the Proposed Action than for Alternatives 1 and 2 due to the larger building footprints and number of additional personnel associated with the Proposed Action, although facilities and personnel would be consolidated in one location under the Proposed Action. This tabular summary of potential environmental impacts focuses on those impacts that are considered to be more adverse and limits discussions of minor, adverse impacts that would be expected from construction. Generally,

construction and demolition would result in some ground disturbance and increased traffic congestion at intersections near the installation and proximal to the build sites, which would be expected regardless of the alternative selected.

Best Management Practices and Mitigation Measures

The Proposed Action has the potential to result in adverse environmental impacts. The Proposed Action includes best management practices (BMPs), mitigation measures, and design concepts to avoid adverse impacts to the extent practicable (see **Table ES-4**). Unavoidable impacts would be minimized or compensated for to the extent practicable. In accordance with Council on Environmental Quality regulations, mitigation measures are considered for adverse environmental impacts. Once a particular impact associated with a proposed action is considered significant, then mitigation measures are developed where it is feasible to do so.

Table ES-3. Summary of Environmental Impacts from the Proposed Action and Alternatives

Resource Area	Proposed Action	Alternative 1	Alternative 2	No Action Alternative
Land Use	Short- to long-term, minor, adverse impacts would be expected from increased construction disturbances and conversion of open space. Long-term, beneficial impacts would be expected from consistency with the *NSA-Washington (NSAW) Facilities Master Plan* and consolidating NSA mission functions. No impacts on land uses outside of Fort Meade would be expected due to the distance between the ECIP project area and off-installation land uses. Short- and long-term, minor, adverse impacts on visual resources due to construction activities and development of open space.	No impacts on land use would occur as a result of operations at National Business Park because NSA would lease already-constructed buildings that are compatible with adjacent land uses and consistent with local land use plans. Negligible impacts on visual resources because the site would change from a largely undeveloped forested area to a business park. Impacts from proposed facilities in the northern portion of the East Campus would be similar to those discussed under the Proposed Action.	Impacts would be similar to those discussed under Alternative 1.	Long-term, negligible to minor, adverse impacts on land use would occur from not developing the NSA East Campus and redeveloping the 9800 Troop Support Area, which would be inconsistent with the *NSAW Facilities Master Plan*.
Transportation	Long-term, major, adverse impacts on levels of service (LOS) at intersections on and adjacent to Fort Meade, external gates, and vehicle control points (VCPs). However, traffic impacts would be above and beyond impacts already considered major under the existing conditions, as LOS values in general are already degraded. Greatest difference in LOS would occur at the intersections of MD 175 and Reece Road, and VCPs 3, 4, and 5.	Minor impacts on intersections adjacent to Fort Meade, external gates, and VCPs. Major, adverse impact on MD 175 and Brock Bridge Road intersection.	Minor impacts on intersections adjacent to Fort Meade, external gates, and VCPs. Greatest adverse impact would occur at the intersection of Dorsey Run and Junction Drive, although this intersection already operates at LOS F under existing conditions.	Major impacts from existing conditions coupled with degraded LOS values as a result of a calculated 7 percent growth rate between 2015 and 2029.

Resource Area	Proposed Action	Alternative 1	Alternative 2	No Action Alternative
Noise	Short-and long-term, negligible to moderate, adverse impacts would be expected. Temporary impacts from noise from construction and demolition activities over 10 years of development would occur. Long-term, negligible to minor, adverse impacts would result from operation of the emergency power generation system.	Short- and long- term, negligible to minor, adverse impacts on the existing noise environment of the National Business Park and surrounding area from construction and operation of the emergency power generation system would be expected. Impacts from proposed facilities in the northern portion of the East Campus would be similar to those discussed under the Proposed Action.	Impacts would be similar to, but slightly less than those discussed under Alternative 1, because there would be less impact on sensitive noise receptors.	No impacts on the existing noise environment would be expected.
Air Quality	Short- and long-term, minor, adverse impacts on air quality from air emissions generated during construction and demolition activities, and operation of boilers and emergency generators.	Impacts would be similar to but less than those discussed under the Proposed Action due to lower emergency generator requirements.	Impacts would be similar to but less than those discussed under the Proposed Action due to lower emergency generator requirements.	No impacts on air quality would be expected.
Geological Resources	Short-and long-term, minor to moderate, adverse impacts on geological resources. Impacts on soils would be minor to moderate due to increased erosion and sedimentation; however, these impacts would be minimized through use of appropriate BMPs.	Short- and long-term, negligible to minor, adverse impacts would occur on geological resources at the National Business Park for reasons similar to those discussed under the Proposed Action.	Impacts would be similar to, but slightly greater, than those discussed under Alternative 1. Prime farmland occurs at Annapolis Junction Business Park, but the site is already planned for private development; therefore no impacts on prime farmland would occur because private entities are not subject to the Farmland Protection Policy Act.	No impacts on geological resources would be expected.

Resource Area	Proposed Action	Alternative 1	Alternative 2	No Action Alternative
Water Resources	Short- and long-term, negligible to minor, adverse impacts on water resources due to sedimentation and erosion from construction and demolition activities. Potential impacts on surface water, groundwater quality, and the coastal zone would be reduced through implementation of environmental site design and BMPs. Post-development hydrology must meet pre-development hydrology and stormwater management would be incorporated as required by Federal and state regulations; therefore, operations under the Proposed Action would have no impacts on water resources. No impacts on floodplains would be expected.	Long-term, negligible to minor, adverse impacts on surface water and groundwater quality as a result of soil disturbance at National Business Park. These impacts would be minimized through implementation of applicable Federal and state stormwater management requirements and adherence to stormwater pollution prevention BMPs. Impacts on the coastal zone would be similar to the Proposed Action. No impacts on floodplains would be expected. Impacts from proposed facilities in the northern portion of the East Campus would be the same as those discussed under the Proposed Action.	Impacts would be similar to those discussed under Alternative 1.	No new impacts on water resources would be expected.

Resource Area	Proposed Action	Alternative 1	Alternative 2	No Action Alternative
Biological Resources	Long-term, minor, adverse impacts on vegetation would be expected from clearing and grading of the forested areas at the ECIP project area. Short-term, negligible to minor, indirect, adverse impacts on wetlands could result from sedimentation from construction activities that would occur outside a 100-foot buffer of wetland limits. Implementation of sediment/erosion controls and stormwater management practices would minimize the potential for indirect impacts. Short-term, minor, adverse impacts on wildlife would be expected from temporary noise disturbances associated with construction activities. Long-term, minor, adverse impacts on wildlife would occur from the potential mortality of terrestrial species during construction activities and the permanent loss of potential habitat. Because no tree clearing would occur during the active season, U.S. Fish and Wildlife Service (USFWS) issued concurrence that the Proposed Action would not likely adversely affect the federally-listed northern long-eared bat.	Short- and long-term, negligible to minor, adverse impacts on biological resources at the National Business Park for reasons similar to those discussed under the Proposed Action.	Impacts would be similar to those discussed under Alternative 1.	No impacts on biological resources would be expected.

Resource Area	Proposed Action	Alternative 1	Alternative 2	No Action Alternative
Cultural Resources	A major impact on architectural resources would be expected. Two buildings in the Area of Potential Effect, Buildings 9800 and 9800A, have been determined eligible for the National Register of Historic Places. Demolition of Building 9800A would result in an adverse effect under Section 106 of the National Historic Preservation Act. There would be no adverse effect on Building 9800. No impacts on previously identified archaeological resources would be expected.	No major impacts on any previously identified archaeological or architectural resources would be expected at National Business Park or the NSA Campus. The site owner would be responsible for regulatory compliance regarding construction of facilities at National Business Park and any potential impact or adverse affect on the Clark/Vogel house, which is eligible for the National Register of Historic Places.	Impacts would be similar to those discussed under Alternative 1.	No impacts on cultural resources would be expected.
Infrastructure	Short-term, negligible to moderate, adverse impacts on utilities are anticipated during construction activities. Infrastructure expansion would generally also provide long-term benefits by creating new energy-efficient utilities, and provide necessary redundancy.	Similar, but less, impacts as the Proposed Action would be expected.	Impacts would be the same as those discussed under Alternative 1.	No impacts on infrastructure would be expected.

Resource Area	Proposed Action	Alternative 1	Alternative 2	No Action Alternative
Sustainability	Short- and long-term, minor to moderate, beneficial impacts on air and water quality through implementation of sustainable design strategies to reduce air emissions and stormwater runoff. Beneficial impacts on resource demands through innovative technologies that enable reduced consumption through recycling and reuse of water, reduced consumption of energy, and renewable generation of energy. Improved efficiency and reduced waste generation and use of landfills through repurposing and recycling.	Short- and long-term, minor, beneficial impacts from use of energy and water efficient technologies. However, the buildings would have been designed and constructed prior to NSA's occupancy, and it is likely that incorporation of sustainable design strategies, would be limited as compared to the extent it would occur under the Proposed Action. Impacts from proposed facilities in the northern portion of the East Campus would be the same as those discussed under the Proposed Action.	Impacts would be the same as those discussed under Alternative 1.	Long-term, beneficial impacts on sustainability would be expected due to maintaining the status quo of upgrading existing facilities to be energy efficient where possible, although impacts would be less than under the Proposed Action.
Hazardous Materials and Wastes	Short- and long-term, negligible, adverse impacts would occur from the use of hazardous materials and petroleum products and the generation of hazardous wastes during construction, demolition, and operational activities. Beneficial impacts would occur from the demolition of the buildings because they likely contain asbestos-containing material, lead-based paint, and polychlorinated biphenyls. Short-term, minor, adverse impacts would occur during the land-clearing, excavation, and grading phases of construction because of overlap with a former training range which is managed with land use controls.	Long-term, negligible, adverse impacts would occur from the use of hazardous materials and petroleum products and the generation of hazardous wastes at the National Business Park. Impacts from proposed facilities in the northern portion of the East Campus would be the same as those discussed under the Proposed Action.	Impacts would be similar to those discussed under Alternative 1.	No impacts on hazardous materials and wastes would be expected.

Resource Area	Proposed Action	Alternative 1	Alternative 2	No Action Alternative
Socioeconomics and Environmental Justice	Short- and long-term, moderate, beneficial impacts on the local economy from construction expenditures and increased need for construction workers and services. Negligible, adverse impacts on housing and schools because most personnel and construction workers would be local residents. Short-term, negligible, adverse impacts on the commercial real estate market due to vacating leases for approximately 1.9 million ft^2 of office space. Long-term, minor, adverse impacts on police and fire services due to increased traffic incidents. No disproportionate impacts on minority or low-income populations.	Negligible, beneficial impacts on the local economy from purchase of goods during construction and operation of facilities at the National Business Park. Impacts from construction and operation of proposed facilities in the northern portion of the East Campus would be similar to, but less than, those discussed under the Proposed Action. No impacts on minority and low-income populations.	Impacts would be similar to those discussed under Alternative 1.	No impacts on socioeconomics or environmental justice would be expected.

Table ES-4. Proposed BMPs, Mitigation, and Environmental Protection Measures

Resource Area	Proposed Measures
Land Use	• In accordance with the *NSAW Facilities Master Plan*, construct appropriately-sized and -utilized buildings that are sited and arranged around open green spaces in an environmentally sustainable manner that will result in an aesthetically pleasing working environment in high-quality, flexible facilities. • Contribute to optimized efficiency by considering walk and bike pathways, shelter, travel distances, centralized commons activities, and how employee amenities come together to minimize the location of people, computing infrastructure, and industrial uses in the same space. • If GSHPs are installed as part of the hybrid building heating system, open space or secondary land uses (e.g., small roadway, setback/buffer areas, or environmental site design [ESD]) would most likely be sited on well fields. • Sustainability features would be incorporated into the building and infrastructure design.
Transportation	• Signal Warrant Analysis o Conduct an additional signal warrant analysis on the intersections in and around the proposed development after parking facility locations have been selected to improve efficiency. o Optimize/interconnect existing and proposed signals along MD 175, Rockenbach Road, Canine Road, and other corridors as a result of the signal warrant analysis. • Signal Timing Study – Conduct a signal timing study to help increase efficiency of all signalized intersections. • Installation Access Study – Under the Proposed Action, the external gates and VCPs continue to experience or degrade to unacceptable LOS. o Conduct a study to determine which external gates and VCPs are predominantly used and why following implementation of the Proposed Action. o Identify commuter trends and inefficient routes. o Assess gate upgrades or widening at heavily used external gates/VCPs. o Investigate adding proper/additional signage along external roadways to direct traffic to appropriate lanes and external gates/VCPs to best suit their destination on the installation. • Bike/Pedestrian Accessibility Study – Under the Proposed Action, the volume and clustering of pedestrians in certain areas is expected to rise with the addition of several multi-level parking facilities and an increase in campus population. o Identify locations for construction and use of additional, continuous, and Americans with Disabilities Act-compliant bike/pedestrian facilities. o Address NSA's bike share program and any proposed infrastructure improvements external to the installation and the associated impacts on commuters biking to Fort Meade. o Recommend biking/pedestrian travel paths to reduce vehicular traffic by diverting commuters from driving to biking or walking. Well-defined walkways and crosswalks could also reduce the risk of pedestrian/vehicular accidents.

Resource Area	Proposed Measures

	• Roadway Improvements
	  o Improve the intersections of Canine Road at Rockenbach Road, Emory Road, and Samford Road to address increased traffic between the current campus and the East Campus and safer access to parking areas. Improvements include new turning lanes and widening of existing turning lanes (NSA 2013a).
	  o Improve external roadways in coordination with other agencies.
	• Bus/Shuttles
	  o Modify existing on-installation routes, including extending routes with additional stops in the ECIP project area.
	  o Add new on-installation routes, particularly those servicing the ECIP project area. Potential new routes would be driven by the selection of parking facilities under the Proposed Action. Transit would occur via hybrid fuel buses and potentially streetcar, depending on further study of usage levels (NSA 2013a).
	  o Partner with Anne Arundel and Howard counties, and transit agencies to continue infrastructure developments and potential incentive programs for carpool/vanpool participants.
	• Promotion of additional alternative commute options to reduce single occupancy vehicle commuting.
	  o Encourage increased use of the Maryland Area Rail Commuter train system.
	  o Provide more shuttle buses to and from the NSA and East campuses if practicable.
	  o Contribute to improvements that would make biking and walking to and from the NSA and East campuses safer and more attractive. These improvements would include:
	  ▪ Direct pedestrian and bicycle access from the Odenton Maryland Area Rail Commuter station to nearby VCPs.
	  ▪ Secure bicycle parking.
	  ▪ Coordination of off-site bike commuter improvements with the Maryland State Highway Administration and with Howard and Anne Arundel counties.

Noise	• Using the best available noise-control techniques (i.e., improved mufflers, equipment redesign, intake silencers, ducts, and engine enclosures and noise-attenuating shields or shrouds on all equipment and trucks) could mitigate noise impacts. • In accordance with the standards and general exemptions provided in the Code of Maryland Regulations (COMAR) 26.02.03, construction activities, including pile-driving, would occur within specified and approved times and could be restricted due to proximity of residential areas.

Resource Area	Proposed Measures
Air Quality	• Implement energy-efficient electrical generation and pollution-control systems to reduce air emissions. • Construction activities would be accomplished in full compliance with State of Maryland regulatory requirements for control of air pollution through the use of compliant practices or products. • Implement fugitive dust-control measures (e.g., wind breaks and barriers, control of vehicle access). • Construction and demolition equipment would be properly tuned and maintained prior to and during construction and demolition activities. • Implement water efficiency and sustainable design strategies and the emergency power generation alternative as safeguards against the effects of climate change.
Geological Resources	• Develop and implement an erosion-and-sediment-control plan for the Proposed Action. • Use BMPs as required by State of Maryland storm water regulations to minimize soil erosion, including installing silt fencing and sediment traps, applying water to disturbed soil, and revegetating disturbed areas as soon as possible after disturbance, as appropriate. • Any removed soils would be managed onsite and incorporated into the design plan, if appropriate. If soils cannot be maintained onsite, they would be transferred to another user for construction or other purposes. • Site specific soils surveys should be conducted prior to implementation of the Proposed Action to determine the breadth and severity of any engineering limitations.

Resource Area	Proposed Measures
Water Resources	• Adhere to the General Performance Standards for Stormwater Management in Maryland, outlined in the *Maryland Stormwater Design Manual* and Supplement No. 1, which apply to any construction activity disturbing 5,000 ft^2 or more of earth and consist of development of ESD and any necessary BMPs to meet these performance standards. • Maintain or restore, to the maximum extent technically feasible, the predevelopment hydrology of the property. • Implement nonstructural storm water management techniques (e.g., filter strips, buffers, and disconnection of rooftops) per State of Maryland regulations, NSA design standards, and using low-impact, ESD, and structural measures (e.g., bioretention areas) to promote natural and sustainable water management, as appropriate. • An erosion-and-sediment-control plan would be required for the Proposed Action per Erosion and Sediment Control Regulations (COMAR 26.17.01) and Stormwater Management Regulations (COMAR 26.17.02). Erosion and sediment control BMPs would be designed and implemented according to the *2015 Maryland Stormwater Management and Erosion & Sediment Control Guidelines for State and Federal Projects*. • Perform construction and demolition activities in State of Maryland-designated redevelopment areas, as defined in COMAR 26.17.02, in accordance the *Maryland Stormwater Management and Erosion & Sediment Control Guidelines for State and Federal Projects* to minimize impacts on stormwater management. • Implement BMPs outlined in the Spill Prevention, Control, and Countermeasure (SPCC) Plan and comply with the SPCC Rule (40 Code of Federal Regulations 112) and existing groundwater protection protocols as required under the Safe Drinking Water Act. • Implement BMPs outlined in the Stormwater Pollution Prevention Plan to ensure that soils disturbed during construction and demolition activities do not pollute nearby water bodies. • All construction equipment would be maintained according to the manufacturer's specifications and all fuels and other potentially hazardous materials would be contained and stored appropriately. • In the event of a spill during construction or operation, procedures outlined in NSA's Spill Contingency Plan, Facility Response Plan, and SPCC Plan would be followed to contain and clean up a spill quickly. • Adhere to all Federal and state permit requirements to protect coastal and marine resources and wetland areas relating to the Coastal Zone Management Program, including forest resources to be managed per the Fort Meade forest conservation program in accordance with the DoD Coastal Zone Management Act Memorandum of Understanding with the State of Maryland.

Resource Area	Proposed Measures
Biological Resources	• In keeping with the Maryland Forest Conservation Act, NSA would develop a forest management and reforestation plan to preserve or reforest acreage equal to 20 percent of the total area developed on the East Campus in accordance with the Fort Meade Forest Conservation Act and Tree Management Policy. Reforestation would occur on-site or nearby, excluding landscaping. If this is not possible, then alternative sites would be designated for reforestation. • To minimize introduction and spread of invasive plant species: inspect and clean construction equipment to remove soil, plants, and seeds; ensure all fill is as free of nonnative plant propagules, as practicable; and revegetate disturbed areas with native plant species. • Implement BMPs to minimize soil disturbance, and control erosion and sedimentation during demolition and construction to minimize the potential for indirect impacts on wetlands and their 100-foot buffers. • Trees would not be cleared during the active season for northern long-eared bat (April 15–August 30). If there is a need to remove more than 1 acre of trees during the active season, the USFWS Chesapeake Bay Field Office and Fort Meade Environmental Division should be consulted to evaluate potential effects. • Avoid clearing trees during the bird nesting season (typically spring months). • If tree clearing cannot avoid the nesting season, conduct pre-construction surveys to identify and avoid active nests. • Train construction workers to identify and avoid active nests.
Cultural Resources	• Development of a Memorandum of Agreement with the Maryland Historical Trust identifying appropriate mitigation for demolition of Building 9800A is currently underway. • If construction or design plans are changed to incorporate any alterations to Building 9800, the Maryland Historical Trust should be consulted to ensure there are no adverse effects to the historic property.
Infrastructure	• Stormwater would be sized and designed to comply with state and Federal regulations and guidelines. • Implement sustainable designs to minimize impacts on stormwater drainage systems. • Construction contractors would be informed of utility locations prior to any ground-disturbing activities that could result in unintended utility disruptions or human safety hazards. • All construction would be conducted in accordance with Federal and state safety guidelines. • Any permits required for excavation and trenching would be obtained prior to the commencement of construction activities. • All solid waste would be recycled to the maximum extent feasible in accordance with the NSA's waste contracts.

Resource Area	Proposed Measures
Sustainability	• To promote sustainability, the following practices and design factors could be implemented: design that considers building orientation, shape, footprint, and position for optimized efficiency; daylighting and shading for reduced heating and cooling requirements; connectivity with other facilities; preservation of open space; multi-level structures and optimized parking designs; procurement and use of recycled, repurposed, and locally produced materials; water and energy management strategies and technologies to promote reduced consumption and improved use-efficiency; proper orientation of outdoor lighting for reduced light pollution; use of on-site renewable technologies; alternative energy technologies; and purchase of renewable energy, where feasible. • Incorporate sustainability site design (e.g., ESD and low-impact design) to meet the building efficiency and performance requirements per EO 13693.
Hazardous Materials and Wastes	• Any hazardous materials, petroleum products, or hazardous wastes currently stored within the footprint of construction or demolition would be removed and properly disposed. • All hazardous materials, petroleum products, and hazardous wastes associated with the Proposed Action would be managed in accordance with applicable NSA and appropriate U.S. Army regulations. • Preparation of a health and safety plan by the contractor prior to commencement of construction and demolition activities. • Should any ordnance be encountered, or soil or groundwater that is believed to be contaminated be discovered during the work activities, the contractor would be required to immediately stop work, report the discovery to the installation, and implement appropriate safety measures. All ordnance would be collected and disposed of in accordance with Federal and U.S. Army regulations by trained and certified personnel. Commencement of field activities would not continue in that area until the issue was resolved. • All permanent storage tanks would be used with appropriate BMPs, such as secondary containment systems, leak detection systems, and alarm systems, and adhere to the NSA's Hazardous Materials Management Program to ensure that contamination from a spill would not occur. If a spill occurs, NSA's SPCC Plan and Facility Response Plan outline the appropriate measures for spill situations. • Demolition contractors would wear appropriate personal protective equipment and would be required to adhere to all Federal, state, and local regulations and the installation's Asbestos Management Program and Lead Hazard Management Plan.
Socioeconomics and Environmental Justice	• No environmental protection measures have been identified for socioeconomic resources and environmental justice.

TABLE OF CONTENTS

FINAL
ENVIRONMENTAL IMPACT STATEMENT
FOR THE
EAST CAMPUS INTEGRATION PROGRAM
FORT MEADE, MARYLAND

TABLE OF CONTENTS

APPENDICES

FIGURES

TABLES

ACRONYMS AND ABBREVIATIONS

$\mu g/m^3$	micrograms per cubic meter
ACM	asbestos-containing material
ADT	average daily traffic
AFSA	Armed Forces Security Agency
AOI	area of interest
APE	Area of Potential Effect
AQCR	air quality control region
ASHRAE	American Society of Heating, Refrigerating, and Air Conditioning Engineers
AST	aboveground storage tank
ATR	automated traffic recorder
BACT	Best Available Control Technology
BGE	Baltimore Gas and Electric
BMP	best management practice
BP	before present
BRAC	Base Realignment and Closure
BRTB	Baltimore Region Transportation Board
Btu	British thermal unit
BWI	Baltimore-Washington International
CAA	Clean Air Act
CCEI	Cyber Center for Education and Innovation
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CH_4	methane natural gas
CO	Carbon monoxide
CO_2e	carbon dioxide equivalent
COMAR	Code of Maryland Regulations
COMINT	Communications Intelligence
CPCN	Certificate of Public Convenience and Necessity
CWA	Clean Water Act
CZMA	Coastal Zone Management Act
CZMP	Coastal Zone Management Program
dB	decibel
dBA	A-weighted decibel
dbh	diameter at breast height
DNL	Day-Night-Average A-weighted Noise Level
DoD	Department of Defense
DOL	Directorate of Logistics
DPW	Directorate of Public Works
ECB	East Campus Building
ECIP	East Campus Integration Program
ECPS	East Campus Parking Structure
EFTSP	emission factor total suspended particles
EFVOC	emission factor volatile organic compounds
EIS	Environmental Impact Statement
EISA	Energy Independence and Security Act
EO	Executive Order
EPACT	Energy Policy Act
ESA	Endangered Species Act
ESCP	Erosion-and-sediment-control plan
ESD	environmental site design
°F	degrees Fahrenheit
FCA	Maryland Forest Conservation Act
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FPPA	Farmland Protection Policy Act
FR	Federal Register
FRP	Facility Response Plan
FSD	Forest Stand Delineation
ft^2	square feet/foot
FY	fiscal year
g/hphr	grams per brake horsepower hour
GHG	Greenhouse gas
GSHP	ground source heat pump
HAP	hazardous air pollutant
HCM	Highway Construction Manual
hp	horsepower
HUD	U.S. Department of Housing and Urban Development
HVAC	heating, ventilation, and air conditioning
IPAC	Information, Planning, and Conservation
IMCOM	Installation Management Command
kW	kilowatt
L_{eq}	equivalent continuous noise level
LBP	lead-based paint
lb	pound
LEED	Leadership in Energy and Environmental Design
LOS	level of service
MACT	Maximum Achievable Control Technology
MARC	Maryland Area Rail Commuter

MBTA	Migratory Bird Treat Act
MDE	Maryland Department of the Environment
MDNR	Maryland Department of Natural Resources
mgd	million gallons per day
MHT	Maryland Historical Trust
mm	millimeters
MMBtu/hr	British thermal units per hour
MOU	Memorandum of Understanding
mph	miles per hour
MPSC	Maryland Public Service Commission
MRA	Munitions Response Area
MRR	Mandatory Reporting of GHGs Rule
MRS	Munitions Response Site
MSAT	Mobile Source Air Toxic
MW	megawatt(s)
MS4	Municipal Separate Storm Sewer System
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NESHAP	National Emission Standards for Hazardous Air Pollutants
NHPA	National Historic Preservation Act
NO_x	nitrogen oxides
NOA	Notice of Availability
NOAA	National Oceanic and Atmospheric Administration
NNSR	Nonattainment New Source Review
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NSA	National Security Agency
NSA/CSS	National Security Agency/Central Security Service
NSAW	National Security Agency-Washington
NSR	New Source Review
NSPS	New Source Performance Standards
O_3	ozone
PCBs	polychlorinated biphenyls
Pd	*Pseudogymnoascus destructans*
percent g	percentage of the force of gravity
PHF	peak hour factor
$PM_{2.5}$	particulate matter less than or equal to 2.5 micrometers
PM_{10}	particulate matter less than 10 microns
ppb	parts per billion
ppm	parts per million
PSD	Prevention of Significant Deterioration
PTE	Potential to Emit
RCN	Runoff Curve Number
RCRA	Resource Conservation and Recovery Act
RONA	Record of Non-Applicability
ROD	Record of Decision
ROI	region of influence
scf	standard cubic feet
SCP	Spill Contingency Plan
SF_4	sulfur hexafluoride
SHA	State Highway Administration
SIGINT	Signal Intelligence
SIP	State Implementation Plan
SO_x	sulfur oxides
SPCC	Spill Prevention, Control and Countermeasure
SO_2	sulfur dioxide
SSPP	Strategic Sustainability Performance Plan
SWMU	Solid Waste Management Unit
SWPPP	Stormwater Pollution Prevention Plan
TMC	turning movement count
TMDL	total maximum daily load
TOD	transit-oriented development
tpy	tons per year
U.S.C.	United States Code
UFC	Unified Facilities Criteria
USACE	U.S. Army Corps of Engineers
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Society
UST	underground storage tank
UXO	unexploded ordnance
VCP	vehicle control point
VOC	volatile organic compound
vpd	vehicles per day
WNS	white-nose syndrome
WWTP	Wastewater Treatment Plant

SECTION 1

PURPOSE OF AND NEED FOR THE ACTION

1. Purpose of and Need for the Action

1.1 Introduction

This Environmental Impact Statement (EIS) has been prepared to address the proposal by the Department of Defense (DoD) for implementation of the East Campus Integration Program (ECIP) and the construction and operation of associated facilities for the National Security Agency (NSA) complex at Fort George G. Meade (Fort Meade), Maryland. **Figure 1-1** shows the location of Fort Meade. The EIS complies with the requirements of the National Environmental Policy Act of 1969 (NEPA), as amended (42 United States Code [U.S.C.] 4321−4347); the Council on Environmental Quality's (CEQ) *Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act* (40 Code of Federal Regulations [CFR] 1500–1508); *Environmental Analysis of Army Actions* (32 CFR 651); DoD Directive 4715.1E (*Environment, Safety, and Occupational Health*); and, for guidance, NSA's *National Environmental Policy Act Procedures*.

The National Security Agency/Central Security Service (NSA/CSS) is an intelligence agency within the DoD. It is responsible for the collection and analysis of foreign communications and foreign signals intelligence. For NSA/CSS to continue leading the Intelligence Community into the next 50 years with state-of-the-art technologies and productivity, its mission elements require new, centralized facilities and infrastructure.

Development of facilities on the NSA East Campus on Fort Meade was addressed in the 2010 *Final Environmental Impact Statement Addressing Campus Development at Fort George G. Meade, Maryland* (NSA 2010) (2010 Campus Development EIS). The actions analyzed in the 2010 Campus Development EIS included the development of approximately 1.8 million square feet (ft^2) of facilities, electrical substation and generator plants providing 50 megawatts (MW) of electricity, and 6,500 NSA personnel on the East Campus (formerly called Site M). The Record of Decision (ROD) for the 2010 Campus Development EIS allowed for initiation of construction currently occurring in the southern portion of the East Campus. DoD's preferred alternative as identified in the ROD was to implement Phase I (in the northern portion of the East Campus); however, due to engineering reasons, the DoD opted to initiate development in the southern portion of East Campus. The analyses of the alternatives in the 2010 Campus Development EIS were based on the same general footprint at increasing development scales. The overall impacts evaluated are generally the same, and the affected area in the southern portion of the East Campus was evaluated under the full Phase III buildout. The Phase I levels of development identified in the 2010 Campus Development EIS have been reached in terms of number of personnel, facility square footage, and air emissions. Therefore, per the 2010 Campus Development EIS, the DoD is conducting an analysis of the Proposed Action identified in this EIS addressing build-out of the undeveloped remainder of the northern portion of the East Campus and the adjacent 9800 Troop Support Area, and integration of the East Campus with the NSA Main Campus.

The EIS is organized into seven sections and appendices. **Section 1** states the purpose, need, scope, and public involvement efforts for the Proposed Action. **Section 2** contains a detailed description of the Proposed Action and the alternatives considered. **Section 3** describes the existing conditions of the potentially affected environment. **Section 4** identifies the environmental impacts of implementing all

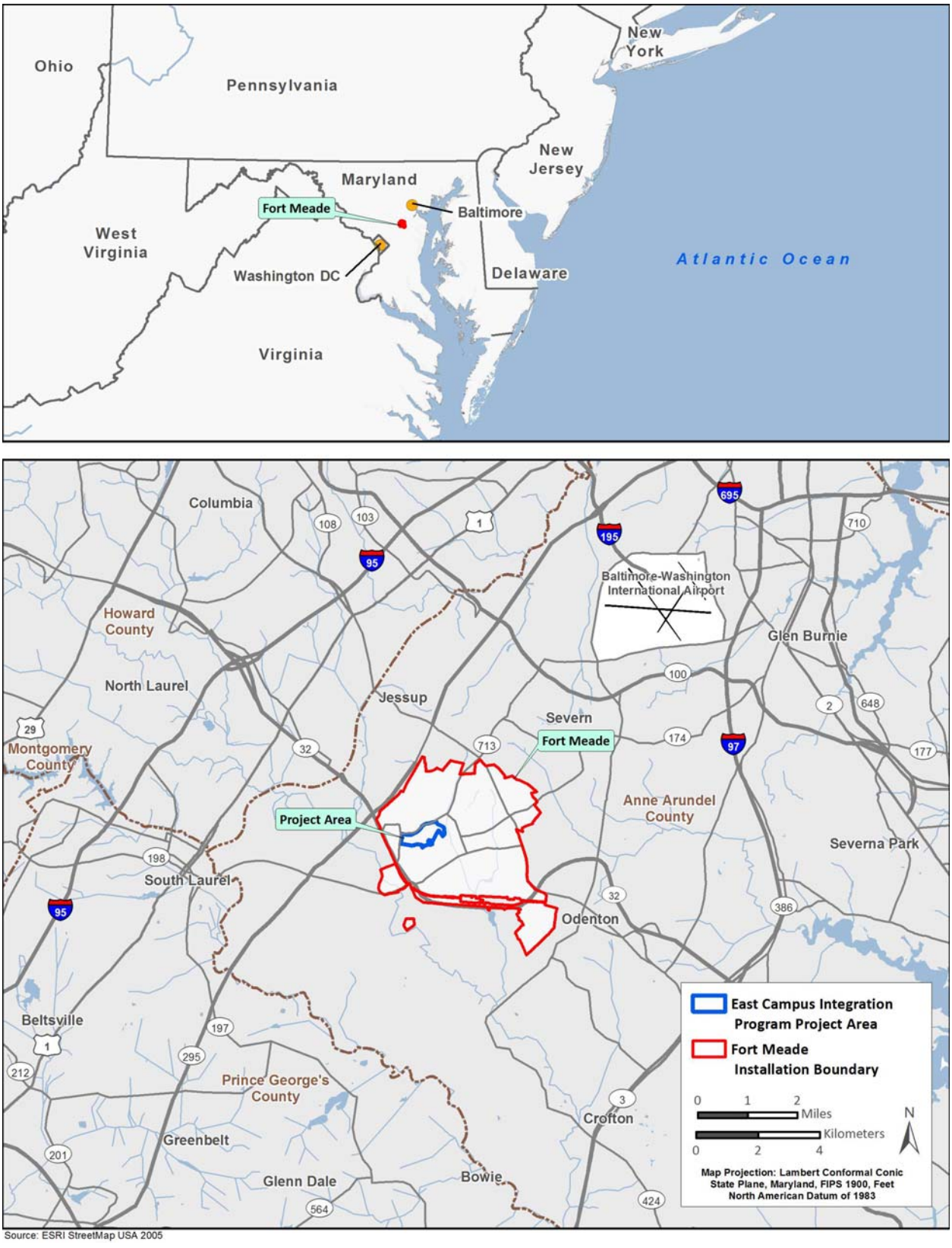


Figure 1-1. Location of Fort Meade

reasonable alternatives. **Section 5** identifies cumulative impacts associated with past, present, and reasonably foreseeable future actions when combined with the Proposed Action and alternatives. **Section 6** provides the names of those persons who prepared the EIS. **Section 7** lists the references used to support the analysis. **Appendix A** includes the Scoping Report documenting the public scoping process for the project. **Appendix B** includes the results of modeling performed for the analysis of potential impacts on traffic. **Appendix C** includes calculations performed for the analysis of potential impacts on air quality. **Appendices D** and **E** contain Endangered Species Act (ESA) Section 7 and National Historic Preservation Act (NHPA) Section 106 consultation materials, respectively. **Appendix F** of the EIS includes all Draft EIS public involvement materials, including the Notice of Availability (NOA) and other public outreach tools used, and all substantive comments on the Draft EIS that were received during the 45-day public review period.

1.2 Purpose and Need

The DoD proposes to continue developing operational complex and headquarters space at the NSA's East Campus and the 9800 Troop Support Area on Fort Meade for use by NSA and the Intelligence Community. The purpose of the Proposed Action is to provide facilities that are fully supportive of the Intelligence Community's function and to continue integrating the East Campus with the NSA Main Campus. The need for the action is to meet mission requirements, both internally at the NSA and within the Intelligence Community.

1.3 Scope of the Environmental Impact Statement

The scope of the analysis in this EIS includes evaluation of the Proposed Action and the range of alternatives and impacts in accordance with NEPA. The purpose of the EIS is to inform decisionmakers and the public of the likely environmental consequences of the Proposed Action and alternatives.

Section 2 presents in detail the scope of the Proposed Action and the range of alternatives to be considered. In accordance with CEQ regulations, the No Action Alternative provides the baseline against which the environmental impacts of implementing the range of alternatives addressed can be compared. This EIS identifies appropriate mitigation measures not already included in the Proposed Action or alternatives in order to avoid, minimize, reduce, or compensate for adverse environmental impacts.

1.3.1 Environmental Laws, Regulations, and Executive Orders

To comply with NEPA, the planning and decisionmaking process refers to other relevant environmental laws, regulations, and Executive Orders (EOs). The NEPA process does not replace procedural or substantive requirements of other environmental laws; it addresses them collectively in an analysis, which enables decisionmakers to have a comprehensive view of major environmental issues and requirements associated with the Proposed Action. According to CEQ regulations, the requirements of NEPA must be integrated "with other planning and environmental review procedures required by law or by agency practice so that all such procedures run concurrently rather than consecutively" (40 CFR 1500.2).

The EIS examines the environmental impacts of the Proposed Action and reasonable alternatives on the following resource areas: land use, transportation, noise, air quality, geological resources, water resources, biological resources, cultural resources, infrastructure, sustainability, hazardous materials and wastes, and socioeconomics and environmental justice. Where relevant, environmental laws, regulations,

and EOs that might apply to this project are described in the appropriate resource areas presented in **Section 3**. The scope of the analyses of potential environmental consequences provided in **Section 4** considers direct and indirect impacts. Cumulative impacts are discussed in **Section 5**.

As required in 40 CFR 1502.25, the EIS provides a list of all permits, licenses, and coordination that might be necessary in implementing the Proposed Action or alternatives (see **Table 1-1**).

Table 1-1. List of Permits, Licenses, and Other Entitlements for the Proposed Action

Agency	Permit/Approval/Coordination
U.S. Fish and Wildlife Service (USFWS)	– ESA Section 7 consultation – Migratory Bird Treaty Act (MBTA) coordination
U.S. Army Corps of Engineers (USACE)	– Clean Water Act (CWA) Section 404 Permit
Maryland Department of the Environment (MDE), Water Management Administration	– CWA Section 401 State Water Quality Certification – CWA National Pollutant Discharge Elimination System (NPDES) permit – Erosion and Sediment Control permit – Coastal zone consistency
MDE, Air and Radiation Management Administration	– Clean Air Act (CAA) Minor New Source Review (NSR) construction permit – CAA Title V Minor permit modification – CAA Title V Significant permit modification
National Park Service	– Consultation regarding potential impacts
Federally recognized Native American Tribes	– Consultation regarding potential impacts of cultural resources
Maryland Historical Trust (MHT)	– NHPA Section 106 consultation
Maryland Public Service Commission	– Waivers from Certificate of Public Convenience and Necessity (CPCN)

1.4 Interagency and Public Involvement

Agency and public participation in the NEPA process promotes open communication between the proponent and regulatory agencies, the public, and potential stakeholders. All persons and organizations having a potential interest in the Proposed Action are encouraged to participate in the public involvement process.

1.4.1 Scoping Process

Scoping for an EIS provides members of the public and applicable regulatory agencies with the opportunity to submit formal comments regarding the development of the Proposed Action and possible alternatives, and assists in identifying issues relevant to the EIS. Scoping helps ensure that relevant issues are identified early in the NEPA process and are properly studied, minor issues do not needlessly consume time and effort, and the Proposed Action and alternatives are thoroughly developed.

The DoD initiated the public scoping process for this EIS with the publication of the Notice of Intent to prepare an EIS (80 *Federal Register* [FR] 209) on January 5, 2015. A letter was also distributed at this time to approximately 100 potentially interested Federal, state, and local agencies; Native American tribes; and other stakeholder groups or individuals. Announcements were also published in the *Baltimore Sun* and the *Washington Post* on January 11, 2015, notifying the public of the intent to prepare an EIS, identifying the public scoping meeting date, and requesting scoping comments on the Proposed Action. The scoping meeting was held on January 27, 2015, at the Severn Community Library near Fort Meade to provide a forum for the public and governmental and regulatory agencies to obtain information and to provide scoping comments. Scoping comments were officially accepted through February 27, 2015. All scoping outreach tools, including the Notice of Intent, text of the newspaper announcements, interested party letter, interested party mailing list, and scoping comments received, are included in the Scoping Report in **Appendix A**. All scoping comments were considered during the preparation of the Draft EIS. Substantive concerns identified during scoping included presence of and impacts on potential historic resources in the project area; impacts on the regional transportation network systems and a recommendation to conduct a traffic study, including identification of potential improvements; impacts on resources in the coastal zone; consideration of sustainable options; and impacts on National Park Service resources, including the Baltimore-Washington Parkway.

1.4.2 Review of the Draft EIS

The DoD provided a 45-day public review period for the Draft EIS (40 CFR 1506.10). The public review period was initiated through publication of an NOA in the *Federal Register* on July 8, 2016. Methods similar to those used during the scoping period were used to notify the public and agencies of the public review period for the Draft EIS, including a mailing of the document to 106 potentially interested parties.

The Draft EIS was circulated to 46 Federal, state, and local agencies having jurisdiction by law or special subject matter expertise and to any person, organization, stakeholder group, or agency that requested a copy. Additionally, 20 interested parties, including 4 agencies, requested copies of the Draft EIS during the public review period (40 CFR 1502.19). A public meeting was held on August 3, 2016, at the Severn Community Library near Fort Meade to offer a forum for providing information to the public and agencies and for receiving comments. The public meeting was advertised in the *Baltimore Sun* and the *Washington Post* on July 10, 2016. The public meeting was attended by approximately 15 individuals. The Draft EIS public comment period remained open through August 22, 2016. In total, 19 sets of comments were received during the public comment period. All comments on the Draft EIS were considered during the preparation of the Final EIS. **Appendix F** of the EIS includes all materials associated with review of the Draft EIS, including the NOA and other public outreach tools, and all substantive comments on the Draft EIS received during the 45-day public review period for the Draft EIS.

1.4.3 Availability of the Final EIS

An NOA for the Final EIS will be published in the *Federal Register* announcing that the Final EIS is available for review. At a minimum, the Final EIS will be circulated to Federal and state agencies having jurisdiction by law or special subject matter expertise and any person, organization, stakeholder group, or agency that provided comments on the Draft EIS or requested a copy of the Final EIS (40 CFR 1502.19). During the 30-day waiting period following the release of the Final EIS, the DoD will take no action nor make any decisions regarding whether or not to implement the Proposed Action. Comments that are

received on the Final EIS during the waiting period will be considered in the decisionmaking process and documented as such in the ROD.

SECTION 2

DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

2. Description of the Proposed Action and Alternatives

2.1 Proposed Action

The DoD proposes to continue integrating the NSA East Campus with the NSA Main Campus through development of operational complex and headquarters space in the northern portion of the East Campus and in the 9800 Troop Support Area (i.e., the Proposed Action). Implementation of the ECIP entails construction and operation of new facilities for operations and headquarters space within the 150-acre ECIP project area and demolition of buildings and infrastructure. The ECIP project area, as shown in **Figure 2-1**, includes the locations being considered for development of operations and headquarters space; some parking facility location alternatives (see **Section 2.2.2**) and locations of buildings proposed for demolition are outside of this project area. Further details on land use planning, principal facilities, and supporting infrastructure are provided in the following sections.

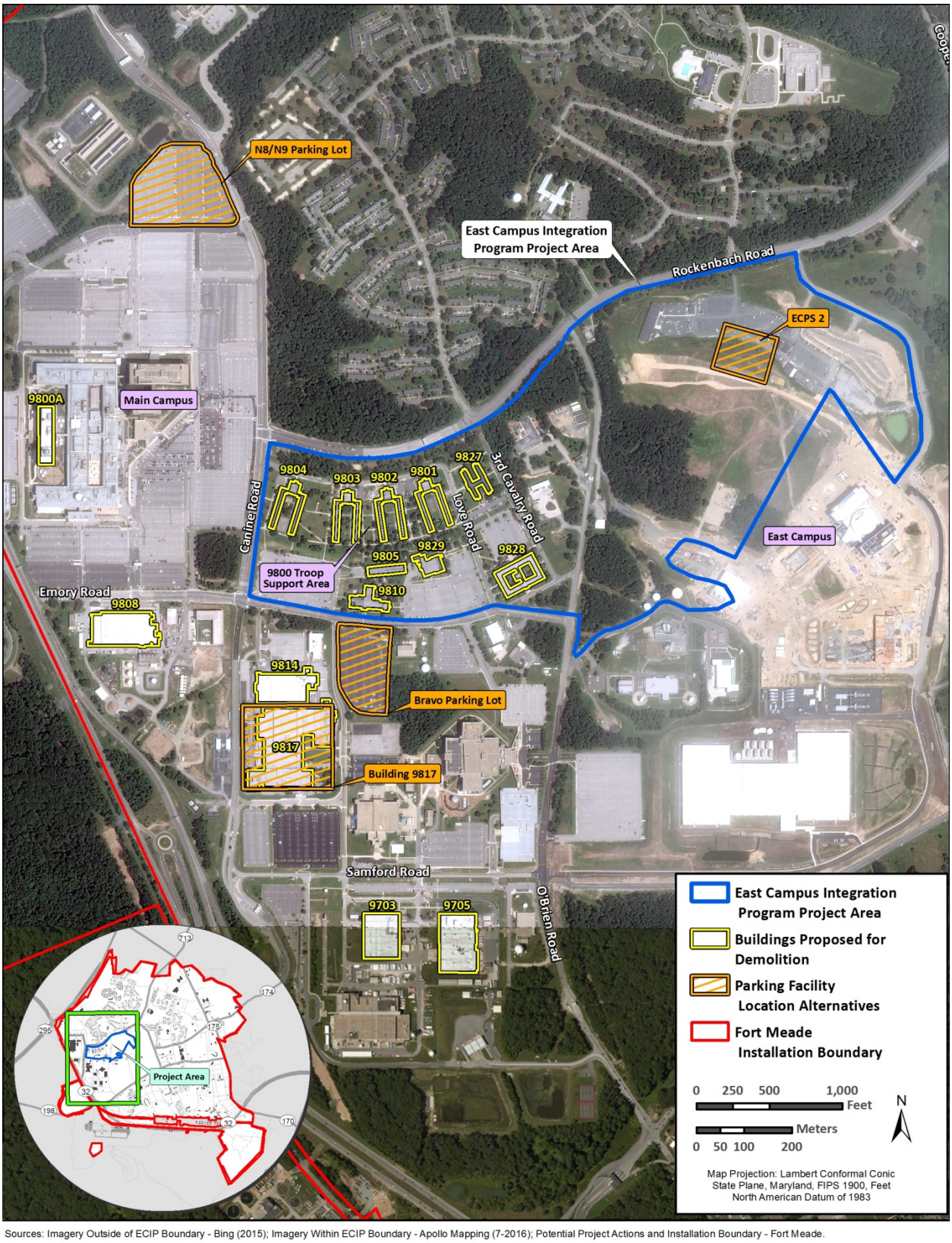
2.1.1 Land Use Planning

The NSA Main Campus consists of existing developed areas used by NSA on Fort Meade generally located northwest of Emory Road and Canine Road and southwest of Emory Road and O'Brien Road. The NSA East Campus is east of the NSA Main Campus and consists of approximately 240 acres (NSA 2013a) generally bordered by O'Brien Road to the west, Rockenbach Road to the north, Midway Branch to the east, and an undeveloped road extending east from Samford Road to the south (see **Figure 2-1**). A U.S. Army satellite communications facility that is not part of NSA is located in the central portion of this area, between the NSA Main and East campuses and south of the ECIP project area. The ECIP project area includes the northern portion of the East Campus and the 9800 Troop Support Area.

The northern portion of the East Campus consists of approximately 84 acres. This area is currently generally undeveloped or occupied by a staging area for development of the southern portion of the East Campus. Completion of ongoing construction activities in the southern portion of the East Campus is planned to occur in fiscal year (FY) 2018, and additional elements not yet under construction in this area would be completed by FY 2020.

The other major portion of the ECIP project area is the 9800 Troop Support Area, an approximately 49-acre tract west of the northwest portion of the East Campus. The 9800 Troop Support Area is bordered by Canine Road to the west, Rockenbach Road to the north, 3rd Cavalry Road to the east, and Emory Road to the south. This area is not currently part of the NSA Main Campus; however, both the *Long Range Component of the Fort Meade Real Property Master Plan* and the *NSA-Washington (NSAW) Facilities Master Plan* identify the 9800 Troop Support Area as reserved for redevelopment by the NSA as part of the ECIP (Fort Meade 2013a, NSA 2013a). The 9800 Troop Support Area currently includes barracks (some of which are currently being used for administrative functions), a dining facility, fitness center, post office, and support facilities, including those used to support NSA operations. Under the Proposed Action, these structures would be demolished and new structures constructed.

An approximately 18-acre triangular site east of the 9800 Troop Support Area and west of the northern portion of the East Campus is also part of the ECIP project area. This area is bordered by 3rd Cavalry Road to the west, Rockenbach Road to the north, and O'Brien Road to the east, and contains the Children's World Learning Center for employee childcare and the NSA recycling yard.



Sources: Imagery Outside of ECIP Boundary - Bing (2015); Imagery Within ECIP Boundary - Apollo Mapping (7-2016); Potential Project Actions and Installation Boundary - Fort Meade.

Figure 2-1. Proposed Action and Surrounding Areas

The ECIP takes into account several factors, including mission requirements, the condition of current facilities (both on and off the NSA's Campus at Fort Meade), space planning, land availability, utility requirements, traffic and parking, and environmental impacts. A key factor is the mission co-location to provide a more efficient and effective work environment for mission-critical functions of the entire Intelligence Community.

The NSA would consolidate mission elements, which would enable grouping services and support services across the NSA Campus based on function; facilitate a more collaborative environment and optimal adjacencies; and provide administrative capacity for up to 13,300 personnel, including 6,100 personnel who currently work on the existing NSA Campus and 7,200 personnel currently located off site. The personnel located outside of Fort Meade are currently in government-owned or -leased space throughout the Baltimore-Washington metropolitan area.

The *NSAW Facilities Master Plan* identifies NSA development in the northern portion of the East Campus and the 9800 Troop Support Area (i.e., ECIP project area) to create a contiguous NSA Campus that unites existing facilities with new structures (NSA 2013a). Additionally, the *Long Range Component of the Fort Meade Real Property Master Plan* designates both the East Campus and the 9800 Troop Support Area as part of the NSA expansion, and depicts both areas as part of the NSA Exclusive Use Area in the Future Land Use Plan (Fort Meade 2013a).

The DoD proposes to construct the ECIP over a period of approximately 10 years (FY 2019 to 2029).

2.1.2 Principal Facilities

The DoD proposes to construct and operate approximately 2,880,000 ft^2 of operational complex and headquarters space consisting of five buildings. These facilities would consist of East Campus Building (ECB) 3, ECB 4, and ECB 5, each with approximately 800,000 ft^2, and two smaller buildings of 330,000 ft^2 and 150,000 ft^2. The buildings would include an open environment conducive to both physical and virtual collaboration; special purpose space, including support and enabler areas (e.g., lobbies, main reception); and supporting electrical, mechanical, and fire protection/suppression components.

Construction of the proposed buildings and the increase of personnel would require additional campus parking. The NSA Campus has limited developable land; therefore, the use of multi-level (i.e., at least four levels) parking structures are considered in lieu of surface parking. Parking lots are fully used most days, including overflow parking, so the net loss of any parking spaces (i.e., construction at the 9800 Troop Support Area that displaces existing parking) would require replacement parking. The exact quantity, size, and capacity of parking structures would not be known until the detailed design process begins. Four alternatives for locations of parking structures are available to DoD and are discussed further in **Section 2.2.2**.

Because the development of the ECIP is in the planning stages, no detailed engineering or design work for proposed facilities has been accomplished. Therefore, this EIS does not consider various design factors in detail and makes general assumptions about the proposed development. The exact space requirements and precise locations and layouts of proposed buildings and infrastructure will not be known until the detailed design process is underway. Therefore, the proposed facilities and infrastructure

analyzed in this EIS are interchangeable within the ECIP project area. **Figure 2-2** depicts one potential conceptual site layout of the proposed facilities.

All proposed facilities would comply with Unified Facilities Criteria (UFC) 04-010-01, *DoD Minimum Antiterrorism Standards for Buildings*. Handicap accessibility design would comply with Federal and state requirements. In compliance with the Federal Guiding Principles identified in the 2006 Memorandum of Understanding (MOU) for *Federal Leadership in High Performance and Sustainable Buildings*; EO 13693, *Planning for Federal Sustainability in the Next Decade* (March 2015); DoD *Sustainable Buildings Policy* (December 2010); DoD Instruction 4170.11, *Installation Energy Management* (December 2009); and UFC 1-200-02, *High Performance and Sustainable Building Requirements* (changed November 2014), the operational complex and headquarters space would be designed, constructed, and managed in a sustainable and cost-effective manner to the maximum extent practicable. Facility and site design would place emphasis on maximizing operating efficiencies of building systems and minimizing the environmental footprint. The facilities would be energy-efficient and use sustainable technology, such as solar hot water systems and vertical rainwater collection cisterns, where feasible.

As part of the Proposed Action, the DoD would demolish approximately 1.9 million ft^2 of buildings and infrastructure on the NSA Main Campus (1,291,206 ft^2) and the 9800 Troop Support Area (592,269 ft^2). All nine buildings in the 9800 Troop Support Area would be demolished to provide room for the proposed facilities and supporting infrastructure. These buildings include Buildings 9801, 9802, 9803, 9804, 9805, 9810, 9827, 9828, and 9829. After construction of each of the proposed facilities on the East Campus and 9800 Troop Support Area are completed and personnel transferred to the facilities, Buildings 9703, 9705, 9800A, 9808, 9814, and 9817 on the NSA Main Campus would be vacated and demolished. Three surface parking lots in the 9800 Troop Support Area would be demolished to make room for the proposed buildings under the ECIP.

2.1.3 Supporting Infrastructure

Infrastructure supporting the proposed operational complex and headquarters space would include electrical substation emergency generator capacity providing 121 MW of electricity (see **Section 2.2.3.1**); life-safety generators; building heating systems (see **Section 2.2.3.2**); utilities, including water, natural gas, and communications services; transportation infrastructure, including roads, parking structures (see **Section 2.2.2**), and sidewalks; and stormwater management facilities.

The Proposed Action would require the addition of 121 MW of emergency power generating facilities for the NSA Campus at Fort Meade. Currently, 171 MW of primary substation capacity has been constructed for the NSA East Campus. The 171 MW of power for the campus would be supported by the substation, 65.4-MW emergency power plants (of which 50 MW has been constructed), and a 105.6-MW emergency power plant. Therefore, the Proposed Action includes the addition of 15.4 MW to complete the existing emergency generator plants, and the construction and operation of a 105.6-MW emergency power plant, which totals 121 MW.

Both the upgrades to the existing plants and the proposed plants would have associated switch gear, substation and associated equipment and ductbanks, air pollution control equipment, oil storage tanks, and urea storage tanks. Three days (72 hours) of fuel to operate any generators, if ultimately selected,

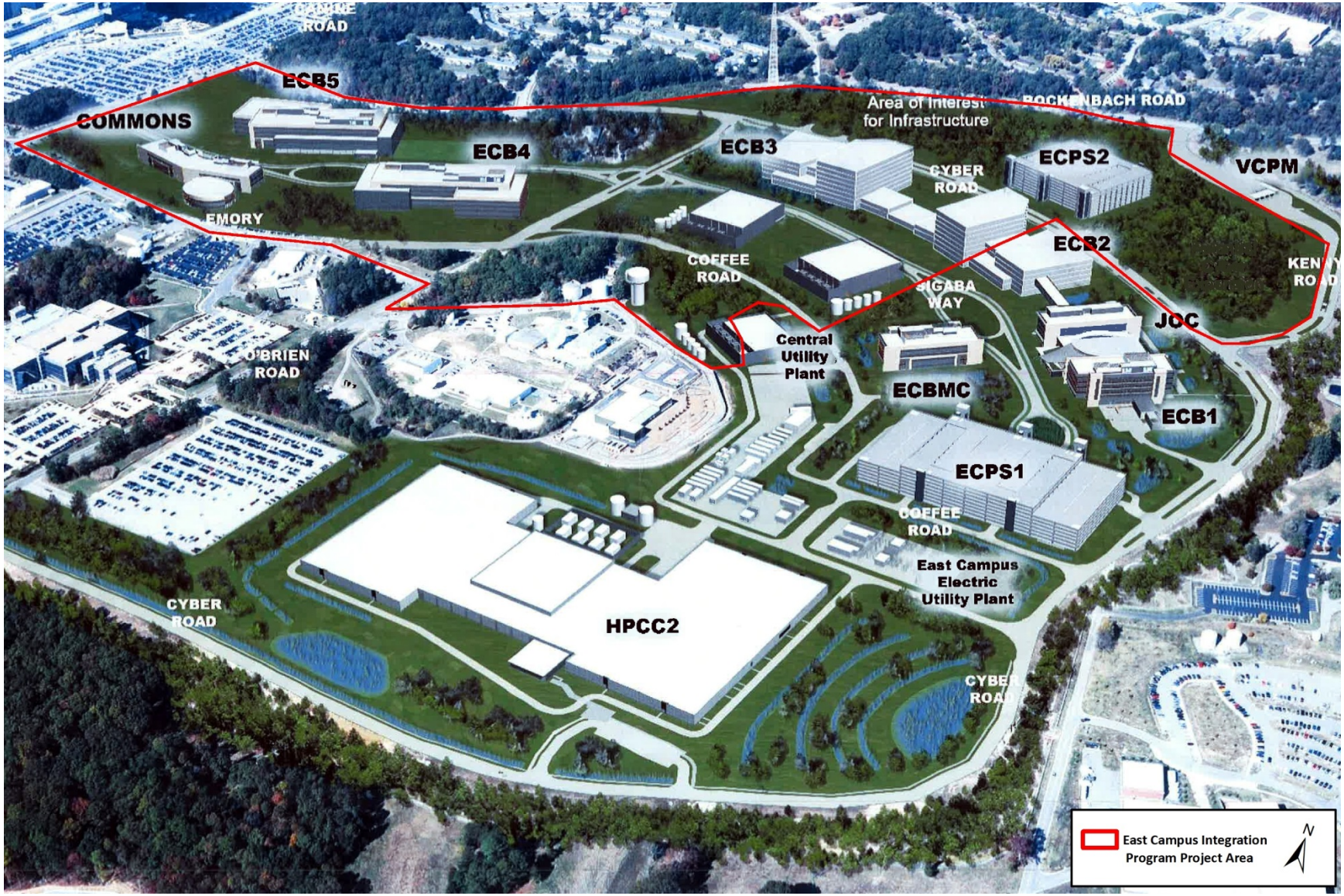


Figure 2-2. Potential Conceptual Site Layout of the Proposed Facilities

would be stored onsite. Four alternatives for emergency power generation equipment are discussed further in **Section 2.2.3.1**.

Life-safety power generation would be independent of emergency power generation, and would include approximately 7.4 MW of generators. Sufficient life-safety power capacity would be installed to support each building, which would likely consist of three 2.0-MW generators (one at each of the 800,000-ft^2 buildings), one 900-kilowatt (kW) (0.9-MW) generator at the 330,000-ft^2 building, and one 450-kW (0.45-MW) generator at the 150,000-ft^2 building. Fuel required to operate the life-safety generators for 1 day (24 hours) would be stored onsite.

The facilities are in the preliminary design stages and a detailed list of equipment is unavailable. All life-safety generators would be internal combustion engines; however, not all units would necessarily be made by the same manufacturer. Generators may be selected to use different fuel types or multiple fuel types; however, the use of diesel fuel is used as a reasonable worst-case scenario to assess environmental impacts under NEPA. The types and sizes of new generators, timing of and available funding for the projects, and the types of controls ultimately selected for the facilities may differ in specific features from the ones described in this EIS; however, the impacts would not change appreciably because the ultimate facility design would include life-safety generators installed similar in size and with similar pollution control equipment.

The NSA Campus and, thus, the ECIP project area, is located in a nonattainment area for ozone (O_3) and a maintenance area for fine particulate matter ($PM_{2.5}$) (i.e., particulate matter less than or equal to 2.5 micrometers). The DoD seeks to minimize, by design, the impacts the Proposed Action would have on regional air quality by limiting emissions of precursors of O_3 (i.e., nitrogen oxides [NO_x] and volatile organic compounds [VOCs]) and of $PM_{2.5}$ and its precursors (i.e., NO_x, VOCs, and sulfur oxides [SO_x]). Existing air quality conditions and regulations pertinent to the Proposed Action are presented in detail in **Section 3.4**. The DoD proposes to use engineering controls and operational limitations to reduce emissions from generators and boilers. These measures are being included to avoid significant impacts on air quality and to comply with state and Federal air quality regulations.

Building heating systems would be installed at each proposed building based on specific building capacity and heating needs. The NSA Main Campus uses steam for building heating; however, this system would not be utilized at the East Campus. The East Campus would have a greater cooling load than heating load. Three alternatives for building heating systems are discussed further in **Section 2.2.3.2**. Solar hot water systems are also being considered as part of the Proposed Action for producing domestic hot water at smaller buildings, such as the proposed 150,000-ft^2 and 330,000-ft^2 buildings.

Roads and sidewalks would be constructed to connect the proposed buildings and parking structures, and interconnect with existing buildings and the road/sidewalk network on the NSA Main Campus. These interconnections would be designed to promote a pedestrian-oriented campus by providing a logical interconnection between vehicles, pedestrians, and cyclists; and minimizing areas of conflict.

Stormwater management facilities would be designed to comply with the appropriate State of Maryland regulations, Section 438 of the Energy Independence and Security Act (EISA), NSA design standards, and the *NSAW Facilities Master Plan*, as appropriate.

2.2 Alternatives Analysis

2.2.1 Operational/Headquarters Complex Location Alternatives

2.2.1.1 Location Alternatives on Fort Meade

Continued Development and Expansion of the NSA Campus. Continued development and expansion of the NSA Campus would occur in the northern portion of the East Campus and the 9800 Troop Support Area, which is described under the Proposed Action in **Section 2.1**. This alternative is carried forward for further detailed analysis in this EIS.

Redevelopment of the NSA Campus. The NSA has considered redeveloping its existing campus on Fort Meade to accommodate a larger number of personnel and state-of-the-art technologies. Opportunities for redevelopment of the NSA Main Campus are limited given the developed nature of the campus. Space available for redevelopment includes existing buildings/operational spaces, and tracts currently occupied by parking lots. Converting or upgrading existing buildings is not feasible; all buildings are currently fully utilized with insufficient swing space to allow any building to be vacated and rebuilt. Construction of facilities on existing parking lots, and offsetting the loss of parking spaces by converting other parking lots into multi-level parking facilities, is another option. However, existing parking lots would have to be closed during construction of the multi-level parking facilities, which would decrease the number of available parking spaces. So this alternative would not be feasible given the limited number of parking spaces currently available. Additionally, all redevelopment options on the NSA Main Campus are limited by utility and roadway infrastructure issues. Existing utility systems are not expandable in terms of either operational capacity or accessibility and physical space for the scale of construction required. Finally, redevelopment of the NSA Main Campus, which is adjacent to the perimeter of Fort Meade, would not be consistent with the effort to consolidate functions towards the interior of the installation. Therefore, this alternative will not be further evaluated in detail in the EIS.

2.2.1.2 Location Alternatives Outside of Fort Meade

Alternative sites outside of Fort Meade are being considered to allow for planning flexibility particularly in the event that the 9800 Troop Support Area was not available in the future for the ECIP. Under these alternatives, Building 9800A on the NSA Main Campus and all nine buildings in the 9800 Troop Support Area would not be demolished; and no proposed facilities would be constructed in the 9800 Troop Support Area. These alternatives are assumed to require space sufficient for 4,400 personnel that would relocate from space vacated by demolition of Buildings 9703, 9705, 9808, 9814, and 9817 (778,369 ft^2) on the NSA Main Campus and terminating leases at some leased Intelligence Community space in the Baltimore-Washington metropolitan area. Under these alternatives, a total of 81 MW of onsite emergency power generation would be required. Life-safety generators would also be installed onsite.

National Business Park/East Campus. Personnel and functions proposed to be located in the ECIP project area would instead occur in a leased administrative facility at the National Business Park, which is on the west side of the Baltimore-Washington Parkway. This alternative would involve leasing existing or newly constructed Interagency Security Committee-qualified buildings at the northern end of the National Business Park. The buildings would consist of up to 1 million ft^2 of space. The leased facilities would already have been constructed. Any environmental requirements and permits would have been the responsibility of the facility developers and owners, and are assumed to have been complied with and

obtained prior to formal leasing arrangements. Construction of ECB 3, smaller buildings, and associated parking facilities on the northern portion of the East Campus would still occur under this alternative. **Figure 2-3** shows the location of National Business Park and the portion of the East Campus within which buildings and infrastructure would be constructed under this alternative. This alternative is carried forward for further detailed analysis in this EIS.

Annapolis Junction Business Park/East Campus. Under this alternative, personnel and functions would occur in a leased administrative facility at the southern end of Dorsey Run Road in the Annapolis Junction Business Park. Facility and leasing requirements would be similar to those discussed under the National Business Park. Construction of ECB 3, smaller buildings, and associated parking facilities on the northern portion of the East Campus would still occur under this alternative. **Figure 2-3** shows the location of Annapolis Junction Business Park and the portion of the East Campus within which buildings and infrastructure would be constructed under this alternative. This alternative is carried forward for further detailed analysis in this EIS.

2.2.2 Parking Facility Location Alternatives

The Proposed Action would require additional parking to accommodate the increase of personnel on the East Campus. As discussed in **Section 2.1.2**, the existing NSA Campus has limited developable land; therefore, multi-level (i.e., at least four levels) parking structures are being considered in lieu of surface parking.

The amount of parking that would be constructed is based on the assumed capacity required for full occupancy of the proposed buildings. The exact space requirements will become more refined as the detailed design process progresses. Because the ECIP is in the planning stages, no engineering or design work has been completed. Therefore, this EIS does not consider various design factors in detail but makes general assumptions about the requirement associated with parking. Additional site-specific parking and transportation studies would also be accomplished during the design and engineering process to ensure efficient and safe use of space, ingress and egress, and movement patterns.

The DoD considered various location alternatives for proposed parking facilities. Reasonable parking facility location alternatives should have sufficient square footage to accommodate required project components, avoid disturbing environmentally sensitive areas, minimize impacts on adjacent land uses, minimize the distance employees would have to walk, and be cost effective. Four parking location alternatives were identified as meeting these criteria. Depending on which operational/headquarters location alternatives would be implemented, at least three of the parking facility location alternatives would be constructed if the ECIP is fully implemented. At least one of the parking facility location alternatives would be constructed if off-post alternative(s) were implemented.

Following are the location alternatives for the proposed parking facilities for the ECIP. These location alternatives are reflected in the project area shown in **Figure 2-1**.

East Campus Parking Structure 2. The East Campus Parking Structure (ECPS) 2 would be located in the northeastern portion of the East Campus between Rockenbach Road and Venona Road, which is a road under construction that would generally run west-east through the northern portion of the East

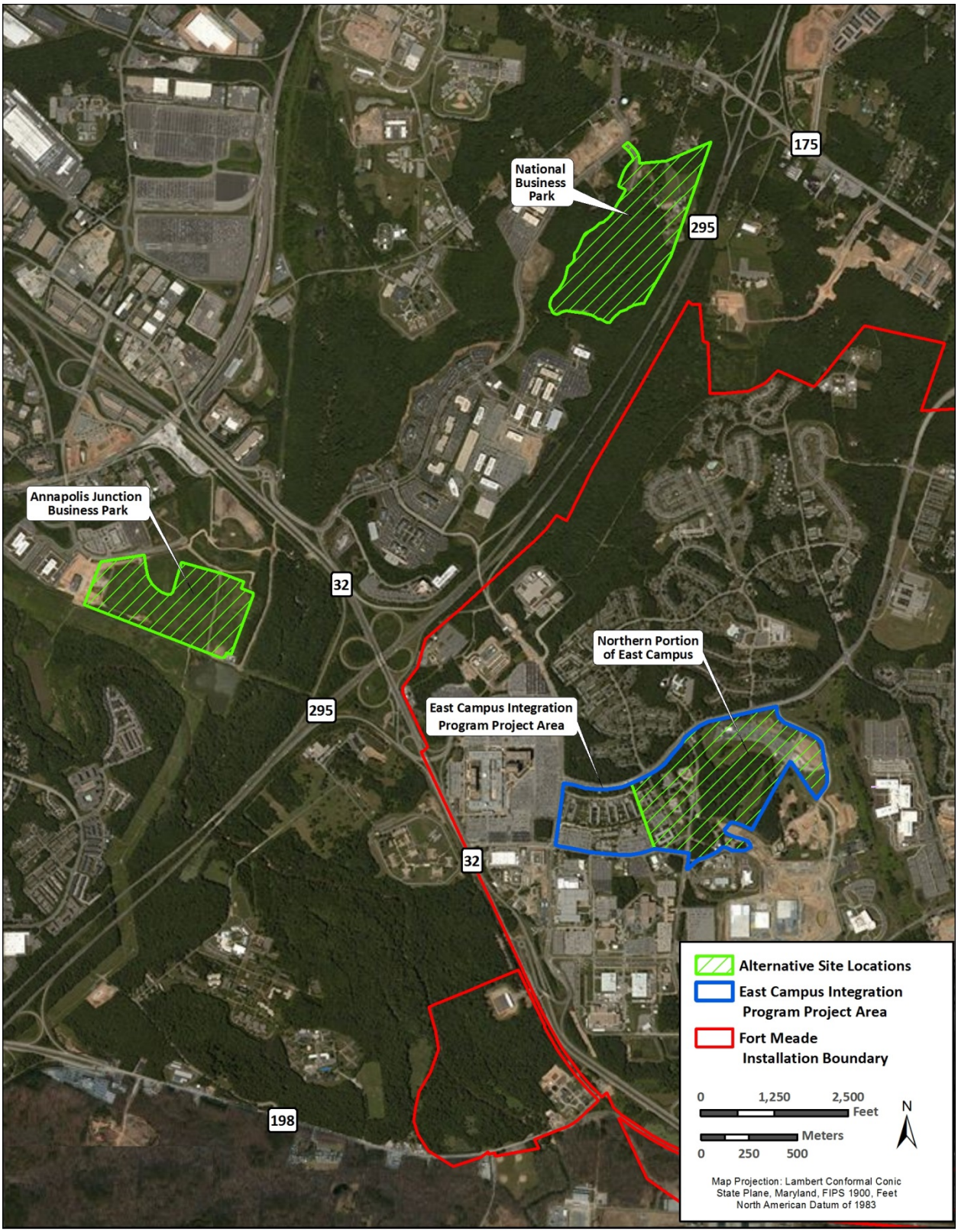


Figure 2-3. Proposed Action Location Alternatives Outside of Fort Meade

Campus. The area proposed for ECPS 2 is currently being used as a staging area for ongoing construction in the southern portion of the East Campus. ECPS 2 would be bordered to the west, north, and east by a potential reforestation area for ECB 2 (part of the action analyzed in the 2010 Campus Development EIS) and ECB 3, and to the south by the Venona Road corridor. ECPS 1 is in the southern portion of the East Campus, which is currently under construction.

Bravo Parking Lot. The Bravo parking lot is a 4.5-acre, surface parking lot on the NSA Main Campus. It is located south of the 9800 Troop Support Area at the southeastern corner of Emory Road and Wenger Road. The Bravo parking lot would be demolished, and a multi-level parking facility would be constructed on all or part of the site.

N8/N9 Parking Lot. The N8/N9 parking lot is a 7.1-acre surface parking lot on the NSA Main Campus. All or part of this lot could be redeveloped as a parking facility. It is located northwest of the intersection of Canine Road (access point to Maryland State Route [MD] 32) and Connector Road (access point to the Baltimore-Washington Parkway).

Building 9817. Building 9817 is proposed for demolition as part of the Proposed Action. It is located on the NSA Main Campus, on the northern side of Erskine Road and bordered by Canine Road to the west and Wenger Road to the east. Following demolition of Building 9817, a parking facility could be constructed on all or part of the 8.2-acre footprint.

2.2.3 Supporting Infrastructure Alternatives

2.2.3.1 Emergency Power Generation Alternatives

The DoD proposes to construct 121 MW of emergency generator facilities to ensure a redundant power supply for the proposed facilities. This section describes the process used to identify emergency power alternatives to be carried forward, and the alternatives to be eliminated from further detailed environmental analysis in this EIS. Alternatives to supply emergency power that were considered potentially viable included generators, combustion turbines, a combination of generators and combustion turbines, and microturbines. A comparative summary of the alternatives, including whether or not they satisfy specific selection criteria, is also included.

Alternatives Overview. The DoD identified operational, environmental, and economic evaluation criteria to compare alternative methods of providing emergency power. For an emergency power system to be considered reasonable, it must meet the following five operational criteria at a minimum: proven and commercially available technology, reliable equipment, sufficient start-up time, sufficient energy output, and integrates with existing emergency generators. Any alternative the DoD selects would need to comply with Federal policy for energy efficiency and cost effectiveness in accordance with EISA, EO 13221, *Energy Efficient Standby Power Devices*, EO 13693, and the DoD Sustainable Buildings Policy requirements. Therefore, in addition to the operational evaluation criteria, each emergency power generation technology was screened based on the following four environmental and economic evaluation criteria: limiting air emissions, physical space requirements, cost effectiveness, and energy efficiency. **Table 2-1** compares the evaluation criteria ratings among generators, combustion turbines, microturbines, and a hybrid emergency power generation system.

Table 2-1. Comparison of Emergency Power Generation System Alternatives

	Operational Evaluation Criteria						Environmental and Economic Evaluation Criteria				
Emergency Power Generation System	**Proven and commercially available technology**	**Reliable equipment**	**Sufficient start-up**	**Sufficient energy output**	**Integrates with existing generator plants**	**Meets evaluation criteria**	**Limiting air emissions**	**Physical space requirements**	**Cost effectiveness**	**Energy efficiency**	**Alternative scoring[1]**
Generators	Yes	Yes	Yes	Yes	Yes	**Yes**	1	2	2	1	**6**
Combustion turbines	Yes	Yes	Yes	Yes	No	**No**	4	4	4	4	**16**
Generators and combustion turbines	Yes	Yes	Yes	Yes	Yes	**Yes**	2	3	3	2	**10**
Microturbines	No	No	Yes	Yes	Yes	**No**	3	1	1	3	**8**

Note:

1. Systems are ranked 1-4. Higher numbers reflect better criteria scores.

Generators. Generators used to generate electricity are normally driven by internal combustion engines that may run on a variety of fuels. Generators are commonly used for electricity and emergency power generation in central utility facilities and industrial applications. Generator sets are the industry standard for emergency power generation and are a proven commercially available technology with rapid start-up capabilities. Banks of off-the-shelf generator sets can be configured to provide the emergency power requirements outlined and have the capacity for application of emissions-control technologies to meet the strict state and Federal air quality regulations within the Baltimore metropolitan region. The use of generators fully meets the evaluation criteria; therefore, this alternative is carried forward for further detailed analysis in this EIS.

The generator plants are in the preliminary design stages, and a detailed list of equipment is unavailable. All generators would be internal combustion engines; however, not all units would necessarily be made by the same manufacturer. Off-the-shelf generators range in size from a few hundred kW to several MW. Generators are rated based on their eventual application (i.e., how they will be operated). A prime rating is used for the generator when it continually provides power to a varying load for an unlimited time. A standby rating is used for a generator that provides emergency power for the duration of a normal power interruption where no sustained overload capability from the primary power source is available. The most suitable off-the-shelf generator identified at this time has a prime rating of 2.725 MW and a standby rating of 3.0 MW. This unit has been carried through for detailed evaluation in this EIS. Approximately six of these generators would be required to provide the additional 15.4 MW to complete existing generator plants, and 39 generators would be required for the proposed 105.6-MW facility (see **Table 2-2**). These numbers do not include redundant units required for reliability. These units would be permitted as emergency generators, meaning they would only be operational during CAA

Table 2-2. Example Equipment Ratings for Emergency Power Generation Alternatives

Alternative	Standby Rating (MW)	Prime Rating (MW)	Quantity	Total Standby Rating (MW)	Total Prime Rating (MW)
New 105.6-MW emergency power plant					
Generator Alternative	3.0	2.725	39	117	106.3
Hybrid Generator Combustion Turbine Alternative	21.7	21.7	6[a]	108.5	108.5
Additional 15.4 MW to complete existing emergency power plants					
Generator and Hybrid Generator/Combustion Turbine Alternatives	3.0	2.725	7[a]	18.0	16.4

Note:
a. Includes n+1 turbines for redundancy.

emergencies, apart from routine maintenance and testing. With that designation, under NSPS Subpart III, only generators certified to Tier 2 emission levels by the manufacturer would be required. NSA is choosing to add pollution control to the emergency generators to reduce their emissions potential, which would effectively be at the Tier 4 level for non-emergency generators.

Generators may be selected to use different fuel types or multiple fuel types; however, the use of diesel fuel was carried forward as a reasonable worst-case scenario to assess the environmental effects under NEPA. The types and sizes of new generators and the types of controls ultimately selected for the facilities may differ in specific features from the ones described in this EIS depending on factors such as availability and timing of funding; however, the environmental effects would not change appreciably given that the ultimate facility design would include generators that are similar in size (approximately 3 MW).

Combustion Turbines. Combustion turbines are a large type of rotary combustion engine used for power generation ranging in size from 500 kW to more than 300 MW. Turbines are commonly used for mass electricity generation and some larger industrial applications. There are several manufacturers of combustion turbines in sizes appropriate for the Proposed Action. This alternative considers the use of six 21-MW combustion turbines in a combined cycle power plant for emergency power. This includes five turbines to meet the base facility needs and one for redundancy. Combustion turbines have limited air emissions and a long record of commercial service in emergency power applications, and are highly reliable. This alternative does not meet the evaluation criteria because combustion turbines cannot be used to complete the 15.4 MW of outstanding capacity at the existing power plants; this 15.4 MW of capacity must be met by generators. Due to the size of the existing power plants and power distribution within the facility, the infrastructure was specifically designed to allow additional generators. Therefore, the use of turbines within this facility is not feasible. However, combustion turbines were carried forward for further detailed analysis as part of the Generators and Turbines Alternative, which would incorporate them in to the separately proposed 105.6-MW emergency power plant. Therefore, combustion turbines as a stand-alone alternative has been eliminated from further detailed analysis in this EIS as an emergency power alternative.

Generators and Combustion Turbines. This alternative would consist of a combination or hybrid of generators and combustion turbines to generate the required 121 MW of emergency power. Generators would be required to complete the existing plants, and combustion turbines would be used for the proposed 105.6-MW power plant (see **Table 2-2**). The use of a combination of generators and combustion turbines fully meets the evaluation criteria; therefore, this alternative is carried forward for further detailed analysis in this EIS.

Microturbines. Microturbines are small combustion turbines that produce between 25 kW and 1,000 kW of power. Microturbines were derived from turbocharger technologies found in large trucks and the turbines in aircraft auxiliary power units. Turbines of many sizes are commonly used for electricity generation in central utility generating stations and industrial applications. There are several manufacturers of microturbine generator sets in a size appropriate for the Proposed Action. For the purposes of this analysis, this alternative considers the use of 1-MW natural gas-fired microturbines for emergency power.

Manufacturers' specifications for several microturbines types were reviewed. The 1-MW microturbines were selected for analysis because they are among the largest commercially available units in terms of energy output. All microturbines would be driven by rotary internal combustion engines, though not all units would necessarily be made by the same manufacturer. Some microturbines reviewed were smaller in size and power output and had a higher cost per MW than other options evaluated. They would require a larger overall building footprint and cost and consequently were not considered realistic for the facilities being proposed. For these reasons, natural gas-fired microturbines have been eliminated from further detailed analysis in this EIS as an emergency power alternative.

2.2.3.2 Building Heating System Alternatives

The DoD would install heating systems for the proposed 2.9 million ft^2 of operations and headquarters space. This section describes the process used to objectively identify heating system alternatives to be carried forward, and the alternatives eliminated from detailed environmental analysis in this EIS. Alternatives for building heating systems considered include packaged boilers, ground source heat pumps (GSHPs), and a hybrid heating system consisting of both boilers and GSHPs. A comparative summary of the alternatives, and whether or not they meet specific selection criteria, is also included.

Alternatives Overview. The DoD identified operational, environmental, and economic evaluation criteria to compare alternative methods of providing building heating. For a building heating system to be considered reasonable, at minimum, it must meet the following three operational criteria: proven and commercially available technology, reliable equipment, and sufficient heat output. Any alternative the DoD selects would need to comply with Federal policy for energy efficiency and cost effectiveness in accordance with EO 13693. Therefore, in addition to the operational evaluation criteria, each building heating system technology was screened based on the following four environmental and economic evaluation criteria: limiting air emissions, physical space requirements, cost effectiveness, and energy efficiency. **Table 2-3** compares stand-alone packaged boilers, stand-alone GSHPs, and a hybrid heating system consisting of boilers and GSHPs to all evaluation criteria outlined above. For this screening, each evaluation criteria was given the same weight.

Table 2-3. Comparison of Building Heating System Alternatives

	Operational Evaluation Criteria				Environmental and Economic Evaluation Criteria				
Building Heating System	**Proven and commercially available technology**	**Reliable equipment**	**Sufficient heat output**	**Meets evaluation criteria**	**Limiting air emissions**	**Physical space requirements**	**Cost effectiveness**	**Energy efficiency**	**Alternative Scoring[1]**
Packaged Boilers	Yes	Yes	Yes	**Yes**	1	3	3	1	**8**
GSHPs	Yes	Yes	No	**No**	3	1	1	3	**8**
Hybrid System	Yes	Yes	Yes	**Yes**	2	2	2	2	**8**

Note:
1. Systems are ranked 1-3. Higher numbers reflect better criteria scores.

Packaged Boilers. Packaged boilers are combustion-based heating systems that use natural gas and other fuels to provide heating for buildings. They are an industry standard for heating and are a proven, commercially available technology. These boilers are off-the-shelf factory-made to a range of standard designs according to the size and capacity required. The packaged boilers are readily available and are relatively simple to install, and often automatically manage their burner and water level, thus, not requiring constant attention. All packaged boilers would be natural gas-fueled, though not all units would necessarily be made by the same manufacturer. The number of units would be sufficient to meet the heating requirements but would vary depending on the size and type ultimately selected. Off-the-shelf boilers can provide the heating requirements for the proposed facilities, and have the capacity for emission-control technologies to meet the strict state and Federal air quality regulations within the Baltimore metropolitan region. Therefore, this alternative is carried forward for further detailed analysis in this EIS.

Ground Source Heat Pumps. GSHPs are electrically powered heating systems that use the Earth's relatively constant temperature to provide heating and cooling for buildings. Water or antifreeze solution is circulated through plastic pipes buried in the ground, and vertical closed loop fields are composed of pipes that run vertically down into the ground. During the winter, the fluid collects heat from the ground and carries it through the system and into the building. During the summer, the system reverses itself to cool the building by pulling heat from the building, carrying it through the system and placing it in the ground.

Stand-alone GSHPs have limited direct air emissions and a long record of commercial service, and they are highly reliable. However, GSHPs have extensive open space requirements (e.g., fields, parking lots) and would be constrained by the space available on the East Campus and the NSA Campus. They also generally have more complicated and costly installations than packaged boilers. Stand-alone GSHPs are not considered a viable building heating system alternative because they would not be able to provide sufficient energy output to fully heat the 2.9 million ft^2 of proposed facilities on the East Campus and the

9800 Troop Support Area. Additionally, because the proposed buildings would be cooling dominant, the cooling loads would only be partially accommodated by the GSHP well fields, with the excess cooling load being directed to supplemental heat rejection equipment (i.e., cooling tower, fluid cooler, etc.). Therefore, stand-alone GSHPs would not fully meet the evaluation criteria and have been eliminated from detailed analysis in this EIS.

Hybrid Building Heating System. The hybrid building heating system would consist of a combination of packaged boilers and GSHPs to heat the proposed facilities. Although stand-alone GSHPs are not considered a viable building heating system alternative for the entire ECIP, GSHPs may provide sufficient energy output to fully heat the smaller individual buildings under the Proposed Action. As such, a hybrid heating system consisting of packaged boilers and GSHPs might fully meet the evaluation criteria. Therefore, this alternative is carried forward for further detailed analysis in this EIS.

2.3 No Action Alternative

CEQ regulations specify the inclusion of the No Action Alternative in the alternatives analysis of an EIS (40 CFR 1502.14). Because the DoD identified a need for the Proposed Action (i.e., to meet mission requirements of the NSA and Intelligence Community), it is understood that taking no action does not meet the project purpose and need. The No Action Alternative is analyzed to provide a baseline of the existing conditions against which potential environmental and socioeconomic impacts of the Proposed Action and alternative actions can be compared. Under the No Action Alternative, the DoD would not construct and operate approximately 2.9 million ft^2 of operations and headquarters facilities on the northern portion of the East Campus and the 9800 Troop Support Area. The baseline for the No Action Alternative includes build-out of the 1.8 million ft^2 of facilities, electrical substation and generator plants providing 50 MW of electricity, and 6,500 NSA personnel in the southern portion of the NSA East Campus, as discussed in the ROD for the 2010 Campus Development EIS. NSA/CSS operations and similar or related operations of other Intelligence Community agencies would continue at their present locations.

2.4 Identification of the Preferred Alternative

CEQ's implementing regulations instruct EIS preparers to "identify the agency's preferred alternative, if one or more exists in the draft statement and identify such alternative in the final statement unless another law prohibits the expression of such a preference" (40 CFR 1502.14(c)). The DoD's preferred alternative is to implement the Proposed Action as described in **Section 2.1**.

The Proposed Action meets the mission requirements better than Alternatives 1 and 2. The Proposed Action is entirely within Federal land and is subject to Federal regulations and control. While use of leased space is a viable option, the sensitive proposed mission operations centers and command and control are more appropriate under Federal control on Federal land. Numerous utilities, including specialized communications lines, can be more easily integrated and expanded on land immediately adjacent to existing operations on the NSA and East campuses. Additionally, use of Federal land and facilities is more desirable than use of leased space based on the exacting requirements of the construction and operation of these leased spaces.

Because the DoD can only lease existing facilities, but not direct the construction of facilities on land not owned by the Federal government, the facilities at National Business Park and Annapolis Junction

Business Park under Alternatives 1 and 2 would viably be constructed by current property owners at their own risk. Therefore, the impacts of that construction would be borne entirely by the property owner and would not be considered in the DoD lease.

2.5 Identification of Cumulative Actions

CEQ defines cumulative impacts as "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time." Informed decisionmaking is served by consideration of cumulative impacts resulting from projects that are proposed, under construction, recently completed, or anticipated to be implemented in the reasonably foreseeable future.

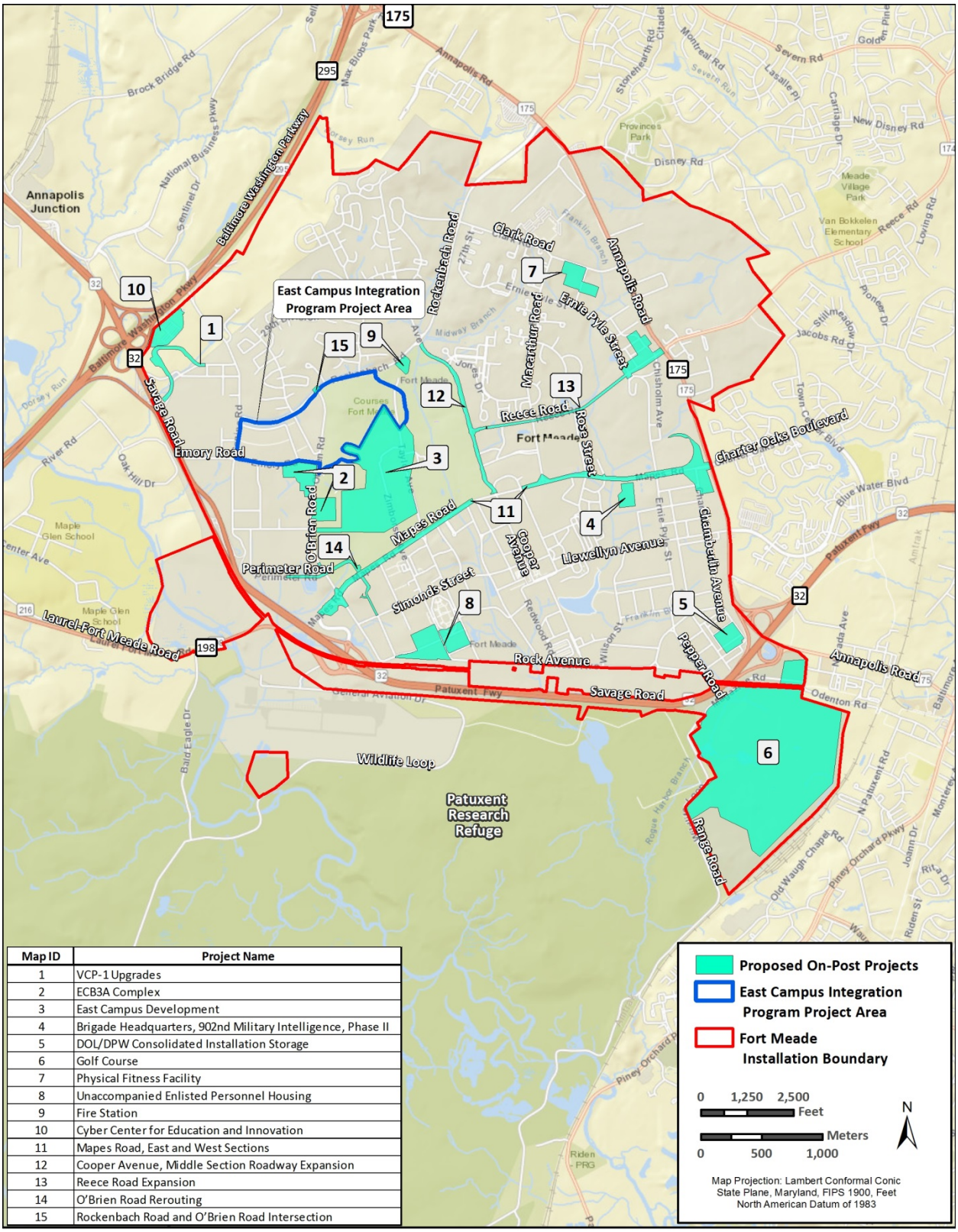
The following discussion presents those actions or projects that are temporally or geographically related to the Proposed Action and, as such, have the potential to result in cumulative impacts. The development of the southern portion of the East Campus, which was analyzed in the 2010 Campus Development EIS, is ongoing and will be completed (or small portions still under construction) by FY 2018. Development of the southern portion of the East Campus represents conditions at the NSA and East campuses at the start of the Proposed Action. Therefore, projects that would be ongoing or starting in FY 2018, including ongoing development of the southern portion of the East Campus, are included in the ongoing and future cumulative projects identified for this cumulative impacts analysis. The cumulative impacts analysis is presented by resource area in **Section 5** of the EIS.

Prior to its establishment as a military reservation in 1917, the East Campus was used as farmland (NSA 2010). The area currently occupied by the East Campus was originally developed as the northern half of what was known as the Fort Meade cantonment area during World War I. Between World Wars I and II, the buildings were demolished and the East Campus was used as a firing range and training area before being developed as a golf course in 1938 (Fort Meade 2012a). Development of the NSA Main Campus to the west of the East Campus began in the mid-1950s when the NSA became a tenant of Fort Meade (USACE Baltimore District 2004). Apart from the campus development in the southern portion of the East Campus, past major actions and development of the NSA Campus that could result in cumulative impacts generally predate the cumulative analysis presented in the 2010 Campus Development EIS and are encompassed in the description of the existing conditions provided in this EIS (see **Section 3**). Therefore, no other specific past actions have been identified for cumulative impacts analysis.

2.5.1 Future Actions on Fort Meade

The known, reasonably foreseeable future projects that would occur on Fort Meade are described in the following sections and depicted in **Figure 2-4**.

Vehicle Control Point (VCP) 1 Upgrades. Upgrades for VCP-1 along Canine Road, northwest of the ECIP project area, would improve traffic flow on Fort Meade. This action would involve realignment of the Canine Road entrance farther away from the MD 32 off-ramp and construction of new vehicle detention and inspection areas, guard booths, and parking areas.



Map ID	Project Name
1	VCP-1 Upgrades
2	ECB3A Complex
3	East Campus Development
4	Brigade Headquarters, 902nd Military Intelligence, Phase II
5	DOL/DPW Consolidated Installation Storage
6	Golf Course
7	Physical Fitness Facility
8	Unaccompanied Enlisted Personnel Housing
9	Fire Station
10	Cyber Center for Education and Innovation
11	Mapes Road, East and West Sections
12	Cooper Avenue, Middle Section Roadway Expansion
13	Reece Road Expansion
14	O'Brien Road Rerouting
15	Rockenbach Road and O'Brien Road Intersection

Figure 2-4. Locations of Other Actions under Consideration for Cumulative Impacts

ECB3A Complex. This project involves construction of the publishing and archives complex and construction of a new multi-level parking garage on O'Brien Road south of the ECIP project area. At full build-out, the buildings would occupy up to 500,000 ft^2. Development of the proposed parking garage would replace displaced parking caused by the project and provide additional parking spaces to reduce the existing parking deficit on the NSA Campus.

East Campus Development. The NSA is currently developing approximately 1.8 million ft^2 of facilities, including a data center and associated administrative space for up to 6,500 personnel, and an electrical substation and generator plants providing 50 MW of electricity in the southern portion of the East Campus. Construction of this project is currently underway with completion of ongoing work planned for FY 2018 (such as ECB 1, ECPS 1, and the data center), and completion of additional elements planned for FY 2020 where site preparation work is underway but facilities are not yet under construction (such as ECB 2).

Brigade Headquarters 902nd Military Intelligence Group, Phase II. The U.S. Army Intelligence and Security Command plans to initiate the Phase II construction and development of a Command and Control Facility for the 902nd Military Intelligence Group. As proposed, the facility would occupy approximately 200,403 ft^2 on the southeastern portion of Fort Meade. The facility would front Ernie Pyle Street in the southeastern portion of Fort Meade with the Franklin Branch to the west and Building 6200 to the east.

Directorate of Logistics/Directorate of Public Works (DOL/DPW) Consolidated Installation Storage. The Fort Meade DOL and DPW plan to develop and replace inadequate storage and facility space. The project would provide facility space for the DOL's Maintenance and Transportation Motor Pool and replace storage space borrowed from the Defense Logistics Agency Disposition Services facility needed for arms storage. The proposed storage and facility space would require 107,000 ft^2. The project would be located southeast of the East Campus in the area bordered by 2½ Street to the north, Chamberlain Avenue to the west, 1st Street to the south, and Ross Road to the east.

Golf Course. The U.S. Army's Department of Family, Morale, Welfare and Recreation on Fort Meade plans to construct a new 36-hole golf course with a 37,000-ft^2 clubhouse in the southeastern corner of the installation (south of MD 32).

Physical Fitness Facility. The Department of Family, Morale, Welfare and Recreation plans to construct an approximately 79,653-ft^2 physical fitness facility in the northeastern portion of Fort Meade on the southern side of Clark Road, overlapping 21st and 22nd streets.

Unaccompanied Enlisted Personnel Housing. Barracks in the 9800 Troop Support Area and elsewhere on Fort Meade would be replaced with five modern barracks. Phases I and II of this project would consist of three 144-single person garden style barracks (105,408 ft^2) and two 270-single person barracks (110,624 ft^2) constructed in the southwestern portion of Fort Meade. These barracks would be located in an area generally bordered by Buildings 6401, 6409, and 8452, and a parking lot to the north; Taylor Avenue to the east; Hodges Street and Rock Avenue to the south; and 6th Armored Cavalry Road to the west.

Fire Station. The Directorate of Emergency Services proposes to construct a satellite 16,417-ft^2 fire station in the 3900 Area southwest of the intersection of Cooper Avenue and Rockenbach Road,

approximately 575 feet northeast of the ECIP project area. The fire station would be constructed to meet a 5- to 7-minute response time to the NSA Campus and northern housing areas.

Cyber Center for Education and Innovation. The National Cryptologic Museum Foundation proposes to demolish the existing National Cryptologic Museum in the east-central portion of Fort Meade, and construct a new 74,500-ft^2, two-story Cyber Center for Education and Innovation (CCEI), which would be the home of the new National Cryptologic Museum, adjacent to the existing museum site. The CCEI would include museum exhibits, library, classrooms, auditorium, gift shop, storage, office space, and ancillary uses, including a reconfigured parking lot and the potential site for relocation of the National Vigilance Park (NCMF 2016).

Roadway Improvements and Vehicle Control Points. The following projects are planned to improve VCPs, intersections, and general transportation on the installation. The information for these projects was obtained from the *Short Range Component of the Fort Meade Real Property Master Plan* and other sources (Fort Meade 2013a, 2014).

- ***Mapes Road, East and West Sections.*** Mapes Road transects Fort Meade south of the East Campus between MD 32 and MD 175. This project would widen Mapes Road and rebuild the VCPs on the east and west sides of the installation near where Mapes Road intersects MD 32 and MD 175, respectively. The east and west sections of Mapes Road (between O'Brien Road and Ernie Pyle Street) would be widened from two to four lanes, and intersections with O'Brien Road and Ernie Pyle Street and the associated turn lanes would be improved to ease traffic congestion. The VCP at the Mapes Road/MD 175 intersection would include construction of a replacement visitor control center with parking. The VCP at the Mapes Road/Route 32 intersection would include an additional privately owned vehicle inspection lane and an upgraded visitor control center with parking.
- ***Cooper Avenue, Middle Section Roadway Expansion.*** This project entails widening Cooper Avenue from two to four lanes along its mid-section between Rockenbach Road and Mapes Road. It would provide a continuity of four-lane roads on the installation to improve traffic circulation.
- ***Reece Road Expansion.*** Reece Road would be widened from two to four lanes between MacArthur Road and Ernie Pyle Street. Turn lanes would be constructed to improve the intersection of Reece Road and Ernie Pyle Street, and the VCP on Reece Road at MD 175 just east of Ernie Pyle Street would be rebuilt.
- ***O'Brien Road Rerouting.*** O'Brien Road would be rerouted at its intersection with Mapes Road, south of the East Campus in the southwestern portion of Fort Meade. Improvements planned for the VCP on the west end of Mapes Road require the rerouting of O'Brien Road from the NSA Campus around the east side of the Fort Meade Water Treatment Plant to Simmonds Street.
- ***Rockenbach Road and O'Brien Road Intersection.*** The project would improve the intersection of Rockenbach Road and O'Brien Road to allow for increased traffic flow efficiency.

2.5.2 Other Actions Outside of the NSA Campus and Fort Meade

Following are the known, reasonably foreseeable future projects located outside of Fort Meade that will be considered in the cumulative impacts analysis (see **Figure 2-5**).

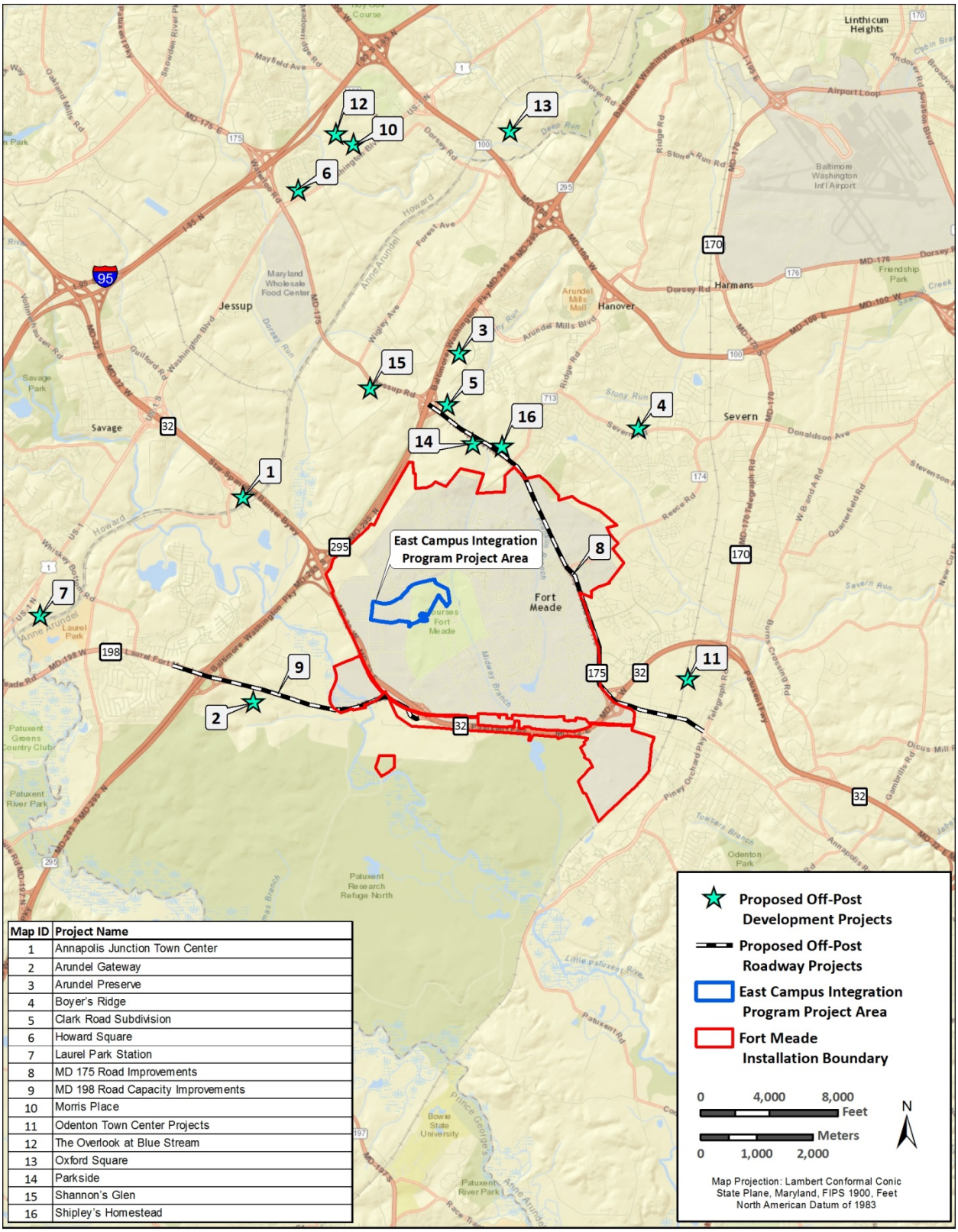
Odenton Town Center Projects. The Odenton Growth Management Area comprises approximately 1,600 acres and would be developed or redeveloped for shopping, entertainment, and access to transportation (e.g., Maryland Area Rail Commuter [MARC] rail line). The Odenton Town Center projects include 3.3 million ft^2 of mixed-use commercial, industrial, office, retail, residential, and transit uses and parking structures. Fourteen town center projects located along MD 175 and connecting streets are in various stages of planning (Anne Arundel County 2014).

Arundel Gateway. Arundel Gateway is a 300-acre mixed-use development, consisting of the Liberty Valley and Arundel Gateway sections, located in western Anne Arundel County, southwest of Fort Meade. Development plans for the area include mixed-use retail buildings, commercial buildings, offices and housing (Ribera Development LLC 2014, Lemke 2014). Arundel Gateway would be comprised of 8 acres for development of three-story office buildings (totaling 100,000 ft^2), 16 acres for mixed commercial buildings and retail shops, a community center (3,000 ft^2), and 103 acres for various housing developments (e.g., 500-unit townhouses, 350-unit multi-family townhouses, 360-unit apartments, and 200-unit condominiums) (Anne Arundel County 2012a). The proposed development is southwest of Fort Meade on MD 198, just east of the Baltimore-Washington Parkway/MD 198 interchange. This project is in the advanced planning stages (West County Chamber of Commerce 2015).

Arundel Preserve. Arundel Preserve entails the phased development of a 268-acre, mixed-use community northeast of Fort Meade at the Baltimore-Washington Parkway/MD 175 interchange. At full build-out, the Arundel Preserve Town Center is planned to provide more than 2 million ft^2 of office space, 250,000 ft^2 of retail space, two hotels, 47 single-family homes, 390 townhomes with parking, and more than 1,000 apartment homes (Arundel Preserve 2014). Phase I, which consisted of construction of approximately 1.3 million ft^2 of the proposed development, has been completed. Phase I actions included development of the hotels, 171,000 ft^2 of office space, 45,000 ft^2 of retail shops, and some of the planned residential homes. Phase II development would provide the remaining offices, residential homes, and complementary-use spaces (West County Chamber of Commerce 2015).

Boyer's Ridge. The Boyer's Ridge subdivision is planned to be a medium-density residential development just east of the Reece Road/Severn Road intersection, approximately 3 miles northeast of the NSA East Campus. The projected site for Boyer's Ridge is a 50-acre agricultural property. The subdivision is designed to accommodate pedestrian circulation, provide a consistent streetscape that will ease traffic congestion, and provide open space and recreational areas (LPDA 2014).

Clark Road Subdivision. The Clark Road Subdivision is planned to provide 282 new residential units (Anne Arundel County 2011, Anne Arundel County 2015a, Anne Arundel County 2015b). The subdivision would be located in a commercial district in Jessup, Maryland, approximately 2.5 miles north of the NSA East Campus, east of the Baltimore-Washington Parkway/MD 175 interchange.



Map ID	Project Name
1	Annapolis Junction Town Center
2	Arundel Gateway
3	Arundel Preserve
4	Boyer's Ridge
5	Clark Road Subdivision
6	Howard Square
7	Laurel Park Station
8	MD 175 Road Improvements
9	MD 198 Road Capacity Improvements
10	Morris Place
11	Odenton Town Center Projects
12	The Overlook at Blue Stream
13	Oxford Square
14	Parkside
15	Shannon's Glen
16	Shipley's Homestead

Figure 2-5. Locations of Other Actions Outside of NSA and Fort Meade

Parkside. This phased mixed-use development (estimated to be completed by 2025) would provide 1,144 townhomes, offices, and commercial components on the 252-acre property (Kim 2014). The initial phases of townhome development began in 2014. Future phases would include a lot for a church and a school as part of the overall mixture of uses. The development would be located in Jessup, Maryland, directly north of Fort Meade, southeast of the Baltimore-Washington Parkway/MD 175 interchange.

Oxford Square. Oxford Square is planned as a phased, transit-oriented development (TOD) that would provide up to 400 rental apartments within walking distance of the Dorsey MARC Station in Hanover, Maryland (Howard County 2014). Oxford Square is located approximately 5.5 miles north of the NSA East Campus, northwest of the MD 100 and the Baltimore-Washington Parkway/MD 295 interchange.

Howard Square. Howard Square is a planned mixed-use community located approximately 5 miles north of the NSA East Campus in Elkridge, Maryland. At full build-out, Howard Square will provide approximately 409 townhomes and 600 apartments (Verde at Howard Square) along with 320,000 ft^2 of retail and commercial space and 6 acres of dedicated amenity and recreational park space (Howard County 2014).

Shipley's Homestead. Shipley's Homestead is a planned new development that would provide housing, retail, and commercial amenities at the intersection of MD 175 and MD 713 in Odenton, Maryland, north of Fort Meade. Plans for this development include 100 acres for 431 homes, and 44 acres for 398,000 ft^2 of retail space (KLNB Retail 2015).

Shannon's Glen. Shannon's Glen would include new retail and housing on a 38-acre property located north of Fort Meade in Odenton, Maryland, between National Business Parkway and the Baltimore-Washington Parkway. The subdivision would provide up to 364 rental apartments and 131 for-sale townhouses (Elm Street Development 2013).

The Overlook at Blue Stream. Located approximately 5 miles north of the NSA East Campus in Elkridge, Maryland, The Overlook at Blue Stream is planned to be a mixed-use residential development located just west of the Blue Stream Drive/U.S. Route 1 intersection. At full build-out, this development is expected to provide up to 1,300 residential units and approximately 540,000 ft^2 of commercial space (Howard County 2014).

Morris Place. Morris Place is planned as a mixed-use residential subdivision located approximately 5 miles north of the NSA East Campus in Elkridge, Maryland, near U.S. Route 1. This project involves development of 184 residential units (Howard County 2014).

Laurel Park Station. Laurel Park Station is planned as a mixed-use development and redevelopment complex. The project involves creation of a TOD next to the Laurel Park MARC Station that would provide up to 650,000 ft^2 of office space, 127,000 ft^2 of retail space, and 1,000 multifamily residential units (Goldreich 2013, Howard County 2014).

Annapolis Junction Town Center. The Annapolis Junction Town Center would create an 18.9-acre TOD to include 100,000 ft^2 of office space, 416 apartment homes, a 150-room hotel, 17,450 ft^2 of retail space, and a new 704-space MARC Station parking garage. According to site plans, phased openings would begin with apartment homes to be completed in 2016. This project would be located in Howard County

near the Savage MARC Station, just north of the Annapolis Junction Business Park (Annapolis Junction Town Center 2014).

Maryland State Route Improvements. Several highway and road improvements originally triggered by 2005 DoD Base Realignment and Closure (BRAC) actions at Fort Meade are planned to address current and future traffic congestion at various locations along MD 175, MD 198, and the Baltimore-Washington Parkway. These improvements include the following:

- ***MD 175 Road Improvements.*** A planning study is underway to identify needs for traffic flow improvements on MD 175 from the Baltimore-Washington Parkway to MD 170 (5.2 miles), including the MD 175/Baltimore-Washington Parkway interchange (MD SHA and Anne Arundel County 2014). Access accommodations for bicycles and pedestrians would be provided, where appropriate. This project includes phased intersection improvements on MD 175 from MD 713 to Disney Road at Mapes and Reece roads, and at MD 198. Improvements are underway for the segment from the Baltimore-Washington Parkway to Disney Road. Planning along the right-of-way for the Baltimore-Washington Parkway interchange is also continuing.
- ***MD 198 Road Capacity Improvements.*** The Maryland State Highway Administration (SHA), in conjunction with the Federal Highway Administration (FHWA), Anne Arundel County, Fort Meade, and USACE, conducted a planning study addressing current and future capacity needs, bicycle lanes, and pedestrian access along MD 198 from the Baltimore-Washington Parkway to MD 32 (3.5-mile study area). The purpose of the MD 198 Project Planning Study is to identify ways to improve existing capacity and traffic operations, enhance access to Fort Meade, and increase the safety of drivers, bicyclists, and pedestrians along MD 198, while supporting existing and planned development in the area (MD SHA and Anne Arundel County 2014, FHWA and MD SHA 2011). Further planning for this project is currently underway.

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SECTION 3

AFFECTED ENVIRONMENT

3. Affected Environment

3.1 Land Use

3.1.1 Definition of the Resource

The term "land use" refers to real property classifications that indicate either natural conditions or the types of human activity occurring on a parcel. In many cases, land use descriptions are codified in installation master planning and local zoning laws. Two main objectives of land use planning are to ensure orderly growth and compatible uses among adjacent property parcels or areas. However, there is no nationally recognized convention or uniform terminology for describing land use categories. As a result, the meanings of various land use descriptions, labels, and definitions vary among jurisdictions. Natural conditions of property can be described or categorized as unimproved, undeveloped, conservation or preservation area, and natural or scenic area. There is a wide variety of land use categories resulting from human activity. Descriptive terms often used include residential, commercial, industrial, agricultural, institutional, and recreational.

In appropriate cases, the location and extent of a proposed action is evaluated for its potential effects on a project site and adjacent land uses. The foremost factor affecting a proposed action in terms of land use is its compliance with any applicable land use or zoning regulations. Other relevant factors include matters such as existing land use at the project site, the types of land uses on adjacent properties and their proximity to a proposed action, and the duration of a proposed activity and its permanence.

Visual resources are defined as the natural and man-made features that give a particular setting or area its aesthetic qualities. These features define the landscape character of an area and form the overall impression that an observer receives. Evaluating the aesthetic qualities of an area is a subjective process because the value that an observer places on a specific feature varies depending on his/her perspective.

3.1.2 Existing Conditions

3.1.2.1 ECIP Project Area

Land Use

Fort Meade. The NSA Campus, including the East Campus, is on Fort Meade. Fort Meade encompasses 5,131 acres in the northwestern corner of Anne Arundel County, Maryland. The installation is 17 miles southwest of Baltimore, Maryland (see **Figure 1-1**). The installation is primarily composed of administration, intelligence operations, instructional institutions, family housing, and support facilities. Fort Meade is bound by the Baltimore-Washington Parkway to the northwest, Annapolis Road (MD 175) to the northeast, and Patuxent Freeway (MD 32) to the south and west. Other significant nearby transportation arteries include U.S. Route 1 and I-95, which run parallel to and just to the west of the Baltimore-Washington Parkway. I-97, which connects Baltimore and Annapolis, is several miles east of Fort Meade (Fort Meade 2013a).

Fort Meade is part of the Baltimore metropolitan region, which includes Baltimore City and the five surrounding counties of Anne Arundel, Baltimore, Carroll, Harford, and Howard. Land use at Fort Meade is made up of general categories including Community, Industrial, Professional/Institutional, Ranges/Training, and Residential (see **Figure 3.1-1**). Fort Meade itself is zoned R1 Residential by Anne Arundel County; however, the county does not have jurisdiction over Federal land.

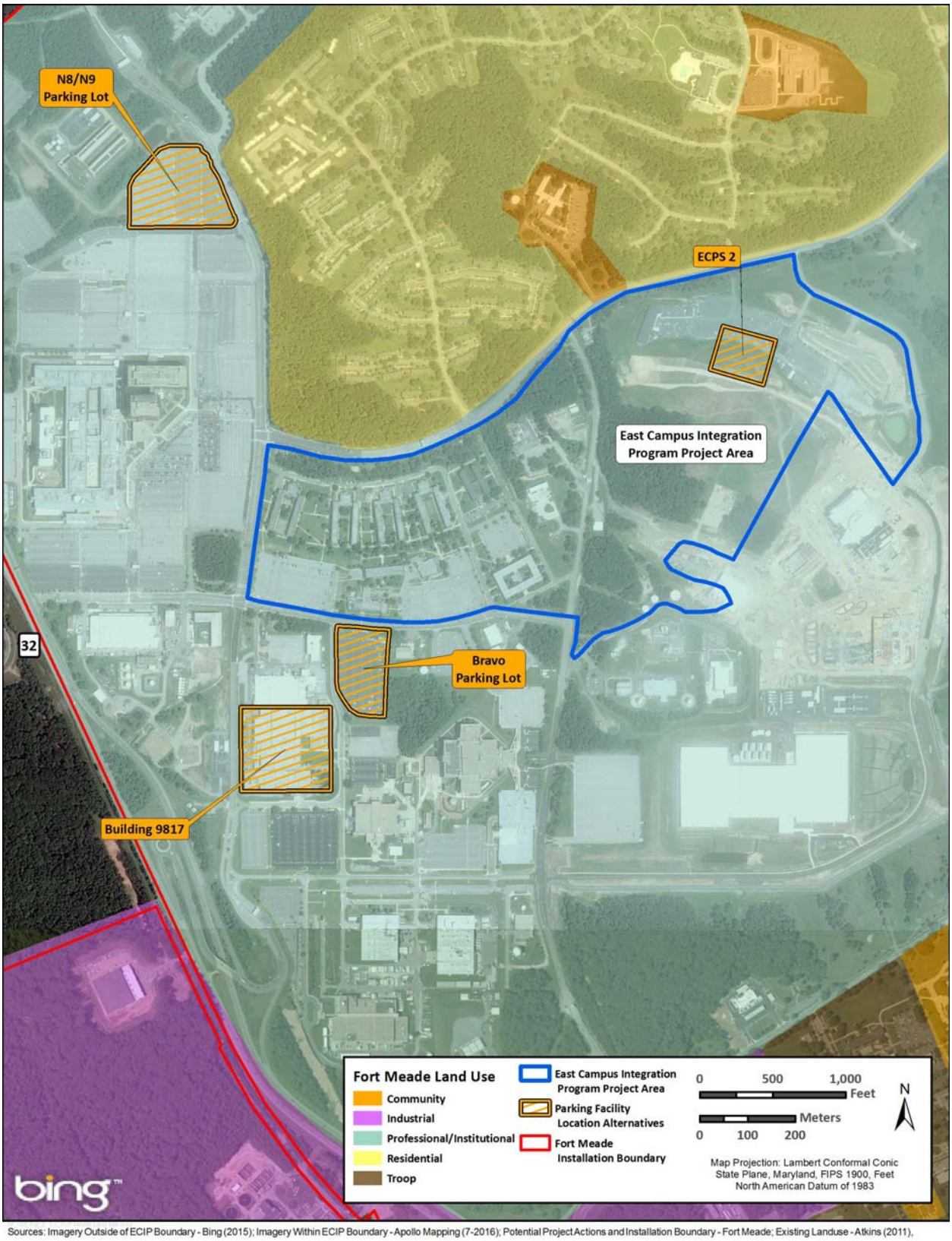
ECIP Project Area. The 240-acre NSA East Campus is east of the NSA Main Campus and generally bordered by O'Brien Road to the west, Rockenbach Road to the north, Midway Branch to the east, and an undeveloped road extending east from Samford Road to the south. The ECIP project area includes the northern portion of the East Campus and the 9800 Troop Support Area (see **Figure 2-1**). Additionally, three parking facility alternative sites and several buildings proposed for demolition under the Proposed Action are on the NSA Main Campus.

The northern portion of the East Campus is approximately 84 acres. This area is currently primarily occupied by a staging area used for development of the southern portion of the East Campus. The 49-acre 9800 Troop Support Area belongs to Fort Meade and is not currently part of the NSA Main or East campuses. The 9800 Troop Support Area includes barracks (some of which are currently being used for administrative functions), a dining facility, fitness center, post office, and support facilities, including those used to support NSA operations. An approximately 18-acre triangular site east of the 9800 Troop Support Area and west of the northern portion of the East Campus is also part of the ECIP project area. This area contains the Children's World Learning Center.

The NSA Main Campus includes administrative, laboratory, warehouse, and utility support facilities. Administrative uses are located throughout the campus with the main support/utility area located south of the 9800 Troop Support Area (NSA 2013a). Land use within the ECIP project area and the NSA Main Campus, including the locations of parking facility alternatives and buildings proposed for demolition, is characterized as Professional/Institutional (Fort Meade 2013a). The ECIP project area is bordered by Fort Meade Residential (Midway Common military family housing neighborhood) and Community (Argonne Hills Chapel Center) land uses to the north, and Professional/Institutional use (Defense Information Systems Agency and Defense Media Activity) to the east on Fort Meade (see **Figure 3.1-1**). The NSA Main Campus and the southern portion of the East Campus are south of the ECIP project area, and the NSA Main Campus is west of the project area.

The *2013 NSAW Facilities Master Plan* is a tool designed to guide the future development of the NSA Campus to ensure that its personnel have the facilities and infrastructure required to be successful. Development of the *2013 NSAW Facilities Master Plan* addresses facility requirements that have resulted from changing mission and technology by:

- Ensuring a safe, secure environment
- Improving reliability of utility systems, including providing redundancy
- Alleviating overstressed utility systems
- Providing an adequate campus transportation network
- Accommodating projected mission changes.



Sources: Imagery Outside of ECIP Boundary - Bing (2015); Imagery Within ECIP Boundary - Apollo Mapping (7-2016); Potential Project Actions and Installation Boundary - Fort Meade; Existing Landuse - Atkins (2011),

Figure 3.1-1. Fort Meade Land Use

The NSA's land use planning focus is on improving the existing NSA Campus and its facilities. Future planning at the NSA Campus involves providing a campus-like, high-tech, professional and collaborative environment. Currently, the NSA either owns or leases multiple buildings at locations across Maryland. This dispersion has its own difficulties in logistics, transportation, space management, and mission support and execution. The execution of this long-term strategy would consolidate regional facilities to create zoned centers that support mission execution through co-location, and increase cost savings by eliminating duplicate service (NSA 2013a).

The "Vision for the Future" as described in the *NSAW Facilities Master Plan* proposes a campus of appropriately sized and utilized buildings, sited and arranged around open green spaces in an environmentally sustainable manner; resulting in an aesthetically pleasing attractive working environment in high-quality, flexible facilities. The framework invokes a community of employees where considerations for pathways, shelter, travel distances, centralized commons activities, and employee amenities come together. It minimizes the location of people, computing infrastructure, and industrial uses in the same space; adjusts transportation infrastructure; and provides adequate parking within reasonable walking distance from most buildings (NSA 2013a). The East Campus is currently the NSA's primary development area on Fort Meade. Development of the East Campus provides an opportunity for the NSA to reorganize its campus structure by grouping major mission-supporting activities onsite (NSA 2013a).

As discussed in **Section 2.1.1**, the *NSAW Facilities Master Plan* identifies development by the NSA in the northern portion of the East Campus and the 9800 Troop Support Area (i.e., ECIP project area) in order to create a contiguous NSA Campus that unites existing facilities with new structures (NSA 2013a). Additionally, the *Long Range Component of the Fort Meade Real Property Master Plan* designates both the East Campus and the 9800 Troop Support Area as part of the NSA expansion, and depicts both areas as part of the NSA Exclusive Use Area in the Future Land Use Plan (Fort Meade 2013a).

Outside of Fort Meade. Land use surrounding Fort Meade consists primarily of developed property that supports a growing population. Cities near Fort Meade include Odenton to the east, Jessup to the north, and Laurel to the west. Areas to the north and east of Fort Meade have a range of residential uses with higher density residential units to the east. Land use to the northwest of the installation is categorized as residential with some industrial and office space areas as well. Land use to the west is a wide variety of governmental/institutional, industrial, and light residential uses with large amounts of forested and open space along the Little Patuxent River. Land uses to the south include governmental/institutional uses, and natural features, including the 12,750-acre Patuxent Research Refuge (Fort Meade 2013a).

Anne Arundel County has a General Development Plan that is a comprehensive land use management plan prepared in compliance with state requirements and guidelines (Anne Arundel County 2009). Anne Arundel County has three designated "Town Centers," Glen Burnie, Parole, and Odenton, which are areas with a mix of general commercial and multifamily residential uses. The Odenton Town Center is approximately 3 miles southeast of the ECIP project area, while the Glen Burnie and Parole town centers are approximately 8 and 14 miles away from the project area, respectively. Accordingly, only the Odenton Town Center is discussed in more detail. The Odenton Town Center Master Plan establishes development and zoning regulations and guidelines to promote an attractive, viable, and pedestrian-friendly Transit Oriented Development center near the Odenton MARC rail station, southeast of Fort Meade (Anne Arundel County 2008a). The Odenton Growth Management Area is a 1,620-acre area

encompassing major commercial and industrial zoned portions of Odenton that was established in 1990. Approximately 55 percent of the land in the Odenton Growth Management Area is developed. The remaining 45 percent is available for development and is one of the county's priority target areas for new growth given its public transit opportunities and its proximity to Fort Meade (Anne Arundel County 2008a, Anne Arundel County 2008b). The Odenton Town Master Plan is the guide for the future development of the Odenton Growth Management Area, and identifies where new roads and community facilities should be located, as well as the type and intensity of future development in the different subareas (Anne Arundel County 2008a). Development within the Odenton Town Center is ongoing, with several in-progress projects in the area (Anne Arundel County 2014).

Visual Resources. Fort Meade, including parts of the NSA Campus, is divided into six visual themes (administrative, industrial, troop, residential, community, and campus) based on the architectural character and land use patterns on the installation. Part of the ECIP project area is in the Campus Visual Zone, which is bound by Rockenbach Road to the north, Mapes Road to the south, and Cooper Avenue to the east (see **Figure 3.1-2**). O'Brien Road bisects the western part of the ECIP project area, dividing it into two separate parcels associated with the East Campus and the 9800 Troop Support Area.

The 9800 Troop Support Area mainly consists of barracks and administrative buildings. A staging area associated with development in the southern portion of the East Campus is located within the northeastern portion of the ECIP project area; however, the ECIP project area also has gently rolling contours with some forest stands. The ECIP project area has some open views to the east and south. Mature trees line Rockenbach Road in the northern portion of the ECIP project area that buffer the Midway Commons neighborhood from the project area (NSA 2010, Fort Meade 2013b).

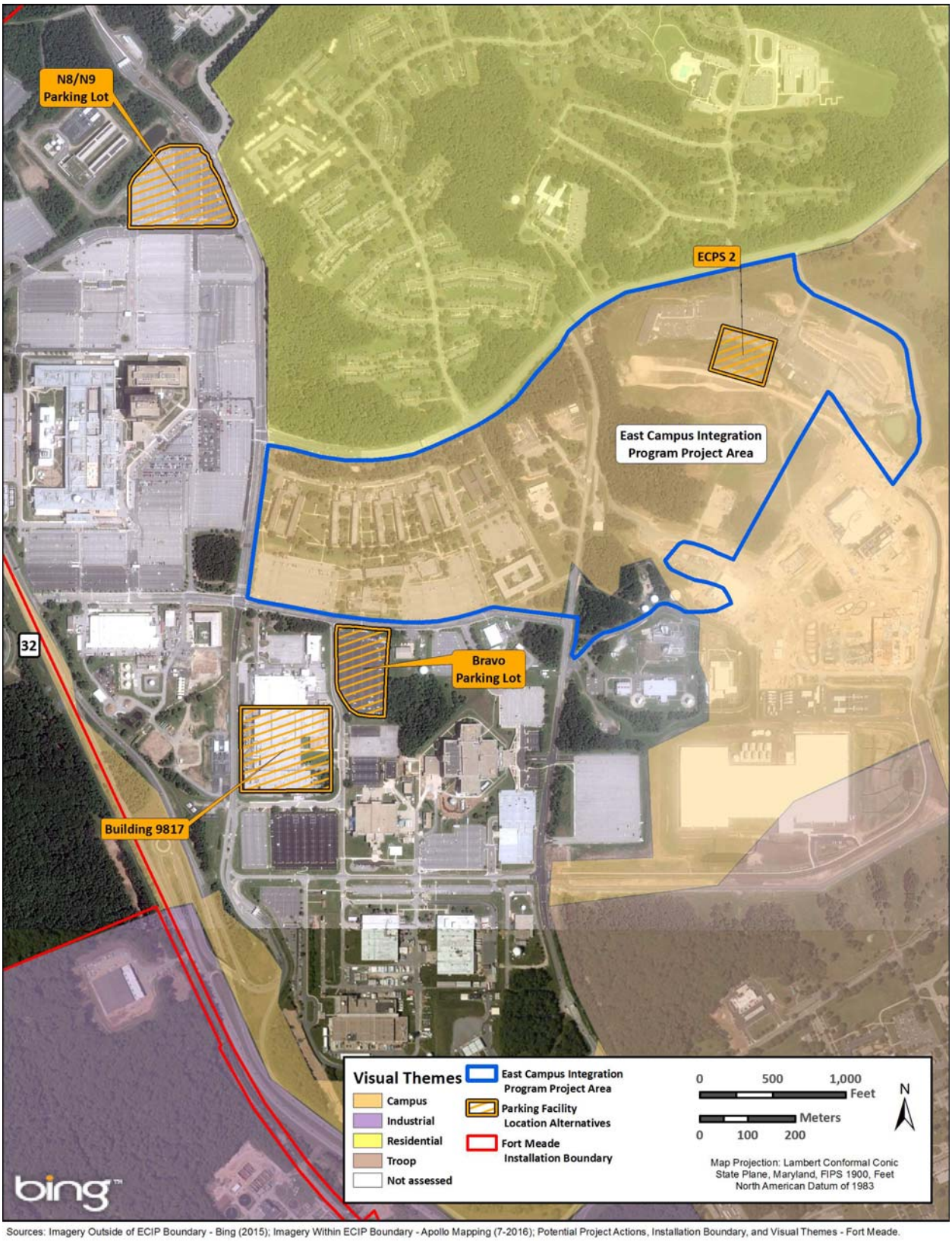
3.1.2.2 National Business Park

Land Use. National Business Park is in Jessup, Maryland, just west of the Baltimore-Washington Parkway. The land use at National Business Park is categorized as Industrial and Mixed-Use Employment by Anne Arundel County (see **Figure 3.1-3**). The land use in the surrounding area is characterized as Residential and Commercial to the north, Mixed Use Residential and Commercial to the east, Industrial, Residential, and Government/Institution to the west, and Industrial and Government/Institution to the south. The National Business Park alternative site itself is categorized as Mixed-Use Employment. It is also forested and contains a few residences. The Baltimore-Washington Parkway is east of and adjacent to National Business Park.

Visual Resources. Visual resources at the National Business Park are typical of a modern office park, with corridors of natural features (e.g., trees and streams) visible to the north and south. The National Business Park alternative site consists of a forested landscape. The Baltimore-Washington Parkway, which has a forested buffer, is approximately 230 feet east of the National Business Park site boundary at its closest point.

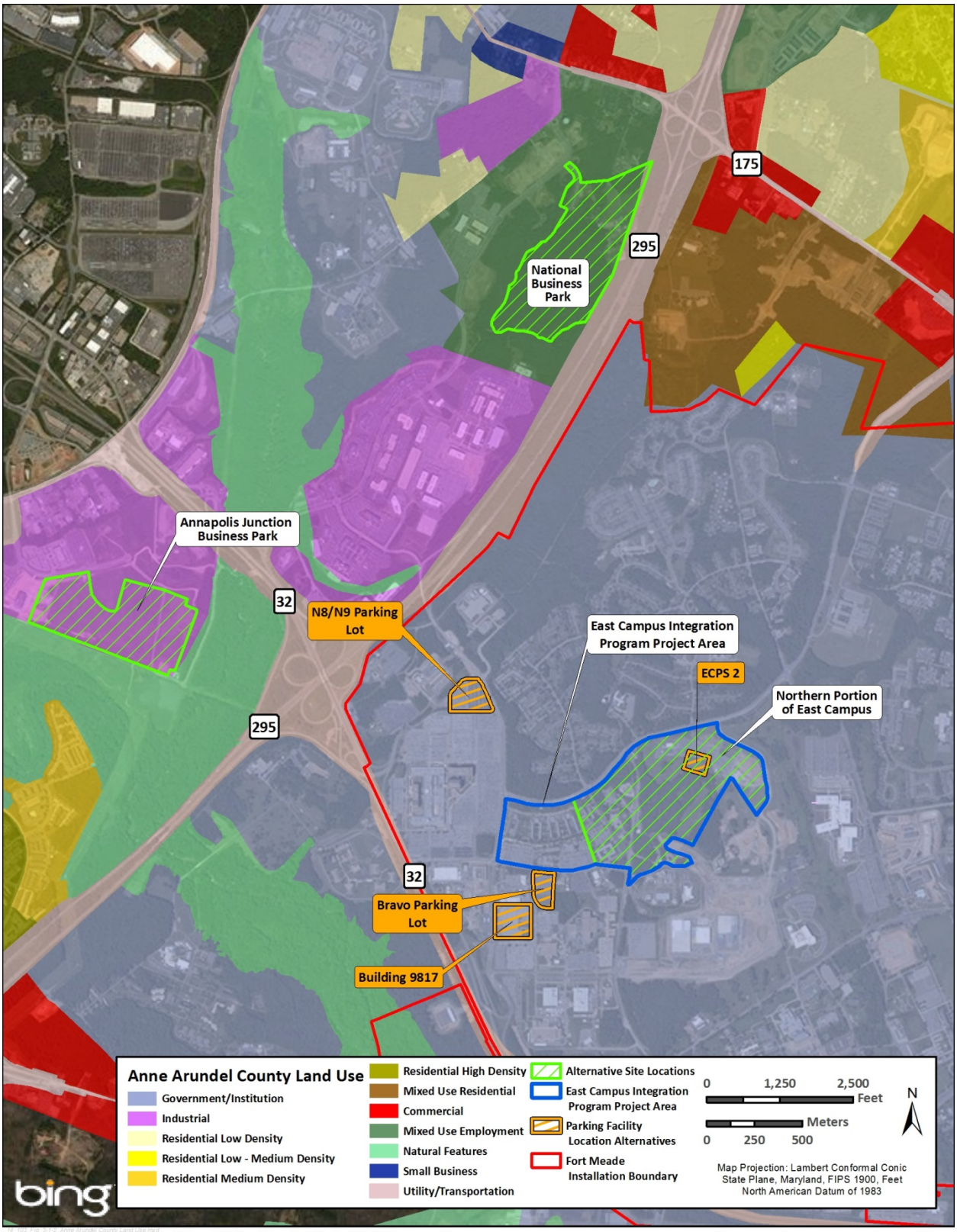
3.1.2.3 Annapolis Junction Business Park

Land Use. Annapolis Junction Business Park is in Annapolis Junction, Maryland, west of the Baltimore-Washington Parkway/MD 32 interchange. The land use at Annapolis Junction Business Park is categorized as Industrial by Anne Arundel County. Land use to the south and east of Annapolis Junction Business Park is categorized as Natural Features, with land to the north and west categorized as Industrial. The Annapolis Junction Business Park alternative site is currently undeveloped open space.



Sources: Imagery Outside of ECIP Boundary - Bing (2015); Imagery Within ECIP Boundary - Apollo Mapping (7-2016); Potential Project Actions, Installation Boundary, and Visual Themes - Fort Meade.

Figure 3.1-2. Fort Meade Visual Themes



Source: County Landuse: Anne Arundel County Office of Planning & Zoning GIS 2009

Figure 3.1-3. Anne Arundel County Land Use

Visual Resources. Visual resources at Annapolis Junction Business Park are typical of a modern office park. Natural features are visible to the south and east. The Annapolis Junction Business Park alternative site consists of a cleared, mowed field.

3.2 Transportation

3.2.1 Definition of the Resource

This section documents the existing transportation systems, conditions, and travel patterns within and in the vicinity of Fort Meade and the NSA Campus. Transportation infrastructure includes primary and secondary roadways that feed into the installation and vehicle control points/gates, roadways, and parking areas on the installation. Available capacity and performance of the transportation system inform the conditions that commuters and other travelers encounter. The traffic network, vehicular traffic, travel patterns, circulation, and parking are described for the study area. The analysis evaluates traffic operations during the AM and PM peak hours, with emphasis on level of service (LOS) at key locations, or ability for an intersection to manage the flow of traffic efficiently.

Traffic operations results presented in this document represent typical weekday AM peak hour conditions, with LOS letter grades ranging from LOS "A" for good or "free flow" traffic operations conditions, to LOS "F" for worst congestion conditions with significant breakdowns in travel flow. **Figure 3.2-1** illustrates LOS in the context of a typical corridor with varying degrees of congestion.

Figure 3.2-1. LOS Illustrations

3.2.2 Existing Conditions

A Traffic Impact Study was completed as part of this EIS (see **Appendix B**). The traffic study analyzed existing traffic patterns and conditions, and examined intersections and freeways for traffic progression and effectiveness. The traffic study area for this EIS includes the roadway network around Fort Meade, including MD 32 from I-95 to U.S. Route 1, Baltimore-Washington Parkway/MD 295 from MD 198 to MD 100, and MD 175 from I-95 to MD 32.

3.2.2.1 ECIP Project Area

Fort Meade is along the northern side of Patuxent Freeway (MD 32), east of the Baltimore-Washington Parkway, on the western edge of Anne Arundel County, Maryland. It is favorably situated in proximity to regional arterial and freeway facilities.

Internal Roadway Network on Fort Meade. Fort Meade is well connected internally though arterial and collector roadways. The following are descriptions of primary and secondary roadways on Fort Meade, with emphasis on the NSA Campus and ECIP project area. These roadways were shown on **Figures 2-1** and **2-3**.

- Rockenbach Road (MD 713) is a four-lane undivided roadway connecting MD 175 (Annapolis Road) to the east, Canine Road and the NSA Main Campus to the west, and borders the East Campus to the north. The posted speed limit is 45 miles per hour (mph).
- Reece Road is a two-lane undivided roadway connecting MD 175 to the east and Cooper Avenue to the west, providing access to the Normandy Bluffs military housing area to the eastern side of MD 175. The posted speed limit is 25 mph.
- Mapes Road is a two-lane undivided roadway connecting MD 175 to the east and External Gate 7 (see External Gates descriptions below and **Figure 3.2-2**) to the west, and a four-lane divided roadway outside the installation from External Gate 7 to the MD 32 interchange, which terminates into MD 198 (south of the NSA East Campus). The posted speed limit is 30 mph.
- Canine Road varies between a three- and four-lane road within the NSA Campus. It has two connections with MD 32 (one west and one south of the East Campus) and borders the west side of the 9800 Troop Support Area.
- Cooper Avenue is a two-lane undivided roadway east of the East Campus connecting Llewellyn Avenue to the south and Rockenbach Road to the north. Cooper Avenue traverses farther north of Rockenbach Road and provides access to the Midway Common military housing area. The posted speed limit is 25 mph.
- Other primary roadways on Fort Meade and the NSA Campus include Clark Road, O'Brien Road, MacArthur Road, Taylor Avenue, Ernie Pyle Road, Connector Road, and Samford Road.

External Roadway Network (Off-Post). Primary highways serving Fort Meade and the traffic study area include the Baltimore-Washington Parkway (MD 295), I-95, MD 32, MD 175, and Fort Meade Road (MD 198). The following list describes each of these roadways, which are shown in **Figure 3.2-2**.

- The Baltimore-Washington Parkway (MD 295) is located along the west side of Fort Meade. It traverses in a north-south direction connecting Baltimore to the north and Washington, DC to the south. It carries two lanes of traffic in each direction. According to the FHWA, the Baltimore-Washington Parkway is classified as a parkway; however, for the traffic capacity analysis, the Baltimore-Washington Parkway is classified as a freeway as per the Highway Capacity Manual (HCM).
- I-95 is located along the west side of the traffic study area. It traverses in a north-south direction connecting Baltimore and Washington, DC and carries four lanes of traffic in each direction. According to the HCM, I-95 is classified as a freeway for capacity analysis.
- Patuxent Freeway (MD 32) forms the southern boundary of Fort Meade. It connects I-95 to the northwest and beyond to I-97 to the southeast. It carries two lanes of traffic in each direction. According to the HCM, MD 32 is classified as a freeway for capacity analysis.

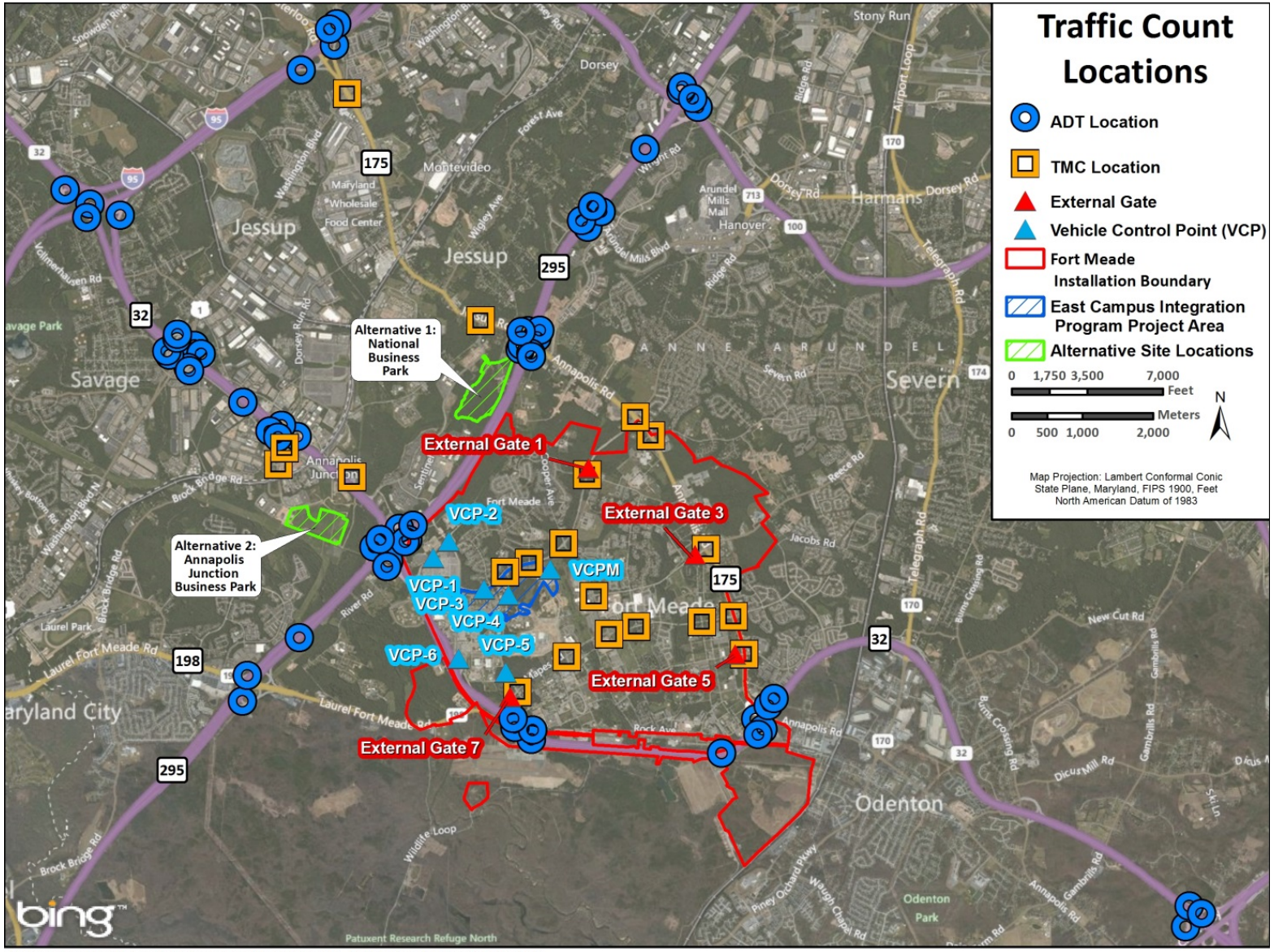


Figure 3.2-2. Traffic Count Locations

- Annapolis Road (MD 175) forms the northeastern boundary of Fort Meade connecting I-95 to the north and MD 32 to the south. It is a two- to four-lane road in the vicinity of Fort Meade with auxiliary lanes at intersections.
- Fort Meade Road (MD 198) is a two-lane undivided roadway east of the Baltimore-Washington Parkway to MD 32. It widens to a four-lane divided roadway west of the Baltimore-Washington Parkway. It connects Fort Meade near External Gate 7 (Mapes Road) to the east and the Baltimore-Washington Parkway to the west.
- Dorsey Run Road is a two-lane road that connects MD 32 to Annapolis Junction Business Park near Junction Drive. It widens with exclusive turning lanes at the intersection with the entrance to the business park and ends in the park.
- National Business Parkway is a four-lane unrestricted access road that connects to MD 32 to the south and MD 175 to the north.

External Gates. Access to Fort Meade, not including the NSA Campus, is provided via several external gates. Inspections are conducted for all inbound vehicles at each external gate. Four external gates are located on Rockenbach Road, Reece Road, Mapes Road, and Llewellyn Avenue, respectively, west of MD 175. External Gate 4, Mapes Road at MD 175, is closed at this time. External Gate 2 is permanently closed. See **Figure 3.2-2** for External Gate locations:

- **External Gate 1: Rockenbach Road**
  - 5:30 a.m. to 9:00 p.m., Monday–Friday
  - 9:00 a.m. to 9:00 p.m., weekends, closed holidays
- **External Gate 3: Reece Road and MD 175**
  - Visitor Control Center Gate (24-hour access)
  - Visitor Control Center hours: 7:30 a.m. to 3:30 p.m., Monday–Friday
- **External Gate 4: Mapes Road and MD 175**
  - Closed until further notice. This external gate was closed during the traffic data collection.
- **External Gate 5: Llewellyn Avenue and MD 175**
  - 6:00 a.m. to 9:00 a.m., Monday–Friday for inbound traffic
  - 3:00 to 6:00 p.m., Monday–Friday for outbound traffic
- **External Gate 6: Pepper Road and MD 32**
  - 6:00 a.m. to 4:00 p.m., Monday–Friday
  - Pedestrian and cyclists only. No motor vehicles.
- **External Gate 7: Mapes Road and MD 32**
  - 5:30 a.m. to 9:00 p.m., Monday–Friday
  - 9:00 a.m. to 9:00 p.m., weekends and holidays.

Vehicle Control Points. NSA maintains seven VCPs to provide access to the NSA Campus. All of the VCPs are inside of Fort Meade, and VCPs 1, 2, and 6 are directly accessible from off the installation as noted below:

- VCP 1: Canine Road (accessible from MD 32)
- VCP 2: Connector Road (accessible from southbound Baltimore-Washington Parkway)
- VCP 3: Rockenbach Road
- VCP 4: O'Brien Road near Rockenbach Road
- VCP 5: O'Brien Road near Perimeter Road
- VCP 6: Samford Road (accessible from MD 32/Samford Road)
- VCP M: Rockenbach Road (currently under construction).

Existing Conditions: Traffic Volumes. In order to evaluate the existing traffic conditions throughout the study area, traffic counts were collected to provide background information. Turning movement counts (TMCs) and automated traffic recorders (ATRs) at key locations and lane configurations were collected from March to May 2015. These data were not seasonally adjusted.

Turning Movement Counts. The TMCs were collected at 22 key intersections in the study area. At each of these locations, vehicles at the intersection were recorded by direction and turning movement. The data were collected from 6:00 a.m. to 9:00 a.m. and 3:00 p.m. to 6:00 p.m. These data were tabulated in 15-minute increments in order to determine the AM peak hour, PM peak hour, and peak hour factors (PHFs). The PHF is a measure of the demand fluctuation within the peak hour period, usually expressed as PHF = V/(4 x v_p), where V is the total volume during the peak hour and v_p is the peak 15-minute volume occurring during the peak hour. By averaging peak hour times at each individual intersection, common AM and PM peak hours were determined to be from 7:15 a.m. to 8:15 a.m. and from 4:45 p.m. to 5:45 p.m., respectively.

Automated Traffic Recorders. ATRs were used to collect 48-hour traffic counts at 13 key locations in the study area. ATR data were collected in 1-hour increments and used to determine the corridor's average daily traffic (ADT) volumes and truck percentages. Vehicles are classified according to the FHWA vehicle classifications. These classifications are distinguished by the number of axles in contact with the road. For this analysis, vehicles with three or more axles and buses were considered trucks. **Table 3.2-1** summarizes the ADT volumes and truck percentages for key commuter corridors adjacent to Fort Meade. See **Figure 3.2-2** for Traffic Count Locations.

Table 3.2-1. Summary of Average Daily Traffic Volumes for Key Corridors

	ADT (vpd)	Truck Percentage
Baltimore-Washington Parkway/MD 295 (northbound)	51,948	2%
Baltimore-Washington Parkway/MD 295 (southbound)	59,061	2%
MD 32 (eastbound)	34,858	6%
MD 32 (westbound)	41,255	3%

Key: vpd = vehicles per day

Alternative Transportation. There are currently several shuttles running on and to/from Fort Meade (see **Appendix B**, Section 2.3). Trips generated by any development were reduced by a factor of 5 percent. This represents carpools, van pools, shuttles, and other means of alternative transportation. **Appendix B,** Section 2.2, discusses other means of mass transit including train and bus service in the study area.

Existing Conditions: Capacity Analysis and Levels of Service. Traffic analyses were performed using the latest version of Planung Transport Verkehr's Vistro 3.00-02 for the study area's ramp merge/diverge locations, freeway segments, and intersections. Using Google Maps, field data, and AM and PM peak hour volumes, a comprehensive network was coded into Vistro to study the AM and PM peak hour traffic impacts. Methods described in the Transportation Research Board's HCM were used to evaluate freeway segments and freeway ramp merge/diverge locations. For this analysis, weave locations were analyzed as ramp merge/diverge locations and not as weave sections as described in **Appendix B**.

The LOS describes the operational conditions of an intersection. It ranges from a LOS A through LOS F. The *Policy on Geometric Design of Highways and Streets 2011* by the American Association of State Highway and Transportation Officials provides guidelines for the selection of design LOS. The criteria provided in Exhibits 10-7, 13-2, 16-2, 17-2, and 21-1 of the HCM were used to determine the LOS for the intersections in the study area.

Under the 2015 Baseline Conditions, I-95, MD 32, and the Baltimore-Washington Parkway operate between LOS C and LOS F. These freeways function between LOS C and LOS E in both AM and PM peak hours, except three locations in the AM scenario that function at LOS F (Baltimore-Washington Parkway/MD 295 southbound between MD 175 and Arundel Mills Boulevard, and I-95 both northbound and southbound between MD 175 and MD 32). The intersection LOS also vary; almost half function at LOS B or C in either the AM or PM peak hours. MD 175 at U.S. Route 1 and Mapes Road at O'Brien Road operate at LOS F in the PM peak hour. See **Figure 3.2-3** for existing LOS values at intersections in the region, and figures in **Appendix B**, Section 4, for regional freeway ramp LOS values.

During the AM peak hour, the NSA VCPs operate at LOS C or worse except for VCP 3, which operates at a LOS A. VCPs 1, 2, and 6 operate at LOS F at this time. In the PM peak hour, all VCPs operate at LOS A except VCP 2, which operates at LOS C.

See **Appendix B**, Section 9, for summary tables showing LOS values for baseline conditions.

Existing Parking and Pedestrian Facilities. The existing parking on Fort Meade is primarily surface lots with approximately 15,500 spaces available (NSA 2013a). Currently, there is a vast shortage of parking available for workers, contractors, military, and visitors that do not have assigned seats. Overflow parking is in satellite locations accessible by shuttle and includes other government facilities and adjacent business parks. The ECIP project area currently has three parking lots serving the 9800 Troop Support Area. There are additional parking areas provided for deliveries and other special uses adjacent to specific buildings on the NSA Campus. Although there is an influx of pedestrians during the AM and PM peak hours, apart from sidewalks along roads and one biking path along Connector Road, there are currently no interconnected bike or walking paths that could be used to facilitate commuting throughout the NSA Campus during the work day and, therefore, are not informative for the traffic analysis.

3.2.2.2 National Business Park

The National Business Park is on the west side of the Baltimore-Washington Parkway in the vicinity of the Parkway and MD 175 interchange. Existing traffic conditions in the region around the National Business Park are described in **Section 3.2.2.1**.

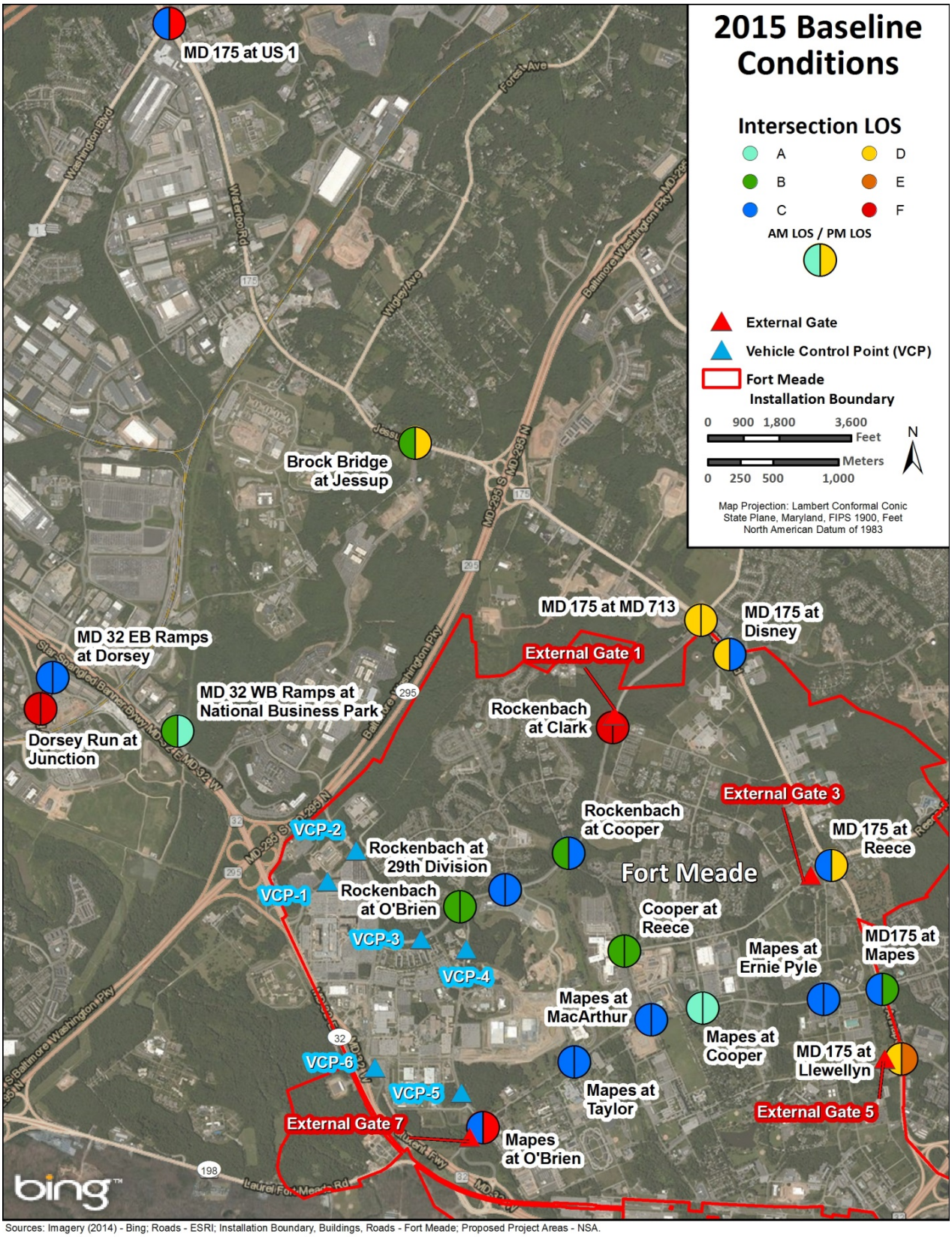


Figure 3.2-3. Intersection LOS for the 2015 Baseline Conditions

3.2.2.3 Annapolis Junction Business Park

The Annapolis Junction Business Park is at the southern end of Dorsey Run Road, which is in the southwest quadrant of the MD 32 and the Baltimore-Washington Parkway interchange. Existing traffic conditions in the region around the Annapolis Junction Business Park are described in **Section 3.2.2.1**.

3.3 Noise

3.3.1 Definition of the Resource

Noise is defined as any sound that is undesirable because it interferes with communication, is intense enough to damage hearing, or is otherwise annoying. Noise can be intermittent or continuous, steady or impulsive, and can involve any number of sources and frequencies. It can be readily identifiable or generally nondescript. Human response to increased sound levels varies according to the source type, characteristics of the sound source, distance between source and receptor, receptor sensitivity, and time of day. Affected receptors can be specific (e.g., schools, churches, or hospitals) or broad areas (e.g., nature preserves or designated districts) in which occasional or persistent sensitivity to noise above ambient, or background, levels exists in the environment.

Noise Metrics. Sound, within the range of human hearing, can vary in intensity by more than one million units. Therefore, a logarithmic scale, known as the decibel scale, is used to quantify sound intensity and to compress the scale to a more manageable range. Sound is characterized by both its amplitude (how loud it is) and frequency (or pitch). The human ear does not hear all frequencies equally. In fact, the human hearing organs of the inner ear deemphasize very low and very high frequencies. "A-weighted" decibels (dBA) are used to reflect this selective sensitivity of human hearing by putting more weight on the range of frequencies where the average human ear is most sensitive, and less weight on those frequencies we do not hear as well. The human range of hearing extends from approximately 3 dBA to around 140 dBA. Considering this range, it is important to understand that to the human hear, an increase in noise levels of 10 dBA is perceived to be twice as loud. All sound levels discussed in this EIS are in dBA values.

Environmental noise is often described as acoustic sound energy level occurring over a stated period of time, typically one hour. When the acoustic energy is averaged over a stated period, the resulting equivalent sound level represents the energy-based average sound level for that that period. This equivalent continuous noise level (L_{eq}) is the metric unit used as a baseline by which to compare project-related noise levels (i.e., noise modeling results, which are also expressed as an hourly L_{eq}) and to assess the potential project-related noise increase over existing (or ambient) conditions. Many noise standards and noise ordinances are based on L_{eq}.

The Day-Night-Average A-weighted Noise Level (DNL) is the average noise level over a 24-hour period, with a nighttime artificial 10-dBA added on to night (i.e., 10 p.m. to 7 a.m.) noise events to account for the fact that community background noise typically decreases by approximately 10 decibels. DNL is a useful descriptor for noise because it averages ongoing, yet intermittent, noise and it measures total sound energy over a 24-hour period.

Federal Regulations. The Federal government has established noise guidelines and regulations for the purpose of protecting citizens from potential hearing damage and from various other adverse physiological, psychological, and social effects associated with noise. According to U.S. Army, Federal Aviation Administration, and U.S. Department of Housing and Urban Development (HUD) criteria, residential units and other noise-sensitive land uses are "clearly unacceptable" in areas where the DNL noise exposure exceeds 75 dBA, and "normally acceptable" in areas exposed to noise of 65 dBA or less (per 24 CFR 51). Areas that experience noise above 65 dBA and below 75 dBA are identified as "normally unacceptable." The Federal Interagency Committee on Noise developed land use compatibility guidelines for noise in terms of DNL (FICON 1992). For outdoor activities, the U.S. Environmental Protection Agency (USEPA) recommends a DNL of 55 dBA as the sound level below which there is no reason to suspect that the general population would be at risk from any of the effects of noise (USEPA 1974).

The head of each Federal executive agency is responsible for compliance with applicable pollution control standards, which includes the Noise Control Act of 1972 (Public Law 92-574). "Applicable pollution control standards" means the same substantive, procedural, and other requirements would apply to a private person under the Act. The executive agency is responsible for submitting an annual plan for the control of environmental pollution, which will provide for any necessary improvement in the design, construction, management, operation, and maintenance of Federal facilities and activities. The head of each executive agency also ensures that sufficient funds for compliance with applicable pollution control standards are requested in the agency budget.

Under the Noise Control Act of 1972, the Occupational Safety and Health Administration (OSHA) established workplace standards for noise. The minimum requirement states that constant noise exposure must not exceed 90 dBA over an 8-hour period. The highest allowable sound level to which workers can be constantly exposed is 115 dBA, and exposure to this level must not exceed 15 minutes within an 8-hour period. The Occupational Safety and Health Administration limit for instantaneous noise exposure, such as impact noise, is 140 dBA. An employer must administer a continuing, effective hearing conservation program as described in 29 CFR 1910.95(c) if employee noise exposure equals or exceeds an 8-hour average sound level of 85 dBA. One component of the program is that employers are required to provide hearing protection equipment that will reduce sound levels to acceptable limits (29 CFR 1910.95).

State Regulations. The State of Maryland has transferred noise regulation authority to local jurisdictions. However, the state continues to be responsible for setting standards and general exemptions (Code of Maryland Regulations [COMAR] 26.02.03, *Control of Noise Pollution*), as provided in the Maryland Environmental Noise Act of 1974. These regulations limit the maximum allowable noise level for residential, industrial, and commercial areas. Construction and demolition activities are exempt from the limits shown in **Table 3.3-1** during daytime hours (i.e., between 7 a.m. and 10 p.m.). However, construction and demolition activities may not cause or permit noise levels that exceed 90 dBA during daytime hours or the noise levels specified in **Table 3.3-1** during nighttime hours (i.e., between 10 p.m. and 7 a.m.). Additionally, noise from pile-driving activities is exempt from the limits shown in **Table 3.3-1** during the daytime hours of 8 a.m. to 5 p.m. Emergency operations are completely exempt from the regulation (COMAR 26.02.03).

Table 3.3-1. Maximum Allowable Noise Levels for Receiving Land Use Categories

Day/Night	Maximum Allowable Noise Levels (dBA)		
	Industrial	Commercial	Residential
Day (7 a.m. to 10 p.m.)	75	67	65
Night (10 p.m. to 7 a.m.)	75	62	55

Source: MDE 2012a

Ambient Sound Levels. Noise levels vary depending on the housing density and proximity to parks and open space, major traffic areas, or airports. As shown on **Table 3.3-2**, the noise level for light auto traffic is about 50 dBA, which increases to 70 dBA for a noisy restaurant or freeway, and to 90 dBA in heavy truck or city traffic (USEPA 1974). Most people are exposed to sound levels of 50 to 55 dBA or higher on a daily basis.

Table 3.3-2. Sound Levels and Human Response

Noise Level (dBA)	Common Sounds	Effect
10	Just audible	Negligible
30	Soft whisper (15 feet)	Very quiet
50	Light auto traffic (100 feet)	Quiet
60	Air conditioning unit (20 feet)	Intrusive
70	Noisy restaurant or freeway traffic	Telephone use difficult
80	Alarm clock (2 feet)	Annoying
90	Heavy truck (50 feet) or city traffic	Very annoying Hearing damage (8 hours)
100	Garbage truck	Very annoying
110	Pile drivers	Strained vocal effort*
120	Jet take-off (200 feet) or auto horn (3 feet)	Maximum vocal effort
140	Carrier deck jet operation	Painfully loud

Source: USEPA 1981

Note:

* HDR extrapolation

Construction Sound Levels. Demolition and construction activities can cause increases in sound levels well above the ambient level. A variety of different sounds and noise are generated by graders, pavers, trucks, welders, and other equipment and work processes depending on the type of demolition/construction activity that is occurring. **Table 3.3-3** lists sound levels associated with common types of construction equipment that could be used under the Proposed Action and alternatives. Construction equipment usually exceeds the ambient sound levels by 20 to 25 dBA in an urban environment and up to 30 to 35 dBA in a quiet suburban area.

Table 3.3-3. Predicted Noise Levels for Construction Equipment

Construction Equipment	Predicted Noise Level at 50 feet (dBA)
Clearing and Grading	
Bulldozer	80
Grader	80–93
Truck	83–94
Roller	73–75
Excavation	
Backhoe	72–93
Jackhammer	81–98
Building Construction	
Concrete mixer	74–88
Welding generator	71–82
Pile driver	91–105
Crane	75–87
Paver	86–88

Source: USEPA 1971

3.3.2 Existing Conditions

3.3.2.1 ECIP Project Area

Fort Meade, including the ECIP project area and proposed parking facility alternative locations, is a relatively quiet installation with no major noise sources. On the NSA Campus, including the ECIP project area, primary sources of noise are vehicular traffic and existing generator plants. Other noise sources on the NSA Campus and ECIP project area include normal operation of heating, ventilation, and air conditioning (HVAC) systems; lawn maintenance; snow removal; and various intermittent construction activities. Occasional helicopter landings and take-offs from the NSA Campus are required, which increases local ambient sound levels; however, these events are generally short in duration (NSA 2013a). None of these operations or activities produce excessive levels of noise (Fort Meade 2013b). Sensitive noise receptors close to the ECIP project area include Midway Commons, a military family housing neighborhood north of Rockenbach Road. The nearest residence is located approximately 250 feet north of the ECIP project area.

The primary off-installation contributors of noise to portions of the ECIP project area include vehicle traffic transiting the two major highways (i.e., Baltimore-Washington Parkway and MD 32) that run adjacent to Fort Meade's eastern and southern boundaries, and small aircraft flight activities at Tipton Airport. Tipton airfield is located approximately 1.1 miles south of the ECIP project area. Tipton Airport is a public airport that conducts approximately 131 aircraft operations per day, and supports single- and double-engine small aircraft and helicopters (AirNav 2014). The approach paths to the Tipton airport

runway are oriented in an east-west direction south of the installation, thus the majority of noise generated by aircraft landings and take-offs at this facility is projected away from on-installation receptors.

A recent study found ambient noise levels for the installation to be between 55 and 65 dBA DNL, depending on the noise-sensitive receptor's proximity to major roadways (NSA 2009). Therefore, the ambient noise levels at Fort Meade and ECIP project area fall into the "normally acceptable" range as defined by U.S. Army and HUD criteria. Because the parking facility alternative locations are in the area around the ECIP project area, they would be expected to have similar noise environments to the ECIP project area.

3.3.2.2 National Business Park

National Business Park is located southwest of the intersection of the Baltimore-Washington Parkway and MD 175. Both roads are arterial roadways that are major contributors to the noise environment at National Business Park. To the north of the business park, there are various small homes and some forested, undeveloped land. West of the National Business Park is a correctional facility and a wastewater treatment plant. Due to its relative proximity to Fort Meade and the Baltimore-Washington Parkway and its business park function, the existing noise environment of National Business Park would be typical of a suburban, administrative setting, similar to that of the NSA Campus on Fort Meade. Sensitive noise receptors near National Business Park include residential units approximately 500 feet to the northwest along Brock Bridge Road and to the north along MD 175.

3.3.2.3 Annapolis Junction Business Park

The existing noise environment for Annapolis Junction Business Park is similar to that of National Business Park. Annapolis Junction Business Park sits southwest of MD 32 and the Baltimore-Washington Parkway, which are heavily used and contribute a majority of the noise to the existing noise environment. South of Annapolis Junction Business Park is a small subdivision buffered by a mature forest. Various offices and industrial parks are located west of the office park, which creates a similar suburban noise environment to the National Business Park. Sensitive noise receptors near Annapolis Junction Business Park include residential units along Pennington Drive, which lie approximately 1,800 feet south of the office park.

3.4 Air Quality

3.4.1 Definition of the Resource

Air pollution is the presence in the outdoor atmosphere of one or more contaminants (e.g., dust, fumes, gas, mist, odor, smoke, or vapor) in quantities and of characteristics and duration such as to be injurious to human, plant, or animal life or to property, or to interfere unreasonably with the comfortable enjoyment of life and property. Air quality as a resource incorporates several components that describe the levels of overall air pollution within a region, sources of air emissions, and regulations governing air emissions. The following sections include a discussion of the existing conditions, a regulatory overview for the project components, and a summary of greenhouse gases and global warming.

3.4.2 Existing Conditions

A discussion of the regional climate, National Ambient Air Quality Standards (NAAQS), and local ambient air quality is provided below. The ECIP project area, National Business Park, and Annapolis Junction Business Park are all within the same airshed; therefore, they have been combined throughout this discussion.

Regional Climate. The climate in the ECIP project area is affected by its proximity to the Chesapeake Bay, Delaware Bay, and Atlantic Ocean. The daily average high temperatures range from 40 degrees Fahrenheit (°F) during January to 87 °F during July. Daily average low temperatures range from 23 °F during January to 67 °F during July. The annual average precipitation is 41 inches uniformly distributed throughout the year. The annual average snowfall is 20 inches. Prevailing winds are from the west-northwest. Southwesterly winds are more frequent during the summer months and northwesterly winds are more frequent during the winter months (Idcide 2014).

National Ambient Air Quality Standards and Attainment Status. USEPA Region 3 and Maryland Department of the Environment (MDE) regulate air quality in Maryland. The CAA (42 U.S.C. 7401–7671q), as amended, gives USEPA the responsibility to establish the primary and secondary NAAQS (40 CFR 50) that set acceptable concentration levels for seven criteria pollutants: particulate matter less than 10 microns (PM_{10}), $PM_{2.5}$, sulfur dioxide (SO_2), carbon monoxide (CO), NO_x, O_3, and lead. Short-term standards (i.e., 1-, 8-, and 24-hour periods) have been established for pollutants contributing to acute health effects, while long-term standards (i.e., annual averages) have been established for pollutants contributing to chronic health effects. Each state has the authority to adopt standards stricter than those established under the Federal program; however, the State of Maryland accepts the Federal standards.

Federal regulations designate air quality control regions (AQCRs) that have concentrations of one or more of the criteria pollutants that exceed the NAAQS as *nonattainment* areas. Federal regulations designate AQCRs with levels below the NAAQS as *attainment* areas. *Maintenance* areas are AQCRs that have previously been designated as nonattainment and have been redesignated to attainment for a probationary period through implementation of maintenance plans. According to the severity of the pollution problem, nonattainment areas can be categorized as marginal, moderate, serious, severe, or extreme. Anne Arundel County (therefore all areas associated with the Proposed Action and alternatives) is within the Baltimore Intrastate AQCR, or AQCR 115 (40 CFR 81.12). AQCR 115 is within the ozone transport region that includes 11 states and Washington, DC. The USEPA designated Anne Arundel County as the following (40 CFR 81.321):

- Moderate nonattainment for the 8-hour O_3 NAAQS
- A maintenance area for the $PM_{2.5}$ NAAQS
- Attainment for all other criteria pollutants.

Local Ambient Air Quality. Existing ambient air quality conditions near the Proposed Action and alternatives can be estimated from measurements conducted at air quality monitoring stations close to the NSA Campus. The most recent available data from MDE for nearby monitoring stations roughly describe the ambient air quality conditions at the NSA Campus (see **Table 3.4-1**). These data represent the most recently collected upper bound levels of criteria pollutants in the area, and have been provided for informational purposes.

Table 3.4-1. 2014 Local Ambient Air Quality Monitoring Data

Pollutant	Primary NAAQS[a]	Secondary NAAQS[a]	Monitored Data[b]
CO			
8-Hour Maximum[c] (ppm)	9	None	0.9
1-Hour Maximum[c] (ppm)	35	None	1.1
NO_2			
1-Hour (ppm)	0.100	None	0.051
Annual Arithmetic Mean (ppm)	0.053	0.053	0.051
O_3			
8-Hour Maximum[d] (ppm)	0.075	0.12	0.071
$PM_{2.5}$			
Annual Arithmetic Mean[e] ($\mu g/m^3$)	12	12	9.1
24-Hour Maximum[f] ($\mu g/m^3$)	35	35	22
PM_{10}			
24-Hour Maximum[c] ($\mu g/m^3$)	150	150	43
SO_2			
1-Hour Maximum[c] (ppb)	75	None	44
24-Hour Maximum[c] (ppm)	None	140	8

Sources:

a. 40 CFR 50.1–50.12.

b. USEPA 2015a

Notes:

c. Not to be exceeded more than once per year.

d. The 3-year average of the fourth highest daily maximum 8-hour average O_3 concentrations over each year must not exceed 0.08 ppm.

e. The 3-year average of the weighted annual mean $PM_{2.5}$ concentrations at each monitor within an area must not exceed 15.0 $\mu g/m^3$.

f. The 3-year average of the 98th percentile of 24-hour concentrations at each population-oriented monitor must not exceed 65 $\mu g/m^3$.

Key: ppm = parts per million; $\mu g/m^3$ = micrograms per cubic meter; ppb = parts per billion

3.4.2.1 Regulatory Overview

General Conformity. The 1990 amendments to the CAA require Federal agencies to ensure that their actions conform to the State Implementation Plan (SIP) in nonattainment and maintenance areas. The USEPA developed two distinctive sets of conformity regulations: one for transportation projects and one for nontransportation projects. Nontransportation projects are governed by general conformity regulations (40 CFR 6, 51 and 93), described in the final rule *Determining Conformity of General Federal Actions to State or Federal Implementation Plans*, revised and published in the *Federal Register* on March 24, 2010. Maryland has adopted the Federal conformity regulations by reference (COMAR

26.11.26.03). The Proposed Action is a nontransportation project within a nonattainment area. Therefore, a general conformity analysis is required with respect to the 8-hour O_3 and $PM_{2.5}$ NAAQS.

The General Conformity Rule specifies *de minimis* threshold emissions levels by pollutant to determine the applicability of requirements to a project (see **Table 3.4-2**). For an area in moderate nonattainment for the 8-hour O_3 NAAQS within the ozone transport region, the applicability criterion is 100 tons per year (tpy) for NO_x and 50 tpy for VOCs (40 CFR 93.153). For a maintenance area for the $PM_{2.5}$ NAAQS, the applicability criterion is 100 tpy for $PM_{2.5}$, NO_x, and SO_2 (71 FR 40420). VOCs and ammonia were also identified as potential $PM_{2.5}$ precursors. However, neither Maryland nor the USEPA have found that ammonia contributes to $PM_{2.5}$ problems in AQCR 115 or other downwind areas. Therefore, ammonia was not carried forward for detailed analysis, while the VOC emissions are addressed as a precursor to O_3.

Table 3.4-2. Applicability Thresholds for Nonattainment Areas

Criteria pollutants	Applicability threshold (tpy)
O_3 (NO_x or VOCs)	
Serious Nonattainment Areas	50
Severe Nonattainment Areas	25
Extreme Nonattainment Areas	10
Other O_3 Nonattainment Areas outside an O_3 Transport Region	100
Marginal and Moderate Nonattainment Areas Inside an O_3 Transport Region	
VOC	**50**
NO_x	**100**
CO	
All Nonattainment Areas	100
SO_2 or NO_x	
All Nonattainment Areas	100
PM_{10}	
Moderate Nonattainment Areas	100
Serious Nonattainment Areas	70
$PM_{2.5}$ ($PM_{2.5}$, NO_x, and SO_2)	
All Nonattainment and Maintenance Areas	**100**
Lead	
All Nonattainment Areas	25

Sources: 40 CFR 93.153, 71 FR 40420

Construction Permits for New or Modified Emissions Sources. MDE oversees programs for permitting the construction and temporary operation of new or modified stationary source air emissions in Maryland. Air quality permitting from MDE is required for many industries and facilities that emit regulated

pollutants. Based on the size of the emissions units and type of pollutants emitted, MDE sets permit rules and standards for emissions sources.

The air quality permitting process begins with the application for a construction permit. The emergency generator plants, boiler plant, and other proposed stationary sources would require permits to construct in one form or another. There are three types of construction permits available through the MDE for the construction and temporary operation of new emissions sources: Major New or Modified Source Construction Permits in nonattainment areas (Nonattainment New Source Review [NNSR]), Prevention of Significant Deterioration (PSD) permits in Attainment Areas, and Minor New Source Construction Permits (Minor New Source Review [NSR]).

NNSR and PSD permits are both part of the MDE Major NSR program. Thresholds that determine the type of construction permit that might be required depend on both the quantity and type of emissions. Thresholds requiring either an NNSR or a PSD permit for a modification to an existing source in Anne Arundel County are outlined in **Table 3.4-3**. PSD review and permitting are required for sources with the potential to emit 100 tpy of any regulated pollutant for any of the 26 named PSD source categories. One of the named source categories is fossil fuel boilers that individually or in combination at a single facility total more than 250 million British thermal units per hour (MMBtu/hr) heat input (COMAR 26.11.01.01B[37]). For all other sources not in the 26 named source categories, PSD review is required if the source has the potential to emit 250 tpy or more of any regulated pollutant.

Table 3.4-3. Major Modification Thresholds of Criteria Pollutants within Anne Arundel County

Pollutant	New major source (tpy)		Major modification to an existing source [1] (tpy)	
	PSD[2]	NNSR	PSD	NNSR
CO	250 (100)		100	
NO_x		25		25
SO_2	250 (100)		40	
PM	250 (100)		25	
PM_{10}	250 (100)		15	
$PM_{2.5}$	250 (100)		10	
VOCs		25		25

Sources: COMAR 26.11.17.01, 40 CFR 52

Notes:

1. Represents the project emission increase considered "significant."
2. PSD review and permitting are required for sources emitting 100 tpy of any regulated pollutant for fossil fuel boilers (or combination of them) totaling more than 250 MMBtu/hr heat input (COMAR 26.11.01.01B [37]).

Nonattainment New Source Review. Major New or Modified Source Construction Permits in Nonattainment Areas (NNSR Permit) are required for any major new sources or major modifications to existing sources intended to be constructed in an area designated as nonattainment. Currently, when undergoing a physical or operational change, a source determines major NSR applicability through a two-step analysis. First, determine if the increased emissions from a proposed project alone are above the thresholds. If the emissions increase is below the threshold, an NNSR permit would not be required. If the emissions increase is above the major source threshold, NSA would be required to account for all

changes in emissions for the previous 5 years (COMAR 26.11.17.01 B [16], COMAR 26.11.17.02 F [1]). If this determination results in an increase that is lower than the threshold, an NNSR permit would not be required.

NNSR permits are legal documents that specify what construction is allowed; what emissions limits must not be exceeded; reporting, recordkeeping, and monitoring requirements; and how the source can be operated. The NNSR permitting process typically takes 18–24 months. Specifically, typical requirements for an NNSR permit can include the following:

- Best Available Control Technology (BACT) review for qualifying attainment criteria pollutants
- Lowest Achievable Emissions Rate review for qualifying nonattainment pollutants (i.e., VOC and NOx)
- Maximum Achievable Control Technology (MACT) review for hazardous air pollutants (HAPs)
- Air quality analysis (predictive air dispersion modeling)
- Acquiring emissions offsets at a 1 to 1.3 or greater ratio for all contemporaneous emissions increases that have occurred or are expected to occur
- A public involvement process.

Prevention of Significant Deterioration. The PSD program protects the air quality in attainment areas. PSD regulations impose limits on the amount of pollutants that major sources may emit. The PSD process would apply to all pollutants for which the region is in attainment (all but O_3). The PSD permitting process typically takes 18–24 months to complete. Sources subject to PSD are typically required to complete the following:

- BACT review for criteria pollutants
- Predictive modeling of emissions from proposed and existing sources
- Public involvement.

Minor New Source Review. A Minor New, Modified, and certain Major Source Construction Permit (or Minor NSR permit) would be required to construct minor new sources, minor modifications of existing sources, and major sources not subject to NNSR or PSD permit requirements. The Minor NSR permitting process typically takes 4–5 months to complete. Sources subject to Minor NSR could be required to complete the following:

- BACT review for each criteria pollutant
- MACT review for regulated HAPs and designated categories
- Air quality analysis (predictive air dispersion modeling), upon request by MDE
- Procedures for measuring and recording emissions and process rates.

Maryland Public Service Commission (MPSC). In Maryland, agencies constructing an electric generating station, including emergency power, must apply for and obtain either (1) a CPCN for larger power generation projects, or (2) a CPCN waiver for smaller power generation projects that meet certain applicability thresholds established by the MPSC. Waivers are available for generating stations designed to provide on-site generated electricity where the capacity of the generating station does not exceed

70 MW and less than 20 percent of the annual energy generated is exported or sold on the wholesale market, or no electricity will be exported to the electric system.

Air Operating Permits. The requirements for Title V Air Operating Permits are outlined in the Federal regulations in 40 CFR 70 and in the MDE's regulations at COMAR 26.11.03. Based on its Potential to Emit (PTE), NSA is a major source of air emissions. Stationary sources of air emissions at NSA include boilers, generators, incinerators, and classified material reclamation furnaces. An NSA Campus-wide Title V permit (No. 24-003-00317) was issued on February 1, 2015, and expires January 31, 2020 (MDE 2015a). As part of the Title V permit requirements, the NSA must submit a comprehensive emissions statement annually. **Table 3.4-4** summarizes the 2014 NSA Campus emissions from significant stationary sources.

Table 3.4-4. 2014 Emissions from Significant Stationary Sources at the NSA Campus (tpy)

SO_x	CO	$PM_{10}/PM_{2.5}$	NO_x	VOC
5.2	3.1	3.8	34.1	2.6

Source: MDE 2014a

Under MDE's Title V Facility Permit regulations (COMAR 26.11.02 and 26.11.03), a Title V Significant Permit Modification is required for facilities whose emissions increases exceed the emissions thresholds outlined in **Table 3.4-3**. In addition, a Significant Permit Modification would be required if it became necessary to establish federally enforceable limitations to reduce potential emissions below the thresholds. A minor permit modification would be required if emissions were below the thresholds and a federally enforceable limit was not necessary. Submission of an application for these permit modifications would be required within 1 year of the first operation of a new emissions source.

Because this EIS has several separate project components that are being evaluated, it is important to assess how they can be combined or aggregated for permitting. Project emissions are aggregated from project components that are technically or economically dependent. A technically dependent project component is incapable of being performed as planned in the absence of the other component. Economically dependent project components require each other for their economic viability. The construction of individual buildings and the installation of the individual emergency generator and boilers would be implemented over time using funding mechanisms as they become available. The generator plants and boilers for separate building components would likely be both technically and economically independent of each other. Therefore, their emissions would not be aggregated for permitting purposes and they would be permitting as funding became available. Stationary sources of air emissions would have to be reviewed on a case-by-case basis during the permitting process to make this determination.

In addition to the permitting requirements to construct and operate new or modified emissions sources, New Source Performance Standards (NSPSs) and National Emission Standards for Hazardous Air Pollutants (NESHAPs) set emissions control standards for categories of new stationary emissions sources of both criteria pollutants and HAPs.

The NSPS process requires the USEPA to list categories of stationary sources that cause or contribute to air pollution that might reasonably be anticipated to endanger public health or welfare. The NSPS program sets uniform emissions limitations for many industrial sources. As of July 11, 2005, stationary

diesel engines (such as emergency generators) are subject to the NSPS. Applicability of the NSPS is based on engine size and date of purchase and construction. Limitations on emissions come into effect using a tiered approach over time, Tier 1 being the least restrictive and Tier 4 being the most. In addition, boilers and gas combustion turbines with a maximum heat input of 10 MMBtu/hr or greater would be required to comply with the NSPS.

The CAA Amendments of 1990, under revisions to Section 112, required the USEPA to list and promulgate NESHAPs to reduce the emissions of HAPs, such as formaldehyde, benzene, xylene, and toluene from categories of major and area sources (40 CFR 63). New stationary sources with PTE HAPs exceeding either 10 tpy of a single HAP, or 25 tpy of all regulated HAPs, would be subject to MACT requirements.

3.4.2.2 Greenhouse Gases and Global Warming

Greenhouse gases (GHGs) are components of the atmosphere that trap heat relatively near the surface of the earth, and therefore, contribute to the greenhouse effect and global warming. Most GHGs occur naturally in the atmosphere, but increases in their concentration result from human activities such as the burning of fossil fuels. Global temperatures are expected to continue to rise as human activities continue to add carbon dioxide, methane, nitrous oxide, and other GHGs (or heat-trapping gases) to the atmosphere. Most of the United States is expected to experience an increase in average temperature. Precipitation changes, which are also very important to consider when assessing climate change effects, are more difficult to predict. Whether or not rainfall will increase or decrease remains difficult to project for specific regions (USEPA 2015b, IPCC 2007). The southeastern United States, including the ECIP project area, is expected to experience decreased water availability, exacerbated by population growth and land use change, and increased risks associated with extreme events such as hurricanes (USGCRP 2014).

The extent of climate change effects, and whether these effects prove harmful or beneficial, will vary by region, over time, and with the ability of different societal and environmental systems to adapt to or cope with the change. Human health, agriculture, natural ecosystems, coastal areas, and heating and cooling requirements are examples of climate-sensitive systems. Rising average temperatures are already affecting the environment. Some observed changes include shrinking of glaciers, thawing of permafrost, later freezing and earlier break-up of ice on rivers and lakes, lengthening of growing seasons, shifts in plant and animal ranges, and earlier flowering of trees (USEPA 2015b, IPCC 2007).

The USEPA has promulgated two GHG regulations: (1) Mandatory Reporting of GHGs Rule (MRR) that requires the reporting of GHG emissions annually, and (2) GHG Tailoring Rule that requires permitting for major new or modified sources of GHGs established after January 2, 2011. The MRR final rule applies to fossil fuel suppliers and industrial gas suppliers, direct GHG emitters, and manufacturers of heavy-duty and off-road vehicles and engines. The rule does not require control of GHGs, but requires that sources above certain threshold levels be monitored, and the emissions reported. Emergency power sources are exempt from the MRR. The GHG Tailoring Rule promulgated by the USEPA established a carbon dioxide equivalent (CO_2e) threshold for permitting (i.e., construction and operation) of 75,000 tpy for new sources. This rule "tailors" the major source permitting rules outlined above (i.e., Title V, PSD, and NNSR) to apply to GHGs. However, based on a June 23, 2014, U.S. Supreme Court decision and an April 10, 2015, District of Columbia Circuit Court Amended Judgement, the PSD and Title V portions of the GHG Tailoring Rule have been temporarily vacated to the extent that they required a stationary source to obtain a PSD or Title V permit solely because the source emits or has the potential to emit GHGs

above the applicable major source thresholds. GHGs must be considered in a PSD or Title V permit, but only if the source exceeds the PSD or Title V threshold for a pollutant other than GHGs. In response to the Supreme Court decision and the D.C. Circuit's amended judgment, the USEPA intends to conduct future rulemaking action to make appropriate revisions to the PSD and operating permit rules.

The CEQ recently released their final guidance on when and how Federal agencies should consider GHG emissions and climate change in NEPA analyses. The guidance is primarily focused on larger projects that have large air quality implications. It also emphasized a global net change (or "netting") approach to GHG analysis. Although not specifically identified in the final guidance, the draft guidance included a reference point of 27,563 tpy (25,000 metric tpy) of CO_2e emissions for discussion and disclosure of such emissions from larger Federal actions that may have appreciable GHG emissions (CEQ 2014, CEQ 2016). This threshold was carried forward to determine if additional quantitative analysis would be required for the action within this EIS.

3.5 Geological Resources

3.5.1 Definition of the Resource

Geological resources consist of the Earth's surface and subsurface materials. Within a given physiographic province, these resources typically are described in terms of geology, topography and physiography, soils, and, where applicable, geologic hazards and paleontology. Geology is the study of the Earth's composition and provides information on the structure and configuration of surface and subsurface features. Such information derives from field analysis based on observations of the surface and borings to identify subsurface composition. Topography and physiography pertain to the general shape and arrangement of a land surface, including its height and the position of its natural and human-made features.

Soils are the unconsolidated materials overlying bedrock or other parent material. Soils are typically described in terms of their complex type, slope, and physical characteristics. Differences among soil types in terms of their structure, elasticity, strength, shrink-swell potential, and erosion potential affect their abilities to support certain applications or uses. In appropriate cases, soil properties must be examined for their compatibility with particular construction activities or types of land use.

Prime farmland is protected under the Farmland Protection Policy Act (FPPA) of 1981. Prime farmland is defined as land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops, and is also available for these uses. The Act also ensures that Federal programs are administered in a manner that, to the extent practicable, will be compatible with private, state, and local government programs and policies to protect farmland. The Natural Resources Conservation Service (NRCS) is responsible for overseeing compliance with the FPPA and has developed the rules and regulations for implementation of the Act (see 7 CFR 658, 5 July 1984). The implementing procedures of the FPPA require Federal agencies to evaluate the adverse effects (direct and indirect) of their activities on farmland (i.e., prime and unique farmland, and farmland of statewide and local importance), and to consider alternative actions that could avoid adverse effects. An agency may determine whether or not a site is farmland as defined in 7 CFR 658.2(a). Such determination and potential impacts associated with a proposed action are based on preparation of the farmland conversion impact rating form AD-1006 for areas where prime farmland soils occur and by applying criteria established at Section 658.5 of the FPPA (7 CFR 658).

3.5.2 Existing Conditions

3.5.2.1 ECIP Project Area

Physiography and Topography. Anne Arundel County and the NSA Campus lie within the Atlantic Coastal Plain physiographic province of Maryland. The Atlantic Coastal Plain is characterized by unconsolidated sediments, including gravel, sand, silt and clay. The sediments found in the Atlantic Coastal Plain range in age from the Triassic to Quaternary time periods. The Atlantic Coastal Plain is underlain by southeastwardly thickening sequence of sediments composed of sand and gravel aquifers interlayered with silt and clay confining units. The topography of the Atlantic Coastal Plain is relatively flat with slopes generally less than 1 degree toward the east. There is minor variation in microtopography that occurs throughout the NSA Campus and Fort Meade, which is attributable to disturbances caused by development (MGS 2014, Fort Meade 2005).

The ECIP project area is relatively flat but slopes slightly to the east and south, and sits between 200 to 210 feet above mean sea level. A majority of the project area is currently developed or disturbed. Additionally, all four of the locations proposed for parking facility alternatives are flat due to previous development at those locations.

Geology. The geologic history of the region of the NSA Campus and Fort Meade is characterized by mountain-building processes and the cyclical opening and closing of a proto-Atlantic Ocean. During the Alleghanian mountain-building event, shallow water marine sediments were uplifted, forming the Blue Ridge-South Mountain anticlinorium. During the Cenozoic Era (1.65 million years before present [BP] to recent), the Blue Ridge-South Mountain anticlinorium began to erode, and the Atlantic Coastal Plain sediments were deposited in lower elevations. Unconsolidated sand, clay, and silt compose the Atlantic Coastal Plain physiographic province. These sediments thicken towards the southeast, forming a wedge. Precambrian to early Cambrian igneous and metamorphic crystalline rocks underlie the sediments, and are exposed along the boundary between the Coastal Plain and Piedmont provinces several miles west of Fort Meade (USGS 2000).

Sediments underlying the region, including Fort Meade, National Business Park, and Annapolis Junction Business Park, consist of interbedded, poorly sorted sand and gravel deposits up to 90 feet thick from the Pleistocene Epoch (100,000 to 1.65 million years BP); and the Patuxent Formation (0 to 250 feet thick) of the Potomac Group, which were deposited during the Cretaceous period (138 to 63 million years BP) (USACE 2005, MGS 2008). Metamorphic Precambrian bedrock underlies the Patuxent Formation. The Arundel Clay acts as a confining layer between the Lower Patapsco Aquifer and the Patuxent Aquifer, in the Patapsco and Patuxent Formations, respectively. This clay is composed of red, gray and brown grains with some ironstone nodules and plant fragments (Fort Meade 2005).

Soils. Eight different soil units have been mapped within the ECIP project area including Downer-Hammonton complex, Downer-Hammonton-Urban land complex, Evesboro and Galestone soils, Patapsco-Evesboro-Fort Mott complex, Patapsco-Fort Mott-Urban land complex, Sassafras and Croom soils, Udorthents, refuse substratum and Urban land. Many of these soil classifications describe soils that have been modified and disturbed by earth-moving equipment or are composed of refuse. Approximately 58.4 percent of the soils mapped within the project area are identified as Evesboro and Galestone soil, which are classified as loamy sand with slopes ranging from 5 to 10 percent in the project area. The Downer-Hammonton-Urban land complex, which comprises 44.5 percent of the ECIP project area, is also

loamy sand with 0 to 5 percent slopes (U.S. Army 2007, NRCS 2015). All soils mapped within the ECIP project area have been previously disturbed.

Soils located at the parking facility alternatives outside of the ECIP project area are identified as urban land as they are developed and have been previously disturbed. The southeastern corner and eastern fringe of the footprint of the Bravo Parking Lot alternative location contains Downer-Hammonton-Urban land complex mapped soils. This soil type comprises approximately 16 percent of the total footprint, with the rest of the area being identified as urban land.

Hydric Soils. The Sassafras and Croom soils are the only hydric soils identified within the ECIP project area. Hydric soils are soils that are saturated, flooded, or ponded for long enough during the growing season to develop anaerobic (oxygen-deficient) conditions in their upper part. Anaerobic soil conditions are conducive to the establishment of vegetation that is adapted for growth under oxygen-deficient conditions and is typically found in wetlands (hydrophytic vegetation). The presence of hydric soil is one of the three criteria (hydric soils, hydrophytic vegetation, and wetland hydrology) used to determine that an area is a wetland based on the USACE *Wetlands Delineation Manual*, Technical Report Y-87-1 (USACE 1987, NRCS 2015, NSA 2010). See **Section 3.7.2** for a discussion of wetlands within the project area.

No soils identified within the parking facility alternative footprints are considered hydric.

Prime Farmland. Of the eight soils identified within the ECIP project area, Downer-Hammonton complex is the only soil identified as prime farmland, and Patapsco-Evesboro-Fort Mott complex is identified as farmland of statewide importance. No unique farmland or farmland of local importance soils were identified by NRCS. Most of the soils identified at the parking facility alternatives outside the ECIP project area are urban land and thus not considered farmland. The southeastern corner and eastern fringe of the Bravo parking lot footprint contains Downer-Hammonton-Urban land complex. However, most of the NSA Campus and Fort Meade, including the ECIP project area, are identified as an urbanized area on the 2010 Census Urbanized Area Reference Map: Baltimore, Maryland, and, therefore, would not be considered farmland (MDE 2012a). Additionally, the prime farmland and farmland of statewide importance soils in the project area have been previously disturbed and modified due to development and no agricultural use of these lands is occurring or is planned to occur (NRCS 2015).

Geologic Hazards. Geologic hazards are defined as a natural geologic event that can endanger human lives and threaten property. Examples of geologic hazards include earthquakes, landslides, sinkholes, and tsunamis. The U.S. Geological Survey (USGS) has produced seismic hazard maps based on current information about the rate at which earthquakes occur in different areas and on how far strong shaking extends from the quake source. The hazard maps show the levels of horizontal shaking that have a 2 in 100 chance of being exceeded in a 50-year period. Shaking is expressed as a percentage of the force of gravity (percent g) and is proportional to the hazard faced by a particular type of building. In general, little or no damage is expected at values less than 10 percent g, moderate damage could occur at 10 to 20 percent g, and major damage could occur at values greater than 20 percent g. The 2014 Seismic Hazard Map for Maryland indicates that the region of Fort Meade and Anne Arundel County have a very low seismic hazard rating of approximately 6 percent g (NSA 2010, USGS 2014a). No other potential geologic hazards are identified for the ECIP project area or the parking facility location alternatives.

3.5.2.2 National Business Park

Physiography and Topography. Physiography of National Business Park would be the same as that mentioned under **Section 3.5.2.1**.

The topography of National Business Park is relatively flat as much of the area either has already been developed, or is planned for future development. National Business Park is at approximately 210 feet above mean sea level and has slight relief to the southern portion of the property (USGS 2014b).

Geology. Geology at National Business Park is the same as mentioned under **Section 3.5.2.1**.

Soils. There are 12 different soil groups that comprise the soils at the National Business Park site alternative. The Russett-Christiana-Hambrook complex makes up approximately 59 percent of the soils mapped at the site. Slopes for the Russett-Christiana-Hambrook complex are between 0 to 15 percent depending on the location. Other soil types at the alternative site include Christiana-Sassafras complex, Downer-Hammonton complex, Downer-Phalanx complex, Patapsco-Fort Mott complex, Sassafras fine sandy loam, Sassafras-Hambrook complex, and Zekiah and Issue soils. The Zekiah and Issue soils comprise the second most abundant soil type within the National Business Park site. This soil is frequently flooded with the Zekiah soil specifically having a frequent amount of flooding and ponding. Soils within the National Business Park alternative site are planned for future development (NSA 2010, NRCS 2015).

Hydric Soils. The only hydric soils at the National Business Park site are the Russett-Christiana-Hambrook complex soil series. No other soils in the site alternative location are considered hydric (NRCS 2015).

Prime Farmland. There are four soils within the National Business Park site that are considered prime farmland: Christiana-Sassafras complex, 2 to 5 percent slope; Downer-Hammonton complex, 2 to 5 percent slope; Sassafras fine sandy loam; and Sassafras-Hambrook complex. Additionally, there are three soils that are considered farmland of statewide importance: Christiana-Sassafras complex, 5 to 10 percent slopes; Downer-Hammonton complex, 5 to 10 percent slopes; and Downer-Phalanx complex (NRCS 2015). There are no unique farmlands or farmlands of local importance identified by NRCS. However, the National Business Park site is identified as an urbanized area on the 2010 Census Urbanized Area Reference Map: Baltimore, Maryland, and, therefore, would not be considered farmland (USCB 2010a). Soils identified at the site are proposed for future development, and no agricultural use of this land currently occurs or is planned to occur due to planned future build-out of the business park.

Geologic Hazards. Geologic hazards for the National Business Park site are the same as those mentioned under **Section 3.5.2.1**.

3.5.2.3 Annapolis Junction Business Park

Physiography and Topography. Physiography of Annapolis Junction Business Park is the same as that mentioned under **Section 3.5.2.1**.

The topography for Annapolis Junction Business Park is generally flat because most of the site is already developed or planned for development (USGS 2014c).

Geology. Geology for the Annapolis Junction Business Park is the same as mentioned under **Section 3.5.2.1**.

Soils. Eight different soil types are mapped within Annapolis Junction Business Park. A majority of the soil type mapped in this area is Pits, gravel, which represents approximately 55 percent of all the soil types. The second most abundant soil is the Udorthents, reclaimed gravel pits, 0 to 5 percent slopes, which is a gravelly sandy loam. Other soils found at the Annapolis Junction Business park site include Downer-Hammonton complex, Downer-Phalanx complex, Sassafras fine sandy loam, Sassafras loam, and Zekiah and Issue soils (NRCS 2015).

Hydric Soils. No soils identified in Annapolis Junction Business Park are considered hydric soils.

Prime Farmland. Three soils in Annapolis Junction Business Park are identified as prime farmland; Downer-Hammonton complex, 2 to 5 percent slopes; Sassafras fine sandy loam, 2 to 5 percent slopes; and Sassafras loam, 2 to 5 percent slopes. The Downer-Hammonton complex, 5 to 10 percent slopes, is identified as farmland of statewide importance. No unique farmland or farmland of local importance was identified by NRCS (NRCS 2015). All of these soils have been previously disturbed and modified due to preparation for development, and no agricultural use of these lands occurs or is planned to occur due to planned future build-out of the business park.

Geologic Hazards. Geologic hazards for the Annapolis Junction Business Park site are the same as those mentioned under **Section 3.5.2.1**.

3.6 Water Resources

3.6.1 Definition of the Resource

Water resources are natural and man-made sources of water available for use by and for the benefit of humans and the environment. Hydrology concerns the distribution of water resources through the processes of evapotranspiration, atmospheric transport, precipitation, surface runoff and flow, and subsurface flow. Hydrology is affected by climatic factors such as temperature, wind direction and speed, topography, and soil and geologic properties.

Groundwater. Groundwater is water that flows or seeps downward and saturates soil or rock, supplying springs and wells. Groundwater quality and quantity are regulated under several statutes and regulations, including the Safe Drinking Water Act (42 U.S.C. 300[f] et seq., as amended).

Surface Water. Surface water resources generally consist of wetlands, lakes, rivers, and streams. Surface water is important for its contributions to the economic, ecological, recreational, and human health of a community or locale. Waters of the United States are defined under Section 404 of the CWA, as amended, as (1) traditional navigable waters, (2) wetlands adjacent to navigable waters, (3) nonnavigable tributaries of traditional navigable waters that are relatively permanent where the tributaries typically flow perennially or have continuous flow at least seasonally (e.g., typically 3 months), and (4) wetlands that directly abut such tributaries. Waters of the United States are regulated by the USEPA and the USACE. Section 303(d) of the CWA requires that Maryland establish a list to identify impaired waters and establish total maximum daily loads (TMDLs) for the sources causing the impairment. A TMDL is the maximum amount of a substance that can be assimilated by a water body without causing impairment. A

water body can be deemed impaired if water quality analyses conclude that exceedances of water quality standards, established by the CWA, occur.

In order to facilitate the restoration and maintenance of the chemical, physical, and biological integrity of surface waters, the CWA (33 U.S.C. 1251, et seq., as amended), through the NPDES program, establishes federal limits on the amounts of specific pollutants that can be discharged into such waters. The NPDES program regulates the discharge of point (i.e., end of pipe) and nonpoint sources (i.e., stormwater) of water pollution. The Maryland NPDES stormwater program requires construction site operators engaged in clearing, grading, and excavating activities that disturb 1 acre or more to obtain coverage under an NPDES permit for their stormwater discharges. Construction or demolition that necessitates a permit also requires preparation of a Notice of Intent to discharge stormwater and a Stormwater Pollution Prevention Plan (SWPPP) that is implemented during construction.

The USEPA issued a Final Rule for the CWA concerning technology-based Effluent Limitations Guidelines and New Source Performance Standards for the Construction and Development point source category. All NPDES stormwater permits issued by the USEPA or states must incorporate requirements established in the Final Rule. As of February 1, 2010, all new construction (or demolition) sites that disturb 1 or more acres of land are required to meet the non-numeric effluent limitations and effective erosion and sedimentation controls must be designed, installed, and maintained.

Section 438 of the EISA (42 U.S.C. 17094) established new stormwater design requirements for Federal construction projects that disturb a footprint greater than 5,000 ft^2. The project footprint consists of all horizontal hard surfaces and disturbed areas associated with the project development, including both building area and pavements such as roads, parking lots, and sidewalks. Under these requirements, predevelopment site hydrology must be maintained or restored to the maximum extent technically feasible with respect to temperature, rate, volume, and duration of flow. Predevelopment hydrology should be modeled or calculated using recognized tools and must include site-specific factors such as soil type, ground cover, and ground slope. Site design would incorporate stormwater retention and reuse technologies such as bioretention areas, permeable pavements, cisterns/recycling, and green roofs to the maximum extent technically feasible. Post-construction analyses would be conducted to evaluate the effectiveness of the as-built stormwater reduction features. These regulations have been incorporated into DoD UFC 3-210-10, *Low Impact Development* (DoD 2010a). Additional guidance is provided in the USEPA's *Technical Guidance on Implementing the Stormwater Runoff Requirements for Federal Projects under Section 438 of the Energy Independence and Security Act*.

To prevent adverse impacts from stormwater runoff, the State of Maryland has developed performance standards that must be met at development sites, which apply to any construction activity disturbing 5,000 ft^2 or more of earth. Maryland's Stormwater Management Act of 2007 requires establishing a comprehensive process for stormwater management approval and implementing environmental site design (ESD) to the maximum extent practicable. ESD uses onsite stormwater management practices to conserve or restore natural site hydrology. The general performance standards for stormwater management in Maryland are outlined in the 2009 *Maryland Stormwater Design Manual* and Supplement No. 1 (MDE 2009a). The *Maryland Stormwater Design Manual* outlines five criteria for sizing stormwater management best management practices (BMPs) in the State of Maryland, including the following:

- Water quality volume (i.e., the storage needed to capture and treat runoff from 90 percent of the average annual rainfall)
- Recharge volume (based on the average annual recharge rate of the hydrologic soil group[s] present at a site as determined from U.S. Department of Agriculture [USDA], NRCS soil surveys or from detailed site investigations)
- Channel protection storage volume (protecting channels from erosion by 24-hour extended detention of the 1-year, 24-hour storm event)
- Overbank flood control volume (preventing an increase in the frequency and magnitude of out-of-bank flooding generated by development)
- Extreme flood volume (preventing flood damage from large storm events, maintaining the boundaries of the pre-development 100-year Federal Emergency Management Agency [FEMA] and locally designated floodplain, and protecting the physical integrity of BMP control structures) (MDE 2009a).

The 2015 *Maryland Stormwater Management and Erosion & Sediment Control Guidelines for State and Federal Projects* serves as guidance for developing, reviewing, and approving erosion-and-sediment-control plans (ESCPs) and stormwater management plans for state and Federal projects (State of Maryland 2015). Minimum control requirements under these guidelines for new development and redevelopment would be implemented, as appropriate. An approved ESCP and stormwater management plan, per MDE's erosion and sediment control regulations (COMAR 26.17.01, *Erosion and Sediment Control*) and stormwater management regulations (COMAR 26.17.02, *Stormwater Management*), would be required.

EO 13508, *Chesapeake Bay Protection and Restoration*, identifies the Chesapeake Bay as a "national treasure" and calls on the Federal government to lead a renewed effort to restore and protect the Chesapeake estuary and its watershed. The EO established the Federal Leadership Committee for the Chesapeake Bay, which is administered by the USEPA and consists of Federal agencies including the DoD, which has developed and implemented a strategy for protection and restoration of the Chesapeake Bay region. The strategy created a framework of four specific goals (restore clean water, recover habitat, sustain fish and wildlife, and conserve land and increase public access) and four supporting strategies (expand citizen stewardship, develop environmental markets, respond to climate change, and strengthen science), as well as 12 key outcomes that will be achieved through actions described in the strategy. In 2014, Federal, state, and local representatives from the Chesapeake Bay watershed, including the DoD, signed the Chesapeake Bay Watershed Agreement, which established a more collaborative and goal-oriented plan for protecting and restoring the watershed. The Agreement established 10 goals and 29 associated outcomes for the restoration of Chesapeake Bay and its tributaries, and the surrounding land. As a signatory to the Chesapeake Bay Watershed Agreement, the DoD has committed to implementation of management strategies to achieve goals in water quality, land conservation, and vital habitats. The DoD also has commitments to implement additional management strategies in partnership with other Agreement signatories (DoD 2016a).

Floodplains. Floodplains are areas of low-level ground present along rivers, stream channels, large wetlands, or coastal waters. Floodplain ecosystem functions include natural moderation of floods, flood storage and conveyance, groundwater recharge, and nutrient cycling. Floodplains also help to maintain

water quality and are often home to a diverse array of plants and animals. In their natural vegetated state, floodplains slow the rate at which the incoming overland flow reaches the main water body.

Floodplains are protected under EO 11988, *Floodplain Management*. If action by a Federal agency is taken that encroaches within the floodplain and alters the flood hazards designated on a National Flood Insurance Rate Map (e.g., changes to the floodplain boundary), an analysis reflecting any changes must be submitted to FEMA. Flood potential is evaluated by FEMA, which defines the 100-year floodplain as the area that has a 1 percent chance of inundation by a flood event in a given year. Certain facilities, such as information technology centers, inherently pose too great a risk to be in either the 100- or 500-year floodplain. Federal, state, and local regulations often limit floodplain development to passive uses, such as recreational and preservation activities, to reduce the risks to human health and safety.

Coastal Zone Management. The Coastal Zone Management Act (CZMA), 16 U.S.C. 1451 et seq., as amended, and 15 CFR 921-930, provides assistance to states, in cooperation with Federal and local agencies, for developing land and water-use programs in coastal zones. When a state coastal management plan is federally approved, Federal agencies proposing actions with the potential to affect the state's coastal uses or resources are subject to review under the Federal consistency determination requirement in CZMA Section 307. Section 307 mandates that "federal actions within a state's coastal zone (or outside the coastal zone, if the action affects land or water uses or natural resources within the coastal zone) be consistent to the maximum extent practicable with the enforceable policies of the state coastal management plan" (16 U.S.C. 1456[c][1][A]).

An enforceable policy is a state policy that is legally binding under state law (e.g., through constitutional provisions, laws, regulations, land use plans, ordinances, or judicial or administrative decisions), and by which a state exerts control over private and public coastal uses and resources, and which are incorporated in a state's federally approved Coastal Zone Management Program (CZMP) (CZMA Section 304[6a] and 15 CFR 930.11[h]). At the heart of Federal consistency is the "effects test." A Federal agency activity is subject to CZMA Federal consistency requirements if the action could affect a coastal use or resource, in accordance with National Oceanic and Atmospheric Administration (NOAA) regulations (15 CFR 930.11[g]). According to 15 CFR 930.11(g), the term "effect on any coastal use or resource" means any reasonably foreseeable effect on any coastal use or resource resulting from a Federal agency activity or Federal license or permit activity (including all types of activities subject to the Federal consistency requirement under subparts C, D, E, F, and I of this part). Effects are not just environmental effects, but include effects on existing uses of the coastal zone.

On May 8, 2013, the DoD and the State of Maryland signed a MOU concerning the Federal consistency requirements of the CZMA and the application and implementation of certain enforceable policies of Maryland's CZMP. The MOU outlines how DoD facilities and projects will meet the Federal law requirements of the CZMA to ensure that their actions affecting these resources are consistent with state policies. The MOU also called for the development of a list of *de minimis* and environmentally beneficial activities, which absent no unusual circumstances, would not require an individual consistency determination (State of Maryland 2013).

3.6.2 Existing Conditions

3.6.2.1 ECIP Project Area

Groundwater. Three distinct aquifers underlie the ECIP project area: the Lower Patapsco, the Upper Patapsco, and the Patuxent. Flow from all three aquifers is generally toward the southeast. The aquifers are composed of unconsolidated silt, sand, and gravel. The Upper Patapsco Aquifer is unconfined and considered to be the water table aquifer. The Middle Patapsco Clay unit is the confining layer between the Upper and Lower Patapsco aquifers. The Arundel Clay unit is the confining layer between the Lower Patapsco Aquifer and the Patuxent Aquifer. The Patuxent Aquifer is confined above by Arundel Clay, and below by crystalline bedrock of the Baltimore Mafic Complex (U.S. Army 2007). The Upper Patapsco Aquifer ranges in thickness from 125 to 390 feet, with an average thickness of 250 feet (MGS 2015). The aquifer is under confined conditions and is one of the best water bearing formations in Anne Arundel County. The Lower Patapsco Aquifer is capable of yielding 0.5 to 2 million gallons per day (mgd) of water from individual wells in most localities and is a source of water for several large wells within the region. The Patuxent Aquifer is at or near the surface near the fall line (i.e., the boundary between the Coastal Plain and Piedmont Physiographic Provinces), and dips below the surface as it moves eastward. The aquifer thickness ranges from 125 to 525 feet and is between 200 and 400 feet thick in the ECIP project area. All three aquifers are important water sources for Anne Arundel County (MGS 2015).

Drinking water for the NSA Campus, which is connected to the Fort Meade potable water system, is provided by six groundwater wells installed in the Patuxent Aquifer in the southern portion of Fort Meade, with two wells north and four wells south of MD 32 (Fort Meade 2013a). Well yield is dependent upon the thickness and permeability of sediments. Where strata are thick and permeable, well fields can produce up to 1 mgd of water (U.S. Army 2007). Average depth to groundwater in the six wells ranges from 480 to 730 feet below ground surface (Fort Meade 2013a). American Water was awarded ownership and a 50-year contract for the water system at Fort Meade. The MDE issued a Water Appropriation and Use Permit (Permit No. AA196G021[07]) in 2012 authorizing the groundwater withdrawal of a daily average of approximately 3.3 mgd on a yearly basis and a daily average of 4.3 mgd for the month of maximum use. Fort Meade and American Water comply with standards in the Safe Drinking Water Act and COMAR. Drinking water is tested according to permit requirements (Fort Meade 2013a). Additional information regarding the potable water supply is described in **Sections 3.9.2** and **3.11.2**.

Surface Water. Fort Meade contains approximately 7.2 miles of perennial streams, as well as other intermittent and ephemeral channels. Riparian buffers were incorporated into the Fort Meade Comprehensive Expansion Master Plan and subsequent BRAC projects to minimize impacts and degradation to water bodies leading to the Chesapeake Bay. Fort Meade maintains voluntary 100-foot riparian forest buffers along streams and abutting wetlands to the maximum extent practical. Streams that are proximate to project areas are identified and field delineated in accordance with the 1987 USACE Wetland Delineation Manual (USACE 1987) and the 2010 Atlantic and Coastal Plain Supplement (USACE 2010), and classified using the Cowardin classification system.

The surface waters near the ECIP project area are associated primarily with the Little Patuxent River, a major tributary of the Patuxent River that eventually empties into the Chesapeake Bay. Four main tributaries of the Little Patuxent River flow through Fort Meade. Midway Branch originates north of Fort

Meade and flows south, forming the eastern boundary of the NSA East Campus, until it meets the Little Patuxent River just south of the installation boundary. Midway Branch enters the East Campus just south of the Rockenbach Road and Cooper Avenue intersection, approximately 250 feet east of the eastern boundary of the ECIP project area, and continues south to Mapes Road. The Midway Branch watershed drains approximately 3,100 acres, including the ECIP project area, and roughly 46 percent of the area is developed land (NSA 2013a). Midway Branch then flows into Rogue Harbor Branch, which flows off-installation into Lake Allen (formerly Soldier's Lake), south of MD 32. With the exception of several stormwater management ponds, Burba Lake (an 8-acre man-made surface water reservoir 1.3 miles southeast from the ECIP project area used for fishing and outdoor recreation) is the only enclosed water body on Fort Meade (USACE Mobile District 2007). One other unnamed tributary crosses the southwestern portion of the East Campus near the intersection of Mapes Road and O'Brien Road, about 0.5 mile from the ECIP project area (NSA 2013a). **Figure 3.6-1** shows surface water in the vicinity of the ECIP project area. Wetlands within and adjacent to the ECIP project area are discussed in **Section 3.7.2**.

The Little Patuxent River and its tributaries, including Midway Branch, are classified as "Use Class I-P," which includes water contact recreation, protection of aquatic life, and public water supply (MDE 2015b). The Chesapeake Bay TMDL passed by the USEPA in December 2010 establishes a portion of the nitrogen, phosphorus, and sediment load for each state along the bay to meet the input reduction goals (USEPA 2010). Specifically, the TMDL sets Chesapeake Bay watershed limits of a 25 percent reduction in nitrogen, 24 percent reduction in phosphorus, and a 20 percent reduction in sediment. The goal of the TMDL is to ensure all pollution control measures required to meet the need to fully restore the bay and its tidal rivers are in place by 2025, with 60 percent of the actions completed by 2017. The MDE has required all counties, including Anne Arundel County, to establish 2-year milestones detailing their progress against the TMDL targets. Maryland has prepared a Phase I Watershed Implementation Plan that has established a framework for achieving the TMDL reduction. Anne Arundel County prepared a Phase II Watershed Implementation Plan that provides strategies for achieving the 60 percent reduction of TMDLs by 2017 (Fort Meade 2013b). These watershed implementation plans also collectively serve as the foundation management strategy for achieving the water quality outcomes identified in the Chesapeake Bay Watershed Agreement. DoD has committed to specific management strategies including support for BMP implementation through continued compliance with EISA Section 438, upgrade and enhancement of wastewater treatment plant and septic systems, support of the watershed implementation plan processes including provision of installation information, and participation in regional working groups (CBP 2016).

Anne Arundel County is conducting stream assessments within the Little Patuxent River Watershed (Anne Arundel County 2012b). The Little Patuxent River and its tributaries are on the CWA 303(d) list of impaired waters relative to aquatic life and wildlife. TMDLs for total dissolved solids were established in the Little Patuxent River and its tributaries on September 30, 2011. TMDLs for chlorides are required and listed as a high priority. A biological stressor analysis identified inorganic pollutants (i.e., chlorides) as a major stressor affecting biological integrity in the Little Patuxent River Watershed, with approximately 39 percent of the stream miles having very poor to poor biological conditions. Chloride TMDLs have not yet been established, but are expected to be addressed by 2017 (MDE 2015c). The biological stressor analysis did not find any nutrient stressors showing a significant degradation of biological conditions, and no Category 5 listing for nutrient stressors within the Patuxent River Watershed were listed in Maryland's Draft 2014 Integrated Report of Surface Water Quality (MDE 2011, MDE 2015c).

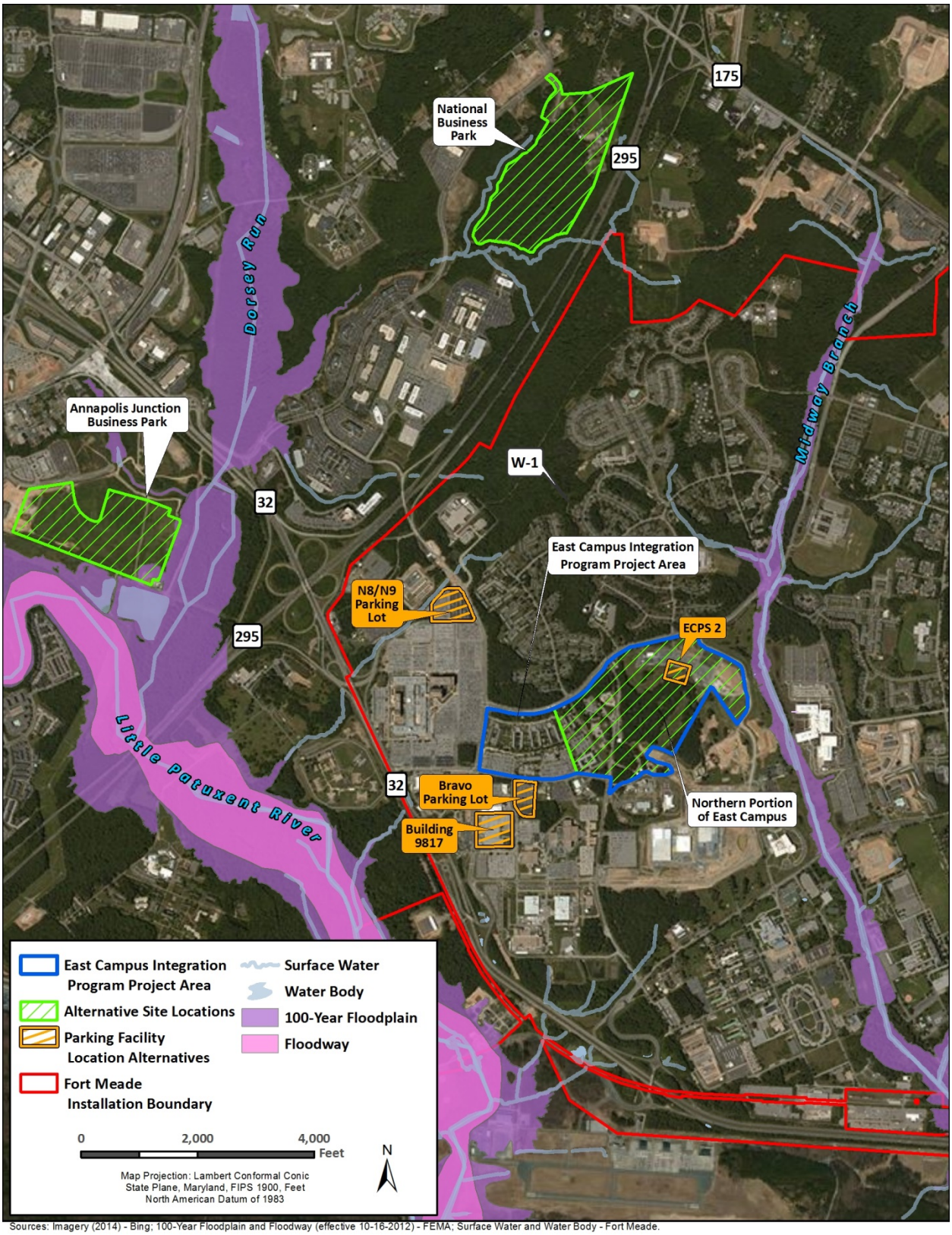


Figure 3.6-1. Water Resources in the Vicinity of the ECIP Project Area

The State of Maryland Water Resources Administration has categorized the Little Patuxent River above its confluence with the Patuxent River as "stressed" (but not impaired) with respect to bacteria. Nitrogen loading, nutrient loading, and suspended sediment concentrations in the Little Patuxent River have also been characterized as high. These conditions are the result of a combination of stormwater surface runoff and sewage treatment plant discharges, with the latter accounting for much of the nitrogen and nutrient loading under normal circumstances (NSA 2013a).

The Fort Meade Wastewater Treatment Plant (WWTP), owned and operated by American Water, discharges treated wastewater into the Little Patuxent River under individual municipal NPDES permit number MD0021717 (State Discharge Permit 12-DP-2533) (MDE 2014b). The Howard County Little Patuxent Wastewater Treatment Plant also discharges into the Little Patuxent River just north of the Fort Meade WWTP outfall. The NPDES permit for the Fort Meade WWTP established an annual maximum loading rate for nitrogen and phosphorus at 54,820 and 4,112 pounds per year, respectively, based on flow equal to or less than 3.0 mgd. The NPDES permit also includes maximum loading rates based on flow greater than 3.0 mgd and up to 4.5 mgd. The loading rates were established to prevent nitrogen and phosphorus loads on the Chesapeake Bay from increasing as the flow to the WWTP increases (Fort Meade 2013b). The current average effluent flow of the WWTP is approximately 1.7 mgd (American Water 2015).

Stormwater runoff in the East Campus is primarily conveyed by Midway Branch, with all natural drainages eventually discharging into the Little Patuxent River. Runoff from the western portion of the East Campus and the 9800 Troop Support Area is conveyed through an extensive network of drainpipes and drainage structures, supplemented by swales, ditches, other drains, and retention ponds into the Little Patuxent River. The existing NSA Main Campus is topographically divided into four natural drainage sub-basins (see **Figure 3.6-2**). The first sub-basin (Basin A) covers the northern area of the NSA Main Campus, including the northern portion of the 9800 Troop Support Area and a small portion of the western East Campus. The second sub-basin (Basin B) covers the central-western area of the NSA Main Campus, including the central portion of the 9800 Troop Support Area. The third sub-basin (Basin C) covers the western portion of the NSA East Campus and the southern portion of the NSA Main Campus from Emory and Canine Roads south to MD 32, including the southeastern portion of the 9800 Troop Support Area, and the fourth sub-basin (Basin D) is in the northern portion of the NSA Main Campus. Stormwater from the eastern portion of the East Campus drains into Midway Branch. A Stormwater Management Plan for NSA is currently being developed to implement minimum control measures as outlined in the NPDES General Permit for Discharge from Small Municipal Separate Storm Sewer Systems (MS4) (NSA 2013a). Additionally, stormwater is managed with an MDE general permit for stormwater discharges associated with industrial activities.

Floodplains. The 100-year floodplain along Midway Branch borders the eastern boundary of the East Campus and is adjacent to, but outside of, the ECIP project area (see **Figure 3.6-1**). Portions of the floodplain associated with Little Patuxent River are near the western border of the installation (FEMA 2015).

Coastal Zone Management. Fort Meade, including the ECIP project area, and surrounding Anne Arundel County fall within Maryland's coastal zone. The Maryland Department of Natural Resources (MDNR) is the lead agency for the CZMP; however, the MDE regulates activities proposed within

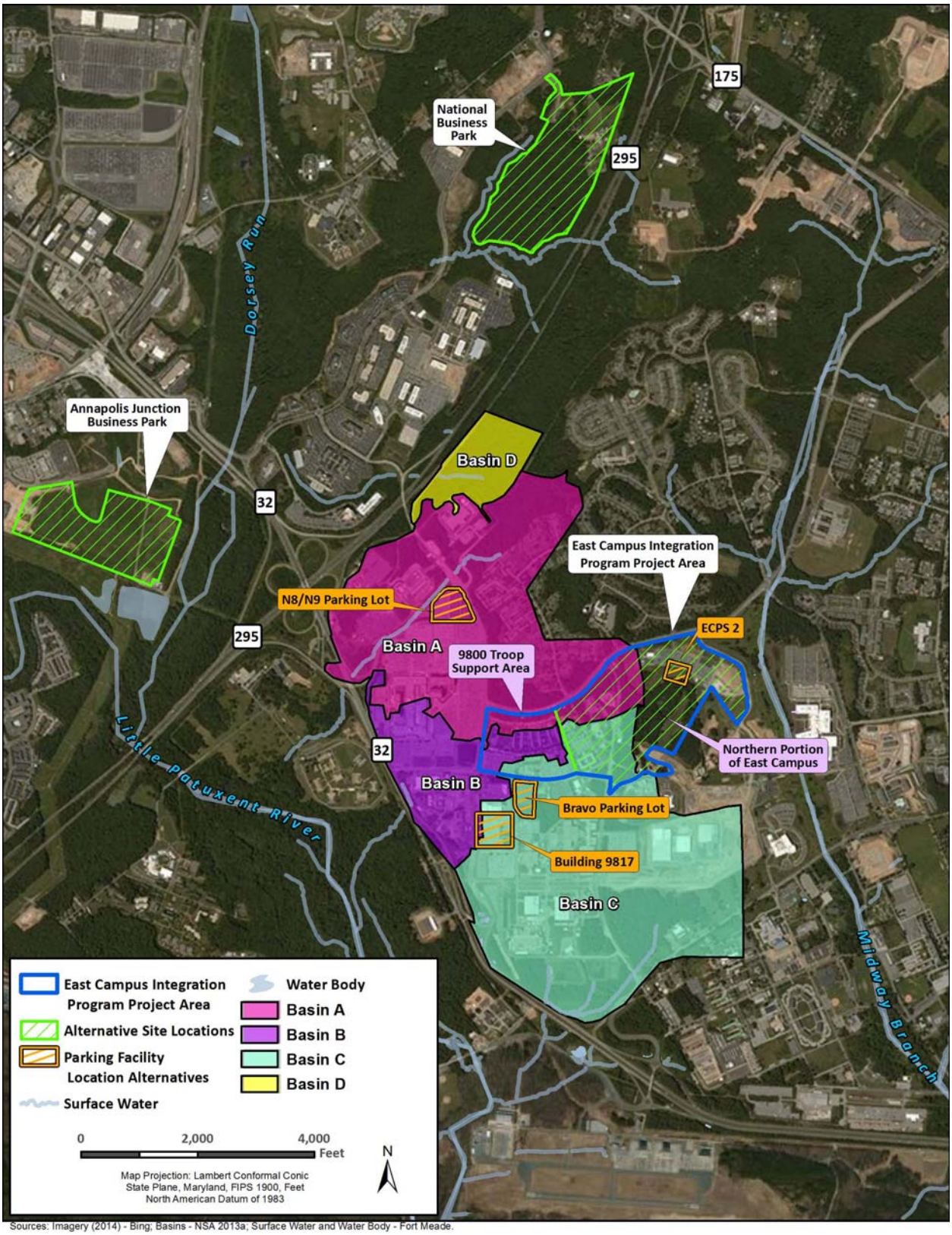


Figure 3.6-2. Drainage Sub-Basins in the Vicinity of the ECIP Project Area

Maryland's coastal zone through Federal consistency requirements. For activities impacting coastal and marine resources such as wetlands, a Coastal Zone Consistency Determination is prepared as part of Maryland's environmental permitting process.

In Maryland, the enforceable coastal policies were approved by NOAA on March 18, 2011. There are 19 enforceable policies separated into three categories (general policies, coastal resources, and coastal uses) under the Maryland CZMP. General policies include core policies, water quality, and flood hazards. The core policies relevant to the Proposed Action include core policies (air quality, noise, water appropriation, soil erosion, hazardous substances), water quality, non-tidal wetlands, forests, historic and archaeological sites, electrical generation and transmission, development, and sewage treatment. Coastal resources include the Chesapeake and Atlantic Coastal Bays Critical Area, tidal wetlands, non-tidal wetlands, forests, historical and archaeological sites, and living aquatic resources. Coastal uses include mineral extraction, electrical generation and transmission, tidal shore erosion control, oil and natural gas facilities, dredging and disposal of dredged material, navigation, transportation, agriculture, and development.

Because Midway Branch, which is east of the East Campus, eventually empty into the Chesapeake Bay, it is applicable for protection under the CZMP. A100-foot riparian buffer has been established along Midway Branch, a tributary of the Chesapeake Bay, on the eastern edge of the East Campus to act as a water quality buffer for the removal or reduction of sediment, nutrients, and toxic substances found in surface runoff, which indirectly reduces impacts on the Chesapeake Bay watershed. The buffer also minimizes the adverse impact of human activities on habitat associated with Midway Branch (NSA 2013a).

3.6.2.2 National Business Park

There are no surface water bodies present on the National Business Park site; however, first- and second-order (i.e., small) streams drain the site to the south, eventually flowing into the Little Patuxent River (see **Figure 3.6-1**). The site is within the Maryland CZMP area, and groundwater resources are similar to those described for the ECIP project area. Runoff within the business park drains via swales, ditches, and natural channels into a tributary of the Little Patuxent River to the south.

3.6.2.3 Annapolis Junction Business Park

There are no surface water bodies present on the Annapolis Junction Business Park site; however, Dorsey Run, a tributary of the Little Patuxent River, borders the eastern portion of the site and a 12-acre stormwater management pond is adjacent to the southeast. The Little Patuxent River flows to the south of the site. Floodplains associated with these water bodies are present in the extreme southeastern corner of the site. The site is within the Maryland CZMP area, and groundwater resources are similar to those described for the ECIP project area. Runoff within the business park eventually drains into the Little Patuxent River to the south.

3.7 Biological Resources

3.7.1 Definition of the Resource

Biological resources include native or naturalized plants and animals and the habitats (e.g., wetlands, forests, and grasslands) in which they exist. Protected and sensitive biological resources include federally

listed (endangered or threatened), proposed, and designated or proposed critical habitat; Species of Concern managed under Conservation Agreements or Management Plans; and state-listed species.

Forest Conservation. The Maryland Forest Conservation Act (FCA) (Natural Resources Article Section 5-1601 through 5-1613) is not applicable to Federal land such as Fort Meade; however, Fort Meade and NSA have opted to voluntarily participate, as long as it does not conflict with critical national security mission obligations. The main purpose of the FCA is to minimize the loss of Maryland's forest resources during land development by making the identification and protection of forests and other sensitive areas an integral part of the site planning process. Of primary interest are areas adjacent to streams or wetlands, those on steep or erodible soils, or those within or adjacent to, large contiguous blocks of forest or wildlife corridors. MDNR Forest Service administers and implements the FCA for non-Federal land. For non-Federal actions, any activity requiring an application for a subdivision, grading permit, or sediment control permit on areas that are 40,000 ft^2 or greater is subject to the FCA and involves a Forest Conservation Plan and Forest Stand Delineation (FSD) prepared by a licensed forester, licensed landscape architect, or other qualified professional (MDNR 2015). It is the intent to maintain a campus-like environment and protect forested areas to the maximum extent practical while continuing to sustain and support current and future missions. NSA and Fort Meade demonstrate compliance with the FCA by ensuring their development and construction projects follow the current Fort Meade Forest Conservation Act and Tree Management Policy to the extent possible. In keeping with the FCA standards, Fort Meade requires that the equivalent of 20 percent of a project area is preserved or 20 percent of forest cover is reestablished.

Wetlands. Wetlands are important natural systems and habitats that can support a diverse number of species. Wetlands perform a number of important biological functions, some of which include water quality improvement, groundwater recharge, nutrient cycling, wildlife habitat provision, and erosion protection. Wetlands are protected as a subset of "the waters of the United States" under Section 404 of the CWA. The term "waters of the United States" has a broad meaning under the CWA and incorporates deepwater aquatic habitats and special aquatic habitats, including some wetlands. The USACE defines wetlands as "those areas that are inundated or saturated with ground or surface water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted to life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas" (33 CFR 328). The USACE has jurisdiction over wetlands that are determined to be jurisdictional under Section 404 of the CWA. Section 404 of the CWA authorizes the Secretary of the Army, acting through the Chief of Engineers, to issue permits for the discharge of dredged or fill materials into the waters of the United States, including jurisdictional wetlands. In addition, Section 404 of the CWA also grants states with sufficient resources the right to assume these responsibilities.

Section 401 of the CWA gives states and regional boards the authority to regulate through water quality certification any proposed federally permitted activity that could result in a discharge to water bodies, including wetlands. The state may issue certification with or without conditions, or deny certification for activities that might result in a discharge to water bodies.

EO 11990, *Protection of Wetlands*, requires that Federal agencies provide leadership and take actions to minimize or avoid the destruction, loss, or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands. Federal agencies are to avoid new construction in wetlands,

unless the agency finds there is no practicable alternative to construction in the wetland, and the proposed construction incorporates all possible measures to limit harm to the wetland.

MDE is the state agency largely responsible for administering Maryland's environmental laws, regulations, and environmental permits related to wetlands, water withdrawal, discharges, stormwater, and water and sewage treatment. The mission of the MDE is to protect the state's air, land, and water from pollution and to provide for the health and safety of its citizens through a cleaner environment.

Freshwater wetlands in Maryland are protected by the Nontidal Wetlands Protection Program, which sets a state goal of no overall net-loss of nontidal wetlands acreage and functions. Activities in nontidal wetlands require a nontidal wetland permit or a letter of exemption, unless the activity is exempt by regulation. Any activity that involves excavating, filling, changing drainage patterns, disturbing the water level or water table, or grading and removing vegetation in a nontidal wetland or within a 25-foot buffer requires a permit from the MDE's Water Management Administration (MDE 2015d).

Endangered Species. Under the ESA (16 U.S.C. 1536), an "endangered species" is defined as any species in danger of extinction throughout all or a significant portion of its range. A "threatened species" is defined as any species likely to become an endangered species in the foreseeable future. Although candidate species receive no statutory protection under the ESA, the USFWS advises government agencies, industry, and the public that these species are at risk and might warrant protection under the ESA in the future (NSA 2010). Under the ESA, Federal agencies are required to provide documentation that ensures that agency actions will not jeopardize the continued existence of any federally threatened or endangered species, or adversely modify critical habitat. The ESA requires that all Federal agencies avoid "taking" threatened or endangered species (which includes significant modification or degradation of the threatened or endangered species' habitat), unless authorized. Section 7 of the ESA establishes an informal consultation process with USFWS (and National Marine Fisheries Service) that ends with concurrence on a determination from a Federal agency that the project is not likely to adversely affect a listed species.

On May 4, 2015, the USFWS concurred with the U.S. Army Installation Management Command's (IMCOM) determination that select military mission operations on Army installations are not likely to adversely affect the threatened northern long-eared bat (*Myotis septentrionalis*). The Programmatic Informal Consultation includes conservation measures outlined in the April 24, 2015, *Programmatic Informal Consultation and Management Guidelines on the Northern Long-eared Bat (*Myotis septentrionalis*) for Ongoing Operations on Installation Management Command (IMCOM) Installations* (Programmatic Guidelines). The conservation measures would be incorporated into activities to avoid adverse effects on northern long-eared bats, achieving the "not likely to adversely affect" determination. The Programmatic Informal Consultation only addresses the consultation requirements for those projects that can implement the conservation measures. The Programmatic Guidelines apply to all installations identified in the document, including Fort Meade (U.S Army 2015, USFWS 2015a). USFWS recommends contacting the local state agency, State's Natural Heritage database, and local USFWS Ecological Services field office for information on the best current sources of northern long-eared bat records to determine the specific locations of the known roost (resting or sheltering places) and hibernation (hibernacula) sites. These locations will be informed by records in each state's Natural Heritage database, USFWS records, other databases, or other survey efforts (80 FR 17974-18033).

Migratory Birds. The MBTA of 1918 is the primary legislation in the United States established to conserve migratory birds. The MBTA prohibits the intentional and unintentional taking, killing, or possessing migratory birds unless permitted by regulation. EO 13186, *Responsibilities of Federal Agencies to Protect Birds*, provides a specific framework for the Federal government's compliance with its MBTA obligations and aids in incorporating national planning for bird conservation into agency programs. A Memorandum of Understanding exists between the DoD and USFWS to promote the conservation of migratory birds in compliance with EO 13186.

3.7.2 Existing Conditions

3.7.2.1 ECIP Project Area

Vegetation. Vegetative cover at Fort Meade consists of forest land, open land/meadow, and developed areas with maintained turf and street trees. Approximately one-third of the installation, or 1,500 acres, is currently forested. Four timber types, including Cove and Mixed Hardwood, Upland Hardwood, Pine Hardwood, and Pine, have been identified on Fort Meade. A vegetation survey in 2013 identified 450 taxa, including 28 invasive species (EEE 2014).

Vegetation communities cover approximately 36 percent (54 acres) of the ECIP project area and are composed of open fields (22 acres) and forests (32 acres) (see **Figure 3.7-1**). Approximately 96 acres (64 percent) of the ECIP project area is developed. Open field areas consist primarily of grasses such as bluegrasses (*Po*a spp.), fescues (*Festuca* spp.), crabgrasses (*Digitaria* spp.), and other planted vegetation that are regularly mowed. The forest area is characterized by a mid-climax mixed hardwood forest co-dominated by chestnut oak (*Quercus prinus*) with Virginia pine (*Pinus virginiana*). Common understory species include American beech (*Fagus grandifolia*), sassafras (*Sassafras albidum*), chestnut oak saplings, red oak (*Quercus rubra*), pignut hickory (*Carya glabra*), red maple (*Acer rubrum*), greenbrier (*Smilax* spp.), and grape (*Vitis* spp.) (HDR|e²M 2009).

Results of a 2009 FSD indicated that all survey plots within the northern portion of the East Campus site have a Low Priority Retention rating. The rating is based on isolation of the stand and lack of contiguous forest, lack of a Champion (i.e., the largest known tree of a given species in a particular geographic area) or trees with 75 percent of the diameter at breast height (dbh) of Champion species, lack of steep slopes, and lack of known Federal- or state-listed sensitive species or critical habitat on site. There is no specific FSD guidance for the Low Priority Retention rating (HDR|e²M 2009). NSA has a reforestation plan for the East Campus that adheres to the Fort Meade Forest Conservation Act and Tree Management Policy, which includes reforestation of acreage equal to 20 percent of the total area developed on the campus.

Invasive plant species are an increasing concern and priority on Fort Meade including the NSA Campus. The most frequent invasive species occurrences in a 2011 survey were Asiatic bittersweet (*Celastrus orbiculatus*), Japanese honeysuckle (*Lonicera japonica*), Nepalese browntop (*Microstegium vimineum*), and mile-a-minute (*Polygonum perfoliatum*) (EEE 2014). A 2009 survey that included the ECIP project area identified the presence of mile-a-minute and Nepalese browntop on the site (HDR|e²M 2009).

Wetlands. Fort Meade, including the NSA Main and East campuses, has approximately 217 acres of wetlands, most of which occur along the Little Patuxent River floodplain in the southwestern portion of the installation (Houchins 2016). Two wetland surveys were conducted within the ECIP project area,

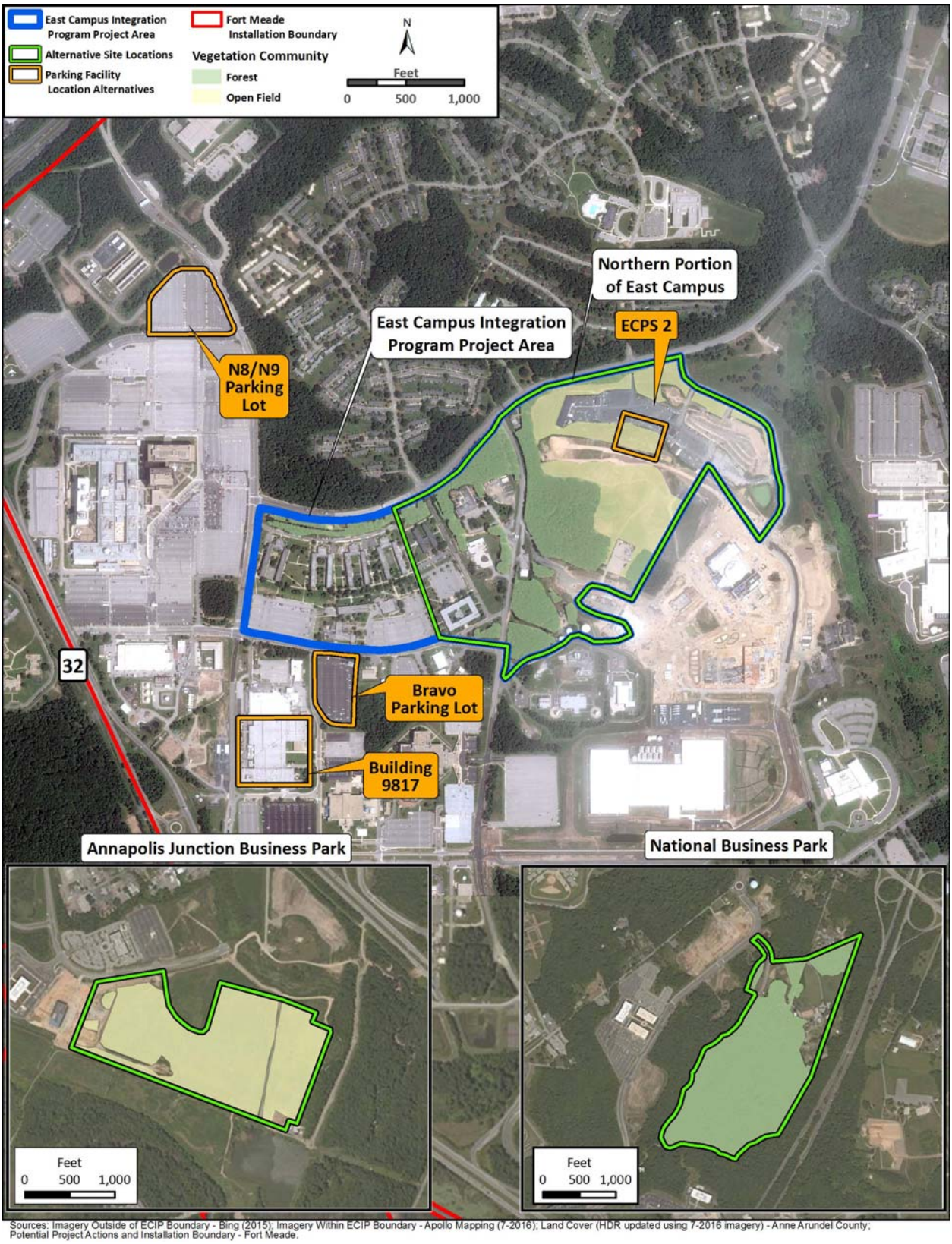


Figure 3.7-1. Vegetation Communities within the ECIP Project Area and Alternative Sites

including a 2009 survey in the northern portion of the East Campus and a 1994 survey in the 9800 Support Troop Area (HDR|e²M 2009, Halliburton NUS 1995). Two potential jurisdictional wetlands in the ECIP project area (Wetlands W-1 and W-2) encompass a total of 0.2 acre (see **Table 3.7-1** and **Figure 3.7-2**). No further action has been taken on these wetlands to determine USACE jurisdiction.

Table 3.7-1. Wetlands within the ECIP Project Area

Name (Survey Year)	Description	Vegetation Summary	Wildlife Habitat Value	Hydrology	Size (acre)	100-Foot Buffer (acre)
W-1 (1994)	Isolated wetland	Forest characterized by sweetgum.	Low quality bird and wildlife habitat due to major roadway to the north, west, and east and commercial development to the south.	Seasonally saturated	0.01	0.9
W-2 (1994)	Intermittent stream	Channel mostly unvegetated. Occasional sweet gum and red maple trees, and small areas of poison ivy and tall fescue within the steep channel banks.	Low quality bird and wildlife habitat due to major roadway to the north, west and east and commercial development to the south.	Channel, including the narrow zones of wetlands within the channel, intermittently flooded. Channel emerges from storm pipe to the east, flows into storm pipe to the west.	0.19	3.6
Grand Total					**0.20**	**4.5**

Source: Halliburton NUS 1995

Wetland W-1 is an isolated area of hydric soils adjacent to a stream channel (Wetland W-2) southeast of the intersection of Rockenbach and Canine roads. The tree canopy is dominated by sweet gum (*Liquidambar styraciflua*) and groundcover includes cinnamon fern (*Osmunda cinnamomea*). Wetland W-1 is separated from the adjacent stream channel by a low earthen berm. Its status as a wetland is uncertain in that channelization of the stream may have lowered the local water table or reduced overflow to areas outside the banks. Further hydrological investigation might determine that it no longer meets the definition of wetlands (Halliburton NUS 1995).

Wetland W-2 is a narrow intermittent stream channel flowing in a westerly direction that is fed by a concrete drainage ditch to the east and flows into a headwall before reaching Canine Road. The channel appears as if it has been artificially deepened and straightened. Small fringe areas of wetland grasses, sedges, and herbs and occasional red maple and sweet gum seedlings and saplings exist within the channel banks (Halliburton NUS 1995).

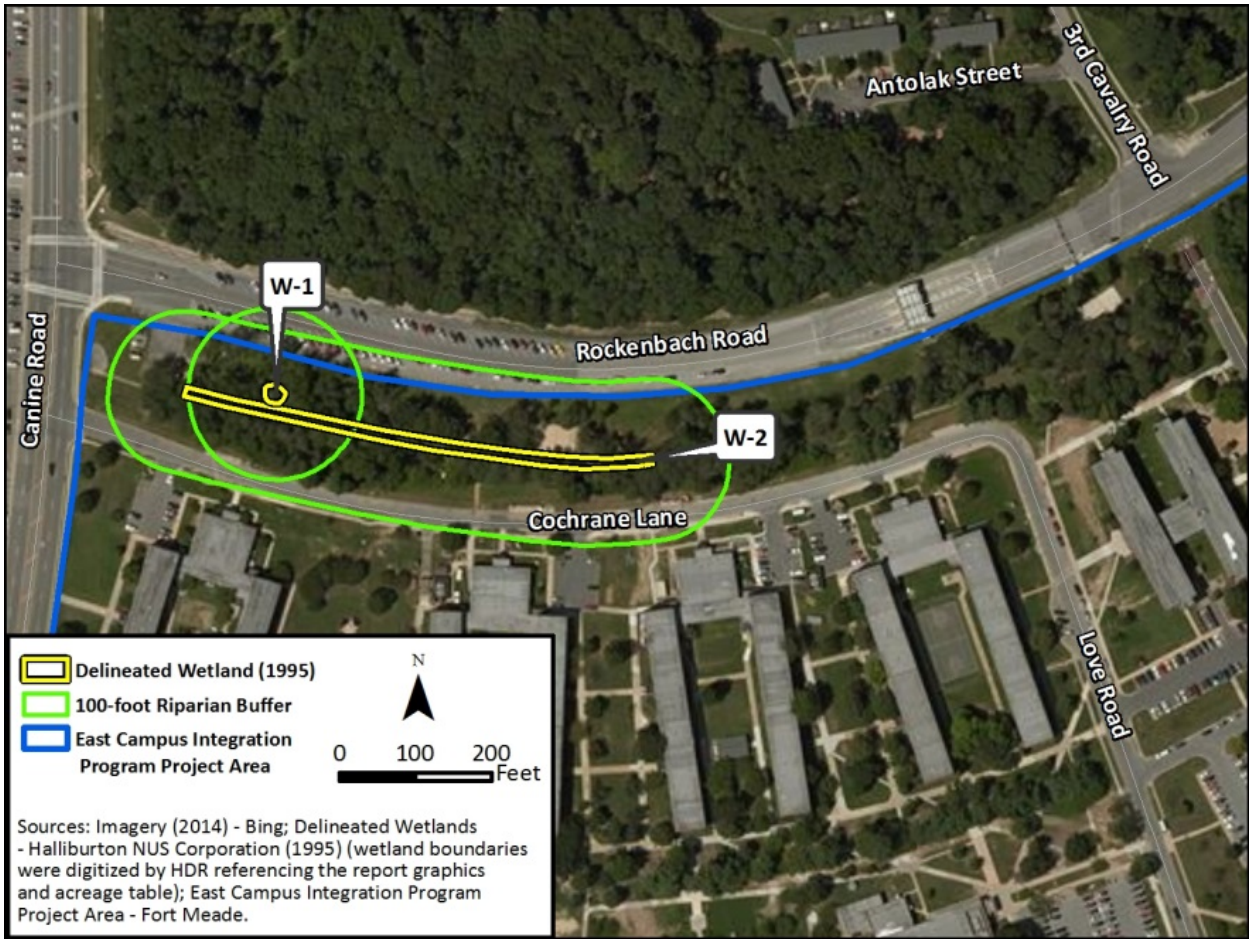


Figure 3.7-2. Wetlands in the Vicinity of the ECIP Project Area

Wildlife. The ECIP project area is primarily developed; however, natural and landscaped areas provide habitat for a variety of wildlife. Based on a 2013 survey, 13 bird, 11 mammal, and 11 reptile and amphibian species were identified on Fort Meade. Wildlife species found on Fort Meade and the ECIP project area are typical of those found in urban-suburban areas. Mammals on Fort Meade include but are not limited to white-tail deer (*Odocoileus virginianus*), groundhog (*Marmota monax*), gray squirrel (*Sciurus carolinensis*), raccoon (*Procyon lotor*), bat, Virginia opossum (*Didelphis virginiana*), eastern chipmunk (*Tamias striatus*), mouse (*Peromyscus* sp.), vole (*Microtus* sp.), eastern mole (*Scalopus aquaticus*), and red fox (*Vulpes vulpes*) (EEE 2014, NSA 2009, U.S. Army 2007).

Some avian species observed within the ECIP project area include American robin (*Turdus migratorius*), Baltimore oriole (*Icterus galbula*), brown thrasher (*Toxostoma rufum*), Canada warbler (*Cardellina canadensis*), Carolina chickadee (*Poecile carolinensis*), chimney swift (*Chaetura pelagica*), hooded merganser (*Lophodytes cucullatus*), Kentucky warbler (*Geothylpis formosus*), mallard (*Anas platyrhynchos*), mourning dove (*Zenaida macroura*), scarlet tanager (*Piranga olivacea*), wood duck (*Aix sponsa*), and wood thrush (*Hylocichla mustelina)* (NSA 2009).

Protected Species

Federally Listed Species. A search of the USFWS Information, Planning, and Conservation (IPaC) system indicates that Fort Meade is within the geographic range of the federally threatened northern long-eared bat (*Myotis septentrionalis*) (USFWS 2015b, USFWS 2015c). Presence of the northern long-eared bat has been detected acoustically during a survey on Fort Meade, but no active summer roost trees or hibernacula have been confirmed on the installation or in Anne Arundel County to date (Houchins 2016). Fort Meade has initiated informal consultation with the USFWS Chesapeake Bay Field Office regarding the northern long-eared bat.

Following population declines of almost 99 percent resulting from the spread of a fungal infection called White Nose Syndrome (WNS), the northern long-eared bat was proposed for listing by USFWS as endangered on October 2, 2013 (80 FR 2371). On January 16, 2015, USFWS proposed a species-specific 4(d) rule for the northern long-eared bat in the event that the species was ultimately listed as threatened. On April 2, 2015, USFWS published notice in the *Federal Register* of its final decision to list the species as threatened, and issued an interim 4(d) rule exempting certain activities from the ESA's take prohibition (80 FR 17794). The listing decision and interim 4(d) rule took effect on May 4, 2015. On January 14, 2016, the USFWS published in the *Federal Register* the final 4(d) rule with revised criteria under which incidental take of northern long-eared bats would be prohibited (81 FR 1900).

The northern long-eared bat's range includes 37 States, including Maryland (USFWS 2015d). Based upon its habitat preferences during winter and summer as described below, the northern long-eared bat could potentially occur on or near the ECIP project area. Because there is no critical habitat designated or proposed to be designated for the northern long-eared bat, the proposed project would have no effect on designated or proposed designated critical habitat. Therefore, critical habitat will be excluded from further evaluation.

The northern long-eared bat is one of 15 bat species listed under the ESA (USFWS 2015e). The USFWS indicates that the primary threat to northern long-eared bats is WNS. WNS is a disease of hibernating bats that has quickly spread from the northeastern to the central United States. The disease is named for the white fungus, *Pseudogymnoascus destructans* (Pd), which infects the skin of hibernating bats. Some affected bats display abnormal behavior including flying during the day and in cold weather (i.e., before insects are available for foraging) and hibernating towards a cave's entrance where temperatures are much colder and less stable. Fat reserves in these bats are also severely diminished or non-existent, making survival to spring emergence difficult (80 FR 17974-18033). Although WNS has not been found in Anne Arundel County, the county is considered to be affected by WNS because it is within 150 miles of a U.S. county boundary where the fungus or WNS has been detected (USFWS 2015f).

Northern long-eared bats are medium-sized insectivorous bats with a body length between 3 and 3.7 inches with a wingspan of between 9 and 10 inches (USFWS 2015d). This bat is distinguishable from other *Myotis* bat species by its relatively long ears (average of 0.7 inch) that extend beyond the nose by up to 0.2 inch when laid forward. Within its range, the northern long-eared bat can be confused with the little brown bat (*Myotis lucifugus*) or the western long-eared myotis (*Myotis evotis*). The northern long-eared bat has medium to dark brown fur on its back, tawny to pale-brown on the underside, and dark brown ears and wing membranes.

The northern long-eared bat is a temperate, migratory bat that hibernates in caves and mines in the winter (typically October through April) and summers in wooded areas. In the summer, northern long-eared bats occur in forested areas and forage for insects. The northern long-eared bat emerges at dusk to feed, by flying through the understory of forested areas, primarily on moths, flies, leafhoppers, caddisflies, and beetles. The bat's foraging pattern includes a peak activity period within 5 hours of sunset, and a second peak within 8 hours of sunset. In general, this species prefers intact mixed-type forests with small gaps (i.e., forest trails, small roads, or forest-covered creeks) and sparse or medium vegetation for forage and travel rather than fragmented habitat or areas that have been clearcut (80 FR 17974-18033).

Northern long-eared bats roost singly or in colonies underneath bark, in cavities or in crevices of both live and dead trees and/or snag (typically ≥ 3 inches dbh) (USFWS 2014a). There is also documentation of this species roosting in human-made structures, such as in buildings, in barns, on utility poles, behind window shutters, and in bat houses (80 FR 17974-18033). Northern long-eared bats most likely are not dependent on certain species of trees for roosts throughout their range; rather, many tree species that form suitable cavities or retain bark will be used opportunistically by the bats. Individual trees might be considered suitable habitat when they exhibit characteristics of suitable roost trees and are within 1,000 feet of other forested/wooded habitat. However, trees found in highly developed urban areas (e.g., street trees and downtown areas) are extremely unlikely to be suitable northern long-eat bat habitat (USFWS 2014a).

The ECIP project area contains a mid-climax hardwood forest dominated by chestnut oak with Virginia pine occurring as a codominant. Common understory species include American beech, sassafras, red oak, pignut hickory, and red maple (HDR|e²M 2009). A U.S. Forest Service study investigating tree species preferences by the northern long-eared bat documented maternity colonies being supported by American beech, maple, and oak species (USDA 2002).

In late summer and early fall, northern long-eared bats migrate from summer areas to winter hibernacula (e.g., caves and abandoned mines). Breeding for this species occurs during this time when males begin swarming near hibernacula (USFWS 2014a). There are no known hibernacula in the ECIP project area and no habitat features (e.g., caves and mines) that could potentially serve as wintering bat habitat (80 FR 17974-18033, Spencer 2015). Following hibernation, pregnant females migrate to wooded summer areas where they give birth and raise their young in maternity colonies of 20 to 60 or more females located under the loose bark of trees or snags. Summer maternity colonies are considered especially important for the long-term recovery of the species. Most bats within a maternity colony give birth around the same time, which may occur from late May or early June to late July, depending where the colony is located within the species' range. Young bats start flying by 18 to 21 days after birth (USFWS 2015d). As stated above, potential summer habitat (forage and roost habitat) occurs within the ECIP project area.

Migratory Birds. Fort Meade supports Partners in Flight, an initiative to protect and conserve neotropical migratory birds and their habitats. Fort Meade records and tracks Species of Concern present on the installation (U.S. Army 2007). Designation as a Species of Concern is based on a prioritization scheme that identifies bird species most in need of conservation action (Hunter et al. 1993).

Of the Species of Concern documented on Fort Meade and potentially occurring in the ECIP project area, the wood thrush (*Hylocichla mustelina*) and the Kentucky warbler (*Geothylpis formosus*) were identified by the USFWS IPAC System as migratory birds of concern within the ECIP project area and are

considered forest interior dwelling species by MDNR (U.S. Army 2007, USFWS 2015b). Forest interior dwelling birds require large forest areas to breed successfully and maintain viable populations. It is also assumed that other migratory birds covered under the MBTA occur within the ECIP project area.

State Listed Species. A search of the USFWS IPAC system indicated that no legally state-protected species are known to occur on or adjacent to the ECIP project area (USFWS 2015b). A 2013 vegetation survey identified one state-endangered plant (Torrey's Rush, *Juncus torreyi*) elsewhere on Fort Meade (EEE 2014).

3.7.2.2 National Business Park

Vegetation. Vegetation covers approximately 81 percent (72 acres) of the National Business Park site, and approximately 19 percent (17 acres) is developed as low-density residential. Vegetation on the site is composed primarily of mature mixed forests, which are expected to be similar to those in the ECIP project area (see **Section 3.7.2.1**).

Wetlands. A wetland delineation was conducted at the National Business Park site, and the site owner obtained a Nontidal Wetlands and Waterways permit from MDE (08-NT-0130/200861426 and 10-NT-0342/201061292) (MDE 2010, MDE 2012b). Any wetland encroachment at the National Business Park site would be addressed in the site owner's permit.

Wildlife. Species on the National Business Park site are likely indicative of those observed in the ECIP project area. Habitat at the site is similar to the habitat described for the ECIP project area.

Protected Species. The USFWS IPAC system does not identify any legally proposed, candidate, federally threatened and endangered species or species critical habitat on the National Business Park site (USFWS 2015b). Due to the proximity of National Business Park to the ECIP project area, potential threatened and endangered species habitat (i.e., northern long-eared bat habitat) would be expected to be similar to those described for the ECIP project area.

3.7.2.3 Annapolis Junction Business Park

Vegetation. Vegetation covers approximately 87 percent (57 acres) of the Annapolis Junction Business Park site, and approximately 13 percent (8 acres) is developed. The vegetated area consists of open fields.

Wetlands. There are no known wetlands at the Annapolis Junction Business Park site.

Wildlife. The Annapolis Junction Business Park site has been disturbed through clearing of vegetation and sodded, and would likely be limited to wildlife whose habitat includes open fields.

Protected Species. The USFWS IPAC system does not identify any legally proposed, candidate, threatened, and endangered federal-protected species or species critical habitat on the Annapolis Junction Business Park site (USFWS 2015b).

3.8 Cultural Resources

3.8.1 Definition of the Resource

Cultural resources is an umbrella term for many heritage-related resources defined in several Federal laws and executive orders. These include the NHPA (1966), the Archeological and Historic Preservation Act (1974), the American Indian Religious Freedom Act (1978), the Archaeological Resources Protection Act (1979), and the Native American Graves Protection and Repatriation Act (1990).

The NHPA focuses on cultural resources such as prehistoric and historic sites, buildings and structures, districts, or other physical evidence of human activity considered important to a culture, a subculture, or a community for scientific, traditional, religious, or other reason. Such resources might provide insight into the cultural practices of previous civilizations or they might retain cultural and religious significance to modern groups. Resources found significant under criteria established in the NHPA are considered eligible for listing in the National Register of Historic Places (NRHP). These are termed "historic properties" and are protected under the NHPA. The Native American Graves Protection and Repatriation Act requires consultation with culturally affiliated Native American tribes for the disposition of Native American human remains, burial goods, and cultural items recovered from federally owned or controlled lands.

Typically, cultural resources are subdivided into archeological sites (prehistoric or historic sites containing physical evidence of human activity but no structures remain standing); architectural sites (buildings or other structures or groups of structures, or designed landscapes that are of historic or aesthetic significance); and sites of traditional, cultural, or religious significance.

Archeological resources comprise areas where human activity has measurably altered the earth or deposits of physical remains are found (e.g., projectile points and bottles).

Architectural resources include standing buildings, bridges, dams, and other structures of historic or aesthetic significance. Generally, architectural resources must be more than 50 years old to warrant consideration for the NRHP. More recent structures might warrant protection if they are of exceptional importance or if they have the potential to gain significance in the future.

Resources of traditional, religious, or cultural significance can include archeological resources, sacred sites, structures, neighborhoods, prominent topographic features, habitat, plants, animals, and minerals considered essential for the preservation of traditional culture.

This section describes the nature and extent of environmental impacts resulting from the Proposed Action and alternatives on cultural resources. Under Section 106 of the NHPA, Federal agencies must take into account the effect of their undertakings on historic properties and allow the Advisory Council on Historic Preservation (ACHP) a reasonable opportunity to comment. Under this process, the Federal agency evaluates the NRHP eligibility of resources within the proposed undertaking's Area of Potential Effect (APE) and assesses the possible effects of the proposed undertaking on historic properties in consultation with the State Historic Preservation Officer and other parties. The APE is defined as the geographic area(s) "within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist." Under Section 110 of the NHPA, Federal agencies are

required to establish programs to inventory and nominate cultural resources under their purview to the NRHP.

3.8.2 Existing Conditions

Originally known as Camp Meade, Fort Meade was established in 1917 as one of 32 military cantonments created by the Army after the United States' entry into World War I. The U.S. government commandeered 4,000 acres of land and purchased additional land bringing the total acreage to 9,349 acres. The main post at Camp Meade in Anne Arundel County was completed by October 1918 at a cost of more than $18 million. The Camp included the 79th Infantry Division, an Officer's Training School, a Remount Depot, Ordnance Supply School, and the 154th Depot Brigade, which received classified training and assigned incoming trainees. More than 103,000 men were trained at Camp Meade during World War I. After the war, the Camp served as a demobilization center for troops returning from overseas service. More than 96,000 men were mustered out of service through Camp Meade (Fort Meade Museum 1985).

Camp Meade was designated a permanent installation in 1928 and was initially named Fort Leonard Wood. It was renamed Fort George G. Meade in 1929. During the inter-war years, Fort Meade was used as a training facility and the home of the Army's tank training school until 1932 when the training was transferred to Fort Benning. By 1940, the post contained nearly 500 temporary and permanent buildings. An $8 million building campaign began in 1940 to add additional training areas and expanded the post to 13,500 acres (Fort Meade Museum 1985).

During World War II, Fort Meade saw increased construction related to the Army's mobilization efforts. The post served as a troop replacement depot and a prisoner of war camp for German and Italian prisoners. More than 1.5 million men were shipped overseas from Fort Meade. At the end of the war, Fort Meade served as a separation center for troops being discharged from military service and processed over 400,000 men back to civilian life. In total, more than 3.5 million men passed through Fort Meade during World War II (Fort Meade Museum 1985).

The NSA traces its history to 1917, when a Cipher Bureau was created in the Military Intelligence Division of the U.S. Army during World War I. The Army and the Navy maintained their own intelligence units, but during World War II, they formed a State-Army-Navy Communications Intelligence Board that oversaw all Communications Intelligence (COMINT) activities (Howe undated). Although the Army and Navy collaborated on most of the COMINT during World War II, after the war, COMINT responsibilities had expanded into six different organizations, including the Army, Navy, Air Force, State Department, Central Intelligence Agency, and Federal Bureau of Investigation (Brownell et al. 1952).

The Armed Forces Communications Intelligence Agency was established in May 1949 to create one unified national cryptologic agency, and was soon renamed the Armed Forces Security Agency (AFSA). In addition to its COMINT duties, the AFSA also handled Communications Security (Howe undated). In 1951, a National Security Council report, known as the Brownell Committee Report, recommended that COMINT efforts be integrated and consolidated at the national level under the purview of a single government department (Brownell et al. 1952). As a result, the NSA was established on November 4, 1952 by the Secretary of Defense, under specific instructions from President Harry Truman.

Lieutenant General Ralph J. Canine, U.S. Army, the head of AFSA, was the first Director of NSA. Director Canine decided to consolidate the various components of NSA and locate NSA headquarters at Fort Meade (see **Figure 3.8-1**). NSA began developing plans to build a headquarters large enough to accommodate their work force (NSA 2012); however, due to the dramatically increased mission and scope of operations, it had outgrown its first facility before construction began (Canine 1955). A limited number of NSA personnel moved to Fort Meade in late 1952.

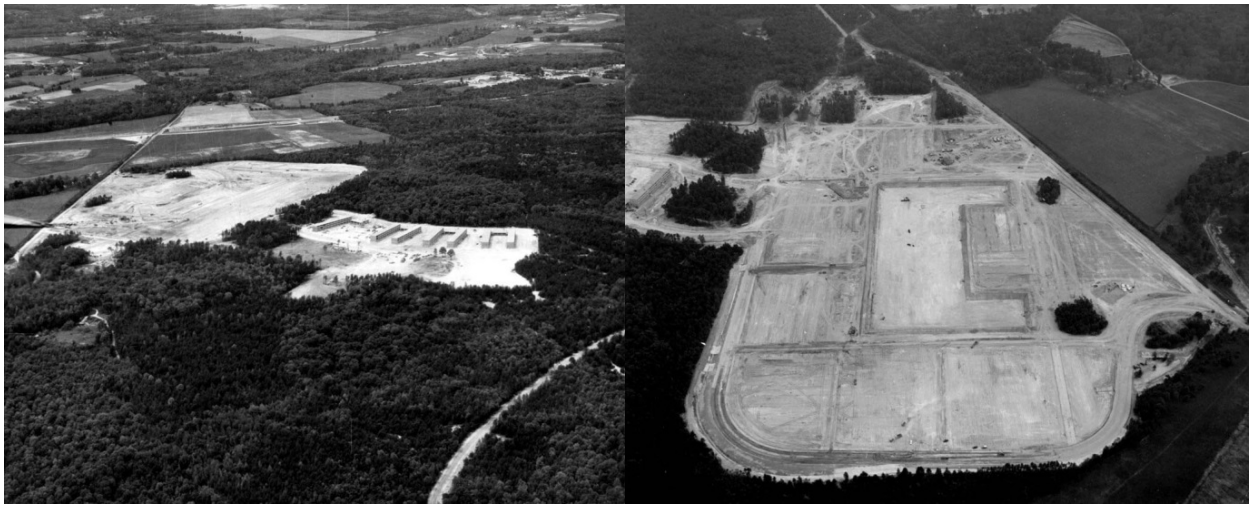


Figure 3.8-1. Aerial photographs showing the future site of the NSA Campus at Fort Meade, ca. 1955 (NSA 2012)

In May 1954, bids were solicited for the construction of the NSA operations building (Claussen 1954a), which was situated on the west side of Fort Meade in a previously undeveloped area that would become the NSA Campus. Four barracks buildings in what is now called the 9800 Troop Support Area buildings were also constructed in 1954. Interim operations of NSA at Fort Meade began January 31, 1955, and continued until Building 9800 was completed in 1957 (Evening Sun 1957). The NSA Campus continued to expand with the construction of various support buildings in the mid-1950s. Building 9800 was not large enough to house all NSA intelligence employees; therefore, Communications Security remained in Washington, DC until Buildings 9800A and 9817 were completed in 1968 (NSA 2012). Building 9814 was added in 1965, and Buildings 9829, 9828, 9703, and 9705 were completed in the early to mid-1970s.

The NSA developed Electronic Intelligence programs to intercept electronic signals via satellites in the 1950s. NSA adopted the term Signal Intelligence (SIGINT) in 1958 to encompass both COMINT and Electronics Intelligence (Howe undated). In the 1960s, NSA focused on providing timely intelligence for the White House and various U.S. agencies, not just those in the DoD (NSA 2012). NSA continued to provide intelligence and counter intelligence through the third-quarter of the twentieth century. During the Cold War, NSA remained focused on the Soviet Union and its allies, with intelligence gathering focused on military forces and associated forces and troops; however in the 1970s, the NSA also began providing information related to terrorist-related kidnappings, assassinations, and hijackings (NSA 2012).

In the 1970s and 1980s, NSA became an expert in securing information systems though encryption technology, improved voice security equipment, and adopted a centralized computer system. NSA provided cryptologic support to U.S. and allied military forces during the Gulf War in the 1990s and eventually became involved in counternarcotic activities (NSA 2012).

An additional large operations building, Building 9800C/D, was completed in September 1986 (NSA 2012). With the end of the Cold War in the late 1980s, Congress made significant cuts in NSA's personnel and budget. The NSA consolidated sites and personnel as it was downsized.

After the terrorist attacks on September 11, 2001, NSA joined America's armed forces in the war in Afghanistan. As part of Expeditionary SIGINT, NSA personnel were deployed with military forces to provide them with tailored and immediate SIGINT for military operations. At the same time, NSA responded to concerns regarding cybersecurity and protecting digital networks and data. As a result, when the U.S. military reorganized its cyber operations in 2005, the new "network warfare" unit was based at the NSA and the Director became that unit's Commander (NSA 2012). Today, NSA continues to address issues of cyberterrorism, computer hacking, and securing digital information and communications, as well as producing SIGINT (NSA 2012).

Section 106 consultation with the Maryland Historical Trust (MHT) (i.e., Maryland State Historic Preservation Officer) for this Proposed Action is underway. NSA established an APE that included all portions of the geographic area that might be affected by the undertaking. A site file search at the MHT indicated there were no previously identified historic properties in the APE. As the project plans proceed, the NSA will continue to follow the Section 106 consultation process as outlined in 36 CFR 800.

Two resources listed in the NRHP are located just northwest of the ECIP project area. The Baltimore-Washington Parkway (AA-5) is a historic district that was listed in 1991. It is located approximately 0.5 miles northwest of Building 9800A. Grassland (AA-94) is an antebellum plantation listed in the NRHP in 1984, and located approximately 0.75 miles northwest of Building 9800A on the south side of Hercules Road.

3.8.2.1 ECIP Project Area

Historic and cultural resources at Fort Meade are detailed within the installation's 2011 Integrated Cultural Resources Management Plan (USACE 2011). Information on previous cultural resources investigations and their results are specified in detail in the Integrated Cultural Resources Management Plan and can be referred to for additional information.

Architectural Resources. Previous architectural investigations identified and evaluated a number of buildings located on Fort Meade, including the NSA Campus, which were built prior to 1960 for listing in the NRHP. Fort Meade has five historic properties, including the Fort Meade Historic District (AA-34), the water treatment plant (Building 8688), and three bridges (Llewellyn Avenue Bridge, Redwood Avenue Bridge, and Leonard Wood Avenue Bridge) constructed during World War II by prisoners of war. All are eligible for listing in the NRHP. None of the previously identified historic properties at Fort Meade are located within the ECIP project area or the APE.

As part of the identification of historic properties under Section 106, NSA engaged a Secretary of the Interior-qualified architectural historian to evaluate all resources in the APE that were constructed prior to 1979. Seventeen resources in the APE were evaluated for listing in the NRHP; of these, NSA determined that Building 9800 is eligible for listing in the NRHP. MHT concurred with that determination and found that Building 9800A was also eligible for listing in the NRHP (see **Appendix E**).

Archaeological Resources. The entirety of Fort Meade, including the NSA Campus, has been investigated for the presence of archaeological resources. There are a total of 41 known archaeological sites on Fort Meade; only one of these sites has been determined eligible for listing in the NRHP (18AN1240). Site 18AN1240 is a Late Archaic Period base camp and is not located within the ECIP project area or the APE.

Resources of Traditional, Religious, or Cultural Significance to Native American Tribes. At present, no known traditional cultural properties or American Indian sacred sites are known to occur within or near the ECIP project area or at Fort Meade. While there are no federally recognized Indian tribes present in Maryland, seven federally recognized tribes elsewhere in the United States are believed to have a historical affiliation with the land occupied by Fort Meade (USACE 2011).

3.8.2.2 National Business Park

A review of the files at the MHT indicates there is one historic property located at the National Business Park site: the Clark/Vogel House (AA-160), which was determined eligible for listing in the NRHP in 2008 (MHT 2008). The National Business Park is adjacent to the Baltimore-Washington Parkway (AA-5), which was listed in the NRHP as a historic district in 1991. The site is also located directly south of the Jessup Survey District (AA-991), which is listed in the Maryland Inventory of Historic Properties.

3.8.2.3 Annapolis Junction Business Park

A review of the files at the MHT indicates there are no historic properties located at the Annapolis Junction Business Park site. However, the site is located directly south of the Annapolis Junction Survey District (AA-925), which is listed in the Maryland Inventory of Historic Properties. The Annapolis Junction Business Park is approximately 0.3 mile west of the Baltimore-Washington Parkway (AA-5), which is listed in the NRHP.

3.9 Infrastructure

3.9.1 Definition of the Resource

Infrastructure consists of the systems, physical structures, and utilities that enable a population in a specified area to function. Infrastructure is wholly human-made, with a high correlation between the type and extent of infrastructure and the degree to which an area is characterized as "urban" or developed. The infrastructure components discussed in this section are water supply, including potable, steam, and chilled water, sanitary sewer and wastewater treatment system, stormwater drainage, electrical supply, natural gas supply, solid waste management (i.e., nonhazardous waste), communications, liquid fuel supply, heating and cooling system, and pavements. This section has been prepared in a manner that protects sensitive information pertaining to infrastructure systems and only discusses those points considered directly relevant to the Proposed Action.

3.9.2 Existing Conditions

3.9.2.1 ECIP Project Area

Potable Water Supply. The NSA Campus is connected to the Fort Meade water supply, treatment, distribution, and storage system. Fort Meade's water supply system was constructed in the 1910s and has

been privatized through a contract with American Water, which provided upgrades to the system and replacement of underground transite piping. American Water maintains a state Water Appropriation and Use Permit (Permit No. AA1969G021[07]) for the supply, treatment, storage, and distribution of potable water (MDE 2012c). The permit allows an average withdrawal of 3.3 mgd on an annual basis, and peak withdrawals of 4.3 mgd during the month of maximum use from groundwater wells. Water is pumped from the groundwater wells to the water treatment plant, which is owned and operated by American Water. The current capacity of the water treatment plant is 5.0 mgd, while the peak-day demand is 3.88 mgd (NSA 2013a). For the 12 months ending May 2015, the water treatment plant treated an average of approximately 68.3 million gallons of water per month (American Water 2015).

The NSA Campus is connected to the Fort Meade water supply system through High Lift Pump Station #2, which pumps water to two storage tanks near the Campus. There is additional storage capacity at the water treatment plant available for use by NSA during an emergency. Four interconnected transmission mains and the associated distribution piping system provide water throughout the NSA Campus. Potable water system infrastructure is present within the 9800 Troop Support Area; there is limited infrastructure in the northern portion of the East Campus. The NSA uses potable water to provide personal consumption and sanitary water for personnel, cool computer equipment and work spaces, and heat buildings on the NSA Main Campus through production of steam. Typically, the NSA Campus uses an average of 1.2 mgd of water of which approximately 50 percent is needed for cooling tower makeup (NSA 2013a).

Building Heating and Cooling Systems. The Central Boiler Plant provides high-pressure steam for heating a majority of the NSA Main Campus, as well as for generation of potable hot water and humidification. The plant is composed of dual-fuel natural gas/fuel oil-fired boilers, pumps, piping, and aboveground storage tanks (ASTs) that store backup fuel (No. 2 fuel oil) for the boilers. The NSA receives bulk diesel deliveries to two 240,000-gallon ASTs at the North Substation, and four ASTs (two 200,000-gallon and two 240,000-gallon ASTs) at the South Substation (NSA 2013b). The plant operates continuously; however, the number of boilers in operation depends on the demand and time of year (NSA 2010). There is no active steam infrastructure within the ECIP project area; however, there are abandoned steam pipes within the 9800 Troop Support Area (NSA 2013a). The 9800 Troop Support Area is heated by natural gas.

Chilled water is provided on the NSA Campus to cool equipment and facilities. The system includes a chiller facility, chilled water distribution lines, a dedicated electrical substation, dedicated emergency electrical power supply, and power transmission lines. Additionally, there are some individual chillers associated with buildings on the NSA Campus. As stated above in *Potable Water Supply*, 0.6 mgd of the 1.2 mgd of water used by the NSA is used to cool computer equipment and work spaces. The NSA partnered with Howard County to provide 5 mgd of reclaimed water for use in the cooling system, which will conserve potable water and reduce overall water costs (NSA 2013a). A reclaimed water delivery system was constructed to transfer reclaimed water from Howard County's Little Patuxent Water Reclamation Plant to the NSA Main and East campuses (Fort Meade 2012b).

Sanitary Sewer and Wastewater Treatment System. Fort Meade has privatized their wastewater services and system to American Water, which owns and operates the Fort Meade WWTP. The WWTP is designed to process a daily inflow of 4.5 mgd, although the current average influent flow of the WWTP is approximately 1.6 mgd (American Water 2015, NSA 2013a). If the average flow to the WWTP were to

exceed 3.0 mgd, American Water would be required to notify the MDE and modify their existing NPDES permit. The MDE would be notified again if flow were to exceed 4.5 mgd. American Water holds the NPDES permit (MD0021717) and State Discharge Permit (12-DP-2533) for the WWTP (MDE 2014b). The wastewater collection system consists of gravity sewers and sewer lift pumping stations, although most of the NSA Main Campus is serviced by gravity sewers. Sewer system infrastructure is present within the 9800 Troop Support Area; there is limited infrastructure in the northern portion of the East Campus (NSA 2013a).

Stormwater Drainage. The NSA Main Campus stormwater drainage system consists of localized stormwater pipes and other drainage structures supplemented by swales, ditches, other drains, and retention ponds. The three drainage areas on the NSA Main Campus and the 9800 Troop Support Area (Basins A, B, and C) discharge to the west into the Little Patuxent River. Stormwater on the eastern portion of the ECIP project area on the East Campus flows east to the Midway Branch, and ultimately south outside of Fort Meade into Lake Allen and ultimately also into the Little Patuxent River. Stormwater is managed through the NPDES MS4 General Permit and a Maryland General Permit for stormwater discharges associated with industrial activities. NSA adheres to state stormwater regulations (COMAR 26.17.02), the 2009 *Maryland Stormwater Design Manual and Supplement No. 1*, and 2015 *Maryland Stormwater Management and Erosion & Sediment Control Guidelines for State and Federal Projects*. NSA is implementing a Stormwater Management Plan that meets minimum control measures as outlined in the MS4 permit (NSA 2013a). See **Section 3.6.2** for more information on stormwater management.

Electrical Supply. Electrical power to Fort Meade and the NSA Main Campus is provided by Baltimore Gas and Electric (BGE). The power for the NSA Campus is distributed to three substations on the campus. Substations supporting 171 MW of power are being constructed for the NSA East Campus. All substations will have a primary-power generator plant and each plant will have redundancy to meet Federal facility design standards. The power for the 9800 Troop Support Area is currently provided by a separate Fort Meade substation (NSA 2013a).

Natural Gas Supply. BGE supplies natural gas to Fort Meade and the NSA Main Campus. The current natural gas capacity is 445,000 cubic feet per hour, which is supplied by seven BGE meters. Current demand is approximately 139,060 cubic feet per hour or one-third of system capacity. The distribution system is well-dispersed and has the capacity to exceed current demand (i.e., 139,060 cubic feet per hour) by 300 percent (NSA 2013a). BGE is performing necessary upgrades (e.g., installation of new gas lines in FY 2015, fixing routine line breaks due to aging, and adding meters to all buildings) to the distribution system (Fort Meade 2013a). Three natural gas lines are adjacent to the East Campus, including two 8-inch lines one each along O'Brien Road and Rockenbach Road to the west and north, respectively, and one 6-inch line along Mapes Road to the south. The 9800 Troop Support Area is serviced by natural gas (NSA 2013a).

Solid Waste Management. The NSA operates its own solid waste and recycling programs independent of Fort Meade. The NSA generated 3,689 tons of municipal solid waste in 2009 (NSA 2010). Waste is disposed of at an offsite location in accordance with existing Federal, state, and local regulations. In 2011, the NSA recycled 15 million pounds of materials (e.g., cardboard, white paper, aluminum cans, and scrap metal) for a waste diversion rate of 65 percent, including an estimated 99 percent of paper waste (NSA 2013a). The *Anne Arundel County, Maryland Ten-Year Solid Waste Management Plan 2013-2023*

ensures that adequate solid waste disposal capacity exists for the county through 2023. The majority of commercial waste generated in Anne Arundel County is managed through transfer stations or directly hauled for disposal at non-county facilities. Industrial waste generated in the county is managed by private entities (Anne Arundel County 2013).

Liquid Fuel Supply. The NSA uses No. 2 fuel oil for heating and diesel fuel for operation of emergency generators. These fuels are stored in ASTs (with capacities ranging from 72 gallons to 240,000 gallons) and underground storage tanks (USTs) on the NSA Campus. NSA has 127 ASTs and 4 USTs that have a combined total capacity of approximately 2 million gallons located throughout the entire NSA Campus and proposed on the southern portion of the East Campus. Diesel fuel is transferred from ASTs to generators and boilers via underground and aboveground piping, and manual transfer via portable containers. Other bulk storage containers include 14 elevator hydraulic fluid reservoirs and containers for kitchen grease (NSA 2013b). The NSA also operates truck-mounted fuel tanks (50 gallons each) for refueling forklifts and other mobile equipment (NSA 2013c).

3.9.2.2 National Business Park

Potable Water Supply. The potable water supply for the National Business Park is provided by Anne Arundel County, which supports 92,000 customers. The water supply system consists of 8 independent wells and 13 major water treatment plants that derive their supply from 57 production wells. The basic system is supplemented in the northern portion of the county by three connections to the City of Baltimore, from whom the county purchases water. The water system capacity of 37.5 mgd is adequate to meet the average daily demand (Anne Arundel County 2015c).

Sanitary Sewer and Wastewater Treatment System. The Anne Arundel County Bureau of Utilities operates the county wastewater system, which is divided into 10 sewer service areas. The Bureau of Utilities operates water reclamation facilities (i.e., wastewater treatment plants) in 9 of the 10 areas and has 10 connections with three other jurisdictions (i.e., Baltimore County, Baltimore City, and Howard County). The current capacity of the county system is 47.6 mgd, which is adequate to meet the average daily demand (Anne Arundel County 2015d). National Business Park is in the Maryland City Sewer Service Area, which is serviced by the Maryland City Water Reclamation Facility. The Maryland City Water Reclamation Facility has a design and permitted capacity of 2.5 mgd. Projected wastewater flow in the Maryland City Sewer Service Area in 2015 and 2020 is 1.51 mgd and 1.97 mgd, respectively (Anne Arundel County 2015e).

Stormwater Drainage. Stormwater from National Business Park drains off site to the south via swales, ditches, and natural channels into a tributary of the Patuxent River. National Business Park has one large stormwater management pond. Portions of National Business Park are undeveloped but can be improved as necessary to meet stormwater requirements (DoD 2012).

Electrical Supply. Electrical power is supplied to the National Business Park by BGE. Currently, BGE uses several energy sources to generate electricity and offers a mix of power purchase options to commercial users (DoD 2012).

Natural Gas System. Natural gas is supplied to National Business Park by BGE (DoD 2012).

Solid Waste. The Anne Arundel County Ten-Year Solid Waste Management Plan's priority is to maximize waste reduction, implement vigorous recycling programs, and promote the use of landfilling alternatives. The only landfill in Anne Arundel County is the Millersville Landfill Resource Recovery

Facility. Other facilities in the area include the Annapolis Junction Transfer Station and the Curtis Creek Transfer Station. The Millersville Landfill Resource Recovery Facility evaluates capacity on an annual basis, and has determined it will meet projected needs until 2041 (Anne Arundel County 2013).

Liquid Fuel Supply. Facilities within National Business Park have emergency generators and other equipment which require liquid fuels.

Heating and Cooling System. Each building within National Business Park has individual heating and cooling units adequate to meet the building's needs.

3.9.2.3 Annapolis Junction Business Park

The infrastructure at Annapolis Junction Business Park is similar to that described for National Business Park because both locations are partially developed modern business parks in the same vicinity that use the local utilities. Aerial electrical transmission lines are present adjacent to the south of the site (DoD 2012). Annapolis Junction Business Park is nestled between Dorsey Run to the east, and the Little Patuxent River to the south. Stormwater drains the site via swales, ditches, and natural channels to Dorsey Run to the east and ultimately to the Little Patuxent River to the south.

3.10 Sustainability

3.10.1 Definition of the Resource

First conceptualized through the establishment of NEPA, sustainability is defined as the means to create and maintain conditions, under which humans and nature can exist in productive harmony, that permit fulfilling the social, economic, and other requirements of present and future generations (42 U.S.C. 4321 et seq.) (USEPA 2015c). Adherence to this policy is guided by the CEQ's *Regulations for Implementing NEPA* (40 CFR 1502.16[e]). Under 40 CFR 1502, agencies are directed to consider the energy requirements and conservation potential of various alternatives and mitigation measures.

Since 1970, several policies, statutes, EOs, and supplemental agency policies and guidance documents were established to shape the Federal government's sustainable planning and management practices. Recently, government agencies have made great strides toward efficiency and environmental planning.

The Energy Policy Act (EPACT) of 2005 was a major undertaking in the Federal government that provided for the development and management of a more reliable and cost-effective energy infrastructure. On January 24, 2006, the DoD, along with 15 other Federal agencies attending the White House Summit on Federal Sustainable Buildings, signed into the MOU for *Federal Leadership in High Performance and Sustainable Buildings.* This MOU provided the original, EPACT-compliant "Federal Guiding Principles," which obligated signatory agencies to take leadership in the design, construction, and operation of high-performance and sustainable buildings (White House 2006). The Federal Guiding Principles guided the integrated design, energy performance, water conservation, indoor environmental quality, and materials of new buildings and major renovations to reduce impacts of these construction actions on the environment.

EO 13423, *Strengthening Federal Environmental, Energy, and Transportation Management* (January 24, 2007), promotes environmental practices, including acquisition of bio-based, environmentally preferable, energy-efficient, water-efficient, and recycled-content products; and maintenance of cost-effective waste prevention and recycling programs in their facilities (72 FR 3919). Section 2(f)(i) of this EO stipulates

that new or major construction of Federal agency buildings must comply with the Federal Guiding Principles. In December 2008, the Federal Guiding Principles were updated to incorporate focus on transforming existing buildings into high performance sustainable buildings in accordance with EO 13423. The EISA of 2007 adopted the energy intensity goals set forth by EO 13423 and set renewable energy goals for new or substantially renovated Federal buildings.

EO 13514, *Federal Leadership in Environmental, Energy and Economic Performance* (October 5, 2009), expanded on the energy reduction and environmental performance requirements for Federal agencies identified in EO 13423, and also set new water and energy conservation standards (74 FR 52117, FedCenter 2014). EO 13514 (Section 2[f][iv]) required that Federal agencies identify and analyze impacts incurred from energy usage and alternative energy sources in all EISs and Environmental Assessments for proposals for new or expanded Federal facilities under NEPA. Further, the EO established efficiency requirements that would be equivalent to attaining a Silver rating, at minimum, under the U.S. Green Building Council's *Leadership in Energy and Environment Design* (LEED) program for new construction or major renovation projects. Recognizing the need for both short- and long-term focus, EO 13514 also established the requirement for agencies to develop, implement, and annually update a 'Strategic Sustainability Performance Plan' (SSPP) that prioritizes actions based on a positive return on investment for the American taxpayer and to meet GHG emissions, energy, water, and waste reduction targets. On December 5, 2013, the *Presidential Memorandum - Federal Leadership on Energy Management* updated and expanded the EO 13514 requirements for reduced consumption of energy and water, reduced greenhouse gas emissions, increased renewable energy generation, and installation of metering technologies to manage and monitor building performance through FY 2020 (White House 2013).

On March 25, 2015, the goals and requirements set forth in EO 13423, EO 13514, and this Presidential Memorandum were adopted into and replaced by the issuance of EO 13693, *Planning for Federal Sustainability in the Next Decade* (80 FR 15871). EO 13693 incrementally expands the sustainability goals outlined within each of its predecessors for production of renewable energy, energy-efficient purchasing, improved building performance, air emissions reductions, reduced water and energy consumption, increases in zero emissions vehicle fleets, and improved stormwater management and water quality to FY 2030. It further stipulated that beginning in FY 2020, all new construction of Federal buildings larger than 5,000 ft^2 that enter the planning phase must be designed to achieve energy net-zero and, where feasible, water and waste net-zero by FY 2030. In June 2015, the Federal Guiding Principles were updated to incorporate compliance with EO 13693.

Sustainability consists of the technologies, systems, physical structures, management strategies, and cultural practices that, when incorporated into design and use of infrastructure and utilities, enable resource-use-efficiency that supports operational readiness while maintaining balance with the natural environment. Sustainable components would be incorporated into the infrastructure and utilities discussed in **Section 3.9**. The regulatory requirements addressing sustainability for the ECIP serve as the existing conditions under which the Proposed Action and alternatives are assessed. Because these requirements would be the same for each alternative, sectional breakouts to address them individually is not necessary.

3.10.2 Existing Conditions

3.10.2.1 ECIP Project Area

The DoD's vision of sustainability is to maintain the ability to operate into the future without decline – either in the mission or in the natural and built systems that support it (DoD 2016c). Sustainable installations provide access to training lands, increase the efficiency of energy and water use, reduce operational costs, conserve energy, protect natural and cultural resources, safeguard national security and the health of its surrounding communities; and comply with applicable environmental laws. As a DoD agency, the NSA's strategic vision for environmental compliance and sustainability of its assets includes resource conservation and a culture of sustainable practices, reduced GHG emissions, reduced water and energy consumption, increased generation of renewable energy, and waste minimization through recycling, repurposing, and reuse of materials (NSA 2013a, NSA 2015).

DoD Instruction 4170.11, *Installation Energy Management* (March 2016), *DoD Sustainable Buildings Policy* (November 2013), and the DoD's UFC 1-200-02, *High Performance and Sustainable Building Requirements* (March 2013) implement the Federal Guiding Principles for sustainable buildings and sustainability goals in DoD actions. These DoD policies guide development strategies to incorporate life-cycle cost-effective, resource-efficient, and sustainable practices into every new construction and major building renovation (DoD 2009, DoD 2010b, DoD 2014). The 2016 *DoD SSPP* incorporates all of these requirements and lays out the goals and sustainability performance expectations through FY 2025 (DoD 2016c). Updated annually, the SSPP provides a path by which DoD agencies will improve their missions, lower life-cycle costs, and advance technologies and practices that further sustainability goals of the nation. Building on this, the *NSAW Facilities Master Plan* prioritizes the leveraging and implementation of sustainable, environmentally friendly, low-impact, and efficient practices and technologies into projects to add to the overall payback of each undertaking on its campus (NSA 2013a). By identifying and implementing resource-conserving opportunities along with initiating a culture of conservation and cooperation, NSA also ensures that its mission requirements will continue to be met.

To-date, sustainable management options implemented at the NSA Campus on Fort Meade have included improved stormwater management designs for new construction and major renovations, procurement and use of energy- and water-efficient technologies, and implementation of strategies to reduce or offset the consumption of energy (NSA 2013a). Half of NSA's total vehicle fleet is comprised of hybrid vehicles, solar panels are installed on four existing buildings, and plans for future development of the East Campus include investigation of use of solar technology for new buildings. Energy and water-use reduction strategies such as green or 'cool roofs' and installation of low-flow faucets and fixtures are being incorporated into buildings currently under construction on the NSA Campus. Buildings under construction on the southern portion of the East Campus are planned to be LEED certified. Additionally, in response to projections of potable water demand within the region, and in compliance with policy requirements for improved water use efficiency and management in Federal facilities, the NSA determined that use of reclaimed water instead of potable water would be a suitable option to meeting its cooling water demands (Fort Meade 2012b). Because reclaimed water costs less per gallon than potable water, use of reclaimed water is cost-efficient and decreases demand on the local drinking water supply. In 2012, the NSA connected its water pipelines to the existing Howard County Little Patuxent Water Reclamation Plant. The NSA reclaimed water system provides a cost-effective solution for mission-

related cooling water needs by diverting treated effluent into an integrated piping and storage system across the Main and East campuses.

3.10.2.2 National Business Park

Covering 2 million gross ft^2, the 16-building National Business Park is the first LEED-certified office park in Maryland (ABP 2012). Most of the constructed buildings in the business park are LEED-Gold certified in the Core and Shell category. Broadly defined, core and shell construction covers base building elements, such as the structure, envelope and building-level infrastructure systems (USGBC 2015a). Some National Business Park buildings are also LEED-Silver and -Gold certified for the Commercial Interiors category, including all of the buildings currently leased by the NSA. LEED for Commercial Interiors is the recognized system for certifying high-performance green tenant spaces that are healthy, productive places to work; are less costly to operate and maintain; and have a reduced environmental footprint (USGBC 2015b). Sustainability features for the National Business Park buildings include water reduction by utilizing waterless urinals, dual-flush toilets, and low-flow shower heads; energy savings through use of energy-efficient technologies; reduced waste through the use of recycled materials; and plans for future building construction would use Forest Stewardship Council-certified wood (ABP 2012).

3.10.2.3 Annapolis Junction Business Park

At full build-out, Annapolis Junction Business Park will provide approximately 2.3 million gross ft^2 of sustainably designed office buildings (Annapolis Junction Business Park 2015). Three of the four existing buildings have been fully constructed; each of these has achieved LEED-Gold certification for Core and Shell. The fourth building is currently under construction. Representative sustainable features for buildings include close proximity to public transportation; bike and pedestrian access; reserved parking for alternative fuel or low-emitting vehicles; reduced outdoor light pollution; use of indigenous plant species for ground cover and landscaping; use of bioretention areas for sustainable stormwater management, use of certified wood and local and recycled materials; reduced water consumption; energy savings from incorporation of renewable energy sources and other energy efficient technologies; and improved indoor air quality through use of low- or no-VOC paints, carpet adhesives, and sealants. The buildings are also designed to include a centralized meter system that supports tenant sub-metering of energy consumption, and to support tenant options for sustainable renovations.

3.11 Hazardous Materials and Wastes

3.11.1 Definition of the Resource

Hazardous materials are defined by 49 CFR 171.8 as "hazardous substances, hazardous wastes, marine pollutants, elevated temperature materials, materials designated as hazardous in the Hazardous Materials Table (49 CFR 172.101), and materials that meet the defining criteria for hazard classes and divisions" in 49 CFR 173. Transportation of hazardous materials is regulated by the U.S. Department of Transportation regulations within 49 CFR 105–180.

Hazardous waste is defined by the Resource Conservation and Recovery Act (RCRA) at 42 U.S.C. 6903(5), as amended by the Hazardous and Solid Waste Amendments, as "a solid waste, or combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or

infectious characteristics may (A) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (B) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed." Certain types of hazardous wastes are subject to special management provisions intended to ease the management burden and facilitate the recycling of such materials. These are called universal wastes and their associated regulatory requirements are specified in 40 CFR 273.

Special hazards are those substances that might pose a risk to human health and are addressed separately from other hazardous substances. Special hazards include asbestos-containing material (ACM), lead-based paint (LBP), and polychlorinated biphenyls (PCBs). The USEPA is given authority to regulate these special hazard substances by the Toxic Substances Control Act, Title 15 U.S.C. 53. The USEPA has established regulations regarding asbestos abatement and worker safety under 40 CFR 763 with additional regulation concerning emissions (40 CFR 61). Whether from lead abatement or other activities, depending on the quantity or concentration, the disposal of the LBP waste is potentially regulated by the RCRA at 40 CFR 260. The disposal of PCBs is addressed in 40 CFR 750 and 761.

Evaluation of hazardous materials and wastes focuses on UST; AST; and the presence, storage, transport, handling, and use of pesticides, herbicides, fuels, solvents, oils, lubricants, ACMs, PCBs, and LBP. The evaluation might also extend to the generation, storage, transportation, and disposal of hazardous wastes when such activity occurs at or near the site of a proposed action. In addition to being a threat to humans, the improper release of hazardous materials and wastes can threaten the health and well-being of wildlife species, botanical habitats, soil systems, and water resources. In the event of a release of hazardous materials or wastes, the extent of contamination varies based on the contaminant and the type of soil, topography, and water resources.

3.11.2 Existing Conditions

3.11.2.1 ECIP Project Area

Hazardous Materials, Petroleum Products, and Hazardous Wastes. Both the U.S. Army and the NSA at Fort Meade use, handle, and store hazardous materials and petroleum products, which include liquid fuels (e.g., gasoline and diesel); dielectric fluid; kitchen grease; pesticides; petroleum, oils, and lubricants; cleaners; and hydraulic fluids. The NSA receives liquid fuels for use in power generation equipment by way of bulk delivery (e.g., 7,500-gallon and 4,500-gallon commercial tanker trucks). These liquid fuels are stored in ASTs that have approximately 2 million gallons of collective storage capacity (NSA 2013b). The use and storage of hazardous materials and petroleum products on the NSA Campus are managed by applicable NSA pollution prevention plans; Spill Prevention, Control and Countermeasure (SPCC) plans; the Facility Response Plan (FRP); and integrated pest management plans. In accordance with DoD Instruction 4150.07, *DoD Pest Management Program*, NSA minimally uses pesticides. Army Regulation 200-1, *Environmental Protection and Enhancement*, promulgates policies, responsibilities, and procedures to implement the Army Pest Management Program, and NSA's practices are covered in its Integrated Pest Management Plan (DoD 2005).

Available records indicate that four ASTs are within the ECIP project area, at the buildings on the NSA Main Campus and the 9800 Troop Support Area that are proposed for demolition, and at the parking facility location alternatives. Two ASTs are located at Building 9829. One AST has capacity for 500

gallons of No. 2 fuel oil (Fort Meade undated) and the other AST has capacity for 2,000-gallons of diesel fuel (Fort Meade 2012c). The two others are 500-gallon diesel fuel ASTs at Buildings 9703 and 9817 (NSA 2013b).

The NSA (i.e., MD2970590004) is an RCRA Large-Quantity Generator, which generates more than 1,000 kilograms of hazardous waste, or more than 1 kilogram of acutely hazardous waste, per month (USEPA 2015d). Typical hazardous wastes generated at the installation include oils, lubricants, antifreeze, brake fluids, hydraulic fluids, paint and paint thinners, cleaners, degreasers, solvents, and batteries. Aside from normal quantities generated through routine operations, available records do not indicate hazardous wastes being generated or stored within the footprint of the Proposed Action (Fort Meade 2002, Fort Meade 2004).

The NSA maintains a Hazardous Waste Generator's Guide for their facilities. These plans describe the roles and responsibilities with respect to the waste stream inventory, waste analysis planning, hazardous waste management procedures, training, emergency response, and pollution prevention. The plan establishes procedures to comply with applicable Federal, state, and local standards for hazardous waste management.

ACM. Asbestos is regulated by the USEPA under the CAA; Toxic Substances Control Act; and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). The USEPA has established that any material containing more than one percent asbestos by weight is considered an ACM. ACMs at Fort Meade, including at the NSA Campus, are managed according to an Asbestos Management Program. The purpose of the program is to establish procedures to maintain ACMs in good condition and minimize the release of asbestos dust to the environment (Fort Meade 2008). The use of ACMs in new building construction has become very infrequent since the 1980s after several regulations restricted their use. It is likely that the buildings proposed for demolition at the NSA Main Campus and the 9800 Troop Support Area contain ACMs based on their year of construction (pre-1980).

LBP. In 1978, the U.S. Consumer Products Safety Commission banned the use of LBP for residential use. Under the LBP Poisoning Prevention Act (42 U.S.C. 4822), as amended, LBP hazards equal to or greater than 1 microgram per cubic centimeter must be abated. Army Regulation 420-70 provides policies and guidance for use when performing real property maintenance, repair, and demolition of buildings and structures. LBP at Fort Meade, including at the NSA Campus, is managed according to a Lead Hazard Management Plan. The purpose of the plan is to establish procedures to identify and control the hazards of LBP (Fort Meade 2006). All of the buildings proposed for demolition at the NSA Main Campus and the 9800 Troop Support Area were constructed prior to 1978; therefore, all of these buildings are assumed to contain LBP.

PCBs. PCBs are a group of organic compounds used as dielectric and coolant fluids in equipment such as transformers, capacitors, fluorescent light ballasts, electric motors, and hydraulic systems. Chemicals classified as PCBs were widely manufactured and used in the United States throughout the 1950s and 1960s. The production of PCBs was banned in the United States in 1979. PCBs are managed and regulated in accordance with the USEPA's Toxic Substances Control Act of 1976 (40 CFR 761). Army Regulation 200-1 states that U.S. Army policy is to manage PCBs in place unless operational, economic, or regulatory considerations justify removal.

Possible sources for PCBs within the footprint of the Proposed Action includes the electrical light ballasts, capacitors, and electrical surge protectors within the buildings and infrastructure on the NSA Main Campus and 9800 Troop Support Area.

An approximate 2-ft² area of PCB-contaminated soil and concrete was documented beneath the floor in the basement transformer vault of Building 9803. The contamination resulted during the removal of PCB-containing electrical equipment from Building 9803 and could not be removed because of logistical constraints associated with deactivating the building's electrical system for prolonged periods of time. The area of contamination was covered with two inches of new concrete encapsulation. On July 2, 1993, the USEPA granted a one-time waiver of the requirement to remove the contaminated soil as long as the contamination was noted in the building's deed and wipe sampling was performed on the concrete surface to ensure PCBs have not bled through (Fort Meade 1993). No other areas of PCB contamination have been documented within the footprint of the Proposed Action (USACE 2016).

Radon. The USEPA rates Anne Arundel County, Maryland, as a Federal Radon Zone 2. Counties in Zone 2 have a predicted average indoor radon screening level between 2 and 4 picoCuries per liter (USEPA 2015e). Radon gas accumulations greater than 4 picoCuries per liter are considered to represent a health risk to occupants. An installation-wide radon screening survey occurred in 1990 where radon samples were collected from select buildings. All indoor radon levels were below 4 picoCuries per liter (Fort Meade 1990).

Environmental Contamination and Ordnance. The *Final Site Management Plan, 2015 Annual Update, Fort George G. Meade, Maryland* (USACE 2016) contains the most up-to-date catalog of all known and potential environmental contamination sites on Fort Meade, including at the NSA Campus, and it summarizes the current status and planned activities for each site. The Site Management Plan identifies each site as an area of interest (AOI). Area of interest sites are organized by funding source and include Installation Restoration Program, Military Munitions Response Program, and BRAC sites. Additional details regarding each AOI site is provided in the various preliminary assessment/site inspection reports prepared by geographic area of the installation and site specific investigation, remedial action, and close-out reports.

Five AOI sites are within the ECIP project area. Each AOI site has been investigated and addressed, as necessary, and the USEPA provided no further action required concurrence for four of the five AOI sites. The remaining AOI site is being addressed through land use controls with long-term management (USACE 2016). **Table 3.11-1** summarizes the background and **Figure 3.11-1** depicts the location of each AOI site within the ECIP project area.

No AOI sites are present at the Parking Facility Location Alternatives. One building on the NSA Main Campus that is proposed for demolition partially overlaps with AOI site FGGM 006-R-01 (see **Figure 3.11-1**). This AOI site is a former pistol range that is believed to have been used from 1924 until the early 1940s. Information on the frequency of use and the types of ammunition used at this range was never documented, but it is believed that 0.45-caliber ammunition was most commonly used. Soil samples have identified elevated levels of lead in soil but at levels below regulatory limits. The USEPA approved no further action is required for FGGM 006-R-01 on June 13, 2007 (USACE 2016).

Table 3.11-1. Summary of AOI Sites within the ECIP Project Area

AOI Site Name	Site Summary
No Further Action Required AOI Sites	
Site M - Parcel 1	This AOI site was identified as a possible landfill during a review of a 1938 aerial photograph. A geophysical investigation confirmed the AOI as a landfill containing household trash. Surface soil, subsurface soil, and groundwater samples were collected and analyzed over the course of multiple site investigations. The results of the surface soil and subsurface soil samples did not indicate contamination. The results of the groundwater samples indicated elevated levels of chromium, cobalt, and thallium; however, these elevated readings were attributed to natural conditions rather than contamination. The USEPA determined that no CERCLA release occurred at Site M - Parcel 1 and provided concurrence on February 17, 2012 that no further action was required.
Site M - Parcel 8	This AOI site was identified as a possible landfill during a review of a 1938 aerial photograph. A geophysical investigation found little evidence to suggest the site was a former landfill. Nonetheless, surface soil, subsurface soil, and groundwater samples were collected and analyzed over the course of multiple site investigations. The results of the surface soil sample did not indicate contamination. The results from the subsurface soil samples indicated elevated levels of lead, so the U.S. Army recommended a non-time critical removal action. The results of the groundwater samples indicated slightly elevated levels of cobalt, but the level of cobalt was determined unlikely to cause adverse health effects from the ingestion of groundwater as a drinking water source. The USEPA determined that no CERCLA release occurred at Site M - Parcel 8 and provided concurrence on December 16, 2013 that no further action was required.
Non-SWMUs 12 and 13	Non-Solid Waste Management Units (SWMUs) 12 and 13 are associated with Buildings 9802 and 9803, respectively. These buildings were investigated during a 1996 investigation of SWMUs on Fort Meade; however, these buildings were not identified as SWMUs during the investigation, and it is unclear why they were initially investigated. Buildings 9802 and 9803 have been used for troop housing since their construction in the mid-1950s. No evidence of a release resulting in contamination to soil, groundwater, or surface water was found during the various investigations of these buildings. The USEPA concurred that no CERCLA release occurred at Non-SWMUs 12 and 13, and provided concurrence on March 31, 2011 that no further action was required. An approximate 2-ft² area of PCB contaminated soil and concrete was documented beneath the floor in the basement transformer vault of Building 9803. This area of contamination is not identified as an AOI in the *Final Site Management Plan, 2015 Annual Update, Fort George G. Meade, Maryland*. Further information on the area of PCB contamination is provided in the PCB subsection.

AOI Site Name	Site Summary
No Further Action Required AOI Sites (continued)	
FGGM 75	FGGM 75 consists of former USTs that leaked or potentially leaked prior to the adoption of Maryland UST regulations in 1984. One former UST that was addressed under FGGM 75 was within the ECIP project area, immediately southwest of Building 9829. All former USTs addressed under FGGM 75 have been investigated and appropriate actions have been taken to remediate these sites. As such, the USEPA concurred on February 23, 2012 that no further action was required for all of the former USTs addressed under FGGM 75, including the former UST within the ECIP project area.
Open AOI Site	
FGGM 003-R-02	The northern portion of FGGM 003-R-02 overlaps a large percentage of the ECIP project area. FGGM 003-R-02 is the approximately 260-acre Training Area Munitions Response Site (MRS) that is part of the 322-acre Mortar Range Munitions Response Area (MRA). The 62-acre Mortar Area MRS is a separate AOI (FGGM 002-R-01) that is not part of the ECIP project area. Munitions debris items have been found on the Training Area MRS and include practice grenades, an expended flare, and a small arms ammunition casing disposal pit. Numerous investigations into the Mortar Range MRA determined that there is a low probability for human receptors to encounter munitions and explosives of concern, and the low probability is compatible with the current and reasonably anticipated future land use. The selected response action for the Mortar Range MRA consists of land use controls with long-term management. The land use controls include requirements that dig permits be obtained for any intrusive activity, unexploded ordnance (UXO) construction support be available for all intrusive construction projects, and UXO avoidance procedures are followed for other intrusive activity. Residential land uses at the former Mortar Range MRA have also been prohibited as part of the land use controls. Long-term management includes ensuring warning signage remains in good condition and performing surface sweeps to ensure that munitions and explosives of concern and munitions debris are not exposed from erosion or frost heave. The USEPA, MDE, and local stakeholders have approved this long-term management strategy.

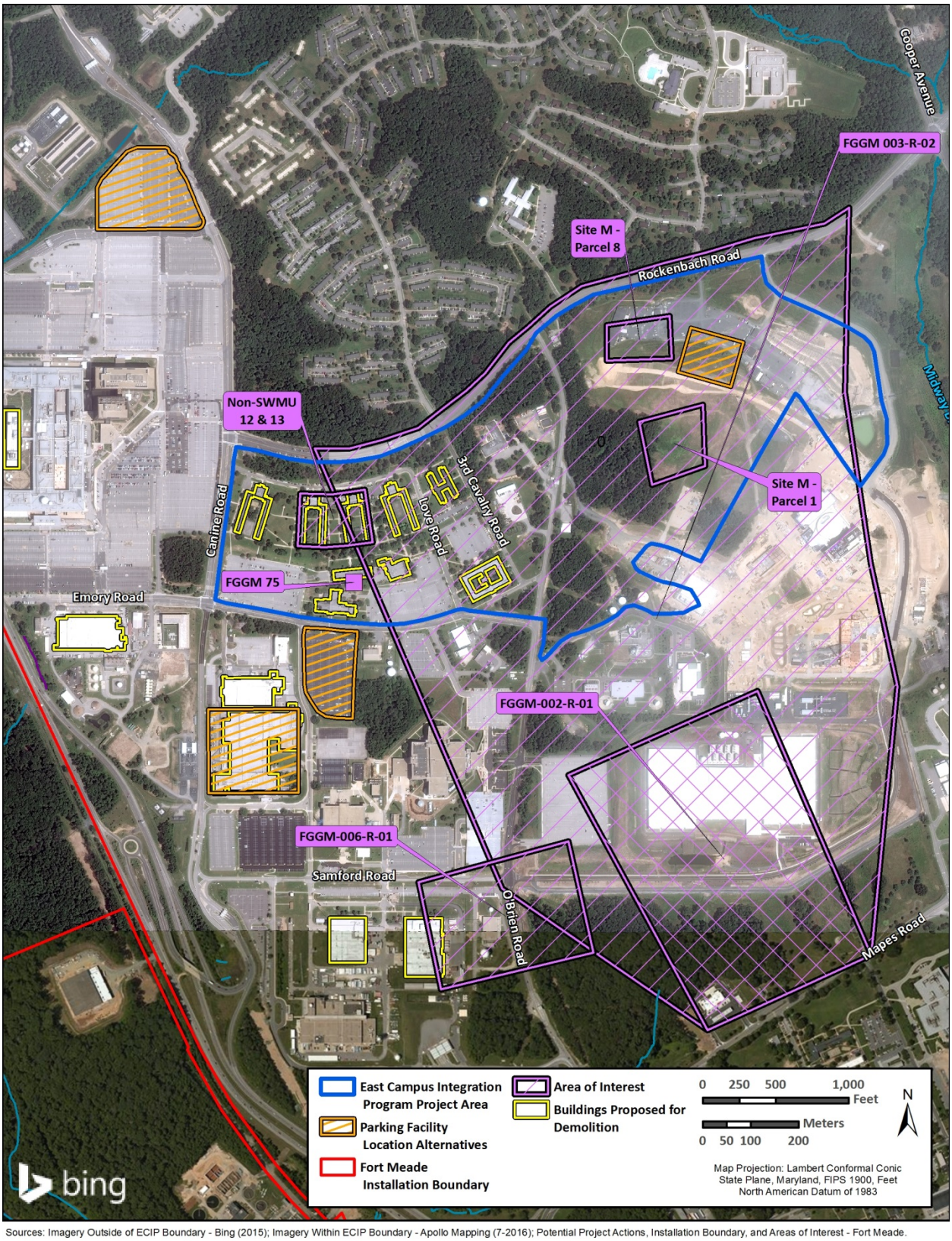
Sources: Fort Meade 2012d, USACE 2012, USACE 2016, USEPA 2011, USEPA 2012a, USEPA 2012b, USEPA 2012c

3.11.2.2 National Business Park

Hazardous Materials, Petroleum Products, and Hazardous Wastes. Apart from routine quantities used in the existing buildings, no hazardous materials, petroleum products, or hazardous wastes are known to be in the National Business Park. Liquid fuel ASTs or USTs likely are associated with the life safety generators in the existing buildings at the National Business Park. No other ASTs or USTs are known to exist at National Business Park.

ACM, LBP, and PCBs. The existing buildings in National Business Park are not located where new construction would occur and are not proposed for demolition or renovation by this alternative. Therefore, no known ACMs, LBP, and PCBs are within the site.

Radon. Radon conditions at National Business Park are similar to those discussed for the Proposed Action.



Sources: Imagery Outside of ECIP Boundary - Bing (2015); Imagery Within ECIP Boundary - Apollo Mapping (7-2016); Potential Project Actions, Installation Boundary, and Areas of Interest - Fort Meade.

Figure 3.11-1. Locations of AOI sites that overlap with the Proposed Action

Environmental Contamination and Ordnance. National Business Park is located outside of Fort Meade. As such, the Fort Meade Installation Restoration Program and Military Munitions Response Program are not applicable on this property. Based on a review of available information, there is no known environmental contamination or ordnance on the National Business Park site.

3.11.2.3 Annapolis Junction Business Park

Hazardous Materials, Petroleum Products, and Hazardous Wastes. Apart from routine quantities used in existing buildings, no hazardous materials, petroleum products, or hazardous wastes are known to be in the Annapolis Junction Business Park. Liquid fuel ASTs or USTs likely are associated with the life safety generators in the existing buildings at the Annapolis Junction Business Park. No other ASTs or USTs are known to exist at Annapolis Junction Business Park.

ACM, LBP, and PCBs. The existing buildings on Annapolis Junction Business Park are not located where new construction would occur and are not proposed for demolition or renovation by this alternative. Therefore, no known ACMs, LBP, and PCBs are within the alternative site.

Radon. Radon conditions at Annapolis Junction Business Park are similar to those discussed for the Proposed Action.

Environmental Contamination and Ordnance. Annapolis Junction Business Park is located outside of Fort Meade. As such, the Fort Meade Installation Restoration Program and Military Munitions Response Program are not applicable on this property. Based on a review of available information, there is no known environmental contamination or ordnance on the Annapolis Junction Business Park site.

3.12 Socioeconomics and Environmental Justice

3.12.1 Definition of the Resource

Socioeconomics. Socioeconomics encompasses economies and social elements such as population levels and economic activity. Factors that describe the socioeconomic environment represent a composite of several interrelated and nonrelated attributes. There are several factors that can be used as indicators of economic conditions for a geographic area, such as demographics, median household income, unemployment rates, percentage of families living below the poverty level, employment, and housing data. Data on employment identify gross numbers of employees, employment by industry or trade, and unemployment trends. Data on personal income in a region are used to compare the before and after effects of any jobs created or lost as a result of a proposed action. Data on industrial, commercial, and other sectors of the economy provide baseline information about the economic health of a region.

Environmental Justice. EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, pertains to environmental justice issues and relates to various socioeconomic groups and the disproportionate effects that could be imposed on them. This EO requires that Federal agencies' actions substantially affecting human health or the environment do not exclude persons, deny persons benefits, or subject persons to discrimination because of their race, color, or national origin. The EO was enacted to ensure the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with the respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Consideration of

environmental justice concerns includes race, ethnicity, and the poverty status of populations in the vicinity of a proposed action.

Consideration of environmental justice concerns includes race, ethnicity, and the poverty status of populations in the vicinity of a proposed action. Such information aids in evaluating whether or not a proposed action would render vulnerable any of the groups targeted for protection in EO 12898.

The affected area for evaluating environmental justice (or region of influence [ROI]) is the area within which potential impacts from a proposed action could occur on an environmental justice population. As defined by the CEQ, minority or low-income populations should be identified if the percentage of persons characterized as being a minority or low-income within the ROI is either greater than 50 percent. The definition of minority as defined by the CEQ is Black or African American, American Indian and Alaska Native, Asian, Native Hawaiian and Other Pacific Islander, and multi-race that includes one of these races; and Hispanic or Latino. CEQ also states "a minority population also exists if there is more than one minority group present and the minority percentage, as calculated by aggregating all minority persons, meets one of the above-stated thresholds" (CEQ 1997).

Protection of Children. EO 13045, *Protection of Children from Environmental Health Risks and Safety Risks*, states that each Federal agency "(a) shall make it a high priority to identify and assess environmental health risks and safety risks that may disproportionately affect children; and (b) shall ensure that its policies, programs, activities, and standards address disproportionate risks to children that result from environmental health risks or safety risks." Specifically, the EO requires an evaluation as to whether a proposed action would have disproportionate environmental health and safety effects on children. For the purposes of this analysis, children are defined as people 17 years of age and under.

3.12.2 Existing Conditions

3.12.2.1 ECIP Project Area

Fort Meade's workforce remains steady at approximately 40,000 employees composed of military, civilian, and contractor personnel, of which approximately 19,000 work for NSA (NSA 2013a). The installation's close proximity to both the Baltimore and Washington, DC, metropolitan areas allow workers to commute from a large number of communities with varied socioeconomic characteristics. Three spatial levels of socioeconomic data analysis used for this EIS are as follows:

- Anne Arundel County Census District 4, which includes Fort Meade, the NSA East Campus, and the surrounding communities of Jessup, Odenton, and Severn (see **Figure 3.12-1**)
- The ROI, which includes Anne Arundel County and the adjacent municipalities of Baltimore City, Baltimore County, Carroll County, Howard County, and Prince George's County
- State of Maryland.

Demographics and Housing. **Table 3.12-1** provides the 2010 population, and 2014 population estimates from the U.S. Census Bureau (USCB 2010b, USCB 2014a). The 2014 ROI population is approximately 57 percent of the population of the State of Maryland. The population of the ROI increased 1.8 percent from 2010 to 2014, while the population growth of the jurisdictions within the ROI ranged from 0.2 percent growth in Baltimore City to 4.2 percent in Howard County. Anne Arundel County's 2014 population was estimated at 550,269 people, representing growth of 2.3 percent since 2010.

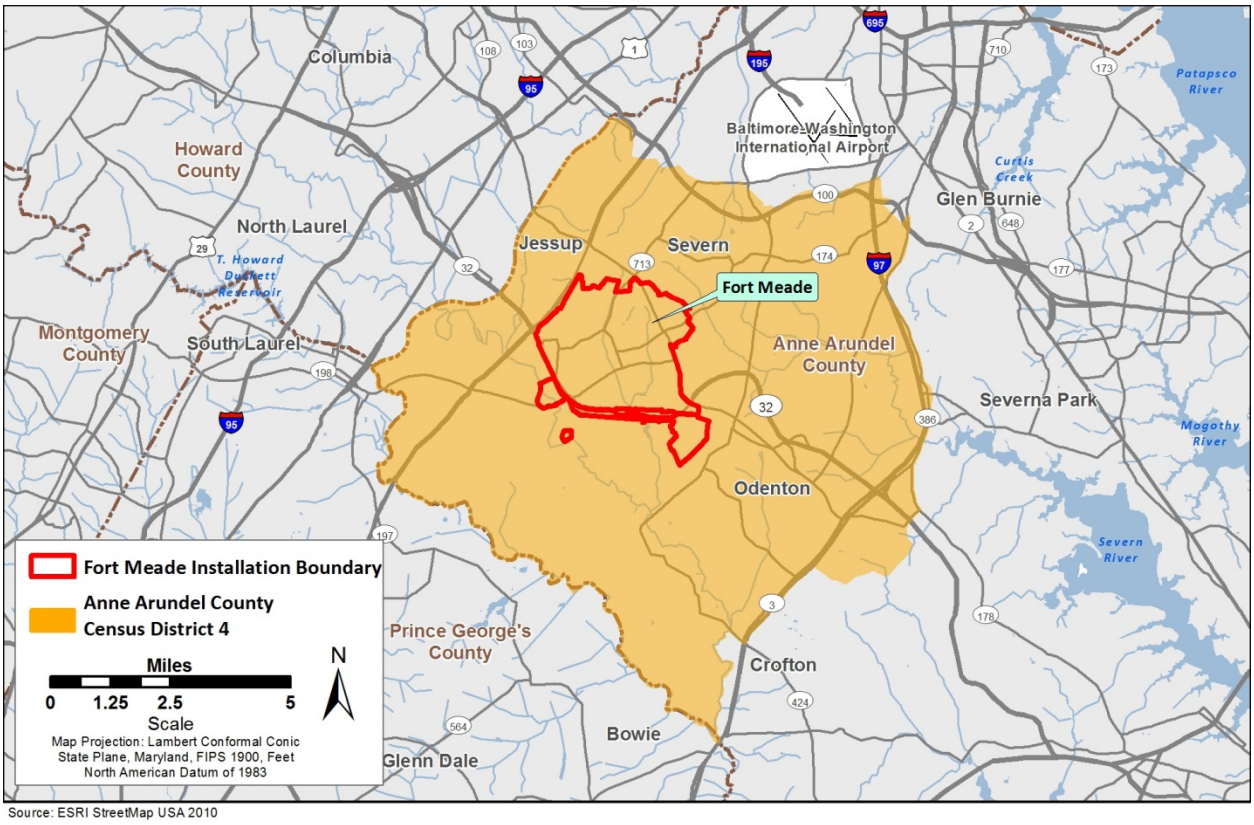


Figure 3.12-1. Location of Anne Arundel County, Census District 4

Table 3.12-1. Population Summary, 2010 and 2014

Location	2010 Population	2014 Population Estimate	Percent Change (2010 to 2014)
Anne Arundel County Census District 4	84,594	88,092	4.1%
ROI	3,281,285	3,341,692	1.8%
Anne Arundel County	537,656	550,269	2.3%
Baltimore City	620,961	622,271	0.2%
Baltimore County	805,029	817,720	1.6%
Carroll County	167,134	167,399	0.2%
Howard County	287,085	299,269	4.2%
Prince George's County	863,420	884,764	2.5%
State of Maryland	5,773,552	5,887,776	2.0%

Source: USCB 2010b, USCB 2014a

There are approximately 1.35 million housing units in the ROI as of 2013, and approximately 15 percent of those units (217,018) are in Anne Arundel County. In aggregate, Baltimore City (295,773) and Baltimore County (335,896) account for almost half of those housing units. Prince George's County, Howard County, and Carroll County account for approximately 24 percent, 8 percent, and 5 percent, respectively. The overall vacancy rate in the ROI is 8.6 percent. Baltimore City has the most vacant housing units (18 percent), while the vacancy rate in the other ROI jurisdictions ranges from 4.3 percent in Howard County to 7.1 percent in Prince George's County (USCB 2015).

Employment and Income. The approximate distribution of Fort Meade's (including NSA's) workforce within the ROI is described in **Table 3.12-2**. The primary employment sectors in the ROI are professional, scientific, management, administrative, and waste management services; educational, health, and social services; and finance, insurance, real estate, and rental and leasing (NSA 2010).

Table 3.12-2. Distribution of Fort Meade Workforce by Jurisdiction

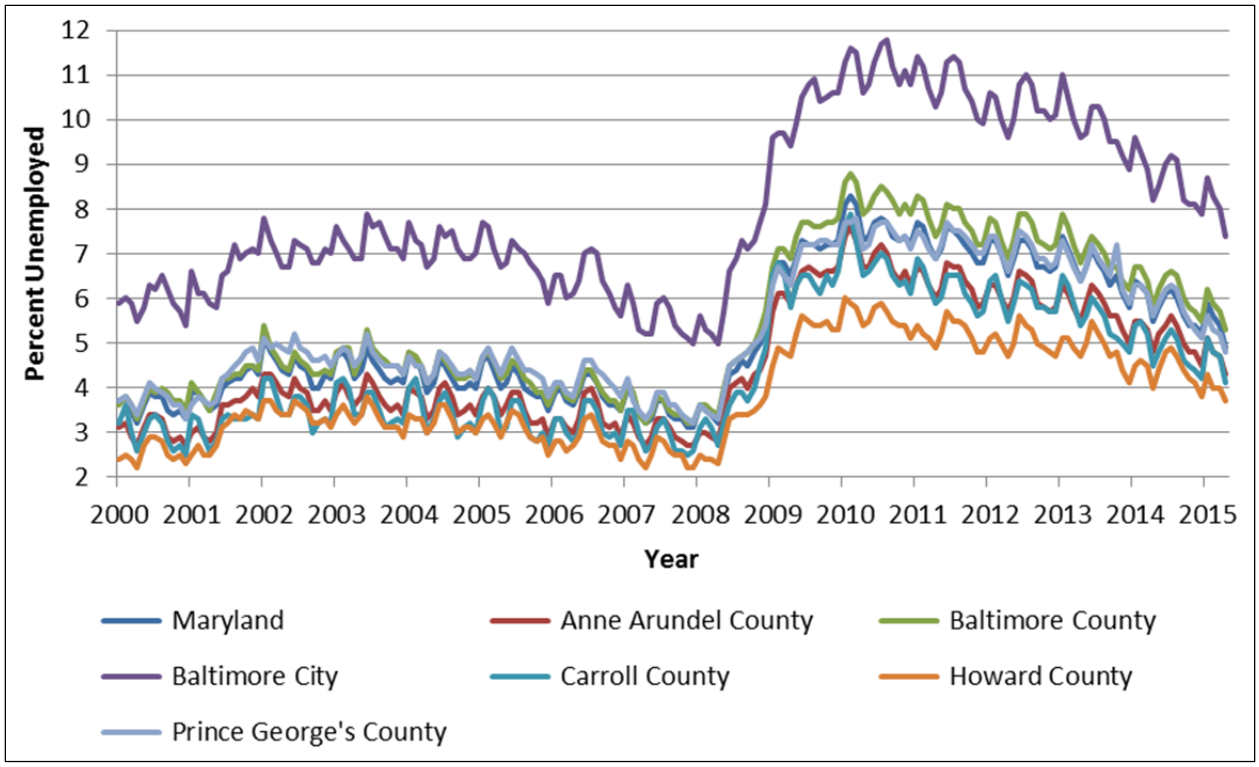
Jurisdiction	Percent of Workforce
Anne Arundel County	39%
Baltimore City/County	14%
Carroll County	7%
Howard County	22%
Prince George's County	5%
Other	13%

Source: NSA 2010

Figure 3.12-2 displays the monthly unemployment rates for Maryland and each jurisdiction within the ROI from January 2000 to April 2015 (OWIP 2015). During this time period, the unemployment rates of all jurisdictions display a similar trend with the highest unemployment rates occurring in 2010 with slow declines since that time. Baltimore City's unemployment rate is consistently higher than those of all other jurisdictions, including the State of Maryland. In April 2015, the unemployment rate in Anne Arundel County was 4.3 percent as compared to 4.9 percent in Maryland.

As shown in **Table 3.12-3**, the median household income in the ROI is slightly lower than that of the state (USCB 2014b). Fort Meade and NSA are directly responsible for 1.4 percent of the employment for the State of Maryland, and over 5 percent of the workforce within Anne Arundel, Howard, Prince George's, and Montgomery counties according to studies conducted by the Maryland Department of Business and Economic Development (NSA 2013a).

Commercial Real Estate Market. The Baltimore commercial real estate market (including portions of Anne Arundel, Baltimore, Carroll, Harford, and Howard counties and Baltimore City) has 1,170 Class A and B buildings of which there were 333 buildings with approximately 34.9 million ft^2 Class A office space. The Baltimore-Washington International (BWI) Airport submarket (i.e., northern Anne Arundel County surrounding BWI Airport) contains 162 buildings with approximately 11.4 million ft^2 of office space (DTZ 2015a). Northern Prince George's County has 134 buildings with 10.2 million ft^2 of office space (DTZ 2015b).



Source: OWIP 2015

Figure 3.12-2. Unemployment Rates, 2000 to 2015

As of the second quarter of 2015, approximately 12.3 percent of the existing Class A office space in the Baltimore market is vacant (4,291,251 ft^2) and 13.6 percent of the office space in the BWI Airport submarket (1,548,130 ft^2). Approximately 1.4 million ft^2 of Class A office space is under construction within the Baltimore market, while 260,500 ft^2 of office space is under construction in the BWI Airport submarket (DTZ 2015a). The vacancy rate in northern Prince George's County was 26.5 percent, and there were no known buildings under construction (DTZ 2015b).

Law Enforcement and Fire Protection. The NSA operates their own police force; however, Fort Meade provides fire protection services for the NSA Campus. Each county in the ROI has a police force, and there are 213 fire and rescue stations in the ROI (AACFD 2015, BCFD 2015, CCFD 2015, City of Baltimore 2015, HCFD 2015, PGCFD 2015).

Environmental Justice and Protection of Children. Minority, low-income, and child populations were characterized within Anne Arundel County Census District 4, the ROI, and the State of Maryland. The area immediately surrounding Fort Meade (i.e., Anne Arundel County Census District 4) was evaluated for low-income, minority, and child populations in comparison to the ROI and the State of Maryland to determine if impacts would disproportionally affect such populations.

Table 3.12-3 contains a detailed breakdown of the racial and ethnic make-up of Census District 4, the ROI, and the State of Maryland. The minority population (i.e., all non-White individuals) of Anne Arundel County Census District 4 is approximately 40 percent, which is higher than that of Anne Arundel County and Carroll County, but less than that of Baltimore City, Prince George's County, and the

Table 3.12-3. Race, Ethnicity, Children, and Poverty Characteristics, 2014

	Anne Arundel County Census District 4	ROI							State of Maryland
		Anne Arundel County	Baltimore City	Baltimore County	Carroll County	Howard County	Prince George's County	Total ROI[1]	
Total Population	88,092	550,269	622,271	817,720	167,399	299,269	884,764	3,341,692	5,887,776
Percent Children	27.0	22.9	21.2	21.7	23.4	25.1	23.1	22.6	22.9
Percent White	60.1	74.8	30.3	63.9	92.8	60.8	21.4	49.3	58.1
Percent Black or African American	28.5	15.7	63.0	26.8	3.2	18.1	63.8	39.5	29.5
Percent American Indian and Alaska Native	0.3	0.2	0.3	0.2	0.2	0.2	0.3	0.3	0.3
Percent Asian	4.5	3.5	2.5	5.4	1.6	15.6	4.3	5.0	5.9
Percent Native Hawaiian and Other Pacific Islander	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percent Some Other Race	2.0	2.3	1.5	1.2	0.4	1.9	7.7	3.2	3.4
Percent Two or More Races	4.5	3.4	2.3	2.4	1.8	3.5	2.6	2.6	2.9
Percent Hispanic or Latino	8.2	6.7	4.5	4.6	2.8	6.1	15.9	8.0	8.8
Percent Persons Below Poverty Level	4.3	5.9	24.2	9.1	5.5	5.1	9.7	11.0	10.0
Median Household Income	$93,883	$89,031	$41,819	$66,940	$85,532	$110,133	$73,856	$72,009[2]	$74,149

Sources: USCB 2014a, USCB 2014b, USCB 2014c

Notes:

1. The percentages of ROI population are weighted averages that were manually calculated using the individual population estimate data for Anne Arundel, Baltimore, Carroll, Howard, and Prince George's counties and Baltimore City.
2. The ROI median household income was calculated by weight-averaging the median household income of each county and Baltimore City.

total ROI. The minority population of Census District 4 is approximately the same as that of Baltimore County, Howard County, and the state of Maryland. The percentage of Hispanic or Latino individuals in Census District 4 (8.2 percent) is approximately the same as the total ROI and the State of Maryland, and higher than those in all other jurisdictions analyzed, except for Prince George's County (15.9 percent) (USCB 2014a).

Table 3.12-3 also contains data on low-income populations. The percentage of persons living in poverty in Anne Arundel County Census District 4 (4.3 percent) was lower than all other jurisdictions analyzed (USCB 2014b, USCB 2014c). The poverty threshold in 2014 was $12,071 for one person (unrelated individual) (USCB 2016). The median household income of Census District 4 ($93,883) was higher than all jurisdictions except for Howard County (USCB 2014b).

Children made up 27 percent of the population of Anne Arundel County Census District 4. This is higher than the percentage of children in all other jurisdications analyzed, which ranged from 21.2 percent (in Baltimore City) to 25.1 percent (in Howard County) (USCB 2014a).

3.12.2.2 National Business Park

National Business Park is approximately 650 feet from the closest portion of Fort Meade and the ECIP project area and is within the ROI and Anne Arundel County Census District 4. Therefore, the conditions described for the Proposed Action are the same as those for the National Business Park site. Alternative 1 is within Anne Arundel County Census District 4, and the general housing characteristics analyzed in the 2010 Campus Development EIS are applicable to this alternative. Neighborhoods and communities adjacent to or near National Business Park include Georgetown and Argonne Hills in Anne Arundel County, and Jessup in Howard County.

3.12.2.3 Annapolis Junction Business Park

Annapolis Junction Business Park is approximately 0.6 mile from the closest portion of Fort Meade and the ECIP project area and is within the ROI and Anne Arundel County Census District 4. Therefore, the conditions described for the Proposed Action are the same as those for the Annapolis Junction Business Park site. Neighborhoods and communities adjacent to or near Annapolis Junction Business Park include Maryland City and Argonne Hills in Anne Arundel County, and North Laurel in Howard County.

SECTION 4

ENVIRONMENTAL CONSEQUENCES

4. Environmental Consequences

4.1 Land Use

4.1.1 Evaluation Criteria

The evaluation of impacts on land use is based on the degree of land use sensitivity in areas affected by a proposed action and compatibility of proposed actions with existing conditions. Land use can remain compatible, become compatible, or become incompatible. Effects on land use are assessed by evaluating the following:

- Consistency and compliance with existing land use plans, zoning, or policies
- Alteration of the viability of existing land use
- The degree to which the Proposed Action or alternatives preclude continued use or occupation of an area
- The degree to which the Proposed Action or alternatives conflict with planning criteria established to ensure the safety and protection of human life and property
- The degree to which the Proposed Action or alternatives preclude use of recreational areas.

Should any of these evaluations be considered substantial, adverse impacts on land use would be considered significant, or major.

The significance of potential impacts on visual resources is based on the level of visual sensitivity in the area. Visual sensitivity is defined as the degree of public interest in a visual resource and concern over adverse changes in the quality of that resource. In general, an impact on a visual resource is considered significantly adverse if implementation of a proposed action were to result in substantial alteration to an existing sensitive visual setting.

4.1.2 Proposed Action (ECIP Project Area)

Land Use. Short- to long-term, minor, adverse impacts on land use would be expected from the Proposed Action. Short-term impacts would be expected due to increased disturbances related to the presence of construction vehicles and construction activities. However, short-term construction-related activities would not affect the long-term viability or continuation of adjacent land uses, which would remain unchanged. The proposed administrative uses in the ECIP project area include an operational complex and headquarters space and the supporting associated infrastructure, including emergency generators; building heating systems; utilities, including water, natural gas, and communications services; transportation infrastructure, including roads, parking structures, and sidewalks; and stormwater management facilities. The administrative facilities that would be developed under the Proposed Action would be compatible with the surrounding land uses. Typically, residential areas represent a more sensitive land use; however, because the Midway Common neighborhood is currently adjacent to the administrative facilities within the NSA Main Campus and the 9800 Troop Support Area, and a forested buffer would be maintained between the NSA development and the neighborhood, the Proposed Action would be compatible with this adjacent residential neighborhood.

The 9800 Troop Support Area would be redeveloped, representing a continuation of existing uses. A loss of open space in the northern portion of the East Campus would occur. However, the area has already been designated for development consistent with the NSA and Fort Meade master plans. As a result, no adverse impacts on land use would be expected from development of the northern portion of the East Campus and redevelopment of the 9800 Troop Support Area.

The proposed facilities and site design would meet all anti-terrorism/force protection requirements including the DoD Minimum Antiterrorism Standards for Buildings (UFC 4-010-01). Therefore, the proposed facilities would be within safe setback distances, making them more consistent with planning criteria established to ensure the safety and protection of human life and property. Long-term, minor, beneficial impacts would be expected from consolidating mission functions of the NSA into the central portion of Fort Meade from their current locations outside of Fort Meade or on the NSA Main Campus. The proposed development of the ECIP project area is consistent with current master planning for the installation, which identifies development by the NSA in the ECIP project area in order to create a contiguous NSA Campus that unites existing facilities with new structures (NSA 2013a). Additionally, the *Long Range Component of the Fort Meade Real Property Master Plan* designates the ECIP project area as part of the NSA expansion, and depicts the area as part of the NSA Exclusive Use Area in the Future Land Use Plan (Fort Meade 2013a).

Parking facility, emergency power generation, and building heating system alternatives would generally be sited within currently disturbed and developed areas that have administrative/professional uses on the NSA East Campus and the 9800 Troop Support Area or constructed as part of surrounding future development. These alternatives would be consistent with the current uses of the area and would be compatible with surrounding land uses. However, if GSHPs are installed as part of the hybrid building heating system, no buildings could be sited on top of the well field. The total sizes of the GSHP well fields required to support the load of each 150,000-ft^2, 330,000-ft^2, and 800,000-ft^2 building are 0.7 acre, 1.1 acre, and 1.7 acre, respectively (HDR 2015). Open space or secondary land uses (e.g., small roadway, setback/buffer areas, or ESD) would most likely be sited on well fields. Installation of a GSHP system would not alter the viability of existing land uses or preclude the continued use or occupation of any areas. Therefore, no impacts on land use from these alternatives would be expected. Similarly, building demolition would not preclude any existing land use or limit the availability of surrounding land use categories.

The Proposed Action would occur within the Fort Meade installation boundary. The proposed development in the ECIP project area and associated areas in the NSA Main Campus within the central portion of Fort Meade would not be expected to affect these adjacent land uses because the ECIP project area is approximately 0.5 mile away from any off-installation land uses.

The proposed development of the ECIP project area would not adversely affect any land use planning functions of Anne Arundel County. Construction activities associated with the Proposed Action would be short-term in nature and isolated to the ECIP project area and other areas in the NSA Main Campus.

The adjacent Odenton Growth Management Area was planned to support potential personnel growth of Fort Meade and demand in housing and services. As discussed in **Section 3.1.2**, approximately 45 percent of the developable land within this growth management area is available. Therefore, the increase in personnel at Fort Meade would not be expected to adversely affect developable land in Anne

Arundel County. Future land use plans and zoning in Anne Arundel County were designed to accommodate growth around Fort Meade. Anne Arundel County projected that most of the county's 55,000 new jobs over a 25-year period would occur in the western part of the county, near Fort Meade, NSA, and BWI Airport (NSA 2010).

Visual Resources. The Proposed Action involves the development of administrative buildings that would transform portions of the ECIP project area from partially forested areas and a staging area to administrative functions. As discussed in **Section 3.1.2**, the ECIP project area is within the Campus Visual Theme, which is characterized by administrative uses and landscaping. The ECIP project area would lose some visual integrity because of the increased amount of development; however, development under the Proposed Action would be consistent with the Campus Visual Theme. Construction activities and eventual operation would likely result in short- and long-term, minor, adverse impacts on visual resources. Temporary (e.g., construction equipment) and permanent facilities would introduce new visual elements into existing viewsheds in the ECIP project area. The 9800 Troop Support Area would be redeveloped, which would maintain, if not slightly increase, the current visual integrity of the area with modern facilities.

Views to the ECIP project area from the east and west would be permanently affected from the loss of visual integrity because of the increased development. The Baltimore-Washington Parkway, which is approximately 0.3 mile northwest of the proposed N8/N9 parking facility alternative site and 0.7 mile northwest the ECIP project area, would not likely be visible from the project area due to distance and visual obstructions (e.g., trees and buildings). Sightlines from the south have been altered by previous development in the southern portion of the East Campus and would not be expected to change under the Proposed Action. Some forested areas (including planned reforestation) would buffer sightlines from the north to minimize adverse impacts from visual intrusion. These buffer areas would help hide unwanted views and create an aesthetically pleasing work environment.

As discussed in **Section 2.1.2**, the Proposed Action would include sustainability features, and the facilities would be energy-efficient. Although the proposed facilities are currently in the preliminary design stage, sustainability features would likely be incorporated into the building and infrastructure design.

4.1.3 Alternative 1 (National Business Park/East Campus)

Land Use. Alternative 1 would involve leasing existing buildings at National Business Park. Development and expansion of National Business Park would likely occur regardless of whether or not Alternative 1 is implemented. There would be no change to the land use at National Business Park under Alternative 1 because the site is already categorized as Mixed-Use Employment (see **Figure 3.1-3**).

No long-term adverse impacts on adjacent land use would occur as a result of the implementation of Alternative 1 because National Business Park would already be developed and would comply with the *Anne Arundel County General Development Plan*. No alteration of surrounding land uses would occur, and conflicts with adjacent land uses would not be expected.

Impacts on land use from construction and operation of proposed facilities in the northern portion of the East Campus under Alternative 1 would be the same as those described in **Section 4.1.2**. The 9800 Troop

Support Area and the buildings within that area would not be affected, and the parking facility alternatives outside of the East Campus would not be implemented.

Visual Resources. There would be negligible impacts on visual resources at the National Business Park because although some forested areas would be removed, the site is not considered a sensitive visual resource and, therefore, would not result in substantial alteration to an existing sensitive visual setting. The Baltimore-Washington Parkway, which is just east of National Business Park, has a forested buffer associated with it to preserve to maintain the historic integrity of the parkway. The forested buffer outside the National Business Park would not be affected under this alternative.

Visual impacts from construction and operation of proposed facilities in the northern portion of the East Campus under Alternative 1 would be the same as those described in **Section 4.1.2**.

4.1.4 Alternative 2 (Annapolis Junction Business Park/East Campus)

Land Use. Alternative 2 would involve leasing existing buildings at Annapolis Junction Business Park, and expansion of the business park would likely occur regardless of whether or not Alternative 2 is implemented. There would be no change to the land use at the Annapolis Junction Business Park because the site is already categorized as Industrial (see **Figure 3.1-3**).

Impacts on land use from construction and operation of proposed facilities in the northern portion of the East Campus under Alternative 2 would be the same as those described under Alternative 1.

Visual Resources. Impacts on visual resources at Annapolis Junction Business Park and the northern portion of the East Campus under Alternative 2 site would be similar to those mentioned under Alternative 1. The large natural features area to the south of the Annapolis Junction Business Park would act as a buffer for the residential area further south. The Baltimore-Washington Parkway, which is greater than 0.5 mile east of the business park, would not likely be visible from the project area due to distance and visual obstructions.

4.1.5 No Action Alternative

Under the No Action Alternative, the DoD would not construct and operate facilities on the northern portion of the East Campus and the 9800 Troop Support Area. Existing land uses on the NSA East Campus would not change; however, not developing the northern portion of the East Campus and not redeveloping the 9800 Troop Support Area would be inconsistent with the *NSAW Facilities Master Plan*. Therefore, long-term, negligible to minor, adverse impacts on land use would be expected under the No Action Alternative.

4.2 Transportation

4.2.1 Evaluation Criteria

The evaluation of impacts on the transportation system is based on the capacity of the transportation network in an area affected by a proposed action and compatibility of a proposed action with existing conditions. The region of influence for transportation impacts is public roadways within/near the study area. Projected traffic levels were measured both qualitatively and quantitatively using the Vistro and

Synchro traffic modeling software. Thresholds for triggering major impacts include evaluating the potential for the following:

- Increase in traffic volumes or delays to levels that impair a roadway's handling capacity or increase traffic safety hazards
- Reduction of operations from LOS A through D to LOS E and F.

The DoD has assumed full implementation of the ECIP for horizon year 2029. Traffic within the NSA Campus, Fort Meade, and in the surrounding region would continue to grow due to ongoing development activities in coming years. Therefore, in addition to presenting the Proposed Action and alternatives, a comparable No Action Alternative analysis is presented in order to provide baseline conditions for comparison with the potential traffic impacts of the Proposed Action and Alternatives. Under the 2029 No Action Alternative, the DoD would not construct and operate approximately 2.9 million ft^2 of operations and headquarters facilities on the northern portion of the East Campus and the 9800 Troop Support Area.

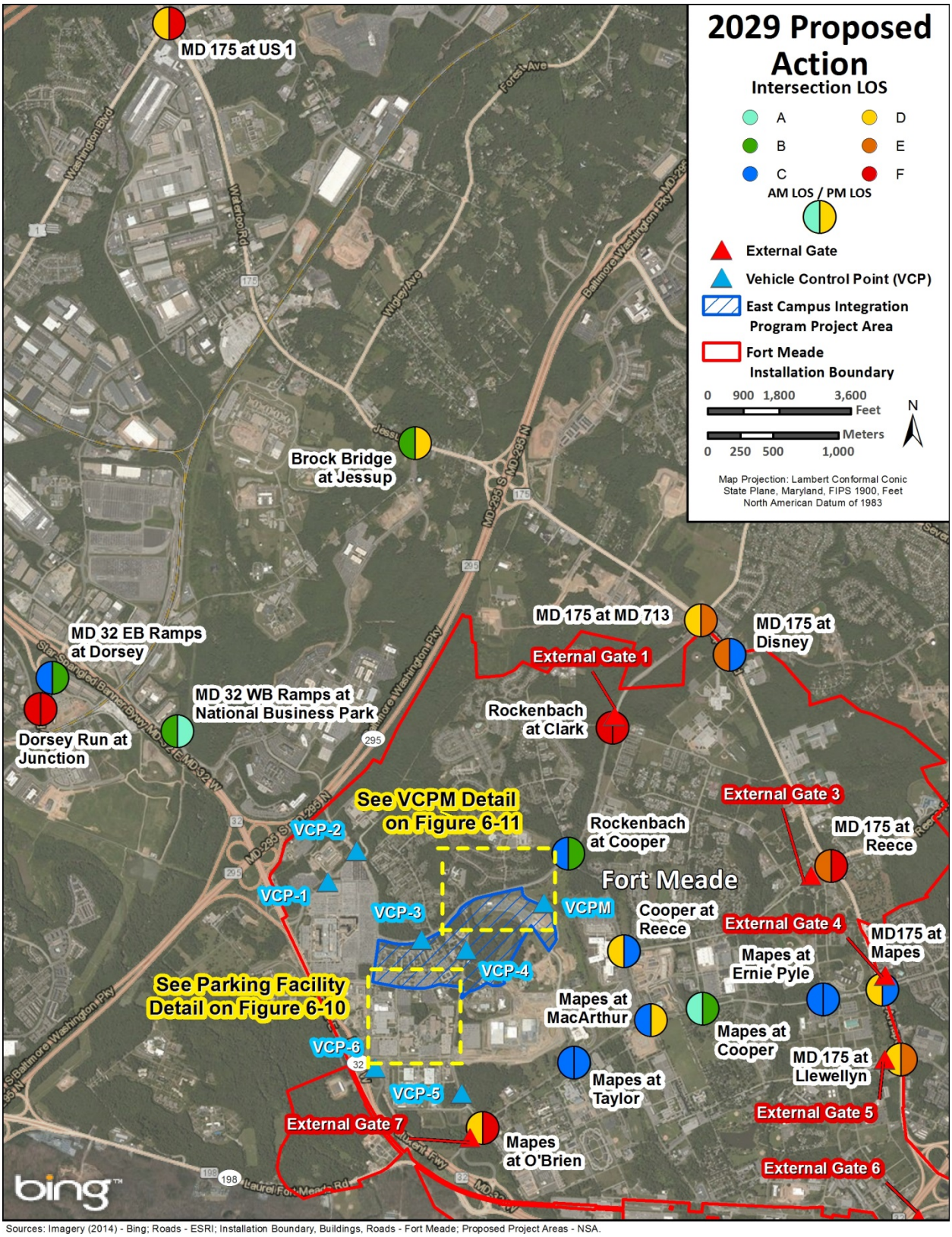
The 2029 No Action AM and PM peak hour volumes were estimated by applying a 7 percent global growth rate (0.45 percent compounded annually over 14 years [2015–2029]) to the 2015 Baseline Conditions peak hour volumes to both on- and off-installation traffic. The growth rate was developed based on the Population Growth Rate reported in the Baltimore Region Transportation Board (BRTB)'s *Maximize 2040* report (BRTB 2015). Growth rate calculations are provided in Appendix A of the Traffic Impact Study (see **Appendix B**). *Maximize 2040* incorporates the known and reasonably foreseeable future projects located outside of Fort Meade as described in **Section 2.5.2**. These 2015 Baseline Conditions were used to develop a base model to be used for developing the future 2029 Alternatives. The 2029 No Action Alternative is used as a future threshold to compare the three proposed alternatives to assess traffic impacts.

4.2.2 Proposed Action (ECIP Project Area)

Long-term, minor to major, adverse impacts on traffic and transportation would be expected. Substantial degradation of LOS values at VCPs and intersections east of Baltimore-Washington Parkway/MD 295, particularly in the AM peak hour, would occur. These impacts are considered major because the LOS would fall to LOS F in these locations. However, traffic impacts from the Proposed Action would generally be above and beyond impacts already considered major adverse under existing conditions, as LOS values overall are already degraded. This section summarizes key observations in the capacity analysis for the Proposed Action when compared to the 2029 No Action Alternative.

A trip generation analysis for the ECIP using the proposed transfer of 7,200 additional personnel the NSA Campus under the Proposed Action estimates how much additional traffic would be created (both entering and exiting vehicles). It was assumed these calculated trips would be reduced by 5 percent as a result of mass transit, vanpools, carpools, and shuttle options. Additional information on the trip generation analysis is provided in **Appendix B**, Section 6.

The summary of traffic impacts is provided below. **Figure 4.2-1**, the figures in Section 6 of **Appendix B**, and Tables 9-1 through 9-6 in **Appendix B** show LOS values for freeway ramps and segments, intersections, external gates, and VCPs, and density (passenger vehicles/mile/lane) for freeway segments under the Proposed Action.



Sources: Imagery (2014) - Bing; Roads - ESRI; Installation Boundary, Buildings, Roads - Fort Meade; Proposed Project Areas - NSA.

Note: Callouts to Figures 6-10 and 6-11 refer to figures in **Appendix B**.

Figure 4.2-1. Intersection LOS for the 2029 Proposed Action Locations

Off-Post Roadways. Minor impacts on the Baltimore-Washington Parkway/MD 295 and I-95 in AM or PM peak hours under the Proposed Action above and beyond the existing significantly deteriorated conditions would be expected. The Baltimore-Washington Parkway/MD 295 segments and interchange ramps demonstrate minor additive impacts or increased traffic levels as a result of the Proposed Action in both AM and PM peak hours. Some segments of the Baltimore-Washington Parkway/MD 295, I-95, and MD 32 operate at the same LOS (either E or F) under both the No Action Alternative and the Proposed Action. The Arundel Mills Blvd. to MD 175 and MD 100 to Arundel Mills Blvd. segments of the Baltimore-Washington Parkway/MD 295 southbound would be LOS F for the No Action Alternative and Proposed Action in the AM peak hour. The densities for both of these segments would be approximately 7 percent higher under the Proposed Action as compared to the No Action Alternative. In the AM peak hour, I-95 would be LOS F under the No Action Alternative and Proposed Action, and the densities for the freeway segments are identical, including the MD 32 to MD 175 segment on which demand would exceed capacity. Four segments of MD 32 would be LOS E under the No Action Alternative and Proposed Action during the PM peak hour. The densities of the I-95 to U.S. Route 1 and the Dorsey Run Road to the Baltimore-Washington Parkway/MD 295 segments of eastbound MD 32 would increase approximately 6 percent under the Proposed Action as compared to the No Action Alternative. However, the U.S. Route 1 to I-95 and the Dorsey Run Road to U.S. Route 1 segments of westbound MD 32 would decrease approximately 8 percent and 6 percent, respectively due to the additional Proposed Action traffic exiting onto Dorsey Run Road.

Only the southbound on-ramp at the Baltimore-Washington Parkway/MD 295 and Arundel Mills interchange in the AM peak hour and the southbound on-ramp to go westbound at the Baltimore-Washington Parkway/MD 295 and MD 100 interchange would be impacted enough to change the LOS. All other ramp merge/diverge AM and PM peak hour LOS along the Baltimore-Washington Parkway/MD 295 stay the same, although some operate at LOS F without the Proposed Action.

There are several interchanges within the traffic study area where the LOS drops at a ramp merge/diverge location for the Proposed Action when compared to the 2029 No Action Alternative in the AM peak hour. These interchanges are along MD 32 east of the Baltimore-Washington Parkway. The MD 32 interchanges west of the Baltimore-Washington Parkway have minor impacts and drop one LOS level or remain the same. This is a result of the additional trips generated by the Proposed Action entering the post from the east and exiting MD 32 east of the Baltimore-Washington Parkway during the AM peak hour.

I-95 operates at LOS F during the both the AM and PM peak hours under both the 2029 No Action Alternative and Proposed Action. Although impacted by the Proposed Action which would result in increased traffic, the LOS for I-95 does not change because the No Action Alternative is also reporting LOS F.

The intersections of MD 175 at Rockenbach Road (MD 713) and MD 175 at Llewellyn Avenue both maintain their LOS in the AM and PM peak hours. The intersections of Mapes Road at O'Brien Road and MD 175 at Reece Road both degrade one LOS category in the AM and PM peak hours.

Fort Meade Gates. During the AM peak hour, the intersections near all of the open Fort Meade external gates operate at LOS F in both the 2029 No Action Alternative and the Proposed Action. External Gate 4 at MD 175 and Mapes Road that was closed at the time of analysis and was consequently modeled as

closed in the analysis and therefore reports a LOS A. In the PM peak hour of the Proposed Action, the intersections near External Gate 1 and External Gate 7 both degrade in LOS, while the intersections near External Gates 3 and 5 operate at the same LOS as in the 2029 No Action Alternative. This means new trips are mostly utilizing External Gates 1 and 7, although External Gate 3 is most likely also used. Despite the LOS not degrading because it already operates at LOS F under the 2029 No Action Alternative, the delay increases by 87 and 30 seconds per vehicle during the AM and PM peak hours, respectively.

VCPs. During the AM peak hour under the Proposed Action, all VCPs would operate at LOS F. A degradation of LOS at VCPs 3, 4 and 5 would occur when compared to the 2029 No Action Alternative. VCPs 1, 2, and 6 already operate at LOS F during the AM peak hour in the 2029 No Action Alternative. During the PM peak hour, VCP 1 degrades in LOS, while the remaining VCPs operate the same LOS as in the 2029 No Action Alternative. VCP M, a VCP currently under construction, would operate at LOS E in the AM peak hour and LOS A in the PM peak hour. **Tables 4.2-1** and **4.2-2** show AM and PM LOS values, respectively, at the VCPs.

NSA Campus Intersections. Intersections adjacent to the proposed parking facility alternatives (i.e., facilities) were analyzed. Major increases in traffic delay at the intersections adjacent to the proposed parking facility alternatives along Emory and Canine Roads under the Proposed Action would be expected. The greatest impacts would occur on the Emory Road intersections and the intersection of Samford Road and O'Brien Road. The delay at Emory Road and Wenger Road would rise from 20 seconds to 1,042 seconds (17 minutes) in the PM peak hour and from 22 seconds to over 1,500 seconds (25 minutes) in the AM peak hour when compared with the 2029 No Action Alternative. Emory Road and Canine Road intersection delays rise from 77 seconds to over 400 seconds (approximately 7 minutes) and from 31 seconds to 250 seconds (4 minutes) of delay in the AM and PM peak hours, respectively. See Section 6.4 in **Appendix B** for detailed traffic analysis for intersections on the NSA Campus.

Parking Facilities. The Proposed Action would result in the demolition of surface parking lots. Design of parking facilities would include adequate parking for workers and visitors, and would include handicapped parking in front of each building. This would result in long-term, beneficial effects. Adequate parking would reduce the parking burden in adjacent areas within Fort Meade and at satellite parking areas off-post.

It is assumed that three of the four parking facility alternatives would be constructed under the Proposed Action. The amount of parking that would be constructed is based on the assumed capacity required for full occupancy of the proposed buildings. The exact space requirements, including sizes of parking facilities, would become more refined as the detailed design process progresses. For purposes of the traffic study completed for this EIS, it was assumed those parking facilities would be located at the ECPS 2, Bravo, and Building 9817 parking facility alternative locations. These parking facility alternatives were identified for the analysis due to their proximity to ECIP project area. As one of the three parking facility alternative locations considered for the purposes of the traffic analysis, ECPS 2 was assumed to accommodate one-third, or 33 percent of the trip generation volumes (see trip generation/distribution discussion above and Section 3.3 in **Appendix B**), while the remaining trips were distributed based on sizes of the parking facility alternative locations as shown on **Figure 4.2-2**. The Building 9817 alternative location would accommodate 45 percent of trips, and the Bravo alternative location would

Table 4.2-1. Summary of AM LOS and Delay at Key Locations

Intersection/ External Gate/VCPs	Level of Service / Delay (seconds per vehicle)				
	2015 Baseline Conditions	2029 No Action Alternative	2029 Proposed Action	2029 Alternative 1: National Business Park/East Campus[1]	2029 Alternative 2: Annapolis Junction Business Park/East Campus[1]
Intersections					
Rockenbach Road (MD 713) and MD 175	D / 38.0	D / 43.6	D / 47.3	D / 45.1	D / 41.9
MD 175 and Reece Road	C / 33.7	D / 39.1	E / 78.9	D / 37.0	C / 34.7
MD 175 and Llewellyn Avenue	D / 40.4	D / 44.8	D / 50.3	D / 46.6	D / 45.8
Mapes Road and O'Brien Road	C / 33.4	C / 34.7	D / 35.13	C / 34.6	C / 34.6
MD 175 and Brock Bridge Road	B / 11.5	C / 20.14	B / 17.6	C / 26.36	B / 17.8
Dorsey Run Road and Junction Drive	F / 59.6	F / 93.26	F / 93.3	F / 93.3	F / 99.4
Emory Road and Canine Road[1]	N/A	F / 76.9	F / 406.6	N/A	N/A
Emory Road and Wegner Road	N/A	C / 22.6	F / 1508.8	N/A	N/A
Emory Road and O'Brien Road	N/A	C / 16.8	D / 31.8	N/A	N/A
Samford Road and Canine Road	N/A	C / 24.1	C / 24.1	N/A	N/A
Samford Road and Wegner Road	N/A	C / 19.7	B / 13.3	N/A	N/A
Samford Road and O'Brien Road	N/A	C / 18.4	F / 504.0	N/A	N/A
External Gates					
External Gate 1: Rockenbach Road	F / 638.2	F / 711.8	F / 1351.7	F / 324.2	F / 324.2
External Gate 3: Reece Road and MD 175	F / 631.1	F / 704.7	F / 1011.7	F / 664.4	F / 640.2
External Gate 4: Mapes Road and MD 175	A / 0.0	A / 0.0	A / 0.0	A / 0.0	A / 0.0
External Gate 5: Llewellyn Avenue and MD 175	F / 1092.5	F / 1196.4	F / 1196.4	F / 1196.4	F / 1196.4
External Gate 7: Mapes Road and MD 32	F / 511.1	F / 575.7	F / 1115.9	F / 115.3	F / 115.3

Intersection/ External Gate/VCPs	Level of Service / Delay (seconds per vehicle)				
	2015 Baseline Conditions	2029 No Action Alternative	2029 Proposed Action	2029 Alternative 1: National Business Park/East Campus[1]	2029 Alternative 2: Annapolis Junction Business Park/East Campus[1]
VCPs[3]					
VCP 1: Canine Road	F / 818.8	F / 905.6	F / 2520.2	B / 19.3	B / 19.3
VCP 2: Connector Road	F / 980.4	F / 1078.5	F / 1126.0	F / 1048.1	F / 1048.1
VCP 3: Rockenbach Road	A / 8.5	B / 10.4	F / 403.4	B / 10.4	B / 10.4
VCP 4: O'Brien Road near Rockenbach Road[2]	D / 51.6	E / 64.3	N/A	A / 0.0	A / 0.0
VCP 5: O'Brien Road near Perimeter Road	C / 25.6	C / 33.6	F / 519.2	A / 0.0	A / 0.0
VCP 6: Samford Road	F / 680.2	F / 757.6	F / 757.6	F / 757.6	F / 757.6
VCP M: Rockenbach Road	N/A	N/A	E / 77.6	N/A	N/A

Notes:

1. Analysis of intersections adjacent to proposed parking facilities is only intended for comparison between the Proposed Action and the 2029 No Action Alternative. It is also assumed all personnel at the off-post site under Alternatives 1 and 2 would not use the proposed parking facilities on-post and would, therefore, have no additional on-post intersection impacts. For this reason, adverse impacts on-post under Alternatives 1 and 2 would be less than those under the Proposed Action.
2. VCP 4 is removed under the Proposed Action due to the addition of VCP M.

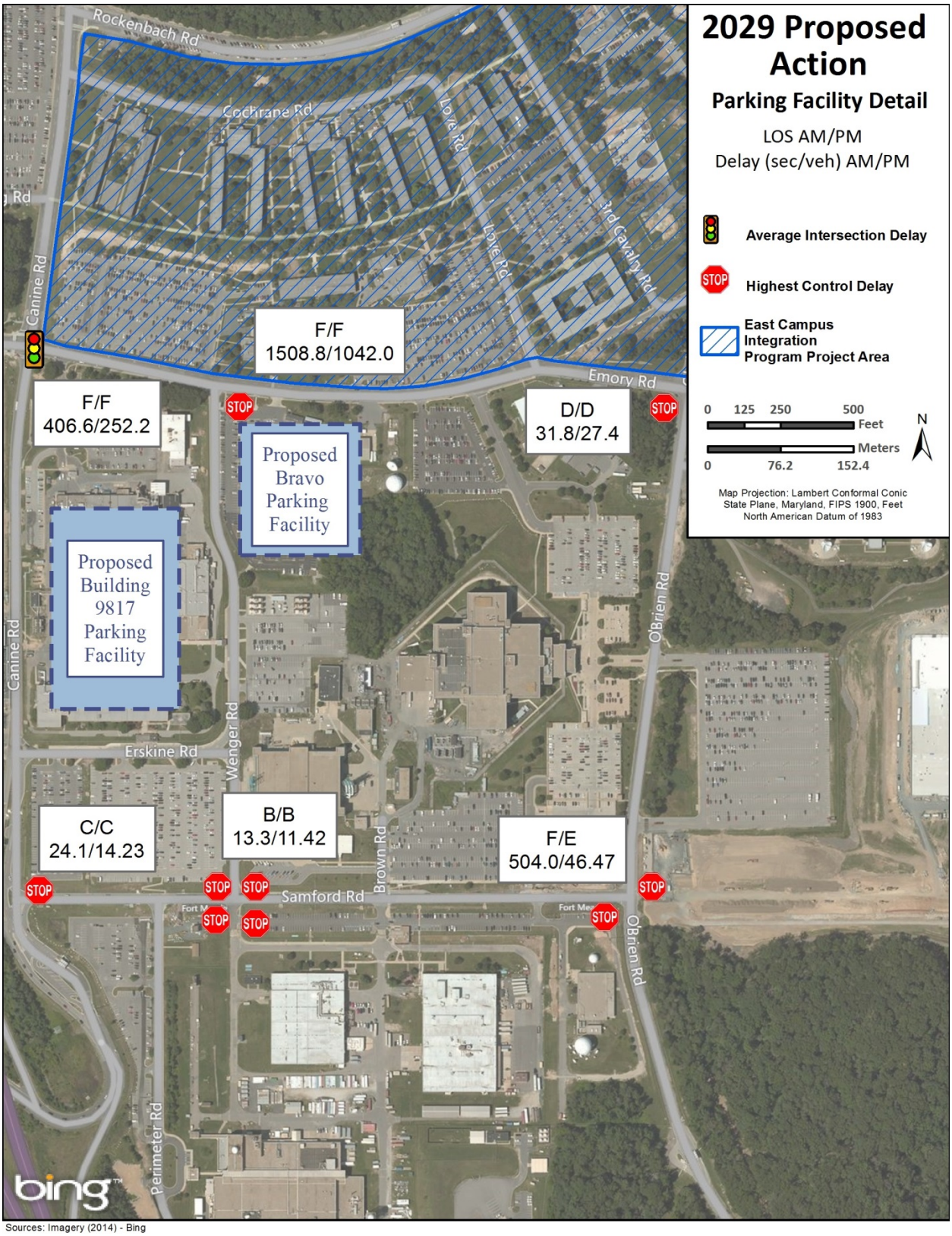
Table 4.2-2. Summary of PM LOS and Delay at Key Locations

Intersection/External Gate/VCPs	Level of Service / Delay (seconds per vehicle)				
	2015 Baseline Conditions	2029 No Action Alternative	2029 Proposed Action	2029 Alternative 1: National Business Park/East Campus[1]	2029 Alternative 2: Annapolis Junction Business Park/East Campus[1]
Intersections					
Rockenbach Road (MD 713) and MD 175	D / 50.5	E / 60.3	E / 72.3	F / 86.5	E / 58.2
MD 175 and Reece Road	D / 43.8	E / 55.6	F / 104.7	E / 77.1	D / 48.8
MD 175 and Llewellyn Avenue	E / 57.1	E / 67.2	E / 72.8	E / 75.1	E / 62.0
Mapes Road and O'Brien Road	F / 115.9	F / 140.4	F / 229.02	E / 70.8	F / 62.0
MD 175 and Brock Bridge Road	D / 36.8	D / 48.5	D / 50.0	F / 168.5	D / 47.31
Dorsey Run Road and Junction Drive	F / 1280	F / 1745	F / 1745.2	F / 1745.2	F / 1756
Emory Road and Canine Road	N/A	C / 30.8	F / 252.2	N/A	N/A

Intersection/External Gate/VCPs	Level of Service / Delay (seconds per vehicle)				
	2015 Baseline Conditions	2029 No Action Alternative	2029 Proposed Action	2029 Alternative 1: National Business Park/East Campus[1]	2029 Alternative 2: Annapolis Junction Business Park/East Campus[1]
Intersections (continued)					
Emory Road and Wegner Road	N/A	C / 20.7	F / 1042	N/A	N/A
Emory Road and O'Brien Road	N/A	C / 18.8	D / 27.4	N/A	N/A
Samford Road and Canine Road	N/A	B / 14.2	C / 14.2	N/A	N/A
Samford Road and Wegner Road	N/A	A / 9.4	B / 11.4	N/A	N/A
Samford Road and O'Brien Road	N/A	C / 18.7	E / 46.5	N/A	N/A
External Gates					
External Gate 1: Rockenbach Road	C / 30.9	D / 41.0	F / 127.8	B / 19.8	B / 19.8
External Gate 3: Reece Road and MD 175	E / 66.4	F / 90.5	F / 140.7	F / 85.7	F / 81.7
External Gate 4: Mapes Road and MD 175	A / 0.0	A / 0.0	A / 0.0	A / 0.0	A / 0.0
External Gate 5: Llewellyn Avenue and MD 175	A / 3.2	A / 3.2	A / 3.2	A / 3.2	A / 3.2
External Gate 7: Mapes Road and MD 32	B / 15.2	B / 18.1	D / 47.7	A / 8.3	A / 8.3
VCPs					
VCP 1: Canine Road	A / 4.7	A / 4.9	D / 44.6	A / 0.0	A / 0.0
VCP 2: Connector Road	C / 23.8	C / 30.6	C / 33.6	C / 28.8	C / 28.8
VCP 3: Rockenbach Road	A / 3.5	A / 3.5	A / 5.1	A / 3.5	A / 3.5
VCP 4: O'Brien Road near Rockenbach Road [2]	A / 4.9	A / 5.1	N/A	A / 0.0	A / 0.0
VCP 5: O'Brien Road near Perimeter Road	A / 4.8	A / 5.0	A / 7.7	A / 3.6	A / 3.6
VCP 6: Samford Road	A / 3.7	A / 3.7	A / 3.7	A / 3.7	A / 3.7
VCP M: Rockenbach Road	N/A	N/A	A / 5.6	N/A	N/A

Notes:

1. Analysis of intersections adjacent to proposed parking facilities is only intended for comparison between the Proposed Action and the 2029 No Action Alternative. It is assumed all personnel at the off-post site under Alternatives 1 and 2 would not use the proposed parking facilities on-post and would, therefore, have no additional on-post intersection impacts. For this reason, adverse impacts on-post under Alternatives 1 and 2 would be less than those under the Proposed Action.
2. VCP 4 is removed under the Proposed Action due to the addition of VCP M.



Note: sec/veh = seconds per vehicle

Figure 4.2-2. Intersection LOS for Parking Facility Locations under the Proposed Action

accommodate the remaining 22 percent of trips. New trips to and from the proposed parking locations were distributed on top of existing baseline conditions and considers that the Bravo lot is already used as a surface parking lot. Because points of ingress/egress are considered conceptual until final design is complete, the level of analysis used adjacent intersections. As per the HCM, the total intersection delay, or the length of delay experienced before proceeding through the intersection, was used for signalized intersections, and the highest delay per approach (highest control delay) was used for unsignalized intersections. Following is a discussion of the parking facility alternatives, and **Tables 4.2-1** and **4.2-2** and **Figure 4.2-2** identify LOS and delay for the adjacent intersections.

East Campus Parking Structure 2. ECPS 2, which was assumed to have a 2.5-acre footprint, would be located in the northeastern portion of the East Campus between Rockenbach Road and Venona Road, a road under construction that would generally run west-east through the northern portion of the East Campus. ECPS 2 would be bordered to the west, north, and east by a potential reforestation area for ECB 2 and ECB 3, and bounded to the south by the proposed Venona Road corridor. Because ECPS 2 would mostly directly serve the East Campus, only minor impacts on vehicular or pedestrian traffic are expected. Figure 6-11 in **Appendix B** demonstrates that LOS values at intersections near ECPS 2 would all be C or better under the Proposed Action, with the exception of LOS E at VCP M during the AM peak hour as traffic queues up at this VCP to access the NSA Campus.

Bravo Parking Lot. The Bravo parking lot is a 4.5-acre, surface parking lot on the NSA Main Campus. It is located south of the ECIP project area at the southeastern corner of Emory Road and Wenger Road. The Bravo parking lot would be demolished and a multi-level parking facility would be constructed on all or part of the site. During construction, existing surface parking spaces would be unavailable and would put additional stress onto other existing lots. Major impacts are expected at the intersections adjacent to the Bravo parking facility as vehicular traffic commutes to and from this location under the Proposed Action. The intersection of Emory Road and Canine Road would deteriorate from LOS C to LOS F during the PM peak hours when compared to the 2029 No Action Alternative (it would already be at LOS F during the AM peak hour). The intersections of Emory Road and Wegner Road and O'Brien Road and Samford Road would likewise deteriorate from C to E or F under both the AM and PM peak hours (see Section 6 and Figure 6-10 in **Appendix B**). Because the Bravo parking lot is located near the ECIP project area, minimal pedestrian impacts are expected because the distance between the parking facility and proposed buildings is short.

N8/N9 Parking Lot. The N8/N9 parking lot is a 7.1-acre surface parking lot on the NSA Main Campus. All or part of this lot could be redeveloped as a parking facility. It is located northwest of the intersection of Canine Road (access point to MD 32) and Connector Road (access point to the Baltimore-Washington Parkway). This parking alternative wasn't included in the parking facility traffic analysis based on the assumption that not all the parking facility alternatives would be required to implement the Proposed Action. However, a qualitative analysis of potential impacts associated with construction and operation of this facility is provided. During construction, this site's existing surface parking spaces would be unavailable and would put additional stress onto other existing lots. Once constructed, a portion of existing traffic would now commute to this location instead of other lots. This would most likely only impact the intersections of Canine Road with Rockenbach Road and Canine Road with Emory Road. Additional pedestrian traffic would be present along Canine Road as employees would walk from this parking lot to the ECIP project area (0.3- to 0.5-mile walk) and elsewhere on the NSA Campus.

Building 9817. Building 9817 is proposed for demolition as part of the Proposed Action. It is located on the NSA Main Campus, on the northern side of Erskine Road and bordered by Canine Road to the west and Wenger Road to the east. Following demolition of Building 9817, a parking facility could be constructed on all or part of the 8.2-acre footprint. During construction of this alternative, there would be no impacts on existing parking due to the absence of existing parking at this location. Major impacts are expected at the intersections adjacent to the Building 9817 parking facility during facility operation as vehicular traffic commutes to and from this location under the Proposed Action. Degradation in LOS values of adjacent intersections for this location are presented in the Bravo parking facility analysis above, which has the same intersections due to the proximity of these alternatives and were therefore included in one analysis. Once constructed, a portion of existing traffic would now commute to this location instead of other lots. This would most likely only impact the intersections of Canine Road with Rockenbach Road and Canine Road with Emory Road. Because of its proximity to the ECIP project area, negligible impacts on pedestrian traffic are expected. Additional pedestrian traffic would populate Canine Road or Wegner Road as employees would walk from this parking facility to the ECIP project area (< 0.2-mile walk).

Walking and Biking Paths. Proposed expansion of the walking and bike paths in and adjacent to the ECIP project area would provide long-term, beneficial impacts on the transportation network. By interconnecting the buildings and parking facilities with safe and continuous pedestrian travel paths, it is anticipated that vehicular traffic on campus would be reduced. Well-defined walkways and crosswalks would also reduce the risk of pedestrian/vehicular accidents.

Transportation Network Improvement Recommendations. The following recommendations could enhance the efficiency of the traffic network in and around the NSA Campus. These recommendations are specific to the areas where implementation of recommendations could potentially minimize impacts caused by the Proposed Action:

- Signal Warrant Analysis
    - Conduct an additional signal warrant analysis on the intersections in and around the proposed development after parking facility locations have been selected to improve efficiency.
    - Optimize/interconnect existing and proposed signals along MD 175, Rockenbach Road, Canine Road, and other corridors as a result of the signal warrant analysis.
- Signal Timing Study – Conduct a signal timing study to help increase efficiency of all signalized intersections.
- Installation Access Study – Under the Proposed Action, the external gates and VCPs continue to experience or degrade to unacceptable LOS.
    - Conduct a study to determine which external gates and VCPs are predominantly used and why following implementation of the Proposed Action.
    - Identify commuter trends and inefficient routes.
    - Assess gate upgrades or widening at heavily used external gates/VCPs.

  - Investigate adding proper/additional signage along external roadways to direct traffic to appropriate lanes and external gates/VCPs to best suit their destination on the installation.

- Bike/Pedestrian Accessibility Study – Under the Proposed Action, the volume and clustering of pedestrians in certain areas is expected to rise with the addition of several multi-level parking facilities and an increase in campus population.
  - Identify locations for construction and use of additional, continuous, and Americans with Disabilities Act-compliant bike/pedestrian facilities.
  - Address NSA's bike share program and any proposed infrastructure improvements external to the installation and the associated impacts on commuters biking to Fort Meade.
  - Recommend biking/pedestrian travel paths to reduce vehicular traffic by diverting commuters from driving to biking or walking. Well-defined walkways and crosswalks could also reduce the risk of pedestrian/vehicular accidents.
- Roadway Improvements
  - Improve the intersections of Canine Road at Rockenbach Road, Emory Road, and Samford Road to address increased traffic between the current campus and the East Campus and safer access to parking areas. Improvements include new turning lanes and widening of existing turning lanes (NSA 2013a).
  - Improve external roadways as identified in **Section 2.5** and discussed further in **Section 5**.
- Bus/Shuttles
  - Modify existing on-installation routes, including extending routes with additional stops in the ECIP project area.
  - Add new on-installation routes, particularly those servicing the ECIP project area. Potential new routes would be driven by the selection of parking facilities under the Proposed Action. Transit would occur via hybrid fuel buses and potentially streetcar, depending on further study of usage levels (NSA 2013a).
  - Partner with Anne Arundel and Howard counties, and transit agencies to continue infrastructure developments and potential incentive programs for carpool/vanpool participants.
- Promotion of additional alternative commute options to reduce single occupancy vehicle commuting.
  - Encourage increased use of the MARC train system.
  - Provide more shuttle buses to and from the NSA and East campuses if practicable.
  - Contribute to improvements that would make biking and walking to and from the NSA and East campuses safer and more attractive. These improvements would include:
    - Direct pedestrian and bicycle access from the Odenton MARC station to nearby VCPs.

- Secure bicycle parking.
- Coordination of off-site bike commuter improvements with the Maryland SHA and with Howard and Anne Arundel counties.

4.2.3 Alternative 1 (National Business Park/East Campus)

Long-term, minor to major, adverse impacts on traffic would be expected due to improvement of LOS values at VCPs, external gates, and intersections, particularly in the AM peak hour from transfer of personnel off-post under this alternative. These impacts are considered minor because the LOS fell only slightly or performed at a better LOS. Only the intersection of MD 175 and Brock Bridge Road would incur a major impact as it degrades to LOS F in the PM peak hour. This section summarizes the capacity analyses for Alternative 1 in 2029. See **Appendix B** Section 7 for figures showing LOS values for Alternative 1.

Minor impacts on the Baltimore-Washington Parkway/MD 295 and I-95 in AM or PM peak hours under Alternative 1 above and beyond the existing significantly deteriorated conditions would be expected. In the AM peak hour, the MD 32 ramp merge/diverge locations perform at an improved LOS in almost all locations when compared to the 2029 No Action Alternative, except at MD 32 and Baltimore-Washington Parkway where the LOS for the westbound on- and off-ramps degrade. In the PM peak hour, only the westbound on-ramp at MD 32 and Dorsey Run Road and the northbound off-ramp to travel westbound on MD 175 at the Baltimore-Washington Parkway and MD 175 interchange have a LOS that degrades. All other locations maintain LOS or perform better.

One of the intersections at the National Business Park site, MD 175 and Brock Bridge Road, operates the same in the AM peak hour and deteriorates in the PM peak hour when compared to the 2029 No Action Alternative. In the AM peak hour, the additional delay caused by the rerouted employees could be minimized by optimizing the signal at this location. The employees not rerouted to National Business Park would remain part of traffic volumes entering Fort Meade.

During the AM peak hour, the intersections near all of the open external gates on Fort Meade operate at LOS F under both the 2029 No Action Alternative and Alternative 1. In the PM peak hour, the LOS for intersections near External Gates 1 and 7 improves, while the intersections near External Gates 3, 4, and 5 operate at the same LOS as in the 2029 No Action Alternative. During the AM and PM peak hours, the NSA VCPs and intersections near proposed parking facilities on-post operate the same or substantially better under this alternative due to less traffic entering the installation than the Proposed Action. This is because 4,400 personnel would no longer be entering Fort Meade but instead travel to National Business Park. **Tables 4.2-1** and **4.2-2** show LOS values at the external gates and VCPs.

In addition to those applicable in **Section 4.2.2**, traffic improvement recommendations for this alternative include signalizing or improving existing traffic signals at intersections in and immediately around the off-post location for improved efficiency and use of shuttles to and from this alternative location the NSA Campus.

4.2.4 Alternative 2 (Annapolis Junction Business Park/East Campus)

Long-term, minor to major, adverse impacts on traffic would be expected due to improvement of LOS values at VCPs, external gates, and intersections, particularly in the AM peak hour from transfer of

personnel off-post under this alternative. The only intersection expected to worsen in performance is Dorsey Run and Junction Drive; however, it operates at LOS F even in the 2029 No Action Alternative, therefore; no further degradation can be shown in the LOS values. However, when shown in seconds of delay per vehicle, the additional delay is 11 seconds or less. This section summarizes the capacity analyses for the 2029 Alternative 2. See **Appendix B**, Section 7, for figures showing LOS values for Alternative 2.

Minor impacts on Baltimore-Washington Parkway/MD 295 and I-95 in AM or PM peak hours under Alternative 2 above and beyond the existing significantly deteriorated conditions would be expected. The MD 32 ramp merge/diverge locations perform at an improved LOS in almost all locations when compared to the 2029 No Action Alternative in the AM peak hour. The only locations where MD 32 LOS degrades in the AM peak hour are the westbound ramps at the MD 32 and Baltimore-Washington Parkway interchange. In the PM peak hour, only the on-ramps at the MD 32 and Dorsey Run Road interchange and the eastbound ramps to go northbound at the MD 32 and Baltimore-Washington Parkway interchange degrade LOS along MD 32.

The intersection at the Annapolis Junction Business Park site, Dorsey Run Road and Junction Drive, operates at LOS F in both the 2029 No Action and 2029 Alternative 2, with Alternative 2 reporting heavier volumes due to increased traffic accessing the business park.

During the AM peak hour, the intersections near all of the open external gates on Fort Meade operate at LOS F under both the 2029 No Action Alternative and Alternative 2. In the PM peak hour, the LOS for intersections near External Gate 1 and 7 improves, while the intersections near External Gates 3, 4, and 5 operate at the same LOS as in the 2029 No Action Alternative. During the AM and PM peak hours, the NSA VCPs and intersections near proposed parking facilities on-post operate the same or substantially better due to less traffic entering the installation than the Proposed Action. This is because 4,400 personnel would no longer be entering Fort Meade but instead travel to Annapolis Junction Business Park.

Traffic improvement recommendations for this alternative would be the same as those identified in **Section 4.2.3**.

4.2.5 No Action Alternative

Long-term, major, adverse impacts on traffic would occur under the No Action Alternative. I-95 would continue to operate at LOS F in both directions during the AM peak hour. The LOS improves in the PM peak hour to a LOS C in the southbound lanes and LOS D in the northbound lanes. Most segments along MD 32 operate at a LOS C, D, or E in both the AM and PM peak hours. The LOS of the Baltimore-Washington Parkway/MD 295 varies greatly between LOS C and LOS F in the AM peak hour, and is consistently a LOS C or D in the PM peak hour, except for the segment from MD 32 to MD 198 which operates at a LOS E. **Tables 4.2-1** and **4.2-2** shown previously, as well as Figures 5-1 through 5-7 and Tables 9-1 and 9-2 in **Appendix B**, show LOS values for intersections under the No Action Alternative.

The LOS at each ramp merge/diverge within the study area varies by interchange. Along MD 32, the interchanges with I-95, U.S. Route 1, and Dorsey Run Road operate with the most delay when compared to the remaining MD 32 interchanges within the study area. All interchanges along the

Baltimore-Washington Parkway/MD 295 operate poorly (with a majority being LOS D–F), except the interchange with Arundel Mills Boulevard.

In both the AM and PM peak hours, MD 175 intersections adjacent to Fort Meade operate at LOS E or better. Farther west along MD 32, Dorsey Run Road at Junction Drive operates at LOS F in both AM and PM peak hours.

In the AM peak hour, the intersections near Fort Meade external gates operate at LOS E or better. In the PM peak hour, all operate at LOS F, except the Rockenbach Road and O'Brien Road intersections (near External Gate 1) that operate at LOS B. **Tables 4.2-1** and **4.2-2** show LOS values at the VCPs.

4.3 Noise

4.3.1 Evaluation Criteria

An analysis of the potential impacts associated with noise typically evaluates potential changes to the existing acoustical environment that would result from implementation of a proposed action. Potential changes in the acoustical environment can be beneficial (i.e., they reduce the number of sensitive receptors exposed to unacceptable noise levels or reduce the ambient sound level), negligible (i.e., the total number of sensitive receptors to unacceptable noise levels is essentially unchanged), or adverse (i.e., they result in increased sound exposure to unacceptable noise levels or ultimately increase the ambient sound level). Impacts would be considered significant if noise levels were unacceptable to multiple sound receptors or created appreciable areas of incompatible land use off-post.

The main issues concerning noise effects on humans are physiological effects (e.g., hearing loss and non-auditory effects), behavioral effects (e.g., speech or sleep interference and performance effects), and subjective effects such as annoyance. This noise analysis considers potential effects on nearby noise-sensitive receptors, including residential areas, schools, churches, and hospitals. The major sources of noise, their contribution to the overall noise environment, and maximum sound level were estimated for comparison to local noise-control standards. The analysis considers construction and operation of the proposed facilities.

4.3.2 Proposed Action (ECIP Project Area)

ECIP Project Area Impacts. Under the Proposed Action, an increase in noise levels would originate from construction equipment, additional vehicle traffic, and the operation of emergency power generation system and other supporting infrastructure (i.e., electrical substation, heating and cooling systems, and equipment for operation of the facilities). The primary sources of noise would be pile-driving and other construction activities, and the operation of emergency power generators as needed once construction of the facilities are completed. Impacts from noise would vary with location and the nearest-sensitive noise receptor. An overview of construction and operational noise for the ECIP project area is below.

Construction and Demolition Noise. Short-term, minor to moderate, adverse impacts on the existing noise environment for the ECIP project area would be expected as a result of the Proposed Action. Noise levels would vary depending on the locations of buildings proposed for construction or demolition, type of construction being performed, the land uses in the area that the project would occur in, and the distance from the source. Construction activities under the Proposed Action would include demolition of existing

outdated facilities, grading, paving, trenching, and new construction. Pile driving would be expected to generate the most noise (91–105 dBA) during construction. However, construction noise originating from within the ECIP project area would be temporary and intermittent over the course of 10 years and would not be expected to exceed similar construction noise in the immediate area around the ECIP project area.

Implementation of the Proposed Action would have short-term effects on the existing acoustical noise environment within the NSA Campus and Fort Meade from the use of heavy equipment during construction and demolition activities. Noise generation would last only for the duration of construction activities. Construction would occur from 7 a.m. to 6 p.m., Monday to Friday, and occasionally on weekends, as necessary. Pile-driving activities may be conducted from 8 a.m. to 5 p.m. on weekdays per the State of Maryland noise regulations, as pile-driving noise would exceed the regulation during any other times due to the considerable distance required for pile-driving noise to attenuate to levels below 55 dBA (approximately 7,200 feet (1.4 miles]) (NSA 2010).

Short-term, negligible, adverse impacts on the existing noise environment would also be expected as a result of the increase in construction vehicle traffic under the Proposed Action. Construction vehicles and traffic would access Fort Meade via MD 32, Canine Road, and Rockenbach Road. Both Canine Road and Rockenbach Road are primary roadways within the installation that are heavily used by NSA and Fort Meade personnel. Temporary construction traffic would be distributed evenly throughout the day and would generate minimal noise compared to traffic noise generated outside the installation from MD 32 and the Baltimore-Washington Parkway. Temporary construction traffic would be a fraction of the existing traffic and would likely cause negligible increases in noise.

Parking Facility Location Alternatives. Impacts from the construction at the parking facility alternative locations would be similar to, but less than, those mentioned under *ECIP Project Area Impacts*. Short-term, negligible, adverse impacts from noise related to construction would be expected on the existing acoustical noise environment. Noise from construction at the parking facility alternative locations would be similar to noise levels from construction within the ECIP project area, but much shorter in duration because the sites comprise a smaller footprint than the ECIP project area. Noise from construction vehicles would also be similar in nature to noise from construction vehicles within the ECIP project area.

Building Demolition. Impacts from noise due to the demolition of buildings would be similar to those discussed under *Parking Facility Location Alternatives*.

Emergency Power Generation Alternatives. Impacts from the operation of the emergency power generation system on the existing noise environment would be long-term, negligible to minor, and adverse. Noise from the operation of the emergency power generation system would dominate over noise levels produced by other equipment associated with the operation of nearby buildings within the NSA Campus when in operation. However, the emergency power generation system would include standard factory-provided noise-attenuation equipment. Noise from the generators may be heard in the military housing area located north of the ECIP project area (i.e., Midway Common neighborhood); however, use of emergency power generation would be infrequent. Operation of the emergency power generation system would only occur during emergency situations when necessary; however, the system would

require testing on a regular basis (approximately 100 hours per year) to ensure that they are in working order.

Building Heating System Alternatives. Operational noise from the building heating system would not result in impacts because the noise would not be noticeable outside of the mechanical rooms that house the systems. Additionally, GSHPs tend to be quieter than conventional heat pumps.

4.3.3 Alternative 1 (National Business Park/East Campus)

Construction of facilities at National Business Park would be the responsibility of the site owner as the NSA would only lease existing facilities. While it is likely that construction would generate noise impacts, any environmental requirements or permits, including those related to noise, would be the responsibility of the site owner.

Alternative 1 would have long-term, minor, adverse impacts on the existing noise environment at National Business Park. Impacts from the construction of the 21-MW emergency power generation system under this alternative would be short-term, negligible, and adverse. Noise impacts from any construction activities necessary to install the emergency power generation system would generate a minimal amount of noise. Sensitive noise receptors, including houses to the north along MD 175, a small farmhouse to the east, and various other small homes to the west along Brock Bridge Road, may experience noise related to operation of the emergency power generation system; however, this noise would be infrequent (including when testing the system) and would only be used when necessary.

Noise impacts associated with construction and operation activities in the northern portion of the East Campus would be the same as those discussed in **Section 4.3.2**.

4.3.4 Alternative 2 (Annapolis Junction Business Park/East Campus)

Impacts on noise under Alternative 2 would be similar to, but less than, those mentioned under Alternative 1. Because sensitive noise receptors identified near Alternative 2 are further away, impacts on sensitive noise receptors would be less than those under Alternative 1.

4.3.5 No Action Alternative

Under the No Action Alternative, the DoD would not construct and operate approximately 2.9 million ft^2 of operations and headquarters space on the northern portion of the East Campus and the 9800 Troop Support Area. The acoustical noise environment described in **Section 3.3.2** would remain unchanged.

4.4 Air Quality

4.4.1 Evaluation Criteria

The environmental impacts on local and regional air quality conditions near a Proposed Action are determined based on increases in regulated pollutant emissions compared to existing conditions and ambient air quality. Impacts on air quality would be considered potentially significant if a Proposed Action would result in emissions greater than the *de minimis* threshold levels established in 40 CFR 93.153(b) for any nonattainment or maintenance pollutants, or would contribute to a violation of any Federal, state, or local air regulations.

4.4.2 Proposed Action (ECIP Project Area)

Implementing the Proposed Action would have short- and long-term minor adverse impacts on air quality. Short-term impacts would occur due to air emissions generated during the demolition of facilities and construction of the proposed facilities. Long-term impacts would be due to introducing heating boilers and emergency generators at the proposed facilities. Increases in emissions would be below the General Conformity Rule *de minimis* thresholds and would not contribute to a violation of any Federal, state, or local air regulations.

4.4.2.1 General Conformity

To determine the applicability of the General Conformity Rule, the total emissions were estimated for all years of the Proposed Action and compared to the *de minimis* thresholds (see **Table 4.4-1**). Project-related emissions would result from (1) demolition and construction activities and (2) operational activities. More specifically, emissions were estimated for the following:

- Demolition of 1.9 million ft^2 of buildings
- Construction of ECB 3, ECB 4, ECB 5 and supporting infrastructure
- Construction of a 330,000 ft^2 building and supporting infrastructure
- Construction of a 150,000 ft^2 building and supporting infrastructure
- Construction of three 1,050,000 ft^2 parking garages
- Addition of 121 MW of additional emergency generator plant capacity
- Life-safety generators for all proposed buildings
- Boilers for all proposed buildings
- Additional commuter emissions.

The total direct and indirect emissions of NO_X, VOCs, $PM_{2.5}$, and SO_2 in any given year would be less than the *de minimis* thresholds. Therefore, the general conformity requirements do not apply, and no formal conformity determination is required. Construction activities would be evenly spread out over a 10-year period, and no individual year's construction emissions were marginal or borderline when compared to the *de minimis* thresholds. Therefore, unless the ultimate implementation schedules were to change appreciably, annual emissions would be below the *de minimis* threshold. In addition, small changes in facilities siting and ultimate design or moderate changes in quantity and types of equipment used would not substantially change these emission estimates, and would not change the determination under the general conformity rule or level of effects under NEPA. Detailed methods for estimating air emissions and a draft Record of Non-Applicability to the General Conformity Rule are provided in **Appendix C**.

4.4.2.2 Mobile Sources

Mobile sources of concern include primarily automobiles and vehicular traffic. The primary air pollutants from mobile sources are CO, NO_x, and VOCs. Lead emissions from mobile sources have declined in recent years through the increased use of unleaded gasoline and are extremely small. Potential SO_2 and particulate emissions from mobile sources are small compared to emissions from point sources, such as power plants and industrial facilities. Air quality impacts from traffic are generally evaluated on two scales:

Table 4.4-1. Total Annual Emissions Subject to the General Conformity Rule

Year	Total Annual Emissions (tpy)			
	NO_x	$PM_{2.5}$	SO_2	VOC
1	40.0	3.2	5.7	4.9
2	39.3	3.2	5.9	4.9
3	38.9	3.7	6.0	5.4
4	32.8	3.5	5.1	5.1
5	33.7	4.4	5.5	5.5
6	49.8	7.7	8.5	8.7
7	26.5	4.9	4.9	4.8
8	37.3	6.8	6.8	6.9
9	45.9	8.3	8.3	8.5
10	24.9	4.4	4.5	4.7
Operational Emissions[1]	2.5	0.2	<0.1	0.2
Greatest Annual Emissions	49.8	8.3	8.5	8.7
De Minimis Threshold	100	100	100	50
Exceeds Threshold	No	No	No	No

Sources: Caterpillar 2012, Caterpillar 2015, Fulton 2015, SCAQMD 1993, USEPA 1995, USEPA 2003, USEPA 2005

Note:

1. The generator alternative combined with the packaged boiler alternative was analyzed as a potentially maximum impact on air quality under the general conformity analysis.

- *Mesoscale*—Mesoscale analysis is performed for the entire AQCR by the MDE. Potential emissions increases from additional vehicle miles traveled resulting from an action could affect regional O_3 or $PM_{2.5}$ levels. However, because these are problems of regional concern and subject to air transport phenomena under different weather conditions, regional impacts are generally evaluated using regional airshed models. Mesoscale analysis is generally not conducted on a project-specific basis and is not necessary for this EIS.
- *Microscale*—Microscale analysis is performed to identify localized hot spots of criteria pollutants. CO is a site-specific pollutant with higher concentrations found adjacent to roadways and signalized intersections. Microscale analysis is often conducted on a project-specific basis in regions where CO is of particular concern. Anne Arundel County and, therefore, NSA and Fort Meade, is neither a nonattainment nor maintenance area for CO; therefore, microscale analysis is not necessary for this EIS.

In addition, $PM_{2.5}$ hot spot analysis is not standard practice for nontransportation projects. The Proposed Action does not involve new intermodal freight or bus terminals, major highway projects, or significant diesel traffic. The intersections affected are primarily secondary arterial roads, at which levels of $PM_{2.5}$ are not expected to exceed the NAAQS (USEPA 2013a). A detailed qualitative $PM_{2.5}$ analysis has not been conducted because the Proposed Action does not meet any of the following criteria:

- A new or expanded highway project that serves a significant volume of or will result in a significant increase in diesel vehicles, such as facilities with greater than 125,000 ADT and 8 percent or more of such ADT is diesel truck traffic.
- A project that creates a new, or expands or improves accessibility to, an existing bus or rail terminal or transfer point that will have a significant number of diesel vehicles congregating at that location, or that is defined as regionally significant.
- A project that affects intersections at LOS D, E or F with a significant number of diesel vehicles, or that will change to LOS D, E or F because of increased traffic volumes from a significant number of diesel vehicles related to the project.
- A project otherwise considered a project of "air quality concern" as outlined in 40 CFR 93.123 (b)(1)(i),(ii),(iii) or (iv).

Mobile Source Air Toxics (MSATs) are a subset of the 188 air toxics defined by the CAA. The MSATs are compounds emitted from highway vehicles and nonroad equipment. Some toxic compounds are present in fuel and are emitted to the air when the fuel evaporates or passes through the engine unburned. Other toxic compounds are emitted from the incomplete combustion of fuels or as secondary combustion products. As with particulate matter, traffic from nearby intersections is not anticipated to be an air quality concern for MSAT because the intersections affected are primarily secondary arterial roads. Quantitative MSAT analysis is not standard practice for nontransportation projects on secondary arterials; therefore, such analysis is not included in this EIS (USDOT and FHWA 2012).

4.4.2.3 Regulatory Review

Permitting scenarios can vary based on the types and sizes of new stationary sources, timing of and available funding for the projects, and the types of controls ultimately selected. These can differ in specific features from the ones described in this EIS. However, during the final design stage and the permitting process either (1) the actual equipment, controls, or operating limitations would be selected to reduce the PTE below the major source threshold; or (2) the NNSR permitting process would require emissions offsets be obtained at a 1 to 1.3 ratio from other previously decommissioned sources within the region. This cap-and-trade-type system is inherent to Federal and state air regulations, and leads to a forced reduction in regional emissions. Therefore, regardless of the ultimate permitting scenario, these impacts would be considered minor under NEPA.

Emergency Power Generation Alternatives

Generator Alternative. Permitting requirements for proposed stationary sources are based on their overall PTE criteria pollutants. The estimated PTE for the use of generators required to complete the existing and proposed generator plants and the life-safety generators combined is presented in **Table 4.4-2**. The total PTE of all pollutants would not exceed the NNSR or PSD thresholds. MDE-mandated federally enforceable limitation of 100 hours of operation would be required to reduce potential emissions below the NNSR or PSD thresholds. Under this scenario, a Minor NSR construction permit would be required.

NSPS limitations on generator emissions come into effect using a tiered approach over time; Tier 1 being the least restrictive and Tier 4 being the most. The generators would be permitted as emergency

Table 4.4-2. Potential to Emit – Generator Alternative

	NO_x	CO	VOC	PM[1]	SO_x
PTE (tpy)	11.4	14.9	1.0	0.4	0.2
PSD Threshold (tpy)	-	250	-	250	250
NNSR Threshold (tpy)	25	-	25	-	-
Exceeds Threshold (Yes/No)	No	No	No	No	No

Note:
1. Conservatively assumed $PM_{2.5} = PM_{10} = PM$

generators, meaning they would only be operational during CAA emergencies, apart from routine maintenance and testing. With that designation, under NSPS Subpart III, only generators certified to Tier 2 emission levels by the manufacturer would be required. NSA chooses to add pollution control to the emergency generators to reduce their emissions potential, which would effectively be at the Tier 4 level for non-emergency generators. All stationary sources at the NSA Campus combined currently emit less than 1 tpy of HAPs. With the additional proposed generators, the total HAP emissions would not change appreciably. All proposed generators would meet NESHAP requirements.

Generator and Combustion Turbine Alternative. The estimated PTE for the use of generators required to complete the existing generator plants, natural gas turbines for the proposed power plant, and the life safety generators combined under this alternative is presented in **Table 4.4-3**. The total PTE of all pollutants would be below the NNSR and PSD thresholds. This analysis assumes a 100 hours-of-operation limitation and the selection of low NO_x turbines. MDE mandated federally enforceable limitation of 100 hours of operation would be required to reduce potential emissions below the NNSR or PSD thresholds. Under this scenario, a Minor NSR construction permit would be required.

Table 4.4-3. Potential to Emit – Generators and Combustion Turbines Alternative

	NO_x	CO	VOC	PM[1]	SO_x
PTE (tpy)	5.0	5.1	0.3	0.1	<0.1
PSD Threshold (tpy)	-	250	-	250	250
NNSR Threshold (tpy)	25	-	25	-	-
Exceeds Threshold (Yes/No)	No	No	No	No	No

Note:
1. Conservatively assumed $PM_{2.5} = PM_{10} = PM$

NSPS limitations on NO_x and SO_2 emissions for stationary gas turbines were promulgated in 2006 (40 CFR 60, subpart KKKK). All stationary combustion turbines with a heat input equal to or greater than 10 MMBtu/hr would meet these NSPS requirements. As with the generators, the total HAP emissions would not change appreciably with the proposed stationary gas turbines. All turbines would meet NESHAP requirements.

Regardless of whether emergency generators or combustion turbines are ultimately selected, if the final permitting scenario became such that NSA's contemporaneous emissions were the determining factor for

NNSR, a thorough emissions evaluation would be required. However, additional controls or changes in scheduling to meet the netting requirements under NNSR would not change the applicability determination under the General Conformity Rule, and would only reduce further these already limited emissions and their effects.

Although no electricity would be exported to the electrical system, the proposed facilities would be rated at more than 70 MW. Regardless of whether or not emergency generators or combustion turbines are ultimately selected, CPCN requirements may apply, and the DoD would be required to obtain a CPCN from the MPSC. This is a public process and would take approximately 6 to 9 months.

Regardless of whether emergency generators or combustion turbines are ultimately selected, Title V Significant Permit Modifications would be required to establish federally enforceable limitations to reduce potential emissions below the thresholds. Submission of an application for these permit modifications would be required within 1 year of the first operation of the proposed units.

Building Heating System Alternatives

Packaged Boiler Alternative. The estimated PTE for the use of packaged boilers is outlined in **Table 4.4-4**. Fossil fuel boilers are included in the 26 listed source categories subject to PSD review. Therefore, the applicable PSD threshold for the proposed boiler plant is 100 tpy of any regulated attainment pollutant. The total PTE of all pollutants would be below the NNSR and PSD thresholds. Under this scenario, a Minor NSR construction permit would be required.

Table 4.4-4. Potential to Emit – Packaged Boiler Alternative

	NO_x	CO	VOC	PM[1]	SO_x
PTE (tpy)	14.5	10.6	1.6	2.2	0.2
PSD Threshold (tpy)	-	100	-	100	100
NNSR Threshold (tpy)	25	-	25	-	-
Exceeds Threshold (Yes/No)	No	No	No	No	No

Note:
1. Conservatively assumed $PM_{2.5} = PM_{10} = PM$

Hybrid Heating System Alternative. The estimated PTE for the use of packaged boilers and GSHP is outlined in **Table 4.4-5**. The total PTE of all pollutants would be below the NNSR and PSD thresholds. Under this scenario, a Minor NSR construction permit would be required.

Table 4.4-5. Potential to Emit – Hybrid Heating System Alternative

	NO_x	CO	VOC	PM[1]	SO_x
PTE (tpy)	8.3	8.6	1.3	1.8	0.1
PSD Threshold (tpy)	-	100	-	100	100
NNSR Threshold (tpy)	25	-	25	-	-
Exceeds Threshold (Yes/No)	No	No	No	No	No

Note:
1. Conservatively assumed $PM_{2.5} = PM_{10} = PM$

Other Proposed Stationary Sources. In addition to the standby power generation equipment and heating systems outlined above, the Proposed Action would include the establishment of chillers, tanks, and other support equipment. Detailed information about the sizes and types of equipment is not available. However, as stated above, during the final design stage and the permitting process either (1) the actual equipment, controls, or operating limitations would be selected to reduce the PTE below the major source threshold; or (2) the NNSR permitting process would require emissions offsets be obtained at a 1 to 1.3 ratio from other previously decommissioned sources within the region. Therefore, regardless of the ultimate permitting scenario, these impacts would be considered minor under NEPA.

4.4.2.4 Greenhouse Gases and Global Warming

Although the exact type of equipment is yet unknown, the primary onsite sources would be fossil fuel burning equipment such as generators and boilers. The only direct sources of GHG would be the CO_2 emitted from the emergency generators or turbines and packaged boilers. The Proposed Action would have no significant emissions of nitrous oxide (N_2O), methane natural gas (CH_4), hydrofluorocarbons, perfluorocarbons, or sulfur hexafluoride. The existing substation does use sulfur hexafluoride as an electrical insulator in its gas insulated switchgear, and this would not change under the Proposed Action. Under the Proposed Action, all operational activities combined would generate approximately 3,267 tons (2,970 metric tons) of CO_2e (see **Table 4.4-6**). This would be well below the 25,000 metric tpy threshold that would trigger a requirement to report annual GHG emissions to the USEPA (40 CFR 98) and well below the 25,000 metric tpy presumptive effects threshold that was identified in the CEQ's 2014 draft GHG NEPA guidance. To put the operational GHG emissions in **Table 4.4-6** into everyday terms, 2,970 metric tons of CO_2e is approximately the GHG "footprint" of 157 single family homes with two passenger vehicles per home (USEPA 2016).

Table 4.4-6. Estimated GHG Emissions

	Estimated Actual Emissions (tpy)			
	CO_2	**CH_4**	**N_2O**	**CO_2e**
Emergency Power Generation Alternatives				
Generators	1,861	1.0	<0.1	1,891
Generators and Combustion Turbines	1,209	0.4	<0.1	1,222
Building Heating System Alternative				
Packaged Boilers	1,373	<0.1	<0.1	1,376
Packaged Boilers and GSHP	1,085	<0.1	<0.1	1,088
Generator and Packaged Boilers Alternatives				
GHG Emissions (tpy)	**3,234**	**1.0**	**<0.1**	**3,267**
GHG Emissions (metric tpy)	**2,934**	**0.9**	**<0.1**	**2,970**

The DoD is committed to reduce GHG emissions from non-combat activities 34 percent by 2020 in accordance with EO 13693. The NSA is committed to continue to act in accordance with the EO within the framework of the DoD-wide efforts to reduce GHG emissions. The NSA, as part of the DoD, inventories direct and indirect emissions of GHG, and is determining their role in the overall process.

Emergency generators are exempt from these requirements, which is both in response to, and consistent with, the guidelines put forth in EO 13693.

It is not expected that any of the Proposed Action activities outlined herein would interfere with the DoD's ability to meet their agency-wide goal. The positions of slightly less than half of the personnel occupying the proposed facilities would be relocated from the existing NSA Campus at Fort Meade, and the remaining personnel positions would be relocated from other administrative space within the region. Although there would be a temporary increase in GHG emissions from construction activities, modern construction techniques and implementing Federal Guiding Principles would make the proposed facilities more energy efficient than the buildings currently occupied. This would constitute a reduction in both the use of fossil fuels and on-site electricity, and would subsequently lead to long-term reduction in GHG emissions.

The two prominent concerns outlined in the U.S. Global Change Resource Program Third National Climate Assessment report for the area are reduced water availability and effects of extreme weather, primarily hurricanes (USGCRP 2014). The Proposed Action incorporates safeguards against effects from future climate scenarios, including emergency power generation during extreme weather events. As discussed in **Section 4.10.2**, the Proposed Action would implement strategies for water efficiency and sustainable design. Additionally, the emergency power generation alternatives, discussed in **Sections 2.2.3.1** and **4.10.2**, provide strategies for extreme weather-related power outages. The effects of implementing sustainable design and water efficiency strategies and emergency power generation would be beneficial in the context of future climate scenarios.

4.4.2.5 Best Management Practices

BMPs would be required and implemented for both construction emissions and stationary point source emissions associated with the new facilities. The construction activities would be accomplished in full compliance with Maryland regulatory requirements through the use of compliant practices or products. These requirements appear in COMAR Title 26, Subtitle 11, *Air Quality*. They include the following:

- Particulate Matter from Materials Handling and Construction (COMAR 26.11.06.03.D)
- Open Fires (COMAR 14.25.02.14)
- Visible Emissions (COMAR 23.22.06.02)
- Control of Emissions of VOCs from Architectural Coatings (COMAR 26.11.35)
- Control of Emissions of VOCs from Consumer Products (COMAR 26.11.32).

Irrespective of whether stationary sources are above or below the major source threshold, one or more air pollution control permits would be required for the facilities. BMPs associated with the new permitted stationary sources of emissions would include the following:

- BACT review for each criteria pollutant
- MACT review for regulated HAPs and designated categories
- Air quality analysis (predictive air dispersion modeling), upon the MDE's request
- Establishing procedures for measuring and recording emissions or process rates
- Meeting the NSPS and NESHAP requirements.

This listing is not all-inclusive; the NSA and any contractors would comply with all applicable Maryland air pollution control regulations.

Other than the BMPs outlined above, no mitigation measures for air quality would be required. The impacts associated with air quality would be minor. No activities outside compliance with existing regulations, permits, and plans would be required to reduce the level of effect to less than significant.

4.4.3 Alternative 1 (National Business Park/East Campus)

Implementing Alternative 1 would have short- and long-term minor adverse impacts on air quality from demolition of some facilities on the NSA Campus, construction of operational facilities only within the northern portion of the East Campus, expansion of the existing generator plants, and introduction of additional stationary sources of air emissions at National Business Park. Facilities at National Business Park would house approximately one-third of the personnel and be approximately one-third the size of those outlined under the Proposed Action; therefore, they would require proportionally less emergency power and building heating requirements. Impacts under Alternative 1 would be less than those outlined under the Proposed Action, because less construction would occur, primarily at the NSA Campus. Functions and personnel at National Business Park would be located within privately owned and already-constructed facilities. Increases in emissions would be below the applicability thresholds and would not contribute to a violation of any Federal, state, or local air regulations.

General Conformity. The estimated operational emissions would be similar in nature but appreciably less than those outlined under the Proposed Action (see **Table 4.4-7**). The estimated emissions of NO_x, VOCs, $PM_{2.5}$, and SO_2 are expected to be approximately one half as much as those outlined under the Proposed Action, would be less than the applicability thresholds, and would not be subject to general conformity.

Regulatory Review. The Generator Alternative would potentially induce the greatest impacts on air quality when compared to the hybrid Generators and Combustion Turbines Alternative and, due to space and size requirements, is more likely to be implemented under Alternative 1. The estimated PTE for the use of generators required to complete the existing generator plants, for the proposed power plant at the NBP facility, and the life-safety generators combined is outlined in **Table 4.4-8**. The estimated PTE would be substantially less than under the Proposed Action outlined in **Tables 4.4-2** through **4.4-5**, and similarly would not exceed the NNSR or PSD thresholds. The MDE mandated limitation on the hours of operation would be required. A minor NSR construction permit would be required before construction, and a minor source operating permit would be required within 1 year of operation. All new stationary sources of air emissions would meet NSPS and NESHAP requirements. BMPs would be similar to those outlined under the Proposed Action.

Greenhouse Gases. Under Alternative 1, the total actual GHG emissions for the both the emergency power and building heating systems would be 2,549 tons (2,317 metric tons) of CO_2e. This would be 718 tons (653 metric tons) less than under the Proposed Action outlined in **Table 4.4-6**. GHG emissions would not interfere with the DoD's ability to meet their reduction goals.

Table 4.4-7. Annual Emissions Subject to the General Conformity Rule - Alternatives 1 and 2

Year	Total Annual Emissions (tpy)			
	NO_x	$PM_{2.5}$	SO_2	VOC
Operational Emissions[1]	1.2	<0.1	<0.1	0.1
De Minimis Threshold	100	100	100	50
Exceeds Threshold	No	No	No	No

Source: Caterpillar 2012

Note:

1. The generator alternative combined with the packaged boiler alternative was analyzed as a potentially maximum impact on air quality under the general conformity analysis.

Table 4.4-8. Potential to Emit for Generators – Alternatives 1 and 2

	NOx	CO	VOC	PM[1]	SOx
PTE (tpy)	7.1	9.1	0.6	0.2	0.1
PSD Threshold (tpy)	-	250	-	250	250
NNSR Threshold (tpy)	25	-	25	-	-
Exceeds Threshold (Yes/No)	No	No	No	No	No

Note:

1. Conservatively assumed $PM_{2.5} = PM_{10} = PM$

4.4.4 Alternative 2 (Annapolis Junction Business Park/East Campus)

As with Alternative 1, and for similar reasons, Alternative 2 would have short- and long-term minor adverse impacts on air quality. Increases in emissions would be below the applicability thresholds and would not contribute to a violation of any Federal, state, or local air regulations.

4.4.5 No Action Alternative

The No Action Alternative would not result in changes in ambient air quality conditions if the ECIP at NSA was not implemented. No construction activities would be undertaken, and no changes in operations would take place. A general conformity analysis and the permitting of stationary sources would not be required. No impacts on air quality would be expected. Notably, any benefits due to efficiencies from using newer equipment and energy efficient building designs and techniques would not be realized under the No Action Alternative.

4.5 Geological Resources

4.5.1 Evaluation Criteria

Protection of unique geological features, minimization of soil erosion, and the siting of facilities in relation to potential geologic hazards are considered when evaluating potential effects of a proposed action on geological resources. Generally, adverse effects can be avoided or minimized if proper construction techniques, erosion-control measures, and structural engineering design are incorporated into project development.

Effects on geology and soils would be major if they would alter the lithology, stratigraphy, and geological structures that control groundwater quality, distribution of aquifers and confining beds, and groundwater availability; or change the soil composition, structure, or function (including prime farmland and other unique soils) within the environment.

4.5.2 Proposed Action (ECIP Project Area)

Long-term, negligible, adverse impacts would be expected on topography from the implementation of the Proposed Action. Areas where construction would occur need to be graded; however, since much of the area proposed for development has previously been developed; impacts on topography would be negligible.

Short-term, minor, and long-term, minor to moderate, adverse impacts on soils and geology would be expected from the implementation of the Proposed Action. The Proposed Action would require additional disturbance to the soils resulting from excavation, grading, and compaction associated with construction of buildings, parking facilities, and siting of infrastructure. As a result of implementing the Proposed Action, soils would be compacted, and soil structure disturbed and modified. For areas that have been previously developed or disturbed, these impacts would be less. Loss of soil structure due to compaction from foot and vehicle traffic could result in localized changes in drainage patterns. Soil productivity, which is the capacity of the soil to produce vegetative biomass, would be eliminated in those areas within the footprint of building structures, roadways, and parking facilities. Some activities associated with the Proposed Action would entail clearing of vegetation, grading, and paving in areas where there are no existing structures or infrastructure. Clearing of vegetation would increase erosion and sedimentation potential. Soil erosion and sediment production would be minimized for all construction activities by following an approved ESCP. Use of stormwater control measures that favor reinfiltration would aid in minimizing the potential for erosion and sediment production as a result of storms. See **Section 4.6.2** for an evaluation of impacts from the Proposed Action on water resources.

The Downer-Hammonton complex, 2 to 5 percent slopes and the Patapsco-Evesboro-Fort Mott complex, 0 to 5 percent slopes are the only soils within the ECIP project area identified as prime farmland soils. Similar to other soils at the ECIP project area, these soils have been disturbed due to previous development and are not currently used for agriculture; therefore, no impacts on prime farmland would be expected.

Short-term, minor, adverse impacts would be expected from trenching activities associated with placement of utilities and infrastructure. Trenching would involve removal of vegetation and disturbance of soil structure. Removal of vegetation would temporarily increase erosion and sedimentation potential until disturbed soil has been stabilized and vegetation regrowth has occurred. Once vegetation has been reestablished, impacts from trenching activities associated with erosion and sedimentation would be reduced to negligible. Any removed soils would be managed onsite and incorporated into the design plan, if appropriate. If soils cannot be maintained onsite, they would be transferred to another user for construction or other purposes.

Site specific soils surveys should be conducted prior to implementation of the Proposed Action to determine the breadth and severity of any engineering limitations. Per COMAR, *Erosion and Sediment Control,* an ESCP would be required for the Proposed Action, as it involves land clearing, grading, or other earth disturbances to an area greater than 5,000 ft^2 of land area. The *2015 Maryland Stormwater*

Management and Erosion & Sediment Control Guidelines for State and Federal Projects would serve as the official guide for erosion-and-sediment-control principles, methods and practices (State of Maryland 2015). The ESCP would describe the measures implemented to prevent loss of soil during construction by stormwater runoff or wind erosion and to prevent sedimentation of storm sewer or receiving streams. In addition to the ESCP, State stormwater requirements would be adhered to. Construction BMPs would be implemented to minimize soil erosion; therefore, no major, adverse impacts on the soils would be anticipated. BMPs could include installing silt fencing and sediment traps, applying water to disturbed soil, and revegetating disturbed areas as soon as possible after disturbance, as appropriate.

Parking Facility Location Alternatives. Impacts on geological resources at the parking facility location alternatives would be similar to, but of lesser magnitude than, those discussed for the ECIP project area above. Impacts on soils would be short-term, negligible and adverse because the areas proposed for parking facility alternatives are already generally developed. In addition, no impacts would be expected on topography, geology, prime farmland, or hydric soils.

Building Demolition. Impacts on geological resources from building demolition would be short-term, negligible, and adverse. Impacts on soils and topography would be negligible because buildings proposed for demolition are already on disturbed soils that would be allowed to return to natural areas post-demolition. No additional impacts on geological resources would be expected from building demolition.

Building Heating System Alternatives. No impacts from packaged boiler systems would be expected on geological resources because building heating systems would be co-located within buildings and any infrastructure associated with these would be constructed in the construction phase of the project. Impacts from GSHP would be short-and long-term, minor, and adverse. Short-term impacts would be expected from construction of GSHP well fields related to the Hybrid Building Heating System Alternative due to soil disturbance. However, these impacts would be less because many areas proposed for the GSHP system have previously been disturbed. Well fields for the GSHP systems would consist of 5- to 6-inch wells drilled approximately 400 feet deep and spaced 20 feet apart. If GSHPs are used to provide heating for the proposed 150,000-ft^2 and 330,000-ft^2 buildings, then approximately 1.8 acres of land would be required for the well fields. The proposed 150,000-ft^2 building would require a well field that consists of approximately 96 wells covering 0.7 acre, while the 330,000-ft^2 building would require a well field of approximately 140 wells covering 1.1 acres of land. The proposed 800,000 ft^2-buildings would each require too large of a well field by itself (1.7 acres) and is not being considered for a GSHP system. Long-term impacts would also be expected from the installation and operation of a GSHP system because these types of systems typically result in an overall underground temperature change of a few degrees around the wells over 20 to 30 years of use.

4.5.3 Alternative 1 (National Business Park/East Campus)

Short- and long-term, negligible to minor, adverse impacts under Alternative 1 would occur from soil disturbance, similar to those discussed under the Proposed Action. With the exception of installation of emergency generators, construction at National Business Park would solely be the responsibility of the site owner (private developer) who would be responsible for the implementation of measures to minimize impacts at the Alternative 1 location.

Impacts on geological resources associated with construction and operation activities in the northern portion of the East Campus would be the same as those discussed for the Proposed Action in **Section 4.5.2**.

4.5.4 Alternative 2 (Annapolis Junction Business Park/East Campus)

Impacts under Alternative 2 would be the same as those discussed under Alternative 1, and construction at the Annapolis Junction Business Park would similarly be the responsibility of the site owner (private developer) who would be responsible for implementation of measures to minimize impacts.

There are 3.4 acres of soils that meet the definition of prime farmland in the north central portion of the Annapolis Junction Business Park site. Annapolis Junction Business Park, including the areas where the farmland soil occurs, is not currently used for agriculture because they are within the boundary of the proposed business park expansion area approved by Anne Arundel County. In addition, buildings would be constructed at Annapolis Junction Business Park by a private entity not subject to the FPPA regardless of NSA's lease of the buildings as a result of the planned expansion of the business park. Therefore, Alternative 2 would not result in conversion of prime farmland and there would be no impacts on farmland.

Impacts on geological resources associated with construction and operation activities in the northern portion of the East Campus would be similar to those discussed in **Section 4.5.2**.

4.5.5 No Action Alternative

Under the No Action Alternative, the DoD would not construct and operate 2.9 million ft^2 of operations and headquarters facilities on the northern portion of the East Campus and the 9800 Troop Support Area. No impacts on geological resources would be expected under the No Action Alternative.

4.6 Water Resources

4.6.1 Evaluation Criteria

Evaluation of impacts on water resources is based on water availability, quality, and use; existence of floodplains; and associated regulations. A proposed action would have significant adverse impacts if it were to substantially affect water quality; substantially reduce water availability or supply to existing users; threaten or damage hydrologic characteristics, or violate established Federal, state, or local laws and regulations. The potential impact of flood hazards on a proposed action is important if such an action occurs in an area with a high probability of flooding.

4.6.2 Proposed Action (ECIP Project Area)

ECIP Project Area Impacts. Assuming proper use of BMPs to provide erosion and sediment control and stormwater management on the active construction site, short-term, negligible to minor, adverse impacts on water resources from construction activities would be expected and minimized to the greatest extent practicable. Under the Proposed Action, the construction contractor would obtain all necessary construction permits and comply with the requirements and guidelines set forth in those permits to minimize the potential for adverse impacts on surface water resources. The Maryland NPDES stormwater program requires construction site operators engaged in clearing, grading, and excavating

activities that disturb 1 acre or more to obtain coverage for their stormwater discharges under an NPDES permit. Construction of the Proposed Action would require application for coverage under MDE's General Permit for Stormwater Associated with Construction Activity; however, due to the expected phased nature of the ECIP construction program, multiple permits would likely be required. Construction or demolition that necessitates a permit also requires preparation of a Notice of Intent to discharge stormwater and an SWPPP that is implemented during construction. Construction activities under the Proposed Action would also be required to meet the effluent limitations guidelines and new performance standards under the USEPA's Construction and Development Rule and the requirements under EISA Section 438.

Per COMAR 26.17.01, an ESCP would be required for the Proposed Action, as it involves land clearing, grading, or other earth disturbances to an area greater than 5,000 ft^2 of land area. Construction activities and BMPs would be implemented according to the *2015 Maryland Stormwater Management and Erosion & Sediment Control Guidelines*, which serves as the official guide for erosion-and-sediment-control principles, methods, and practices. The ESCP would describe the measures implemented to prevent soil erosion during construction by stormwater runoff and to prevent sedimentation of storm sewer or receiving streams. In addition, construction contractors would need to develop a site-specific SWPPP prior to construction. All construction BMPs would follow the guidelines provided in the ESCP, site-specific SWPPP, MDE's *Maryland Stormwater Design Manual*, and Federal and state permitting processes and regulations.

Despite construction BMPs, a minor amount of sediment or construction-related pollutants (e.g., fuels, oils, paints, solvents) could be transported during large storm events to Midway Branch to the east and directly to the Little Patuxent River to the southwest. In the event of a spill or leak of fuel, or other construction-related products, there could be adverse impacts on surface water quality or groundwater quality. All construction equipment would be maintained according to the manufacturer's specifications and all fuels and other potentially hazardous materials would be contained and stored appropriately. In the event of a spill during construction or operation, procedures outlined in NSA's Spill Contingency Plan (SCP), FRP, and SPCC Plan would be followed to quickly contain and clean up a spill. See **Section 4.10.2** for a discussion of potential hazardous materials and wastes impacts resulting from the Proposed Action.

The NSA would comply with the General Performance Standards for Stormwater Management in Maryland, outlined in the *Maryland Stormwater Design Manual*. To avoid adverse impacts from stormwater runoff, the State of Maryland has developed performance standards that must be met at development sites, which apply to any construction activity disturbing 5,000 ft^2 or more of earth. The *Maryland Stormwater Design Manual* outlines five sizing criteria to facilitate stormwater management, including development of ESD and any necessary BMPs to meet these performance standards (see **Section 3.6.1**) (MDE 2009a).

Adherence to ESD as outlined in the *Maryland Stormwater Design Manual* would ultimately reduce the potential long-term, negligible to minor, adverse impacts the Proposed Action could have on water resources. The following are the performance standards for using ESD that the NSA would meet in its stormwater management design:

- The standard for characterizing pre-development runoff characteristics for new development projects will be wooded sites in good hydrologic condition.
- ESD will be implemented to the maximum extent practicable to mimic pre-development conditions.
- As a minimum, ESD will be used to address both water quality volume and recharge volume requirements.
- Channel protection obligations are met when ESD practices are designed according to the Reduced Runoff Curve Number (RCN) Method (MDE 2009a).

The criteria for sizing ESD practices are based on capturing and retaining enough rainfall so that the runoff leaving a site is reduced to a level equivalent to a wooded site in good condition as determined using NRCS methods (e.g., *Hydrology National Engineering Handbook*) (NRCS 1997). The basic principle is that a RCN may be applied to post-development conditions when ESD practices are used. The goal is to provide enough treatment using ESD practices to address channel protection storage volume requirements by replicating an RCN for wooded sites in good condition for the 1-year rainfall event (i.e., replicating the amount of runoff that would be generated by wooded sites in good condition for the 1-year rainfall event), thereby eliminating the need for structural BMPs (MDE 2009a).

Construction and demolition activities associated with the 9800 Troop Support Area would be considered a redevelopment area under COMAR 26.17.02. Stormwater management for redevelopment of the 9800 Troop Support Area must meet the following requirements (State of Maryland 2015):

- Redevelopment designs must reduce existing impervious areas within the limit of disturbance by a minimum of 50 percent
- ESD would be implemented to the maximum extent practicable to provide water quality treatment for a minimum of 50 percent of the existing impervious area within the limit of disturbance
- When a combination of impervious area reduction and stormwater management facilities is used, the combined reduction and treated areas would equal, or exceed, 50 percent of the existing impervious area within the limit of disturbance
- Where conditions prevent impervious area reduction or the implementation of ESD, alternative management practices would be considered
- If redevelopment changes the site runoff characteristics in a way that creates points of concentrated stormwater flow where previously there was sheet flow, or increases discharge rates or volumes, additional conditions to limit disturbances could be required.

Groundwater. Under the Proposed Action, ESD practices would be used to maintain 100 percent of the average annual predevelopment groundwater recharge volume for the site. This would be accomplished by infiltrating runoff from impervious surfaces back into the groundwater through the use of structural (e.g., bioretention) and nonstructural (e.g., filter strips, buffers, and disconnection of rooftops) methods. Although, the post-development average annual groundwater recharge volume must be equal to the predevelopment recharge volume, the distribution of groundwater recharge across the project area would change (e.g., recharge would be concentrated in infiltration areas). These changes in drainage would be

highly localized, site-specific, and negligible. Therefore, long-term, negligible to minor, adverse impacts on groundwater could occur from changes in groundwater recharge patterns associated with the proposed construction and demolition activities.

In the event of a spill or leak of fuel or other construction-related products, there could be long-term, minor, adverse impacts on groundwater quality. All construction equipment would be maintained according to the manufacturer's specifications and all fuels and other potentially hazardous materials would be contained and stored appropriately. In the event of a spill during construction or operation, procedures outlined in NSA's SCP, FRP, and SPCC Plan would be followed to contain and clean up a spill quickly. BMPs outlined in the SPCC Plan would be enacted and NSA would comply with the SPCC Rule (40 CFR 112) and existing groundwater protection protocols as required under the Safe Drinking Water Act (NSA 2013c).

Surface Water. Short- and long-term, negligible to minor, adverse impacts on surface water would occur from construction and demolition activities and operation of the Proposed Action. Natural drainage flows would be altered because of the removal of vegetation, grading, and the addition of buildings and pavement in the ECIP project area. An increase in stormwater runoff volume and velocity would be expected in areas with new or increased impervious surfaces. If a stream channel cannot accommodate the increased volume of stormwater, areas downstream can flood. In addition, the channel morphology of the receiving streams could adjust to accommodate increased flows often resulting in streambank and channel erosion, channel widening, decline in stream substrate quality, and associated impacts on downstream water quality and habitat. However, because these impacts would generally only be expected during large storm events when the stormwater management design cannot capture and treat all rainfall, these impacts would likely be minimal. Regardless, changes in stormwater flows would be greatly reduced through use of ESD. Per the *Maryland Stormwater Management Act* of 2007, ESD would be required to be implemented in the onsite stormwater management system to the maximum extent practicable through the use of better site design and nonstructural BMPs, and by using appropriate structural BMPs only when absolutely necessary. ESD would be used to maintain the predevelopment runoff characteristics after development has occurred, and to reduce stream channel erosion, pollution, siltation and sedimentation, and local flooding. The criteria for sizing ESD practices are based on capturing and retaining enough rainfall so that the runoff leaving a site is reduced to a level equivalent to a wooded site in good condition as determined using NRCS methods (NRCS 1986).

Per the *Maryland Stormwater Design Manual*, the post development 10-year storm event peak discharge from the ECIP project area must not exceed the predevelopment peak discharge (MDE 2009a). Applicable stormwater BMPs established by the MDE regulation for stormwater management and erosion and sediment control would be implemented to reduce the volume and velocity of stormwater runoff to predevelopment conditions, and prevent sedimentation and the introduction of pollutants into the Patuxent River watershed. These practices include creating rain gardens; creating or maintaining riparian forest buffers along streams, maintaining clean culverts; the capture and reuse of stormwater, landscaping parking areas to manage stormwater, and replacing concrete storm drains with grass swales. The construction contractor would be responsible for preparing a stormwater management plan and ESCP for the approval of the NSA Occupational Health, Environmental, and Safety Services Office prior to submittal to the MDE.

Facilities associated with the Proposed Action would be constructed outside of the 100-foot riparian buffer established along the Midway Branch on the eastern edge of the campus. Additionally, reforestation areas would be established in the ECIP project area. The buffer and reforestation areas would act as a water quality filter for the removal or reduction of sediment, nutrients, and toxic substances found in surface runoff. The buffer and reforestation areas would also serve to minimize the impact of human activities on habitat associated with Midway Branch.

The transfer of personnel to Fort Meade and the East Campus from off-post would have long-term, minor, adverse effects on water quality from the generation of additional wastewater. Under the Proposed Action, positions for 7,200 personnel would relocate from outside Fort Meade. The generation of additional wastewater would likely increase nutrient loads (e.g., nitrogen and phosphorus) within the effluent discharged to the Little Patuxent River. See **Section 4.9.2** for discussion of the impacts resulting from the Proposed Action on the potable water and sanitary sewer and wastewater systems.

Despite the implementation of construction BMPs, a minor amount of sediment or construction-related pollutants (e.g., fuels, oils, paints, solvents) could be transported during large storm events to Midway Branch and directly to the Little Patuxent River. Additionally, BMPs that are outlined in the installation SWPPP would be used to ensure that soils disturbed during construction and demolition activities do not pollute nearby water bodies. A spill or leak would be unlikely; however, in the event of a spill or leak, there could be adverse impacts to water quality. All construction equipment would be maintained according to the manufacturer's specifications and all fuels and other potentially hazardous materials would be contained and stored appropriately. Operation of the facilities would not likely result in a spill or leak. However, in the event of a spill during construction or operation, procedures outlined in NSA's SCP, FRP, and SPCC Plan would be followed to contain and clean up a spill quickly. See **Section 4.11.2** for a discussion of hazardous materials and wastes impacts from the Proposed Action. Implementation of the various applicable Federal and state stormwater management requirements, compliance with the Maryland NPDES general construction stormwater permit, and adherence to the SWPPP would minimize the potential for pollutants to reach surface waters and are consistent with the DoD's commitments under the Chesapeake Bay Watershed Agreement and EO 13508.

Floodplains. Construction and demolition activities under the Proposed Action would not occur within the 100-year floodplain. Therefore, no impacts on floodplains would occur as a result of the Proposed Action. Two design criteria from the *Maryland Stormwater Design Manual* apply to protection of floodplains (overbank flood protection criteria and extreme flood criteria) and would be implemented, as appropriate. Overbank flood protection volume sizing criteria prevent an increase in the frequency and magnitude of out-of-bank flooding generated by development. The intent of the extreme flood criteria is to prevent flood damage from large storm events, to maintain the boundaries of the pre-development, 100-year FEMA-designated floodplain, and to protect the physical integrity of BMP control structures.

Coastal Zone Management. Minor, adverse impacts would be expected on coastal zone resources. New construction and operation under the Proposed Action meets the following goals and objectives of the Maryland CZMP:

- To the extent feasible, consider low-impact development options during the design phase of the projects.
- Avoid construction activities within 100 feet of riparian areas where practicable.

- Avoid construction activities within 100 feet of wetland areas, where practical (MDE requires a 25-foot buffer area for wetlands).
- Avoid construction activities within 100 feet of wetlands meeting the criteria of MDE's Special State Concern.
- Development and implementation of a site-specific ESCP and development and implementation of Stormwater Management Plan, including SWPPP measures to control stormwater runoff.

NSA would adhere to all Federal and state permit requirements to protect coastal and marine resources and wetland areas relating to the CZMP. As a result, the Proposed Action represents minimal foreseeable effects on coastal uses or resources in the State of Maryland. Forest stands on the ECIP project area would be managed per the Fort Meade forest conservation program in accordance with the DoD CZMA MOU with the State of Maryland. Construction would have no direct impacts on wetlands but could represent negligible to minor, indirect impacts on non-tidal wetlands. See **Section 4.7.2** for more information on potential impacts on wetlands from the Proposed Action.

ESD would be used to maintain the pre-development runoff characteristics after development has occurred. Additionally, adherence to the 2015 *Maryland Stormwater Management and Erosion & Sediment Control Guidelines for State and Federal Projects* would further minimize runoff and erosion. See *Surface Water* and *Groundwater* in this section for more information on potential impacts on water quality from the Proposed Action and minimization of erosion. Impacts on soils are also discussed in **Section 4.5.2**.

Other relevant enforceable policies are discussed in this EIS, including noise in **Section 4.3.2**, air quality in **Section 4.4.2**, forests in **Section 4.7.2**, historical and archaeological sites in **Section 4.8.2**, sewage treatment and water appropriation in **Section 4.9.2**, and hazardous substances in **Section 4.11.2**. Siting and design of electrical generation and other development associated with the Proposed Action would not result in significant impacts on coastal resources, and are discussed throughout **Section 4**.

This EIS has been provided to the MDE as the Federal Coastal Zone Consistency Determination.

Parking Facility Location Alternatives and Building Demolition Alternatives. Impacts on water resources as a result of construction and operation of the parking facilities would be similar to those described for construction and operation of the ECIP project area, regardless of the parking facility location alternative selected. Various levels of demolition would occur depending on the structure location; however, the change in impervious surfaces would not be significantly different from existing conditions as all alternative sites, except for a small portion of the Building 9817 alternative site, are impervious.

4.6.3 Alternative 1 (National Business Park/East Campus)

Impacts on water resources, including those on surface water resources from increased stormwater runoff, erosion and sedimentation, and possible spills and leaks, could occur during construction of buildings at National Business Park. However, under Alternative 1, the NSA would lease existing buildings, so construction of the buildings at the National Business Park would occur regardless of whether or not the NSA leases buildings at the business park, and impacts on water resources from building construction would be the responsibility of the site developer and owner. Any additional infrastructure upgrades

required for the buildings to meet NSA standards, such as emergency power generation, would be constructed on previously disturbed land. Similar minor, adverse impacts on coastal zone resources as described in **Section 4.6.2** would be expected. No impacts on floodplains would be expected at National Business Park under Alternative 1.

Impacts on water resources related to construction and operation of proposed facilities in the northern portion of the East Campus would be same as those discussed in **Section 4.6.2**.

4.6.4 Alternative 2 (Annapolis Junction Business Park/East Campus)

Impacts on water resources from Alternative 2 would be similar to those described under Alternative 1.

4.6.5 No Action Alternative

Under the No Action Alternative, the DoD would not construct and operate facilities in the ECIP project area. Existing water resources conditions would not change. Therefore, no new impacts on water resources would be expected under the No Action Alternative.

4.7 Biological Resources

4.7.1 Evaluation Criteria

Potential impacts on biological resources are evaluated based on the importance (e.g., legal, commercial, recreational, ecological, and scientific) of the resource, the proportion of the resource that would be affected relative to its occurrence in the region, the sensitivity of the resource to proposed activities, and the duration of ecological impacts. A habitat perspective is used to provide a framework for analysis of general classes of impacts (e.g., removal of critical habitat, noise, and human disturbance).

Ground disturbance and noise associated with construction activities could potentially directly or indirectly result in adverse effects on biological resources. Effects from ground disturbance were evaluated by identifying the types and locations of ground-disturbing activities in correlation to important biological resources. Mortality of individuals, habitat removal, and damage or degradation of habitats might be effects associated with ground-disturbing activities. To evaluate the effects of noise, considerations were given to the potential number of individuals or critical species present, and type of stressors involved.

Potential impacts on threatened and endangered species are evaluated based on the potential for the Proposed Action to directly or indirectly adversely affect listed species or designated critical habitat; jeopardize the continued existence of species that are proposed for listing; or adversely modify proposed critical habitat. Consideration is given to context and intensity of the effects, and the measures proposed to avoid effects on listed species.

4.7.2 Proposed Action (ECIP Project Area)

Vegetation. Development associated with the Proposed Action would be permanent and have long-term, minor, direct, adverse impacts on the residual forests and open fields in the eastern portion of the ECIP project area. The total acreage of vegetation disturbed as a result of the Proposed Action would depend on the final design, layout, and site of the proposed structures and facilities, and the constraints of each of

the sites. In keeping with the FCA, NSA would preserve or reforest acreage equal to 20 percent of the total area developed on the East Campus. Preservation of forested area or reforestation would be factored into the ECIP design process to maintain a campus-like environment while continuing to sustain and support current and future missions. Reforestation would occur on-site or nearby. Groups of three or more landscape trees can be planted as part of reforestation techniques. If reforestation is not entirely possible on-site, then alternative sites would be designated for reforestation.

Soil disturbances could provide opportunities for nonnative and invasive species to establish or spread; however these impacts would be negligible and indirect. As a result, the following BMPs would be implemented during and following construction and demolition activities to prevent the establishment and spread of nonnative species:

- Inspect and clean construction equipment to remove soil, plants, and seeds
- Ensure all fill is as free of nonnative plant propagules, as practicable
- Per EO 13112, *Invasive Species*, remove invasive species from the ECIP project area during construction, and no invasive species would be allowed during revegetation efforts
- Revegetate disturbed areas with native plant species.

BMPs to minimize soil disturbance and control erosion and sedimentation during demolition, construction, and clearing activities would also be implemented to minimize potential impacts on adjacent downgradient forested areas and water quality (see **Section 4.6.2**). No forest stand delineations are required for the ECIP project area due to the availability of existing data. In keeping with the FCA standards, the equivalent of 20 percent of the ECIP project area would be preserved or 20 percent of the forest cover would be reestablished. The Proposed Action would comply with the 20 percent equivalency requirement.

Landscaped areas around proposed buildings would be maintained using existing landscaping practices. Reforested or preserved forest areas would be maintained consistent with the FCA. Therefore, no impacts on vegetation would result from operation of the Proposed Action.

Wetlands. Direct impacts on wetlands and their buffers would be avoided under the Proposed Action. However, if plans change and avoidance of Wetlands W-1 or W-2 is not possible, a new delineation is recommended because the existing survey is greater than 5 years old. Short-term, negligible to minor, indirect impacts on wetlands could occur from sedimentation as a result of erosion in the construction site. Implementation and proper maintenance of erosion and sediment control and stormwater management practices during demolition, construction, and operation would minimize the potential for indirect impacts to occur.

Wildlife. Short-term, minor, direct adverse impacts on wildlife would occur as a result of temporary noise disturbances associated with construction and demolition activities, which include heavy equipment use. Loud noise can disturb wildlife resulting in escape or avoidance behaviors; however, these effects would be temporary. Noise can also distort or mask bird communications signals (e.g., songs, warning calls, fledgling begging calls) and ability to find prey or detect predators (USFWS 2010). If noise persists in a particular area, animals could leave their habitat and avoid it permanently. Avoidance behavior by animals requires the expenditures of excess energy that is needed for survival (e.g., finding new food

sources, water sources, and breeding and nesting habitats) (USFWS 2010). Most wildlife species would be expected to recover quickly from noise disturbance once the construction activities have ceased. Noises associated with construction and demolition activities would only be expected to affect individual animals within close proximity to the noise sources. As a result, population-level impacts would not be expected to occur.

Long-term, minor, direct, adverse impacts could occur from the mortality of small less-mobile terrestrial species (e.g., reptiles, rodents, and small mammals) as a result of collision with construction equipment. Wildlife in the ECIP project area would be expected to have adapted to an urban environment and would generally avoid high traffic areas.

Forested and open field habitat would be lost, however impacts would be minimized through reforestation or preservation of lands equal to 20 percent of the total area developed on the East Campus; therefore, impacts on wildlife habitat would be minor.

Protected Species - Federally Listed Species. Construction of the proposed Project Action could result in negligible, adverse impacts on the federally-listed northern long-eared bat. Suitable roosting and foraging habitats for the northern long-eared bat occur within and adjacent to the ECIP project area, and presence of the northern long-eared bat has been detected acoustically elsewhere on Fort Meade. Project activities would not deviate from the requirements of the Programmatic Guidelines and would be covered under the IMCOM Programmatic Informal Consultation and would avoid tree clearing activities from April 15–August 30 (U.S. Army 2015, USFWS 2015a). However, the Programmatic Guidelines indicate that site-specific consultation with the local USFWS field office (i.e., Chesapeake Bay Field Office for the Proposed Action) is often needed to adequately assess the potential direct and indirect effects associated with construction projects.

All demolition and construction activities would occur more than 0.5 miles from known hibernacula. Therefore, no direct effects on hibernating northern long-eared bats would occur during the winter (U.S. Army 2015).

The potential exists for roosting and foraging bats, or individuals flying through their home range, to be disturbed or displaced by dust, noise, and light associated with demolition, construction, and operation activities. Given the temporary and variable nature of construction activities, these impacts and other behavioral responses to the disturbances would be insignificant. Additionally, measures would be implemented to minimize potential construction impacts, such as generation of dust. Therefore, disturbances related to dust are expected to be insignificant.

Northern long-eared bats hunt prey in the air while flying using echolocation (i.e., an auditory behavior that uses ultrasonic signals to detect prey and maneuver through the environment). While little information is available in the literature regarding the specific effect of noise on bat species utilizing echolocation in their search for prey, most noise from construction of the Proposed Action is expected to occur during the day and not expected to disturb foraging (USFWS 2014b). Impacts from noise disturbances associated with construction and operation activities are expected to be minimal and temporary, and are not expected to permanently impact local bat populations (Natural Resource Solutions 2012).

Additional safety lighting may be required during construction activities. Many bat species respond in different ways to light disturbance. Some bats are light averse and would avoid lit areas, while others actively forage in lit areas. Additional light might cause avoidance behavior and reduce the availability of foraging areas for the northern long-eared bat. However, higher densities of *Myotis* spp. have been recorded in lit areas as compared to unlit areas due to the large number of insects (particularly moths) attracted to street lights, particularly low wavelength light (University of Bristol 2014). The appropriate safety lighting would be used during construction and operation of the proposed facilities to illuminate the specific work area, or area of safety concern, and would be directed away from adjacent potential foresting and roosting habitat. Effects would be minimal and temporary, and are not expected to significantly impact local bat populations.

While it is possible that physical impacts resulting in injury or death could occur from operation of construction vehicles or felling trees, these impacts would be avoided. All tree cutting and clearing would be conducted in accordance with the Programmatic Guidelines and avoided during the northern long-eared bat active season (April 15–August 30) (USFWS 2015h). If there is a need to remove a single or small cluster of trees (less than 1 acre) during the active season, the procedures in the Programmatic Guidelines would be followed (U.S. Army 2015). In addition, construction vehicles in the ECIP project area would be moving slowly to enable bats to avoid the vehicles, and traveling mostly during the daytime when northern long-eared bats are not flying. Therefore, given the slow moving, daytime construction vehicle traffic, the species' nocturnal behavior, and the timing of clearing, no collisions between northern long-eared bats and construction vehicles are anticipated.

All contractors and others present during construction activity will be fully informed of the potential to encounter bats and their responsibilities to avoid impacts on bats. If dead or injured bats are encountered, the number of bats and location would be reported to the USFWS Chesapeake Bay Field Office (USFWS 2013a).

Tree removal could also result in the loss of foraging and roost habitat for the northern long-eared bat. Based on July 2016 aerial photography, the ECIP project area contains approximately 32 acres of forested land. As discussed in the Vegetation section, the total acreage of forested land and vegetation disturbed would depend on the final design, layout, and location of the proposed facilities. The likely behavioral response of bats returning in the spring to the cleared area would be to disperse to adjacent suitable habitat, but these changes would be insignificant, based on the remaining forested habitat within Fort Meade and at the Patuxent Research Refuge (less than 2 miles south of the ECIP project area) and the propensity of the species to use alternative roost sites. NSA would preserve or reforest lands equal to 20 percent of the total area developed on the East Campus. Any new tree planting would provide returning bats familiar sheltering areas and new foraging habitat while they search for new roost sites, thereby helping to reduce energy demands immediately after migration (USFWS 2013b). Furthermore, the Programmatic Guidelines state that inactive season tree removal effects would be discountable by following similar conservation measures to the FHWA and Federal Railroad Administration's Range-wide Biological Assessment for Transportation Projects for Indiana Bat and northern long-eared bat (U.S. Army 2015).

On September 22, 2015, the USFWS issued a letter of concurrence that the Proposed Action would not likely adversely affect the northern long-eared bat because trees would not be cleared during the active season (April 15–August 30). If there is a need to remove more than 1 acre of trees during the active

season, the USFWS Chesapeake Bay Field Office and Fort Meade Environmental Division should be consulted to evaluate potential effects. Consultation with the USFWS revealed that, except for the occasional transient individuals, no other federally proposed or listed endangered or threatened species protected by Section 7 of the ESA are known to exist within the project impact area. Should project plans change, or if additional information on the distribution of listed or proposed species becomes available, this determination may be reevaluated. Consultation letters with the USFWS are provided in **Appendix D**.

Protected Species - Migratory Birds. Clearing of the ECIP project area could result in adverse impacts on migratory birds. The wood thrush and the Kentucky warbler were identified as migratory birds of concern within the ECIP project area and are known to occur at Fort Meade (USDA 2002, USFWS 2015b). Additionally, it is assumed that other migratory birds covered under MBTA occur within the ECIP project area. Direct loss of forests, which provides nesting habitat for migratory birds, is expected under the Proposed Action. However, there is forested habitat in adjacent areas, and birds would be expected to relocate to these habitats. Although, construction activity associated with the Proposed Action could result in unintentional take under the MBTA, implementation of the following measures would avoid it:

- Avoid clearing trees during the bird nesting season (typically spring months)
- If tree clearing cannot avoid the nesting season, conduct pre-construction surveys to identify and avoid active nests
- Train construction workers to identify and avoid active nests.

Any effect on migratory birds from noise generation would be negligible.

Protected Species - State Listed Species. There are no state-listed threatened or endangered species documented or known to occur on or adjacent to the ECIP project area.

4.7.3 Alternative 1 (National Business Park/East Campus)

Construction and operational activities associated with Alternative 1 could result in short- and long-term, negligible, adverse impacts on wildlife. National Business Park site owner is planning to construct facilities and infrastructure that, under Alternative 1, would be leased. Therefore, while impacts on vegetation, wetlands, or protected species could occur at the site due to construction, these impacts would be the responsibility of the site owner. Noise impacts on wildlife could occur from construction and operation of emergency generators at the National Business Park site; however, given the minimal expected increase in noise, these impacts would be negligible.

Impacts from demolition activities and construction and operation of proposed facilities in the northern portion of the East Campus under Alternative 1 would be the same as those described under Proposed Action.

4.7.4 Alternative 2 (Annapolis Junction Business Park/East Campus)

Impacts on vegetation, wetlands, wildlife, and protected species under Alternative 2 would similar to those described under Alternative 1.

4.7.5 No Action Alternative

Under the No Action Alternative, the NSA would not implement the Proposed Action and no changes in biological resources would occur. Therefore, no impacts on vegetation, wetlands, wildlife, or protected species would be expected under the No Action Alternative.

4.8 Cultural Resources

4.8.1 Evaluation Criteria

Adverse impacts on cultural resources can include physically altering, damaging, or destroying all or part of a resource; altering characteristics of the surrounding environment that contribute to the resource's significance; introducing visual or audible elements that are out of character with the property or that alter its setting; neglecting the resource to the extent that it deteriorates or is destroyed; or the sale, transfer, or lease of the property out of agency ownership (or control) without adequate legally enforceable restrictions or conditions to ensure preservation of the property's historic significance. Both temporary and long-term project impacts were considered and evaluated for their potential effects. Demolition of a historic property is an adverse effect, by definition.

4.8.2 Proposed Action (ECIP Project Area)

For this Proposed Action, the demolition of the NRHP-eligible Building 9800A and potential short-term noise and vibration impacts resulting from its demolition may constitute the most relevant potential adverse effects on cultural resources. The Proposed Action involves the demolition of approximately 1.9 million ft^2 of buildings and infrastructure on the NSA Main Campus and the 9800 Troop Support Area. Six buildings on the NSA Main Campus, all nine buildings in the 9800 Troop Support Area, and three surface parking lots would be demolished to provide room for the proposed facilities and supporting infrastructure (see **Table 4.8-1**). None of the five previously identified historic properties on Fort Meade or Site 18AN1240 are located within the APE, and would not be affected by the Proposed Action. The Proposed Action would have a major impact on historic properties resulting from demolition of Building 9800A.

ECIP Project Area and Parking Facility Location Alternative Impacts. Construction and operation of the proposed ECIP administrative and parking facilities would not have major impacts on any previously identified archaeological or architectural resources. Although design has not been finalized, the height of any facilities constructed at these sites would not have adverse visual impacts on the NHRP-listed Baltimore-Washington Parkway or the Grassland plantation, or on the NRHP-eligible Fort Meade Historic District and Buildings 9800 and 9800A. Because of distance, tree cover, and low height, facilities constructed at these sites would not be visible from any of the previously identified historic properties and would therefore have no visual impact on them. Buildings 9800 and 9800A are approximately 1,000 feet from the ECIP project area and from the closest proposed parking facility location (N8/N9 parking lot). Construction at these sites would have no effect on Buildings 9800 and 9800A.

Table 4.8-1. Buildings Proposed for Demolition as part of the Proposed Action

Building #	Total Size (ft^2)	Year Constructed
Buildings within the ECIP Project Area		
9801	80,550	1954
9802	80,550	1954
9803	80,550	1954
9804	80,550	1954
9805	32,240	1954
9810	22,287	1954
9827	68,061	1954
9828	128,393	1973
9829	19,088	1972
Subtotal	*592,269*	
Buildings outside of the ECIP Project Area (on the NSA Main Campus)		
9800A	512,837	1968
9817	353,603	1968
9814	75,300	1965
9703	114,780	1973
9705	129,686	1976
9808	105,000	1957
Subtotal	*1,291,206*	
TOTAL	**1,883,475**	

Building Demolition. Because the Proposed Action build-out period extends from FY 2019 to FY 2029, buildings in the APE dating from 1979 or earlier were evaluated for NRHP eligibility. Two resources, Buildings 9800 and 9800A, were determined eligible for listing in the NRHP. Building 9800 would not be demolished or altered as part of the Proposed Action. Building 9800A is proposed to be demolished, which would constitute an adverse effect under Section 106 of the NHPA. Because of the proximity of Buildings 9800 and 9800A (approximately 100 feet from one another), there is the potential for short-term noise and vibration impacts on Building 9800 resulting from the demolition of Building 9800A; however, these impacts would be temporary and minimal and would not rise to the level of an adverse effect. Building 9800 would remain occupied during the demolition of Building 9800A, and the NSA would work to minimize noise and vibration effects as much as possible. The NSA will continue to consult with MHT and will develop a Memorandum of Agreement mitigating the adverse effect of the demolition of Building 9800A. The Memorandum of Agreement will also include provisions for continued consultation with MHT through the design phase of the ECIP. Therefore, the demolition activities under the Proposed Action would have a major adverse impact on cultural resources. **Appendix E** contains the consultation with MHT.

4.8.3 Alternative 1 (National Business Park/East Campus)

Alternative 1 would result in the demolition of Buildings 9703, 9705, 9808, 9814, and 9817, and the lease of available buildings at National Business Park with space sufficient to accommodate the relocation of

4,400 personnel. None of the buildings proposed for demolition are eligible for the NRHP. The site owner would be responsible for regulatory compliance regarding construction of facilities at National Business Park and any potential impact or adverse affect on the NRHP-eligible Clark/Vogel house. Leasing existing space under Alternative 1 would not have major impacts on any previously identified archaeological or architectural resources.

Impacts from demolition activities and construction and operation of proposed facilities in the northern portion of the East Campus under Alternative 1 would be the same as those described under Proposed Action. Building 9800A and the 9800 Troop Support Area and the buildings within that area would not be affected, and the parking facility alternatives outside of the East Campus would not be implemented.

4.8.4 Alternative 2 (Annapolis Junction Business Park/East Campus)

Impacts under Alternative 2 would be similar to those described under Alternative 1. No known cultural resources are in the vicinity of Annapolis Junction Business Park.

4.8.5 No Action Alternative

Under the No Action Alternative, the DoD would not construct and operate approximately 2.9 million ft^2 of operations and headquarters facilities on the northern portion of the East Campus and the 9800 Troop Support Area. Baseline conditions for cultural resources as described above would remain unchanged. Therefore, no impacts on cultural resources would occur as a result of the implementation of the No Action Alternative.

4.9 Infrastructure

4.9.1 Evaluation Criteria

The analysis to determine potential impacts on infrastructure and infrastructure systems considers primarily whether a proposed action would exceed capacity or place unreasonable demand on a specific utility. Impacts might arise from energy needs created by either direct or indirect workforce and population changes related to installation activities. It is assumed construction contractors would be informed of utility locations prior to any ground-disturbing activities that would result in unintended utility disruptions or human safety hazards. All construction activity would be conducted in accordance with Federal and state safety guidelines. Any permits required for excavation and trenching would be obtained prior to the commencement of construction activities.

4.9.2 Proposed Action (ECIP Project Area)

Short- and long-term, negligible to moderate, adverse and beneficial impacts on infrastructure would be expected. Where available, the discussion uses conventional building standards to estimate loads as specific design-level load information for infrastructure and utility demand is unknown. The Proposed Action would result in the use of existing infrastructure and the construction of additional infrastructure to support the new proposed facilities.

Potable Water Supply. Short-term, negligible to moderate, and long-term, negligible to minor, adverse impacts are expected during construction. The NSA currently draws 1.2 mgd from the water treatment plant, which is approximately 16 percent of the current design capacity and 35 percent of the current

production capacity (NSA 2013a). Water demand would increase slightly during construction activities associated with the Proposed Action, which would result in short-term, negligible, adverse impacts. Additionally, temporary water supply disruptions and water pressure changes could occur during construction and while new buildings come on line. Increases in water demand associated with construction activities would not be expected to exceed existing capacity. The buildings proposed for demolition in the NSA Campus and the 9800 Troop Support Area, and the new buildings would temporarily be in operation at the same time, until personnel transition from the existing buildings to the new buildings and existing buildings are taken offline. During the time period in which personnel are transitioning to new facilities (5 to 7 years), water demand would increase, and impacts on water supply would be short-term, moderate, and adverse. Potential increases in water demand associated with the operation of the existing and new buildings concurrently would not be expected to exceed existing capacity.

The Proposed Action would require water supply capacity for an additional 7,200 people moving on-post. Assuming 35 gallons per day usage per person in an office building, this would result in an increase of approximately 252,000 gallons of water used per day, which represents a 21 percent increase over current usage. The personnel from the 9800 Troop Support Area would be moved elsewhere on Fort Meade, so their water consumption would remain the same. The proposed facilities would be connected to existing potable water system. Reclaimed water would be used for cooling systems, so no potable water would be necessary for such systems (see *Building Heating and Cooling Systems*). Operation of the Proposed Action would not exceed the capacity of either the potable water or the reclaimed water systems.

Building Heating and Cooling Systems. Long-term, minor, beneficial and adverse impacts would be expected. The Proposed Action would result in the replacement of old, inefficient heating and cooling systems within the 9800 Troop Support Area with modern and energy-efficient systems, thereby providing reliable heating and cooling at a reduced energy cost. As noted in **Section 2.2.3.2**, viable alternatives for heating the buildings include packaged boilers or a hybrid system of packaged boilers and GSHPs, which would use natural gas, electricity, or a combination. Although, general use of these resources (i.e., natural gas and electricity) would be required to operate the building heating and cooling system under each alternative, resulting in long-term, minor, adverse impacts on the natural gas and electric supply, the new systems would be more efficient than existing systems. Additionally, proposed buildings might include more efficient windows, insulation, and other materials and designs that that reduce heating and cooling demands. The final design would incorporate heating and cooling systems capable of handing the expected load of each proposed building.

The cooling system typically used with packaged boiler heating is a chilled water system consisting of electrically-powered chillers and cooling towers. Make-up water for cooling under this alternative would be met with reclaimed water from the chiller plant and reclaimed water system that has been established for the East Campus. Five mgd of reclaimed water is available for cooling requirements on the NSA Campus, including the East Campus; therefore, sufficient capacity exists to support the proposed cooling systems. New reclaimed water pipes would need to be constructed to connect to the proposed facilities.

For the hybrid building heating and cooling alternative, building cooling loads would partially be accommodated by the GSHP well fields, with the excess cooling load being directed to supplemental heat rejection equipment (e.g., cooling tower, fluid cooler, etc.).

Long-term, negligible, beneficial impacts on steam heating capacity would be expected. Buildings 9800A and 9817 are heated using steam and would be removed from the steam heating system prior to demolition of the buildings. Therefore, the steam required to heat the approximately 860,000 ft^2 in these buildings would be available for use at other locations throughout the NSA Main Campus. No other active steam infrastructure would be affected, and the proposed new buildings would use natural gas, not steam heat (NSA 2013a). If necessary, the abandoned steam heat pipes in the 9800 Troop Support Area would be removed to make way for the Proposed Action.

Sanitary Sewer and Wastewater Treatment System. Short-term, negligible to minor, adverse impacts and long-term, minor, adverse and beneficial impacts would be expected. Construction of the Proposed Action would result in temporary disruptions in sanitary sewer disposal when the new buildings are connected to the sewer system, and existing pipes are relocated and replaced with new pipes. The increased demand on the system from the influx of 7,200 personnel from off-site locations would generate an assumed additional 252,000 gallons of wastewater per day. Currently, the average flow to the WWTP is approximately 1.6 mgd. Therefore, the increased wastewater generated under the Proposed Action would only be 3 percent above current WWTP flow to 41 percent of the design capacity, which would still be well within the maximum capacity of the WWTP. Boiler blowdown would make a minimal contribution to the wastewater discharged to the WWTP.

Stormwater Drainage. Short-term, negligible to minor, adverse impacts and long-term, minor, beneficial impacts on stormwater drainage systems would be expected. Demolition and construction activities would temporarily disrupt stormwater management. The State of Maryland would require a Stormwater Management Plan that would require the implementation of BMPs to limit adverse impacts of sedimentation into the stormwater drainage system during construction and restoration activities. Construction of the Proposed Action would result in replacement of old stormwater infrastructure with new infrastructure in the 9800 Troop Support Area, and installation of new infrastructure in the northern portion of the East Campus. Stormwater would be sized and designed to comply with state and Federal regulations and guidelines (see **Sections 3.6** and **4.6**). Sustainable designs outlined in **Sections 3.10** and **4.10** would be implemented and minimize impacts on stormwater drainage systems.

Electrical Supply. Short-term, minor, adverse and long-term, moderate, beneficial impacts on the electricity supply system are expected. Short-term energy disruptions would be anticipated while buildings are taken off-line and put on-line. Long-term, beneficial impacts would be anticipated due to the new electrical infrastructure designed to provide electrical power from BGE to the ECIP project area. Operation of the five proposed buildings would consume approximately 126.7 million kilowatt-hours per year (HDR 2015).

The Proposed Action also includes the construction of 121 MW of emergency generator facilities to ensure a redundant power supply. Viable alternatives for emergency power include generators and a combination of generators and combustion turbines. The hybrid alternative would result in lower emissions of criteria pollutants per year and be more efficient overall than the generator alternative.

The Proposed Action would add life-safety power generation via a generator at each of the five proposed buildings. The generators could use different or multiple fuel types. Each building would have a life-safety power generator appropriate for its size and design.

Natural Gas Supply. Short- and long-term, minor, adverse impacts on the natural gas distribution system would be expected during construction from short disruptions in service. Two alternatives to provide heating to new buildings, including packaged boilers and a hybrid building heating system, could use natural gas. The heating systems, and the associated cooling systems, would be designed to meet both the needs of each building (also see *Building Heating and Cooling Systems* above). New natural gas lines would likely be tapped from the existing line that runs through the ECIP project area along O'Brien Road for new buildings in the northern portion of the East Campus. Existing natural gas infrastructure in the 9800 Troop Support Area would be modified to allow connection to buildings constructed in that area. Some existing facilities on the NSA Main Campus and 9800 Troop Support Area could temporarily be in operation at the same time as the newly constructed buildings until the personnel transition was completed. Therefore, natural gas demand would temporarily increase resulting in short-term, minor impacts.

There would be a long-term increase in natural gas demand due to implementation of the Proposed Action. Approximately 2.5 million cubic feet of natural gas per year (285.2 cubic feet per hour) would be required to heat the five proposed buildings under the Packaged Boiler Alternative (HDR 2015). Less natural gas would be required for building heating under the Hybrid Building Heating System Alternative as some heating demand would be serviced by the GSHP systems. Current capacity exceeds anticipated building heating needs of the Proposed Action under both building heating alternatives; therefore, no significant impacts would be expected during operation of the new buildings.

Domestic hot water for the proposed buildings would be provided via gas-fired water heaters/boilers and could be supplemented by solar hot water heaters for the smaller buildings. The 2007 EISA requires that 30 percent of the domestic hot water demand for new Federal buildings be supplied by solar hot water heaters, if it is lifecycle cost-effective. **Table 4.9-1** presents the estimated requirements for hot water for the Proposed Action based on the proposed building sizes, and the characteristics of a solar water heating system that would be required under the hybrid option in which hot water for the proposed buildings (likely the 150,000 ft^2 and 330,000 ft^2 buildings) is produced by gas-fired water heaters paired with solar hot water heaters. The table illustrates that the 150,000-ft^2 and 330,000-ft^2 buildings would require 400 ft^2 and 860 ft^2 of solar collection, respectively, to meet EISA guidelines.

Table 4.9-1. Estimated Demand for Domestic Hot Water

Feature	Building Size (ft^2)		
	150,000	**330,000**	**800,000**
Occupancy (people)	700	1,500	3,700
Domestic hot water use at 1 gallon/person/day demand (gallons/day)	700	1,500	3,700
Maximum hourly demand at 0.40 gallon/person/hour (gallons/hour)	280	600	1,480
30% of max daily demand (gallons/day) (per EISA)	210	450	1,110
EISA Solar Water Heating Potential			
Solar energy required (Btu/day)	175,140	375,300	925,740
Solar collector size required based on average 500 Btu/ft^2/day output for Fort Meade (ft^2) with 15% capacity added (ft^2)	**400**	**860**	**2,130**

Source: HDR 2015

Note:

Btu=British thermal unit, a traditional unit of energy needed to cool or heat one pound of water by 1 °F.

Solid Waste Management. Long-term, minor impacts on solid waste are expected from construction and demolition debris. Construction and demolition debris is generally composed on clean building materials, and most of the waste would be recycled. Remaining debris would be placed in a landfill, resulting in a long-term, irreversible effect. **Table 4.9-2** estimates the construction debris generated from the proposed construction and demolition activities.

Table 4.9-2. Estimated Construction and Demolition Debris Generated from the Proposed Action

Project	Total Square Feet	Multipliers (pounds/ft2)	Debris Generated	
			Pounds	Tons
Building Demolition	1,883,475	158	297,589,050	148,794.5
Pavement Demolition	2,160,000	69.9	150,984,000	75,492
Building Construction	2,880,000	4.34	12,499,200	6,249.6
Pavement Construction	2,415,000	1	2,415,000	1,207.5
		Total	**463,487,250**	**231,743.6**

Source: USEPA 2009

The total debris generated from construction and demolition activities is approximately 231,744 tons. The construction contractor would be responsible for taking all debris to appropriate landfills or recycling areas.

Long-term, negligible impacts on operational solid waste generation at the NSA Campus would be expected due to the increase of staff on site. All solid waste would be recycled to the maximum extent feasible in accordance with NSA's waste contracts. NSA's current waste diversion rate is 65 percent, including diversion of an estimated 99 percent of paper waste. After processing by NSA, any solid waste generated would be disposed of in accordance with the Anne Arundel County Ten-year Solid Waste Management Plan, which is expected to operate within approved limits through 2023 (Anne Arundel County 2013).

Liquid Fuel Supply. No short-term impacts on the liquid fuel supply would be expected. It is anticipated that any new liquid fuel storage tanks to support the emergency power generators and life-safety generators would be tested and on-line before the generators come into service. Removal of two liquid fuel ASTs in the 9800 Troop Support Area would not result in any impacts. Long-term, negligible, adverse effects on the liquids supply would be expected from operation and periodic testing of emergency and life-safety generators. Fuel would be brought on site by contractors who would be responsible for spill prevention plans and clean up.

4.9.3 Alternative 1 (National Business Park/East Campus)

Apart from installation of emergency generators, no long-term impacts on infrastructure are anticipated from leasing space for up to 4,400 personnel because the facilities at National Business Park would already have necessary utilities and communications services available for any future tenant, and the new utilities would already be energy-efficient. The 4,400 personnel that would be housed at National Business Park currently work in the region and, therefore, are currently using local utility services.

Impacts from construction and operation of proposed facilities in the northern portion of the East Campus under Alternative 1 would be the similar to, but less than, those described in **Section 4.9.2**. There would

be fewer personnel housed in the ECIP project area, so there would be less demand on utilities and infrastructure.

4.9.4 Alternative 2 (Annapolis Junction Business Park/East Campus)

This alternative would have the same impacts as Alternative 1.

4.9.5 No Action Alternative

The No Action Alternative would result in no changes to infrastructure within the proposed project area as a result of not implementing the Proposed Action. The DoD would not construct approximately 2.9 million ft^2 of operations and headquarters facilities on the northern portion of the East Campus and the 9800 Troop Support Area. Existing NSA operations would continue to be performed both on- and off-site, and existing infrastructure and utility conditions would continue.

4.10 Sustainability

4.10.1 Evaluation Criteria

A sustainability analysis to determine potential impacts of sustainable design considers whether a proposed action would contribute to the DoD and NSA's overall sustainability goals as measured by compliance with pertinent regulations. Pursuant to NEPA, EISA, EPACT, EO 13693, and DoD and NSA policies, impacts from energy usage and alternative energy sources are also evaluated. Adverse impacts would be considered major if implementation of the Proposed Action resulted in the substantial inability to achieve compliance with these regulations and policies.

4.10.2 Proposed Action (ECIP Project Area)

In compliance with the Federal Guiding Principles, the EISA, EO 13693, and DoD's sustainability and performance policies, the operational complex and headquarters space would incorporate the following sustainability components and strategies to achieve sustainability, lifecycle cost-effectiveness, and resource-use-efficiency standards to the maximum extent practicable.

Long-term, minor to moderate, beneficial effects on energy consumption through reduced use of conventional energy and the increase in usage of renewable and energy efficient technologies would be expected from incorporation of sustainable development strategies such as LEED. The U.S. Green Building Council's LEED program was developed to standardize benchmarks in building design and management and to provide means to measure and certify the sustainability of a building. As an elected certification system, the goal of implementing LEED strategies is to minimize a facility's adverse impact on natural resources while maximizing its efficiency, productivity, maintainability, durability, accessibility, and comfort.

Regulation-compliant sustainable building features that can be cost-effectively integrated to achieve development equivalent to a LEED rating would be incorporated to the maximum extent practicable for the Proposed Action. Thus, site design would place emphasis on maximizing operating efficiencies of building systems and minimizing the environmental footprint. Environmental design considerations that would incorporated into buildings, utilities, and associated infrastructure include sustainable site design (which incorporates innovative design and indoor environmental quality), water efficiency, strategies for

conservation of energy and the atmosphere, and materials and resources. The impacts of these design considerations are discussed in the following sections.

Site Design

Redevelopment of existing facilities and spaces, such as redevelopment of the 9800 Troop Support Area, would be preferred over development of undisturbed portions of the Campus, as this would reduce the overall environmental impact and would enable preservation of green or open space in accordance with the *NSAW Facilities Master Plan* (NSA 2013a). The factors considered for site planning also include innovative design technology, and management of indoor environmental quality.

Strategies for Water Efficiency

As discussed in **Sections 4.6.2** and **4.9.2**, stormwater management facilities would be designed to comply with the appropriate State of Maryland regulations, the DoD's *Sustainable Buildings Policy*, NSA design standards, and the *NSAW Facilities Master Plan* to the maximum extent practicable.

Specifically, ESD techniques defined within the Maryland Stormwater Management Act would be implemented to the maximum extent possible to mimic natural hydrological runoff characteristics and to minimize the impact of land development on water resources. ESD includes optimizing conservation of natural features (e.g., drainage patterns, soil, and vegetation); minimizing impervious surfaces (e.g., pavement, concrete channels, and roofs); slowing runoff to maintain discharge timing and increase infiltration and evapotranspiration; and using other nonstructural practices or innovative technologies approved by MDE (MDE 2009b). Additional to these ESD techniques, design for the Proposed Action could include low-impact stormwater management through bioretention with vegetated swales. This method entails development of a landscape depression that slows the flow of stormwater directed into some combination of sand beds, ponding areas, organic or mulch layers, planting medium, and plants to remove stormwater contaminants on-site. The runoff is then allowed to infiltrate native soils or is directed to nearby stormwater drains or receiving waters.

Use of low-impact development, ESD techniques, and BMPs for stormwater management would also ensure adherence to the MDE's anti-degradation of water quality policies. ESD techniques could be appropriate if opportunities exist to reduce the life-cycle cost of the site's stormwater infrastructure. Additional examples of ESD strategies include grading to encourage sheet flow and lengthen flow paths; maintaining natural drainage divides to keep flow paths dispersed; disconnecting impervious areas such as pavement and roofs from the storm drain network, allowing runoff to be conveyed over pervious areas instead; preserving the naturally vegetated areas and soil types that slow runoff, filter out pollutants, and facilitate infiltration; directing runoff into or across vegetated areas to help filter runoff and encourage recharge; using rain barrels and cisterns, soil amendments, tree box filters, vegetated buffers, and vegetated roofs. These techniques would garner long-term benefits on water quality through reduced runoff, reduced potable water consumption, reduced erosion, and improved habitat for wildlife in vegetated areas.

Strategies for Conservation of Energy and the Atmosphere

The energy requirements for the Proposed Action and the supporting infrastructure are provided in **Sections 2.1.3** and **4.9.2**, respectively. The following technologies would be used to support improved efficiency as those requirements are met.

Emergency Power Generation Alternatives. The NSA would install either generators or hybrid generators/combustion turbines to provide emergency power as necessary. In compliance with EO 13221 requirements, these options would use no more than 1 watt in their standby power consuming mode. Both generator alternatives would support optimized space-use efficiency and would provide cost-effective reliable power. Additionally, these power alternatives would comply with Federal standards for reduced air emissions and improved energy efficiency. Respectively, **Sections 3.4** and **4.4** provide detailed discussion on the existing conditions and impacts of the Proposed Action on air quality.

Building Heating System Alternatives. The NSA would either install natural gas-fueled or combined natural gas-fueled/GSHP building heating and cooling systems. The packaged boilers to be installed would be modern and energy efficient with regulated standards on heating capacity and emissions. The boilers would be high efficiency condensing type natural gas-fired boilers providing a minimum full load efficiency of 90 percent. Because all packaged boilers would be fuel-efficient, long-term, beneficial impacts on air quality would be expected from reduced GHG emissions as compared with less efficient conventional options. Refer to **Section 4.4** for detailed discussion on air quality impacts. Per EO 13693, new Federal buildings are required to use 30 percent less energy than a minimally compliant American Society of Heating, Refrigerating, and Air Conditioning Engineers (ASHRAE) 90.1 building. The baseline systems required by ASHRAE 90.1 consisted of 80 percent efficient natural gas-fired boilers with constant volume pumping. Building simulations showed energy savings over the minimum ASHRAE 90.1 baseline of 8.6 percent for the 150,000 ft^2 building, 23.3 percent for the 330,000 ft^2 building, and 22.2 percent for the 800,000 ft^2 building (HDR 2015).

Additionally, the hybrid building heating system alternative would capitalize on electrically powered GSHPs that use the Earth's relatively constant temperature to provide heating and cooling for buildings (Trane 2007). Depending upon the well field installed for the GSHPs and the affected acreage, NSA could expect long-term, minor to moderate benefits from energy cost savings associated with heating and cooling, and reduced energy consumption as the system maintains a temperature balance. Used solely, GSHPs in ideal situations can use between 25 and 50 percent less energy (and proportionate cost) than conventional technologies. However, GSHPs would not likely be able to serve the 800,000-ft^2 building alone under the Proposed Action due to large well field acreage requirements (1.7 acre), but would be able to serve the proposed 150,000-ft^2 and 330,000-ft^2 buildings. Although less efficient than stand-alone GSHPs, a hybrid system that would use GSHPs with energy-efficient packaged boilers would still provide the NSA with long-term benefits from potential cost and energy savings.

Solar Hot Water. The EISA requires that 30 percent of the domestic hot water demand for new Federal buildings be supplied by solar hot water heaters, if it is lifecycle cost-effective. Annual energy savings for the proposed buildings would range from approximately $685 to $3,600 based on the building size (HDR 2015). The NSA could install passive solar hot water systems that rely on the design and orientation of the collector rather than mechanical devices to absorb and store the sun's energy (USEPA 2012d) (see also **Section 4.9.2**). Solar hot water technology uses sunlight to heat water in a collector and then distribute the heated water throughout a building, reducing a building's reliance on a conventional hot water heater that uses non-renewable sources of energy (NREL 2015). The potential beneficial impacts of solar water heating would be energy savings over the life of the equipment, not installed costs, which would be higher. The solar collectors would be assumed to be installed on the roof of the building they serve to minimize visual impacts, and negate effects of potential shading by surrounding structures including the buildings they serve.

Reduction of the Heat Island Effect. "Heat island" refers to developed areas that have hotter surface and air temperatures than nearby rural areas. A heat island effect occurs when dark-colored heat-absorbing surfaces (e.g., buildings, roads, parking lot pavements) replace vegetation and open land (USEPA 2013b). To reduce heat island effect within the ECIP project area, parking facilities could be constructed under cover (i.e., buildings, decks, or roofs). Additionally, site hardscape could be made of highly reflective materials (i.e., light-colored materials such as gray or white concrete). If use of such materials is not be feasible, the NSA could incorporate open-grid paving systems (pavement that is pervious to water), which contribute to a reduction of the heat island effect and increase stormwater infiltration. Each area of the development would be evaluated to determine the most appropriate options for reducing heat island effect for roofed and non-roofed facilities. Heat island effect could also be reduced by shading paved surfaces with trees, installation of solar panels, or other features such as green roofs.

Renewable Energy Generation. The NSA would also consider the feasibility of incorporating renewable energy systems in the ECIP project area. Currently, the NSA is investigating options for installation of solar panels on buildings that would be constructed under the Proposed Action. Incorporation of this technology would be cost-effective and help achieve compliance with DoD and Federal requirements for use of renewable energy.

Materials and Resources

Recycling and Use of Recycled Materials. Materials and debris resulting from proposed demolition and construction activities would be recycled and repurposed to the maximum extent practicable, as described in **Section 4.9.2**. Additionally, the proposed new facilities would be designed to accommodate recycling programs for the following items, at a minimum: paper, cardboard, glass, plastics, and metals. Design and construction of new proposed facilities would incorporate materials with high recycled content, thereby helping reduce the demand for raw materials. Materials with high recycled content include steel, ceiling panels, gypsum wallboard, and glass. The exact percentage of these materials would be determined based on the final building designs.

Local/Regional Materials. Materials used to construct facilities for the Proposed Action could be sourced from local or regional sources (manufactured, harvested, extracted, or processed within 500 miles of the ECIP project area). This could encourage local markets and help reduce air pollutants and energy used to transport goods. Common materials that can be found within 500 miles of the ECIP project area include carpet, steel, wallboard, and glass. The exact percentage of these materials would be determined based on the final building designs.

4.10.3 Alternative 1 (National Business Park/East Campus)

The buildings that NSA would lease at National Business Park would have been designed and constructed by private developers prior to the lease transaction; therefore, the NSA's control over incorporation of sustainable design strategies would be more limited under this alternative as compared with the Proposed Action. Therefore, the resulting beneficial impacts under Alternative 1 would be less than those identified for the Proposed Action. Short- and long-term, minor, beneficial impacts could be expected from operation of buildings that contain sustainable components and implementation of sustainable practices per EO 13693. Such components could include use of energy efficient emergency generators; recycling of materials; use of recycled products; use of energy and water-efficient technologies such as lighting sensors, LED light bulbs, lighting timers, low-flow toilets, urinals, and faucets to the maximum extent

practicable; purchase and use of energy saving technologies; and use of waste minimization practices. The level of impacts would depend upon the actual technologies installed.

Impacts from construction and operation of proposed facilities in the northern portion of the East Campus under Alternative 1 would be the same as those described in **Section 4.10.2**. The 9800 Troop Support Area and the buildings within that area would not be affected, and the parking facility alternatives outside of the East Campus would not be implemented.

4.10.4 Alternative 2 (Annapolis Junction Business Park/East Campus)

The same short and long-term, minor, beneficial impacts could be expected from operation of buildings that contain sustainable components at Annapolis Junction Business Park and implementation of sustainable practices as identified for Alternative 1. The level of beneficial impacts from installation and use of energy and water efficient technologies would depend upon the actual technologies installed.

4.10.5 No Action Alternative

Under the No Action Alternative, the sustainability components that could be incorporated into the Proposed Action would not be implemented and the existing levels of energy and water use efficiency for buildings and facilities would continue. Long-term, beneficial impacts would be expected from maintaining the status quo of upgrading existing facilities to be energy-efficient where possible. However, these impacts would not be as beneficial as those that could result under the Proposed Action.

4.11 Hazardous Materials and Wastes

4.11.1 Evaluation Criteria

Impacts on hazardous materials and wastes would be considered adverse if a proposed action resulted in noncompliance with applicable Federal or state regulations or increased the amounts of hazardous materials and petroleum products procured and hazardous wastes generated beyond current management procedures and capacities. Impacts would also be considered adverse if a proposed action resulted in the disturbance of ACM, LBP, PCBs, and contaminated sites that cause negative effects on human health or the environment. Adverse impacts include actions that make it more difficult or costly to remediate environmental contamination sites or discoveries that may impact on-site construction.

4.11.2 Proposed Action (ECIP Project Area)

Hazardous Materials, Petroleum Products, and Hazardous Wastes. Short-term, negligible, adverse impacts would occur from the use of hazardous materials and petroleum products and the generation of hazardous wastes during the construction of the proposed buildings, parking facilities, and supporting infrastructure and during the demolition of the buildings and infrastructure on the NSA Main Campus and 9800 Troop Support Area. Hazardous materials that would be used include paints, welding gases, solvents, preservatives, and sealants. Additionally, hydraulic fluids and petroleum products, such as diesel and gasoline, would be used in many of the heavy vehicles and equipment needed for the implementation of the Proposed Action. Onsite storage of petroleum products for construction and demolition would be accomplished through the installation of temporary diesel and gasoline ASTs, as necessary. These ASTs would be removed following the completion of construction and demolition, and all contractors would use proper BMPs (e.g., secondary containment, inspections, and spill kits) and

adhere to Federal and state regulations and the applicable NSA SPCC Plan to minimize the potential for releases from the ASTs.

Construction and demolition activities would generate negligible quantities of hazardous wastes, and these quantities would not be expected to exceed the capacities of the existing hazardous waste disposal streams. Contractors would be responsible for the disposal of hazardous wastes in accordance with Federal and state laws. Any hazardous materials, petroleum products, or hazardous wastes currently stored within the footprint of construction or demolition would be removed and properly disposed of. The ASTs at Buildings 9703, 9817, and 9829 would be closed and removed prior to the demolition of the buildings. Fort Meade is still operating under a Federal Facilities Consent Decree, and any hazardous materials discovered during construction would be addressed under those USEPA-mandated requirements.

Long-term, negligible, adverse impacts would occur from the use of hazardous materials and petroleum products, and the generation of hazardous wastes during the operation of the proposed facilities and infrastructure. Minimal quantities of hazardous materials, such as household cleaners, would be used and minimal quantities of hazardous wastes would be generated from everyday activities. The emergency and life-safety generators would require the delivery and storage of large quantities of fuel, which is discussed in below. All hazardous materials, petroleum products, and hazardous wastes associated with the Proposed Action would be managed in accordance with applicable NSA and appropriate U.S. Army regulations.

Emergency Power Generation Alternatives. Under the Proposed Action, the NSA would construct fuel storage provisions to sustain the emergency generators for 72 hours and the life-safety generators for 24 hours. An additional 24 hours of storage capacity is assumed to be necessary for the emergency generators and an additional 12 hours is assumed to be necessary for the life-safety generators to account for storage tank headspace requirements. Generators may be selected to use different or multiple fuel types; however, the use of diesel fuel was carried forward as a reasonable worst-case scenario to assess the environmental impacts under NEPA. The two emergency power generation alternatives would require the delivery and storage of different volumes of liquid fuels on site. Under the Generators alterative, the 43 3-MW emergency generators and five life-safety generators (i.e., three 2-MW, one 900-kW, and one 450-kW) would require approximately 897,500 gallons of diesel fuel storage capacity. Under the Generators and Combustion Turbines alternative, the seven 3-MW emergency generators and five life-safety generators would require approximately 161,700 gallons of diesel fuel storage capacity. The estimates for the 3-MW emergency generator and the 2-MW, 900-kW, and 450-kW life-safety generators assume fuel consumption rates of 212.9, 141.4, 64.0, and 30.3 gallons per hour per generator, respectively, based on manufacturer specifications (Caterpillar 2012, Cummins 2015a, Cummins 2015b, Cummins 2015c). No liquid fuel storage capacity would be needed for the combustion turbines because these would be fueled with by natural gas. Liquid fuels would be delivered by commercial tanker trucks.

Adverse impacts from both emergency power generation alternatives would be similar and negligible in magnitude because all permanent storage tanks would be used with appropriate BMPs, such as secondary containment systems, leak detection systems and alarm systems, and adhere to the NSA's Hazardous Materials Management Program to ensure that contamination from a spill would not occur. If a spill occurs, the NSA's SPCC Plan and FRP delineate the appropriate measures for spill situations.

ACM. Short-term, minor, adverse impacts would occur from the demolition of the buildings and infrastructure on the NSA Main Campus and 9800 Troop Support Area because these buildings likely contain ACMs. Each building, therefore, would be surveyed for asbestos by a certified demolition contractor to ensure that appropriate measures are taken during demolition to reduce potential exposure to, and release of, asbestos. Demolition contractors would wear appropriate personal protective equipment and would be required to adhere to all Federal, state, and local regulations and the installation's Asbestos Management Program. Long-term, negligible, beneficial impacts would occur from reducing the potential for future human exposure to ACMs and reducing the amount ACMs to maintain. U.S. Army policy prohibits the use of ACMs for new construction when asbestos-free substitute materials exist.

LBP. Short-term, minor, adverse impacts would occur from the demolition of the buildings and infrastructure on the NSA Main Campus and 9800 Troop Support Area because these buildings are assumed to contain LBP based on their year of construction. Each building, therefore, would be surveyed for LBP by a contractor prior to demolition activities. Building materials containing LBP can be disposed of at a USEPA-approved landfill without removing the LBP. Demolition contractors would wear appropriate personal protective equipment and adhere to all applicable Federal, state, and local regulations and the installation's Lead Hazard Management Plan. Long-term, negligible, beneficial impacts would occur from reducing the potential for future human exposure to LBP and reducing the amount LBP to maintain. Federal law prohibits LBP in new construction.

PCBs. Long-term, negligible, beneficial impacts would occur from the removal of any PCB-containing equipment within the buildings and infrastructure on the NSA Main Campus and 9800 Troop Support Area that are proposed for demolition. Any potential PCB-containing equipment not labeled PCB-free or missing date-of-manufacture labels would be assumed to contain PCBs and removed and handled in accordance with applicable Federal and state regulations. PCB-containing materials would be transported and disposed of as hazardous waste. Federal law prohibits the use of PCBs in new construction. The approximate 2-ft² area of PCB-contaminated concrete and soil beneath the floor in the basement transformer vault of Building 9803 would be excavated and properly disposed of during building demolition.

Radon. No impacts from radon would be encountered. Based on the results of past radon sampling events at Fort Meade, it is unlikely that levels of radon inside of any of the proposed buildings would exceed the acceptable thresholds. New construction would incorporate appropriate design measures for ventilation as determined to be needed.

Environmental Contamination and Ordnance. Short-term, minor, adverse impacts would occur during the land-clearing, excavation, and grading phases of construction because the northern portion of FGGM 003-R-02 overlaps with a large percentage of the ECIP project area. FGGM 003-R-02 is being managed by land use controls with long-term management. These land use controls require that dig permits be obtained for any intrusive activity, UXO construction support is available for all intrusive construction projects, and UXO avoidance procedures are followed. Therefore, prior to ground disturbance on FGGM 003-R-02, appropriate dig permits would be obtained from the installation. Additionally, a UXO specialist would be available in the event of the discovery of suspected materials during earth-moving activities. Should any ordnance be encountered during the work activities, the contractor would be required to immediately stop work, report the discovery to the installation, and implement appropriate

safety measures. All ordnance would be collected and disposed of in accordance with Federal and U.S. Army regulations by trained and certified personnel. Commencement of field activities would not continue in that area until the issue was resolved. After construction is complete, Fort Meade would continue to perform long-term management on FGGM 003-R-02.

The footprint of construction and demolition overlaps with five other AOI sites (i.e., Site M - Parcel 1, Site M - Parcel 8, Non-SWMUs 12 and 13, FGGM 75, and FGGM 006-R-01), each of which are closed and require no further action. Therefore, it is unlikely that environmental contamination would be inadvertently discovered during work activities at these five AOI sites. However, if soil or groundwater that is believed to be contaminated was discovered during construction and demolition activities, the contractor would be required to immediately stop work, report the discovery to the installation, and implement appropriate safety measures. Commencement of field activities would not continue in this area until the issue was investigated and resolved.

4.11.3 Alternative 1 (National Business Park/East Campus)

Impacts on hazardous materials and wastes from construction, including identifying and addressing any hazardous wastes or environmental contamination, at the National Business Park site would be the responsibility of the site owner during facility planning and construction.

Impacts on hazardous materials and wastes from the operation of the leased facilities would be similar to those that would occur from the operation of the proposed facilities on the ECIP project area. All hazardous materials, petroleum products, and hazardous wastes associated with Alternative 1 would be managed in accordance with applicable NSA regulations. The storage of diesel fuel for the emergency and life-safety generators is addressed in the *Emergency Power Generation Alternatives* subsection in **Section 4.11.2**. No impacts from ACM, LBP, PCBs, and environmental contamination and ordnance would be encountered from operation of buildings at National Business Park under Alternative 1.

Impacts from construction and operation of proposed facilities in the northern portion of the East Campus under Alternative 1 would be the same as those described under Proposed Action. The 9800 Troop Support Area and the buildings within that area would not be affected, and the parking facility alternatives outside of the East Campus would not be implemented.

4.11.4 Alternative 2 (Annapolis Junction Business Park/East Campus)

Impacts would be similar to those discussed under Alternative 1.

4.11.5 No Action Alternative

The No Action Alternative would not change existing hazardous materials and wastes conditions. Additional quantities of hazardous materials and petroleum products would not be delivered to the installation, and no additional quantities of hazardous wastes would be generated. The ACMs, LBP, and PCBs known and suspected to be within the buildings of the NSA Main Campus and 9800 Troop Support Area that are proposed for demolition under the Proposed Action would remain in place. No impacts on hazardous materials and wastes would occur from not implementing the Proposed Action, Alternative 1, or Alternative 2.

4.12 Socioeconomics and Environmental Justice

4.12.1 Evaluation Criteria

Socioeconomics. Significance of impacts for socioeconomics varies depending on the context of a proposed action (40 CFR 1508.27[a]). The significance of socioeconomic impacts is assessed in terms of direct impacts on the local economy and related impacts on other socioeconomic resources (e.g., income, housing, employment).

Environmental Justice and Protection of Children. Ethnicity, poverty, and age data are examined for Anne Arundel County District 4 and compared to the ROI and the State of Maryland to determine if a low-income or minority population or children could be disproportionately affected by the Proposed Action.

4.12.2 Proposed Action (ECIP Project Area)

Socioeconomics. Short- and long-term, direct and indirect, beneficial impacts on the local economy would be expected from construction of the Proposed Action. The ECIP construction cost is estimated at $4.2 billion (NSA 2013a). The beneficial impacts would include expenditures for construction workers' wages and taxes, construction and building materials, and purchases of other goods and services in the area. Short-term, moderate, beneficial effects on construction workers' income would be expected from implementing the Proposed Action. Benefits that would result from increases in local employment, including the construction labor force, are expected for the duration of construction of the Proposed Action. Approximately 6 percent of the workforce in the ROI is for the construction industry, and it is anticipated there is enough construction workers in the region to accommodate the ECIP project. Additionally, it is anticipated that there would be increases in indirect employment (i.e., induced jobs created in all industries) due to construction of the ECIP. Current construction in the southern portion of the East Campus is anticipated to be completed at approximately the start for the Proposed Action. The steady construction would continue to provide income for other local industries and business due to purchase of building materials and other goods and services. Building materials for this project are assumed to be sourced locally, when available.

Negligible impacts on local housing and schools are expected. Construction workers would likely be local residents. Additionally, it is anticipated that nearly all of the approximately 7,200 personnel that would transfer to the NSA East Campus from existing offsite leased locations would not be required to move because these offsite leased facilities are also located within the ROI. Some personnel filling vacant positions might relocate from outside the region, but the number of such personnel is expected to be very small and sufficient housing vacancies and abilities for local school systems in the region to accommodate such personnel and their families would be expected.

Short-term, negligible, adverse effects on the local commercial real estate market would be expected. Most of the 7,200 NSA personnel that would relocate to the East Campus are currently occupying leased properties within the ROI. Under the Proposed Action, NSA would not renew leases for approximately 1.9 million ft^2 of office space within the ROI that is currently occupied by personnel proposed to transfer to the ECIP project area. This space represents 5.4 percent of the total office space available in the Baltimore market and 16.7 percent of available space in the BWI Airport submarket. Assuming the demand for space remains level, 1.9 million ft^2 of office space would become vacant, increasing the

amount of vacant office by 44.3 percent in the Baltimore market and by 122.7 percent in the BWI Airport submarket. However, it is anticipated that this vacated office space would be available for lease by others at different times over a 10-year construction timespan as personnel are transferred to the NSA East Campus. The Baltimore area commercial real market indicators show a decrease in overall vacancy, and a slight rise in area rents (DTZ 2015a). Because the vacated office space would become available in a staggered fashion, it is not anticipated it would flood the market thereby driving down prices for commercial real estate.

Long-term, minor, adverse impacts on law enforcement and fire protection services would be expected during construction activities between FY 2019–2029. It is not anticipated that the Proposed Action would result in additional residents in the ROI. Construction workers and transferred NSA personnel are expected to currently reside within the ROI and, therefore, remain within the ROI, resulting in no net increase of people requiring public services off-post. NSA and Fort Meade would provide sufficient law enforcement and fire protection/emergency services on the NSA Campus and Fort Meade for daily activities due to the increase in personnel on-post. The addition of 7,200 employees traveling to and from Fort Meade would increase risk of transportation accidents on the roads in the immediate area of Fort Meade. Any emergency situations that occur along the nearby roadways would be addressed by existing law enforcement and fire protection/emergency services in the ROI.

Environmental Justice. The Proposed Action would not disproportionally affect minority or low-income populations. While Anne Arundel County Census District 4 contains a higher percentage of minorities than some jurisdictions within the ROI, it is lower than and generally similar to those of other jurisdictions and lower than 50 percent of the population. The percentage of individuals in Anne Arundel County Census District 4 living below the poverty line is lower than both the ROI and state levels (USCB 2014b, USCB 2014c). However, because the Proposed Action would occur within the NSA Campus, impacts associated with construction would not affect neighboring populations.

Protection of Children. The Children's World Learning Center, a day care facility on the NSA Campus, is within the ECIP project area, approximately 400 feet west of the western boundary of the northern portion of the East Campus. Impacts would be confined to noise generated by the use of heavy equipment within approximately 400 to 800 feet of the Learning Center, and end at the completion of construction. During these construction activities, the Learning Center would likely have to close its windows during indoor classes to limit noise. This, however, would not be required for non-class activities such as lunch or recess. Construction conducted farther than 800 feet from the Learning Center would be audible, but distant. Due to the temporary nature of the noise, impacts would be minor. All construction would be conducted in compliance with the State of Maryland Noise ordinance.

There would be no long-term (permanent or ongoing) sources of noise due to the Proposed Action; therefore, the Learning Center would not be affected by any long-term changes in the ambient noise environment.

4.12.3 Alternative 1 (National Business Park/East Campus)

Construction of buildings at National Business Park is not part of Alternative 1; therefore, no impacts on socioeconomics or environmental justice would result from construction activities. Operational activities associated with leasing space for 4,400 personnel could result in short-term, negligible, beneficial effects from personnel purchasing goods in the local economy for the duration of the lease. Personnel in existing

off-post leased facilities would remain in that leased space and personnel would transfer from the NSA Campus to occupy the National Business Park site under this alternative. Impacts on police and fire protection would be similar to those discussed under the Proposed Action. No impacts on minority or low-income populations are expected from operation of leased facilities under Alternative 1. No substantial minority or low-income populations are present near the site of the National Business Park.

Impacts on socioeconomics associated with construction and operation activities in the northern portion of the East Campus would be similar to those discussed in **Section 4.12.2**, but less because there would be less construction on the East Campus and ultimately less personnel working there.

4.12.4 Alternative 2 (Annapolis Junction Business Park/East Campus)

Impacts from Alternative 2 would be similar to those described under Alternative 1.

4.12.5 No Action Alternative

The No Action Alternative would result in no changes to socioeconomics or environmental justice conditions within the ROI. The DoD would not construct approximately 2.9 million ft^2 of operations and headquarters facilities on the northern portion of the East Campus and the 9800 Troop Support Area. NSA operations would continue to be performed both the NSA Main Campus and at off-site facilities. Development of the East Campus would occur as described in the 2010 Campus Development EIS and would include the relocation of 6,500 NSA personnel to the southern portion of the NSA East Campus.

SECTION 5

CUMULATIVE AND OTHER IMPACTS

5. Cumulative and Other Impacts

Analysis of cumulative impacts must be conducted within the context of each resource area. The magnitude and context of the impact on a resource area depends on whether or not the cumulative impacts exceed the capacity of a resource to sustain itself and remain productive. **Section 2.5** presented projects that are considered temporally or geographically related to the Proposed Action, and, as such, have the potential to result in cumulative impacts. Construction and operation of the following projects have been identified for detailed consideration for potential cumulative impacts:

- Development projects on the NSA Campus and Fort Meade, including 9800 Troop Support Area replacement barracks elsewhere on Fort Meade, VCP-1 upgrades along Canine Road, new ECB3A Complex, satellite fire station outside the northeast boundary of the ECIP project area, 902nd Military Intelligence Group headquarters, DOL/DPW motor pool, Fort Meade physical fitness facility, and new Fort Meade golf course.
- Road expansion projects and turn-lane improvements to reduce traffic congestion and improve circulation on several Fort Meade roads including Mapes Road, Cooper Avenue, Reece Road, O'Brien Road, and Rockenbach Road.
- Mixed-use commercial and residential developments outside of Fort Meade, including Odenton Town Center, Arundel Gateway, Arundel Preserve, Boyer's Ridge, Clark Road Subdivision, Parkside, Oxford Square, Howard Square, Shipley's Homestead, Shannon's Glen, The Overlook at Blue Stream, Morris Place, Laurel Park Station, and Annapolis Junction Town Center.
- Ongoing BRAC-related Maryland highway and road improvements that include phased intersection upgrades to improve traffic flow for current and projected capacity needs and incorporation of bicycle and pedestrian accommodations, where appropriate.

This cumulative impacts section presents the expected environmental effects for the resource-specific combined impacts of the past, present, and reasonably foreseeable actions identified above.

5.1 Cumulative Impacts Under the Proposed Action (ECIP Project Area)

5.1.1 Land Use

The Proposed Action would be consistent with present and foreseeable land uses on the NSA Campus and Fort Meade. The Proposed Action would be adjacent to and compatible with development in the southern portion of the East Campus, and would have minimal potential to combine with other projects, such as the 902nd Military Intelligence Group Brigade Headquarters, DOL/DPW storage facility, unaccompanied enlisted personnel barracks, satellite fire station, CCEI, and road improvements, to produce incompatible land uses. Furthermore, the Proposed Action would not be expected to impact surrounding sensitive land uses, such as the Midway Common military family housing neighborhood and Argonne Hills Chapel Center.

The Proposed Action and the other cumulative projects would be expected to have long-term, beneficial and adverse, cumulative impacts on land uses surrounding Fort Meade. Construction and operation of these combined actions would stimulate changes in and development of off-installation land use. Adverse impacts would include loss of open space and forested areas as office, retail, and residential areas are

constructed. Beneficial impacts on the installation would include the modern redevelopment of areas and facilities such as the 9800 Troop Support Area under the Proposed Action and the unaccompanied enlisted personnel barracks, DOL/DPW's consolidated storage facility, and the CCEI. Off-installation, beneficial impacts include redevelopment and revitalization within the Odenton Growth Management Area.

Construction activities and eventual operation of the Proposed Action and the other cumulative projects would result in short- and long-term, minor, adverse and beneficial cumulative impacts on visual resources on and adjacent to Fort Meade. Short-term impacts would result from the immediate change in landscape from clearing and demolition activities, and the presence of construction vehicles and equipment within the viewscape. Long-term adverse impacts from the Proposed Action would include the permanent loss of forested and open land; however, beneficial impacts would be realized from reforestation of 20 percent of the development site acreage within the East Campus, consistent with the state FCA, as well as redevelopment and revitalization in some areas with modern facilities and appropriate landscaping.

5.1.2 Transportation

The baseline for assessing transportation impacts was formed using existing and projected future (i.e., from growth and cumulative projects on the installation and in the region) traffic conditions in **Section 4.2**. Short-term, major, adverse, cumulative impacts on transportation could occur if multiple construction projects were occurring simultaneously. Long-term, major, adverse impacts on traffic and transportation (i.e., substantial degradation of LOS values at VCPs and intersections east of the Baltimore-Washington Parkway, particularly in the AM peak hour) would occur from increased personnel and associated vehicle traffic entering and exiting the installation combined with surrounding growth and cumulative projects. However, traffic impacts from the Proposed Action combined with other growth would be above and beyond impacts already considered major under existing conditions, as LOS values are already degraded. Roadway improvements would be expected to address the LOS at failing intersections (i.e., LOS E or LOS F).

5.1.3 Noise

Implementation of the Proposed Action and other concurrent actions would have short-term, minor, adverse, cumulative impacts on the noise environment during demolition and construction activities, particularly from development of the southern portion of the East Campus, the ECB3A Complex and associated parking facilities, the CCEI, the roadway expansions along Mapes Road, Cooper Avenue, and O'Brien Road, and the proposed satellite fire station because of their proximity to ECIP project area. The combined construction noise (including pile-driving) from the Proposed Action and other identified projects, potentially occurring on a simultaneous or overlapping timeframe on the installation, would likely result in increased ambient noise levels in the immediate area and adverse effects on sensitive noise receptors located north of the ECIP project area (e.g., Midway Common neighborhood and chapel). Because these increased noise levels would be periodic and short-term (only lasting until completion of the construction activity) cumulative noise impacts on these sensitive receptors would be expected to be minor. Although infrequent, minor, adverse impacts on sensitive noise receptors would also be expected from operation of the emergency power generators under the Proposed Action over the long-term. Short-term, negligible, adverse cumulative noise impacts on off-installation sensitive noise receptors

(e.g., Patuxent Wildlife Research Refuge) could be expected from construction and pile-driving activities from the major cumulative projects. Pile-driving activities would only be conducted on weekdays during normal business hours (i.e., 8 a.m. to 5 p.m.) to reduce noise impacts on nearby sensitive noise receptors.

The past, current, and reasonably foreseeable noise environment in and around the ECIP project area and East Campus is dominated by traffic noise from the adjacent roadways, which will continue into the future. Cumulatively, the perceived changes in noise levels for noise-sensitive receptors on- and off-installation from proposed projects would not likely be distinguishable from future noise environments under the No Action Alternative.

5.1.4 Air Quality

The Proposed Action when combined with cumulative projects would have short- and long-term, minor, adverse cumulative effects on air quality. By inventorying all emissions in a nonattainment region and monitoring concentrations of criteria pollutants in attainment regions, the State of Maryland considers the effects of all past and present emissions in the state. A regulatory structure contained in the SIP is in place that is designed to prevent air quality deterioration in both nonattainment and attainment areas. SIPs are the regulations and other materials for meeting clean air standards and associated CAA requirements. SIPs include the following:

- State regulations that the USEPA has approved
- State-issued, USEPA-approved orders requiring pollution control at individual companies
- Planning documents such as area-specific compilations of emissions estimates and computer simulations (modeling analyses) demonstrating that the regulatory limits ensure that the air will meet air quality standards.

The SIP process applies either specifically or indirectly to all activities in the region. No large-scale cumulative projects, when combined with the Proposed Action, would threaten the region's attainment status, have substantial GHG emissions, or lead to a violation of any Federal, state, or local air regulation.

5.1.5 Geological Resources

Negligible to minor cumulative impacts on geological resources would be expected from construction activities. Direct impacts on topography, geology, and soils from construction are localized to the site that is being developed. Construction sites that are greater than 5,000 ft^2 require development of BMPs, stormwater management plans, and ESCPs to minimize the potential for impacts offsite. Long-term cumulative impacts from the Proposed Action and other actions could occur as a result of the conversion of undeveloped land, which is an irreversible and irretrievable conversion of natural soils to urban land.

5.1.6 Water Resources

Short-term, minor, cumulative, adverse impacts on water resources could occur from all construction activities. Implementation of soil erosion and sedimentation controls and stormwater pollution prevention at construction sites would minimize the potential for adverse impacts from individual construction sites and, therefore, reduce potential cumulative impacts on water resources. Long-term, minor, adverse cumulative impacts on water resources would be expected from the addition of impervious surfaces. In addition to the Proposed Action, development of the southern portion of the East Campus, the

unaccompanied enlisted personnel barracks, fire station, VCP-1 upgrades, ECB3A Complex, new Brigade Headquarters facility, DOL/DPW storage and facility space, physical fitness facility, and CCEI would also result in additional new impervious surfaces on Fort Meade. Similarly, over the next 10 to 25 years, major development activities occurring outside of the installation but proximal to the Proposed Action, such as the Odenton Town Center, Arundel Gateway, Annapolis Junction Town Center, and Arundel Preserve, involve plans to construct new residential, retail, and office spaces that would result in changes to existing impervious surface quantities in those areas.

The cumulative increase in impervious surfaces from proposed cumulative projects in the region would be considered a minor contribution in the context of the whole watershed but could be noticeable on a more localized level. In accordance with Federal and state stormwater regulations, the post-development hydrologic condition of the ECIP and other project areas must be the same as it was pre-development. For these projects, preservation of and return to pre-development hydrologic condition would be ensured through adherence to the ESD as outlined in the *Maryland Stormwater Design Manual*, and incorporation of BMPs and low-impact development strategies that would be expected to attenuate potentially long-term, adverse impacts on water resources.

The removal of forest and other vegetation and the subsequent creation of impervious surfaces in currently undeveloped areas can increase stormwater runoff during rain events, introducing contaminants (e.g., oils, fertilizers, or pesticides) into surfaces water bodies and possibly worsening downstream flooding if water channels are transporting more water in a shorter period of time. Cumulatively, there is potential for an increase in impervious surfaces resulting from the Proposed Action and other projects that could exacerbate water quality and flooding problems that are already occurring in the Little Patuxent River and other downstream areas.

Increases in the number of personnel working on the installation within the new facilities would likely have long-term minor adverse effects on wastewater management from the generation of additional wastewater and associated increased nutrient loads (e.g., nitrogen and phosphorus) within the effluent discharged to the Little Patuxent River. Cumulatively, if the average flow to the WWTP were to exceed 3.0 mgd, American Water would be required to notify the MDE and modify their existing NPDES permit to address the issue. The MDE would be notified again if flow were to exceed 4.5 mgd.

5.1.7 Biological Resources

Short- and long-term, direct and indirect, adverse cumulative impacts would be expected on vegetation and wildlife as a result of the development of currently undeveloped forested sites. The Proposed Action and other major cumulative development activities would likely result in the development and loss of existing forested and open space habitats on and off of the installation. Development activities could include buildings, parking, sidewalks, or landscaping. Cumulative impacts could include increased effects of segmentation of existing wildlife habitat on and around Fort Meade, increased potential for wildlife mortality associated with collision during construction, a reduction in the quality of wildlife habitat available, and the permanent removal of forest and open field habitat. Clearing and development of these areas would not preclude wildlife from using other suitable habitat located on Fort Meade and at the nearby Patuxent Wildlife Research Refuge. Impacts from forest clearing would be reduced by maintaining consistency with policies such as the state FCA, which is not applicable to Federal land but

with which the NSA has opted to voluntarily participate and reforest 20 percent of the total area developed on the East Campus.

There is also potential for the occurrence of long-term, cumulative impacts on wetlands. Wetland losses in the United States have resulted from draining, dredging, filling, leveling, and flooding for urban, agricultural, and residential development. Construction activities associated with the Proposed Action could result in a potential increase in surface runoff to wetlands as a result of an increase in impervious surfaces. The CCEI would have a direct impact on wetlands, and the BRAC-related roadway improvements, development in the southern portion of the East Campus, and construction of the 902nd Military Intelligence Group facility, unaccompanied enlisted personnel housing, DOL/DPW storage facility, fire station, and the new 36-hole golf course all have the potential to result in indirect impacts on wetlands as a result of sedimentation and pollution in surface runoff. Implementation of BMPs, stormwater management plans, and ESCPs, as required by Federal and state regulations, would minimize the potential for impacts on wetlands and other surface water bodies.

Presence of the northern long-eared bat has been detected acoustically on Fort Meade, but no active summer roost trees or hibernacula have been confirmed on the installation or in Anne Arundel County to date. Therefore, the federally listed threatened northern long-eared bat might occur in forested habitats proximal to the ECIP project area. If this species is present on the installation near the ECIP project area, then cumulative short-term, minor disturbance impacts from construction activities for the Proposed Action and other projects would be possible. Further, loss of habitat resulting from tree clearing activities could present long-term, minor, adverse impacts on individual bats present in the area. It is likely that bats would avoid areas where construction is occurring for the duration of those activities. Other nearby forested areas would remain available for use during demolition and construction periods. To reduce potential for impacts on northern long-eared bats and their potential habitat on the installation, development projects underway on Fort Meade would comply with the conservation measures provided in the Programmatic Guidelines (see **Section 3.7**).

5.1.8 Cultural Resources

Cumulative impacts on archaeological sites and architectural resources have likely occurred from past construction on and off the NSA and Fort Meade as areas were disturbed for construction activities. A major impact on architectural resources would be expected under the Proposed Action, which would result in a major cumulative impact. Two buildings in the APE, Buildings 9800 and 9800A, have been determined eligible for the NRHP. Demolition of Building 9800A would result in an adverse effect under Section 106 of the NHPA. Development of the southern portion of the East Campus resulted in a major impact on three historic properties, including a previously recorded archaeological site (18AN973/Downs Cemetery and Farmstead) and two undocumented cemeteries (NSA 2010), and appropriate mitigation was implemented. Although the Proposed Action would have no impacts on previously identified archaeological resources, there would be an overall cumulative impact on cultural resources when considering impacts from development of the southern portion of the East Campus. The VCP-1 upgrades, ECB3A Complex, and CCEI projects and other identified roadway improvements would not result in additive cumulative impact cultural resources (DoD 2016b, FHWA and MD SHA 2011, NCMF 2016). Building demolition and construction actions for the Brigade Headquarters, unaccompanied enlisted personnel barracks, and DOL/DPW storage facility have not been evaluated for impacts on cultural resources.

5.1.9 Infrastructure

The Proposed Action and other cumulative projects would generally be expected to have short- and long-term, minor to major, adverse, cumulative impacts resulting from increased demand on utility systems. Although the impacts may be considered major in terms of increased demand on infrastructure, the impacts are determined to be less than significant based on the ability of the infrastructure, either in its current capacity or with planned improvements, to meet the expected demand and not experience failure. Long-term, minor, beneficial impacts would be expected from the construction and operation of new electrical, and parking infrastructure. Short-term impacts associated with construction activities would not be significant. On-installation, the operation of the facilities in the southern portion of the East Campus, VCP on Canine Road, ECB3A Complex, Phase II of the Brigade Headquarters, DOL/DPW storage facility, unaccompanied enlisted personnel barracks, CCEI, and other on- and off-post roadway improvement projects would result in long-term, minor to major, cumulative adverse impacts on infrastructure systems, with long-term, major impacts on water supply due to personnel increases and cooling water demand. Construction and operation of major development projects outside of the installation but proximal to the Proposed Action (e.g., the Odenton Town Center, Arundel Gateway, Annapolis Junction Town Center, and Arundel Preserve) would have similar long-term, minor to moderate, adverse impacts on infrastructure and utility systems. Overall, additional new buildings would be expected to increase demands on potable water systems, sanitary sewer systems, stormwater systems, electrical systems, natural gas systems, solid waste management, communications, liquid fuel supply, heating and cooling systems, and pavements. Additionally, the cumulative increased demand on utilities and infrastructure systems on the installation would likely result in more frequent servicing requirements and infrastructure expansion, which would be addressed through appropriate system upgrades and use of energy efficient technologies.

5.1.10 Sustainability

No cumulative adverse impacts would be expected as a result of incorporating sustainable design, development, and operation of projects. Cumulative long-term, minor to moderate, beneficial impacts from reduced energy and water usage, reduced waste generation, increased use of recycled and repurposed materials, use of cost-effective sustainable technologies, and incorporation of sustainable site design would be expected from implementation of the Proposed Action and other development projects occurring on the installation. If sustainable strategies are employed during development of the off-installation projects, then similar beneficial impacts would also be expected. These impacts would reflect incorporation of sustainable (e.g., ESD and low-impact) design and operating strategies in compliance with Maryland's Stormwater Management Act, the EISA, EPACT, and EO 13693.

5.1.11 Hazardous Materials and Wastes

No cumulative adverse impacts would be expected as a result of use of hazardous materials and petroleum products and generation of hazardous wastes. The Proposed Action and other cumulative projects on Fort Meade would be expected to use an increased amount of hazardous materials and generate hazardous wastes during construction activities, but all uses would be in accordance with existing laws, regulations, and management plans. Cumulative, negligible, beneficial impacts could occur from the demolition of buildings because they likely contain ACMs, LBP, and PCBs. Hazardous materials and wastes and

petroleum products would be contained and disposed of according to procedures already in place at NSA and Fort Meade.

5.1.12 Socioeconomics and Environmental Justice

Short- and long-term, negligible to moderate, adverse and beneficial, direct effects on socioeconomics would be expected from implementing the Proposed Action and other cumulative actions. Short-term, minor to moderate, beneficial impacts on the local economy are expected for the duration of the project from increased construction labor force employment and expenditures for construction workers' wages and taxes, construction materials, and purchase of other goods and services. Short-term, adverse cumulative effects on the local commercial real estate market would result from the Proposed Action and the development of the southern portion of the East Campus because the NSA would phase-out the use of commercially leased spaces in the area. Other cumulative actions (e.g., Annapolis Junction Town Center, Arundel Gateway, and Odenton Town Center projects) would increase real estate competition through construction and lease of additional office and industrial spaces in the area. New lessees would be expected to acquire these commercial spaces as they become available. There would also be potential for cumulative long-term, minor, adverse effects on law enforcement and fire protection services, such as emergency response capabilities, during construction activities between FY 2019–2029. Any emergency situations that occur along the nearby roadways would be addressed by existing law enforcement and fire protection/emergency services in the ROI. No noticeable increase in housing demands are anticipated as employees that would work in the new buildings would be from the existing workforce occupying nearby leased facilities. The Proposed Action and other cumulative actions are not expected to disproportionately affect minority or low-income populations at this time.

5.2 Comparison of Cumulative Impacts under the Proposed Action and Alternatives

Cumulative impacts under Alternative 1 and Alternative 2 would be similar to those described for the Proposed Action, but generally less adverse because these would involve less building construction and land disturbance. **Table 5.2-1** provides a summary and brief comparison of cumulative impacts under the Proposed Action and other alternatives.

5.3 Unavoidable Adverse Impacts

The Proposed Action would result in development of land that is currently open space and forested. Minor adverse impacts on vegetation, wildlife, and stormwater would be unavoidable because that habitat would be disturbed or completely lost and replaced with impervious surfaces. It is anticipated that potentially adverse impacts on geological resources and water resources (i.e., sedimentation, erosion, and stormwater runoff) could be minimized during site design and use of BMPs. Construction and demolition activities also unavoidably generate solid waste.

The Proposed Action would increase stationary (i.e., power plant) and mobile (i.e., automobiles) sources of noise and air emissions. Increased automobiles also increase pressure on already stressed transportation networks. These are also unavoidable adverse impacts, though traffic congestion can be reduced through roadway improvements.

Table 5.2-1. Summary and Comparison Matrix of Cumulative Impacts Under the Proposed Action and Other Alternatives

Resource Area	Proposed Action and Other Actions	Alternative 1 and Other Actions	Alternative 2 and Other Actions	No Action Alternative and Other Actions
Land Use	The Proposed Action and other cumulative projects would be compatible with surrounding land uses. Short- to long-term, minor, adverse cumulative impacts from loss of forest and development of open space on Fort Meade. Short- to long-term, minor, beneficial cumulative impacts from redevelopment and revitalization projects on and off-installation. Short- and long-term, minor, adverse cumulative impacts on visual resources on Fort Meade from clearing and demolition activities and presence of construction vehicles and equipment within the viewscape. Long-term, minor, adverse impacts on visual resources from the permanent loss of forest or open space. Long-term minor beneficial impacts from revitalization of areas using modern architecture, landscaping, and reforestation of 20 percent of the development site acreage.	No cumulative impacts on land use would be expected. Negligible cumulative impacts on visual resources.	Cumulative impacts would be the same as those identified for Alternative 1.	No cumulative impacts would be expected.
Transportation	Short-term, major, adverse, cumulative impacts on transportation if multiple construction projects occur simultaneously. Long-term, major, adverse impacts on traffic and transportation (i.e., substantial degradation of LOS values at VCPs and intersections east of the Baltimore-Washington Parkway, particularly in the AM peak hour) from increased personnel and associated vehicle traffic entering and exiting the installation.	Cumulative long-term, minor, adverse impacts on traffic (i.e., LOS values at VCPs, external gates, and intersections, particularly in the AM peak hour) would be expected from the transfer of personnel off-post when considered with other cumulative projects. During the AM and PM peak hours, the NSA VCPs operate the same or substantially better under Alternative 1 as compared with the Proposed Action.	Cumulative impacts would be similar to, but slightly less than, those identified for Alternative 1. Under Alternative 2, the LOS for VCPs, intersections, highway interchanges, on- and off-ramps would be consistent with, or slightly better than, those identified for the Proposed Action.	Long-term, major, adverse cumulative impacts (i.e., degraded and/or failing LOS at VCPs, highway interchanges, and roadway intersections) would be expected from implementation of the No Action Alternative and cumulative projects.

Resource Area	Proposed Action and Other Actions	Alternative 1 and Other Actions	Alternative 2 and Other Actions	No Action Alternative and Other Actions
Noise	Short-term, minor, adverse cumulative impacts on the surrounding community due to an increased ambient noise environment during construction. Short-term, adverse, negligible to minor cumulative impacts on noise sensitive receptors, including Patuxent Wildlife Research Refuge, from construction (including pile-driving) activities on- and off-installation. Although infrequent, long-term, minor, adverse impacts on noise sensitive receptors from operation of the emergency power generators.	Short-term, negligible, adverse cumulative noise impacts on the surrounding community and noise sensitive receptors from construction activities at National Business Park and construction sites immediately proximal (i.e., Shannon's Glen). Long-term, negligible to minor, adverse cumulative impacts on the existing noise environment and surrounding noise sensitive receptors due to operation of Alternative 1 and Shannon's Glen.	Cumulative impacts would be similar to, but less than, those identified for Alternative 1, because there would be less impact on noise sensitive receptors.	No cumulative impacts would be expected under the No Action Alternative.
Air Quality	Short-term, minor, adverse cumulative impacts during construction. Long-term, negligible to minor, adverse cumulative impacts from operation of power generation sources, use of heating systems, and emergency power generation.	Cumulative impacts similar to, but slightly less adverse than, those identified for the Proposed Action because less construction would be required.	Cumulative impacts would be similar to those identified for Alternative 1.	No cumulative impacts would be expected.
Geological Resources	Long-term, negligible to minor adverse cumulative impacts from permanent conversion of natural soil to urban land.	Cumulative impacts would be similar to, but less than, those identified for the Proposed Action.	Cumulative impacts would be similar to, but greater than, those identified for Alternative 1 resulting from construction in prime farmland.	No cumulative impacts would be expected.

Resource Area	Proposed Action and Other Actions	Alternative 1 and Other Actions	Alternative 2 and Other Actions	No Action Alternative and Other Actions
Water Resources	Short-term, negligible, cumulative adverse impacts on water resources from sedimentation and erosion during demolition and construction activities. Long-term, minor to moderate, adverse cumulative impacts from additional impervious surfaces in the region. No cumulative impacts on hydrologic condition would be expected.	Cumulative impacts would be similar to, but slightly less than those identified for the Proposed Action due to less construction.	Cumulative impacts would be similar to those identified for Alternative 1.	No cumulative impacts would be expected.
Biological Resources	Long-term, minor, adverse cumulative impacts on vegetation and wildlife from loss of forest and open field habitats. These impacts would be reduced through consistency with the state FCA policy requirement to reforest 20 percent of development site acreage. Short-term, direct, negligible to minor adverse cumulative impacts on wildlife, potentially including protected species, would occur as a result of noise disturbances associated with construction and demolition activities. Short-and long-term, direct, minor, adverse impacts could occur during construction and operation from the mortality of small less-mobile terrestrial animals as a result of collision with construction equipment and operational vehicle traffic. Short-term, indirect, minor, adverse cumulative impacts on wetlands during construction. All construction would be expected to occur outside of 100-foot buffer of wetland limits and adhere to sediment and erosion controls.	Short-and long-term, direct, minor, adverse cumulative impacts could occur during construction and operation from the mortality of small less-mobile terrestrial animals as a result of collision with construction equipment and operational vehicle traffic.	Cumulative impacts would be similar to those identified for Alternative 1.	No cumulative impacts would be expected.

Resource Area	Proposed Action and Other Actions	Alternative 1 and Other Actions	Alternative 2 and Other Actions	No Action Alternative and Other Actions
Cultural Resources	A major cumulative impact on architectural resources would be expected from the Proposed Action and other cumulative projects identified at this time. Two buildings in the APE, Buildings 9800 and 9800A, have been determined eligible for the NRHP. Demolition of Building 9800A would result in an adverse effect under Section 106 of the NHPA. Although, no cumulative impacts on previously identified archaeological resources would be expected under the Proposed Action, there would be an overall cumulative impact on cultural resources from other cumulative projects.	Cumulative impacts would be similar to those identified for the Proposed Action on-post.	Cumulative impacts would be similar to those identified for Alternative 1.	No cumulative impact would be expected.
Infrastructure	Short-term, negligible to moderate, cumulative adverse impacts during construction. Long-term, negligible to major, adverse cumulative impacts would result from increased use of utilities and infrastructure. Long-term, minor, beneficial impacts would be expected from construction and operation of new electrical, and parking infrastructure. The cumulative increased demand on utilities and infrastructure systems would likely also result in more frequent servicing requirements, upgrades, and infrastructure expansion that would be addressed through system upgrades and use of energy-efficient technologies.	Cumulative impacts would be similar to, but less than, those identified for the Proposed Action because less construction and development would be required for Alternative 1.	Cumulative impacts would be similar to those identified for Alternative 1.	No cumulative impacts would be expected.
Sustainability	No cumulative adverse impacts expected from incorporating sustainable design into projects occurring in proximity to the Proposed Action. Cumulative long-term, minor to moderate, beneficial impacts would be expected from the Federal and private development projects that employ EO 13693-compliant strategies for reduced energy and water usage, reduced waste generation, increased use of recycled and repurposed materials, use of cost-effective sustainable technologies, and sustainable site design.	Cumulative short and long-term, minor, beneficial impacts expected from Federal projects implementing regulation-compliant sustainable components per EO 13693. However, these beneficial impacts would be less than those identified for the Proposed Action.	Cumulative impacts would be similar to those identified for Alternative 1.	No cumulative impacts would be expected.

Resource Area	Proposed Action and Other Actions	Alternative 1 and Other Actions	Alternative 2 and Other Actions	No Action Alternative and Other Actions
Hazardous Materials and Wastes	No cumulative adverse impacts would be expected. Cumulative, negligible, beneficial impacts could occur from the demolition of buildings because they likely contain ACMs, LBP, and PCBs, which would be properly addressed and disposed.	No cumulative adverse impacts would be expected.	No cumulative impacts would be expected.	No cumulative impacts would be expected.
Socioeconomic and Environmental Justice	Cumulative short-and long-term, minor to moderate, beneficial cumulative impacts on the local economy from increased jobs in the local construction workforce and construction-related expenditures. Cumulative short-term, minor, adverse impacts on the local commercial real estate market as NSA phases out existing commercial leases. Long-term, minor, adverse cumulative impacts on law enforcement and emergency service response capability during periods of increased construction-related traffic and congestion. No noticeable increase in housing demands are anticipated as employees that would work in the new buildings would be from the existing workforce occupying nearby leased facilities. No disproportionate effects on low-income or minority populations expected from the Proposed Action or other cumulative projects at this time.	No construction is required under Alternative 1; therefore, no cumulative impacts on socioeconomics, low-income, or minority populations would occur from construction activities. Cumulative short-term, negligible, beneficial effects on the local economy would be expected from lease of commercial spaces and increased purchase of goods for the duration of those leases.	Cumulative impacts would be similar to those identified for Alternative 1.	No cumulative impacts would be expected.

5.4 Relationship Between Short-Term Uses and Long-Term Productivity

Short-term uses of the biophysical components of the human environment include direct impacts, usually related to construction activities, which occur over a period of less than 5 years. Long-term uses of the human environment include those impacts that occur over a period of more than 5 years, including permanent resource loss.

This EIS identifies potential short-term adverse impacts on the natural environment from construction activities. These potential adverse impacts include soil erosion, stormwater runoff into surface water and wetlands, and removal of vegetation and wildlife habitat. These kinds of short-term impacts would persist only during construction activities in localized sections, occasional maintenance activities (e.g., vegetation management) in terrestrial areas, or emergency repair activities. Generally, disturbed areas would recover once ground-disturbing activities, noise, and construction vehicles leave the area.

Removal of forest for construction of facilities would be considered an adverse impact on the long-term productivity of forests on Fort Meade.

5.5 Irreversible and Irretrievable Commitments of Resources

An irreversible or irretrievable commitment of resources refers to impacts on or losses to resources that cannot be reversed or recovered, even after an activity has ended and facilities have been decommissioned. A commitment of resources is related to use or destruction of nonrenewable resources, and the impacts that loss will have on future generations. For example, if prime farmland is developed, there would be a permanent loss of agricultural productivity. Implementation of the ECIP would involve the irreversible and irretrievable commitment of materials, energy, biological resources, landfill space, and human resources. The impacts on these resources would be permanent.

Materials. Material resources irretrievably used for the Proposed Action include steel, concrete, and other building materials. Such materials are not in short supply and would not be expected to limit other unrelated construction activities. The irretrievable use of material resources would not be considered significant. The preferential use of recycled building materials would reduce the overall amount of materials used for building construction.

Energy. Energy resources used for the Proposed Action would be irretrievably lost. These include fossil fuels (e.g., gasoline, diesel, natural gas, No. 2 fuel oil) and electricity. During construction, gasoline and diesel fuel would be used for the operation of construction vehicles and equipment. Long-term operation of new facilities would use electricity generated by combusting fossil fuels, both for primary and backup power. Overall, consumption of energy resources would not place a significant demand on their availability in the region. Therefore, no major impacts would be expected. The preferential use of energy efficient technologies and maximized use of recycled materials would reduce the overall impacts on energy resources.

Biological Resources. The Proposed Action would result in some irretrievable loss of vegetation and wildlife habitat from clearing of forest stands. The loss of vegetation would remove potential wildlife habitat and could degrade some remaining scenic and natural qualities of Fort Meade. This result would be a permanent loss or conversion of open spaces. However, in accordance with the NSA's reforestation plan for the East Campus that adheres to the Fort Meade Forest Conservation Act and Tree Management

Policy, the Proposed Action would reforest 20 percent of the total area developed on the East Campus. Reforestation would occur onsite or nearby, and be in addition to standard landscaping.

Landfill Space. The generation of construction and demolition debris and subsequent disposal of that debris in a landfill would be an irretrievable adverse impact. Construction contractors would be expected to recycle at least 40 percent of the debris that is generated. If a greater percentage is recycled, then irretrievable impacts on landfills would be reduced. There are numerous rubble landfills and construction and demolition processing facilities that could handle the waste generated. However, any waste generated by the Proposed Action that is disposed of in a landfill would be considered an irretrievable loss of that landfill space.

Human Resources. The use of human resources for construction is considered an irretrievable loss only in that it would preclude such personnel from engaging in other work activities. However, the use of human resources for the Proposed Action represents employment opportunities and is considered beneficial.

Resources that would be permanently and continually consumed by implementation of the Proposed Action include water, electricity, and fossil fuels. To the extent practicable, pollution prevention considerations would be included. In addition, sustainable management practices would be in place to protect and conserve natural and cultural resources.

SECTION 6

PREPARERS

6. Preparers

This EIS has been prepared under the direction of the DoD. The individual contractors who contributed to the preparation of this document are listed below. Staff are from HDR, Inc. unless otherwise indicated.

Stephen Armstrong
Noise, Geological Resources
B.S. Environmental Science
Years of Experience: 4

Jeanne Barnes
Cultural Resources
M.A. American History
B.A. American History
Years of Experience: 9

Billie Joy Budner, PE
Transportation
B.S. Civil and Environmental Engineering
Years of Experience: 13

Jeremy Cook
Socioeconomics and Environmental Justice
M.A. Economics
B.A. Economics
Years of Experience: 15

Stephanie Conner
Biological Resources, GIS
B.S Environmental Science and Policy
Certified GIS Professional
Years of Experience: 14

William Davidson, PE
Systems Engineering
B.S. Electrical Engineering
Years of Experience: 20

Timothy Didlake
Hazardous Materials and Wastes
B.S. Earth Sciences
Years of Experience: 7

Nicolas Frederick
Land Use, Water Resource
M.S. Biology
B.S. Psychology
Years of Experience: 7

Stuart Gottlieb
GIS
B.A. Geography
GIS Professional Certificate
Years of Experience: 11

Leigh Hagan
Deputy Project Manager, Land Use, Geological Resources, Water Resources
M.E.S.M. Environmental Science and Management
B.S. Biology
Years of Experience: 10

Russell Henning, PE
Air Quality
B.S. Mechanical Engineering
Years of Experience: 28

Christopher Holdridge
Infrastructure, Quality Assurance
M.S. Environmental Assessment
B.S. Environmental Science/Chemistry
Years of Experience: 18

Timothy Lavallee, PE (LPES, Inc.)
Air Quality, Noise
M.S. Environmental Engineering
B.S. Mechanical Engineering
Years of Experience: 25

Jeff Lewis, PE
Systems Engineering
CEM Certified Energy Manager
LEED AP BD+C
B.S. Mechanical Engineering
Years of Experience: 25

Adam Lynch, PE
Transportation
B.S. Civil and Environmental Engineering
Years of Experience: 11

Christopher McJetters
Technical Editor
B.S. English
Years of Experience: 10

Darrell Molzan, PE
Hazardous Materials and Wastes, Quality Assurance
B.S. Civil Engineering (Environmental)
Years of Experience: 33

Cheryl Myers
Document Specialist and Graphics
A.A.S. Nursing
Years of Experience: 24

Marjorie Nowick
Cultural Resources
M.Phil. (ABD) History/Historical Archaeology
M.S. Historic Preservation
B.A. Anthropology
Years of Experience: 30

Deborah Peer
Sustainability, Cumulative Effects
M.S. Environmental Science and Management
B.S. Zoology
B.S. Wildlife Science
Years of Experience: 14

Andrea Poole
Infrastructure, Socioeconomics and Environmental Justice
M.S. Science and Technology Studies
B.A. Environmental Science and Business Administration
Years of Experience: 15

Patrick Solomon
Project Manager, Sustainability
M.S. Geography
B.A. Geography
Years of Experience: 22

Amy Staud, PE, PTOE
Transportation
M.S. Civil Engineering (Traffic Engineering)
B.S. Civil and Environmental Engineering
Years of Experience: 18

Valerie Whalon
Biological Resources
M.S. Fisheries Science
B.S. Marine Science
Years of Experience: 21

Charles H. Wolfe (Mosaic Technologies Group)
Government Liaison
M.S. Geography and Environmental Systems
B.S. Geography (Geomorphology)
Years of Experience: 5

SECTION 7

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APPENDIX A

SCOPING REPORT

SCOPING REPORT

Prepared for the

ENVIRONMENTAL IMPACT STATEMENT ADDRESSING THE EAST CAMPUS INTEGRATION PROGRAM FORT MEADE, MARYLAND

Contract No. H98230-13-D-0009
Subcontract No. EPMIII BA9-2014-HDR
Task Order 0020
HDR Project No. 227-238196

MARCH 2015

SCOPING REPORT

ENVIRONMENTAL IMPACT STATEMENT ADDRESSING THE EAST CAMPUS INTEGRATION PROGRAM FORT MEADE, MARYLAND

CONTENTS

TABLES

APPENDICES

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ACRONYMS AND ABBREVIATIONS

DOE	Determination of Eligibility
EIS	Environmental Impact Statement
NOA	Notice of Availability
NOI	Notice of Intent
NSA	National Security Agency

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1. Introduction

The scoping process identifies and determines the scope of environmental issues to be addressed in an Environmental Impact Statement (EIS) and is a specific regulatory requirement associated with implementation of the National Environmental Policy Act. Council on Environmental Quality regulations (40 Code of Federal Regulations Parts 1501.7 and 1503.1) and Executive Order 12372, *Intergovernmental Review of Federal Programs*, direct Federal agencies to foster an intergovernmental partnership by soliciting and considering Federal, state, and local input on the scope of issues to be addressed in an EIS. Public and agency scoping is an integral part of determining the range of issues to be addressed and for identifying the significant issues related to a proposal.

This report documents the scoping components used to solicit public and agency input on the scope of analysis and range of alternatives for the EIS to address the proposed East Campus Integration Program for the National Security Agency (NSA) at Fort George G. Meade (Fort Meade), Maryland. This report also summarizes the comments gathered during the scoping period and identifies the substantive issues to be included in the analyses for the Draft EIS.

2. Summary of Scoping Components

Scoping was conducted from January 5, 2015, until February 27, 2015. The following discussion identifies the specific components of the process.

Notice of Intent

On January 5, 2015, the publication of the Notice of Intent (NOI) to prepare an EIS in the *Federal Register* formally initiated the public scoping process. **Appendix A** contains the NOI.

Announcements in Local Newspapers

On January 11, 2015, announcements were published in the *Baltimore Sun* and the *Washington Post* to notify the public of the intent to prepare an EIS, identify the public scoping meeting date, and request scoping comments on the Proposed Action. The announcement identified several methods for comment submittal, including submittal of verbal and written comments at the scoping meeting and written comments submitted via U.S. mail and email. The same announcement was published once in each newspaper. **Appendix B** contains the announcements that were published.

Interested Party Mailing

A scoping letter was mailed to a list of approximately 100 potentially interested parties. The interested party list was developed based on the public involvement associated with the recent EIS prepared for Campus Development at Fort Meade (September 2010) and the Environmental Assessment prepared for the USCYBERCOM Joint Operations Center (October 2012). The scoping letter was distributed on January 5, 2015, via U.S. mail. A copy of the scoping letter and interested party list is provided in **Appendix C**.

The interested party list will be maintained in a database and updated throughout the development of the EIS to ensure all interested parties receive applicable project correspondence.

Scoping Meeting

On January 27, 2015, a public scoping meeting was held at the Severn Community Library, 2624 Annapolis Road, Severn, Maryland. The meeting consisted of two parts. The open house portion lasted from 4:00 pm to 5:00 pm and provided an opportunity for the public to obtain information about the Proposed Action and potential alternatives. Materials available at the scoping meeting included fact sheets and poster boards (see **Appendix D**). Each meeting attendee was asked to sign a registration card to indicate if they would like to be added to the interested party list or if they would like to receive a copy of the Draft EIS when it is available.

The public hearing portion of the scoping meeting was from 5:00 pm to 7:00 pm and included a brief project presentation following by an opportunity for attendees to make verbal comments recorded by a court reporter. A copy of the court reporter's transcript is included as **Appendix E**. Blank forms to provide written comments were also available during the scoping meeting if attendees preferred not to make a verbal comment during the public hearing.

3. Scoping Results

The following discussion summarizes the results of the scoping meeting and comments received during the scoping period.

Scoping Meeting

A total of 11 scoping meeting attendees completed a registration card, although several other attendees chose not to complete a registration card. The interested party list has been updated to include all attendees that registered. Their names and indicated associations are as follows:

- Peirce Macgill, Fort Meade Regional Growth Management Council
- Raj Kudchadkar, Howard County Office of Military Affairs
- Ian Duncan, Baltimore Sun
- Rusty Bristow
- Roland Jeffers
- Suzanne Teague, Fort Meade Directorate of Public Works – Environmental
- Linda Greene, BWI Business Partnership
- Mick Butler, Fort Meade Directorate of Public Works – Environmental
- Sean Molane
- Brad Knudsen, U.S. Fish and Wildlife Service
- Pete Smith, Representative, Anne Arundel County Council, District 1.

One verbal scoping comment was received at the scoping meeting (see transcript in **Appendix E**). No written comments were received during the scoping meeting. Four comments were received via mail or electronic mail during the scoping period (see **Appendix F**).

Scoping Comments

All scoping comments received are included in **Appendices E** and **F**. **Table 1** summarizes each comment received and identifies the intended resolution of substantive comments.

Table 1. Summary of Scoping Comments

Subject Matter	Comment and Resolution
Maryland Department of Planning/Maryland Historical Trust, 01/26/15	
Cultural Resources	*Commenter suggested the NSA should take appropriate measures to identify, evaluate, and consider historic properties, including defining the project's Area of Potential Effect, determining the National Register of Historic Places eligibility of properties within the Area of Potential Effect, and preparing Determination of Eligibility (DOE) forms, if applicable. The NSA should also determine the effect of the project on historic properties and submit all relevant documentation to the Maryland Historical Trust for review and comment.* Comment noted. An examination of historic properties and other cultural resources will be provided in the cultural resources section of the EIS.
Cultural Resources	*Commenter indicated that, if necessary, the appropriate DOE forms must contain a sufficient description of buildings, structures, areas of land use, and the overall landscape of the property to evaluate significance and integrity under the National Register of Historic Places Criterion C.* Comment noted. The NSA will follow appropriate Federal guidelines associated with the protection of cultural resources. If applicable resources requiring DOE forms are identified, appropriate steps to ensure compliance with the Maryland Historical Trust (i.e., Maryland State Historic Preservation Office) will be followed.
Linda Greene, BWI Business Partnership, 01/27/15	
Transportation	*Commenter suggested that transportation analysis should include remedies and solutions to traffic congestion, including increasing public transit options.* Comment noted. A thorough review of transportation impacts and appropriate potential remedies will be evaluated in the transportation section of the EIS.
Maryland State Highway Administration, 02/13/15	
Transportation	*Commenter stated that the EIS should appropriately examine the impacts of the Proposed Action on the surrounding state-maintained roadway network.* Comment noted. A thorough review of impacts on transportation, including surrounding roadway networks, will be evaluated in the EIS.
Transportation	*Commenter recommended that the NSA conduct a traffic study to determine state and local road improvement needs based on the implementation of the Proposed Action.* Comment noted. A traffic study will be conducted to identify impacts associated with the Proposed Action and included in the transportation section of the EIS.

Subject Matter	Comment and Resolution
Maryland Department of Natural Resources, 02/13/15	
Coastal Resources	*Commenter indicated that the Proposed Action would have impacts on coastal resources and recommends that a Coastal Zone Management Act Federal Consistency Determination be submitted to ensure that the Proposed Action will be consistent to the maximum extent possible with Maryland's enforceable policies.* A Federal Consistency Determination will be included in the EIS and submitted to the Maryland Department of Natural Resources.
Infrastructure	*Commenter suggested that, to the extent possible, green and sustainable choices should be considered in developing alternative options, including recycling and reusing materials and providing access to affordable energy and local food production.* Green and sustainable design choices will be evaluated for use to the extent practicable and discussed in the infrastructure and sustainability sections of the EIS.
U.S. Department of Interior, National Park Service, 02/27/15	
Land Use and Cultural Resources	*Commenter expressed concerns over potential impacts on the Star Spangled Banner National Historic Trail and the Baltimore and Washington Parkway. The commenter placed a request for information on the project and offered to provide source documents on the trail.* Documents will be provided to the National Park Service for review throughout the National Environmental Policy Act process and any additional information that could be provided to the NSA will be incorporated into the analysis for the EIS, as appropriate.

4. Next Steps

Those issues identified and discussed during the scoping comment period will be considered during preparation of the Draft EIS.

Following the publication in the *Federal Register* of the Notice of Availability (NOA) for the Draft EIS, there will be a 45-day comment period and a public meeting. The Draft EIS will be sent to the following groups:

- Persons on the interested party list
- Any Federal agency that has jurisdiction by law or special expertise with respect to any environmental impact involved and any appropriate Federal, state, or local agency authorized to develop and enforce environmental standards (e.g., U.S. Environmental Protection Agency Office of Federal Activities, U.S. Fish and Wildlife Service, and Maryland Historical Trust)
- Any person, organization, or agency that has requested a copy of the Draft EIS.

The public meeting for the Draft EIS will also allow the general public to interface with resource agencies and other stakeholder groups. Comments pertaining to the Draft EIS received during that time will be reviewed and incorporated into the Final EIS.

Prior to publication of the Record of Decision on the Proposed Action, a 30-day waiting period will follow the *Federal Register* publication of the NOA for the Final EIS. Similar to distribution for the Draft EIS, the Final EIS will be distributed to Federal, state, and local agencies with jurisdiction by law or special expertise; anyone that has requested a copy of the Final EIS; and any person, organization, or agency that submitted substantive comments on the Draft EIS.

Public comments received during the waiting period for the Final EIS will be considered by decisionmakers along with final comments by agencies. Following the Final EIS waiting period, decisionmakers will review all materials applicable to the Proposed Action and subsequently prepare a Record of Decision. **Table 2** outlines the three phases of the EIS process that involve public participation.

Table 2. Public Participation Process for the East Campus Integration Program EIS

Phase I ⇒	**Phase II ⇒**	**Phase III ⇒**	**Final**
NOI for an EIS	NOA of the Draft EIS	NOA of the Final EIS	**Record of Decision**
↓	↓	↓	
Public Scoping	Public Meetings/ Comments	Public Comments	
↓	↓	↓	
45-day Scoping Period	45-day Public Comment Period	30-day Waiting Period	

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APPENDIX A

FEDERAL REGISTER NOTICE OF INTENT

current performance against MEP program plans.

Background information on the Board is available at *http://www.nist.gov/mep/about/advisory-board.cfm.*

Pursuant to the Federal Advisory Committee Act, as amended, 5 U.S.C. App., notice is hereby given that the MEP Advisory Board will hold an open meeting on Wednesday, January 21, 2015 from 8:00 a.m. to 2:00 p.m. Eastern Time. This meeting will focus on updates from the new sub-committees on (1) Technology Acceleration and (2) Board Governance. The final agenda will be posted on the MEP Advisory Board Web site at *http://www.nist.gov/mep/about/advisory-board.cfm.*

Admittance Instructions: Anyone wishing to attend this meeting should submit their name, email address and phone number to Kari Reidy (*Kari.Reidy@nist.gov* or 301–975–4919) no later than Wednesday, January 14, 2015, 5:00 p.m. Eastern Time. Non-U.S. citizens must submit additional information; please contact Ms. Reidy. All attendees must pre-register in order to be admitted to the NIST campus. Also, please note that under the REAL ID Act of 2005 (Pub. L. 109–13), federal agencies, including NIST, can only accept a state-issued driver's license or identification card for access to federal facilities if issued by states that are REAL ID compliant or have an extension. NIST also currently accepts other forms of federal-issued identification in lieu of a state-issued driver's license. For detailed information please contact Ms. Reidy or visit: *http://www.nist.gov/public_affairs/visitor/.*

Individuals and representatives of organizations who would like to offer comments and suggestions related to the MEP Advisory Board's business are invited to request a place on the agenda. Approximately 15 minutes will be reserved for public comments at the beginning of the meeting. Speaking times will be assigned on a first-come, first-served basis. The amount of time per speaker will be determined by the number of requests received but is likely to be no more than three to five minutes each. The exact time for public comments will be included in the final agenda that will be posted on the MEP Advisory Board Web site as *http://www.nist.gov/mep/about/advisory-board.cfm.* Questions from the public will not be considered during this period. Speakers who wish to expand upon their oral statements, those who had wished to speak but could not be accommodated on the agenda, and those who were unable to attend in person are invited to submit written statements to the MEP Advisory Board, National Institute of Standards and Technology, National Institute of Standards and Technology, 100 Bureau Drive, Mail Stop 4800, Gaithersburg, MD 20899–4800, or via fax at (301) 963–6556, or electronically by email to *kari.reidy@nist.gov.*

Dated: December 22, 2014.

Phillip Singerman,

Associate Director for Innovation & Industry Services.

[FR Doc. 2014–30849 Filed 1–2–15; 8:45 am]

BILLING CODE 3510–13–P

DEPARTMENT OF DEFENSE

Office of the Secretary

Intent To Prepare an Environmental Impact Statement for the East Campus Integration Program Within the Fort Meade Complex, Maryland

AGENCY: Department of Defense.

ACTION: Notice of intent; notice of public meeting; request for comments.

SUMMARY: The Department of Defense (DoD) announces its intent to prepare an Environmental Impact Statement (EIS) as part of the environmental planning process for the East Campus Integration Program at Fort George G. Meade, Maryland (hereafter referred to as Fort Meade). The DoD proposes to develop operational complex and headquarters space at the National Security Agency's (NSA) East Campus on Fort Meade for use by NSA and the Intelligence Community. The purpose of the Proposed Action is to provide facilities that are fully supportive of the Intelligence Community's function and to continue to integrate the East Campus site with the NSA Main Campus. The need for the action is to meet mission requirements, both internally at the NSA and within the Intelligence Community.

Publication of this notice begins a scoping process that identifies and determines the scope of environmental issues to be addressed in the EIS. This notice requests public participation in the scoping process and provides information on how to participate.

DATES: There will be an open house at 4:00 p.m. followed by a scoping meeting from 5:00 p.m. to 7:00 p.m. on January 27, 2015. Comments or questions regarding this EIS should be submitted by February 27, 2015 to ensure sufficient time to consider public input in the preparation of the Draft EIS.

ADDRESSES: The open house and scoping meeting will be held at the Severn Community Library, 2624 Annapolis Road, Severn, Maryland 21144. Verbal and written comments will be accepted at the scoping meeting. You can also submit written comments to "East Campus Integration Program EIS" c/o HDR, 2600 Park Tower Drive, Suite 100, Vienna, VA 22180 or submit by email to *ECIPEIS@hdrinc.com.*

FOR FURTHER INFORMATION CONTACT: Mr. Jeffrey Williams at 301–688–2970, or email *jdwill2@nsa.gov.*

SUPPLEMENTARY INFORMATION:

Background: The NSA is a tenant DoD agency on Fort Meade. NSA is a high-technology communications and data processing organization. In order to meet mission requirements, both at the NSA and within the Intelligence Community, continued integration of the East Campus with the NSA Main Campus on Fort Meade through development of office, operational, and headquarters space is needed. In 2010, NSA completed an EIS that addressed development of the East Campus, which is the northern part of the former Fort Meade golf course. The Record of Decision implemented the first phase of development identified in that EIS, which is currently occurring in the southern portion of the East Campus. This upcoming East Campus Integration Program EIS will address buildout of the northern portion of the East Campus.

Proposed Action and Alternatives: The East Campus Integration Program was initiated to provide a modern office, operational, and headquarters complex to meet the growth requirements of the NSA and Intelligence Community. Development is proposed along the East Campus central core extending through the NSA Main Campus at Fort Meade. The Proposed Action would consist of the construction of approximately 2,880,000 square feet of office, operational, and headquarters space supporting an increase of 7,200 people with the majority from local leases and government-owned buildings to the NSA Main Campus. The program also includes the demolition of approximately 1,900,000 square feet of aged buildings and infrastructure. Development would include associated infrastructure (*e.g.,* electrical substation, generator capacity providing 121 megawatts of electricity, life/safety generators, building heating systems, roads, sidewalks, storm water management facilities, and parking structures).

Alternatives identified include four options for redundant emergency backup power generation and various pollution control systems, two options for building heating systems, four

options for locations of parking structures, and acquisition of additional space at two existing, offsite leased locations. These alternatives will be further developed during preparation of the Draft EIS as a result of public and agency input and environmental analyses of the activities. The No Action Alternative (not undertaking the East Campus Integration Program) will also be analyzed in detail.

This notice of intent is required by 40 Code of Federal Regulations (CFR) 1508.22 and briefly describes the Proposed Action and possible alternatives and our proposed scoping process. The EIS will comply with the National Environmental Policy Act of 1969 (NEPA) (42 U.S.C. 4321 *et seq.*), the Council on Environmental Quality regulations in 40 CFR parts 1500 through 1508, and DoD Instruction 4715.9 (Environmental Planning and Analysis).

Significant Issues: Environmental issues to be analyzed in the EIS will include potential impacts on air quality, noise, natural resources, water use, solid waste, hazardous materials and wastes, transportation, and cumulative impacts from increased burdens on the installation and neighboring community based on projected development.

Scoping Process: Public scoping is an early and open process for identifying and determining the scope of issues to be addressed in the EIS. Scoping begins with this notice, continues through the public comment period (see **DATES**), and ends when the DoD has completed the following actions:

—Invites the participation of Federal, State, and local agencies, any affected Indian tribes, and other interested persons;
—Determines the actions, alternatives, and impacts described in 40 CFR 1508.25;
—Identifies and eliminates from detailed study those issues that are not significant or that have been covered elsewhere;
—Indicates any related EISs or environmental assessments (EAs) that are not part of the EIS;
—Identifies other relevant environmental review and consultation requirements;
—Indicates the relationship between timing of the environmental review and other aspects of the proposed program;
—At its discretion, exercises the options provided in 40 CFR 1501.7(b).

Once the scoping process is complete, DoD will prepare a Draft EIS, and will publish a **Federal Register** notice announcing its public availability. If you want that notice to be sent to you, please contact the DoD Project Office point of contact identified in **FOR FURTHER INFORMATION CONTACT**. You will have an opportunity to review and comment on the Draft EIS. Additionally, the DoD anticipates holding a public meeting after publication of the Draft EIS in the vicinity of Fort Meade, Maryland, to present the Draft EIS and receive public comments regarding the document. The DoD will consider all comments received and then prepare the Final EIS. As with the Draft EIS, the DoD will announce the availability of the Final EIS and once again give you an opportunity for review and comment.

Dated: December 19, 2014.

Aaron Siegel,

Alternate OSD Federal Register Liaison Officer, Department of Defense.

[FR Doc. 2014–30343 Filed 1–2–15; 8:45 am]

BILLING CODE 5001–06–P

DEPARTMENT OF DEFENSE

Department of the Army, Corps of Engineers

Termination of Environmental Impact Statement (EIS) for the Alaska Department of Transportation & Public Facilities Foothills West Transportation Access Project

AGENCY: U.S. Army Corps of Engineers, Department of Defense.

ACTION: Withdrawal of notice of intent.

SUMMARY: The Alaska District, U.S. Army Corps of Engineers (Corps) is notifying interested parties that it has terminated the process to develop an Environmental Impact Statement and has withdrawn the application for a Department of the Army permit from the Alaska Department of Transportation and Public Facilities (DOT&PF) proposed Foothills West Transportation Access Project (Foothills Project). The original Notice of Intent to Prepare the EIS was published in the **Federal Register** on May 20, 2011 (76 FR 29218).

FOR FURTHER INFORMATION CONTACT: Questions regarding the termination of this EIS process should be addressed to: Ms. Melissa Riordan, Regulatory Division, telephone: (907) 474–2166, or mail: U.S. Army Corps of Engineers, CEPOA–RD, 2175 University Avenue, Suite 201(E), Fairbanks, AK 99709–4927. Or email: *melissa.c.riordan@usace.army.mil.* Emailed questions, including attachments, should be provided in .doc, .docx, .pdf or .txt formats.

SUPPLEMENTARY INFORMATION: The Alaska District published the original Notice of Intent to prepare the EIS for the proposed Foothills project in the **Federal Register** on Friday, May 20, 2011 (76 FR 29218). In the summer of 2013 the Alaska DOT&PF decided to re-evaluate plans for future EIS work, and in response the Corps suspended work and closed the EIS project file. After confirming on October 21, 2014 that the DOT&PF has no future plans to proceed with the project, the Corps officially determined that it is appropriate to terminate the EIS. The Corps' neutral role in the EIS process was to evaluate the environmental consequences of the proposed project under the authority of Section 10 of the River and Harbors Act of 1899 and Section 404 of the Clean Water Act. The preparation of the EIS was being conducted by a third-party contractor directed by the Corps, and funded by the applicant, which is typical of the Corps Regulatory EIS studies. Withdrawal of the permit application and termination of the EIS process will not prevent DOT&PF from reapplying at a later date.

Dated: November 3, 2014.

Approved by:

Michael Salyer,

North Branch Chief, Alaska District, U.S. Army Corps of Engineers.

[FR Doc. 2014–30862 Filed 1–2–15; 8:45 am]

BILLING CODE 3720–58–P

DEPARTMENT OF DEFENSE

Department of the Army, Corps of Engineers

Notice of Intent To Prepare a Draft Environmental Impact Statement (EIS), Initiate the Public Scoping Period and Host Public Scoping Meetings for the Great Lakes and Mississippi River Interbasin Study ("GLMRIS")—Evaluation of Aquatic Nuisance Species Controls Near Brandon Road Lock and Dam: Extension of the Public Scoping Period and Announcement of an Additional Public Scoping Meeting Location

AGENCY: U.S. Army Corps of Engineers, DoD.

ACTION: Notice.

SUMMARY: Reference the Notice of Intent published in the **Federal Register** on Thursday, November 20, 2014, volume 79, number 224, pages 69099–100 (79 FR 69099). This notice extends the public comment period and identifies an additional location for a GLMRIS public scoping meeting. For convenience, the **SUPPLEMENTARY INFORMATION** section of the November 20, 2014 notice has been reprinted with

APPENDIX B

ANNOUNCEMENTS

The announcement to the right was published in the *Baltimore Sun* on January 11, 2015.

Notice of Intent and Request for Scoping Comments:
Environmental Impact Statement (EIS)
for the East Campus Integration Program
at Fort Meade, Maryland

The Department of Defense (DOD) announces its intent to prepare an EIS as part of the environmental planning process for the East Campus Integration Program at Fort George G. Meade, Maryland. The DOD proposes to continue to develop operational complex and headquarters space at the National Security Agency's (NSA) East Campus on Fort Meade for use by NSA and the Intelligence Community. The purpose of the Proposed Action is to provide facilities that are fully supportive of the Intelligence Community's function and to continue to integrate the East Campus with the NSA Main Campus. The need for the action is to meet mission requirements, both internally at the NSA and within the Intelligence Community. The DOD proposes to develop the East Campus central core extending through the NSA Main Campus at Fort Meade. The Proposed Action would consist of the construction of approximately 2,880,000 square feet of office, operational, and headquarters space supporting an increase of 7,200 people with the majority from local leases and government-owned buildings to the NSA Main Campus. The program also includes the demolition of approximately 1,900,000 square feet of aged buildings and infrastructure. Development would include associated infrastructure (e.g., electrical substation, generator capacity providing 121 megawatts of electricity, life/safety generators, building heating systems, roads, sidewalks, storm water management facilities, and parking structures). The EIS will consider four options for redundant emergency backup power generation, two options for building heating systems, four options for locations of parking structures, acquisition of additional space at two existing, offsite leased locations, and the No Action Alternative.

The DOD is in the scoping stage for preparation of a Draft EIS and invites the public to comment on the alternatives considered and the scope of the environmental analysis. On January 27, 2015, the DOD will hold an open house from 4:00 p.m. to 5:00 p.m. and a scoping meeting from 5:00 p.m. to 7:00 p.m. at the Severn Community Library, 2624 Annapolis Road, Severn, MD 21144. Verbal and written comments will be received at the scoping meeting and considered in preparation of the Draft EIS. You can also submit written comments addressed to "East Campus Integration Program EIS," c/o HDR, 2600 Park Tower Drive, Suite 100, Vienna, VA 22180. Written comments are requested by February 27, 2015, to ensure sufficient time to consider public input in preparation of the Draft EIS. You may also email comments to ECIPEIS@hdrinc.com.

Comments on this Proposed Action are requested. Verbal and written comments may be published in the EIS. Any personal information provided will be used only to identify your desire to make a statement during the public comment portions of the EIS process or to fulfill requests for copies of the EIS or associated documents. Private addresses will be compiled to develop a mailing list for those requesting copies of the Draft EIS or Final EIS. However, only the names of private citizens will appear in the EIS; personal addresses and phone numbers will not be published.

Notice of Intent and Request for Scoping Comments:
Environmental Impact Statement (EIS)
for the East Campus Integration Program
at Fort Meade, Maryland

The Department of Defense (DOD) announces its intent to prepare an EIS as part of the environmental planning process for the East Campus Integration Program at Fort George G. Meade, Maryland. The DOD proposes to continue to develop operational complex and headquarters space at the National Security Agency's (NSA) East Campus on Fort Meade for use by NSA and the Intelligence Community. The purpose of the Proposed Action is to provide facilities that are fully supportive of the Intelligence Community's function and to continue to integrate the East Campus with the NSA Main Campus. The need for the action is to meet mission requirements, both internally at the NSA and within the Intelligence Community. The DOD proposes to develop the East Campus central core extending through the NSA Main Campus at Fort Meade. The Proposed Action would consist of the construction of approximately 2,880,000 square feet of office, operational, and headquarters space supporting an increase of 7,200 people with the majority from local leases and government-owned buildings to the NSA Main Campus. The program also includes the demolition of approximately 1,900,000 square feet of aged buildings and infrastructure. Development would include associated infrastructure (e.g., electrical substation, generator capacity providing 121 megawatts of electricity, life/safety generators, building heating systems, roads, sidewalks, storm water management facilities, and parking structures). The EIS will consider four options for redundant emergency backup power generation, two options for building heating systems, four options for locations of parking structures, acquisition of additional space at two existing, offsite leased locations, and the No Action Alternative.

The DOD is in the scoping stage for preparation of a Draft EIS and invites the public to comment on the alternatives considered and the scope of the environmental analysis. On January 27, 2015, the DOD will hold an open house from 4:00 p.m. to 5:00 p.m. and a scoping meeting from 5:00 p.m. to 7:00 p.m. at the Severn Community Library, 2624 Annapolis Road, Severn, MD 21144. Verbal and written comments will be received at the scoping meeting and considered in preparation of the Draft EIS. You can also submit written comments addressed to "East Campus Integration Program EIS," c/o HDR, 2600 Park Tower Drive, Suite 100, Vienna, VA 22180. Written comments are requested by February 27, 2015, to ensure sufficient time to consider public input in preparation of the Draft EIS. You may also email comments to ECIPEIS@hdrinc.com.

Comments on this Proposed Action are requested. Verbal and written comments may be published in the EIS. Any personal information provided will be used only to identify your desire to make a statement during the public comment portions of the EIS process or to fulfill requests for copies of the EIS or associated documents. Private addresses will be compiled to develop a mailing list for those requesting copies of the Draft EIS or Final EIS. However, only the names of private citizens will appear in the EIS; personal addresses and phone numbers will not be published.

The announcement to the left was published in the Classified Section of the *Washington Post* on January 11, 2015.

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APPENDIX C

INTERESTED PARTY MAILING

Fort Meade East Campus Integration Program
Environmental Impact Statement
Interested Party List

See **Appendix F** of the EIS for the updated interested party list.

Sample Interested Party Letter

NATIONAL SECURITY AGENCY
CENTRAL SECURITY SERVICE
Fort George G. Meade, Maryland 20755

Anne Arundel County Public Information Office
44 Calvert Street
Annapolis, MD 21401

January 5, 2015

RE: Environmental Impact Statement for the East Campus Integration Program, Fort Meade, Maryland

In accordance with the National Environmental Policy Act (NEPA), the Department of Defense (DOD) is announcing its intent to prepare an Environmental Impact Statement (EIS) as part of the environmental planning process for the East Campus Integration Program at Fort George G. Meade, Maryland. The DOD proposes to continue to develop operational complex and headquarters space at the National Security Agency's (NSA) East Campus on Fort Meade for use by the NSA and the Intelligence Community. A Notice of Intent (NOI) was published in the *Federal Register* on January 5, 2015 (attached). The NOI summarizes the Proposed Action and the alternatives to be considered in the EIS.

The purpose of this correspondence is to solicit your scoping comments regarding environmental aspects of the proposed project. To assist us in complying with NEPA and Executive Order 12372, *Intergovernmental Review of Federal Programs*, and in identifying environmental issues that might affect the design or implementation of the project, we request that you provide appropriate comments within your area of expertise, by February 27, 2015, to the following address:

East Campus Integration Program EIS
c/o HDR
2600 Park Tower Drive, Suite 100
Vienna, VA 22180

You can also send comments via email to ECIPEIS@hdrinc.com.

You are also invited to attend an open house from 4:00 p.m. to 5:00 p.m. and a scoping meeting from 5:00 p.m. to 7:00 p.m. on January 27, 2015. The open house and scoping meeting will be held at the Severn Community Library, 2624 Annapolis Road, Severn, MD 21144. Verbal and written comments regarding this proposal will be accepted at the scoping meeting.

Your input and comment are greatly appreciated. If you have any questions, please contact me at (301) 688-2970. Thank you for your interest.

Sincerely,

Jeffrey D. Williams

Jeffrey D. Williams
Senior Environmental Engineer

Enclosure: NOI, as published in the *Federal Register*

Printed on Recycled Paper

APPENDIX D

FACT SHEETS AND POSTER BOARDS

PROPOSED ACTION

Introduction

The Department of Defense (DoD) proposes to continue to develop operational complex and headquarters space at the National Security Agency's (NSA) East Campus on Fort Meade. The purpose of the Proposed Action is to provide facilities that are fully supportive of the Intelligence Community's function and to continue to integrate the East Campus site with the NSA Main Campus. The action is needed to meet mission requirements, both at the NSA and within the Intelligence Community.

Proposed Action

Development is proposed along the East Campus central core extending through the NSA Main Campus at Fort Meade. The Proposed Action would consist of the construction of approximately 2,880,000 square feet of office, operational, and headquarters space supporting an increase of 7,200 people. The East Campus Integration Program also includes demolition of approximately 1,900,000 square feet of aged buildings and infrastructure. Development would include associated infrastructure (e.g., electrical substation, generator capacity providing 121 megawatts of electricity, life/safety generators, building heating systems, roads, sidewalks, storm water management facilities, and parking structures).

The East Campus Integration Program takes into account several factors, including mission requirements, the condition of current facilities (both on and off NSA's Campus at Fort Meade), space planning, land availability, utility requirements, traffic and parking, and environmental impacts. A key factor is the mission collocation to provide a more efficient and effective work environment for mission-critical functions of the entire Intelligence Community.

Alternative options for redundant emergency backup power generation, building heating systems, parking structures, and lease of additional space at existing, offsite locations are described on the Alternatives fact sheet.

Environmental Impact Statement for the
East Campus Integration Program at Fort Meade

THE NATIONAL ENVIRONMENTAL POLICY ACT

Background

The National Environmental Policy Act (NEPA) of 1969 was enacted to address concerns about environmental quality. NEPA establishes a national policy for attaining harmony between people and nature, for promoting efforts to eliminate damage to the environment, and for better understanding of ecological systems and natural resources. NEPA's main objectives are as follows:

- Ensure that Federal agencies evaluate the potential environmental impacts of proposed programs, projects, and actions before decisions are made to implement them.
- Inform the public of proposed Federal activities that have the potential to significantly affect environmental quality.
- Encourage and facilitate public involvement in the decisionmaking process.

What is an EIS?

An Environmental Impact Statement (EIS) is the most detailed analysis prescribed by the Council on Environmental Quality's regulations for implementing NEPA. An EIS is a detailed public document describing a proposed action, all alternative actions that were considered, and the environmental impacts of implementing a proposed action and reasonable alternatives.

Steps in the EIS Process

Public Involvement

Opportunities to participate in the NEPA process include submitting scoping comments, submitting comments on the Draft EIS and Final EIS, and attending public meetings.

Agency Coordination

NEPA mandates that local, state, and Federal agencies within the affected project area be given the opportunity to comment on proposed actions. These agencies are asked to identify specific areas or issues that should be addressed in the EIS.

Department of Defense

ALTERNATIVES

Site Development. The Proposed Action would occur in the northern portion of the East Campus and central core extending into the National Security Agency (NSA) Main Campus. Other location alternatives are discussed under *Leased Locations* below.

Emergency Generators. Alternatives to supply redundant emergency backup power generation that are considered potentially viable and will be analyzed in the Environmental Impact Statement (EIS) include stationary internal combustion engines, turbine generators using different types of fuel, and microturbines. The alternatives will be evaluated on reliability and ability to meet Federal and state environmental regulations and impacts on land use. In addition, pollution control system alternatives (e.g., selective catalytic reduction) and alternatives for operational limits will be evaluated for reducing air pollutant emissions.

Heating Systems. Two options for building heating systems will be examined in the EIS. These options include ground source heat pumps using vertical wells, and dual-fuel (natural gas and fuel oil [diesel]) packaged boilers. These alternatives could be used individually or in combination. In addition, evaluation of solar hot water heaters for buildings along with hot water boilers will be included in the EIS. The alternatives will be evaluated based on building size, soil conditions, space requirements, and air emissions.

Parking. The EIS will analyze four location alternatives for parking structures for the East Campus. The locations would be within the NSA fenceline, but peripheral to the main corridor of the East Campus.

Leased Locations. In lieu of construction at the East Campus, acquisition of additional space at two existing, offsite leased locations close to the NSA campus will be examined in the EIS.

No Action Alternative. The EIS will also analyze a No Action Alternative to provide a baseline of the existing conditions against which potential environmental and socioeconomic impacts of the Proposed Action and alternative actions can be compared.

Environmental Impact Statement for the
East Campus Integration Program at Fort Meade

HOW TO MAKE COMMENTS

Pursuant to the Council on Environmental Quality's regulations, the Department of Defense (DoD) invites public participation in the National Environmental Policy Act (NEPA) process. Anyone wishing to provide comments, suggestions, or relevant information on the Proposed Action and alternatives may do so using one of the following methods.

By mail:
"East Campus Integration Program EIS"
c/o HDR
2600 Park Tower Drive, Suite 100
Vienna, VA 22180

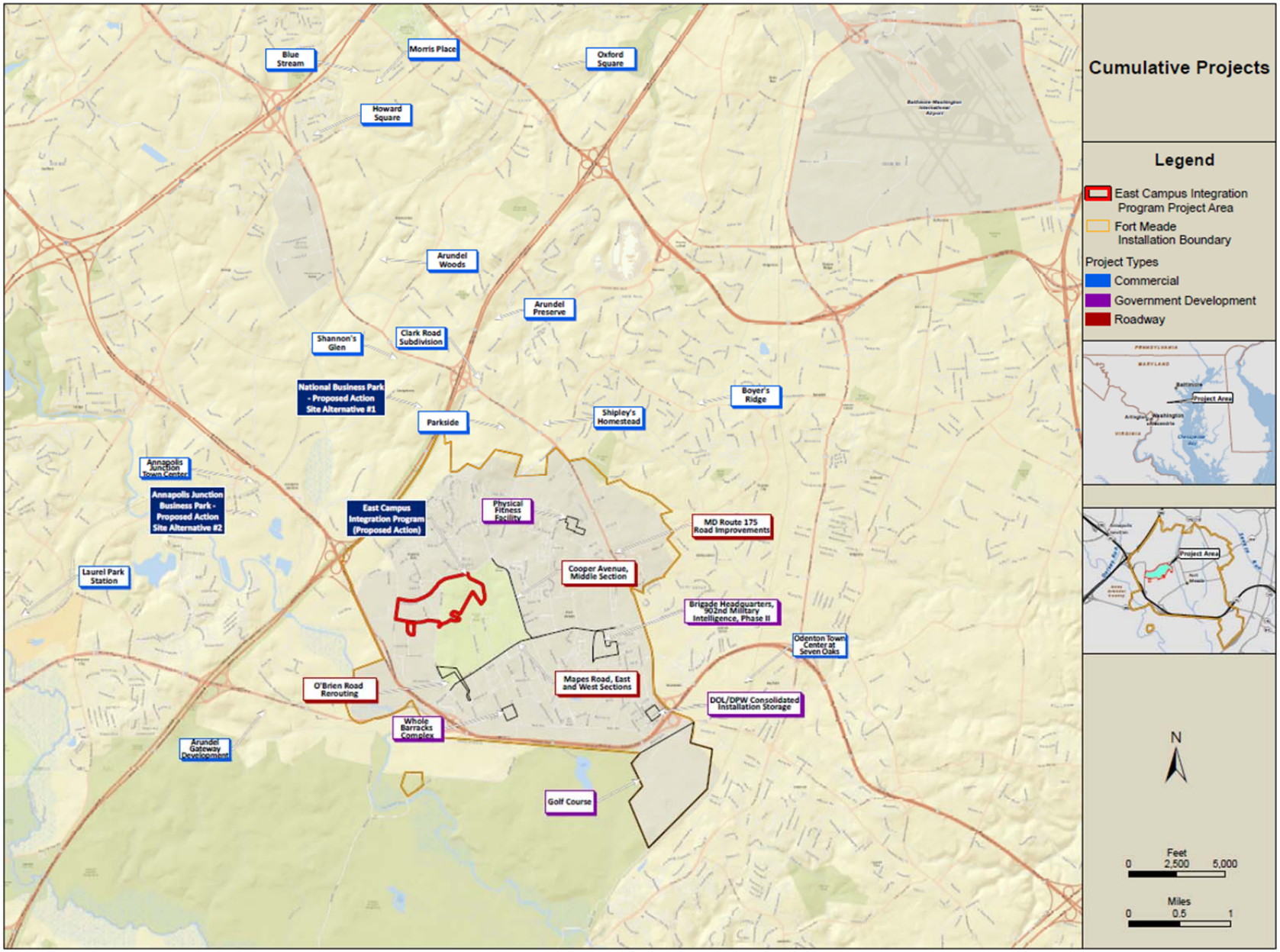
By email:
ECIPEIS@hdrinc.com

Comments and related material on the Proposed Action and alternatives must be received by February 27, 2015, to be considered in the Draft Environmental Impact Statement (EIS). If you submit a comment, include your name and address, and identify your comments as for the "East Campus Integration Program EIS". Please be aware that written and oral statements could be published in the EIS. Private addresses will be compiled to develop a mailing list for those requesting copies of the Draft EIS or Final EIS. However, only the names of private citizens will appear in the EIS; personal addresses and phone numbers will not be published.

Opportunities for Making Comments throughout EIS Development

Department of Defense


MAIN CAMPUS
9800 TROOP SUPPORT AREA
EAST CAMPUS
Proposed Action Location
Legend
East Campus Integration Program Project Area
Fort Meade Installation Boundary
Project Area
Project Area
N
0 250 500
Feet


Cumulative Projects
Legend
East Campus Integration Program Project Area
Fort Meade Installation Boundary
Project Types
Commercial
Government Development
Roadway
Project Area
N
Feet
0
2,500
5,000
Miles
0
0.5
1
Blue Stream
Morris Place
Oxford Square
Howard Square
Arundel Woods
Arundel Preserve
Shannon's Glen
Clark Road Subdivision
National Business Park - Proposed Action Site Alternative #1
Parkside
Shipley's Homestead
Boyer's Ridge
Annapolis Junction Town Center
Annapolis Junction Business Park - Proposed Action Site Alternative #2
East Campus Integration Program (Proposed Action)
Physical Fitness Facility
MD Route 175 Road Improvements
Laurel Park Station
Cooper Avenue, Middle Section
Brigade Headquarters, 902nd Military Intelligence, Phase II
Odenton Town Center at Seven Oaks
O'Brien Road Rerouting
Mapes Road, East and West Sections
DOL/DPW Consolidated Installation Storage
Whole Barracks Complex
Arundel Gateway Development
Golf Course

APPENDIX E

SCOPING MEETING TRANSCRIPT

DEPARTMENT OF DEFENSE

EAST CAMPUS INTEGRATION PROGRAM

FORT MEADE, MARYLAND

PUBLIC SCOPING MEETING

JANUARY 27, 2015

The above-mentioned meeting was held on Tuesday, January 27, 2015, commencing at 5:16 p.m., at the Severn Community Library, 2624 Annapolis Road, Severn, Maryland 21144, before Robert A. Shocket, Notary Public.

REPORTED BY: Robert A. Shocket

SPEAKERS:

PATRICK SOLOMON, Moderator, HDR

LEIGH HAGAN, HDR

CHRIS HOLDRIDGE, HDR

PUBLIC SPEAKER:

LINDA GREENE, Executive Director
BWI Business Partnership

PROCEEDINGS

MR. SOLOMON: Good evening and welcome to the public scoping meeting for the proposed East Campus Integration Program for the Department of Defense at Fort Meade in Maryland. My name is Patrick Solomon and I represent HDR, the contractor preparing the Environmental Impact Statement. Also present from HDR are, to my left, Leigh Hagan and Chris Holdridge.

Before we get started, I'd like to cover a few important details. The fire exits are the same way you came in, and the restrooms are down the hall on the right. If you haven't registered this evening, I encourage urge to do so at the registration table in the back of the room. If you provide your name and address you'll be entered into a mailing list and will receive announcements regarding the project. We have a court reporter present, and all verbal comments made as part of the formal meeting tonight will be recorded and kept in the official administrative record for the project.

The public meeting will be conducted this

evening in two parts. During the first part of the meeting we will present information on the proposed East Campus Integration Program at Fort Meade, define the Proposed Action and Alternatives, and discuss the environment the impact analysis process that will be undertaken. During the second part of the meeting, we will provide you with the opportunity to make verbal comments to help us identify issues or alternatives to be addressed in the environmental impact analysis.

MS. HAGAN: The East Campus Integration Program was initiated to provide a modern office, operational, and headquarters complex to meet the mission requirements of the NSA and Intelligence Community. Development is proposed for the East Campus and redevelopment of the 9800 Troop Support Area located within the NSA Main Campus. The development of the East Campus and the 9800 Area is identified in the Fort Meade and NSA plaster plans and would promote recapitalization of aging facilities on the installation.

Portions of the East Campus are currently

under construction. Continued development and integration of the East Campus into the NSA Main Campus would consist of demolition of approximately 1.9 million square feet of aged buildings and infrastructure, and construction of approximately 2.9 million square feet of operational complex and headquarters space. This space would be supporting an increase of 7200 people on the installation, most from leased space within the local area.

Alternatives to development of the East Campus include acquisition of additional space at two existing, off-site leased locations as identified on the map in the back of the room, as well as four options for redundant emergency backup power generation and various pollution control systems, two options for building heating systems, and four options for locations of parking structures. These alternatives will be further developed during the preparation of the Draft EIS as a result of public and agency input and environmental analyses of the activities. The No Action Alternative or not implementing the East Campus

Integration Program will also be analyzed in detail.

MR. HOLDRIDGE: So the National Environmental Policy Act -- also commonly referred to as NEPA -- establishes the process that Federal agencies are to follow so that agency officials can make decisions that are based on an understanding of environmental consequences, and take actions that protect, restore or enhance the environment. The NEPA decisionmaking process is founded on using accurate scientific analysis, expert agency comments, and public scrutiny to identify the environmental and socioeconomic issues that are truly significant.

An Environmental Impact Statement, or EIS, will be prepared for the East Campus Integration Program. An EIS is a public document that describes in detail the Proposed Action, all alternatives that were considered, and the environmental impacts of implementing the Proposed Action, reasonable alternatives, and the No Action Alternative. The EIS for the East Campus Integration Program will be prepared consistent with NEPA and the regulations

implementing NEPA, as well as DOD's policy for implementing NEPA.

There may be aspects and details of the Proposed Action that are classified. Therefore, the Draft EIS will present the Proposed Action and Alternatives in enough detail to describe the types and magnitudes of environmental impacts while also ensuring that sensitive information is safeguarded. The DOD decisionmaker for this project will use the analysis and information in the Final EIS in conjunction with other relevant materials to decide on the ultimate course of action.

MS. HAGAN: Public involvement is a fundamental aspect of NEPA. We are early in the NEPA process. Currently, we are seeking input from agencies and the public on the Proposed Action, possible alternatives, and potential environmental impacts. This process is called "scoping" because we are determining the scope of issues that should be included in the Draft EIS.

The scoping process began with the

publication of the Notice of Intent in the Federal Register. Notices were also published in the Washington Post and the Baltimore Sun on January 11, 2015. Additionally, a letter containing the Notice of Intent was mailed to Federal, state, and local agencies; Native American tribes; individuals; and other stakeholder groups that might have some interest in the proposed East Campus Integration Program.

All comments that are received during the scoping period, including comments that we receive tonight, will be taken into consideration when the Draft EIS is prepared. Information on how to submit comments relevant to this project was published in the Notice of Intent and is reported on this fact sheet, which you can get at the back of the room on the table and also on the poster that we have next to that table. We request that scoping comments be submitted by February 27th, 2015.

The next step in the EIS process is to prepare the Draft EIS. A Notice of Availability will be published in the Federal Register and local

newspapers once the Draft EIS has been prepared, and copies of the Draft EIS will be distributed to anyone who has requested a copy. If you have not already done so, please indicate on your registration card if would like to receive a copy of the Draft EIS when it becomes available. The Draft EIS will be available for review and comments for at least 45 days.

After the close of the comment period on the Draft EIS, a Final EIS will be prepared. All substantive comments received during the Draft EIS comment period will be documented in and attached to the Final EIS. The Final EIS will also be made available for review prior to any decisions being made.

Following the review period on the Final EIS, the DOD will release a Record of Decision.

We are here tonight to listen to your views and concerns regarding environmental issues associated with the East Campus Integration Program at Fort Meade. Thank you.

MR. SOLOMON: As we move into the public hearing portion of tonight's meeting, I would first ask

every one to take a moment to silence your cell phones if you haven't already done so.

My role for this evening is to facilitate the public comment process. The goal is to ensure that every speaker has the opportunity to make comments that they would like to be heard by this group.

If you weren't here for the open house portion earlier this evening, all the public developments, as we pointed out, are available in the pack of the room. Feel free to take copies of the handouts that are available on the tables in the back with you.

Now for the ground rules. Please begin making your comments by stating your name and your affiliation you have so that the court reporter can transcribe it correctly for the record. If you have any written comments in addition to your verbal comments, please give those to me or to the registration table at the back of the room and we'll be sure that they are included in the record. Comment forms are also available on table in the back of the

room as previously noted. Written and verbal comments receive the same consideration, so you only need to use one method in making a scoping comment.

Everyone who desires to speak should have signed up on the speaker sheet at the registration table. Individuals who have signed up to speak will be called in the following order: elected officials, representatives from public agencies, and then individuals. When you come up to the microphone, again please state your name and you will have, depending on the number of speakers, up to three minutes to speak. At the end of your three minutes I will signal to you that your time is up; you can then finish your sentence. If we have a limited number of speakers we're not going to necessarily hold anybody to the three minutes. And then following that it will be the next person's turn to speak.

After all the speakers have had one chance to speak, then if you have already spoken and would like to speak again, I'll let you come back up, and you can finish what you were saying. If you would like to

speak, but have not yet registered, you can still do so in the back of the room at the registration table. Before we get started, are there any questions on logistics?

I would like to open up the floor to public comments. Does anybody wish to make a public comment at this time? Come on up. Again, just state your name and affiliation clearly to the court reporter.

MS. GREENE: My name is Linda Greene and I'm Executive Director of the BWI Business Partnership. And I would liked to request that the scoping in the EIS include a very thorough look at the transportation impacts that this would cause, not only on the highway system but also in terms of transit and other modes of getting people to work.

I would also like to see it include potential remedies and solutions for not only highway congestions but increasing transit and availability of people to get into this project. Even though it's internal to NSA, as it looks on the map, 7200 people are again commuters on the road and we're already in an

extremely congested situation. So I encourage the broadest possible look at transportation as part of your project.

MR. SOLOMON: Thank you. Are there any other speakers at this time? Since there are no further speakers at this time, we'll temporarily suspend the meeting and will reconvene if a person who wishes to make a verbal comment arrives. We will now "disconvene" if that is a word. Thank you.

(Meeting in recess.)

MR. SOLOMON: It's now just after 7 p.m. Does anyone wish to provide a verbal comment? Thank you again for your participation in this scoping meeting. The meeting is adjourned.

(Meeting adjourned at 7:12 p.m.)

State of Maryland

Baltimore County, to wit:

I, ROBERT A. SHOCKET, a Notary Public of the State of Maryland, County of Baltimore, do hereby certify that the within-named proceedings personally took place before me at the time and place herein set out.

I further certify that the proceedings were recorded stenographically by me and this transcript is a true record of the proceedings.

I further certify that I am not of counsel to any of the parties, nor in any way interested in the outcome of this action.

As witness my hand this 5th day of February, 2015.

Robert A. Shocket

Robert A. Shocket,

Notary Public

My Commission Expires:

November 23, 2018

APPENDIX F

SCOPING COMMENTS

Maryland Department of Planning
Maryland Historical Trust

Sustainable Attainable

January 26, 2015

East Campus Integration Program EIS
c/o HDR
2600 Park Tower Drive, Suite 100
Vienna, Va 22180

Re: EIS East Campus Integration Program
Historic Preservation Review
Anne Arundel County, Maryland

Dear Mr. Williams,

The Maryland Historical Trust (Trust), a division of the Maryland Department of Planning, received notice of the above-referenced undertaking on January 8, 2015. We have reviewed the provided information and are writing to offer our initial comments and request additional documentation necessary to evaluate the project's effect on historic properties in accordance with Section 106 of the National Historic Preservation Act and Sections 5A-325 and 5A-326 of the Annotated Code of Maryland, as appropriate.

The National Security Agency should take the following steps to identify, evaluate, and consider historic properties.

- Define the project's Area of Potential Effect (APE).
- Determine the National Register eligibility of properties within the APE. This may require the preparation of Determination of Eligibility (DOE) forms.
- Determine the effect of the project on historic properties and submit all relevant documentation to the Trust for review and comment.

If necessary, DOE forms must contain sufficient description of buildings, structures, areas of land use, and the overall landscape of the property to evaluate significance and integrity under National Register Criterion C. This should include information regarding feature age, form, stylistic elements, methods of construction, materials, and condition. Forms must also contain sufficient historical context to evaluate the property under National Register Criteria A and B. This should include information derived from historic maps and land records; examination of the existing buildings, structures, and landscape as historical sources; and relevant information from existing reports and other secondary sources. All DOE forms must be completed by a qualified architectural historian, preservationist, or historian and be accompanied by supporting materials as described in *General Guidelines for Compliance-Generated Determinations of Eligibility* and *Standards and Guidelines for Architectural and Historical Investigations in Maryland*. These documents and other information about completing a DOE form may be found on the Trust's website, http://mht.maryland.gov/projectreview_DOEGuide.shtml .

Thank you for providing us this opportunity to comment. We look forward to receiving the requested information and working with you to successfully complete the preservation requirements for the proposed undertaking. If you have questions or require assistance, please contact Dixie Henry (regarding archeology) at dixie.henry@maryland.gov or me (regarding buildings, structures, and cultural landscapes) at amanda.apple@maryland.gov.

Sincerely,

Amanda R. Apple
Preservation Officer
Maryland Historical Trust

DLH \ ARA
201500088

Maryland Department of Planning

Sustainable Attainable

February 13, 2015

Mr. Patrick Solomon
HDR
2600 Park Tower Drive, Suite 100
Vienna, VA 22180

STATE CLEARINGHOUSE RECOMMENDATION

State Application Identifier: **MD20150108-0017**
Applicant: HDR
Project Description: Scoping for Environmental Impact Statement: East Campus Integration Program, Fort Meade, MD
Project Location: Anne Arundel County
Approving Authority: U.S. Department of Defense DOD/NSA
Recommendation: **Consistent Contingent Upon Certain Action(s)**

Dear Mr. Solomon:

In accordance with Presidential Executive Order 12372 and Code of Maryland Regulation 34.02.01.04-.06, the State Clearinghouse has coordinated the intergovernmental review of the referenced project. This letter constitutes the State process review and recommendation based upon comments received to date. This recommendation is valid for a period of three years from the date of this letter.

Review comments were requested from the Maryland Department(s) of Natural Resources, Transportation, the Environment, the Maryland Department of Planning, including the Maryland Historical Trust; and Anne Arundel County. As of this date, the Maryland Department of the Environment; and Anne Arundel County have not submitted comments. **This recommendation is contingent upon the applicant considering and addressing any problems or conditions that may be identified by their review. Any comments received will be forwarded.**

The Maryland Department of Planning found this project to be consistent with their plans, programs and objectives.

The Maryland Department(s) of Natural Resources, Transportation and the Maryland Historical Trust stated that their finding(s) of consistency is/are contingent upon the applicant taking the action(s) summarized below.

The Department of Transportation stated that "as far as can be determined at this time, the subject has no unacceptable impacts on plans or programs."

The Maryland State Highway Administration (SHA) requests that the Environmental Impact Statement (EIS) appropriately examines the impacts to the surrounding State-maintained roadway network as a result of the additional traffic generated by the development.

The MD 175 Corridor, from MD 295 to MD 170, Planning Study used Round 7 land use assumptions for Fort Meade, which included Base Realignment and Closure (BRAC), National Security Agency (NSA) expansion and Enhanced Use Lease (EUL) development. With these developments, planning study forecasts captured 5,700 BRAC employees, 5,700 contractors and 4,000 additional NSA employees. At the beginning of the MD 175, from Disney Road to Reece Road, design study, SHA performed sensitivity analyses to 2035 Round 7B forecasts. Land use projections were similar; and

SHA left the traffic volumes unchanged.

Since then, Rounds 8 and 8a have been approved by the County and Baltimore Metropolitan Council (BMC). Upon review, it is unlikely, that either Round captured the additional northern campus development. The area State roads (MD 175, MD 198, and MD 32) may need further improvements due to the proposed NSA East Campus Expansion Program. Therefore, SHA recommends that NSA conduct a traffic impact study (TIS) of the East Campus Integration Program of the state and local roads and determine their improvement needs.

- A reasonable traffic impact study should include the following State roadways:
  - MD 295 from MD 198 to MD 175
  - MD 32 from MD 295 to MD 175
  - MD 175 from MD 295 to MD 32
  - MD 198 from MD 295 to MD 32

The Maryland State Highway Administration notes that if heavy truck traffic is expected to increase significantly between Fort Meade and the sewage treatment plant on MD 198 significantly, improvements to the area's State roads may be required.

Please coordinate with SHA throughout the process to ensure that proposed mitigation to traffic impacts is consistent with planned and active State roadway projects in the area.

The Maryland Department of Natural Resources (DNR) stated that this major project includes construction of 2.88 million square feet on building space to provide workspace for 7,200 additional personnel and demolition of 1.9 million square feet of existing buildings and facilities to help integrate the East Campus of National Security Agency (NSA) with its main campus at Fort Meade, Maryland. The Department requests to consider the following in developing the project's Environmental Impact Statement (EIS): (1) This proposed action will have foreseeable coastal effects on the Maryland Coastal Zone. DNR also wants to include a Federal Consistency Determination to ensure that the proposed projects will be consistent to the maximum extent possible with Maryland's enforceable policies. (2) The proposed projects include demolition, construction and many upgrades and retrofits to numerous facilities. To the extent possible, green and sustainable choices should be considered in developing alternative options. This includes recycling and reusing materials, providing access to affordable energy and local food production. Ground-source heat pumps, energy efficient appliances, doors and windows, combined heating/cooling and power systems, and passive solar gain should also be considered in building design in combination with above to provide reliable comfort to residents with minimum ecological impact. Green roofs, permeable pavement, planting of trees and other vegetation proximate to the building (such as rain gardens and community vegetable gardens) could help reduce both "heat island effect" and help with onsite stormwater management. All of the above also provide opportunities for reducing operation and maintenance costs, providing green jobs and training and improving the livability, environmental performance and economic vitality of the NSA campus and the broader region.

The Maryland Historical Trust (MHT), a division of the Maryland Department of Planning, received notice of the above-referenced undertaking on January 8, 2015. We have reviewed the provided information and are writing to offer our initial comments and request additional documentation necessary to evaluate the project's effect on historic properties in accordance with Section 106 of the National Historic Preservation Act and Sections 5A-325 and 5A-326 of the Annotated Code of Maryland, as appropriate.

The National Security Agency should take the following steps to identify, evaluate, and consider historic properties.

- Define the project's Area of Potential Effect (APE).
- Determine the National Register eligibility of properties within the APE. This may require the preparation of Determination of Eligibility (DOE) forms.
- Determine the effect of the project on historic properties and submit all relevant documentation to the Trust for review and comment.

If necessary, the Department of Environment (MDE) forms must contain a sufficient description of buildings, structures, areas of land use, and the overall landscape of the property to evaluate significance and integrity under the National Register Criterion C. This should include information regarding feature age, form, stylistic elements, methods of construction, materials, and condition. Forms must also contain sufficient historical context to evaluate the property under National Register Criteria A and B. This should include information derived from historic maps and land records; examination of the existing buildings, structures, and landscape as historical sources; and relevant information from existing reports and other secondary sources. All MDE forms must be completed by a qualified architectural historian, preservationist, or historian and be accompanied by supporting materials as described in General Guidelines for Compliance-Generated Determinations of Eligibility and Standards and Guidelines for Architectural and Historical Investigations in Maryland. These documents and other information about completing a MDE form may be found on the Trust's website, http://mht.maryland.gov/projectreview_DOEGuide.shtml .

The Maryland Historical Trust thanks the applicant for providing them this opportunity to comment. They look forward to receiving the requested information and working with the applicant to successfully complete the preservation requirements for the proposed undertaking. If the applicant has questions or requires assistance, please contact Dixie Henry (regarding archeology) at dixie.henry@maryland.gov or me (regarding buildings, structures, and cultural landscapes) at amanda.apple@maryland.gov.

Any statement of consideration given to the comments(s) should be submitted to the approving authority, with a copy to the State Clearinghouse. The State Application Identifier Number must be placed on any correspondence pertaining to this project. The State Clearinghouse must be kept informed if the approving authority cannot accommodate the recommendation.

Please remember, you must comply with all applicable state and local laws and regulations. If you need assistance or have questions, contact the State Clearinghouse staff person noted above at 410-767-4490 or through e-mail at nasrin.rahman@maryland.gov. **Also please complete the attached form and return it to the State Clearinghouse as soon as the status of the project is known.** ***Any substitutions of this form must include the State Application Identifier Number.*** **This will ensure that our files are complete.**

Thank you for your cooperation with the MIRC process.

Sincerely,
Linda C. Janey
Linda C. Janey, J.D., Assistant Secretary

LCJ:NR
cc: Jeffrey Williams
Greg Golden - DNR
Amanda Degen - MDE
Tina Quinichette - MDOT
Debra Falconer - ANAR
Peter Conrad - MDPL
Beth Cole - MHT

Maryland Department of Planning

Sustainable Attainable

PROJECT STATUS FORM

Please complete this form and return it to the State Clearinghouse upon receipt of notification that the project has been approved or not approved by the approving authority.

TO: **Maryland State Clearinghouse**
Maryland Department of Planning
301 West Preston Street
Room 1104
Baltimore, MD 21201-2305

DATE: _____
(Please fill in the date form completed)

FROM: _____
(Name of person completing this form.)

PHONE: ____-____-_____
(Area Code & Phone number)

RE: **State Application Identifier:** **MD20150108-0017**
Project Description: Scoping for Environmental Impact Statement: East Campus Integration Program, Fort Meade, MD

PROJECT APPROVAL

This project/plan was: ☐ **Approved** ☐ **Approved with Modification** ☐ **Disapproved**

Name of Approving Authority: _____ **Date Approved:** _____

FUNDING APPROVAL

The funding (if applicable) has been approved for the period of:

_____, 201____ **to** _____, 201____ **as follows:**

Federal $:	**Local $:**	**State $:**	**Other $:**
_____	_____	_____	_____

OTHER

☐ *Further comment or explanation is attached*

Lawrence J. Hogan, Jr., Governor
Boyd K. Rutherford, Lt. Governor

David R. Craig, Secretary

301 West Preston Street - Suite 1101 - Baltimore - Maryland - 21201
Tel: 410.767.4500 - Toll Free: 1.877.767.6272 - TTY users: Maryland Relay - Planning.Maryland.gov

From: Morrison, Mary [mailto:mary_morrison@nps.gov]
Sent: Friday, February 27, 2015 11:54 AM
To: ECIPEIS
Cc: jdwill2@nsa.gov; Matthew Jagunic
Subject: RE: NPS response (NPS No. ER 15/0037) - Notice of Intent To Prepare an Environmental

Impact Statement for the East Campus Integration Program Within the Fort Meade Complex, Maryland

Good Morning -

Mr. Williams, thank you so much for your time in discussing this project today. Our comments, as we discussed, on the above referenced project are being submitted on behalf of the National Park Service, Chesapeake Bay Office, Star Spangled Banner National Historic Trail. Please let me know if you have any questions.

This Project potentially impacts the Star Spangled Banner National Historic Trail (STSP), and the Baltimore and Washington Parkway, which is a resource associated with the STSP. The STSP is managed by the National Park Service (NPS), Chesapeake Bay Office (CHBA). Due to the proximity of the proposed project to NPS resources, the CHBA would like to stay informed throughout the National Environmental Policy Act and National Historic Preservation Act compliance processes conducted by the Department of Defense for this project. We are available to participate in any reviews of documents or analyses related to impacts to NPS resources prior to the publication of the Final EIS, and NPS/CHBA would request to remain in communication to review the information as it continues to be developed.

The NPS/CHBA is also available to provide information about the STSP and associated resources, that would inform analysis of potential impacts to NPS resources.

Thank you for the opportunity to provide these comments. For questions related to these comments, please contact Matt Jagunic, Outdoor Recreation Planner, CHBA, matt_jagunic@nps.gov, or Missy Morrison (see contact info below).

Thank you

Missy

--
Mary K. Morrison (Missy)
Resource Planning Specialist
Resource Planning Compliance Division
National Park Service, Northeast Region
200 Chestnut Street, 3rd Fl
Phila., PA 19106

Phone: 215-597-7067
Mobile: 215-617-9440
Fax: 215-597-5747

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APPENDIX B

TRAFFIC IMPACT STUDY

Final

TRAFFIC IMPACT STUDY

FOR THE

EAST CAMPUS INTEGRATION PROGRAM
ENVIRONMENTAL IMPACT STATEMENT
FORT MEADE, MARYLAND

National Security Agency

Fort George G. Meade, Maryland

October 2016

FINAL

TRAFFIC IMPACT STUDY
FOR THE
EAST CAMPUS INTEGRATION PROGRAM
ENVIRONMENTAL IMPACT STATEMENT
FORT MEADE, MARYLAND
TABLE OF CONTENTS

ATTACHMENTS

FIGURES

TABLES

ACRONYMS AND ABBREVIATIONS

ADT	average daily traffic
ATR	automated traffic recorder
BWI	Baltimore-Washington International Airport
DoD	Department of Defense
ECIP	East Campus Integration Program
EIS	Environmental Impact Statement
ECPS	East Campus Parking Structure
ft^2	square feet
HCM	Highway Capacity Manual
I	Interstate
LOS	level of service
MARC	Maryland Area Regional Commuter
mph	miles per hour
NSA	National Security Agency
pc/hr/ln	passenger cars per hour per lane
PHF	peak hour factor
PTV	Planung Transport Verkehr
s/veh	seconds per vehicle
TIS	Traffic Impact Study
TMC	turning movement count
V	volume
v/c	volume/capacity
VCP	vehicle control point
V_p	15-minute peak period volume
vpd	vehicles per day
vph	vehicles per hour

1. Introduction

This Traffic Impact Study (TIS) analyzes the potential traffic impacts on the study area and surrounding roadway network as a result of the Department of Defense's (DoD's) East Campus Integration Program (ECIP) for the National Security Agency's (NSA) complex at Fort George G. Meade (Fort Meade) in Maryland. The ECIP would construct office and operational spaces consisting of approximately 2.9 million square feet (ft^2), and 1.9 million ft^2 of buildings would be demolished.

The DoD proposes to continue integrating the NSA East Campus with the NSA Main Campus through development of an operational complex and headquarters space in both the northern portion of the East Campus and in the 9800 Troop Support Area (i.e., the Proposed Action). Implementation of the ECIP entails construction and operation of 2,880,000 ft^2 of new facilities for operational and headquarters space within the 150-acre ECIP project area (see **Figure 1-1**), and demolition of approximately 1,880,000 ft^2 of buildings and infrastructure. In addition, two off-post alternatives are considered at the National Business Park and Annapolis Junction Business Park sites (see **Figure 1-2**). These off-post alternatives would both assume up to 1,000,000 ft^2 of office space and transfer of 4,400 personnel from the NSA Main Campus. Construction of East Campus Building 3, smaller buildings, and associated parking facilities on the northern portion of the East Campus would still occur under the off-post alternatives.

In addition to the 2015 Baseline Conditions (existing) analysis, this TIS addresses the traffic capacity and level of service (LOS) impact that the following alternatives have on the internal Fort Meade Campus and surrounding external roadway systems:

- 2029 No Action Alternative
- 2029 Proposed Action (**Figure 1-1**)
- 2029 Alternative 1: National Business Park/East Campus (see **Figure 1-2**)
- 2029 Alternative 2: Annapolis Junction Business Park/East Campus (see **Figure 1-2**).

In addition to the internal and external roadway networks described in **Sections 1.1** and **1.2**, the study area for this TIS is generally bounded by the following routes:

- Maryland State Route (MD) 32 from Interstate (I)-95 to U.S. Route 1
- Baltimore-Washington Parkway/MD 295 from MD 198 to MD 100
- MD 175 from I-95 to MD 32.

1.1 Internal Roadway Network (On-Post)

Fort Meade is well connected internally though arterial and collector roadways. The following describes primary and secondary roadways on Fort Meade, with emphasis on the NSA Campus and ECIP project area:

- Rockenbach Road (MD 713) is a four-lane undivided roadway connecting MD 175 (Annapolis Road) to the east, Canine Road and the NSA Main Campus to the west, and borders the East Campus to the north. The posted speed limit is 45 miles per hour (mph).

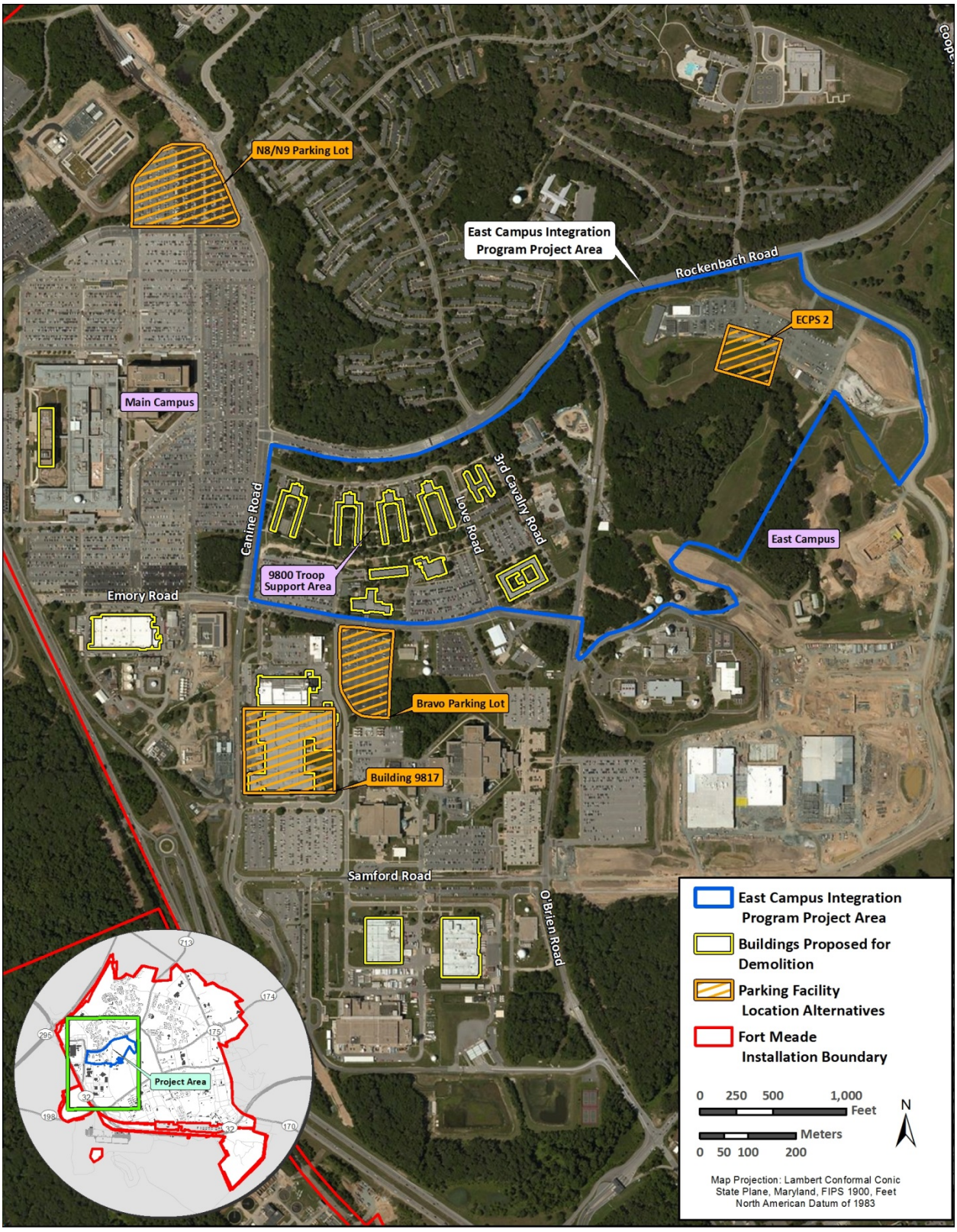
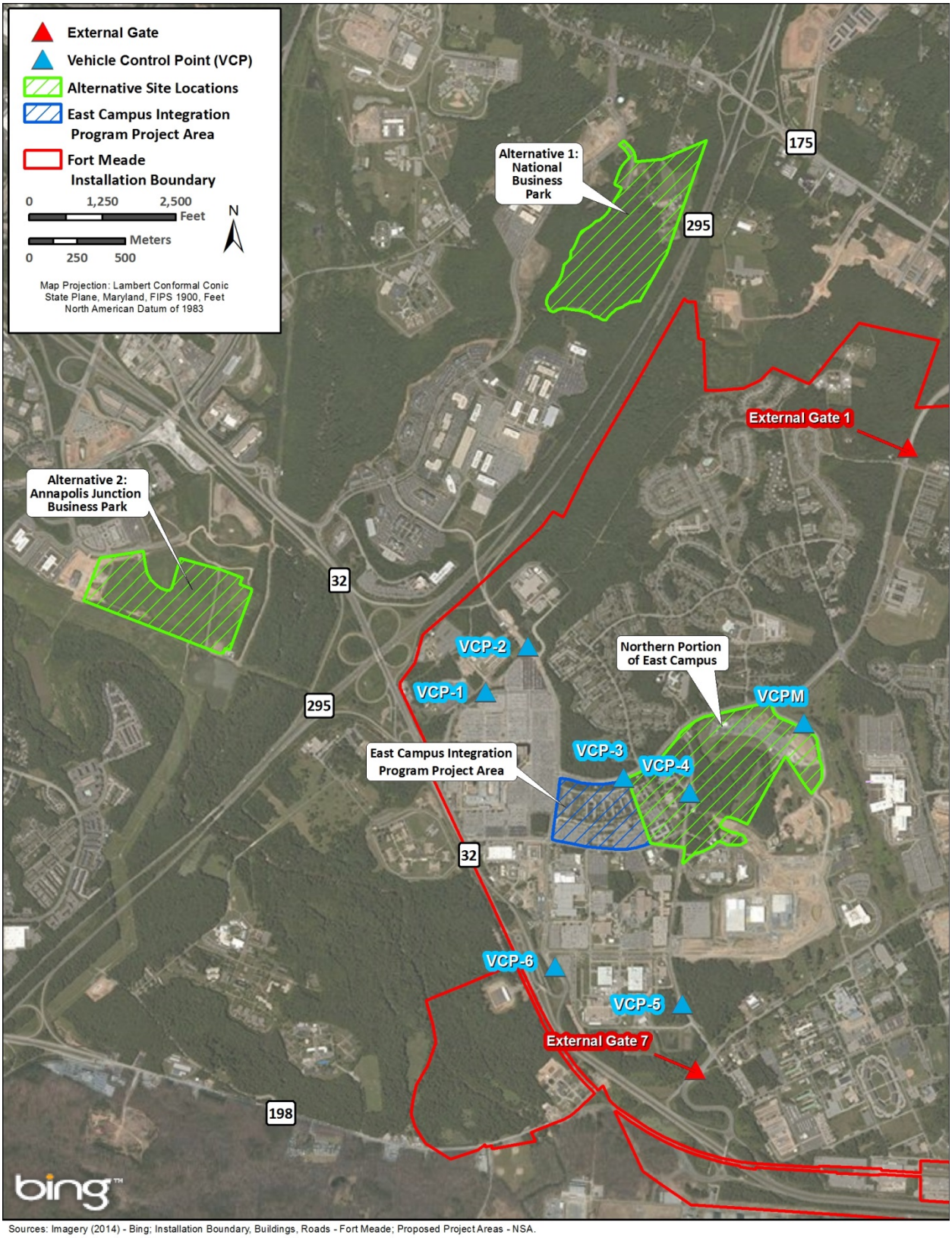


Figure 1-1. Proposed Action and Surrounding Areas



Sources: Imagery (2014) - Bing; Installation Boundary, Buildings, Roads - Fort Meade; Proposed Project Areas - NSA.

Figure 1-2. Proposed Action Location Alternatives Outside of Fort Meade

- Reece Road is a two-lane undivided roadway connecting MD 175 to the east and Cooper Avenue to the west, providing access to the Normandy Bluffs military housing area to the eastern side of MD 175. The posted speed limit is 25 mph.
- Mapes Road is a two-lane undivided roadway connecting MD 175 to the east and External Gate 7 (see *External Gates* descriptions in **Section 3.1** below and see **Figure 1-2**) to the west, and a four-lane divided roadway from External Gate 7 outside the installation to the MD 32 interchange, which terminates into MD 198 (south of the East Campus). The posted speed limit is 30 mph.
- Canine Road varies between a three- and four-lane road within the NSA Campus. It has two connections with MD 32 (one west and one south of East Campus) and borders the west side of the 9800 Troop Support Area.
- Cooper Avenue is a two-lane undivided roadway to the east of the East Campus connecting Llewellyn Avenue to the south and Rockenbach Road to the north. Cooper Avenue traverses farther north of Rockenbach Road and provides access to the Midway Common military housing area. The posted speed limit is 25 mph.
- Other primary roadways on Fort Meade and the NSA Campus include Clark Road, O'Brien Road, MacArthur Road, Taylor Avenue, Ernie Pyle Road, Connector Road, and Samford Road.

1.2 External Roadway Network (Off-Post)

Primary highways serving Fort Meade and the traffic study area include I-95, the Baltimore-Washington Parkway/MD 295, MD 32, MD 175, and Fort Meade Road (MD 198). The following describes each of these roadways:

- The Baltimore-Washington Parkway/MD 295 is located along the west side of Fort Meade. It traverses in a north-south direction connecting Baltimore to the north and Washington, DC to the south. It carries two lanes of traffic in each direction. According to the Federal Highway Administration, the Baltimore-Washington Parkway/MD 295 is classified as a parkway; however, for the traffic capacity analysis, the Baltimore-Washington Parkway is classified as a freeway as per the Highway Capacity Manual (HCM).
- I-95 is located along the west side of the traffic study area. It traverses in a north-south direction connecting Baltimore and Washington, DC and carries four lanes of traffic in each direction. According to the HCM, I-95 is classified as a freeway for capacity analysis.
- Patuxent Freeway (MD 32) forms the southern boundary of Fort Meade. It connects I-95 to the northwest and beyond to I-97 to the southeast. It carries two lanes of traffic in each direction. According to the HCM, MD 32 is classified as a freeway for capacity analysis.
- Annapolis Road (MD 175) forms the northeastern boundary of Fort Meade connecting I-95 to the north and MD 32 to the south. It is a two- to four-lane road in the vicinity of Fort Meade with auxiliary lanes at intersections.
- Fort Meade Road (MD 198) is a two-lane undivided roadway east of the Baltimore-Washington Parkway to MD 32. It widens to a four-lane divided roadway west of the Baltimore-Washington

Parkway. It connects Fort Meade near External Gate 7 (Mapes Road) to the east and the Baltimore-Washington Parkway to the west.

- Dorsey Run Road is a two-lane road that connects MD 32 to Annapolis Junction Business Park near Junction Drive. It widens with exclusive turning lanes at the intersection with the entrance to the business park and ends in the park.
- National Business Parkway is a four-lane unrestricted access road that connects to MD 32 to the south and MD 175 to the north.

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2. Background Traffic Data

2.1 Traffic Data Collection

In order to evaluate the existing traffic conditions throughout the study area, traffic counts were collected to provide background information. Turning movement counts (TMCs), automated traffic recorder (ATR) counts at key locations, and lane configurations were collected from March to May 2015. These data were not seasonally adjusted. See **Figure 2-1** for traffic data collection locations.

Turning Movement Counts

The TMCs were collected at 22 key intersections in the study area. At each of these locations, vehicles at the intersection were recorded by direction and turning movement. The data were collected from 6:00 a.m. to 9:00 a.m. and 3:00 p.m. to 6:00 p.m. These data were tabulated in 15-minute increments in order to determine the AM peak hour, PM peak hour, and peak hour factors (PHFs). The PHF is a measure of the demand fluctuation within the peak hour period, usually expressed as PHF = V/(4 x v_p), where V is the total volume during the peak hour and v_p is the peak 15-minute volume occurring during the peak hour. By averaging peak hour times at each individual intersection, common AM and PM peak hours were determined to be from 7:15 a.m. to 8:15 a.m. and from 4:45 p.m. to 5:45 p.m., respectively.

Automated Traffic Recorders

ATRs were used to collect 48-hour traffic counts at 13 key locations in the study area. ATR data were collected in 1-hour increments and used to determine the corridor's average daily traffic (ADT) volumes and truck percentages. Vehicles are classified according to the Federal Highway Administration vehicle classifications. These classifications are distinguished by the number of axles in contact with the road. For this analysis, vehicles with three or more axles and buses were considered trucks. **Table 2-1** summarizes the ADT volumes and truck percentages for key commuter corridors adjacent to Fort Meade.

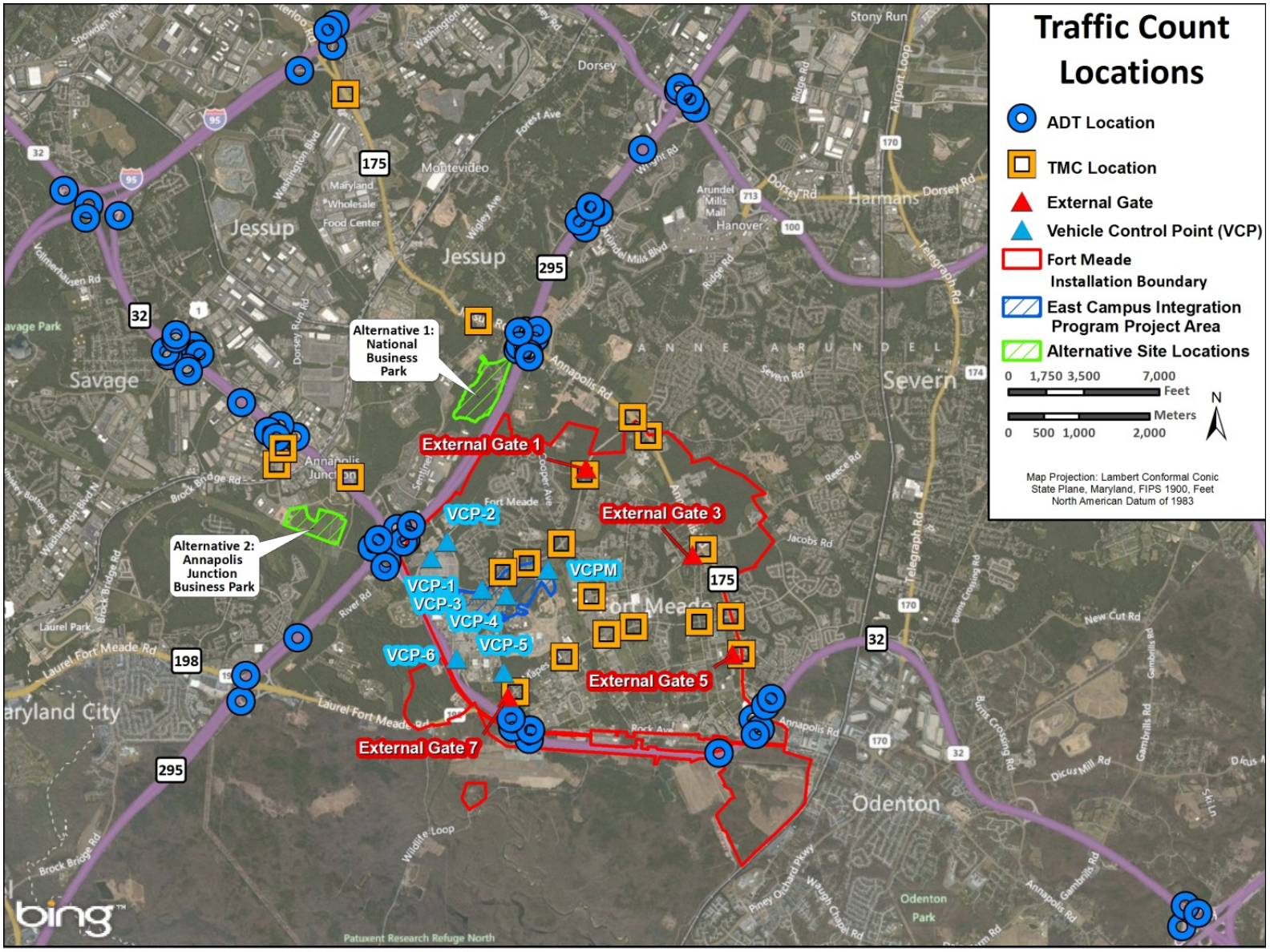
Table 2-1. Summary of Average Daily Traffic Volumes for Key Corridors

	ADT (vpd)	Truck Percent
Baltimore-Washington Parkway/MD 295 (northbound)	51,948	2%
Baltimore-Washington Parkway/MD 295 (southbound)	59,061	2%
MD 32 (eastbound)	34,858	6%
MD 32 (westbound)	41,255	3%

Key: vpd = vehicles per day

2.2 Alternative Transportation Modes

To support reducing single-vehicle trips to Fort Meade, transit, shuttle/vanpool, and pedestrian/bicycle options are available (NSA 2010). Fort Meade also maintains a commuter website titled *MeadeRide* (www.meaderide.com) which provides information and links related to commuter options, on-post shuttle services, and alternative transportation modes. Links to the various commuter service providers are also provided for the latest information. Fort Meade also participates in the Guaranteed Ride Home program. Other transportation modes are discussed in detail below.



Sources: Imagery (2014) - Bing; Installation Boundary, Buildings, Roads - Fort Meade; Proposed Project Areas - NSA.

Figure 2-1. Traffic Count Locations

Train Service

- Maryland Area Regional Commuter (MARC) Train Service, operated by the Maryland Transit Administration, provides rail services from Washington, DC and Baltimore to Odenton Station and Savage Station in the Fort Meade area. The Odenton Station in Anne Arundel County and Savage Station in Howard County are along the Penn line and Camden line, respectively. Both train stations are within a 4-mile radius of Fort Meade. Between 5:00 a.m. and 10:00 a.m., there are 18 trips departing from Baltimore and 12 trips departing from Washington, DC (Union Station) to these Fort Meade area stations. Between 3:00 p.m. and 7:00 p.m., there are 8 trips departing from Baltimore and 14 trips departing from Washington, DC. Additional limited service north of Baltimore includes stops at Martin Airport, Edgewood, Aberdeen, and Perryville.
- The closest Washington Metropolitan Area Transit Authority train station to Fort Meade is the Greenbelt Metro Station. It is located in Prince George's County on the Green Line.

Bus Service

- The K Route, operated by the Regional Transportation Agency of Central Maryland, provides peak hour service to Fort Meade. It operates from Arundel Mills to the Odenton MARC Rail Station. This route operates with 30- to 60-minute headway (depending on the time of day) and provides 9 trips between 6:45 a.m. and 11:45 a.m. and 15 afternoon/evening trips between 12:45 p.m. and 10:45 p.m. Stops at Fort Meade include Reece Road Gate (External Gate 3) and Mapes Gate (External Gate 5).
- Route 202, operated by the Maryland Transportation Administration, provides service from the Metropolitan Grove MARC Station to Fort Meade. This route operates on 60-minute headways between 5:10 a.m. and 7:10 a.m. (inbound) and 3:00 p.m. to 5:00 p.m. (outbound). There is also a mid-day trip at 12:00 p.m. (outbound) from Fort Meade.
- Route 504, which will be operated by the Regional Transportation Agency of Central Maryland, will begin service in 2017. This new bus transit route will serve the Odenton and Savage MARC rail stations and travel through Fort Meade and the National Business Park. The planned alignment of Route 504 will operate on MD 175 past Fort Meade External Gates 3 and 5, and on National Business Parkway north of Guilford Road to MD 175. The intersections of MD 175/Rockenbach Road and segments of Mapes Road and Reece Road on Fort Meade will also be served by Route 504, but the route will be outside of the NSA vehicle control points (VCPs).

2.3 Existing Shuttle/Vanpool

- The NSA provides shuttle service between the MARC Rail Station at Odenton and the NSA Campus and Fort Meade to employees and civilians with proper identification. The shuttle operates six morning trips from the Odenton MARC Rail Station to the NSA Campus and the post, and six return trips in the evening from the NSA Campus to the Odenton MARC Rail Station.
- The Link Shuttle is operated by the Baltimore-Washington International Airport (BWI) Business Partnership, a public policy organization. The shuttle circulates in and around the BWI Hotel

District. The shuttle provides services between the BWI Business Park Light Rail Station and the Friendship Annex 3 Building. It operates Monday through Friday from 5:45 a.m. to 5:55 p.m.

- A shuttle departs the Greenbelt Metro Station and travels directly to Fort Meade. The shuttle departs the Greenbelt Metro Station on the half-hour between 6:00 a.m. and 7:30 a.m. and arrives approximately 30 minutes later. Return trips run between 3:30 p.m. and 5:00 p.m. There is also a mid-day trip at 11:00 a.m. (NSA 2010, NSA 2013).

2.4 Existing Pedestrian Accessibility

Pedestrians were counted along with vehicles at each TMC location. The daily pedestrian crossing volumes at the key intersections were observed to be low and for the purposes of this study have negligible impacts to overall intersection operations. However, there is typically a substantial influx of pedestrian movements during the AM and PM peak hours as personnel walk to and from the parking lots and their workplace. There are sidewalks on at least one side of most primary roadways within Fort Meade and the NSA Campus, including Reece Road, Cooper Road, and sections of Canine Road, O'Brien Road, and Mapes Road.

External Gate 6, located along Rock Avenue adjacent to the MD 32 to MD 175 westbound off ramp, is open only to bicyclists and pedestrians. It is open between 6:00 a.m. and 4:00 p.m. Monday through Friday.

2.5 Existing Parking

The existing parking on the NSA Main Campus is primarily surface lots with approximately 15,500 spaces available (NSA 2013). The ECIP project area currently has three parking lots serving the 9800 Troop Support Area and one lot currently used for construction staging and worker parking for activities in the southern portion of the East Campus. There are additional parking areas provided for deliveries and other special uses adjacent to specific buildings.

3. Traffic Modeling and Analysis Procedures

To assess the existing conditions and constraints in the study area, analyses were performed for the 2015 Baseline Conditions, 2029 No Action Alternative, 2029 Proposed Action, 2029 Alternative 1: National Business Park/East Campus and 2029 Alternative 2: Annapolis Junction Business Park/East Campus during the AM and PM peak hours. These analyses were completed using the modeling software and assumptions described below.

3.1 PTV Vistro 3.00-02

Planung Transport Verkehr (PTV) Vistro 3.00-02 was used to conduct signal timing optimization and record intersection LOS and delays. Vistro has the capability to develop a large network with multiple scenarios and conduct trip generation assignments. Using Google Maps, field data, and traffic data, a comprehensive network was coded into Vistro to study the AM and PM peak hour traffic impacts. By applying a growth rate of 7 percent (see **Section 5.1**) to the base existing model's traffic volumes, the 2029 No Action Alternative AM and PM peak scenarios were analyzed using Vistro. After further augmenting the model with the trip generation data, Vistro distributed the additional traffic for the 2029 Proposed Action, 2029 Alternative 1, and 2029 Alternative 2 AM and PM peak scenarios.

The trips generated by each proposed site (Proposed Action, Alternative 1, and Alterative 2) were assigned to each alternative's proposed "zone." A "zone" is an origin or destination area associated with a specific trip generator. As access to Fort Meade is controlled by gates, traffic was routed to the Fort Meade access points using a weighted distribution model based on Maryland State Highway Administration 2013 Average Annual Weekday Traffic. The weighted distribution model was created to allocate generated trips to/from the gates and zones. After the distribution model was entered into Vistro, trip assignments were logically routed through the network from the gates to zone, and vice versa. Similarly, access to Alternatives 1 and 2 are through intersections and the new trips developed by these alternatives were distributed to/from these intersections. These additional trips were added to the 2029 No Action Alternative AM and PM peak hour volumes to create an all-inclusive traffic model for each alternative scenario.

Using Vistro intersection optimization capabilities, traffic signals in all scenarios were automatically optimized based on volume/capacity (v/c) balancing, including the 2015 Baseline Conditions, which allowed for a similar comparison between alternatives. Vistro's intersection analyses identify measures of effectiveness including approach movement, group, and average delays. These measures of effectiveness are calculated analogous to the HCM 2010 procedures.

During the modeling process, it was determined that Vistro was unable to replicate the operations of a gate to accurately represent the processing of vehicles. To provide an estimation of LOS at the gates, an independent Synchro model was developed to represent the gate operations. However, it should be noted that based on field observations, there is an interdependent relationship between the gates and the intersections located adjacent to them.

Several assumptions were made in the development of the model:

- No roadway or intersection improvements were assumed for the network.

- Dorsey Run Road Extension – Only 1 million ft^2 are assumed for the Alternative 2 (Annapolis Junction Business Park/East Campus) development (not full build-out of 2.3 million ft^2 for the business park proposed by the site owners); therefore, a proposed extension of Dorsey Run Road to MD 32 eastbound is not incorporated into the model.
- Intersection control type was modeled as summarized in **Table 3-1.**

Table 3-1. Intersection Control Type Summary

Intersection	Control Type
MD 175 at Llewellyn Ave	Signalized
MD 175 at Mapes Rd	Signalized
MD 175 at Reece Rd	Signalized
MD 175 at Disney Rd	Signalized
MD 175 at MD 713	Signalized
Rockenbach Rd at Clark Rd	Two-way stop
Rockenbach Rd at Cooper Ave	Signalized
Rockenbach Rd at 29th Division Rd	Two-way stop
Rockenbach Rd at O'Brien Rd	Two-way stop
Mapes Rd at Ernie Pyle Rd	Signalized
Mapes Rd at MacArthur Rd	Signalized
Mapes Rd at Cooper Ave	Signalized
Mapes Rd at O'Brien Rd	Signalized
Cooper Ave at Reece Rd	Signalized
MD 32 Westbound Ramps at National Business Park	Roundabout
MD 32 Eastbound Ramps at Dorsey Run Rd	Signalized
Dorsey Run Rd at Junction Dr	Two-way stop
Mapes Rd at Taylor Ave	Signalized
Brock Bridge Rd at Jessup Rd	Signalized
MD 175 at U.S. Route 1	Signalized

External Gates. Access to Fort Meade, not including the NSA Campus, is provided via several external gates. These gates are regulated and staffed by Fort Meade personnel. Inspections are conducted for all inbound vehicles at each gate. Four external gates are located on Rockenbach Road, Reece Road, Mapes Road, and Llewellyn Avenue, respectively, west of MD 175. External Gate 4, Mapes Road at MD 175, is closed at this time. External Gate 2 is permanently closed and is therefore not included in the Vistro model. For accuracy, the model reflects gate hours and other information.

- **External Gate 1: Rockenbach Road**
  - 5:30 a.m. to 9:00 p.m., Monday–Friday
  - 9:00 a.m. to 9:00 p.m., weekends, closed holidays

- **External Gate 3: Reece Road and MD 175**
  - Demps Visitor Control Center Gate (24-hour access)
  - Demps Visitor Control Center hours: 7:30 a.m. to 3:30 p.m., Monday–Friday
- **External Gate 4: Mapes Road and MD 175**
  - Closed until further notice. This gate was closed during the traffic data collection. For consistency, the Vistro model was built to reflect this closure.
- **External Gate 5: Llewellyn Avenue and MD 175**
  - 6:00 a.m. to 9:00 a.m., Monday–Friday for inbound traffic
  - 3:00 to 6:00 p.m., Monday–Friday for outbound traffic.
- **External Gate 6: Pepper Road and MD 32**
  - 6:00 a.m. to 4:00 p.m., Monday–Friday
  - Pedestrian and cyclists only. No motor vehicles.
- **External Gate 7: Mapes Road and MD 32**
  - 5:30 a.m. to 9:00 p.m., Monday–Friday
  - 9:00 a.m. to 9:00 p.m., weekends and holidays.

Vehicle Control Points. NSA maintains seven VCPs to provide access to the NSA Campus. All of the VCPs are inside of Fort Meade, and VCPs 1, 2, and 6 are directly accessible from off the installation as noted below:

- VCP 1: Canine Road (accessible from MD 32)
- VCP 2: Connector Road (accessible from northbound Baltimore-Washington Parkway)
- VCP 3: Rockenbach Road
- VCP 4: O'Brien Road near Rockenbach Road
- VCP 5: O'Brien Road near Perimeter Road
- VCP 6: Samford Road (accessible from MD 32/Samford Road)
- VCP M: Rockenbach Road (currently under construction).

3.2 Level of Service Criteria

The *Policy on Geometric Design of Highways and Streets 2011* by the American Association of State Highway and Transportation Officials provides guidelines for the selection of design LOS. Various factors are considered in the calculations and differ depending on what is being analyzed (i.e., ramp merge/diverge, freeway, intersection, and roundabout). These factors include, but are not limited to, lane width, speed, grade, truck percent, traffic volume, PHF, and intersection control. A reasonable LOS for an urban freeway like I-95 is LOS C. A reasonable LOS for an urban collector and arterial is LOS D and LOS C, respectively.

The criteria provided in Exhibits 10-7, 13-2, 16-2, 17-2, and 21-1 of the HCM were used to determine the LOS for the intersections in the study area. For signalized intersections, Vistro reports a delay and LOS for each movement, approach, and intersection. The signalized intersection LOS is based on a weighted average of the movement volumes and delays. At unsignalized intersections, Vistro reports the delay and LOS for the approaches controlled by the stop signs. All LOS results reported in this TIS are based on

intersection LOS for signalized locations and the worst stop-controlled approach for unsignalized intersections.

Methods described in the HCM were used to evaluate freeway segments, and freeway ramp merge/diverge locations. For this analysis, weave locations were analyzed as ramp merge/diverge locations and not as weave sections described in the HCM. To determine the acceleration/deceleration lengths in weave areas, the weave distance between interchanges were divided in half. As the interchanges are closely spaced, evaluating the merge/diverge locations provides a more conservative evaluation of operations. Also, a default PHF of 0.95 was used for freeways (HCM recommends a general default of 0.95 for urban freeway sections).

Tables 3-2, **3-3**, and **3-4** provide a summary of the HCM thresholds.

Table 3-2. Summary of HCM Intersection LOS Thresholds

	Control Delay per Vehicle (s/veh)		LOS Description
	Signalized (HCM Exhibit 16-2)	**Unsignalized[1]/ Roundabout (HCM Exhibit 17-2/21-1)**	
A	≤ 10	≤ 10	Stable operations.
B	> 10–20	> 10–15	Stable operations, minimal delays.
C	> 20–35	> 15–25	Stable operations, acceptable delays.
D	> 35–55	> 25–35	Constricted operations, regular delays.
E	> 55–80	> 35–50	Maximum capacity, extended delays. Volumes at or near capacity. Long queues form upstream from intersection.
F[2]	> 80	> 50 or v/c 1.0	Restricted operations, excessive delays. Represents jammed conditions. Intersection operates below capacity with low volumes. Queues might block upstream intersections.

Key: s/veh = seconds per vehicle
Notes:
1. Unsignalized LOS is for the stop-controlled minor approach.
2. Max lane group v/c > 1.0 results in LOS F regardless of delay.

Table 3-3. Summary of HCM Ramp Merge/Diverge LOS Thresholds

	Density (pc/mi/ln) (HCM Exhibit 13-2)	LOS Description
A	≤ 10	Unrestricted Operations
B	> 10–20	Merging and diverging maneuvers noticeable to drivers
C	> 20–28	Influence area speeds begin to decline
D	> 28–35	Influence area turbulence becomes intrusive
E	> 35	Turbulence felt by virtually all drivers
F	Demand Exceeds Capacity	Ramp and freeway queues form

Key: pc/mi/ln = passenger cars per hour per lane

Table 3-4. Summary of HCM Freeway LOS Thresholds

	Density (pc/mi/ln) (HCM Exhibit 10-7)
A	≤ 11
B	> 11–18
C	> 18–26
D	> 26–35
E	> 35–45
F	>45 or v/c>1.00

Key: pc/mi/ln = passenger cars per hour per lane

3.3 Parking Facility Analysis

To evaluate impacts that the proposed parking facilities would have on the surrounding adjacent intersections under the Proposed Action, LOS were calculated for the intersections adjacent to the proposed parking facility locations under both the 2029 No Action Alternative (as a baseline) and the Proposed Action. As described further in **Section 8**, the following three multi-level parking facilities were assumed under the 2029 Proposed Action: the East Campus Parking Structure (ECPS) 2, Bravo, and Building 9817 parking facility alternative locations (see **Figure 1-1**). These parking facility alternatives were identified for the analysis due to their proximity to the ECIP project area. The amount of parking that would be constructed is based on the assumed capacity required for full occupancy of the proposed buildings. The exact space requirements, including sizes of parking facilities, would become more refined as the detailed design process progresses. The N8/N9 parking lot was not included in the parking facility analysis because it is assumed that not all the parking facility alternatives would be required to implement the Proposed Action. For the purposes of this analysis, the projected commuter traffic accessing the ECIP project area from off-post was divided among the other three alternative sites based on relative size of each site's footprint. It was assumed that approximately 33 percent of ECIP traffic would be directed to ECPS 2 and the remaining 45 percent and 22 percent of employees would be distributed to the Building 9817 and Bravo parking facilities, respectively. It was also assumed the existing traffic control devices, including traffic signals and stop signs, would still be in place in 2029. For the analysis of intersections adjacent to the proposed facility locations and the VCP locations, volumes from the NSA *2014 Traffic Count Updates, Final Report* were used (NSA 2014). As per the HCM, the average intersection delay was used for signalized intersections and the highest delay per approach (highest control delay) was used for unsignalized intersections.

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4. 2015 Baseline Conditions

The 2015 Baseline Conditions were analyzed to document existing traffic flow, distributions, gate usage, and overall performance along the perimeter and inside of the study area. The 2015 Baseline Conditions analyses are based on existing traffic volumes in the vicinity of Fort Meade.

4.1 Volume Development

As explained in **Section 2.1**, traffic data were collected with TMCs and ATRs throughout the study area. The 2015 Baseline Conditions AM and PM peak hours were determined, and the volumes were entered into the Vistro model. In locations where volumes were not collected, Maryland State Highway Administration 2013 Average Annual Weekday Traffic volumes were used to supplement the data. No growth was applied, as it was assumed the 0.45 percent per year growth rate (see **Section 5.1**) over 2 years was negligible. For VCP analysis, volumes from the NSA *2014 Traffic Count Updates, Final Report* were used (NSA 2014).

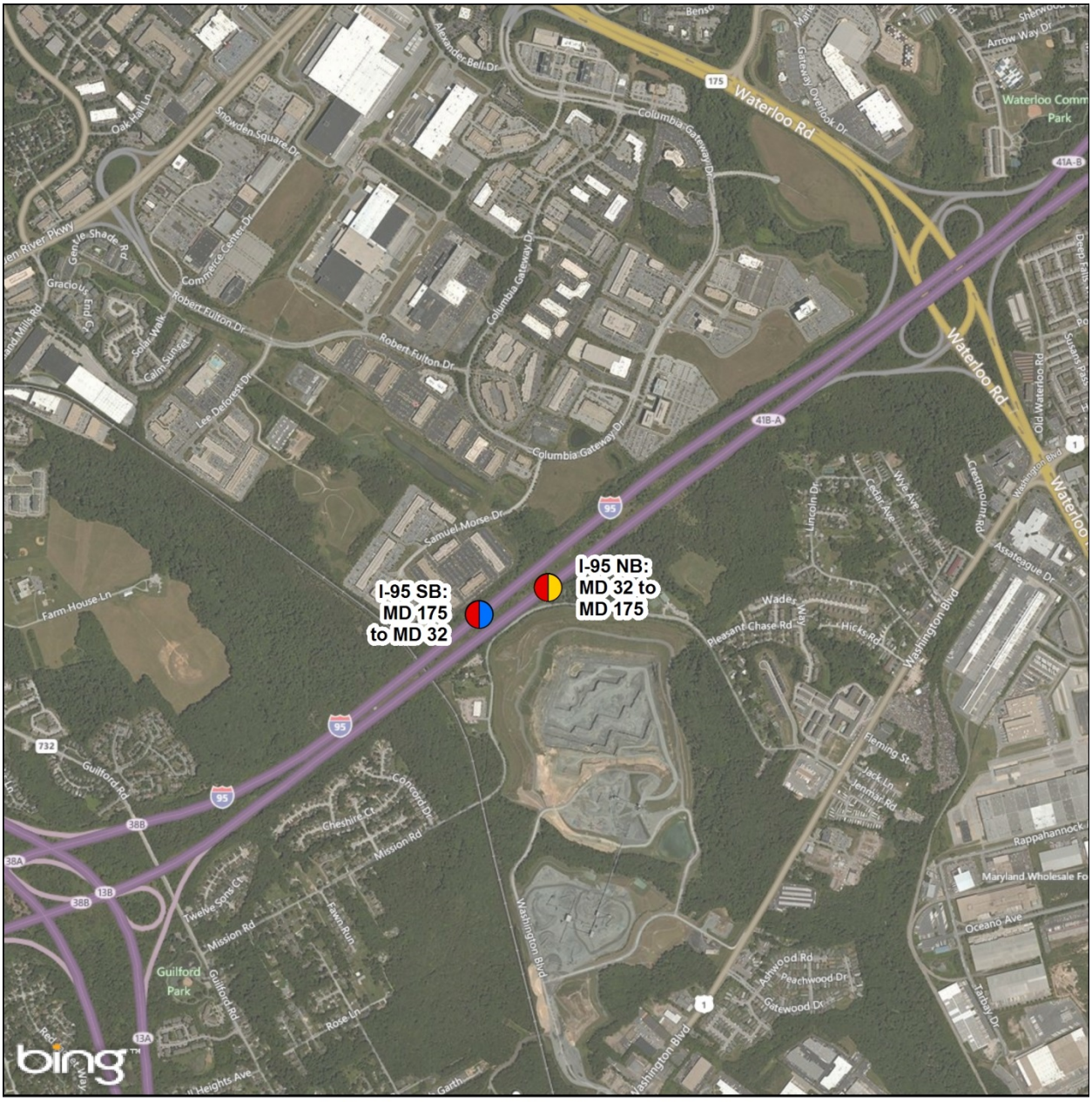
4.2 Capacity Analyses

The capacity analyses for the 2015 Baseline Conditions are presented in LOS for the roadway segments (see **Figures 4-1** through **4-3**), interchange ramp merge/diverge (see **Figures 4-4** through **4-6**), and key intersections (see **Figure 4-7**) throughout the study area. Tables presenting the 2015 Baseline Conditions LOS values for the ramps and intersections are presented in **Section 9** of this TIS to facilitate comparison with the Proposed Action and alternatives.

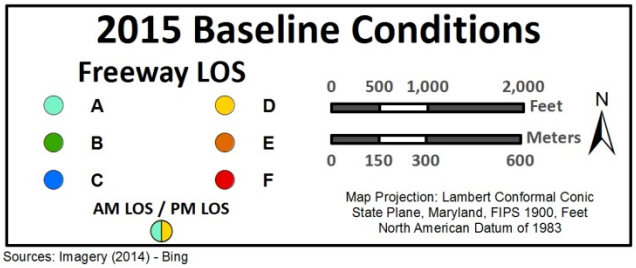
Under the 2015 Baseline Conditions, I-95, MD 32, and the Baltimore-Washington Parkway/MD 295 operate between LOS C and LOS F. These freeways function between LOS C and LOS E in both AM and PM peak hours, except three locations in the AM scenario that function at LOS F (Baltimore-Washington Parkway/MD 295 southbound between MD 175 and Arundel Mills Boulevard and I-95 both northbound and southbound between MD 175 and MD 32).

The LOS at the intersections also vary; almost half function at LOS B or C in either the AM or PM peak hours. Only two intersections (Dorsey Run Road at Junction Drive and Rockenbach Road at Clark Road) operate at LOS F in both AM and PM peak hours. MD 175 at U.S. Route 1 and Mapes Road at O'Brien Road operate at LOS F in the PM peak hour.

During the AM peak hour, the NSA VCPs operate at LOS C or worse except for VCP 3, which operates at LOS A. VCPs 1, 2, and 6 operate at LOS F at this time. In the PM peak hour, all VCPs operate at LOS A except VCP 2, which operates at LOS C.



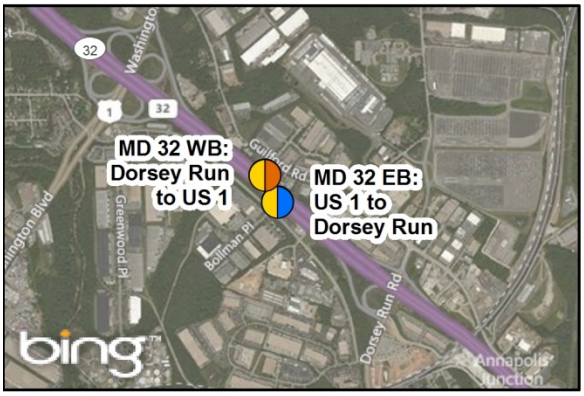
I-95 between MD 32 and MD 175



Sources: Imagery (2014) - Bing

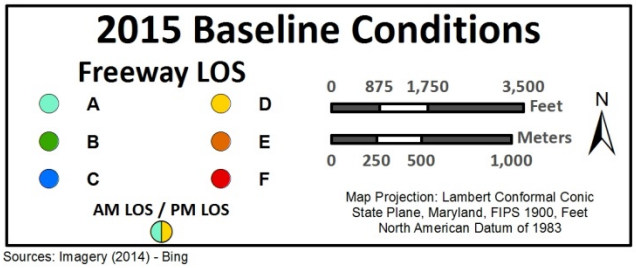
Figure 4-1. Freeway LOS for the 2015 Baseline Conditions (1 of 3)

MD 32 between I-95 and US 1



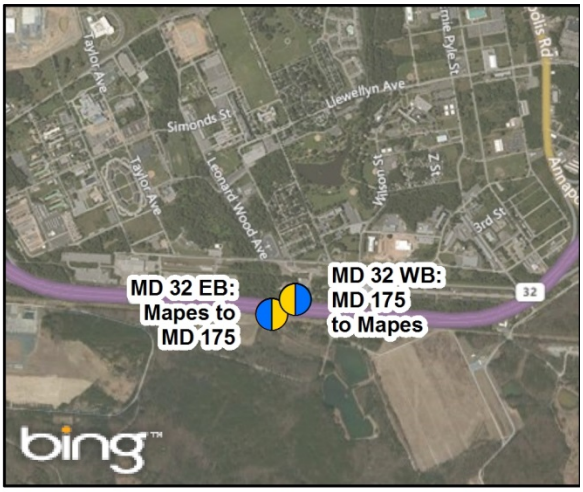
MD 32 between US 1 and Dorsey Run

MD 32 between Dorsey Run and MD 295



Sources: Imagery (2014) - Bing

MD 32 between MD 295 and Mapes



MD 32 between Mapes and MD 175

MD 32 between MD 175 and MD 3

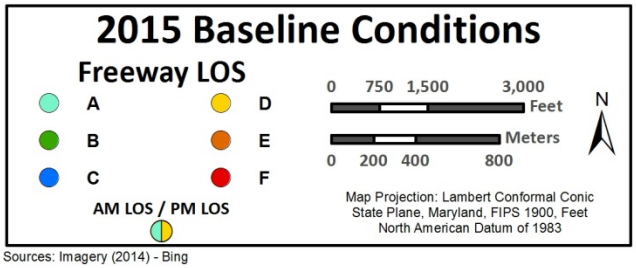
Figure 4-2. Freeway LOS for the 2015 Baseline Conditions (2 of 3)

MD 295 between Arundel Mills and MD 100

MD 295 between MD 175 and MD 32

MD 295 between Arundel Mills and MD 175

MD 295 between MD 32 and MD 198



Sources: Imagery (2014) - Bing

Figure 4-3. Freeway LOS for the 2015 Baseline Conditions (3 of 3)

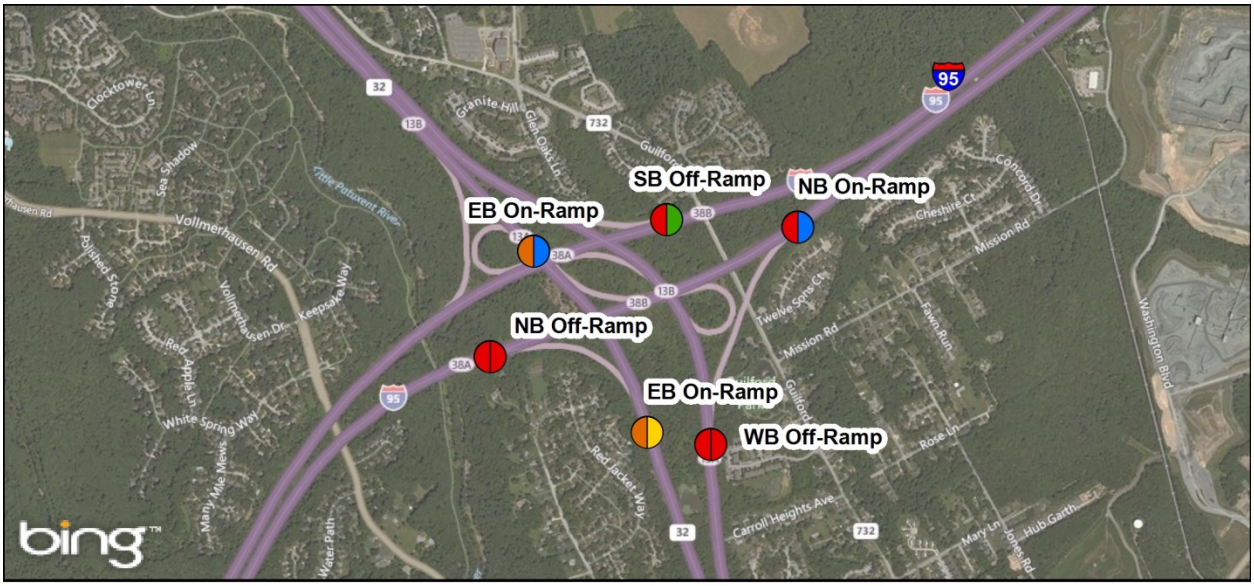
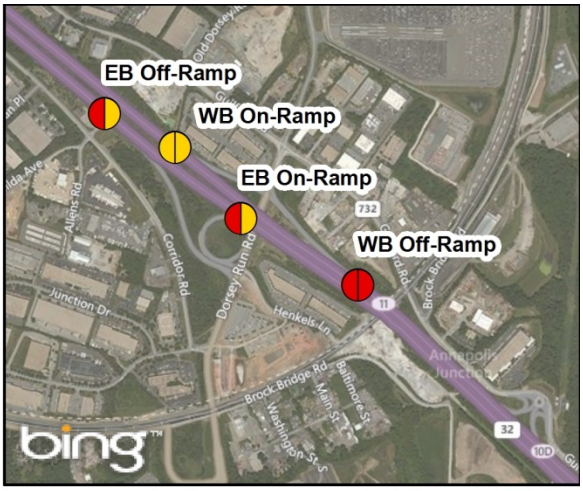
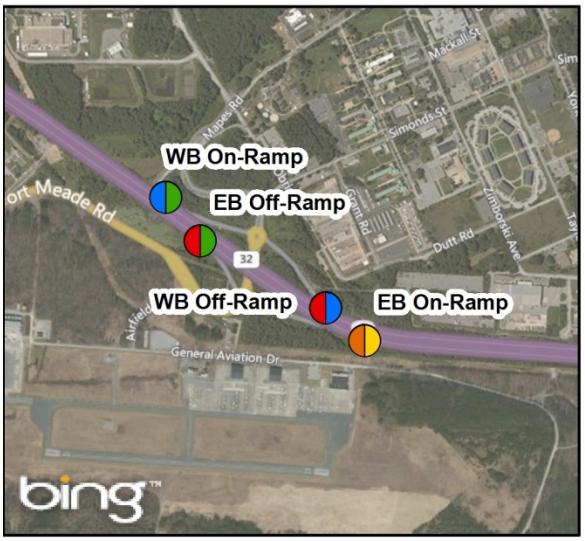


Figure 4-4. Ramp Merge/Diverge LOS for the 2015 Baseline Conditions (1 of 3)

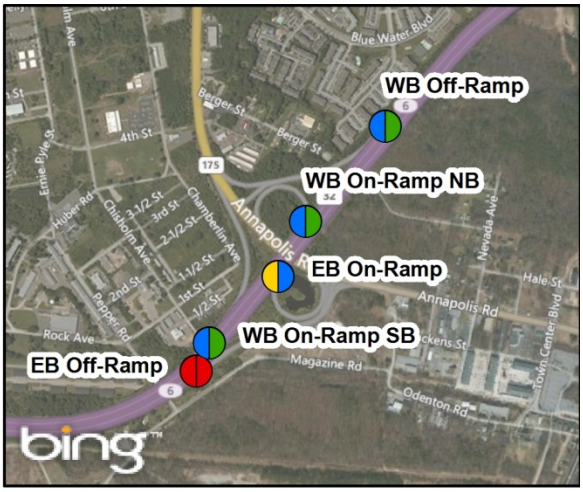
MD 32 with US 1 Interchange



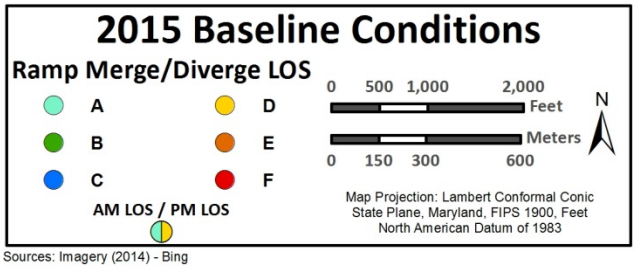
MD 32 with Dorsey Run Interchange



MD 32 with Mapes Rd. Interchange



MD 32 with MD 175 Interchange

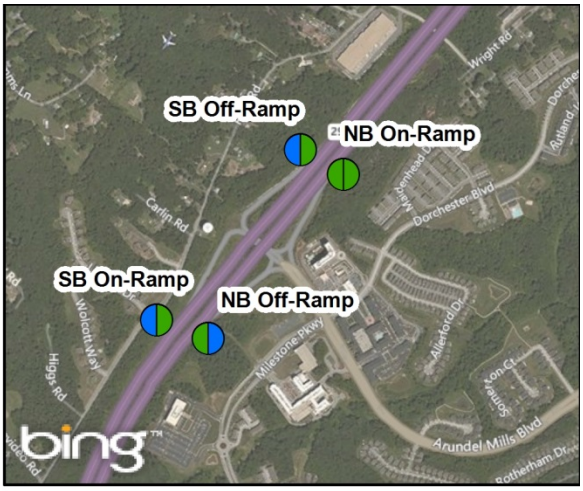


Sources: Imagery (2014) - Bing

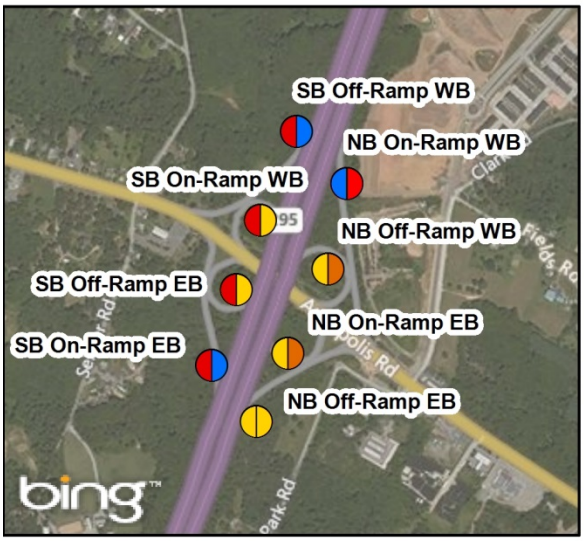
MD 32 with MD 3 Interchange

Figure 4-5. Ramp Merge/Diverge LOS for the 2015 Baseline Conditions (2 of 3)

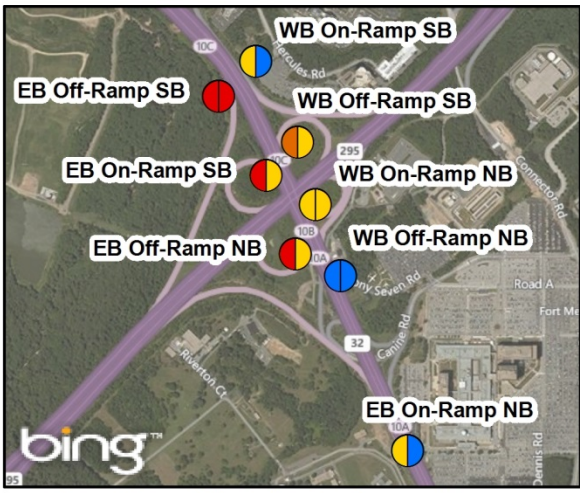
MD 295 with MD 100 Interchange



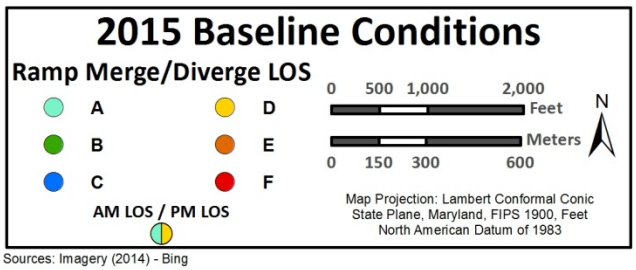
MD 295 with Arundel Mills Interchange



MD 295 with MD 175 Interchange



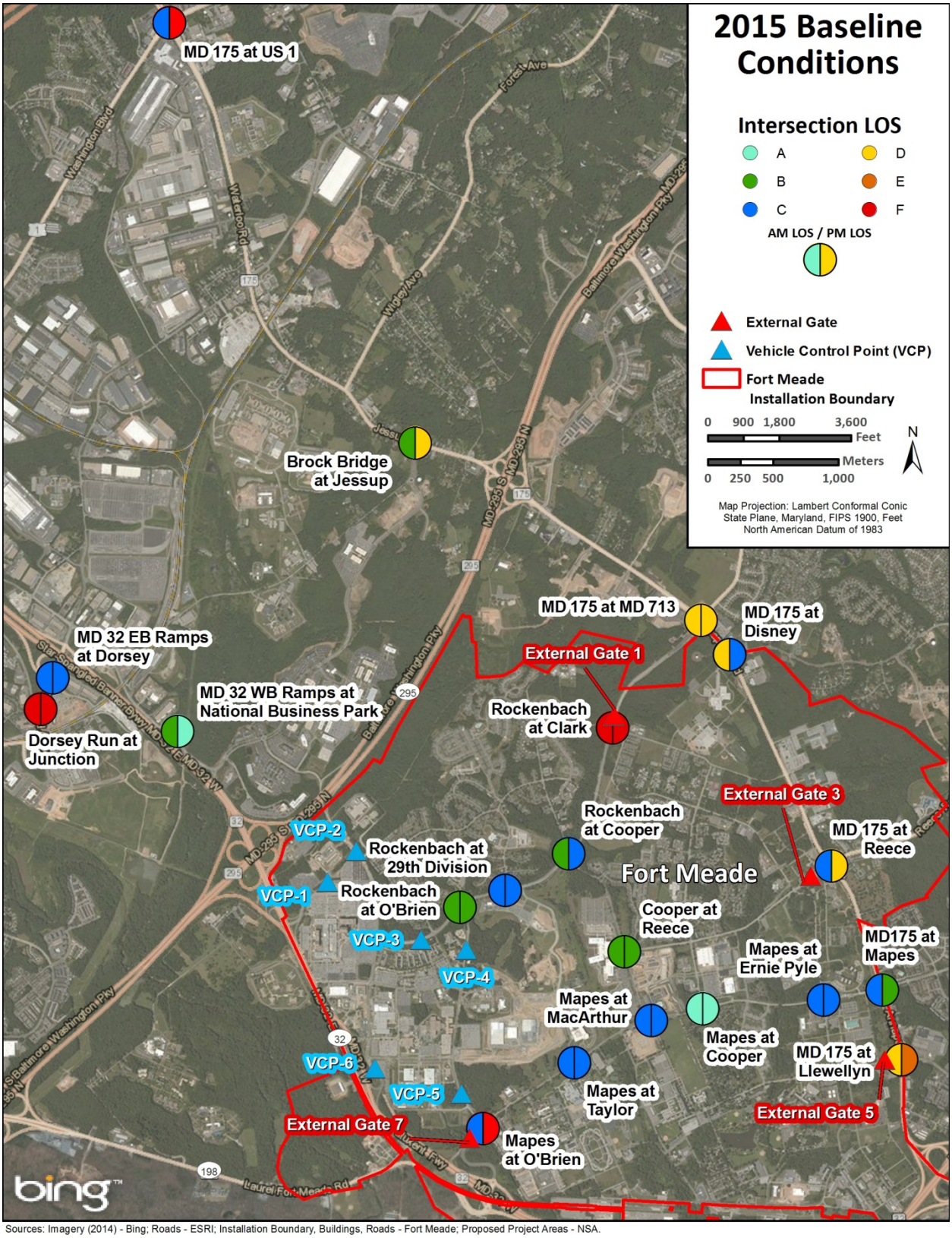
MD 295 with MD 32 Interchange



Sources: Imagery (2014) - Bing

MD 295 with MD 198 Interchange

Figure 4-6. Ramp Merge/Diverge LOS for the 2015 Baseline Conditions (3 of 3)



Sources: Imagery (2014) - Bing; Roads - ESRI; Installation Boundary, Buildings, Roads - Fort Meade; Proposed Project Areas - NSA.

Figure 4-7. Intersection LOS for the 2015 Baseline Conditions

5. 2029 No Action Alternative

The 2029 No Action Alternative is used as a future threshold to compare the three proposed alternatives to assess traffic impacts. Under the 2029 No Action Alternative, the DoD would not construct and operate approximately 2.9 million ft^2 of operations and headquarters facilities on the northern portion of the East Campus and the 9800 Troop Support Area.

5.1 Volume Development

Under the 2029 No Action Alternative, the NSA would not implement the ECIP. Fort Meade would continue to operate under current conditions within current facilities.

The 2029 No Action Alternative AM and PM peak hour volumes were estimated by applying a seven percent global growth rate (0.45 percent compounded annually over 14 years [2015–2029]) to the 2015 Baseline Conditions peak hour volumes to both on- and off-installation traffic. The growth rate was developed based on the Population Growth Rate reported in the Baltimore Region Transportation Board's *Maximize 2040* report (BRTB 2014). Growth rate calculations are provided in **Attachment A**. *Maximize 2040* incorporates the known and reasonably foreseeable future growth in the region, including the area around Fort Meade. **Section 2.5.2** of the ECIP Environmental Impact Statement (EIS) provides a detailed listing of known and reasonably foreseeable future projects in the vicinity of Fort Meade. The projected regional growth in this TIS includes these developments.

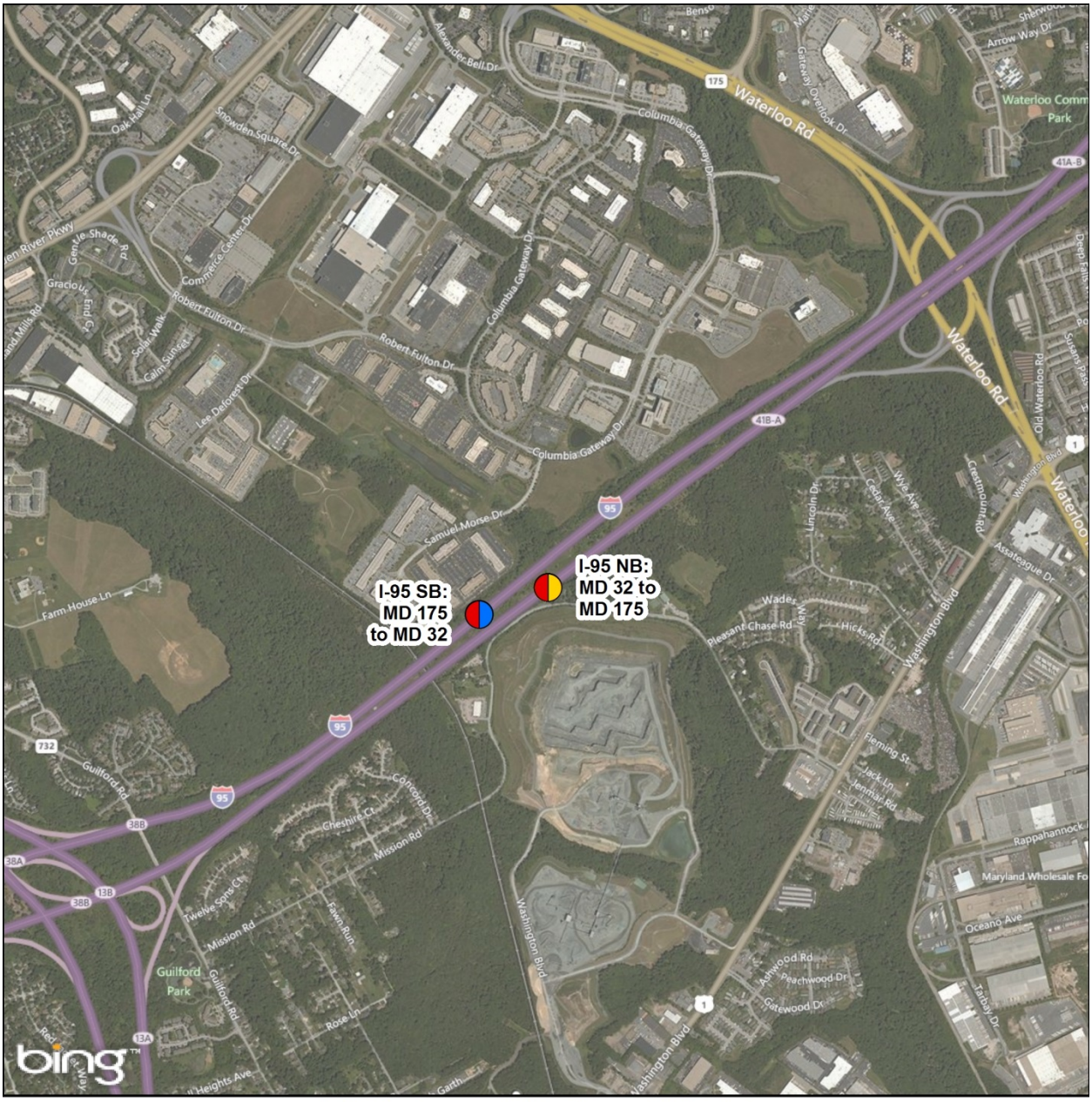
5.2 Capacity Analyses

The 2029 No Action Alternative capacity analyses are presented in LOS for the freeway segments (see **Figures 5-1** through **5-3**), interchange ramp merge/diverge (see **Figures 5-4** through **5-6**), and key intersections (see **Figure 5-7**) throughout the study area. **Section 9** provides tables comparing the LOS values for the Proposed Action and alternatives.

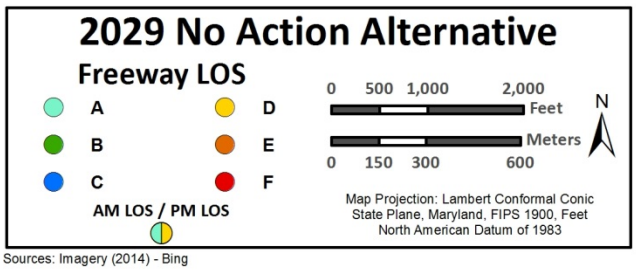
I-95 operates at LOS F in both directions during the AM peak hour under the 2029 No Action Alternative. The LOS improves in the PM peak hour to a LOS C in the southbound lanes and LOS D in the northbound lanes. Most segments along MD 32 operate at a LOS C, D, or E in both the AM and PM peak hours. The LOS of the Baltimore-Washington Parkway/MD 295 varies greatly between LOS C and LOS F in the AM peak hour, and is consistently a LOS C or D in the PM peak hour, except for the segment from MD 32 to MD 198 which operates at a LOS E.

The LOS at each ramp merge/diverge within the study area vary by interchange. Along MD 32, the interchanges with I-95, U.S. Route 1, and Dorsey Run Road operate with the greatest delay when compared to the remaining MD 32 interchanges within the study area. All interchanges along the Baltimore-Washington Parkway/MD 295 operate poorly (with a majority being LOS D–F), except the interchange with Arundel Mills Boulevard.

In both the AM and PM peak hours, MD 175 intersections adjacent to Fort Meade operate at LOS E or better. Farther west along MD 32, Dorsey Run Road at Junction Drive operates at LOS F in both AM and PM peak hours.



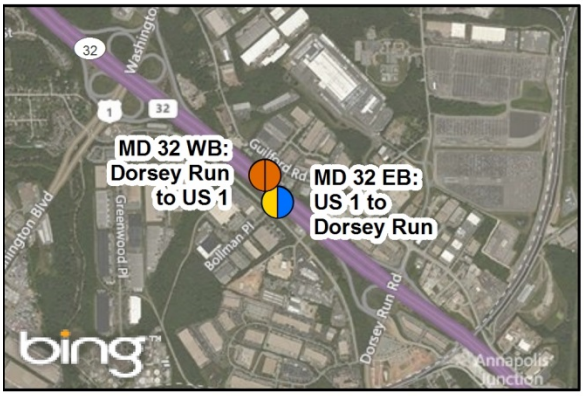
I-95 between MD 32 and MD 175



Sources: Imagery (2014) - Bing

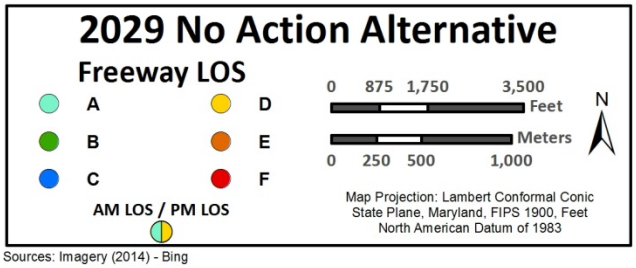
Figure 5-1. Freeway LOS for the 2029 No Action Alternative (1 of 3)

MD 32 between I-95 and US 1

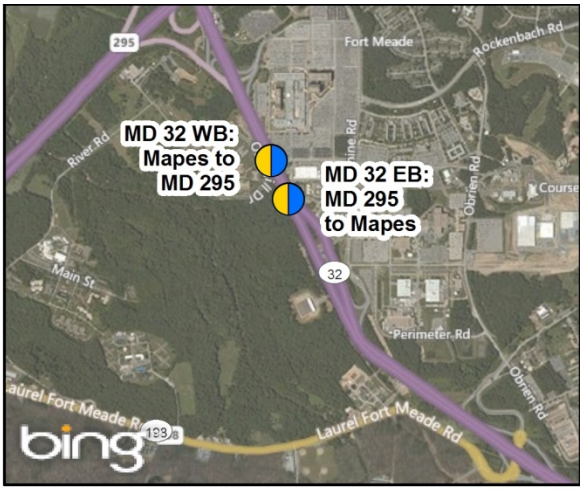


MD 32 between US 1 and Dorsey Run

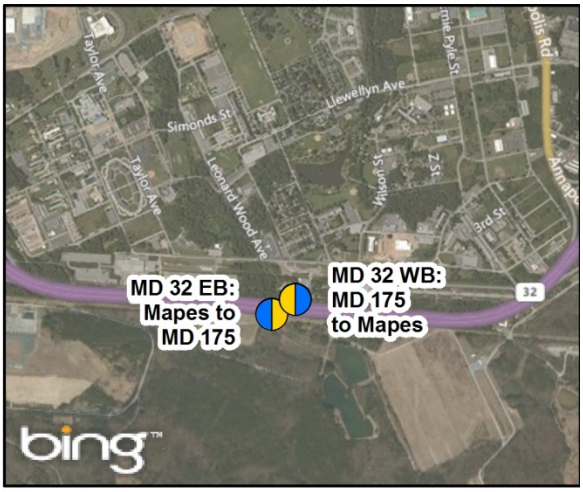
MD 32 between Dorsey Run and MD 295



Sources: Imagery (2014) - Bing



MD 32 between MD 295 and Mapes



MD 32 between Mapes and MD 175

MD 32 between MD 175 and MD 3

Figure 5-2. Freeway LOS for the 2029 No Action Alternative (2 of 3)

MD 295 between Arundel Mills and MD 100

MD 295 between MD 175 and MD 32

MD 295 between Arundel Mills and MD 175

MD 295 between MD 32 and MD 198

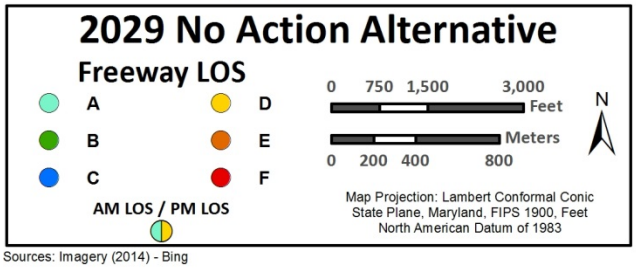
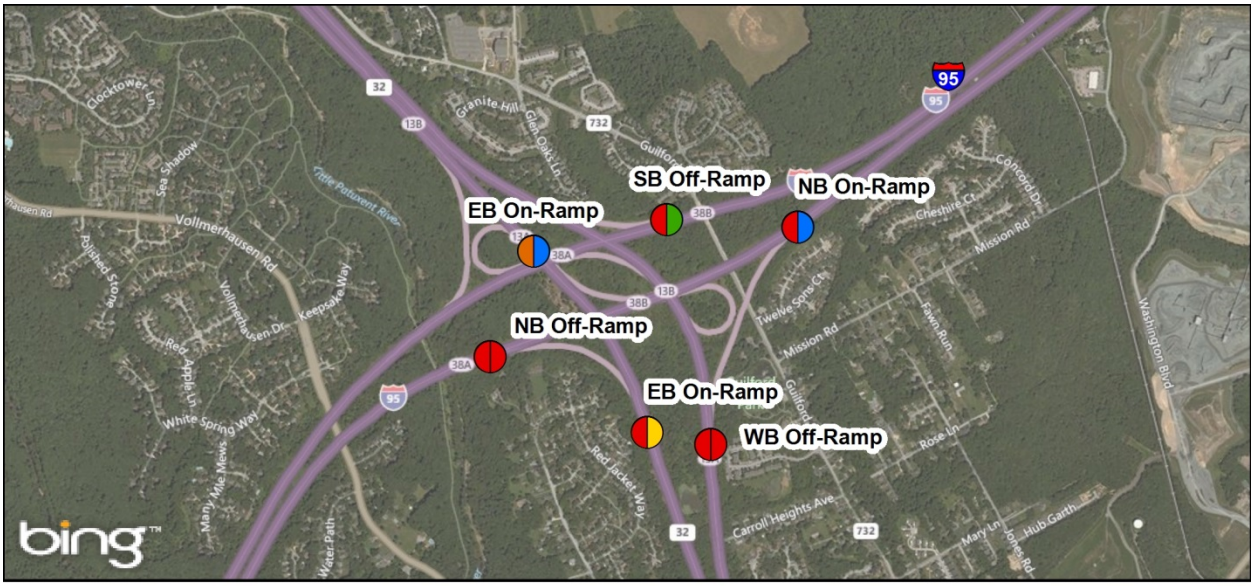


Figure 5-3. Freeway LOS for the 2029 No Action Alternative (3 of 3)



I-95 with MD 32 Interchange

I-95 with MD 175 Interchange

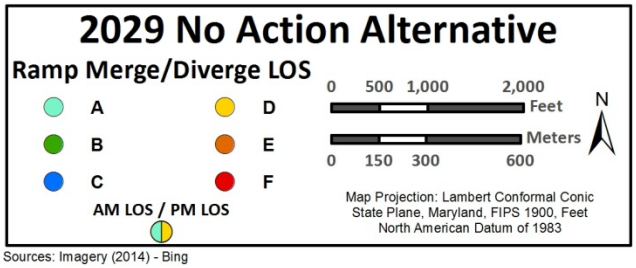
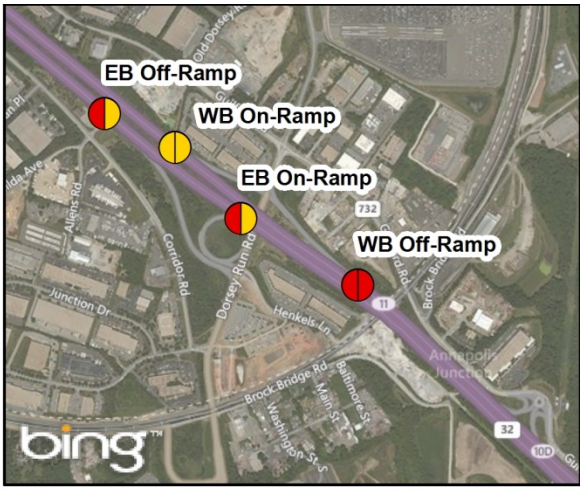
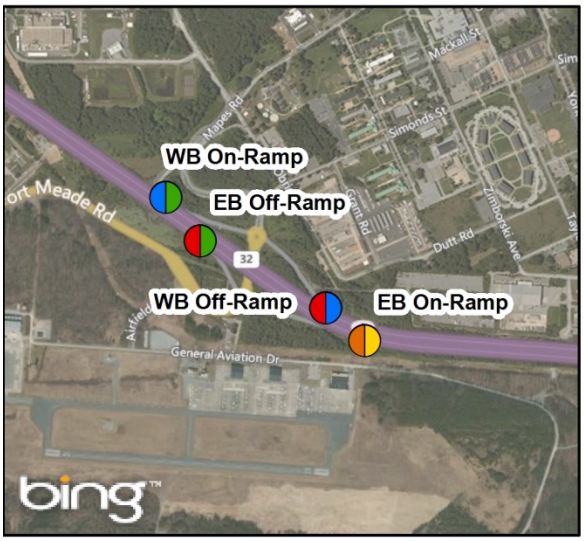


Figure 5-4. Ramp Merge/Diverge LOS for the 2029 No Action Alternative (1 of 3)

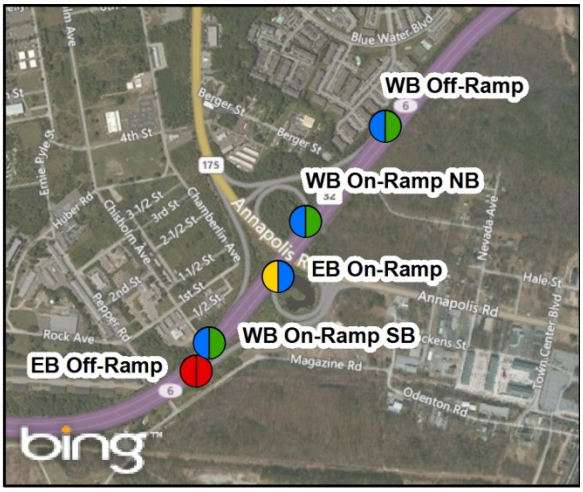
MD 32 with US 1 Interchange



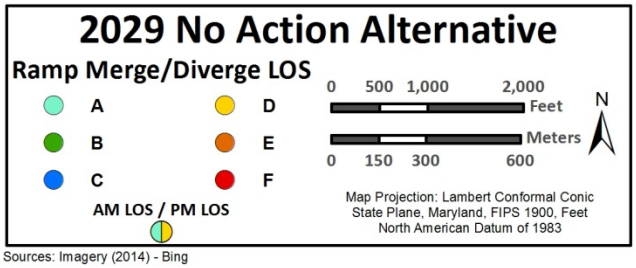
MD 32 with Dorsey Run Interchange



MD 32 with Mapes Rd. Interchange



MD 32 with MD 175 Interchange

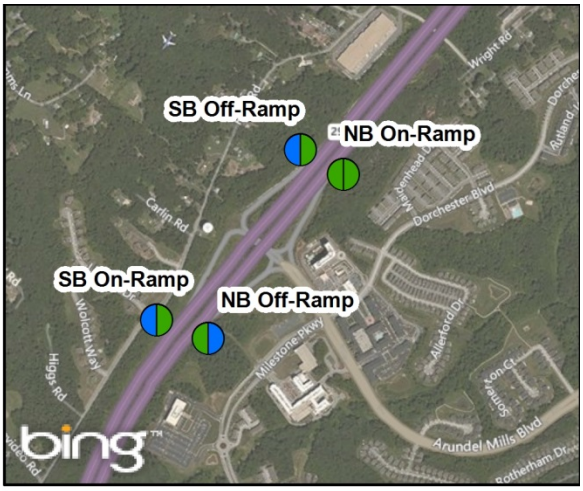


Sources: Imagery (2014) - Bing

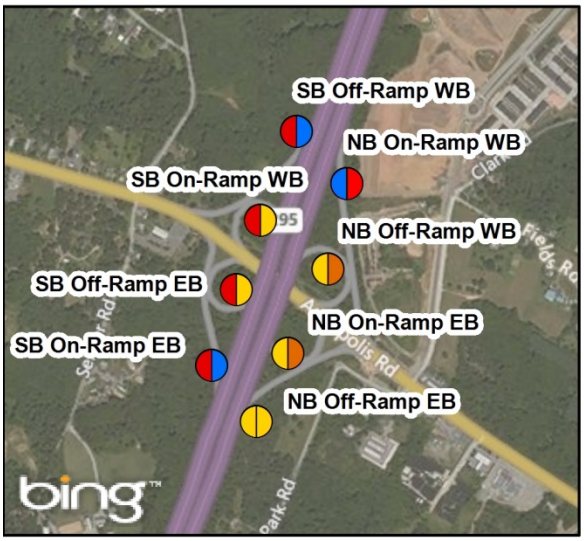
MD 32 with MD 3 Interchange

Figure 5-5. Ramp Merge/Diverge LOS for the 2029 No Action Alternative (2 of 3)

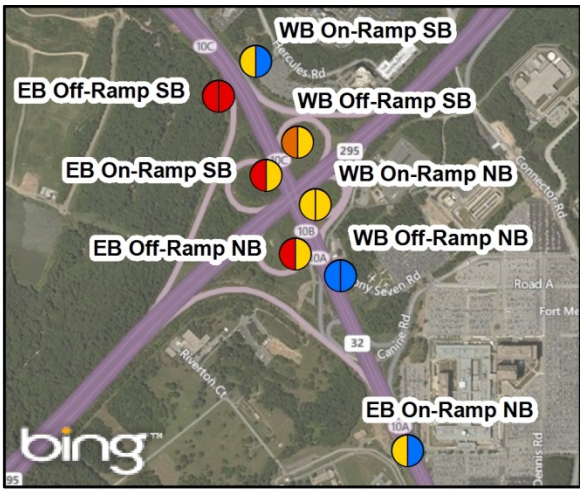
MD 295 with MD 100 Interchange



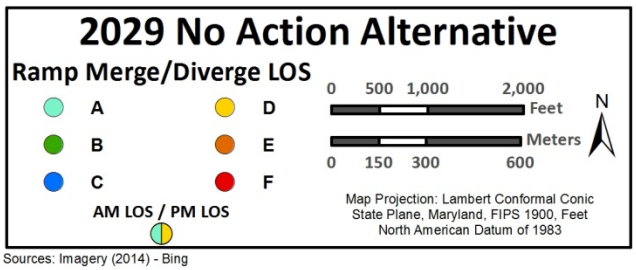
MD 295 with Arundel Mills Interchange



MD 295 with MD 175 Interchange



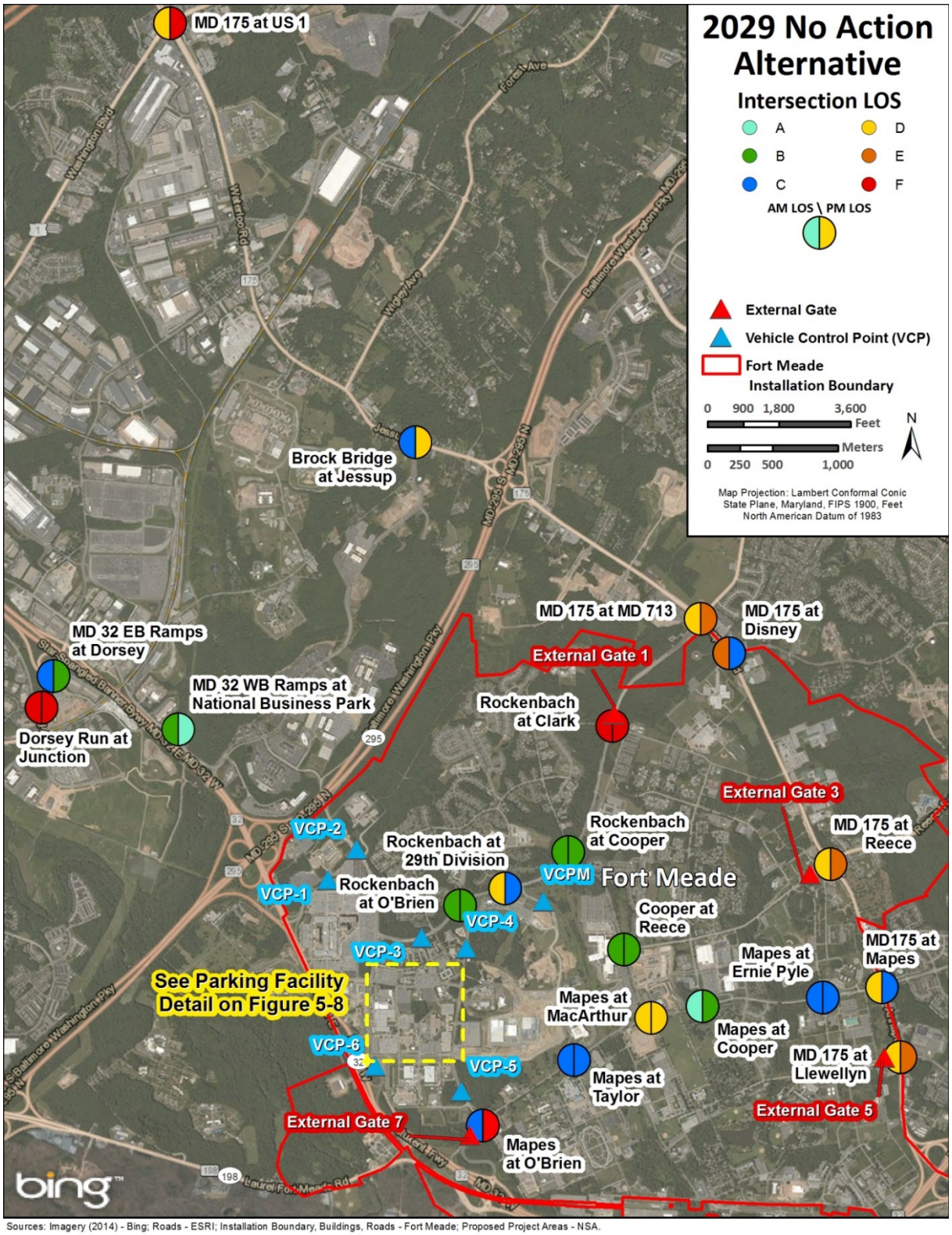
MD 295 with MD 32 Interchange



Sources: Imagery (2014) - Bing

MD 295 with MD 198 Interchange

Figure 5-6. Ramp Merge/Diverge LOS for the 2029 No Action Alternative (3 of 3)



Sources: Imagery (2014) - Bing; Roads - ESRI; Installation Boundary, Buildings, Roads - Fort Meade; Proposed Project Areas - NSA.

Figure 5-7. Intersection LOS for the 2029 No Action Alternative

Analyses were completed for several intersections adjacent to the ECIP project area to identify and measure impacts caused by the proposed parking facility locations. The LOS for these intersections are included in **Figure 5-8**. The analysis of the impacts of the parking facilities, including a comparison of the 2029 Proposed Action with the 2029 No Action Alternative and assumptions for analysis of intersections near the parking facilities and parking facility design and location, are included in **Section 6** and **Section 8**. **Figure 5-8** shows the LOS for intersections adjacent to the proposed locations of the Bravo and Building 9817 parking facilities to demonstrate how the intersections would fare without the parking facilities under the 2029 No Action Alternative for comparison with the 2029 Proposed Action. Analysis of ECPS 2 was not included in the 2029 No Action Alternative because there are generally no existing intersections in the vicinity of this proposed parking facility that would remain unchanged by the 2029 Proposed Action. Analysis of proposed future intersections for this facility is also provided for the 2029 Proposed Action in **Sections 6** and **8**.

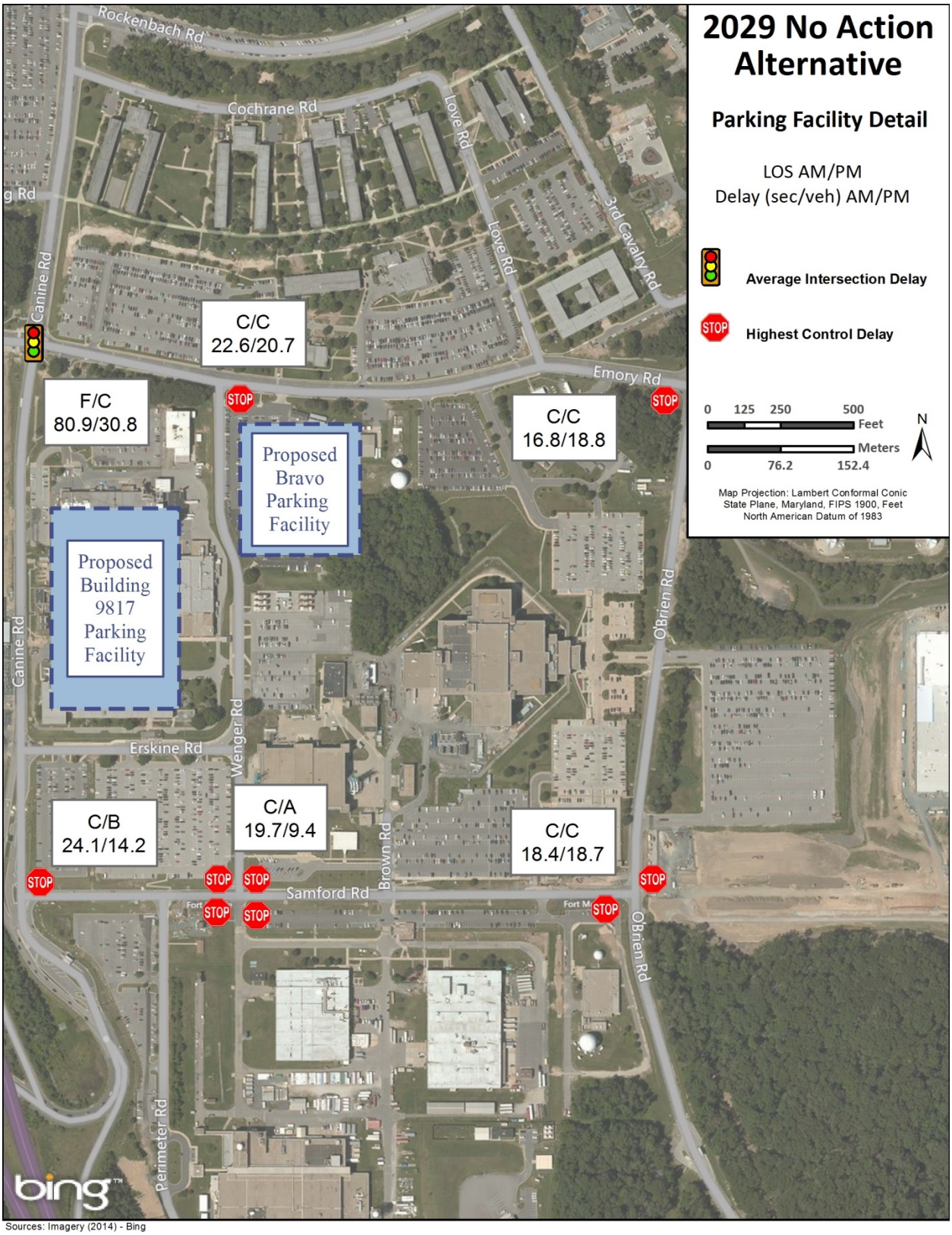


Figure 5-8. Intersection LOS for Parking Facility Locations under the 2029 No Action Alternative

6. 2029 Proposed Action

Under the Proposed Action, the DoD proposes to construct and operate approximately 2.9 million ft^2 of operational complex and headquarters space consisting of five buildings and demolish approximately 1.9 million ft^2 of buildings and infrastructure on the NSA Main Campus (1,291,206 ft^2) and the 9800 Troop Support Area (592,269 ft^2). All nine buildings in the 9800 Troop Support Area would be demolished to provide room for the proposed facilities and supporting infrastructure. After construction of each of the proposed facilities on the East Campus and 9800 Troop Support Area are completed and personnel transferred to the facilities, several buildings on the NSA Main Campus would be vacated and demolished. By doing this, it is assumed the NSA would provide administrative capacity for up to 13,300 personnel, including 6,100 personnel who currently work on the existing NSA Campus and 7,200 personnel currently located off-site. The personnel located outside of Fort Meade are in other Intelligence Community locations throughout the Baltimore-Washington metropolitan area.

6.1 Volume Development

The trips generated by the ECIP were estimated using the Institute of Transportation Engineers *Trip Generation Handbook*, 9th Edition. Because the proposed development is for office space, the Land Use 710 – General Office Space section of the handbook was used to estimate the trips generated by the proposed transfer of 7,200 additional employees reporting to the NSA East Campus. The trip generation analysis estimates how much traffic the Proposed Action would create (both entering and exiting vehicles). It was assumed these calculated trips would be reduced by 5 percent as a result of mass transit, vanpools, carpools, and shuttle options (NSA 2010).

Table 6-1 summarizes the development-generated trips, and **Attachment A** provides the complete method.

Table 6-1. Summary of Proposed Action Development Generated Trips

Land Use 710 - General Office Building	Weekday (vpd)			Weekday, AM Peak (vph)			Weekday, PM Peak (vph)		
	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
Proposed Action	11,952	11,952	23,904	3,041	415	3,456	563	2,749	3,312
Alternative Mode Reduction (5 Percent)	598	598	1,195	152	21	173	28	137	166
Total Trips	11,354	11,354	22,708	2,889	394	3,283	535	2,612	3,146

Key: vpd = vehicles per day, vph = vehicles per hour

6.2 Trip Distribution

A total of 13,300 personnel would work at the ECIP project area (see **Figure 6-1**). Of this total, 7,200 personnel would be transferred from off-site locations in the Baltimore-Washington metropolitan area.

Many roadways including state and U.S. routes surround the installation and many different travel routes could be used by commuters to access the NSA Campus. The trips generated by the 2029 Proposed

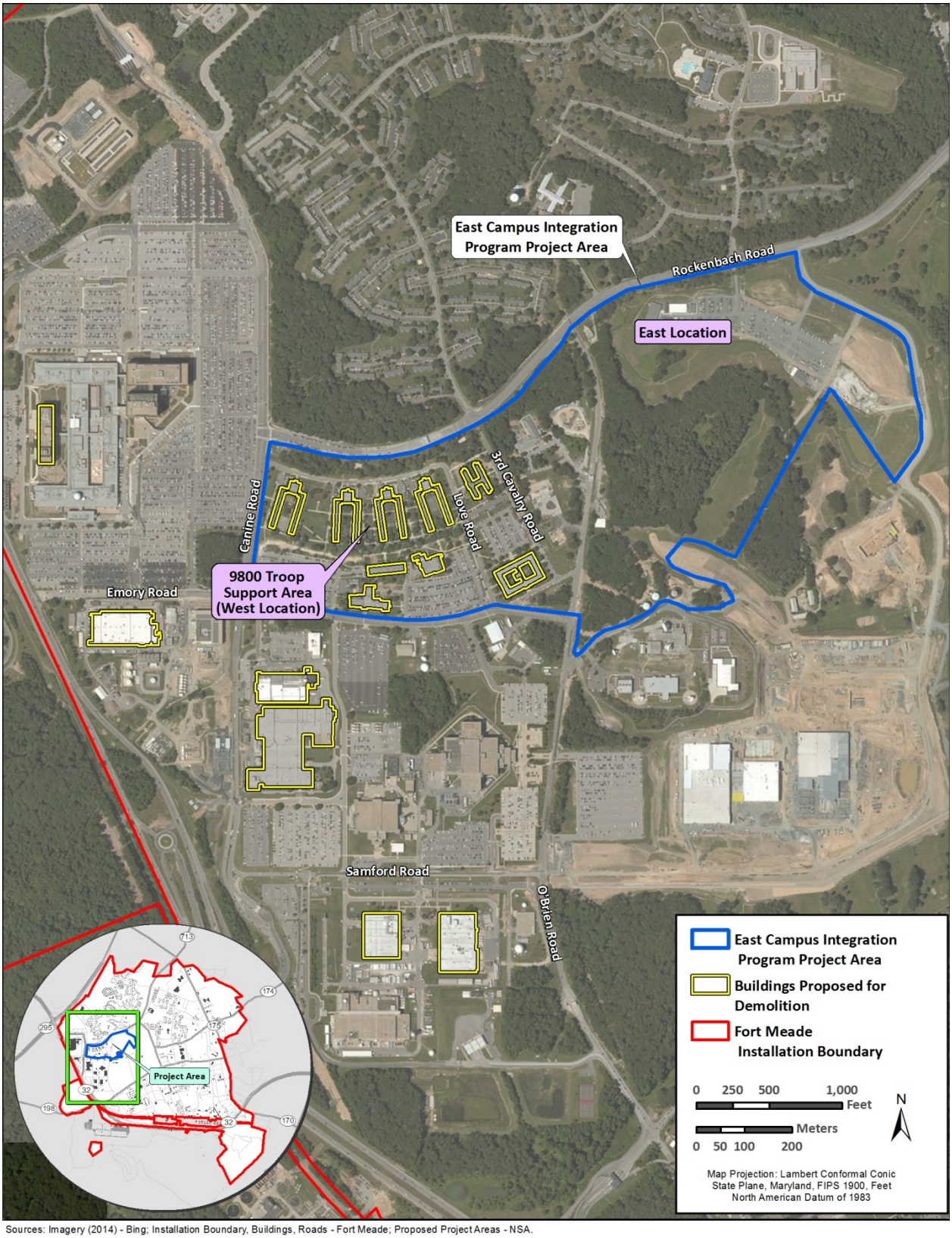


Figure 6-1. Proposed Action

Action and alternative site developments (referred to as "proposed development sites" as shown on **Figure 6-2**) were distributed to and from the commuting destinations (i.e., parking facilities) by the following method. Origin-destination (O-D) points were selected immediately adjacent to the key corridors in the study area as entry and exit points for access to and from the corridors. Using a weighted flow method to distribute the generated trips throughout the study corridor, the Maryland State Highway Administration's 2013 Annual Average Weekday Traffic volumes were used to weight the traffic distribution. These weights "pull" the generated trips to and from the O-D points. For example, the higher the Annual Average Weekday Traffic volume at the O-D point, the higher the attraction of the generated trips to that O-D point. **Table 6-2** summarizes the weighted distribution percentage of vehicles from the 30 O-D points adjacent to the study corridors. **Figure 6-2** shows the O-D points in reference to Fort Meade.

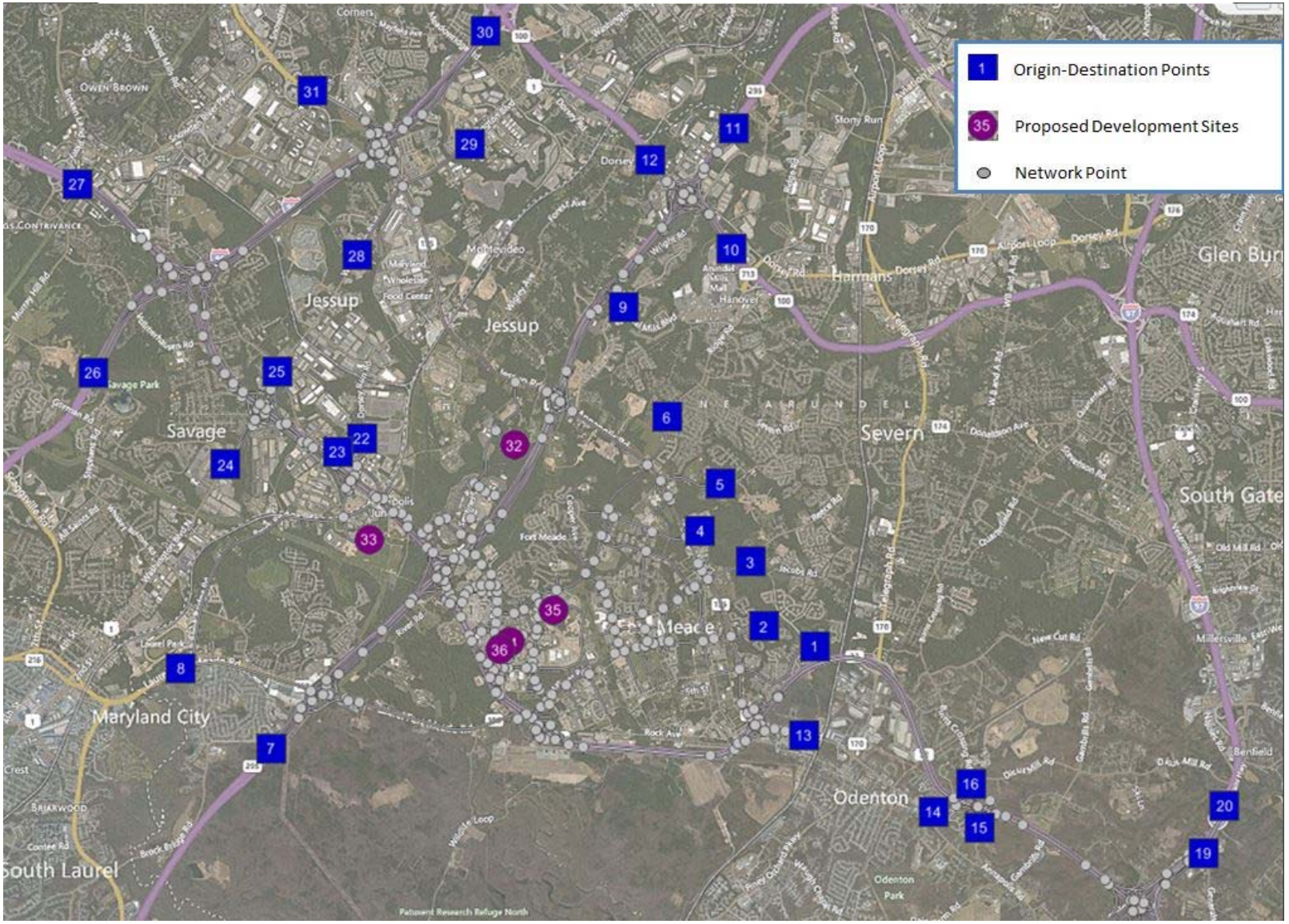
As discussed in **Section 8**, it was assumed all personnel would commute to one of three proposed parking facilities. It was assumed parking facilities Building 9817, Bravo and ECPS 2 would be constructed under the Proposed Action. The following are the general routes that inbound traffic would take to the parking facilities on the NSA Campus when coming from O-D points near the study area boundaries. The outbound route is generally reversed. These likely routes tend to make up the higher percentages in the weighted distribution:

- Traffic coming from the east along MD 32 would exit onto MD 175 for the ECPS 2 parking facility, or MD 198 for Building 9817 and Bravo parking facilities.
- Traffic coming from the west along MD 32 would exit onto Canine Road for all proposed parking facilities.
- Traffic coming from the south along the Baltimore-Washington Parkway/MD 295 would exit on to eastbound MD 32 and then exit onto Canine Road for all proposed parking facilities.
- Traffic coming from the north along the Baltimore-Washington Parkway/MD 295 would exit on to Connector Road and travel south along Canine Road to the Building 9817 and Bravo parking facilities, or would exit onto MD 175 for the ECPS 2 parking facility.
- Traffic coming from the north along I-95 would exit on to eastbound MD 32 and then exit onto Canine Road for all proposed parking facilities.

O-D points in close proximity to the commuting destinations, which tend to be lower percentages in the weighted distribution, would be used by commuters who take a series of local roads to their destinations, resulting in a shortest path that would avoid MD 32, the Baltimore-Washington Parkway/MD 295, and MD 175 if possible.

6.3 Capacity Analysis

The capacity analyses for the 2029 Proposed Action are presented in LOS for the freeway segments (see **Figures 6-3** through **6-5**), interchange ramp merge/diverge (see **Figures 6-6** through **6-8**), and key intersections (see **Figure 6-9**) throughout the study area. The tables in **Section 9** provide comparisons of the LOS values for highway interchanges and roadway intersections, and LOS and density (passenger cars/mile/lane) values for freeway segments for the Proposed Action and all alternatives. The key observations when compared to the 2029 No Action Alternative are summarized below:



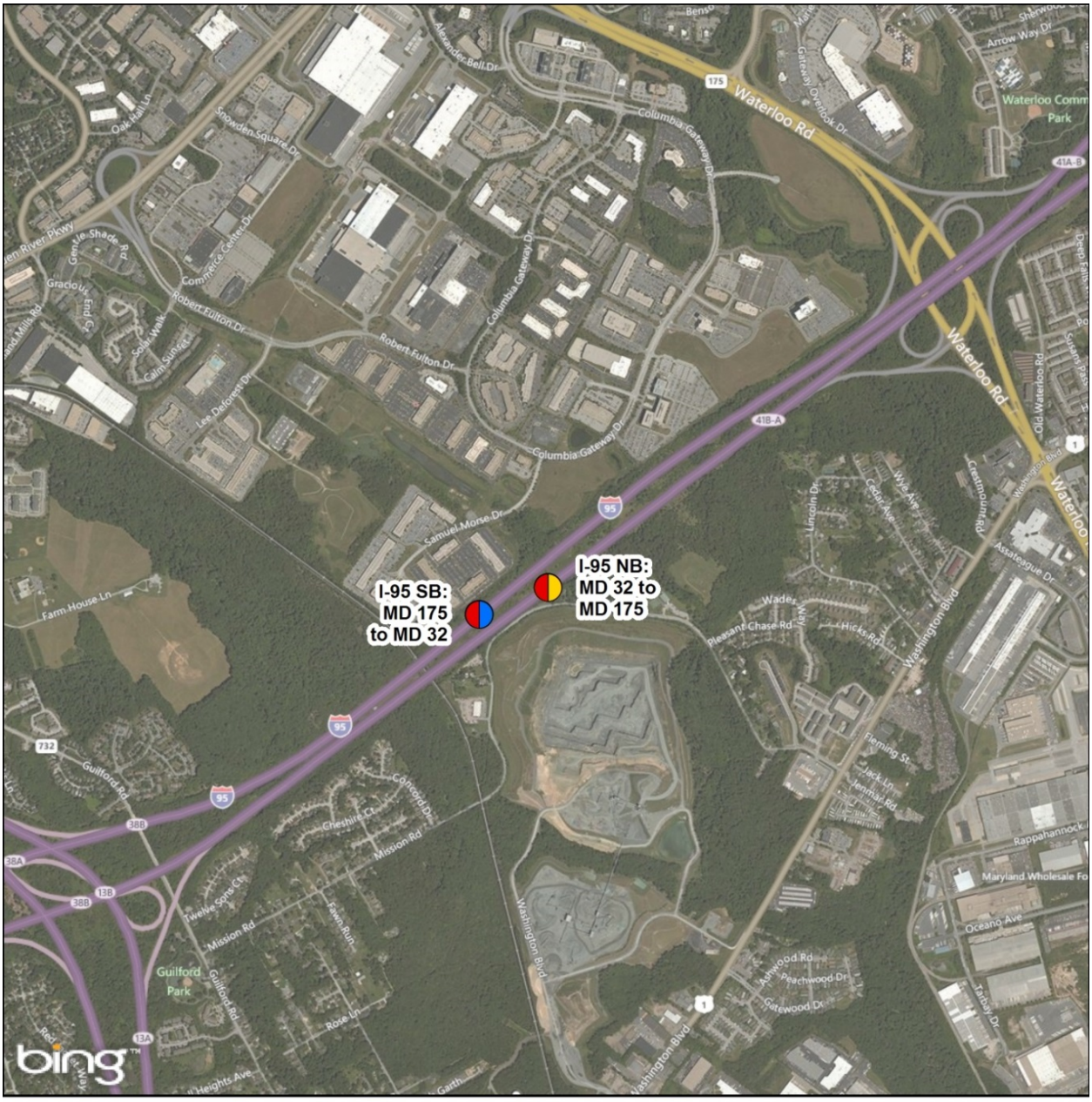
Note: The Proposed Action was split up into three sites, one for each parking facility (Points 34-36). Points 32 and 33 are the sites for Alternatives 1 and 2, respectively.

Figure 6-2. Origin/Destination (O-D) Points

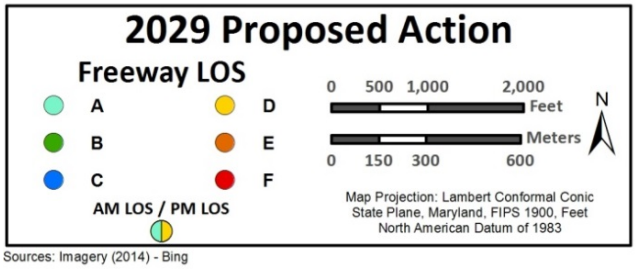
Table 6-2. Origin/Destination (O-D) Points Distribution Percentages

O-D Point (on Figure 6-2)[1]	Description	Distribution To/ From O-D Point
1	Blue Water Blvd	**0.73%**
2	Charter Oaks Blvd	**0.53%**
3	Reece Rd	**0.73%**
4	21st St	**0.00%**
5	Disney Rd	**0.46%**
6	Ridge Rd	**1.10%**
7	Baltimore-Washington Parkway/MD 295 South of MD 198	**6.02%**
8	MD 198 West of Baltimore-Washington Parkway/MD 295	**2.64%**
9	Arundel Mills Blvd	**1.45%**
10	MD 100 East of MD 29	**4.95%**
11	MS 295 North of MD 100	**6.08%**
12	MD 100 West of Baltimore-Washington Parkway/MD 295	**6.08%**
13	MD 175 East of MD 100	**1.37%**
14	Sappington Station Rd	**0.66%**
15	Burns Crossing Rd South	**0.39%**
16	Burns Crossing Rd North	**0.35%**
17	MD 3N South of I-97	**4.32%**
18	I-97 East of MD 3N	**6.86%**
19	MD 3N North of MD 32	**0.73%**
20	I-97 North of MD 32	**8.28%**
22	Dorsey Run Rd North of MD 32	**0.55%**
23	Guilford Rd	**0.97%**
24	US 1 South of MD 32	**2.66%**
25	US 1 North of MD 32	**2.50%**
26	I-95 South of MD 32	**12.38%**
27	MD 32 West of I-95	**6.21%**
28	US 1 South of MD 175	**1.84%**
29	US 1 North of MD 175	**1.91%**
30	I-95 North of MD 175	**12.73%**
31	MD 175 West of I-95	**4.50%**
	Total[2]	**100%**

Note:
1. O-D Point 21 was combined with O-D Point 8.
2. Total does not add up to precisely 100.00 percent due to rounding.



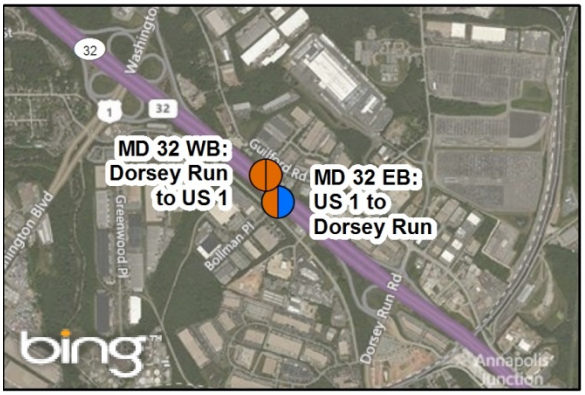
I-95 between MD 32 and MD 175



Sources: Imagery (2014) - Bing

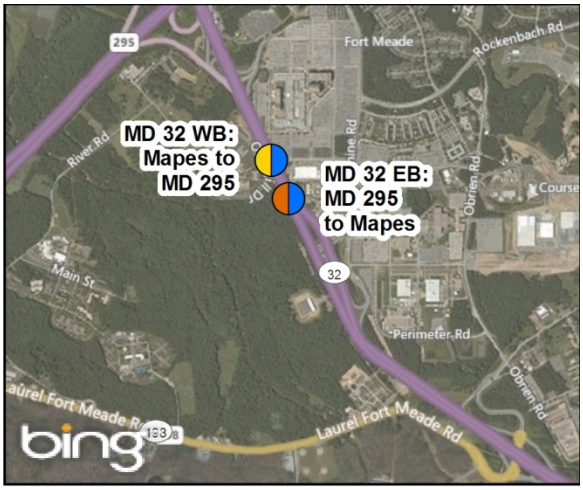
Figure 6-3. Freeway LOS for the 2029 Proposed Action (1 of 3)

MD 32 between I-95 and US 1

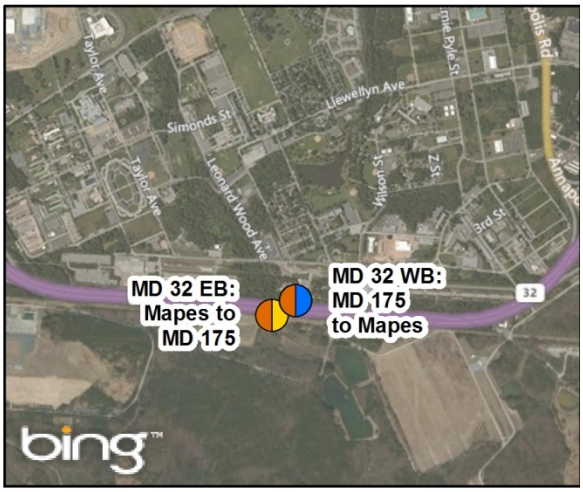


MD 32 between US 1 and Dorsey Run

MD 32 between Dorsey Run and MD 295

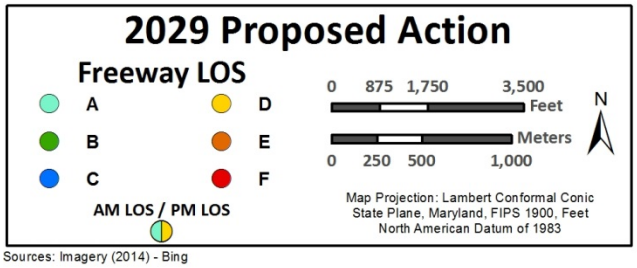


MD 32 between MD 295 and Mapes



MD 32 between Mapes and MD 175

MD 32 between MD 175 and MD 3



Sources: Imagery (2014) - Bing

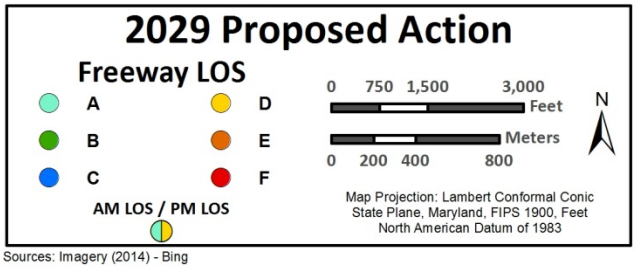
Figure 6-4. Freeway LOS for the 2029 Proposed Action (2 of 3)

MD 295 between Arundel Mills and MD 100

MD 295 between MD 175 and MD 32

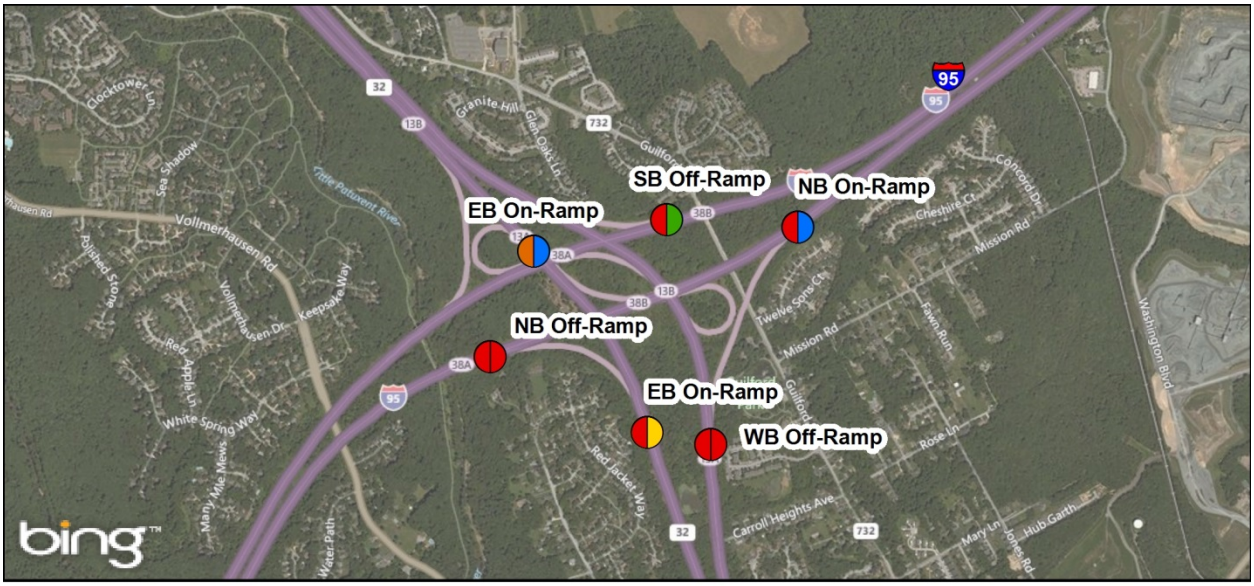
MD 295 between Arundel Mills and MD 175

MD 295 between MD 32 and MD 198



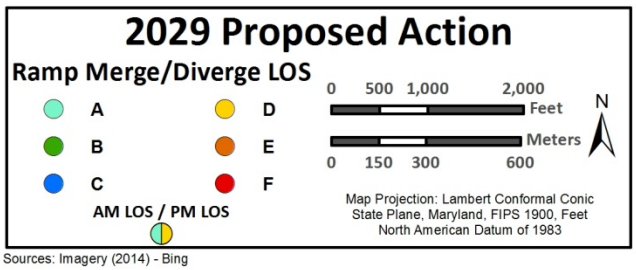
Sources: Imagery (2014) - Bing

Figure 6-5. Freeway LOS for the 2029 Proposed Action (3 of 3)



I-95 with MD 32 Interchange

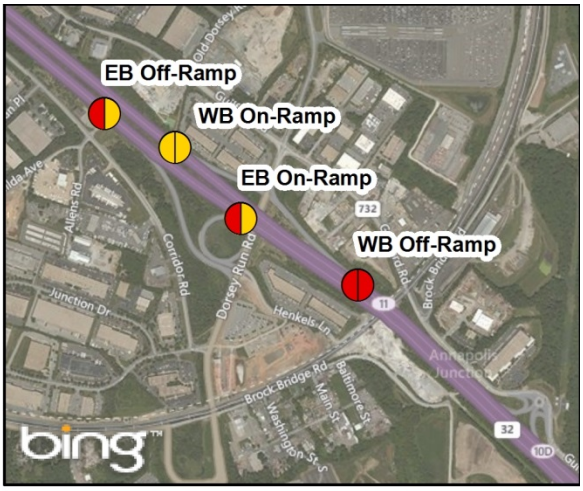
I-95 with MD 175 Interchange



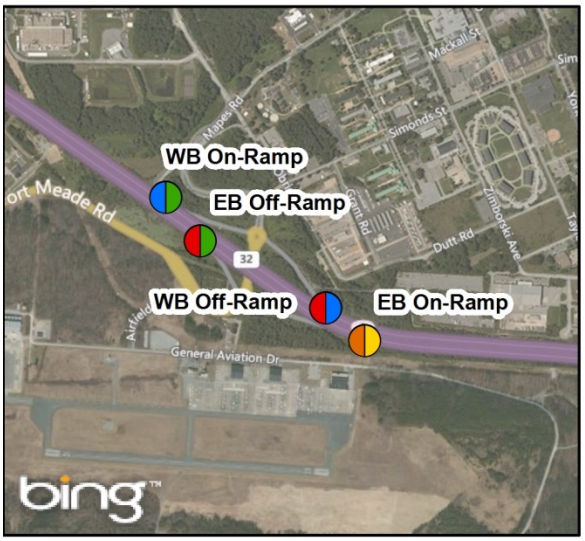
Sources: Imagery (2014) - Bing

Figure 6-6. Ramp Merge/Diverge LOS for the 2029 Proposed Action (1 of 3)

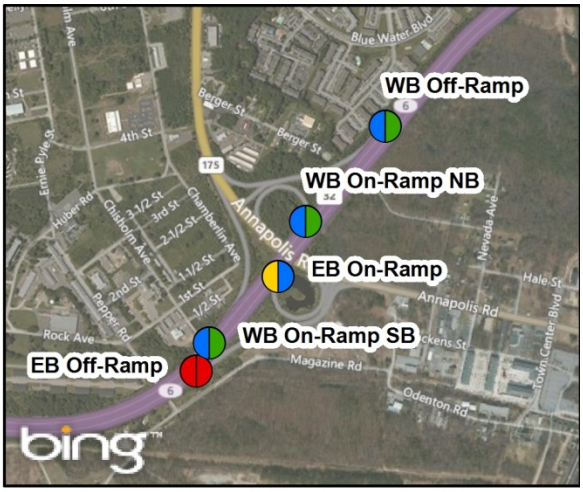
MD 32 with US 1 Interchange



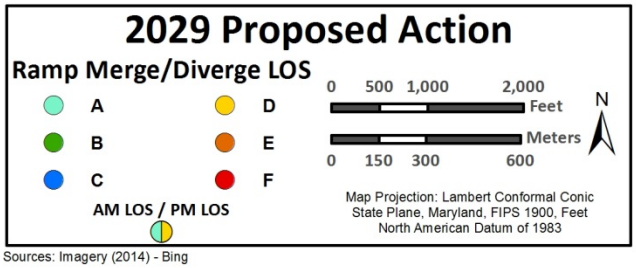
MD 32 with Dorsey Run Interchange



MD 32 with Mapes Rd. Interchange



MD 32 with MD 175 Interchange



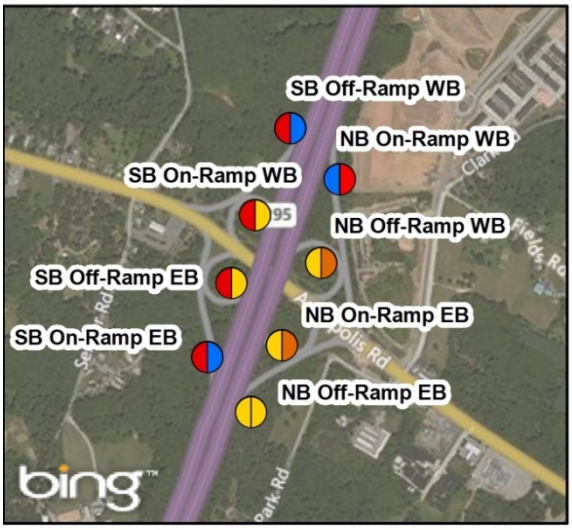
Sources: Imagery (2014) - Bing

MD 32 with MD 3 Interchange

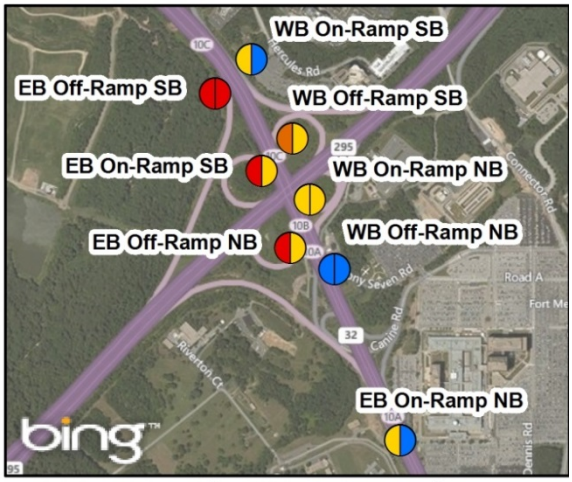
Figure 6-7. Ramp Merge/Diverge LOS for the 2029 Proposed Action (2 of 3)

MD 295 with MD 100 Interchange

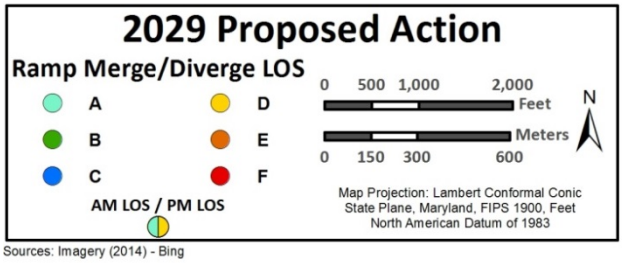
MD 295 with Arundel Mills Interchange



MD 295 with MD 175 Interchange

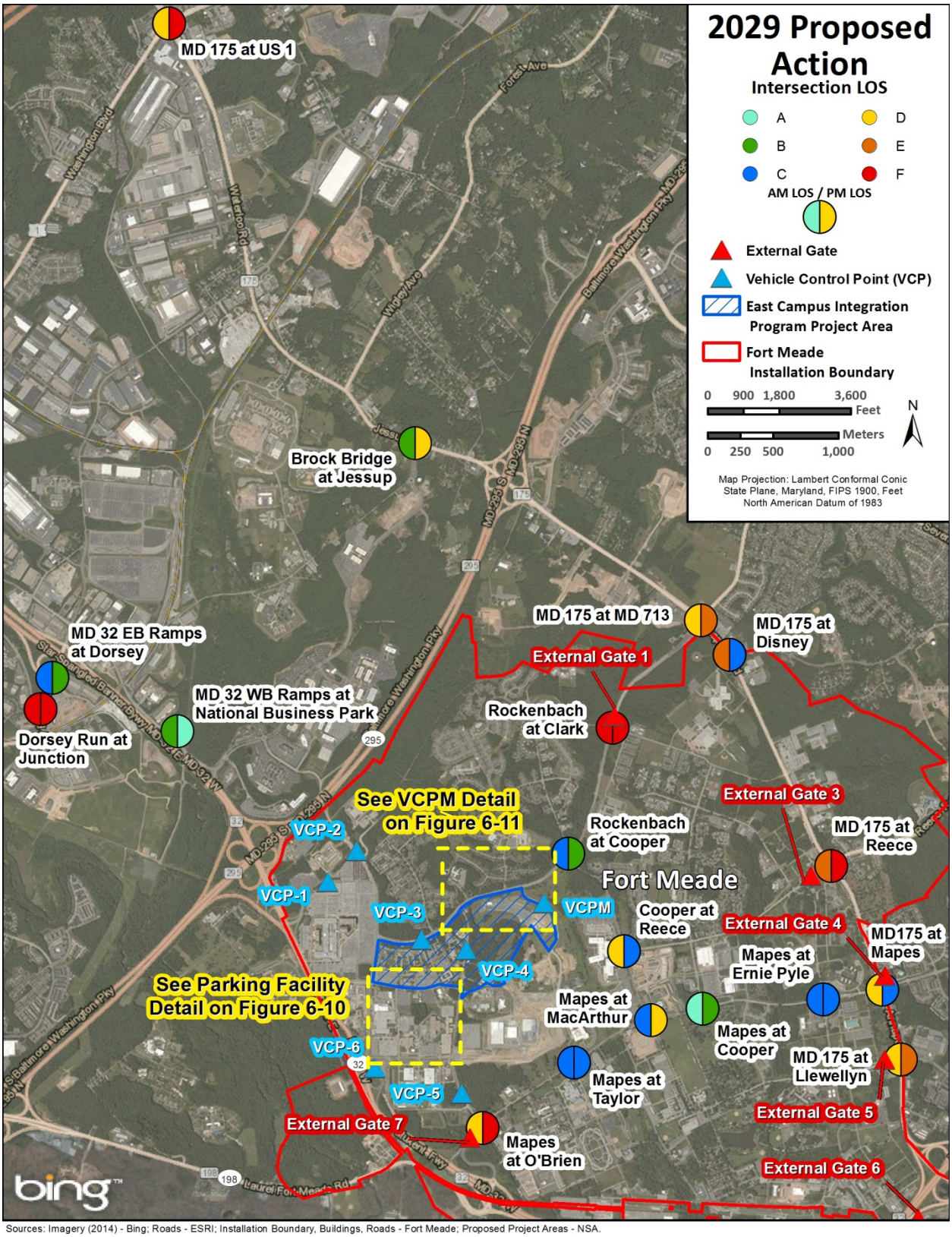


MD 295 with MD 32 Interchange



MD 295 with MD 198 Interchange

Figure 6-8. Ramp Merge/Diverge LOS for the 2029 Proposed Action (3 of 3)



Sources: Imagery (2014) - Bing; Roads - ESRI; Installation Boundary, Buildings, Roads - Fort Meade; Proposed Project Areas - NSA.

Figure 6-9. Intersection LOS for the 2029 Proposed Action

- Minor impacts on the Baltimore-Washington Parkway and I-95 in AM or PM peak hours under the Proposed Action above and beyond the existing significantly deteriorated conditions would be expected. The Baltimore-Washington Parkway/MD 295 segments and interchange ramps demonstrate minor additive impacts or increased traffic levels as a result of the Proposed Action in both AM and PM peak hours. Some segments of the Baltimore-Washington Parkway/MD 295, I-95, and MD 32 operate at the same LOS (either E or F) under both the No Action Alternative and the Proposed Action. The Arundel Mills Blvd. to MD 175 and MD 100 to Arundel Mills Blvd. segments of the Baltimore-Washington Parkway/MD 295 southbound would be LOS F for the No Action Alternative and Proposed Action in the AM peak hour. The densities for both of these segments would be approximately 7 percent higher under the Proposed Action as compared to the No Action Alternative. In the AM peak hour, I-95 would be LOS F under the No Action Alternative and Proposed Action, and the densities for the freeway segments are identical, including the MD 32 to MD 175 segment on which demand would exceed capacity. Four segments of MD 32 would be LOS E under the No Action Alternative and Proposed Action during the PM peak hour. The densities of the I-95 to U.S. Route 1 and the Dorsey Run Road to the Baltimore-Washington Parkway/MD 295 segments of eastbound MD 32 would increase approximately 6 percent under the Proposed Action as compared to the No Action Alternative. However, the U.S. Route 1 to I-95 and the Dorsey Run Road to U.S. Route 1 segments of westbound MD 32 would decrease approximately 8 percent and 6 percent, respectively due to the additional Proposed Action traffic exiting onto Dorsey Run Road.
- Only the southbound on-ramp at the Baltimore-Washington Parkway/MD 295 and Arundel Mills interchange in the AM peak hour and the southbound on-ramp to go westbound at the Baltimore-Washington Parkway/MD 295 and MD 100 interchange would be impacted enough to change the LOS. All other ramp merge/diverge AM and PM peak hour LOS along the Baltimore-Washington Parkway/MD 295 stay the same, although some operate at LOS F without the Proposed Action.
- There are several interchanges within the traffic study area where the LOS drops at a ramp merge/diverge location for the Proposed Action when compared to the 2029 No Action Alternative in the AM peak hour. These interchanges are along MD 32 east of the Baltimore-Washington Parkway/MD 295. The MD 32 interchanges west of the Baltimore-Washington Parkway have minor impacts and drop one LOS level or remain the same. This is a result of the additional trips generated by the Proposed Action entering the post from the east and exiting east of the Baltimore-Washington Parkway during the AM peak hour.
- I-95 operates at LOS F during the AM and PM peak hours under both the 2029 No Action Alternative and Proposed Action. Although impacted by the Proposed Action, which would result in increased traffic, the LOS for I-95 does not change because the No Action Alternative is also reporting LOS F.
- The intersections of Rockenbach Road (MD 713) at MD 175 and MD 175 with Llewellyn Avenue both maintain their LOS in the AM and PM peak hours. The intersections of Mapes Road at O'Brien Road and MD 175 at Reece both degrade one LOS category in the AM and PM peak hours. The intersection of Dorsey Run Road and Junction Drive operates at LOS F in both the AM and PM peak hours. Under this alternative, the intersections adjacent to the proposed

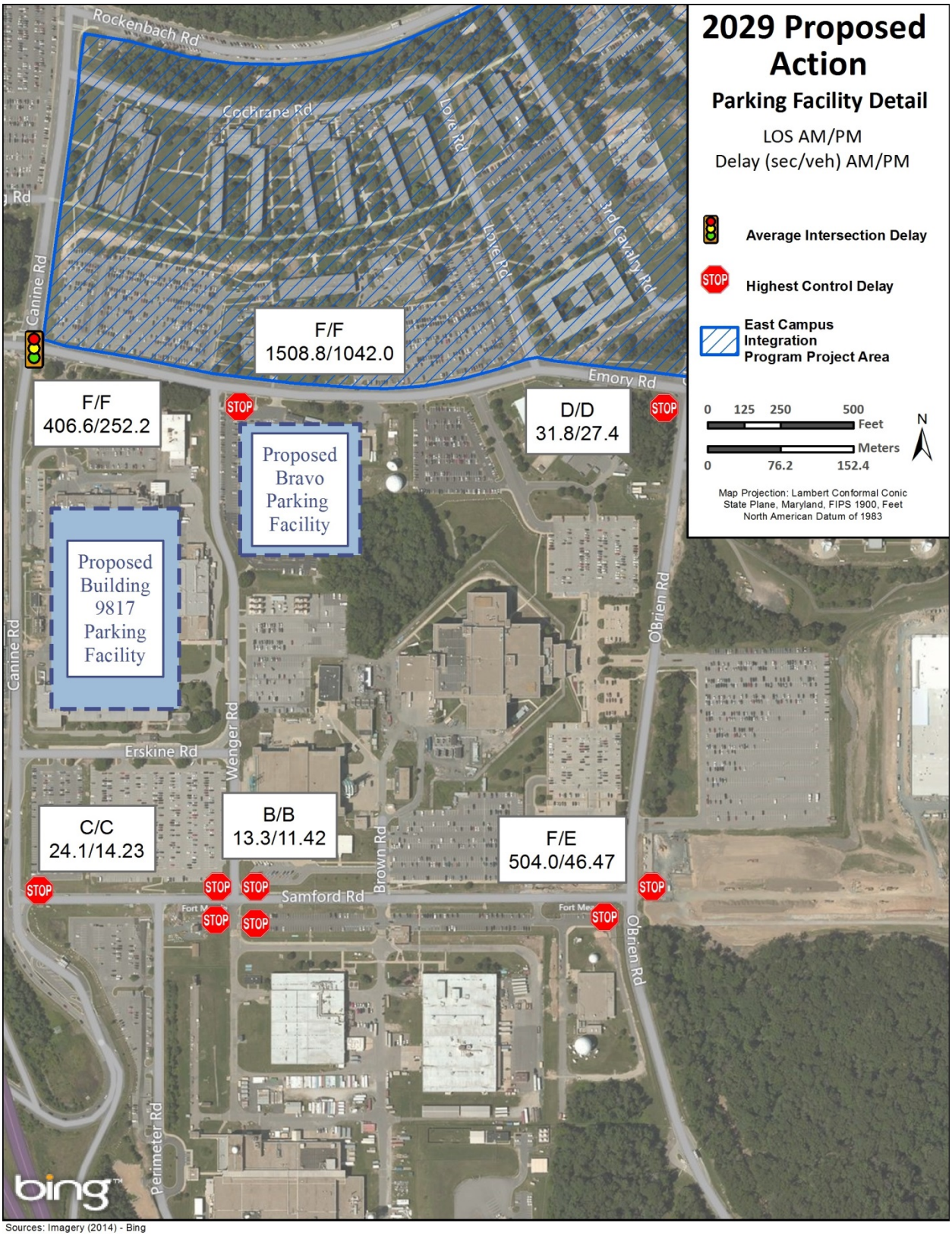
parking facilities were analyzed. As discussed further in **Section 8**, there are major increases in delay to the intersections adjacent to the proposed parking facilities along Emory and Canine roads when compared to the conditions under the 2029 No Action Alternative.

- During the AM peak hour, all of the open Fort Meade external gates operate at LOS F in both the 2029 No Action Alternative and the Proposed Action, except External Gate 4, which is currently closed and assumed to remain closed in the future and therefore reports LOS A. The LOS values at External Gate 4 are representative of nearby intersections, in this case MD 175 and Mapes Road, which performs well because no traffic attempts to turn onto Mapes Road to access the installation. In the PM peak hour under the Proposed Action, External Gate 1 and External Gate 7 both degrade in LOS, while External Gates 3, 4, and 5 operate at the same LOS as in the 2029 No Action Alternative. This means new trips are mostly using External Gates 1 and 7, although External Gate 3 is most likely also used. Despite the LOS not degrading because it already operates at LOS F under the 2029 No Action Alternative, the delay increases by 87 and 30 seconds per vehicle during the AM and PM peak hours, respectively.
- During the AM peak hour under the Proposed Action, all VCPs would operate at LOS F. A degradation of LOS at VCPs 3, 4 and 5 would occur when compared to the 2029 No Action Alternative. VCPs 1, 2, and 6 already operate at LOS F in the 2029 No Action Alternative. During the PM peak hour, VCP 1 degrades in LOS while the remaining VCPs would operate at the same LOS as in the 2029 No Action Alternative. VCP M, a VCP currently under construction and expected to be active on or before 2029, would operate at LOS E in the AM peak hour and LOS A in the PM peak hour.

6.4 Analysis of Intersections Near Parking Facilities

Under the Proposed Action, there are assumed road network improvements at the eastern portion of the ECIP project area near ECPS 2, including a new intersection of Venona Road with Rockenbach Road, new VCP M between Rockenbach Road and Venona Road, and removal of a connection between O'Brien Road and Rockenbach Road. As a result, it was assumed traffic would be rerouted onto Venona Road and through VCP M to access the eastern portion of the ECIP project area. **Figures 6-10** and **6-11** depict proposed roadway locations and LOS for the proposed parking facilities, VCP M, and surrounding intersections. VCP M was assumed to have five entering lanes. This assumption was developed based on projected hourly volumes, redistribution of the trip generation, and calculated queue.

As discussed in **Section 5**, the intersections adjacent to the proposed parking facilities were analyzed to assess impacts. As further discussed in **Section 8**, three of the parking facility alternatives are expected to be constructed under the Proposed Action. For the purposes of this report, it was assumed that the Bravo, Building 9817 and ECPS 2 facilities would be constructed. Because exact locations of ingress/egress are considered conceptual until final design is complete, all intersections adjacent to Building 9817 and Bravo parking facilities were analyzed. ECPS 2 is located in the ECIP project area, and it is assumed to accommodate 33 percent of the trip generation volumes, while the Building 9817 and Bravo are assumed to accommodate the remaining 45 percent and 22 percent, respectively. This trip generation volume distribution was calculated using the proposed facility lot acreage. New trips to and from the proposed parking locations were distributed on top of existing baseline conditions and that the Bravo lot is already



Sources: Imagery (2014) - Bing

Note: sec/veh = seconds per vehicle

Figure 6-10. Intersection LOS for the Proposed Action Parking Facility Adjacent Intersections

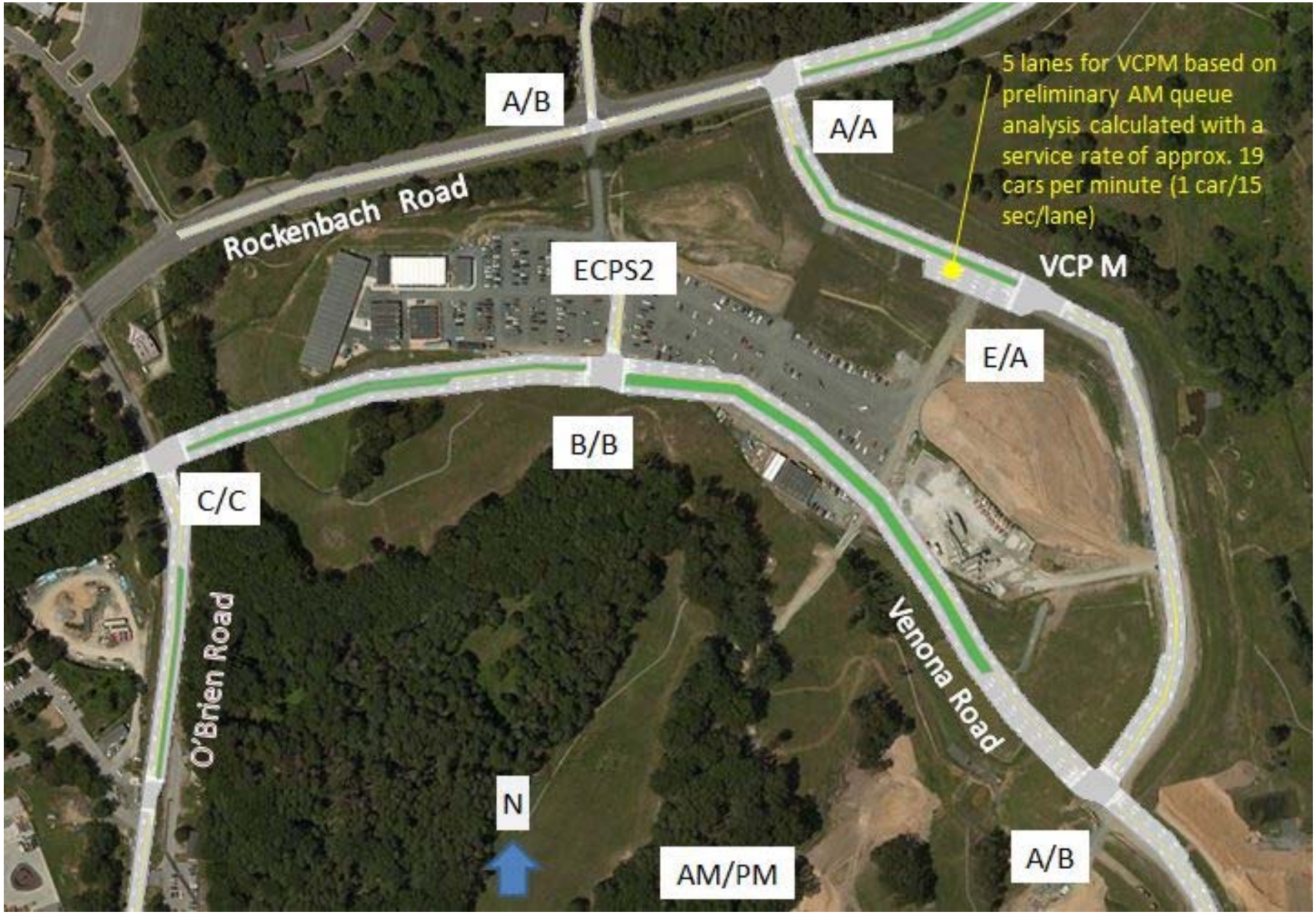


Figure 6-11. Intersection LOS for the Proposed Action VCP M and Surrounding Intersections

used as a surface parking lot is considered. As explained in **Section 5**, per the HCM, the total intersection delay, or the length of delay experienced before proceeding through the intersection, was used for signalized intersections and the highest delay per approach (highest control delay) was used for unsignalized intersections. If the final design allows for open parking to visitors, non-NSA employees, and others outside of the trip generation calculations, the impacts to adjacent intersections could be worse than that described in the following sections.

At the intersections adjacent to the proposed parking facilities (see **Figure 6-10**), the greatest impacts are to the Emory Road intersections and the intersection of Samford Road and O'Brien Road. The delay at Emory Road and Wenger Road would rise from 20 seconds to 1,042 seconds (17 minutes) in the PM peak hour and from 22 seconds to over 1,500 seconds (25 minutes) in the AM peak hour when compared with the 2029 No Action Alternative. Emory Road and Canine Road intersection delays rise from 77 seconds to over 400 seconds (approximately 7 minutes) and from 31 seconds to 250 seconds (4 minutes) of delay in the AM and PM peak hours, respectively.

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7. 2029 Alternatives Outside of Fort Meade

In the event that the 9800 Troop Support Area is not available in the future for the ECIP, alternative sites outside of Fort Meade are being considered to allow for planning flexibility. Under these alternatives, Building 9800A on the NSA Main Campus and all nine buildings in the 9800 Troop Support Area would not be demolished; and no proposed facilities would be constructed in the 9800 Troop Support Area. These alternatives are assumed to require space sufficient for 4,400 personnel who would relocate from space vacated by demolition of Buildings 9703, 9705, 9808, 9814, and 9817 (778,369 ft^2) on the NSA Main Campus and terminating leases at some leased Intelligence Community space in the Baltimore-Washington metropolitan area. **Figure 1-2** depicted the alternative site locations outside of Fort Meade.

Alternative 1: National Business Park/East Campus

Personnel and functions proposed to be located in the ECIP project area would instead occur in a leased administrative facility at National Business Park, which is on the west side of the Baltimore-Washington Parkway/MD 295 in the vicinity of the MD 175 interchange. This alternative would involve leasing existing or newly constructed Unified Facilities Criteria-qualified buildings at the northern end of National Business Park. It is assumed the buildings would consist of up to 1 million ft^2 of space and house 4,400 personnel.

Alternative 2: Annapolis Junction Business Park/East Campus

Under this alternative, personnel and functions would occur in a leased administrative facility at the southern end of Dorsey Run Road at Annapolis Junction Business Park, which is in the southwest quadrant of the MD 32 and the Baltimore-Washington Parkway/MD 295 interchange. It is assumed the buildings would consist of up to 1 million ft^2 of space and house 4,400 personnel.

7.1 Volume Development

The same method was applied to estimate trips for the two 2029 alternatives as for the Proposed Action. It was assumed that 4,400 personnel would relocate to the alternative site from other NSA sites both at Fort Meade and in the Baltimore-Washington metropolitan area.

Table 7-1 summarizes the development-generated trips for the 2029 alternatives. As noted in **Section 6.1**, the calculated trips were reduced by 5 percent as a result of mass transit, vanpools, carpools, and shuttle options.

Table 7-1. Summary of 2029 Alternatives-Generated Trips

Land Use 710 - General Office Building	Weekday (vpd)			Weekday, AM Peak (vph)			Weekday, PM Peak (vph)		
	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
2029 Alternative	7,304	7,304	14,608	1,859	253	2,112	344	1,680	2,024
Alternative Mode Reduction (5 Percent)	365	365	730	93	13	106	17	84	101
Total Trips	6,939	6,939	13,878	1,766	240	2,006	327	1,596	1,923

Key: vpd = vehicles per day, vph = vehicles per hour

7.2 Trip Distribution

These alternatives are assumed to require space sufficient for 4,400 personnel. In the traffic model, the trips to the 9800 Troop Support Area were removed from Fort Meade and redistributed to the alternative site (i.e., National Business Park or Annapolis Junction Business Park). Although one parking facility would still be constructed on the installation under these alternatives, it was assumed employees at these off-post alternative sites would not use that facility due to its location. Instead, it was assumed all employees would report and park at the alternative location.

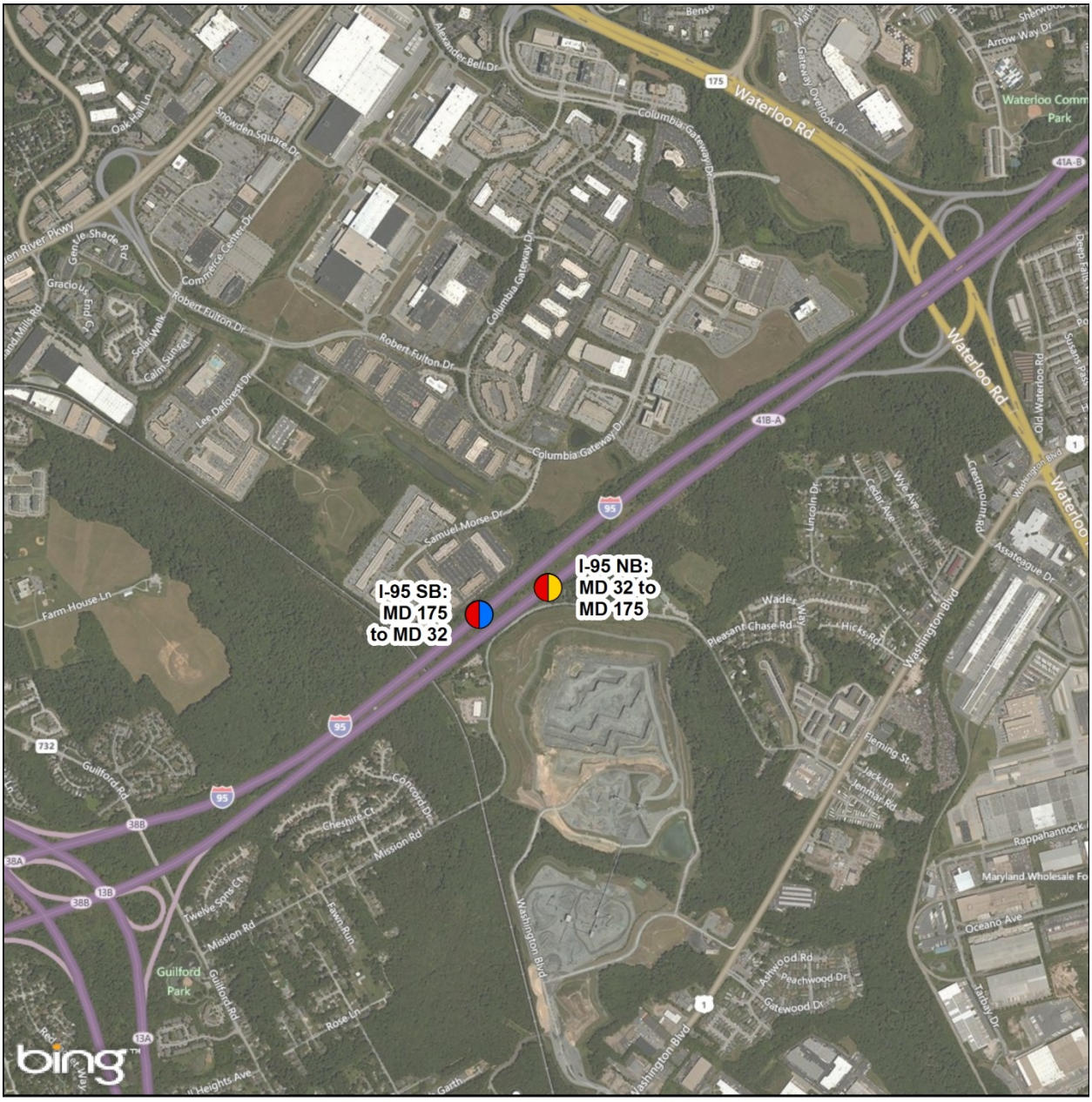
As described in **Section 6.2**, commuter origins are from the external terminus of links modeled in the Vistro traffic model, based on the routes entering and exiting the study area. Each O-D point assumed a percentage of generated trips. The O-D points and their percentages are described in **Table 6-2**.

Because Annapolis Junction Business Park is near the exit of Dorsey Run Road along MD 32, it was assumed all commuters would take this exit to access the site. As a result, personnel coming from I-95 or the Baltimore-Washington Parkway/MD 295 would take the exit for MD 32 and drive in the direction of the Dorsey Run Road interchange.

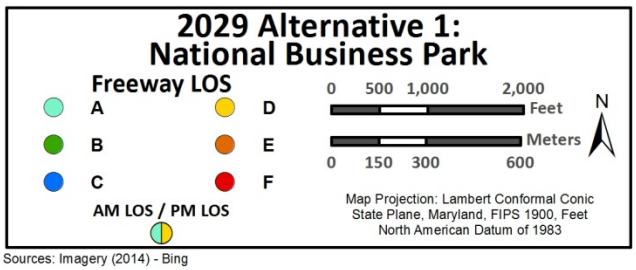
7.3 Capacity Analysis: 2029 Alternative 1: National Business Park/ East Campus

The capacity analyses for the 2029 Alternative 1: National Business Park/East Campus are presented in LOS for the freeway segments (see **Figures 7-1** through **7-3**), interchange ramp merge/diverge (see **Figures 7-4** through **7-6**), and key intersections (see **Figure 7-7**) throughout the study area. The key observations when compared to the 2029 No Action Alternative are summarized below:

- Minor impacts on the Baltimore-Washington Parkway/MD 295 or I-95 in either AM or PM peak hours above and beyond the existing significantly deteriorated conditions would be expected.
- In the AM peak hour, the MD 32 ramp merge/diverge locations perform at an improved LOS in almost all locations when compared to the 2029 No Action Alternative except at MD 32 and the Baltimore-Washington Parkway/MD 295 where the LOS for the westbound on- and off-ramps would degrade. In the PM peak hour, only the westbound on-ramp at MD 32 and Dorsey Run Road and the northbound off-ramp to travel westbound on MD 175 at the Baltimore-Washington Parkway and MD 175 interchange have a LOS that degrades. All other locations maintain LOS or perform better.
- In the AM peak hour, the intersections near the external gates perform at LOS F in both this alternative and the 2029 No Action Alternative. The VCPs perform the same or better under this alternative when compared to the 2029 No Action Alternative. This is because 4,400 personnel would no longer be entering Fort Meade through the VCPs but instead travel to National Business Park. One of the intersections at the National Business Park site, MD 175 and Brock Bridge Road, would operate the same in the AM and deteriorate in the PM peak hour when compared to the 2029 No Action Alternative. In the AM peak hour, the additional delay caused by the rerouted employees is mitigated by optimizing the signal at this location. The employees not rerouted to National Business Park would remain within existing traffic volumes entering Fort Meade.



I-95 between MD 32 and MD 175



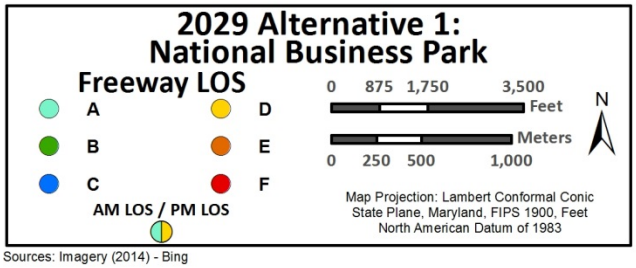
Sources: Imagery (2014) - Bing

Figure 7-1. Freeway LOS for the 2029 Alternative 1: National Business Park/East Campus (1 of 3)

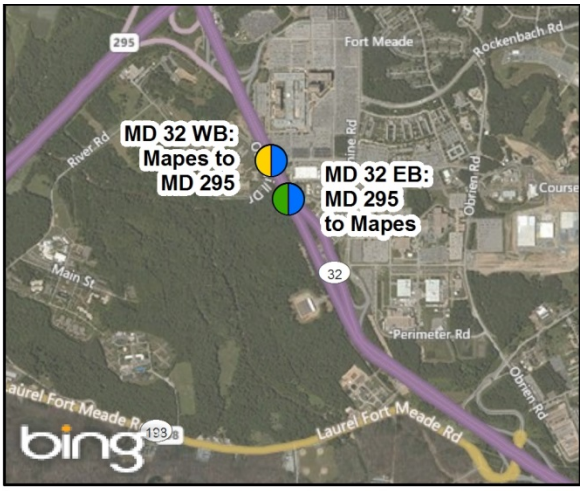
MD 32 between I-95 and US 1

MD 32 between US 1 and Dorsey Run

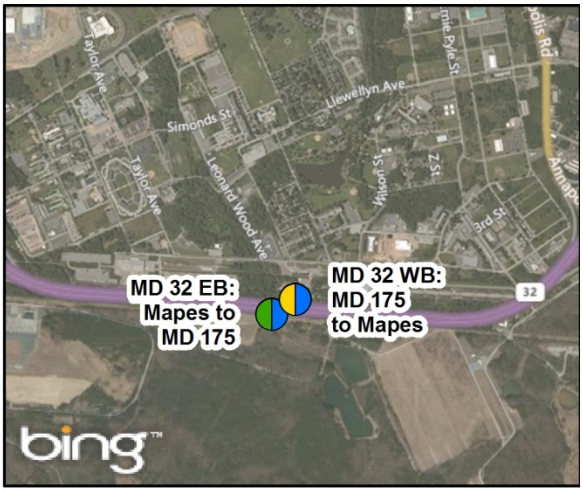
MD 32 between Dorsey Run and MD 295



Sources: Imagery (2014) - Bing



MD 32 between MD 295 and Mapes



MD 32 between Mapes and MD 175

MD 32 between MD 175 and MD 3

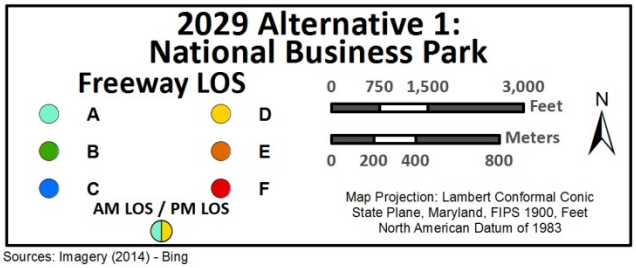
Figure 7-2. Freeway LOS for the 2029 Alternative 1: National Business Park/East Campus (2 of 3)

MD 295 between Arundel Mills and MD 100

MD 295 between MD 175 and MD 32

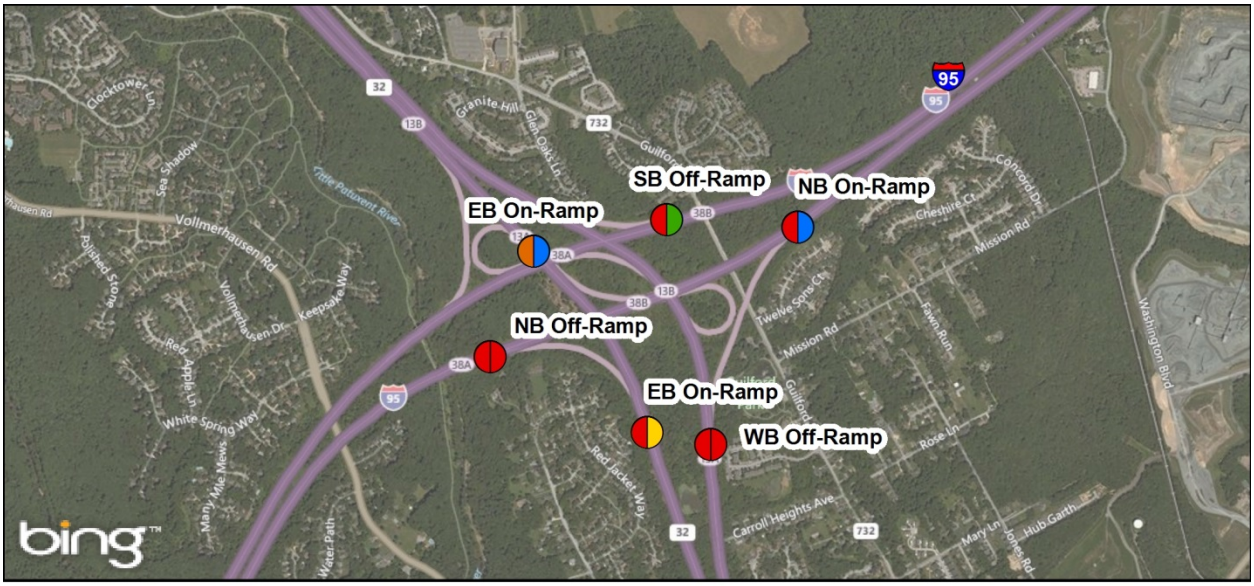
MD 295 between Arundel Mills and MD 175

MD 295 between MD 32 and MD 198



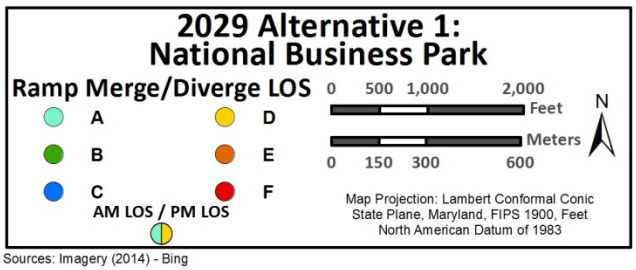
Sources: Imagery (2014) - Bing

Figure 7-3. Freeway LOS for the 2029 Alternative 1: National Business Park/East Campus (3 of 3)



I-95 with MD 32 Interchange

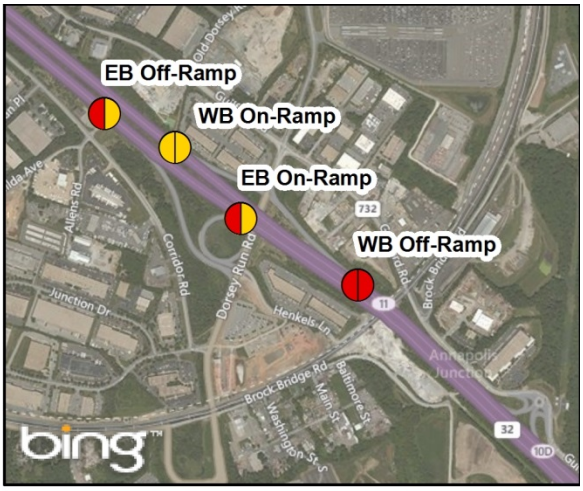
I-95 with MD 175 Interchange



Sources: Imagery (2014) - Bing

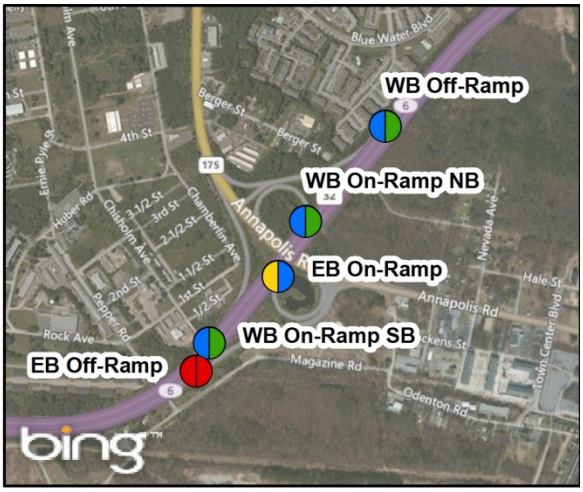
Figure 7-4. Ramp Merge/Diverge LOS for the 2029 Alternative 1: National Business Park/East Campus (1 of 3)

MD 32 with US 1 Interchange



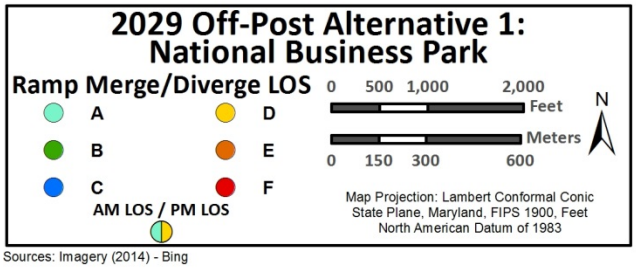
MD 32 with Dorsey Run Interchange

MD 32 with Mapes Rd. Interchange



MD 32 with MD 175 Interchange

MD 32 with MD 3 Interchange

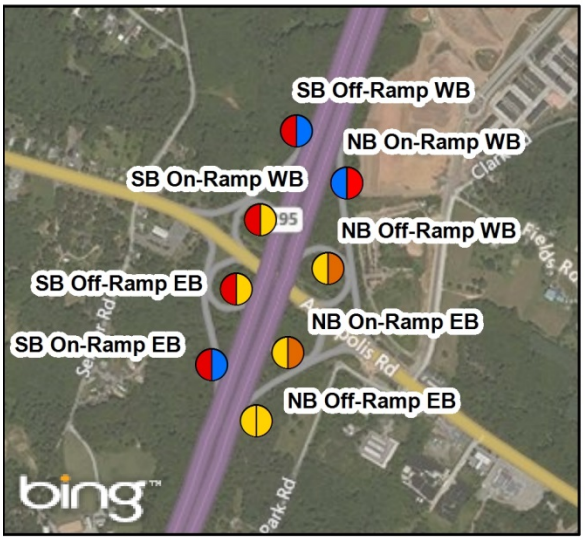


Sources: Imagery (2014) - Bing

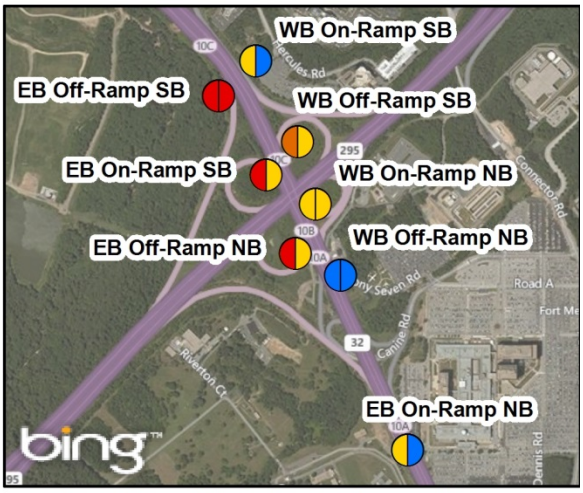
Figure 7-5. Ramp Merge/Diverge LOS for the 2029 Alternative 1: National Business Park/East Campus (2 of 3)

MD 295 with MD 100 Interchange

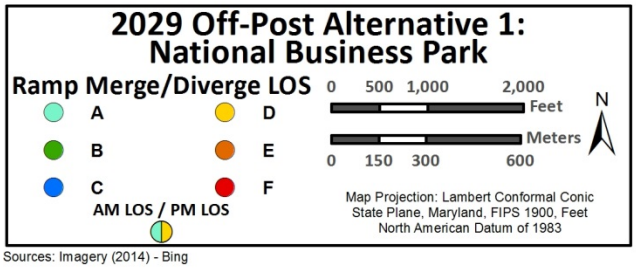
MD 295 with Arundel Mills Interchange



MD 295 with MD 175 Interchange



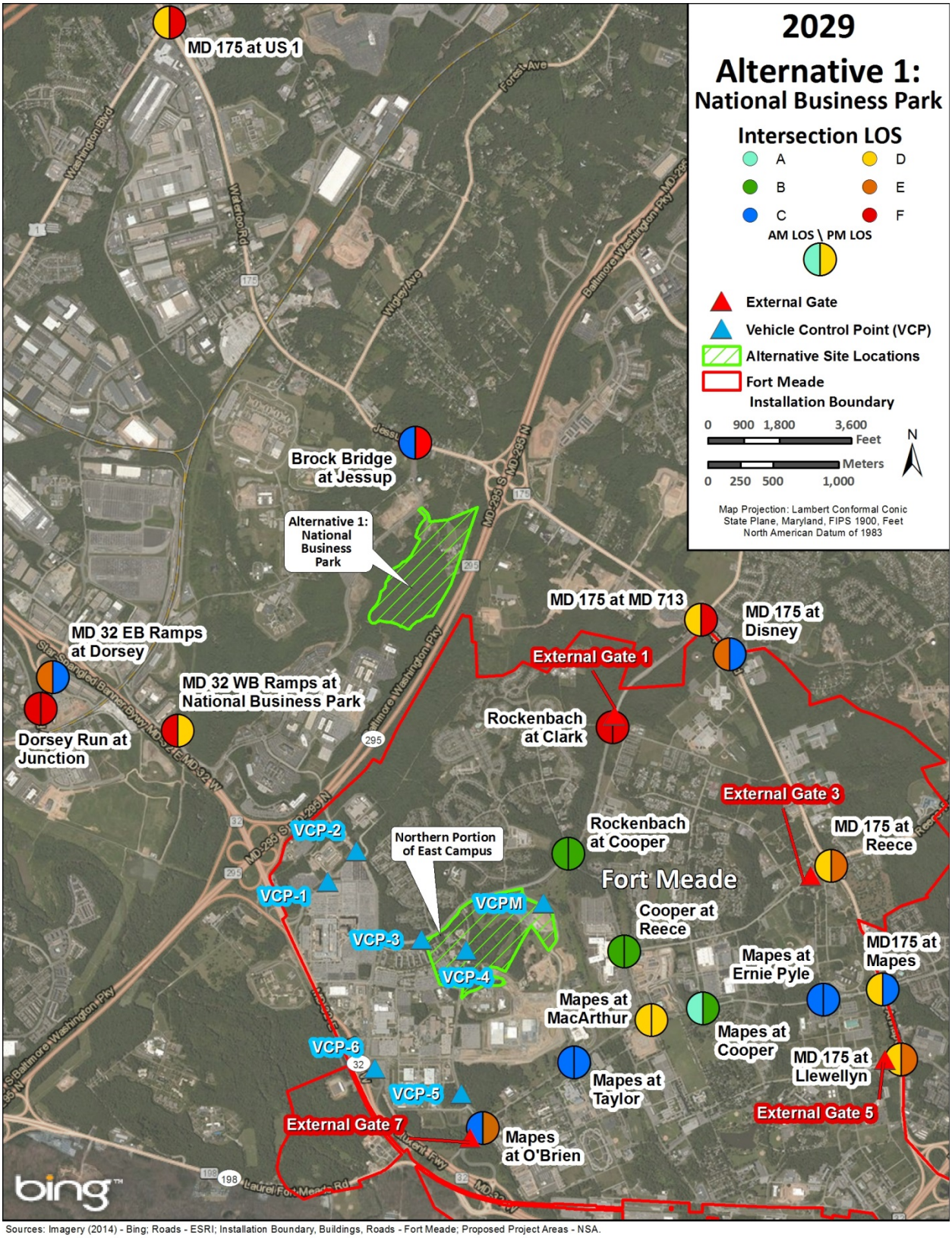
MD 295 with MD 32 Interchange



Sources: Imagery (2014) - Bing

MD 295 with MD 198 Interchange

Figure 7-6. Ramp Merge/Diverge LOS for the 2029 Alternative 1: National Business Park/East Campus (3 of 3)



Sources: Imagery (2014) - Bing; Roads - ESRI; Installation Boundary, Buildings, Roads - Fort Meade; Proposed Project Areas - NSA.

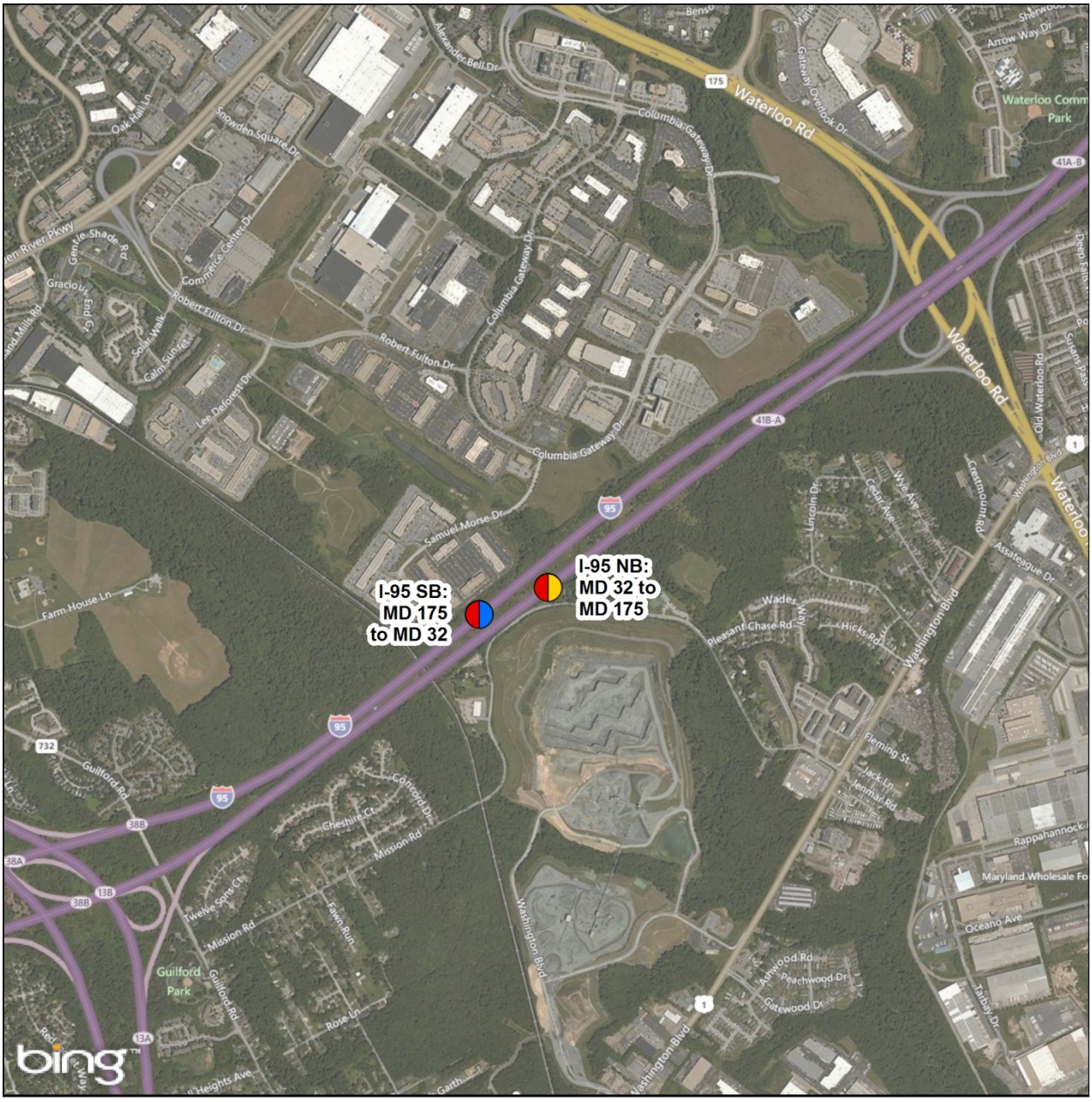
Figure 7-7. Intersection LOS for the 2029 Alternative 1: National Business Park/East Campus

- During the AM peak hour, all of the external gates on Fort Meade operate at LOS F at both the 2029 No Action Alternative and the Proposed Action, except for External Gate 4, which was closed during traffic data collection and, as a result, was modeled as closed in the analysis. In the PM peak hour, the LOS for External Gate 1 and 7 improves, while External Gates 3, 4, and 5 operate at the same LOS as in the 2029 No Action Alternative.
- During the AM and PM peak hours, the NSA VCPs and intersections near proposed parking facilities on-post operate the same or substantially better under this alternative due to less traffic entering the installation than the Proposed Action.

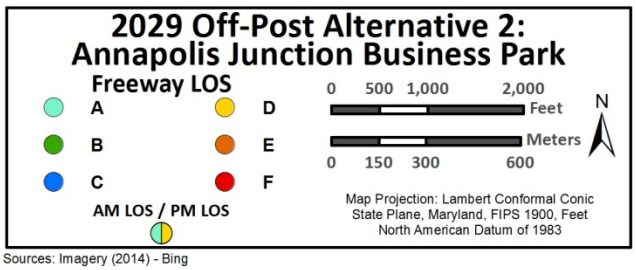
7.4 Capacity Analysis: 2029 Alternative 2: Annapolis Junction Business Park/East Campus

The capacity analyses for the 2029 Alternative 2: Annapolis Junction Business Park/East Campus are presented in LOS for the freeway segments (see **Figures 7-8** through **7-10**), interchange ramp merge/diverge (see **Figures 7-11** through **7-13**), and key intersections (see **Figure 7-14**) throughout the study area. The key observations when compared to the 2029 No Action Alternative are summarized below:

- Minor impacts on the Baltimore-Washington Parkway/MD 295 or I-95 in either AM or PM peak hours above and beyond the existing significantly deteriorated conditions would be expected.
- The LOS for MD 32 ramp merge/diverge locations performs better in almost all locations when compared to the 2029 No Action Alternative in the AM peak hour. The only locations where MD 32 LOS degrades in the AM peak hour are the westbound ramps at the MD 32 and Baltimore-Washington Parkway/MD 295. In the PM peak hour, only the on-ramps at MD 32 and the Dorsey Run Road interchange and the eastbound ramps to go northbound at the MD 32 and Baltimore-Washington Parkway interchange degrade LOS along MD 32.
- Inside Fort Meade, the LOS at the intersections adjacent to external gates are consistent with the trends shown at the off-post interchanges. The intersections perform better or the same as in the 2029 No Action Alternative. This is because 4,400 personnel would no longer be entering Fort Meade but instead travel to the Annapolis Junction Business Park site. The intersection at the Annapolis Junction Business Park site, Dorsey Run Road and Junction Drive, operates at LOS F in both the 2029 No Action Alternative and 2029 Alternative 2, with Alternative 2 reporting heavier volumes due to increased traffic accessing the business park. The employees not rerouted to Annapolis Junction Business Park would remain within existing traffic volumes entering Fort Meade.
- During the AM peak hour, all of the external gates on Fort Meade operate at LOS F at both the 2029 No Action Alternative and Alternative 2, except for External Gate 4, which was closed during traffic data collection and, as a result, was modeled as closed in the analysis. In the PM peak hour, the LOS for External Gates 1 and 7 improves, while External Gates 3, 4, and 5 operate at the same LOS as in the 2029 No Action Alternative.
- During the AM and PM peak hours, the VCPs and intersections near proposed parking facilities on-post operate the same or substantially better under this alternative due to less traffic entering the installation than the Proposed Action.



I-95 between MD 32 and MD 175



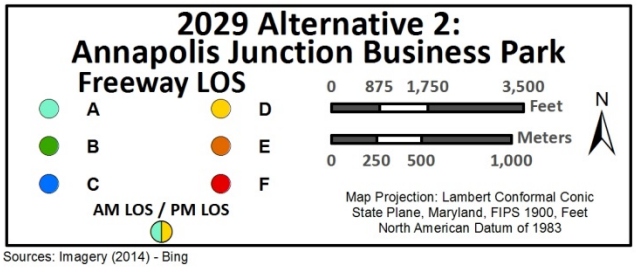
Sources: Imagery (2014) - Bing

Figure 7-8. Freeway LOS for the 2029 Alternative 2: Annapolis Junction Business Park/East Campus (1 of 3)

MD 32 between I-95 and US 1

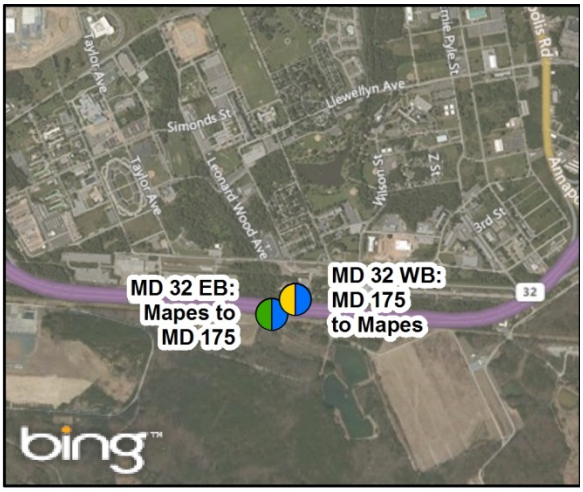
MD 32 between US 1 and Dorsey Run

MD 32 between Dorsey Run and MD 295



Sources: Imagery (2014) - Bing

MD 32 between MD 295 and Mapes



MD 32 between Mapes and MD 175

MD 32 between MD 175 and MD 3

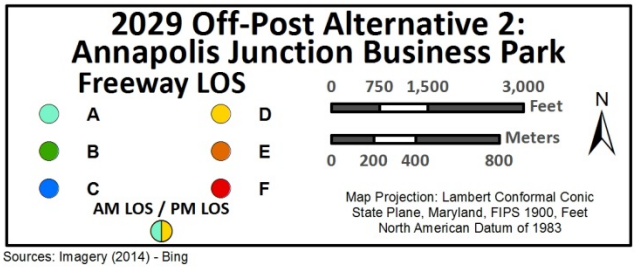
Figure 7-9. Freeway LOS for the 2029 Alternative 2: Annapolis Junction Business Park/East Campus (2 of 3)

MD 295 between Arundel Mills and MD 100

MD 295 between MD 175 and MD 32

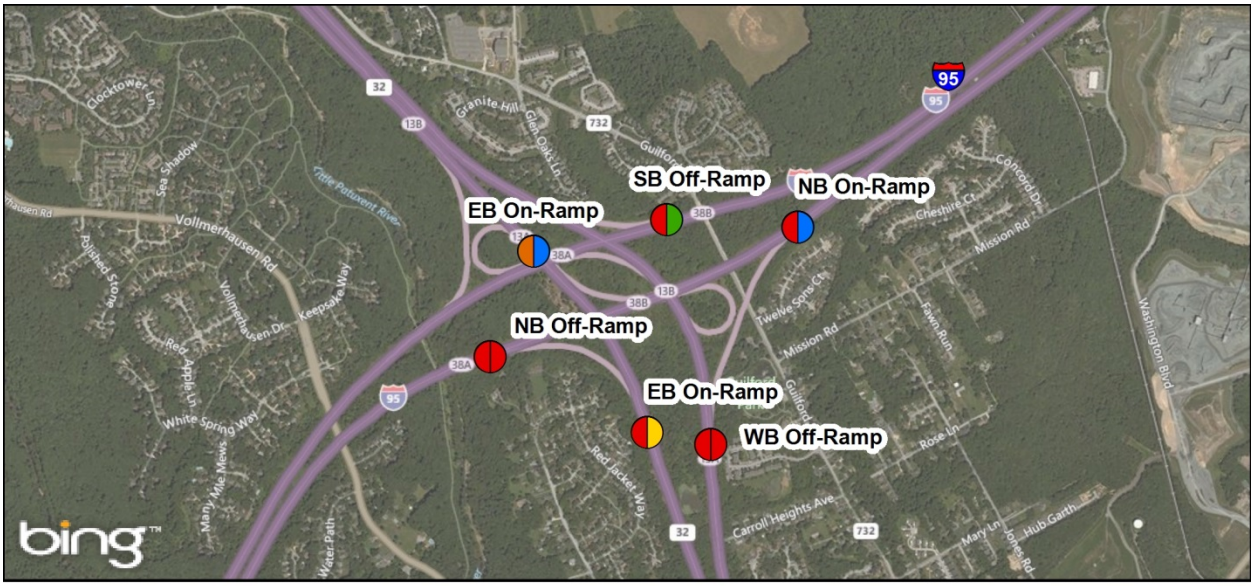
MD 295 between Arundel Mills and MD 175

MD 295 between MD 32 and MD 198



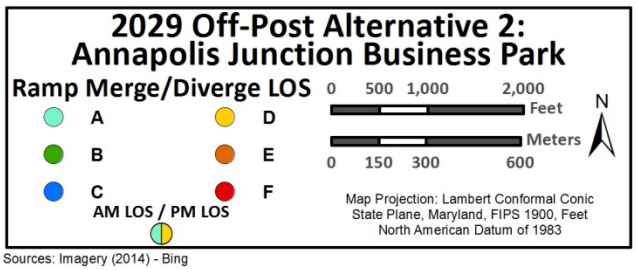
Sources: Imagery (2014) - Bing

Figure 7-10. Freeway LOS for the 2029 Alternative 2: Annapolis Junction Business Park/East Campus (3 of 3)



I-95 with MD 32 Interchange

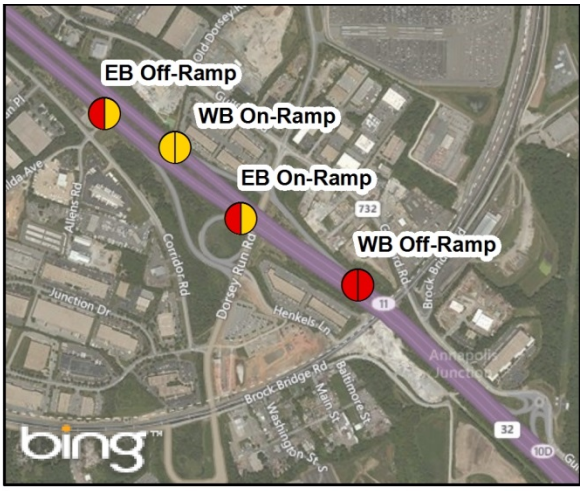
I-95 with MD 175 Interchange



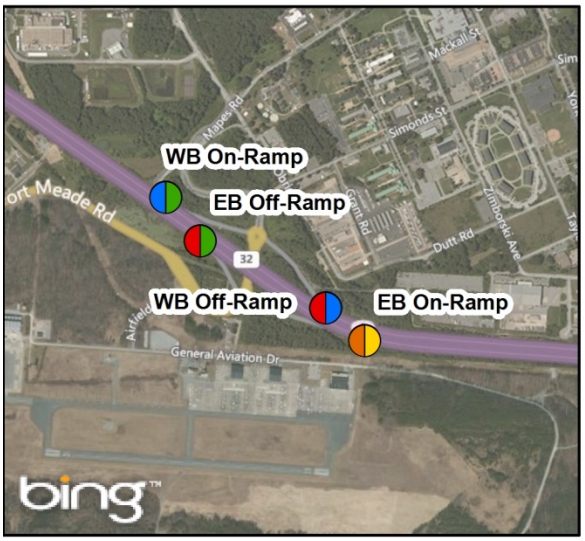
Sources: Imagery (2014) - Bing

Figure 7-11. Ramp Merge/Diverge LOS for the 2029 Alternative 2: Annapolis Junction Business Park/East Campus (1 of 3)

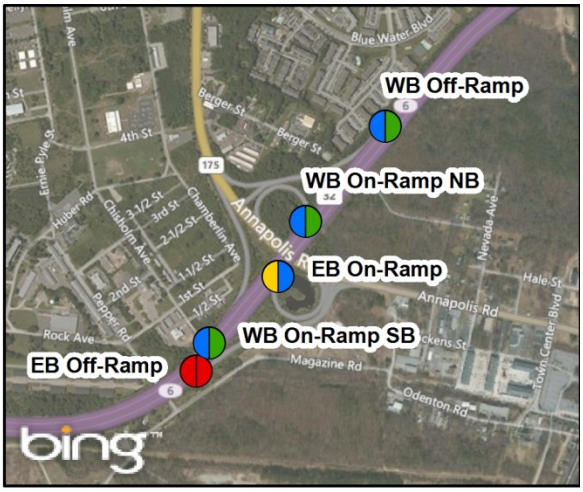
MD 32 with US 1 Interchange



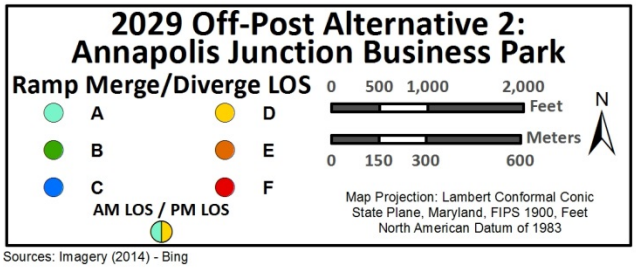
MD 32 with Dorsey Run Interchange



MD 32 with Mapes Rd. Interchange



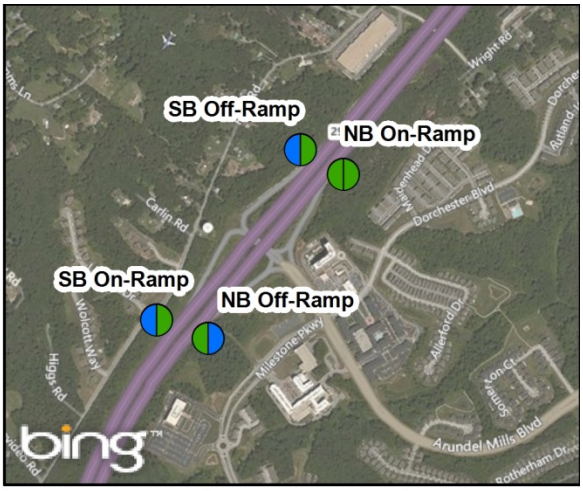
MD 32 with MD 175 Interchange



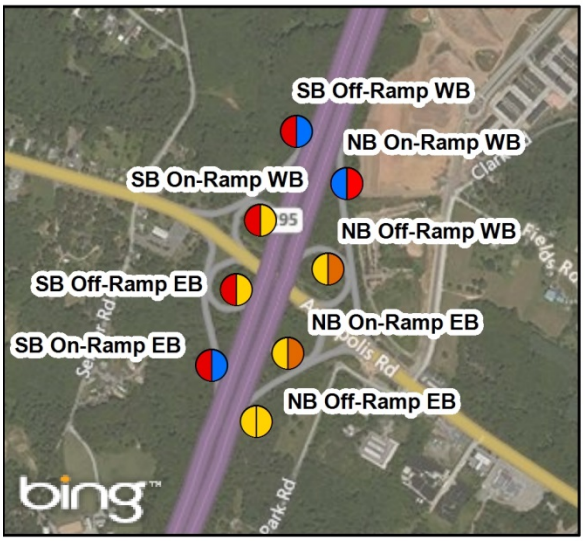
MD 32 with MD 3 Interchange

Figure 7-12. Ramp Merge/Diverge LOS for the 2029 Alternative 2: Annapolis Junction Business Park/East Campus (2 of 3)

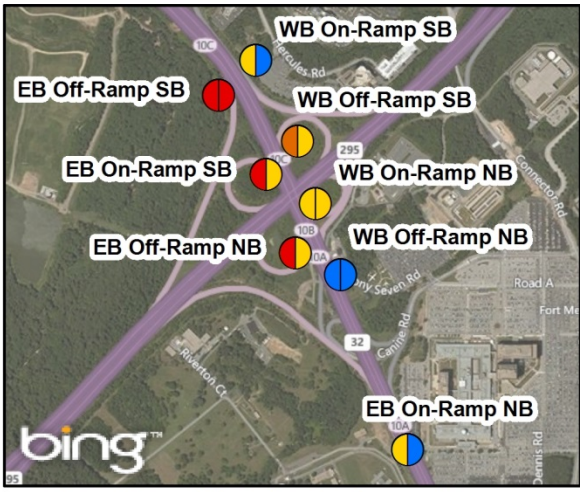
MD 295 with MD 100 Interchange



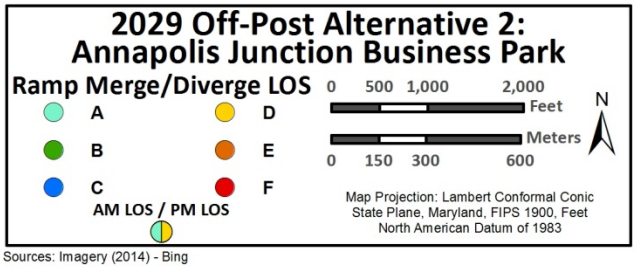
MD 295 with Arundel Mills Interchange



MD 295 with MD 175 Interchange



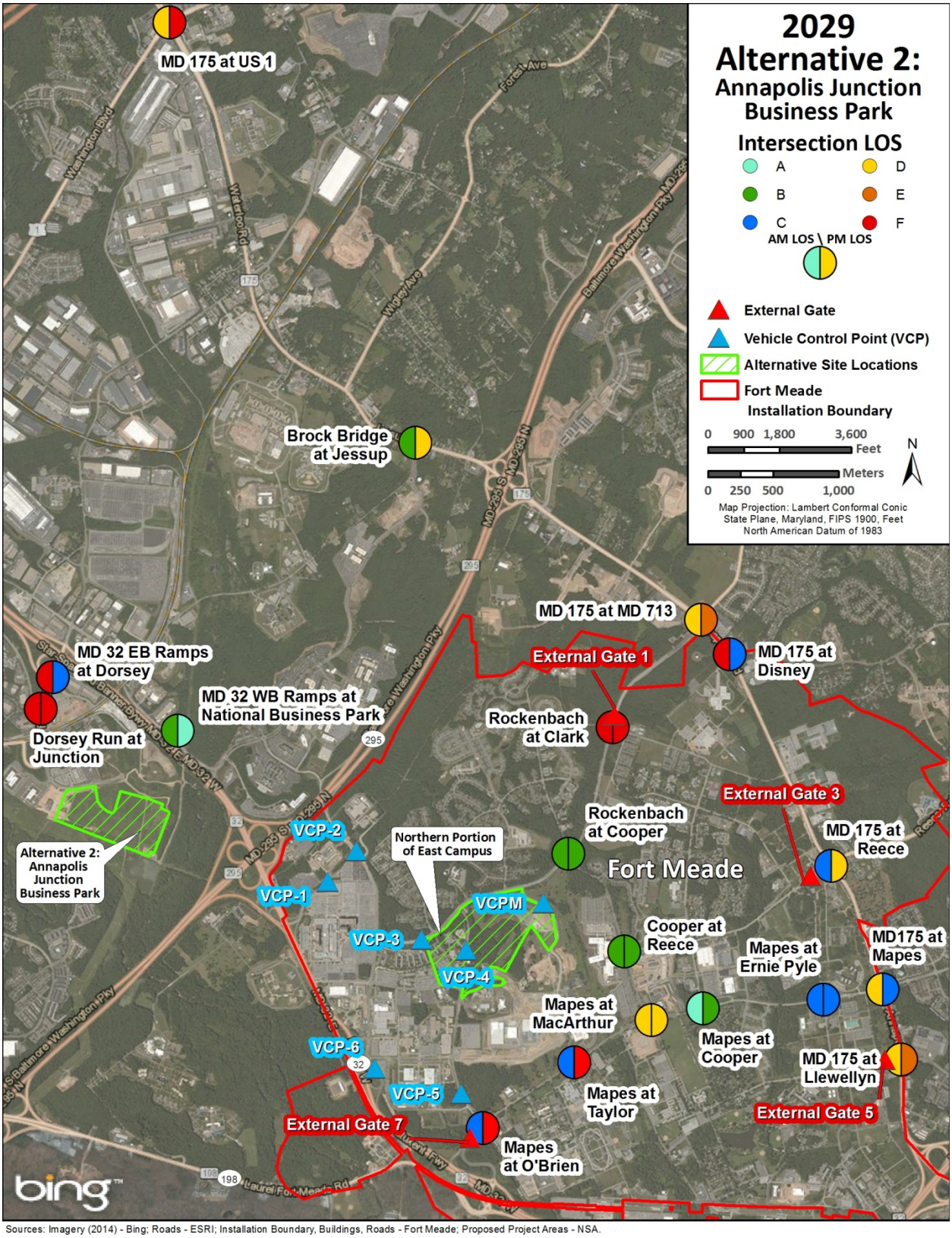
MD 295 with MD 32 Interchange



Sources: Imagery (2014) - Bing

MD 295 with MD 198 Interchange

Figure 7-13. Ramp Merge/Diverge LOS for the 2029 Alternative 2: Annapolis Junction Business Park/East Campus (3 of 3)



Sources: Imagery (2014) - Bing; Roads - ESRI; Installation Boundary, Buildings, Roads - Fort Meade; Proposed Project Areas - NSA.

Figure 7-14. Intersection LOS for the 2029 Alternative 2: Annapolis Junction Business Park/East Campus

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8. Parking Facilities

The Proposed Action would require additional parking to accommodate the increase of personnel on the East Campus. Due to limited developable land, multi-level parking structures are being considered in lieu of surface parking.

The DoD considered various location alternatives for proposed parking facilities. Reasonable parking facility location alternatives should have sufficient square footage to accommodate required project components, including security standoff-distances; avoid disturbing environmentally sensitive areas; minimize impacts on adjacent land uses; minimize the distance employees would have to walk; and be cost-effective. Four parking location alternatives were identified as meeting these criteria. Depending on the locations of the operational/headquarters buildings, at least three of the parking facility location alternatives would be constructed if the Proposed Action is fully implemented. At least one of the parking facility location alternatives would be constructed if an off-post alternative were implemented. Assumptions for this analysis, including distribution of traffic among parking facilities, were presented in **Section 3.3**.

Following are the location alternatives for and impacts from the proposed ECIP parking facilities:

- ***East Campus Parking Structure 2.*** ECPS 2, which was assumed to have a 2.5-acre footprint, would be located in the northeastern portion of the East Campus between Rockenbach Road and Venona Road, a road under construction that would generally run west-east through the northern portion of the East Campus. ECPS 2 would be bordered to the west, north, and east by a potential reforestation area for ECB 2 and ECB 3, and bounded on the south by proposed Venona Road corridor. Because ECPS 2 would mostly directly serve the East Campus, minimal impacts on vehicular or pedestrian traffic are expected near the ECIP project area. **Figure 6-11** demonstrated that LOS values at intersections near ECPS 2 would all be C or better under the Proposed Action, with the exception of LOS E at VCP M during the AM peak hour as traffic queues up at this VCP to access the NSA Campus.
- ***Bravo Parking Lot.*** The Bravo parking lot alternative parking facility location is a 4.5-acre, surface parking lot on the NSA Main Campus. It is located south of the ECIP project area at the southeastern corner of Emory Road and Wenger Road. The Bravo parking lot would be demolished and a multi-level parking facility would be constructed on all or part of the site. During construction, existing surface parking spaces would be unavailable and would put additional stress onto other existing lots. Because the Bravo parking lot is located near the ECIP project area, minimal pedestrian impacts are expected because the distance between the parking facility and proposed ECIP buildings would be short. As described in **Section 6** and depicted in **Figure 6-10**, major impacts are expected at the intersections adjacent to the Bravo parking facility as vehicular traffic commutes to and from this location under the Proposed Action. The intersection of Emory Road and Canine Road would deteriorate from LOS C to LOS F during the PM peak hours when compared to the 2029 No Action Alternative (it would already be at LOS F during the AM peak hour). The intersections of Emory Road and Wenger Road and O'Brien Road and Samford Road would likewise deteriorate from C to E or F under both the AM and PM peak hours (see **Section 6** and **Figure 6-10**). Because the Bravo parking lot is located near the

ECIP project area, minimal pedestrian impacts are expected because the distance between the parking facility and proposed buildings is short.

- ***N8/N9 Parking Lot.*** The N8/N9 parking lot is a 7.1-acre surface parking lot on the NSA Main Campus. All or part of this lot could be redeveloped as a parking facility. It is located northwest of the intersection of Canine Road (access point to MD 32) and Connector Road (access point to the Baltimore-Washington Parkway). Based upon the assumption that not all of the parking facility alternatives would be required to implement the Proposed Action, this alternative was not included in the parking facility traffic analysis. However, the analysis of potential impacts associated with the construction and operation of this facility was included in the resource analyses in the ECIP EIS. During construction, this site's existing surface parking spaces would be unavailable and would put additional stress onto other existing lots. Once constructed, a portion of existing traffic would now commute to this location instead of other lots. This would most likely only impact the intersections of Canine Road with Rockenbach Road and Canine Road with Emory Road. Additional pedestrian traffic would be present along Canine Road as employees would walk from this parking lot to the ECIP project area (0.3- to 0.5-mile walk) and elsewhere on the NSA Campus.
- ***Building 9817.*** Building 9817 is proposed for demolition as part of the Proposed Action. It is located on the NSA Main Campus, on the northern side of Erskine Road and bordered by Canine Road to the west and Wenger Road to the east. Following demolition of Building 9817, a parking facility could be constructed on all or part of the 8.2-acre footprint. During construction of this alternative, there would be no impacts on existing parking due to the absence of existing parking at this location. Major impacts are expected at the intersections adjacent to the Building 9817 parking facility during facility operation as vehicular traffic commutes to and from this location under the Proposed Action. Degradation in LOS values of adjacent intersections for this location are presented in the Bravo parking facility analysis above, which has the same intersections due to the proximity of these alternatives and were therefore included in one analysis. Once constructed, a portion of existing traffic would now commute to this location instead of other lots. This would most likely only impact the intersections of Canine Road with Rockenbach Road and Canine Road with Emory Road. Because of its proximity to the ECIP project area, negligible impacts on pedestrian traffic are expected. Additional pedestrian traffic would populate Canine Road or Wenger Road as employees would walk from this parking facility to the ECIP project area (< 0.2-mile walk).

9. Summary of Capacity Analysis

2029 Proposed Action

As shown in **Tables 9-1** and **9-2**, there are several locations where the LOS drops at a ramp merge/diverge location for the Proposed Action when compared to the 2029 No Action Alternative in the AM peak hour. At the MD 32 and Mapes Road interchange, the eastbound ramps reduce from LOS C to LOS F and E for the diverge and merge, respectively. The same situation occurs at the interchanges of MD 32 and MD 175 and MD 32 and MD 3; only the eastbound ramps show reductions in LOS. All three of these intersections are east of the Baltimore-Washington Parkway/MD 295. The MD 32 interchanges west of the Baltimore-Washington Parkway have minor reductions in LOS when compared to the 2029 No Action Alternative. This is a result of the additional trips generated by the Proposed Action entering Fort Meade from the east and exiting east of the Baltimore-Washington Parkway during the AM peak hour.

Minor impacts on the Baltimore-Washington Parkway/MD 295 and I-95 in AM or PM peak hours under the Proposed Action above and beyond the existing significantly deteriorated conditions would be expected. Baltimore-Washington Parkway/MD 295 parkway segments and interchange demonstrate minor additive impacts or increased traffic levels as a result of the Proposed Action in both AM and PM peak hours. Some segments of the Baltimore-Washington Parkway/MD 295, I-95, and MD 32 would operate at the same LOS (either E or F) under both the No Action Alternative and the Proposed Action (see **Tables 9-3** and **9-4**). The densities of these segments would increase approximately 6 to 8 percent under the Proposed Action as compared to the No Action Alternative.

Only the southbound on-ramp at the Baltimore-Washington Parkway/MD 295 and Arundel Mills interchange in the AM peak hour and the southbound on-ramp to go westbound at the Baltimore-Washington Parkway/MD 295 and MD 100 interchange are impacted enough to change the LOS. All other ramp merge/diverge AM and PM peak hour LOS along the Baltimore-Washington Parkway/MD 295 stay the same, although some operate at LOS F without the Proposed Action.

I-95 operates at LOS F during the both the AM and PM peak hours under both the 2029 No Action Alternative and Proposed Action. Although impacted by the Proposed Action which would result in increased traffic, the LOS for I-95 does not change because the No Action Alternative is also reporting LOS F.

Inside Fort Meade, and as shown on **Tables 9-5** and **9-6**, the intersection LOS and delay along MD 175 (gate locations) all degrade to LOS F when compared to the 2029 No Action Alternative in the AM peak hour. In the PM peak hour, many of the intersections on-post operate at LOS F for the Proposed Action, which is similar to the No Action Alternative.

During the AM peak hour, all of the open Fort Meade external gates would operate at LOS F in both the 2029 No Action Alternative and the Proposed Action. In the PM peak hour, External Gate 1 and External Gate 7 both degrade in LOS, while External Gates 3, 4, and 5 operate at the same LOS as in the 2029 No Action Alternative. This is consistent with the assumption that new trips are accessing new on-post development through these gates.

Table 9-1. Summary of AM Ramp Merge/Diverge Locations

Interchange Name	Ramp Name	Ramp Type	EX AM	NA AM	PA AM	Alt 1 AM	Alt 2 AM
I-95 and MD 175	SB Off-Ramp	DIVERGE	F	F	F	F	F
I-95 and MD 175	NB On-Ramp	MERGE	F	F	F	F	F
I-95 and MD 175	SB On-Ramp	MERGE	D	D	D	D	D
I-95 and MD 175	NB Off-Ramp	DIVERGE	F	F	F	F	F
I-95 and MD 32	NB On-Ramp	MERGE	F	F	F	F	F
I-95 and MD 32	SB Off-Ramp	DIVERGE	F	F	F	F	F
I-95 and MD 32	NB Off-Ramp	DIVERGE	F	F	F	F	F
MD 32 and I-95	EB On-Ramp	MERGE	C	D	E	C	D
MD 32 and I-95	EB On-Ramp	MERGE	E	F	F	D	F
MD 32 and I-95	WB Off-Ramp	DIVERGE	F	F	F	F	F
MD32 and US 1	EB Off-Ramp	DIVERGE	F	F	F	F	F
MD 32 and US 1	EB On-Ramp	MERGE	E	F	F	D	F
MD 32 and US 1	WB Off-Ramp	DIVERGE	D	F	F	F	F
MD 32 and Dorsey	EB Off-Ramp	DIVERGE	F	F	F	F	F
MD 32 and Dorsey	EB On-Ramp	MERGE	C	D	F	C	C
MD 32 and Dorsey	WB Off-Ramp	DIVERGE	F	F	F	F	F
MD 32 and Dorsey	WB On-Ramp	MERGE	D	D	D	E	D
MD32 and MD 295	EB Off-Ramp SB	DIVERGE	C	F	F	C	C
MD32 and MD 295	EB On-Ramp SB	MERGE	C	D	F	C	C
MD32 and MD 295	EB Off-Ramp NB	DIVERGE	C	D	F	C	C
MD32 and MD 295	EB On-Ramp NB	MERGE	C	C	D	B	B
MD32 and MD 295	WB Off-Ramp NB	DIVERGE	C	C	C	D	D
MD32 and MD 295	WB On-Ramp NB	MERGE	D	D	D	E	E
MD32 and MD 295	WB Off-Ramp SB	DIVERGE	D	E	E	F	F
MD32 and MD 295	WB On-Ramp SB	MERGE	D	D	D	F	F
MD 32 and Mapes	EB Off-Ramp	DIVERGE	B	C	F	B	B
MD 32 and Mapes	EB On-Ramp	MERGE	C	C	E	B	B
MD 32 and Mapes	WB Off-Ramp	DIVERGE	D	F	F	D	D
MD 32 and Mapes	WB On-Ramp	MERGE	C	C	C	C	C
MD 32 and MD 175	EB Off-Ramp	DIVERGE	C	C	F	B	B
MD 32 and MD 175	EB On-Ramp	MERGE	B	B	D	A	A
MD 32 and MD 175	WB Off-Ramp	DIVERGE	B	C	C	C	C
MD 32 and MD 175	WB On Ramp NB	MERGE	B	C	C	C	C
MD 32 and MD 175	WB On-Ramp SB	DIVERGE	C	C	C	C	C
MD 32 and MD 3	EB Off-Ramp	DIVERGE	C	C	F	B	B
MD 32 and MD 3	WB Off-Ramp	DIVERGE	B	B	C	B	B
MD 32 and MD 3	WB On-Ramp	MERGE	C	C	D	C	C
MD 295 and MD 198	NB On-Ramp	MERGE	E	F	F	F	F
MD 295 and MD 198	SB Off-Ramp	DIVERGE	F	F	F	F	F
MD 295 and MD 175	NB Off-Ramp EB	DIVERGE	C	D	D	D	D
MD 295 and MD 175	NB On-Ramp EB	MERGE	D	D	D	D	D
MD 295 and MD 175	NB Off-Ramp WB	DIVERGE	D	D	D	E	E
MD 295 and MD 175	NB On-Ramp WB	MERGE	C	C	C	D	D
MD 295 and MD 175	SB Off-Ramp WB	DIVERGE	F	F	F	F	F
MD 295 and MD 175	SB On-Ramp WB	MERGE	F	F	F	F	F
MD 295 and MD 175	SB Off-Ramp EB	DIVERGE	F	F	F	F	F
MD 295 and MD 175	SB On-Ramp EB	MERGE	E	F	F	F	F
MD 295 and Arundel	NB Off-Ramp	DIVERGE	B	B	B	B	B
MD 295 and Arundel	NB On-Ramp	MERGE	B	B	B	B	B
MD 295 and Arundel	SB Off-Ramp	DIVERGE	B	B	C	B	B
MD 295 and Arundel	SB On-Ramp	MERGE	C	C	C	C	C
MD 295 and MD 100	NB Off-Ramp WB	DIVERGE	D	F	F	F	F
MD 295 and MD 100	NB On-Ramp WB	MERGE	D	D	D	D	F
MD 295 and MD 100	SB Off-Ramp WB	DIVERGE	F	F	F	F	F
MD 295 and MD 100	SB On-Ramp WB	MERGE	F	F	F	F	F

Note: See Section 9 above for Table 9-1 abbreviations.

Table 9-2. Summary of PM Ramp Merge/Diverge Locations

Interchange Name	Ramp Name	Ramp Type	EX PM	NA PM	PA PM	Alt 1 PM	Alt 2 PM
I-95 and MD 175	SB Off-Ramp	DIVERGE	F	F	F	F	F
I-95 and MD 175	NB On-Ramp	MERGE	C	D	D	D	D
I-95 and MD 175	SB On-Ramp	MERGE	B	B	B	B	B
I-95 and MD 175	NB Off-Ramp	DIVERGE	F	F	F	F	F
I-95 and MD 32	NB On-Ramp	MERGE	C	C	C	C	C
I-95 and MD 32	SB Off-Ramp	DIVERGE	B	B	B	B	B
I-95 and MD 32	NB Off-Ramp	DIVERGE	D	F	F	F	F
MD 32 and I-95	EB On-Ramp	MERGE	C	C	C	C	C
MD 32 and I-95	EB On-Ramp	MERGE	D	D	D	D	D
MD 32 and I-95	WB Off-Ramp	DIVERGE	F	F	F	F	F
MD32 and US 1	EB Off-Ramp	DIVERGE	F	F	F	F	F
MD 32 and US 1	EB On-Ramp	MERGE	C	D	D	D	D
MD 32 and US 1	WB Off-Ramp	DIVERGE	F	F	F	F	F
MD 32 and Dorsey	EB Off-Ramp	DIVERGE	C	D	D	D	D
MD 32 and Dorsey	EB On-Ramp	MERGE	D	D	D	D	F
MD 32 and Dorsey	WB Off-Ramp	DIVERGE	F	F	F	F	F
MD 32 and Dorsey	WB On-Ramp	MERGE	D	E	D	F	F
MD32 and MD 295	EB Off-Ramp SB	DIVERGE	F	F	F	F	F
MD32 and MD 295	EB On-Ramp SB	MERGE	C	D	D	C	D
MD32 and MD 295	EB Off-Ramp NB	DIVERGE	C	D	D	C	F
MD32 and MD 295	EB On-Ramp NB	MERGE	B	B	C	B	C
MD32 and MD 295	WB Off-Ramp NB	DIVERGE	C	C	C	C	C
MD32 and MD 295	WB On-Ramp NB	MERGE	D	D	D	D	D
MD32 and MD 295	WB Off-Ramp SB	DIVERGE	D	D	D	D	D
MD32 and MD 295	WB On-Ramp SB	MERGE	C	D	C	D	D
MD 32 and Mapes	EB Off-Ramp	DIVERGE	B	B	B	B	B
MD 32 and Mapes	EB On-Ramp	MERGE	C	C	D	C	C
MD 32 and Mapes	WB Off-Ramp	DIVERGE	B	C	C	C	C
MD 32 and Mapes	WB On-Ramp	MERGE	B	B	B	B	B
MD 32 and MD 175	EB Off-Ramp	DIVERGE	F	F	F	C	F
MD 32 and MD 175	EB On-Ramp	MERGE	B	B	C	B	B
MD 32 and MD 175	WB Off-Ramp	DIVERGE	B	B	B	B	B
MD 32 and MD 175	WB On Ramp NB	MERGE	B	B	B	B	B
MD 32 and MD 175	WB On-Ramp SB	DIVERGE	B	B	B	B	B
MD 32 and MD 3	EB Off-Ramp	DIVERGE	C	C	F	C	C
MD 32 and MD 3	WB Off-Ramp	DIVERGE	B	B	B	B	B
MD 32 and MD 3	WB On-Ramp	MERGE	B	B	C	B	B
MD 295 and MD 198	NB On-Ramp	MERGE	D	D	D	D	D
MD 295 and MD 198	SB Off-Ramp	DIVERGE	D	F	F	D	D
MD 295 and MD 175	NB Off-Ramp EB	DIVERGE	C	D	D	D	D
MD 295 and MD 175	NB On-Ramp EB	MERGE	D	E	E	E	E
MD 295 and MD 175	NB Off-Ramp WB	DIVERGE	E	E	E	F	E
MD 295 and MD 175	NB On-Ramp WB	MERGE	D	F	F	F	F
MD 295 and MD 175	SB Off-Ramp WB	DIVERGE	C	C	C	C	C
MD 295 and MD 175	SB On-Ramp WB	MERGE	D	D	D	D	D
MD 295 and MD 175	SB Off-Ramp EB	DIVERGE	D	D	D	D	D
MD 295 and MD 175	SB On-Ramp EB	MERGE	C	C	C	C	C
MD 295 and Arundel	NB Off-Ramp	DIVERGE	B	C	C	C	C
MD 295 and Arundel	NB On-Ramp	MERGE	B	B	B	B	B
MD 295 and Arundel	SB Off-Ramp	DIVERGE	B	B	B	B	B
MD 295 and Arundel	SB On-Ramp	MERGE	B	B	B	B	B
MD 295 and MD 100	NB Off-Ramp WB	DIVERGE	D	F	F	F	F
MD 295 and MD 100	NB On-Ramp WB	MERGE	D	D	D	D	D
MD 295 and MD 100	SB Off-Ramp WB	DIVERGE	F	F	F	F	F
MD 295 and MD 100	SB On-Ramp WB	MERGE	D	D	E	D	D

Note: See Section 9 above for Table 9-2 abbreviations.

Table 9-3. Summary of AM Density and LOS for Freeway Segments in the Study Area

Route	Segment Name	EX[1] Density (pc/mi/ln)	EX LOS	NA Density (pc/mi/ln)	NA LOS	PA Density (pc/mi/ln)	PA LOS	Alt 1 Density (pc/mi/ln)	Alt 1 LOS	Alt 2 Density (pc/mi/ln)	Alt 2 LOS
I-95 NB	MD 32 to MD 175	Demand Exceeds Capacity[2]	F	Demand Exceeds Capacity	F	Demand Exceeds Capacity	F	Demand Exceeds Capacity	F	Demand Exceeds Capacity	F
I-95 SB	MD 175 to MD 32	57.9	F	72.8	F	72.8	F	72.8	F	72.8	F
MD 32 EB	I-95 to US 1	41.0	E	43.9	E	55.3	F	40.2	E	43.9	E
MD 32 WB	US 1 to I-95	40.8	E	43.7	E	43.2	E	48.3	F	45.0	E
MD 32 EB	US 1 to Dorsey Run	27.4	D	29.4	D	37.8	E	26.9	D	29.3	D
MD 32 WB	Dorsey Run to US 1	34.8	D	37.3	E	36.9	E	41.8	E	38.5	E
MD 32 EB	Dorsey Run to MD 295	32.4	D	34.7	D	47.5	F	26.9	D	28.2	D
MD 32 WB	MD 295 to Dorsey Run	24.0	C	25.6	C	25.4	C	28.3	D	32.0	D
MD 32 EB	MD 295 to Mapes	24.7	C	26.4	D	40.8	E	17.6	B	18.2	C
MD 32 WB	Mapes to MD 295	25.5	C	27.3	D	27.3	D	31.1	D	31.6	D
MD 32 EB	Mapes to MD 175	24.0	C	25.6	C	40.4	E	16.5	B	17.1	B
MD 32 WB	MD 175 to Mapes	31.0	D	33.1	D	37.2	E	33.1	D	33.7	D
MD 32 EB	MD 175 to MD 3	21.1	C	22.6	C	37.6	E	13.9	B	13.9	B
MD 32 WB	MD 3 to MD 175	21.8	C	23.4	C	29.5	D	23.4	C	23.4	C
MD 295 NB	MD 198 to MD 32	36.5	E	39.1	E	40.7	E	39.5	E	39.5	E
MD 295 SB	MD 32 to MD 198	38.6	E	41.3	E	43.4	E	37.9	E	38.1	E
MD 295 NB	MD 32 to MD 175	29.4	D	31.5	D	31.5	D	35.2	E	35.7	E
MD 295 SB	MD 175 to MD 32	34.9	D	37.3	E	39.1	E	34.3	D	37.6	E
MD 295 NB	MD 175 to Arundel Mills	21.5	C	23.0	C	23.1	C	24.8	C	25.9	C
MD 295 SB	Arundel Mills to MD 175	45.6	F	48.8	F	52.3	F	48.8	F	48.8	F
MD 295 NB	Arundel Mills to MD 100	22.2	C	23.8	C	23.8	C	25.6	C	26.7	D
MD 295 SB	MD 100 to Arundel Mills	42.4	E	45.4	F	48.4	F	45.4	F	45.4	F

Notes:
1. See Section 9 text above for abbreviations.
2. Demand exceeds available freeway capacity and can not be calculated per the HCM (at breakpoint on speed-flow curve for basic freeway segments).
Key:
pc/mi/ln = passenger cars/mile/lane

Table 9-4. Summary of PM Density and LOS for Freeway Segments in the Study Area

Route	Segment Name	EX[1] Density (pc/mi/ln)	EX LOS	NA Density (pc/mi/ln)	NA LOS	PA Density (pc/mi/ln)	PA LOS	Alt 1 Density (pc/mi/ln)	Alt 1 LOS	Alt 2 Density (pc/mi/ln)	Alt 2 LOS
I-95 NB	MD 32 to MD 175	30.3	D	33.5	D	33.5	D	33.5	D	33.5	D
I-95 SB	MD 175 to MD 32	20.0	C	21.4	C	21.4	C	21.4	C	21.4	C
MD 32 EB	I-95 to US 1	33.6	D	36.0	E	38.1	E	35.3	E	36.0	E
MD 32 WB	US 1 to I-95	41.9	E	44.8	E	41.2	E	50.6	F	53.3	F
MD 32 EB	US 1 to Dorsey	20.6	C	22.1	C	23.6	C	21.6	C	22.1	C
MD 32 WB	Dorsey to US 1	37.9	E	40.6	E	38.3	E	46.3	F	49.0	F
MD 32 EB	Dorsey to MD 295	35.4	E	37.8	E	40.2	E	36.4	E	44.9	E
MD 32 WB	MD 295 to Dorsey	23.3	C	24.9	C	23.4	C	26.3	D	27.0	D
MD 32 EB	MD 295 to Mapes	20.9	C	22.3	C	25.0	C	20.7	C	24.5	C
MD 32 WB	Mapes to MD 295	20.2	C	21.7	C	21.7	C	22.3	C	22.4	C
MD 32 EB	Mapes to MD 175	27.7	D	29.6	D	32.2	D	23.2	C	27.0	D
MD 32 WB	MD 175 to Mapes	21.5	C	23.0	C	23.8	C	23.0	C	23.1	C
MD 32 EB	MD 175 to MD 3	22.2	C	23.8	C	28.2	D	20.7	C	20.7	C
MD 32 WB	MD 3 to MD 175	18.6	C	19.9	C	21.1	C	19.9	C	19.9	C
MD 295 NB	MD 198 to MD 32	25.1	C	26.8	D	25.4	C	25.2	C	25.2	C
MD 295 SB	MD 32 to MD 198	30.7	D	32.8	D	35.3	E	30.9	D	32.2	D
MD 295 NB	MD 32 to MD 175	28.4	D	30.3	D	30.3	D	31.0	D	31.1	D
MD 295 SB	MD 175 to MD 32	22.9	C	24.5	C	24.8	C	25.2	C	24.5	C
MD 295 NB	MD 175 to Arundel Mills	25.8	C	27.7	D	28.1	D	30.2	D	28.3	D
MD 295 SB	Arundel Mills to MD 175	30.6	D	32.8	D	33.4	D	32.7	D	32.7	D
MD 295 NB	Arundel Mills to MD 100	22.6	C	24.2	C	24.3	C	26.7	D	24.8	C
MD 295 SB	MD 100 to Arundel Mills	29.4	D	31.4	D	32.0	D	31.4	D	31.4	D

Notes:
1. See Section 9 text above for abbreviations.
Key:
pc/mi/ln = passenger cars/mile/lane

Table 9-5. Summary AM LOS and Delay at Key Locations

Intersection/External Gate/VCP	Level of Service / Delay (seconds per vehicle)				
	EX AM[1]	NA AM	PA AM	Alt 1 AM[2]	Alt 2 AM[2]
Intersections					
Rockenbach Road (MD 713) and MD 175	D / 38.0	D / 43.6	D / 47.3	D / 45.1	D / 41.9
MD 175 and Reece Road	C / 33.7	D / 39.1	E / 78.9	D / 37.0	C / 34.7
MD 175 and Llewellyn Avenue	D / 40.4	D / 44.8	D / 50.3	D / 46.6	D / 45.8
Mapes Road and O'Brien Road	C / 33.4	C / 34.7	D / 35.13	C / 34.6	C / 34.6
MD 175 (Jessup Rd) and Brock Bridge Road	B / 11.5	C / 20.14	B / 17.6	C / 26.36	B / 17.8
Dorsey Run Road and Junction Drive	F / 59.6	F / 93.26	F / 93.3	F / 93.3	F / 99.4
Emory Road and Canine Road	n/a	F / 76.9	F / 406.6	n/a	n/a
Emory Road and Wenger Road	n/a	C / 22.6	F / 1508.8	n/a	n/a
Emory Road and O'Brien Road	n/a	C / 16.8	D / 31.8	n/a	n/a
Samford Road and Canine Road	n/a	C / 24.1	C / 24.1	n/a	n/a
Samford Road and Wenger Road	n/a	C / 19.7	B / 13.3	n/a	n/a
Samford Road and O'Brien Road	n/a	C / 18.4	F / 504.0	n/a	n/a
External Gates					
External Gate 1: Rockenbach Road (MD 713)	F / 638.2	F / 711.8	F / 1351.7	F / 324.2	F / 324.2
External Gate 3: Reece Road and MD 175	F / 631.1	F / 704.7	F / 1011.7	F / 664.4	F / 640.2
External Gate 4: Mapes Road and MD 175	A / 0.0	A / 0.0	A / 0.0	A / 0.0	A / 0.0
External Gate 5: Llewellyn Avenue and MD 175	F / 1092.5	F / 1196.4	F / 1196.4	F / 1196.4	F / 1196.4
External Gate 7: Mapes Road and MD 32	F / 511.1	F / 575.7	F / 1115.9	F / 115.3	F / 115.3
VCPs					
VCP 1: Canine Road	F / 818.8	F / 905.6	F / 2520.2	B / 19.3	B / 19.3
VCP 2: Connector Road	F / 980.4	F / 1078.5	F / 1126.0	F / 1048.1	F / 1048.1
VCP 3: Rockenbach Road (MD 713)	A / 8.5	B / 10.4	F / 403.4	B / 10.4	B / 10.4
VCP 4: O'Brien Road near Rockenbach Road[3]	D / 51.6	E / 64.3	n/a	A / 0.0	A / 0.0
VCP 5: O'Brien Road near Perimeter Road	C / 25.6	C / 33.6	F / 519.2	A / 0.0	A / 0.0
VCP 6: Samford Road	F / 680.2	F / 757.6	F / 757.6	F / 757.6	F / 757.6
VCP M: Rockenbach Road (MD 713)	n/a	n/a	E / 77.6	n/a	n/a

Notes:

1. See Section 9 text above for abbreviations.
2. Analysis of intersections adjacent to proposed parking facilities is only intended for comparison between the Proposed Action and the 2029 No Action Alternative. It is assumed all personnel at the off-post site under Alternatives 1 and 2 would not use the proposed parking facilities on-post and would therefore have no additional on-post intersection impacts. For this reason, adverse impacts on-post under Alternatives 1 and 2 would be less than those under the Proposed Action.
3. VCP 4 is removed under the Proposed Action due to the addition of VCP M.

Table 9-6. Summary of PM LOS and Delay at Key Locations

Intersection/External Gate/VCP	Level of Service / Delay (seconds per vehicle)				
	EX PM[1]	NA PM	PA PM	Alt 1 PM[2]	Alt 2 PM[2]
Intersections					
Rockenbach Road (MD 713) and MD 175	D / 50.5	E / 60.3	E / 72.3	F / 86.5	E / 58.2
MD 175 and Reece Road	D / 43.8	E / 55.6	F / 104.7	E / 77.1	D / 48.8
MD 175 and Llewellyn Avenue	E / 57.1	E / 67.2	E / 72.8	E / 75.1	E / 62.0
Mapes Road and O'Brien Road	F / 115.9	F / 140.4	F / 229.02	E / 70.8	F / 62.0
MD 175 (Jessup Rd) and Brock Bridge Road	D / 36.8	D / 48.5	D / 50.0	F / 168.5	D / 47.31
Dorsey Run Road and Junction Drive	F / 1280	F / 1745	F / 1745.2	F / 1745.2	F / 1756
Emory Road and Canine Road	n/a	C / 30.8	F / 252.2	n/a	n/a
Emory Road and Wenger Road	n/a	C / 20.7	F / 1042	n/a	n/a
Emory Road and O'Brien Road	n/a	C / 18.8	D / 27.4	n/a	n/a
Samford Road and Canine Road	n/a	B / 14.2	C / 14.2	n/a	n/a
Samford Road and Wenger Road	n/a	A / 9.4	B / 11.4	n/a	n/a
Samford Road and O'Brien Road	n/a	C / 18.7	E / 46.5	n/a	n/a
External Gates					
External Gate 1: Rockenbach Road (MD 713)	C / 30.9	D / 41.0	F / 127.8	B / 19.8	B / 19.8
External Gate 3: Reece Road and MD 175	E / 66.4	F / 90.5	F / 140.7	F / 85.7	F / 81.7
External Gate 4: Mapes Road and MD 175	A / 0.0	A / 0.0	A / 0.0	A / 0.0	A / 0.0
External Gate 5: Llewellyn Avenue and MD 175	A / 3.2	A / 3.2	A / 3.2	A / 3.2	A / 3.2
External Gate 7: Mapes Road and MD 32	B / 15.2	B / 18.1	D / 47.7	A / 8.3	A / 8.3
VCPs					
VCP 1: Canine Road	A / 4.7	A / 4.9	D / 44.6	A / 0.0	A / 0.0
VCP 2: Connector Road	C / 23.8	C / 30.6	C / 33.6	C / 28.8	C / 28.8
VCP 3: Rockenbach Road (MD 713)	A / 3.5	A / 3.5	A / 5.1	A / 3.5	A / 3.5
VCP 4: O'Brien Road near Rockenbach Road[3]	A / 4.9	A / 5.1	n/a	A / 0.0	A / 0.0
VCP 5: O'Brien Road near Perimeter Road	A / 4.8	A / 5.0	A / 7.7	A / 3.6	A / 3.6
VCP 6: Samford Road	A / 3.7	A / 3.7	A / 3.7	A / 3.7	A / 3.7
VCP M: Rockenbach Road	n/a	n/a	A / 5.6	n/a	n/a

Notes:

1. See Section 9 text above for abbreviations.
2. Analysis of intersections adjacent to proposed parking facilities is only intended for comparison between the Proposed Action and the 2029 No Action Alternative. It is assumed all personnel at the off-post site under Alternatives 1 and 2 would not use the proposed parking facilities on-post and would therefore have no additional on-post intersection impacts. For this reason, adverse impacts on-post under Alternatives 1 and 2 would be less than those under the Proposed Action.
3. VCP 4 is removed under the Proposed Action due to the addition of VCP M.

During the AM peak hour, all VCPs would operate at LOS F. A degradation of performance at VCP 3, 4 and 5 would occur when compared to the 2029 No Action Alternative. VCPs 1, 2, and 6 already operate at LOS F in the 2029 No Action Alternative. During the PM peak hour, VCP 1 and VCP 4 both degrade in LOS while the remaining VCPs would operate the same as in the 2029 No Action Alternative.

Intersections adjacent to the proposed parking facility alternatives (i.e., facilities) were analyzed. Major increases in traffic delay at the intersections adjacent to the proposed parking facility alternatives along Emory and Canine Roads under the Proposed Action would be expected. The greatest impacts would occur on the Emory Road intersections and the intersection of Samford Road and O'Brien Road. The delay at Emory Road and Wenger Road would rise from 20 seconds to 1,042 seconds (17 minutes) in the PM peak hour and from 22 seconds to over 1,500 seconds (25 minutes) in the AM peak hour when compared with the 2029 No Action Alternative. Emory Road and Canine Road intersection delays rise from 81 seconds to over 400 seconds (approximately 7 minutes) and from 31 seconds to 250 seconds (4 minutes) of delay in the AM and PM peak hours, respectively. See **Section 6.4** for detailed traffic analysis for intersections on the NSA Campus.

2029 Alternative 1: National Business Park/East Campus

As shown in **Tables 9-1** and **9-2**, the LOS for MD 32 ramp merge/diverge locations performs better in almost all locations when compared to the 2029 No Action Alternative in the AM peak hour. The only locations where MD 32 LOS degrades in the AM peak hour are the westbound ramps at the MD 32 and Baltimore-Washington Parkway/MD 295 interchange. This is because some traffic is no longer exiting MD 32 to access Fort Meade, but instead exiting MD 32 at the Baltimore-Washington Parkway and driving north to exit closer to the National Business Park site. In the PM peak hour, only the westbound on-ramp at MD 32 and Dorsey Run Road and the northbound off-ramp to travel westbound on MD 175 at the Baltimore-Washington Parkway and MD 175 interchange have a LOS that degrades. All other locations maintain LOS or perform better when compared to the 2029 No Action Alternative.

Minor impacts on the Baltimore-Washington Parkway/MD 295 and I-95 in the AM or PM peak hours under 2029 Alternative 1 above and beyond the existing significantly deteriorated conditions would be expected.

Inside Fort Meade, the LOS at the intersections are consistent with the trends shown at the interchanges. The network of roads near the gates and VCPs to access the installation perform better under this alternative when compared to the 2029 No Action Alternative. The intersection of MD 175 with Brock Bridge Road, which is located just outside the National Business Park development, deteriorates to LOS F in the 2029 Alternative 1 scenarios in the PM peak hour.

During the AM peak hour, all of the external gates on Fort Meade operate at a LOS F at both the 2029 No Action Alternative and Alternative 1, except for External Gate 4, which was closed during traffic data collection and, as a result, was modeled as closed in the analysis. In the PM peak hour, the LOS for External Gate 1 and 7 improves, while External Gates 3, 4, and 5 operate at the same LOS as in the 2029 No Action Alternative.

2029 Alternative 2: Annapolis Junction Business Park/East Campus

As shown in **Tables 9-1** and **9-2**, the LOS for MD 32 ramp merge/diverge locations performs better in almost all locations when compared to the 2029 No Action Alternative in the AM peak hour. The only locations where MD 32 LOS degrades in the AM peak hour are the westbound ramps at the MD 32 and Baltimore-Washington Parkway interchange. This is because traffic is no longer exiting MD 32 to access Fort Meade. All generated trips traveling towards Annapolis Junction Business Park would now exit at the MD 32 and Dorsey Run interchange. In the AM peak hour, the off-ramps at this interchange already operate at LOS F in the 2029 No Action Alternative; therefore, additional delay is not shown by LOS. In the PM hour, only the on-ramps at MD 32 and the Dorsey Run Road interchange and the eastbound ramps to go northbound at the MD 32 and Baltimore-Washington Parkway interchange degrade LOS. This is consistent with Annapolis Junction Business Park traffic entering MD 32 at the Dorsey Run Road interchange and commuting via the Baltimore-Washington Parkway. All other interchanges operate at the same LOS as in the 2029 No Action Alternative.

Minor impacts on the Baltimore-Washington Parkway/MD 295 and I-95 in either AM or PM peak hours under 2029 Alternative 2 above and beyond the existing significantly deteriorated conditions would be expected.

The intersection at the Annapolis Junction Business Park site, Dorsey Run Road and Junction Drive, operates at LOS F in both the 2029 No Action and 2029 Alternative 2, with Alternative 2 reporting heavier volumes due to increased traffic accessing the business park. When shown in seconds of delay per vehicle, the additional delay in Alternative 2 is 11 seconds or less.

Inside Fort Meade, the LOS at the intersections are consistent with the trends shown at the interchanges. The network of roads near the gates and VCPs to access the installation perform better under this alternative when compared to the 2029 No Action Alternative. The intersection at the Annapolis Junction Business Park site, Dorsey Run Road and Junction Drive, operates at LOS F in both the 2029 No Action Alternative and 2029 Alternative 2.

During the AM peak hour, all of the external gates on Fort Meade operate at LOS F in both the 2029 No Action Alternative and the Proposed Action, except for External Gate 4, which was closed during traffic data collection and, as a result, was modeled as closed in the analysis. In the PM peak hour, the LOS for External Gate 1 and 7 improves, while External Gates 3, 4, and 5 operate at the same LOS as in the 2029 No Action Alternative.

The following abbreviations are used in **Table 9-1** through **9-6**:

- NB – northbound
- SB – southbound
- WB – westbound
- EB – eastbound
- EX – 2015 Baseline Conditions
- PA – 2029 Proposed Action
- NA – 2029 No Action Alternative
- Alt 1 – 2029 Alternative 1: National Business Park/East Campus
- Alt 2 – 2029 Alternative 2: Annapolis Junction Business Park/East Campus

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10. Conclusions

The purpose of this TIS is to analyze the potential impacts of the ECIP for the NSA complex at Fort Meade. The study area for the TIS included MD 32 from I-95 to MD 1, the Baltimore-Washington Parkway/MD 295 from MD 198 to MD 100, and MD 175 from I-95 to MD 32.

Traffic analyses conducted for the 2015 Baseline Conditions were compared with the following alternatives:

- 2029 No Action Alternative
- 2029 Proposed Action
- 2029 Alternative 1: National Business Park/East Campus
- 2029 Alternative 2: Annapolis Junction Business Park/East Campus.

2029 No Action Alternative

The 2029 No Action Alternative was used as a future threshold to compare the three proposed alternatives to assess traffic impacts. Under the 2029 No Action Alternative, DoD would not construct and operate approximately 2.9 million ft^2 of operations and headquarters facilities on the northern portion of the East Campus and the 9800 Troop Support Area.

The 2029 No Action AM and PM peak hour volumes were estimated by applying a 7 percent global growth rate (0.45 percent compounded annually over 14 years [2015–2029]) to the 2015 Baseline Conditions peak hour volumes to traffic both on and off Fort Meade and comparing the results with the action alternatives as described below.

2029 Proposed Action

The 2029 Proposed Action would have long-term, minor to major, adverse impacts on traffic. Additional employees are being added to the existing traffic and all are reporting to Fort Meade. With the addition of parking facilities, these employees would be commuting to one of three parking facilities and increasing traffic levels at intersections along the way and adjacent to those facilities. As shown in **Tables 9-5** and **9-6**, the intersections along Emory Road all operate at LOS D or F in both AM and PM peak hours. Intersections along Samford Road degrade, but only the Samford Road and O'Brien Road intersection degrades to LOS F in the AM peak hour.

Externally, the greatest impacts are reported along the MD 32 interchanges east of the Baltimore-Washington Parkway/MD 295. This is a result of the additional trips generated by the Proposed Action entering the installation from the east and exiting east of the Baltimore-Washington Parkway/MD 295 during the AM peak hour.

Alternative 1: National Business Park/East Campus

This alternative would have long-term, minor to major, adverse impacts, though impacts would be slightly less than the Proposed Action. Approximately 4,400 personnel would travel to National Business Park rather than the NSA Campus when compared with the Proposed Action. The MD 175 and Brock Bridge Road intersection would be the most impacted due to the influx of additional vehicles.

Alternative 2: Annapolis Junction Business Park/East Campus

Alternative 2 would have long-term, minor to major, adverse impacts, though impacts would be slightly less than the Proposed Action. Approximately 4,400 personnel would travel to Annapolis Junction Business Park rather than the NSA Campus when compared with the Proposed Action. The Dorsey Run Road and Junction Drive intersection, adjacent to the business park, would be the most impacted due to the influx of additional vehicles, although the LOS of this intersection would not change from LOS F under the 2029 No Action Alternative.

11. Recommendations

The following recommendations could enhance the efficiency of the traffic network in and around the NSA Campus. These recommendations are specific to the areas where implementation of recommendations could potentially minimize impacts caused by the Proposed Action and alternatives.

- Signal Warrant Analysis
    - Conduct an additional signal warrant analysis on the intersections in and around the proposed development after parking facility locations have been selected to improve efficiency.
    - Optimize/interconnect existing and proposed signals along MD 175, Rockenbach Road, Canine Road, and other corridors as a result of the signal warrant analysis.
- Signal Timing Study – Conduct a signal timing study to help increase efficiency of all signalized intersections.
- Installation Access Study – Under the Proposed Action, the external gates and VCPs continue to experience or degrade to unacceptable LOS.
    - Conduct a study to determine which external gates and VCPs are predominately used and why following implementation of the Proposed Action.
    - Identify commuter trends and inefficient routes.
    - Assess gate upgrades or widening at heavily used external gates/VCPs.
    - Investigate adding proper/additional signage along external roadways to direct traffic to appropriate lanes and external gates/VCPs to best suit their destination on the installation.
- Bike/Pedestrian Accessibility Study – Under the Proposed Action, the volume and clustering of pedestrians in certain areas is expected to rise with the addition of several multi-level parking facilities and an increase in campus population.
    - Identify locations for construction and use of additional, continuous, and Americans with Disabilities Act-compliant bike/pedestrian facilities.
    - Address NSA's bike share program and coordinate any proposed infrastructure improvements external to the installation and the associated impacts on commuters biking to Fort Meade.
    - Recommend biking/pedestrian travel paths to reduce vehicular traffic by diverting commuters from driving to biking or walking. Well-defined walkways and crosswalks could also reduce the risk of pedestrian/vehicular accidents.
- Roadway Improvements
    - Improve the intersections of Canine Road at Rockenbach Road, Emory Road, and Samford Road to address increased traffic between the current campus and the East

Campus and safer access to parking areas. Improvements include new turning lanes and widening of existing turning lanes (NSA 2013).

- Improve external roadways as identified in **Section 2.5** of the EIS and discussed further in **Section 5** of the EIS.

- Bus/Shuttles
  - Modify existing on-installation routes, including more stops near the ECIP project area.
  - Add new on-installation routes, particularly those servicing the ECIP project area. Potential new routes would be driven by the selection of parking facilities under the Proposed Action. Transit would occur via hybrid fuel buses and potentially streetcar, depending on further study of usage levels (NSA 2013).
  - Partner with Anne Arundel and Howard counties, and transit agencies to continue infrastructure developments and potential incentive programs for carpool/vanpool participants.

- Promotion of additional alternative commute options to reduce single occupancy vehicle commuting.
  - Encourage increased use of the MARC train system.
  - Provide more shuttle buses to and from the NSA and East campuses if practicable.
  - Contribute to improvements that would make biking and walking to and from the NSA and East campuses safer and more attractive. These improvements would include:
    - Direct pedestrian and bicycle access from the Odenton MARC station to nearby VCPs.
    - Secure bicycle parking.
    - Coordination of off-site bike commuter improvements with the Maryland State Highway Administration and with Howard and Anne Arundel counties.

In addition to the above, traffic improvement recommendations for Alternatives 1 and 2 include signalizing or improving existing traffic signals at intersections in and immediately around the off-installation location for improved efficiency and use of shuttles to and from this alternative location the NSA Campus.

12. References

BRTB 2014 — Baltimore Region Transportation Board (BRTB). 2014. *Maximize 2040 Max Notes – June 2014*. Available online: <*http://www.baltometro.org/phocadownload/Publications/Transportation/Plans/Maximize2040/Maxnotes-Round8a.pdf*>. Accessed 15 June 2015.

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NSA 2010 — National Security Agency (NSA). 2010. *Final Environmental Impact Statement Addressing Campus Development at Fort Meade, Maryland*. Prepared for NSA by HDR, Inc. September 2010.

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ATTACHMENT A

GROWTH RATE AND TRIP CALCULATIONS

Project:	Fort Meade Traffic Study	**Comput**	BJB	**Date:**	06/02/15
Subject:	Growth Rate Calculations	**Checked**	AML	**Date:**	06/02/15
Task:		**Page:**	1	**of:**	1
Job #:		**No:**			

Population Growth Rate (Maximize 2040 (published by BRTB))

Location	2014	2040	Percent Change 2010 to 2040
Baltimore Region			14.00%

Compounded growth equations =

The Compound Interest Equation

$$P = C\,(1 + r/n)^{nt}$$

where
P = future value
C = initial deposit
r = interest rate (expressed as a fraction: eg. 0.06)
n = # of times per year interest in compounded
t = number of years invested

Using census data and solving for "r"

"r" = 0.45%

Check:

1000*1.14=1140 (over 30 years)
1000*(1+.0045)^10 =1144 (annually)

* Note: The 1,000 figure was used as a simple number to check calculations. Exact populations are unknown.

Recommended Growth Rate = 0.45%

Project:	Ft Meade East Campus	Computed	BJB	Date:	5/28/15
Subject:	Trip Generation	Checked:	ABS	Date:	6/10/15
Task:		Page:	1	of:	2
Job #:		No.:			

Source: ITE Trip Generation, 9th Edition

Land Use 710 - General Office Building
Number of Employees: 7200

Weekday
DD In: 50%
DD Out: 50%

Average Rate: 3.32

Total Trips = 3.32 x 7200 = 23904 trip ends

In = 50% x 23904 = 11952 trips entering
Out = 50% x 23904 = 11952 trips exiting

Equation: Ln(T) = 0.84 Ln(X)+2.23

Ln(T) = 0.84 x Ln 7200 + 2.23 = 9.69 vpd
Trips= Inv. Log 9.69 = 16155 vpd

In = 50% x 16155 = 8078 trips entering
Out = 50% x 16155 = 8078 trips exiting

Weekday, AM Peak Hour
DD In: 88%
DD Out: 12%

Average Rate: 0.48

Total Trips = 0.48 x 7200 = 3456 trip ends

In = 88% x 3456 = 3041 trips entering
Out = 12% x 3456 = 415 trips exiting

Equation: Ln(T) = 0.86 Ln(X)+0.24

Ln(T) = 0.86 x Ln 7200 + 0.24 = 7.88 vpd
Trips= Inv. Log 7.88 = 2644 vpd

In = 88% x 2644 = 2327 trips entering
Out = 12% x 2644 = 318 trips exiting

Weekday, PM Peak Hour
DD In: 17%
DD Out: 83%

Average Rate: 0.46

Total Trips = 0.46 x 7200 = 3312 trips ends

In = 17% x 3312 = 563 trips entering
Out = 83% x 3312 = 2749 trips exiting

Equation: T=0.37(X)+60.08

T = 0.37 x 3000 + 60.08
T= 1170 vpd

In = 17% x 1170 = 199 trips entering
Out = 83% x 1170 = 971 trips exiting

Project:	Ft Meade East Campus	Computed	BJB	Date: 5/28/15
Subject:	Trip Generation	Checked:	ABS	Date: 6/10/15
Task:		Page:	2	of: 2
Job #:		No.:		

Source: ITE Trip Generation, 9th Edition

Land Use 710 - General Office Building
Number of Employees: 4400

Weekday
DD In: 50%
DD Out: 50%

Average Rate: 3.32

Total Trips = 3.32 x 4400 = 14608 trip ends

In = 50% x 14608 = 7304 trips entering
Out = 50% x 14608 = 7304 trips exiting

Equation: Ln(T) = 0.84 Ln(X)+2.23

Ln(T) = 0.84 x Ln 4400 + 2.23 = 9.28 vpd
Trips= Inv. Log 9.28 = 10721 vpd

In = 50% x 10721 = 5361 trips entering
Out = 50% x 10721 = 5361 trips exiting

Weekday, AM Peak Hour
DD In: 88%
DD Out: 12%

Average Rate: 0.48

Total Trips = 0.48 x 4400 = 2112 trip ends

In = 88% x 2112 = 1859 trips entering
Out = 12% x 2112 = 253 trips exiting

Equation: Ln(T) = 0.86 Ln(X)+0.24

Ln(T) = 0.86 x Ln 4400 + 0.24 = 7.45 vpd
Trips= Inv. Log 7.45 = 1720 vpd

In = 88% x 1720 = 1514 trips entering
Out = 12% x 1720 = 207 trips exiting

Weekday, PM Peak Hour
DD In: 17%
DD Out: 83%

Average Rate: 0.46

Total Trips = 0.46 x 4400 = 2024 trips ends

In = 17% x 2024 = 344 trips entering
Out = 83% x 2024 = 1680 trips exiting

Equation: T=0.37(X)+60.08

T = 0.37 x 3000 + 60.08
T= 1170 vpd

In = 17% x 1170 = 199 trips entering
Out = 83% x 1170 = 971 trips exiting

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APPENDIX C

AIR QUALITY CALCULATIONS

C.1 Emissions Estimations and Methodology

The DoD has considered net emissions generated from all direct and indirect sources of air emission that are reasonably foreseeable. *Direct emissions* are emissions that are caused or initiated by a Federal action and occur at the same time and place as the action. *Indirect emissions* are defined as reasonably foreseeable emissions that are caused by the action but might occur later in time and/or be farther removed in distance from the action itself, and the Federal agency can practicably control. More specifically, project-related direct emissions would result from the following:

- ***Demolition and construction activities*** **-** Use of heavy equipment, worker vehicles, use of paints and architectural coatings, paving off gasses, and fugitive particles from surface disturbances.
- ***Operational activities*** **-** Use of emergency generators and boilers.

C.1.1 Demolition and Construction Emissions

Regardless of the sites ultimately chosen, estimated actual construction emissions would be similar. All direct and indirect emissions associated with construction were estimated. The construction emissions were generated by estimating equipment use for utilities, site preparation, construction, and landscaping for the proposed facilities and storage tanks, including:

- Demolition of 1.9 million ft^2 of buildings;
- Construction of ECB 3, ECB 4, ECB 5 and supporting infrastructure;
- Construction of a 330,000 ft^2 building and supporting infrastructure;
- Construction of a 150,000 ft^2 building and supporting infrastructure;
- Construction of three 1,050,000 ft^2 parking facilities;
- Addition of 121 MW of additional back-up power;
- Life-safety generators for all proposed buildings;
- Boilers for all proposed buildings; and
- Additional commuter emissions.

Demolition and construction emissions associated with the use of construction equipment (e.g., bulldozers, backhoes), worker vehicles, the use of VOC paints, paving off-gasses, and fugitive particles from surface disturbances are presented in **Tables C-1**, **C-2**, and **C-3** for all years of construction. This section also outlines all calculations and assumptions made to derive these construction emission estimations.

C.1.1.1 Heavy Construction Equipment

Pollutant emissions resulting from activities associated with constructing the proposed buildings, parking facilities, and roadways were estimated. The typical demolition and construction would involve such activities as demolition of existing buildings or structures, utility installation, road construction, site clearing and grading, building construction, and asphalt paving.

Table C-1. Estimated Construction and Demolition Emissions

	Construction Emissions (tpy)					
	CO	**NO_x**	**PM_{10}**	**$PM_{2.5}$**	**SO_2**	**VOC**
Year						
1	29.2	40.0	6.2	3.2	5.7	4.9
2	29.7	39.3	6.1	3.2	5.9	4.9
3	31.9	38.9	5.8	3.7	6.0	5.4
4	28.9	32.8	4.0	3.5	5.1	5.1
5	30.6	33.7	5.5	4.4	5.5	5.5
6	47.7	49.8	8.7	7.7	8.5	8.7
7	26.1	26.5	5.9	4.9	4.9	4.8
8	37.3	37.3	8.0	6.8	6.8	6.9
9	45.9	45.9	9.4	8.3	8.3	8.5
10	25.3	24.9	4.6	4.4	4.5	4.7
Construction Emissions – Year 1						
Heavy Equipment Emissions	15.0	38.9	2.7	2.7	5.7	3.1
Worker Trip Emissions	14.3	1.1	0.0	0.0	0.0	1.0
Architectural Coating Emissions	0.0	0.0	0.0	0.0	0.0	0.8
Fugitive Dust Emissions	0.0	0.0	3.5	0.5	0.0	0.0
Total	**29.2**	**40.0**	**6.2**	**3.2**	**5.7**	**4.9**
Construction Emissions – Year 2						
Heavy Equipment Emissions	15.1	38.2	2.8	2.7	5.9	3.0
Worker Trip Emissions	14.5	1.1	0.0	0.0	0.0	1.0
Architectural Coating Emissions	0.0	0.0	0.0	0.0	0.0	0.8
Fugitive Dust Emissions	0.0	0.0	3.3	0.5	0.0	0.0
Total	**29.7**	**39.3**	**6.1**	**3.2**	**5.9**	**4.9**
Construction Emissions – Year 3						
Heavy Equipment Emissions	14.6	37.6	3.4	3.3	5.9	3.1
Worker Trip Emissions	17.3	1.4	0.1	0.1	0.0	1.2
Architectural Coating Emissions	0.0	0.0	0.0	0.0	0.0	1.0
Fugitive Dust Emissions	0.0	0.0	2.4	0.4	0.0	0.0
Total	**31.9**	**38.9**	**5.8**	**3.7**	**6.0**	**5.4**
Construction Emissions – Year 4						
Heavy Equipment Emissions	11.9	31.5	3.5	3.4	5.1	2.8
Worker Trip Emissions	17.0	1.3	0.1	0.1	0.0	1.2
Architectural Coating Emissions	0.0	0.0	0.0	0.0	0.0	1.0
Fugitive Dust Emissions	0.0	0.0	0.5	0.1	0.0	0.0
Total	**28.9**	**32.8**	**4.0**	**3.5**	**5.1**	**5.1**
Construction Emissions – Year 5						
Heavy Equipment Emissions	12.0	32.2	4.4	4.2	5.5	3.0
Worker Trip Emissions	18.6	1.5	0.1	0.1	0.0	1.3
Architectural Coating Emissions	0.0	0.0	0.0	0.0	0.0	1.2
Fugitive Dust Emissions	0.0	0.0	1.1	0.2	0.0	0.0
Total	**30.6**	**33.7**	**5.5**	**4.4**	**5.5**	**5.5**

	Construction Emissions (tpy)					
	CO	**NO_x**	**PM_{10}**	**$PM_{2.5}$**	**SO_2**	**VOC**
Construction Emissions – Year 6						
Heavy Equipment Emissions	17.3	47.4	7.7	7.5	8.5	4.7
Worker Trip Emissions	30.5	2.4	0.1	0.1	0.1	2.2
Architectural Coating Emissions	0.0	0.0	0.0	0.0	0.0	1.9
Fugitive Dust Emissions	0.0	0.0	1.0	0.1	0.0	0.0
Total	**47.7**	**49.8**	**8.7**	**7.7**	**8.6**	**8.8**
Construction Emissions – Year 7						
Heavy Equipment Emissions	9.0	25.2	4.9	4.7	4.8	2.6
Worker Trip Emissions	17.1	1.3	0.1	0.1	0.0	1.2
Architectural Coating Emissions	0.0	0.0	0.0	0.0	0.0	1.0
Fugitive Dust Emissions	0.0	0.0	1.0	0.1	0.0	0.0
Total	**26.1**	**26.5**	**5.9**	**4.9**	**4.9**	**4.9**
Construction Emissions – Year 8						
Heavy Equipment Emissions	12.6	35.4	6.8	6.6	6.7	3.6
Worker Trip Emissions	24.7	1.9	0.1	0.1	0.1	1.8
Architectural Coating Emissions	0.0	0.0	0.0	0.0	0.0	1.5
Fugitive Dust Emissions	0.0	0.0	1.1	0.2	0.0	0.0
Total	**37.3**	**37.3**	**8.0**	**6.9**	**6.8**	**6.9**
Construction Emissions – Year 9						
Heavy Equipment Emissions	15.5	43.5	8.4	8.1	8.2	4.5
Worker Trip Emissions	30.5	2.4	0.1	0.1	0.1	2.2
Architectural Coating Emissions	0.0	0.0	0.0	0.0	0.0	1.9
Fugitive Dust Emissions	0.0	0.0	1.0	0.1	0.0	0.0
Total	**45.9**	**45.9**	**9.4**	**8.3**	**8.3**	**8.5**
Construction Emissions – Year 10						
Heavy Equipment Emissions	8.4	23.6	4.5	4.4	4.4	2.4
Worker Trip Emissions	16.9	1.3	0.1	0.1	0.0	1.2
Architectural Coating Emissions	0.0	0.0	0.0	0.0	0.0	1.0
Total	**25.3**	**24.9**	**4.6**	**4.4**	**4.5**	**4.7**

Note: Inconsistencies due to rounding may occur.

Demolition and construction would involve the use of various non-road equipment, power generators, and trucks. Pieces of equipment to be used for building construction include, but are not limited to, backhoes, loaders, excavators, air compressors, chain saws, chipping machines, dozers, cranes, pavers, graders, rollers, and heavy trucks. Information regarding the number of pieces and types of construction equipment to be used on the project, the schedule for deployment of equipment (monthly and annually), and the approximate daily operating time (including power level or usage factor) were estimated for each individual construction project based on a schedule of construction activity.

Emissions from construction activities were estimated based on the projected construction activity schedule, the number of vehicles/pieces of equipment, and vehicle/equipment utilization rates. Emission factors for heavy-duty diesel equipment were obtained from USEPA's *NONROAD2005 Emissions Model* (USEPA 2005). The equipment and vehicle operation hours were estimated based on R.S.Means'

Building Cost Construction Data, 64th annual edition (Waier 2006), and field experience from similar projects.

Emission factors in grams of pollutant per hour were multiplied by the estimated running time to calculate total grams of pollutant from each piece of equipment. Finally, total grams of pollutant were converted to tons of pollutant. The following formula was used to calculate hourly emissions from non-road engine sources, including cranes, backhoes, and the like:

$M_i = (N \times EF_i)$

where: M_i = mass of emissions of i^{th} pollutant during inventory period

N = source population (units)

EF_i = average emissions of i^{th} pollutant per unit of use (e.g., grams per hour)

The total annual emissions levels are summarized in **Table C-2**.

Table C-2. Annual Emissions from Construction and Demolition Equipment

Year	Annual emissions (tpy)					
	CO	**NO_x**	**PM_{10}**	**$PM_{2.5}$**	**SO_2**	**VOC**
1	15.0	38.9	2.7	2.7	5.7	3.1
2	15.1	38.2	2.8	2.7	5.9	3.0
3	14.6	37.6	3.4	3.3	5.9	3.1
4	11.9	31.5	3.5	3.4	5.1	2.8
5	12.0	32.2	4.4	4.2	5.5	3.0
6	17.3	47.4	7.7	7.5	8.5	4.7
7	9.0	25.2	4.9	4.7	4.8	2.6
8	12.6	35.4	6.8	6.6	6.7	3.6
9	15.5	43.5	8.4	8.1	8.2	4.5
10	8.4	23.6	4.5	4.4	4.4	2.4

Sources: SCAQMD 1993, USEPA 1995

C.1.1.2 Construction Worker Vehicle Operations

Emissions due to construction worker vehicle use were included in the analysis. Emission factors for motor vehicles were conservatively calculated using the USEPA *MOVES* mobile emission model. These emission factors were then multiplied by the vehicle operational hours to determine motor vehicle emissions. The analysis assumed conservatively that the worker's vehicle would drive 30 miles per day at an average speed of 35 miles per hour. The total annual emissions levels are summarized in **Table C-3**.

Table C-3. Estimated Annual Emissions from Construction Worker Vehicles

Year	Annual Emissions (tpy)					
	CO	NO_x	PM_{10}	$PM_{2.5}$	SO_2	VOC
1	14.3	1.1	0.0	0.0	0.0	1.0
2	14.5	1.1	0.0	0.0	0.0	1.0
3	17.3	1.4	0.1	0.1	0.0	1.2
4	17.0	1.3	0.1	0.1	0.0	1.2
5	18.6	1.5	0.1	0.1	0.0	1.3
6	30.5	2.4	0.1	0.1	0.1	2.2
7	17.1	1.3	0.1	0.1	0.0	1.2
8	24.7	1.9	0.1	0.1	0.1	1.8
9	30.5	2.4	0.1	0.1	0.1	2.2
10	16.9	1.3	0.1	0.1	0.0	1.2

Sources: SCAQMD 1993, USEPA 2005

C.1.1.3 Emissions from Architectural Coatings

Emission factors relating emissions to total square footage to be built were used to estimate VOC emissions from architectural coating activities— primarily painting activities. For office space, the area to be painted was assumed to be approximately twice the heated area of the facility, and the dry film thickness was assumed to be 3 millimeters (mm). The following formula was used to calculate emissions from the painting of the facilities:

$$E = [(F \times G) / 1000] \times H$$

where: E = emissions of VOCs from architectural coatings

F = pounds of VOC emissions per gallon

G = total area to be coated (floor area x 2)

H = paint coverage.

A sample calculation for architectural coating VOC emissions during construction of an example facility is provided below:

Floor area = 100,000 ft^2

E = [(0.83 [pounds (lb)/gallon] / 400 [ft^2/gallon] x [(100,000 [ft^2] x 2)]]/2,000 [lb/ton]

= 0.208 tons

The total annual emissions levels are summarized in **Table C-4**. In addition, estimated emissions from the potential demolition and construction including architectural coatings are presented in **Section C.2**.

Table C-4. Annual VOC Emissions from Architectural Coatings

Year	Annual VOC Emissions (tpy)
1	0.8
2	0.8
3	1.0
4	1.0
5	1.2
6	1.9
7	1.0
8	1.5
9	1.9
10	1.0

Sources: SCAQMD 1993, COMAR 26.11.35

C.1.1.4 Asphalt Curing Emissions

Asphalt paving would generate emissions from (1) asphalt curing, (2) operation of onsite paving equipment, and (3) operation of motor vehicles, including paving material delivery trucks and worker commuting vehicles. Because the emissions resulting from the operation of onsite paving equipment, trucks, and vehicles were included in the previous section, only asphalt curing-related emissions are discussed in this section. Asphalt curing-related VOC emissions were calculated based on the amount of paving for the onsite parking lot and proposed roadways. The following assumption was used in VOC emission calculations for asphalt curing (SCAQMD 1993):

E = area paved x 2.62 lb VOC/acre

A sample calculation is provided below:

Paved area = 100 acres

E = 100 acres x 2.62 lb VOC/acre/2,000 lb/ton

= 0.131 ton

Due to the minimal paving anticipated for all alternatives, negligible off gas emissions are anticipated.

C.1.1.5 Surface Disturbance

The quantity of dust emissions from construction operations is proportional to the area of land being worked and level of construction activity. The following assumptions were used in $PM_{2.5}$ emission calculations for fugitive dust emissions (USEPA 1995, USEPA 2013a).

E = open area x EF x PM_{10}/TSP x $PM_{2.5}/PM_{10}$ x capture fraction

where: open area = number of acres open

EF = 80 lb TSP/acre

PM_{10}/TSP = 0.45 lb PM_{10}/lb TSP

TSP = total suspended particulates

$PM_{2.5}/PM_{10}$ = 0.15 lb $PM_{2.5}$/lb PM_{10}

Capture fraction = 0.5

A sample calculation is provided below:

Disturbed area = 100 acres

E = 100 ac x 80 lb TSP /acre x 0.45 lb PM_{10}/lb TSP x 0.15 lb $PM_{2.5}$/ lb PM_{10} x 2,000 lb/ton

= 1.35 tons

The total annual emissions levels are summarized in **Table C-5**.

Table C-5. Annual $PM_{2.5}$ Emissions from Surface Disturbance

Year	Annual emissions (tpy)	
	PM_{10}	**$PM_{2.5}$**
1	3.5	0.5
2	3.3	0.5
3	2.4	0.4
4	0.5	0.1
5	1.1	0.2
6	1.0	0.1
7	1.0	0.1
8	1.1	0.2
9	1.0	0.1
10	<0.1	<0.1

Sources: USEPA 1995, USEPA 2013a

C.1.2 Operational Emissions

Operational emissions occur as a result of the operation (heating boilers and emergency generators) of the proposed facilities. The total annual operational emissions levels are summarized in **Table C-11** through **C-16**.

C.2 Emission Calculations

Table C-6. Project Areas and Durations

Project Name	Year	Clearing Area (acres)	Building Area (ft^2)	Paving (acres)	Days of Clearing	Days of Building	Days of Paving
East Campus Building 3 (clearing)	1	5.29	0	0	230	0	0
East Campus Building 3 (building)	1	0	400,000	0	0	230	0
Demolition of Buildings 1	1	11.5	0	0	230	0	0
East Campus Building 3 (building)	2	0	400,000	0	0	230	0
East Campus Building 3 (paving)	2	0	0	5.29	0	0	230
Parking Garage 1 (clearing)	2	4.6	0	0	230	0	0
Demolition of Buildings 2	2	11.5	0	0	230	0	0
Parking Garage 1 (building)	3	0	500,000	0	0	230	0
Demolition of Buildings 3	3	11.5	0	0	230	0	0
Parking Garage 1 (building)	4	0	500,000	0	0	230	0
Parking Garage 1 (paving)	4	0	0	4.6	0	0	230
Smaller Building 1 (clearing)	4	2.3	0	0	230	0	0
Smaller Building 1 (building)	5	0	150,000	0	0	230	0
Smaller Building 1 (paving)	5	0	0	1.15	0	0	230
East Campus Building 4 (clearing)	5	5.29	0	0	230	0	0
East Campus Building 4 (building)	5	0	400,000	0	0	230	0
East Campus Building 4 (building)	6	0	400,000	0	0	230	0
East Campus Building 4 (paving)	6	0	0	5.29	0	0	230
Parking Garage 2 (clearing)	6	4.6	0	0	230	0	0
Parking Garage 2 (building)	6	0	500,000	0	0	230	0
Parking Garage 2 (building)	7	0	500,000	0	0	230	0
Parking Garage 2 (paving)	7	0	0	4.6	0	0	230
Smaller Building 2 (clearing)	7	4.6	0	0	230	0	0
Smaller Building 2 (building)	8	0	330,000	0	0	230	0
Smaller Building 2 (paving)	8	0	0	2.3	0	0	230
East Campus Building 5 (clearing)	8	5.29	0	0	230	0	0
East Campus Building 5 (building)	8	0	400,000	0	0	230	0
East Campus Building 5 (building)	9	0	400,000	0	0	230	0
East Campus Building 5 (paving)	9	0	0	5.29	0	0	230
Parking Garage 3 (clearing)	9	4.6	0	0	230	0	0
Parking Garage 3 (building)	9	0	500,000	0	0	230	0
Parking Garage 3 (building)	10	0	500,000	0	0	230	0
Parking Garage 3 (paving)	10	0	0	4.6	0	0	230

Table C-7. Heavy Equipment Emissions

Project	Year	Emissions (tpy)					
		CO	NO_x	PM_{10}	$PM_{2.5}$	SO_2	VOC
East Campus Building 3 (clearing)	1	1.32	3.24	0.23	0.23	0.54	0.22
East Campus Building 3 (building)	1	10.78	28.59	1.98	1.93	3.94	2.38
Demolition of Buildings 1	1	2.87	7.05	0.51	0.49	1.18	0.48
East Campus Building 3 (building)	2	10.51	27.20	1.93	1.88	3.94	2.26
East Campus Building 3 (paving)	2	0.71	1.72	0.13	0.13	0.30	0.12
Parking Garage 1 (clearing)	2	1.12	2.65	0.20	0.19	0.47	0.18
Demolition of Buildings 2	2	2.79	6.63	0.49	0.48	1.18	0.45
Parking Garage 1 (building)	3	12.07	31.50	2.80	2.73	4.78	2.72
Demolition of Buildings 3	3	2.53	6.06	0.58	0.56	1.15	0.42
Parking Garage 1 (building)	4	10.96	29.09	3.21	3.12	4.63	2.62
Parking Garage 1 (paving)	4	0.51	1.26	0.15	0.15	0.24	0.09
Smaller Building 1 (clearing)	4	0.45	1.10	0.13	0.13	0.22	0.08
Smaller Building 1 (building)	5	2.98	8.08	1.08	1.05	1.34	0.76
Smaller Building 1 (paving)	5	0.11	0.29	0.04	0.04	0.06	0.02
East Campus Building 4 (clearing)	5	0.92	2.31	0.35	0.34	0.50	0.17
East Campus Building 4 (building)	5	7.94	21.54	2.88	2.80	3.58	2.02
East Campus Building 4 (building)	6	7.16	19.76	3.17	3.08	3.47	1.97
East Campus Building 4 (paving)	6	0.45	1.19	0.22	0.21	0.26	0.10
Parking Garage 2 (clearing)	6	0.71	1.78	0.34	0.33	0.42	0.14
Parking Garage 2 (building)	6	8.95	24.70	3.96	3.85	4.33	2.46
Parking Garage 2 (building)	7	8.04	22.69	4.30	4.18	4.20	2.35
Parking Garage 2 (paving)	7	0.33	0.93	0.21	0.20	0.22	0.08
Smaller Building 2 (clearing)	7	0.62	1.58	0.37	0.36	0.40	0.14
Smaller Building 2 (building)	8	5.31	14.97	2.84	2.76	2.77	1.55
Smaller Building 2 (paving)	8	0.17	0.46	0.11	0.10	0.11	0.04
East Campus Building 5 (clearing)	8	0.71	1.82	0.43	0.41	0.47	0.16
East Campus Building 5 (building)	8	6.43	18.15	3.44	3.34	3.36	1.88
East Campus Building 5 (building)	9	6.43	18.15	3.44	3.34	3.36	1.88
East Campus Building 5 (paving)	9	0.38	1.07	0.24	0.24	0.25	0.09
Parking Garage 3 (clearing)	9	0.62	1.58	0.37	0.36	0.40	0.14
Parking Garage 3 (building)	9	8.04	22.69	4.30	4.18	4.20	2.35
Parking Garage 3 (building)	10	8.04	22.69	4.30	4.18	4.20	2.35
Parking Garage 3 (paving)	10	0.33	0.93	0.21	0.20	0.22	0.08

Sources: SCAQMD 1993, USEPA 1995

Table C-8. Worker Trip Emissions

		NO_x	$PM_{2.5}$	SO_2	VOC
Emission Factors (gram/mile)		0.32	0.01	0.01	0.29
Project Emissions (tpy)	**VMT**	**NO_x**	**$PM_{2.5}$**	**SO_2**	**VOC**
ECB 3 (clearing)	68,439	0.02	0.00	0.00	0.02
ECB 3 (building)	2,980,800	1.04	0.04	0.03	0.95
Demolition 1	148,781	0.05	0.00	0.00	0.05
ECB 3 (building)	2,980,800	1.04	0.04	0.03	0.95
ECB 3 (paving)	68,439	0.02	0.00	0.00	0.02
Parking Garage 1 (clearing)	59,513	0.02	0.00	0.00	0.02
Demolition 2	148,781	0.05	0.00	0.00	0.05
Parking Garage 1 (building)	3,726,000	1.30	0.05	0.04	1.19
Demolition 3	148,781	0.05	0.00	0.00	0.05
Parking Garage 1 (building)	3,726,000	1.30	0.05	0.04	1.19
Parking Garage 1 (paving)	59,513	0.02	0.00	0.00	0.02
Smaller Building 1 (clearing)	29,756	0.01	0.00	0.00	0.01
Smaller Building 1 (building)	1,117,800	0.39	0.01	0.01	0.36
Smaller Building 1 (paving)	14,878	0.01	0.00	0.00	0.00
ECB 4 (clearing)	68,439	0.02	0.00	0.00	0.02
ECB 4 (building)	2,980,800	1.04	0.04	0.03	0.95
ECB 4 (building)	2,980,800	1.04	0.04	0.03	0.95
ECB 4 (paving)	68,439	0.02	0.00	0.00	0.02
Parking Garage 2 (clearing)	59,513	0.02	0.00	0.00	0.02
Parking Garage 2 (building)	3,726,000	1.30	0.05	0.04	1.19
Parking Garage 2 (building)	3,726,000	1.30	0.05	0.04	1.19
Parking Garage 2 (paving)	59,513	0.02	0.00	0.00	0.02
Smaller Building 2 (clearing)	59,513	0.02	0.00	0.00	0.02
Smaller Building 2 (building)	2,459,160	0.86	0.03	0.03	0.79
Smaller Building 2 (paving)	29,756	0.01	0.00	0.00	0.01
ECB 5 (clearing)	68,439	0.02	0.00	0.00	0.02
ECB 5 (building)	2,980,800	1.04	0.04	0.03	0.95
ECB 5 (building)	2,980,800	1.04	0.04	0.03	0.95
ECB 5 (paving)	68,439	0.02	0.00	0.00	0.02
Parking Garage 3 (clearing)	59,513	0.02	0.00	0.00	0.02
Parking Garage 3 (building)	3,726,000	1.30	0.05	0.04	1.19
Parking Garage 3 (building)	3,726,000	1.30	0.05	0.04	1.19
Parking Garage 3 (paving)	59,513	0.02	0.00	0.00	0.02

Table C-9. Architectural Coating Emissions (Paint)

Project	Floor Area (ft^2)	Wall Surface (ft^2)	EFVOC (lb/1000 ft^2)	VOC (tons)
East Campus Building 3	400,000	800,000	55.5	0.83
East Campus Building 3	400,000	800,000	55.5	0.83
Parking Garage 1	500,000	1,050,000	55.5	1.04
Parking Garage 1	500,000	1,050,000	55.5	1.04
Smaller Building 1	150,000	300,000	55.5	0.31
East Campus Building 4	400,000	800,000	55.5	0.83
East Campus Building 4	400,000	800,000	55.5	0.83
Parking Garage 2	500,000	1,050,000	55.5	1.04
Parking Garage 2	500,000	1,050,000	55.5	1.04
Smaller Building 2	330,000	660,000	55.5	0.69
East Campus Building 5	400,000	800,000	55.5	0.83
East Campus Building 5	400,000	800,000	55.5	0.83
Parking Garage 3	500,000	1,050,000	55.5	1.04
Parking Garage 3	500,000	1,050,000	55.5	1.04

Sources: SCAQMD 1993, COMAR 26.11.35

Key: EFVOC = emission factor volatile organic compound

Table C-10. Fugitive Dust Emissions

Project	PM_{10}/ TSP	$PM_{2.5}$/ PM_{10}	EFTSP (lb/acre/day)	Capture Fraction	Duration (days)	Cleared Area (acres)	PM_{10} (tons)	$PM_{2.5}$ (tons)
ECB 3						5.3	1.1	0.16
Demolition 1	0.45	0.15	80	0.5	230	11.5	2.4	0.36
Parking Garage 1	0.45	0.15	80	0.5	230	4.6	1.0	0.14
Demolition of Buildings 2	0.45	0.15	80	0.5	230	11.5	2.4	0.36
Demolition of 3	0.45	0.15	80	0.5	230	11.5	2.4	0.36
Smaller Building 1						2.3	0.5	0.07
ECB 4 (clearing)	0.45	0.15	80	0.5	230	5.3	1.1	0.16
Parking Garage 1	0.45	0.15	80	0.5	230	4.6	1.0	0.14
Smaller Building 2	0.45	0.15	80	0.5	230	4.6	1.0	0.14
ECB 5	0.45	0.15	80	0.5	230	5.3	1.1	0.16
Parking Garage 1	0.45	0.15	80	0.5	230	4.6	1.0	0.14

Sources: USEPA 1995, USEPA 2013a

Key: EFTSP = emission factor total suspended particles

Table C-11. Operational Emissions – Emergency Power Generation Alternatives

	Emissions (tpy)								
	NO_x	**CO**	**VOC**	**PM**	**SO_x**	**CO_2**	**CH_4**	**N_2O**	**CO_2e**
Potential to Emit (PTE)	100 hours								
Generator Alternative									
Generators to complete existing plant	1.4	1.9	0.1	0.1	<0.1	1,384	0.8	9.8E-03	1,406
Generators for the proposed 105.6-MW plant	8.4	11.7	0.8	0.3	0.2	8,307	4.5	5.9E-02	8,438
Life safety generators	0.8	0.3	<0.1	<0.1	<0.1	565	0.3	4.6E-03	574
Total PTE	10.7	13.9	1.0	0.4	0.2	10,256	5.6	7.3E-02	10,418
Generator and Combustion Turbine Alternative									
Generators to complete existing plant	1.4	1.9	0.1	0.1	<0.1	1,384	0.8	9.8E-03	1,406
Turbines for the proposed 105.6-MW plant	2.8	2.8	0.1	<0.1	<0.1	5,162	1.5	2.4E-02	5,207
Life safety generators	0.8	0.3	<0.1	<0.1	<0.1	565	0.3	4.6E-03	574
Total PTE	5.0	5.1	0.3	0.1	<0.1	7,112	2.5	3.8E-02	7,187
Generator Alternative (Alternatives 1 and 2)									
Generators to complete existing plant	1.4	1.9	0.1	0.1	0.0	1,384	0.8	9.8E-03	1,406
Generators for the proposed 105.6-MW plant	4.9	6.8	0.5	0.2	0.1	4,846	2.6	3.4E-02	4,922
Life safety generators	0.8	0.3	0.0	0.0	0.0	565	0.3	4.6E-03	574
Total PTE	7.1	9.1	0.6	0.2	0.1	6,795	3.7	4.9E-02	6,903
Actual Emissions	17 hours								
Generator Alternative									
Generators to complete existing plant	0.2	0.3	<0.1	<0.1	<0.1	235	0.1	1.7E-03	239
Generators for the proposed 105.6-MW plant	1.4	2.0	0.1	0.1	<0.1	1,412	0.8	1.0E-02	1,434
Life-safety generators	0.1	0.1	<0.1	<0.1	<0.1	96	0.1	7.8E-04	98
Total Actual Emissions (PTE)	1.8	2.4	0.2	0.1	<0.1	1,744	1.0	1.2E-02	1,771
Generator and Combustion Turbine Alternative									
Generators to complete existing plant	0.2	0.3	<0.1	<0.1	<0.1	235	0.1	1.7E-03	239
Turbines for the proposed 105.6-MW plant	0.5	0.5	<0.1	<0.1	<0.1	878	0.3	4.1E-03	885
Life-safety generators	0.1	0.1	<0.1	<0.1	<0.1	96	0.1	7.8E-04	98
Total Actual Emissions (PTE)	0.8	0.9	<0.1	<0.1	<0.1	1,209	0.4	6.5E-03	1,222
Generator Alternative (Alternatives 1 and 2)									
Generators to complete existing plant	0.2	0.3	0.0	0.0	0.0	235	0.1	1.7E-03	239
Generators for the proposed 105.6-MW plant	0.8	1.2	0.1	0.0	0.0	824	0.4	5.9E-03	837
Life-safety generators	0.1	0.1	0.0	0.0	0.0	96	0.1	7.8E-04	98
Total Actual Emissions (PTE)	1.2	1.5	0.1	0.0	0.0	1,155	0.6	8.3E-03	1,173

Table C-12. Operational Emissions - Generator Alternative - 105.6-MW Plant

Emergency Generator Emissions		
Generator Size	3,000	kW
Generator Size	4,023	hp
Maximum Hours of Operation	100	Hours
Actual Hours of Operation	17	Hours
Nominal Emission Rates		
NO_x [1]	0.53	
CO[1]	0.73	
VOC[3]	0.05	
PM[1]	0.02	
SO_x[1]	<0.01	
CO_2[2]	520.20	
CH_4[2]	0.28	

	Number of Generators (units)	Emissions (tpy)							
		NO_x	CO	VOC	PM	SO_x	CO_2	CH_4	N_2O
Proposed Action									
PTE	39	9.1	12.6	0.9	0.3	0.2	8999.0	4.9	6.4E-02
Actual Emissions	39	1.6	2.1	0.1	0.1	<0.1	1529.8	0.8	1.1E-02
Alternatives 1 and 2									
PTE	21	4.9	6.8	0.5	0.2	0.1	4845.6	2.6	3.4E-02
Actual Emissions	21	0.8	1.2	0.1	0.0	0.0	823.8	0.4	5.9E-03

1. Source: Caterpillar 2012
2. Source: USEPA 1995
3. Source: USEPA 2014

Key: kW = kilowatt; hp = horsepower

Table C-13. Operational Emissions - Generator Alternative - Complete Existing Plant

Emergency Generator Emissions		
Generator Size	3,000	kW
Generator Size	4,023	hp
Maximum Hours of Operation	100	Hours
Actual Hours of Operation	17	Hours
Nominal Emission Rates		
NO_x [1]	0.53	
CO [1]	0.73	
VOC [3]	0.05	
PM [1]	0.02	
SO_x [1]	<0.01	
CO_2 [2]	520.20	
CH_4 [2]	0.28	

	Number of Generators (units)	Emissions (tpy)							
		NO_x	CO	VOC	PM	SO_x	CO_2	CH_4	N_2O
PTE	6	1.4	1.9	0.1	0.1	<0.1	1384.5	0.8	9.8E-03
Actual Emissions	6	0.2	0.3	<0.1	<0.1	<0.1	235.4	0.1	1.7E-03

1. Source: Caterpillar 2012
2. Source: USEPA 1995
3. Source: USEPA 2014

Key: kW = kilowatt; hp = horsepower

Table C-14. Operational Emissions – Life-Safety Generator Emissions

Life Safety Generators Information		
Maximum Hours of Operation (PTE)[1]	100	Hours
Actual Hours of Operation	17	Hours

Manufacturer Nominal Emission Rates (g/hphr)			
Generator Capacity [kW]	**2000**	**900**	**450**
NO_x [1]	0.48	0.39	5.15
CO[1]	0.23	0.6	0.42
VOC[3]	0.03	0.03	0.03
PM[1]	<0.01	<0.01	0.03
SO_x [1]	<0.01	<0.01	<0.01
CO_2[3]	520.2	520.2	520.2
CH_4[3]	0.28375	0.28375	0.28375

	Number of Units	**Emissions (tpy)**							
		NO_x	**CO**	**VOC**	**PM**	**SO_x**	**CO_2**	**CH_4**	**N_2O**
2000	3	0.4	0.2	<0.1	<0.1	<0.1	461	0.3	3.7E-03
900	1	0.1	0.1	<0.1	<0.1	<0.1	69	<0.1	5.6E-04
450	1	0.3	<0.1	<0.1	<0.1	<0.1	34	<0.1	2.6E-04
PTE	-	0.8	0.3	<0.1	<0.1	<0.1	565	0.3	4.6E-03
Actual Emissions	-	0.1	0.1	<0.1	<0.1	<0.1	96	0.1	7.8E-04

1. Source: Cummins 2015a, Cummins 2015b, Cummins 2015c
2. Source: USEPA 1995
3. Source: USEPA 2014

Key: g/hphr = grams per brake horsepower hour; kW = kilowatt

Table C-15. Operational Emissions - Natural Gas Turbines - 105.6-MW Plant

Natural Gas Turbine Information			
Turbine Capacity	21,400	kW	
Quantity of turbines	5	EA	
Total Turbine Capacity	107,000	kW	
Turbine Capacity	365,126,800	BTU/hr	
Turbine Efficiency	0.39		
Total Heat Input	938,629,306	BTU/hr	
Heat Content for Natural Gas	1,020	Btu/cf	
Total Hours	100	Hours	
Total Heat	9.39E+10	Btu	
Total Volume	92,022,481	cf	
Emission Factors			
	AP-42		
	lb/MMBtu	**lb/10^6scf**	
NO_x	9.90E-02	100.98	
CO	1.50E-02	15.30	
VOC	2.10E-03	2.14	
	Manufacture's Data		
	lb/MMBtu	**lb/10^6scf**	
NO_x	5.90E-02	60.18	
CO	6.00E-02	61.20	
VOC	2.10E-03	2.14	
	AP-42		
	lb/MMBtu	**lb/10^6scf**	
CO_2	1.10E+02	112200.00	
CH_4	8.60E-03	8.77	
N_2O	3.00E-03	3.06	
	Manufacturer's Data		
	lb/MMBtu	**percentage**	**lb/10^6scf**
CH_4 (92.79% of fuel)	3.40E-02	0.93	32.18
N_2O (N_2 is 1.51% of fuel)	3.40E-02	0.02	0.52

Potential to Emit (tpy)							
NO_x	**CO**	**VOC**	**PM**	**SO_x**	**CO_2**	**CH_4**	**N_2O**
2.8	2.8	0.1	<0.1	<0.1	5162	1.5	<0.1

1. Source: USEPA 1995
2. Source: Caterpillar 2015

Key: scf = standard cubic feet

Table C-16. Operational Emissions - Heating Alternatives

Building	Buildings	Type of Boiler	Hours	Units Per Building	Number of Units	Total Number of Hours	Natural Gas Consumption (10^6scf/year)
800,000 ft^2 Buildings	3	VTG-6000	335	3	9	3,015	18.1
330,000 ft^2 Building	1	VTG-4000	375	2	2	750	3.0
150,000 ft^2 Building	1	VTG-2000	449	2	2	898	1.8

	Emission Factors (lb/hour)						Emission Factors (lb/10^6scf)			
	NO_x	CO	VOC	PM_{10}	$PM_{2.5}$	SO_x	CO_2	CH_4	N_2O	
VTG-6000	0.2118	0.2190	0.0330	0.0456	0.0456	0.0036	120,000	2.30	0.64	
VTG-4000	0.4706	0.1460	0.0220	0.0304	0.0304	0.0024	120,000	2.30	0.64	
VTG-2000	0.2353	0.0730	0.0110	0.0152	0.0152	0.0012	120,000	2.30	0.64	
Potential to Emit (tpy)										
800,000 ft^2 Buildings	8.3	8.6	1.3	1.8	<0.1	0.1	28,382	0.5440	0.1514	28,441
330,000 ft^2 Building	4.1	1.3	0.2	0.3	0.3	<0.1	4,205	0.0806	0.0224	4,213
150,000 ft^2 Building	2.1	0.6	0.1	0.1	0.1	<0.1	2,102	0.0403	0.0112	2,107
Estimated Actual Emissions (tpy)										
800,000 ft^2 Buildings	0.3	0.3	<0.1	0.1	0.1	<0.1	1,085	0.0208	0.0058	1,088
330,000 ft^2 Building	0.2	0.1	<0.1	<0.1	<0.1	<0.1	180	0.0035	0.0010	180
150,000 ft^2 Building	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	108	0.0021	0.0006	108
Proposed Action										
Potential to Emit (tpy)										
Packaged Boilers	14.5	10.6	1.6	2.2	2.2	0.2	34,690	0.6649	0.1850	34,761
Packaged Boilers–GSHP	8.3	8.6	1.3	1.8	1.8	0.1	28,382.4	0.5	0.2	28,441
Estimated Actual Emissions (tpy)										
Packaged Boilers	0.6	0.4	0.1	0.1	0.1	<0.1	1,373	0.0263	0.0073	1,376
Packaged Boilers–GSHP	0.3	0.3	<0.1	0.1	0.1	<0.1	1,085.4	<0.1	<0.1	1,088
Alternatives 1 and 2										
Potential to Emit (tpy)										
Packaged Boilers	4.8	3.5	0.5	0.7	0.7	0.1	11,563	0.2216	0.0617	11,587
Packaged Boilers–GSHP	2.8	2.9	0.4	0.6	0.6	<0.1	9,460.8	0.2	0.1	9,480
Estimated Actual Emissions (tpy)										
Packaged Boilers	0.2	0.1	<0.1	<0.1	<0.1	<0.1	458	0.0088	0.0024	459
Packaged Boilers–GSHP	0.1	0.1	<0.1	<0.1	<0.1	<0.1	362	0.0069	0.0019	363

1. Source: Fulton 2015

C.3 Record of Non-Applicability

Record of Non-Applicability (RONA)
to the General Conformity Rule
for the East Campus Integration Program
Fort Meade, Maryland

March 3, 2017

Air emissions were estimated for the construction and operation of the proposed 2.88 million square feet of facilities and associated support infrastructure associated with all phases of the East Campus Integration Program for the National Security Agency (NSA) Campus on Fort Meade, Maryland. The development would be implemented over 10 years; therefore, emissions in any given year would be limited. Emissions from land clearing and grading, construction of buildings, associated parking areas and structures, and support utility upgrades were assessed. Operational emissions from emergency generators, boilers, and personnel commutes were assessed. General Conformity under the Clean Air Act, Section 176 has been evaluated according to the requirements of 40 CFR 93.153, Subpart B. Regardless of the alternative ultimately implemented, the requirements of this rule are not applicable because:

> The highest total annual direct and indirect emissions from this action have been estimated at 49.8 tons NO_x, 8.7 tons VOCs, 8.3 tons $PM_{2.5}$, and 8.5 tons SO_2 per year, which would be below the conformity threshold values of 50 tons VOCs and 100 tons for SO_2, $PM_{2.5}$, and NO_x.

Supporting documentation and emission estimates:

( ) Are Attached

(X) Appear in the NEPA Documentation

( ) Other (Not Necessary)

SIGNATURE

Chief, Sustainability and Environmental Compliance
TITLE
National Security Agency

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APPENDIX D

ESA SECTION 7 DOCUMENTATION

NATIONAL SECURITY AGENCY
CENTRAL SECURITY SERVICE
Fort George G. Meade, Maryland 20755

August 28, 2015

Ms. Julie Slacum
Chesapeake Bay Field Office
U.S. Fish & Wildlife Service
177 Admiral Cochrane Drive
Annapolis, MD 21401

RE: Environmental Impact Statement for the East Campus Integration Program, Fort Meade, Maryland, Endangered Species Act Section 7 Informal Consultation Initiation

Dear Ms. Slacum,

The Department of Defense (DoD) proposes to continue integrating the National Security Agency (NSA) East Campus with the NSA Main Campus through development of operational complex and headquarters space in the northern portion of the East Campus and in the 9800 Troop Support Area of Fort George G. Meade (i.e., East Campus Integration Program [ECIP]). A Draft Environmental Impact Statement (EIS) is currently being prepared to address the proposal by the DoD for implementation of the ECIP, including the construction and operation of associated facilities for the NSA complex at Fort Meade and demolition of some existing facilities.

In accordance with Section 7(a)(2) of the Endangered Species Act, as amended (50 CFR 402.14(a)), NSA seeks to consult with the USFWS regarding the Proposed Action. On May 4, 2015, the USFWS concurred with the U.S. Army Installation Management Command's (IMCOM) determination that select military mission operations on Army installations are not likely to adversely affect the threatened northern long-eared bat (*Myotis septentrionalis*). The programmatic informal consultation includes conservation measures outlined in the April 24, 2015, *Programmatic Informal Consultation and Management Guidelines on the Northern Long-eared Bat (Myotis septentrionalis) for Ongoing Operations on Installation Management Command (IMCOM) Installations* (Programmatic Guidelines). The conservation measures are intended to be incorporated into activities to avoid adverse effects on northern long-eared bats, achieving the "not likely to adversely affect" determination. However, the Programmatic Guidelines indicate that site-specific consultation with the local USFWS field office (i.e., Chesapeake Bay Field Office for the Proposed Action) may be required to adequately assess the potential direct and indirect effects associated with construction projects.

An advance description of the Proposed Action, environmental baseline of the project area, and analysis of potential effects on northern long-eared bats are enclosed to initiate informal Section 7 consultation and review for this project under the Endangered Species Act, as amended. Should you have any questions or comments, please contact me by telephone at 301-688-2970, or email at jdwill2@nsa.gov.

Sincerely,

Jeffrey D. Williams

Jeffrey D. Williams REM, LEED-AP
Director, Environmental Sustainability
Occupational Health, Environment, and Safety Systems

Enclosure:
Project Description/Environmental Baseline/Effects Analysis

1. Project Description

The Department of Defense (DoD) proposes to continue integrating the National Security Agency's (NSA's) East Campus with the NSA Main Campus on Fort Meade through development of operational complex and headquarters space in the northern portion of the East Campus and in the 9800 Troop Support Area (i.e., the Proposed Action). Implementation of this East Campus Integration Program (ECIP) entails construction and operation of new facilities for operations and headquarters space within the 150-acre ECIP project area and demolition of buildings and infrastructure. The ECIP project area, as shown in **Figure 1**, includes the locations being considered for development of operations and headquarters space; some parking facility location alternatives and locations of buildings proposed for demolition are outside of this project area. Further details on land use planning, principal facilities, and supporting infrastructure are provided in the following sections.

1.1 Land Use Planning

The NSA Main Campus consists of existing developed areas used by NSA on Fort Meade generally located northwest of Emory Road and Canine Road and southwest of Emory Road and O'Brien Road. The NSA East Campus is east of the NSA Main Campus and consists of approximately 240 acres (NSA 2013) generally bordered by O'Brien Road to the west, Rockenbach Road to the north, Midway Branch to the east, and an undeveloped road extending east from Samford Road to the south (see **Figure 1**). A U.S. Army satellite communications facility that is not part of NSA is located in the central portion of this area, between the NSA Main and East Campuses and south of the ECIP project area. The ECIP project area includes the northern portion of the East Campus and the 9800 Troop Support Area.

The northern portion of the East Campus consists of approximately 84 acres. This area is currently generally undeveloped, or occupied by a staging area for development of the southern portion of the East Campus. Completion of ongoing construction activities in the southern portion of the East Campus is planned to occur in fiscal year (FY) 2018, and additional elements not yet under construction in this area would be completed by FY 2020.

The other major portion of the ECIP project area is the 9800 Troop Support Area, an approximately 49-acre tract west of the northwest portion of the East Campus. The 9800 Troop Support Area is bordered by Canine Road to the west, Rockenbach Road to the north, 3rd Cavalry Road to the east, and Emory Road to the south. This area is not currently part of the NSA Main Campus; however, both the *Long Range Component of the Fort Meade Real Property Master Plan* and the *NSA-Washington (NSAW) Facilities Master Plan* identify the 9800 Troop Support Area as reserved for redevelopment by the NSA as part of the ECIP (Fort Meade 2013, NSA 2013). The 9800 Troop Support Area currently includes barracks (some of which are currently being used for administrative functions), a dining facility, fitness center, post office, and support facilities, including those used to support NSA operations. Under the Proposed Action, these structures would be demolished and new structures constructed.

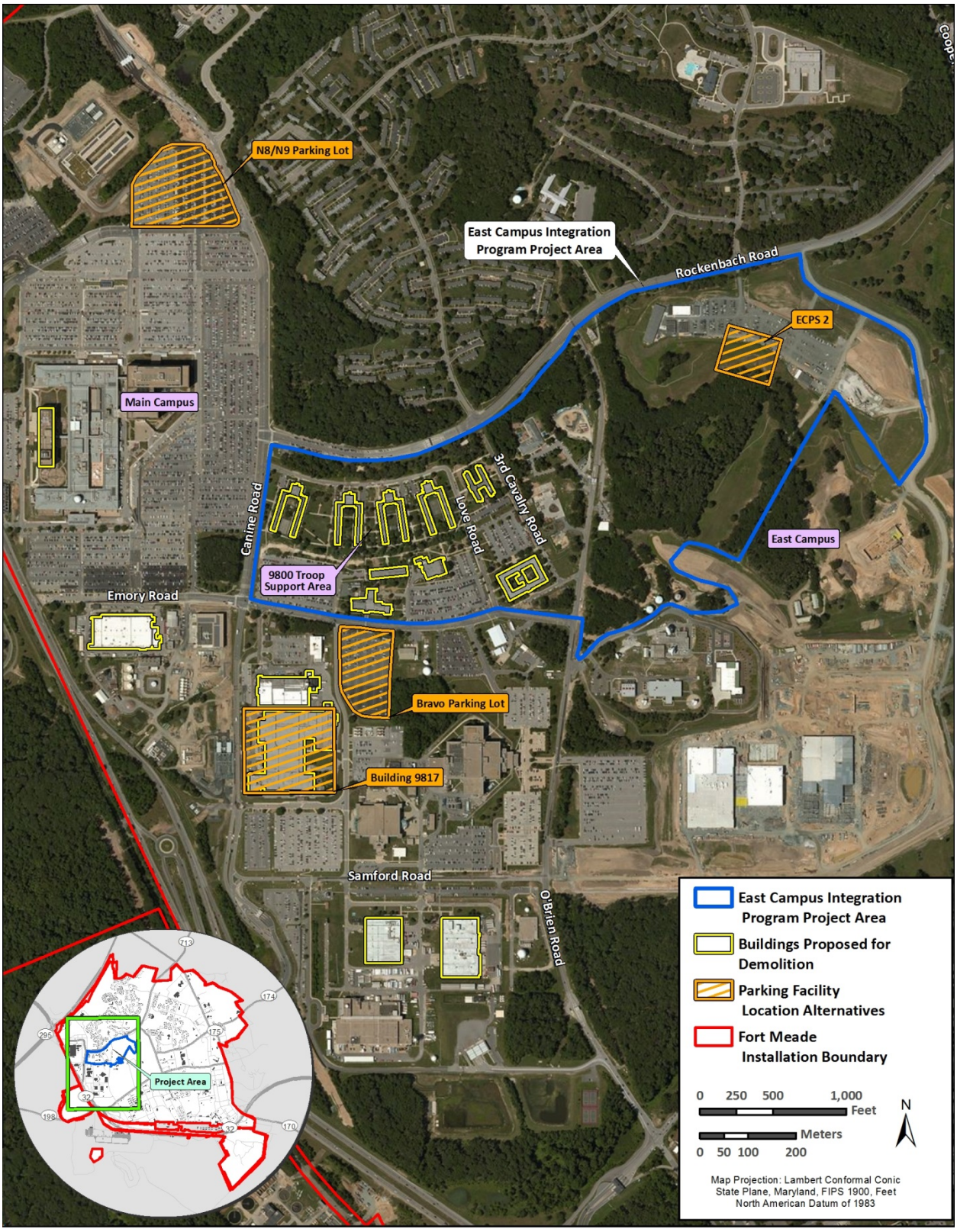

Figure 1. Proposed Action and Surrounding Areas

An approximately 18-acre triangular site east of the 9800 Troop Support Area and west of the northern portion of the East Campus is also part of the ECIP project area. This area is bordered by 3rd Cavalry Road to the west, Rockenbach Road to the north, and O'Brien Road to the east, and contains the Children's World Learning Center for employee childcare and the NSA recycling yard.

The ECIP takes into account several factors, including mission requirements, the condition of current facilities (both on and off the NSA's Campus at Fort Meade), space planning, land availability, utility requirements, traffic and parking, and environmental impacts. A key factor is the mission co-location to provide a more efficient and effective work environment for mission-critical functions of the entire Intelligence Community.

The NSA would consolidate mission elements, which would enable grouping services and support services across the NSA Campus based on function; facilitate a more collaborative environment and optimal adjacencies; and provide administrative capacity for up to 13,300 personnel, including 6,100 personnel who currently work on the existing NSA Campus and 7,200 personnel currently located off site. The personnel located outside of Fort Meade are currently in government-owned or leased space at Fort Meade or locations throughout the Baltimore-Washington metropolitan area.

The *NSAW Facilities Master Plan* identifies NSA development in the northern portion of the East Campus and the 9800 Troop Support Area (i.e., ECIP project area) to create a contiguous NSA Campus that unites existing facilities with new structures (NSA 2013). Additionally, the *Long Range Component of the Fort Meade Real Property Master Plan* designates both the East Campus and the 9800 Troop Support Area as part of the NSA expansion, and depicts both areas as part of the NSA Exclusive Use Area in the Future Land Use Plan (Fort Meade 2013).

The DoD proposes to construct the ECIP over a period of approximately 10 years (FY 2019 to 2029).

1.1.1 Principal Facilities

The DoD proposes to construct and operate approximately 2,880,000 square feet (ft^2) of operational complex and headquarters space consisting of five buildings. These facilities would consist of East Campus Building (ECB) 3, ECB 4, and ECB 5, each with approximately 800,000 ft^2, and two smaller buildings of 330,000 ft^2 and 150,000 ft^2. ECBs 1 and 2 are currently under construction in the southern portion of the East Campus. The proposed buildings would include an open environment conducive to both physical and virtual collaboration; special purpose space, including support and enabler areas (e.g., lobbies and main reception); and supporting electrical, mechanical, and fire protection/suppression components.

Construction of the proposed buildings and the increase of personnel would require additional campus parking. The NSA Campus has limited developable land; therefore, the use of multi-level (i.e., at least four levels) parking structures are considered in lieu of surface parking. Parking lots are fully used most days, including overflow parking, so the net loss of any parking (i.e., construction at the 9800 Troop Support Area that displaces existing parking) would require replacement parking. The exact quantity, size, and capacity of parking structures would not be known until the detailed design process begins. Four alternatives for locations of parking structures are available to DoD and are presented in **Figure 1**.

As these four sites are outside the core ECIP project area and are all currently fully developed with parking lots or other facilities, they are not discussed further for the purposes of this consultation.

Because the development of the ECIP is in the planning stages, no detailed engineering or design work for proposed facilities has yet been accomplished. Therefore, the Environmental Impact Statement (EIS) currently being prepared does not consider various design factors in detail and makes general assumptions about the proposed development. The exact space requirements, locations, and layouts of proposed buildings and infrastructure would not be known until the detailed design process begins. Therefore, the proposed facilities and infrastructure analyzed in the EIS are interchangeable with respect to the location in which each would eventually occur.

As part of the Proposed Action, the DoD would demolish approximately 1.9 million ft^2 of buildings and infrastructure on the NSA Main Campus (1,291,206 ft^2) and the 9800 Troop Support Area (592,269 ft^2) (see **Figure 1**). All nine buildings in the 9800 Troop Support Area would be demolished to provide room for the proposed facilities and supporting infrastructure. These buildings include Buildings 9801, 9802, 9803, 9804, 9805, 9810, 9827, 9828, and 9829. After construction of each of the proposed facilities on the East Campus and 9800 Troop Support Area are completed and personnel transferred to the facilities, Buildings 9703, 9705, 9800A, 9808, 9814, and 9817 on the NSA Main Campus would be vacated and demolished. Three surface parking lots in the 9800 Troop Support Area would be demolished to make room for the proposed buildings under the ECIP.

1.1.2 Supporting Infrastructure

Infrastructure supporting the proposed operational complex and headquarters space would include electrical substation, emergency generator capacity providing 121 megawatts (MW) of electricity; life-safety generators; building heating systems; utilities, including water, natural gas, and communications services; transportation infrastructure, including roads, parking structures, and sidewalks; and stormwater management facilities.

The Proposed Action would require the addition of 121 MW of emergency power generating facilities for the NSA Campus at Fort Meade. Currently, 171 MW of primary substation capacity has been constructed for the NSA East Campus. The 171 MW of power for the campus would be supported by the substation, 65.4-MW emergency power plants (of which 50 MW has been constructed), and a 105.6-MW emergency power plant. Therefore, the Proposed Action includes the addition of 15.4 MW to complete the existing emergency generator plants, and the construction and operation of a 105.6-MW emergency power plant, which totals 121 MW. Both the upgrades to the existing plants and the proposed plants would have associated switch gear, substation and associated equipment and ductbanks, air pollution control equipment, oil storage tanks, and urea storage tanks. Three days (72 hours) of fuel to operate any generators, if ultimately selected, would be stored onsite. Four alternatives for emergency power generation equipment are being considered. Life-safety power generation would be independent of emergency power generation, and would include approximately 7.4 MW of generators.

The facilities are in the preliminary design stages and a detailed list of equipment is unavailable at this time. All life-safety generators would be internal combustion engines; however, not all units would necessarily be made by the same manufacturer. Generators may be selected to use different fuel types or multiple fuel types; however, the use of diesel fuel is used as a reasonable worst-case scenario to assess

environmental impacts under the National Environmental Policy Act of 1969 (NEPA). The types and sizes of new generators, timing of and available funding for the projects, and the types of controls ultimately selected for the facilities may differ in specific features from the ones described in this EIS; however, the impacts would not change appreciably because the ultimate facility design would include life-safety generators installed similar in size and with similar pollution control equipment.

Building heating systems would be installed at each proposed building based on specific building capacity and heating needs. The NSA Main Campus uses steam for building heating; however, this system would not be utilized at the East Campus. The East Campus would have a greater cooling load than heating load. Three alternatives for building heating systems are being considered. Solar hot water systems are also being considered as part of the Proposed Action for producing domestic hot water at smaller buildings, such as the proposed 150,000 ft^2 and 330,000 ft^2 buildings.

Roads and sidewalks would be constructed to connect the proposed buildings and parking structures, and interconnect with existing buildings and the road/sidewalk network on the NSA Main Campus. These interconnections would be designed to promote a pedestrian-oriented campus by providing a logical interconnection between vehicles, pedestrians, and cyclists; and minimizing areas of conflict.

Stormwater management facilities would be designed to comply with the appropriate State of Maryland regulations, Section 438 of the Energy Independence and Security Act (EISA), NSA design standards, and the *NSAW Facilities Master Plan*, as appropriate.

2. Action Area

The action area is defined as the ECIP project area and is presented in **Figure 1** and below in **Figure 2**. The following description of the action area is excerpted from the description of the existing vegetation communities in the Biological Resources section of the Draft EIS currently being prepared.

Vegetation communities cover approximately 46 percent (69 acres) of the ECIP project area and are composed of open fields (25 acres) and forests (44 acres) (see **Figure 2**). Approximately 81 acres (54 percent) of the ECIP project area are developed. Open field areas consist primarily of grasses such as bluegrasses (*Poa* spp.), fescues (*Festuca* spp.), crabgrasses (*Digitaria* spp.), and other planted vegetation that are regularly mowed. The 44-acre forest area is characterized by a mid-climax mixed hardwood forest co-dominated by chestnut oak (*Quercus prinus*) with Virginia pine (*Pinus virginiana*). Common understory species include American beech (*Fagus grandifolia*), sassafras (*Sassafras albidum*), chestnut oak saplings, red oak (*Quercus rubra*), pignut hickory (*Carya glabra*), red maple (*Acer rubrum*), greenbrier (*Smilax* spp.), and grape (*Vitis* spp.) (HDR|e²M 2009).

Results of a 2009 Forest Stand Delineation (FSD) indicated that all survey plots within the northern portion of the East Campus site have a Low Priority Retention rating. The rating is based on isolation of the stand and lack of contiguous forest, lack of a Champion (i.e., the largest known tree of a given species in a particular geographic area) or trees with 75 percent of the diameter at breast height (dbh) of Champion species, lack of steep slopes, and lack of known Federal- or state-listed sensitive species or critical habitat on site. There is no specific FSD guidance for the Low Priority Retention rating. NSA has a reforestation plan for the East Campus, which includes replanting of acreage equal to 20 percent of the total area developed on the East Campus.

Figure 2. Vegetation Communities within the ECIP Project Area

3. Species/Critical Habitat Considered

The following description of the Species/Critical Habitat Considered is excerpted from the description of the Federally Listed Species under the description of the existing Biological Resources in the Draft EIS currently being prepared.

A search of the USFWS Information, Planning, and Conservation (IPaC) system indicates that Fort Meade is within the geographic range of the federally threatened northern long-eared bat (*Myotis septentrionalis*) (USFWS 2015b, USFWS 2015c). The northern long-eared bat's range includes 37 States, including Maryland (USFWS 2015d). Based upon its habitat preferences during winter and summer as described below, the northern long-eared bat could potentially occur on or near the ECIP project area. Because there is no critical habitat designated or proposed to be designated for the northern long-eared bat, the proposed project would have no effect on designated or proposed designated critical habitat. Therefore, critical habitat will be excluded from further evaluation.

The northern long-eared bat is one of 15 bat species listed under the Endangered Species Act (ESA) (USFWS 2015e). The northern long-eared bat was proposed for listing as endangered in October 2013. On May 4, 2015, the USFWS listed the species as "threatened." The USFWS indicates that the primary threat to northern long-eared bats is white-nose syndrome (WNS). WNS is a disease of hibernating bats that has quickly spread from the northeastern to the central United States. The disease is named for the white fungus, *Pseudogymnoascus destructans*, which infects the skin of hibernating bats. Some affected bats display abnormal behavior including flying during the day and in cold weather (i.e., before insects are available for foraging) and hibernating towards a cave's entrance where temperatures are much colder and less stable. Fat reserves in these bats are also severely diminished or non-existent, making survival to spring emergence difficult (80 *Federal Register* (FR) 17974-18033).

Although WNS has not been found in Anne Arundel County, the county is considered to be affected by WNS because it is within 150 miles of a U.S. county boundary where the fungus or WNS has been detected (USFWS 2015f). For areas inside the WNS buffer zone, the following activities provided via an interim species-specific rule per Section 4(d) of the ESA are exempt from take, provided these activities protect known maternity roots and hibernacula (USFWS 2015g):

- Forest management practices
- Maintenance and limited expansion of transportation and utility rights-of-way
- Prairie habitat management
- Limited tree removal projects
- Removal of hazardous trees for the protection of human life or property
- Removal of northern long-eared bats from human dwellings
- Survey and research-related activities.

Based on an initial assessment, the Proposed Action does not qualify for an exemption of the interim 4(d) rule. The Proposed Action would not deviate from the requirements of the Programmatic Guidelines and would be covered under the U.S. Army Installation Management Command's (IMCOM) Programmatic Informal Consultation (U.S. Army 2015, USFWS 2015a).

Northern long-eared bats are medium-sized insectivorous bats with a body length between 3 and 3.7 inches with a wingspan of 9 and 10 inches (USFWS 2015d). This bat is distinguishable from other *Myotis* bat species by its relatively long ears (average of 0.7 inch) that extend beyond the nose by up to 0.2 inch when laid forward. Within its range, the northern long-eared bat can be confused with the little brown bat (*Myotis lucifugus*) or the western long-eared myotis (*Myotis evotis*). The northern long-eared bat has medium to dark brown fur on its back, tawny to pale-brown on the underside, and dark brown ears and wing membranes.

The northern long-eared bat is a temperate, insectivorous, migratory bat that hibernates in caves and mines in the winter (typically October through April) and summers in wooded areas. In the summer, northern long-eared bats occur in forested areas and forage for insects. The northern long-eared bat emerges at dusk to feed, by flying through the understory of forested areas, primarily on moths, flies, leafhoppers, caddisflies, and beetles. The bat's foraging pattern includes a peak activity period within 5 hours of sunset, and a second peak within 8 hours of sunset. In general, this species prefers intact mixed-type forests with small gaps (i.e., forest trails, small roads, or forest-covered creeks) and sparse or medium vegetation for forage and travel, rather than fragmented habitat or areas that have been clearcut (80 FR 17974-18033).

Northern long-eared bats roost singly or in colonies underneath bark, in cavities or in crevices, of both live and dead trees and/or snag (typically ≥ 3 inches dbh) (USFWS 2014a). There is also documentation of this species roosting in human-made structures, such as in buildings, in barns, on utility poles, behind window shutters, and in bat houses (80 FR 17974-18033). Northern long-eared bats most likely are not dependent on certain species of trees for roosts throughout their range; rather, many tree species that form suitable cavities or retain bark will be used opportunistically by the bats. Individual trees might be considered suitable habitat when they exhibit characteristics of suitable roost trees and are within 1,000 feet of other forested/wooded habitat. However, trees found in highly developed urban areas (e.g., street trees and downtown areas) are extremely unlikely to be suitable northern long-eat bat habitat (USFWS 2014a).

The ECIP project area contains a mid-climax hardwood forest dominated by chestnut oak with Virginia pine occurring as a codominant. Common understory species include American beech, sassafras, red oak, pignut hickory, and red maple (HDR|e²M 2009). A U.S. Forest Service study investigating tree species preferences by the northern long-eared bat documented maternity colonies being supported by American beech, maple, and oak species (USDA 2002).

In late summer and early fall, northern long-eared bats migrate from summer areas to winter hibernacula (e.g., caves and abandoned mines). Breeding for this species occurs during this time when males begin swarming near hibernacula (USFWS 2014a). There are no known hibernacula in the ECIP project area and no habitat features (e.g., caves and mines) that could potentially serve as wintering bat habitat (80 FR 17974-18033, Spencer 2015). Following hibernation, pregnant females migrate to wooded summer areas where they give birth and raise their young in maternity colonies of 20 to 60 or more females located under the loose bark of trees or snags. Summer maternity colonies are considered especially important for the long-term recovery of the species. Most bats within a maternity colony give birth around the same time, which may occur from late May or early June to late July, depending where the colony is located

within the species' range. Young bats start flying by 18 to 21 days after birth (USFWS 2015d). As stated above, potential summer habitat (forage and roost habitat) occurs within the ECIP project area.

4. Effects Analysis

The following Effects Analysis is excerpted from the description of the Federally Listed Species under the description of the Environmental Consequences on Biological Resources in the Draft EIS currently being prepared.

Construction of the proposed Project Action could result in negligible, adverse impacts on the federally-listed northern long-eared bat. Suitable roosting and foraging habitats for the northern long-eared bat occur within and adjacent to the ECIP project area. Project activities would not deviate from the requirements of the Programmatic Guidelines and would be covered under the IMCOM Programmatic Informal Consultation (U.S. Army 2015, USFWS 2015a). However, the Programmatic Guidelines indicate that site-specific consultation with the local USFWS field office (i.e., Chesapeake Bay Field Office for the Proposed Action) is often needed to adequately assess the potential direct and indirect effects associated with construction projects.

Because all demolition and construction activities would occur more than 0.5 miles from known hibernacula, no direct effects on hibernating northern long-eared bats would occur during the winter (U.S. Army 2015). However, if it is determined through coordination with the USFWS that a hibernacula is located less than 0.5 mile from the ECIP project area, additional consultation would be required.

The potential exists for roosting and foraging bats, or individuals flying through their home range, to be disturbed or displaced by dust, noise, and light associated with demolition, construction, and operation activities. Given the temporary and variable nature of construction activities, these impacts and other behavioral responses to the disturbances would be insignificant. Additionally, measures would be implemented to minimize potential construction impacts, such as generation of dust. Therefore, disturbances related to dust are expected to be insignificant.

Northern long-eared bats hunt prey in the air while flying using echolocation (i.e., an auditory behavior that uses ultrasonic signals to detect prey and maneuver through the environment). While little information is available in the literature regarding the specific effect of noise on bat species utilizing echolocation in their search for prey, most noise from construction of the Proposed Action is expected to occur during the day and not expected to disturb foraging (USFWS 2014b). Impacts from noise disturbances associated with construction and operation activities are expected to be minimal and temporary, and are not expected to permanently impact local bat populations (Natural Resource Solutions 2012).

Additional safety lighting may be required during construction activities. Many bat species respond in different ways to light disturbance. Some bats are light averse and would avoid lit areas, while others actively forage in lit areas. Additional light might cause avoidance behavior and reduce the availability of foraging areas for the northern long-eared bat. However, higher densities of *Myotis* spp. have been recorded in lit areas as compared to unlit areas due to the large number of insects (particularly moths) attracted to street lights, particularly low wavelength light (University of Bristol 2014). The appropriate safety lighting would be used during construction and operation of the proposed facilities to illuminate the

specific work area, or area of safety concern, and would be directed away from adjacent potential foresting and roosting habitat. Effects would be minimal and temporary, and are not expected to significantly impact local bat populations.

While it is possible that physical impacts resulting in injury or death could occur from operation of construction vehicles or felling trees, these impacts would be avoided. All tree cutting and clearing would be conducted in accordance with the Programmatic Guidelines and avoided during the northern long-eared bat active season (April 1 through September 1) (USFWS 2015h). If there is a need to remove a single or small cluster of trees during the active season (April 1 through September 1), the procedures in the Programmatic Guidelines would be followed (U.S. Army 2015). In addition, construction vehicles in the ECIP project area would be moving slowly to enable bats to avoid the vehicles, and traveling mostly during the daytime when northern long-eared bats are not flying. Therefore, given the slow moving, daytime construction vehicle traffic, the species' nocturnal behavior, and the timing of clearing, no collisions between northern long-eared bats and construction vehicles are anticipated.

All contractors and others present during construction activity will be fully informed of the potential to encounter bats and their responsibilities to avoid impacts on bats. If dead or injured bats are encountered, the number of bats and location would be reported to the USFWS Chesapeake Bay Field Office (USFWS 2013a).

Tree removal could also result in the loss of foraging and roost habitat for the northern long-eared bat. Based on 2014 aerial photography, the ECIP project area contains approximately 44 acres of forested land. However, the total acreage of forested land and vegetation disturbed would depend on the final design, layout, and location of the proposed facilities. The likely behavioral response of bats returning in the spring to the cleared area would be to disperse to adjacent suitable habitat, but these changes would be insignificant, based on the remaining forested habitat within Fort Meade and at the Patuxent Research Refuge (less than 2 miles south of the ECIP project area) and the propensity of the species to use alternative roost sites. NSA would preserve or reforest lands equal to 20 percent of the development on the East Campus. Any new tree planting would provide returning bats familiar sheltering areas and new foraging habitat while they search for new roost sites, thereby helping to reduce energy demands immediately after migration (USFWS 2013b). Furthermore, the Programmatic Guidelines state that inactive season tree removal effects would be discountable by following similar conservation measures to the Federal Highway Administration and Federal Railroad Administration's Range-wide Biological Assessment for Transportation Projects for Indiana Bat and northern long-eared bat (U.S. Army 2015).

5. Conclusions and Determinations Effect

On May 4, 2015, the USFWS concurred with the U.S. Army IMCOM determination that select military mission operations on Army installations are not likely to adversely affect the threatened northern long-eared bat (*Myotis septentrionalis*). The programmatic informal consultation includes conservation measures outlined in the April 24, 2015, *Programmatic Informal Consultation and Management Guidelines on the Northern Long-eared Bat (Myotis septentionalis) for Ongoing Operations on Installation Management Command (IMCOM) Installations* (Programmatic Guidelines). As described in **Section 4**, the conservation measures would be incorporated into activities to avoid adverse effects on northern long-eared bats, achieving the "not likely to adversely affect" determination. The Programmatic

Informal Consultation only addresses the consultation requirements for those projects that can implement the conservation measures. The Programmatic Guidelines apply to all installations identified in the document, including Fort Meade. The Proposed Action would not deviate from the requirements of the Programmatic Guidelines and would be covered under the IMCOM Programmatic Informal Consultation (U.S. Army 2015, USFWS 2015a). Therefore, the project is not likely to adversely to adversely affect northern long-eared bats.

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United States Department of the Interior

FISH AND WILDLIFE SERVICE

Chesapeake Bay Field Office
177 Admiral Cochrane Drive
Annapolis, Maryland 21401
http://www.fws.gov/chesapeakebay

September 22, 2015

Jeffrey D. Williams
Director, Environmental Sustainability
National Security Agency
Fort George G. Meade, Maryland 20755

Re: "Not Likely to Adversely Affect" determination for northern long-eared bat for East Campus Integration Program, Fort Meade, Maryland

Dear Mr. Williams:

This responds to your August 28, 2015 letter requesting review of the East Campus Integration Program in Fort Meade, Maryland. The project involves integrating the National Security Agency (NSA) East Campus with the NSA Main Campus through development of operational complex and headquarters space in the northern portion of the East Campus and in the 9800 Troop Support Area of Fort George G. Meade. Implementation of this East Campus Integration Program (ECIP) entails construction and operation of new facilities for operations and headquarters space within the 150-acre ECIP project area and demolition of buildings and infrastructure. The ECIP project area contains approximately 44 acres of forested land. However, the total acreage of forest disturbed would depend on the final design, layout, and location of the proposed facilities. The following comments are provided pursuant to Section 7 of the Endangered Species Act (48 Stat. 401, as amended; 16 U.S.C. 661 *et seq.*).

The proposed project is located in Anne Arundel County, Maryland, which is considered to be part of the range for northern long-eared bat (*Myotis septentrionalis)*, a federally listed threatened species. The northern long-eared bat is a temperate, insectivorous migratory bat that hibernates in mines and caves in the winter and summers in wooded areas. Since NSA has committed to clearing trees outside the active season (April 15-August 30), the project is not likely to adversely affect the northern long-eared bat. If there is a need to remove more than 1 acre of trees during the active season, this field office should be consulted to evaluate potential effects. Except for occasional transient individuals, no other federally proposed or listed endangered or threatened species under our jurisdiction are known to exist within the project impact area. Should project plans change, or if additional information on the distribution of listed or proposed species becomes available, this determination may be reconsidered.

We appreciate the opportunity to provide information relevant to threatened and endangered fish and wildlife resources. This Endangered Species Act determination does not exempt this project

from obtaining all permits and approvals that may be required by other state or Federal agencies. Should you have any questions or concerns regarding this letter, please contact Julie Slacum of my Endangered Species staff at (410) 573-4595 or by email at Julie_thompson@fws.gov.

Sincerely,

Genevieve LaRouche
Field Supervisor

NATIONAL SECURITY AGENCY
CENTRAL SECURITY SERVICE
Fort George G. Meade, Maryland 20755

July 1, 2016

Ms. Genevieve LaRouche
U.S. Fish and Wildlife Service
Chesapeake Bay Ecological Services Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401-7307

RE: Draft Environmental Impact Statement for the East Campus Integration Program, Fort Meade, Maryland

Dear Ms. LaRouche:

Enclosed for your review and comment is a copy of the Draft Environmental Impact Statement (EIS) for the East Campus Integration Program at Fort Meade, Maryland. The Department of Defense (DoD) proposes to continue to develop operational complex and headquarters space at the National Security Agency's (NSA) East Campus on Fort Meade for use by NSA and the Intelligence Community. The purpose of the Proposed Action is to provide facilities that are fully supportive of the Intelligence Community's function and to continue to integrate the East Campus with the NSA Main Campus. The need for the action is to meet mission requirements, both internally at the NSA and within the Intelligence Community. The Draft EIS is being prepared in accordance with the National Environmental Policy Act (NEPA) (42 U.S.C. 4321, et seq.). A Notice of Availability for the Draft EIS will be published in the *Federal Register* on July 8, 2016, formally initiating a 45-day public review period.

We have reviewed the Proposed Action for its potential to affect federally threatened or endangered species. In accordance with our August 28, 2015 letter, we determined that the Proposed Action is not likely to adversely affect the northern long-eared bat (*Myotis septentrionalis*), based on the NSA commitment to conduct tree clearing outside of the active season (April 15 – August 30). In your letter dated September 22, 2015, you concurred with this determination. If there is a need to remove more than one acre of trees during the active season, we will contact your office.

In accordance with NEPA, the DoD requests your input on the Draft EIS. On August 3, 2016, the DoD will hold an open house from 4:30 to 5:00 p.m. and a public meeting from 5:00 to 7:00 p.m. at Severn Community Library, 2624 Annapolis Road, Severn, Maryland 21144. The public meeting may end earlier or later than the stated time depending on the number of persons wishing to speak.

Verbal and written comments will be received at the public meeting and considered in preparation of the Final EIS. You can also submit written comments by mail to "East Campus Integration Program EIS" c/o HDR, 2600 Park Tower Drive, Suite 100, Vienna, VA 22180, or by email to ECIPEIS@hdrinc.com. Written comments are requested by August 22, 2016, to ensure sufficient time to consider public input in preparation of the Final EIS.

Your comments on the enclosed Draft EIS are requested. Written and verbal comments may be published in the EIS. Any personal information provided will be used only to identify your desire to make a statement during the public comment portions of the EIS process or to fulfill requests for copies of the EIS or associated documents. Private addresses will be compiled to develop a mailing list for those requesting copies of the Draft or Final EIS. However, only the names of private citizens will appear in the EIS; personal addresses and phone numbers will not be published.

Your input and comment are greatly appreciated. If you need additional information, please contact me at (301) 688-2970 or send an email to jdwill2@nsa.gov for additional information. Thank you for your interest.

Sincerely,

Jeffrey D. Williams

Jeffrey D. Williams
Director, Environmental Sustainability

Enclosure:
Draft EIS

APPENDIX E

NHPA SECTION 106 DOCUMENTATION

NATIONAL SECURITY AGENCY
CENTRAL SECURITY SERVICE
Fort George G. Meade, Maryland 20755

July 22, 2015

Elizabeth Hughes
Acting Director/State Historic Preservation Officer
Maryland Historical Trust
100 Community Place
Crownsville, MD 21032

RE: Environmental Impact Statement for the East Campus Integration Program, Fort Meade, Maryland, Section 106 Consultation Initiation

Dear Ms. Hughes,

The Department of Defense (DoD) proposes to continue integrating the National Security Agency (NSA) East Campus with the NSA Main Campus through development of operational complex and headquarters space in the northern portion of the East Campus and in the 9800 Troop Support Area of Fort George G. Meade (i.e., East Campus Integration Program [ECIP]). A Draft Environmental Impact Statement (EIS) is being prepared to address the proposal by the DoD for implementation of the ECIP, including the construction and operation of associated facilities for the NSA complex at Fort Meade and demolition of some existing facilities.

The National Security Agency/Central Security Service (NSA/CSS) is an intelligence agency within the DoD. It is responsible for the collection and analysis of foreign communications and foreign signals intelligence. For NSA/CSS to continue leading the Intelligence Community into the next 50 years with state-of-the-art technologies and productivity, its mission elements require new, centralized facilities and infrastructure.

Enclosed please find a MHT Project Review Form and the required attachments to initiate Section 106 consultation and review for this project under the National Historic Preservation Act of 1966, as amended. Should you have any questions or comments, please contact me by telephone at 301-688-2970, or email at jdwill2@nsa.gov.

Sincerely,

Jeffrey D. Williams

Jeffrey D. Williams
Director, Environmental Sustainability

Enclosures: MHT Project Review Form and Attachments

cc: Amanda Apple, Preservation Officer, Review and Compliance, MHT

PROJECT REVIEW FORM

Request for Comments from the Maryland Historical Trust/ MDSHPO on State and Federal Undertakings

MHT USE ONLY
Date Received: Log Number:

Project Name: EIS for the East Campus Integration Program (ECIP), National Security Agency
County: Anne Arundel

Primary Contact:

Contact Name: Jeff Williams, Director, Environmental Sustainability
Company/Agency: NSA
Mailing Address: 9800 Savage Road, Suite 6218
City: Fort Meade
State: Maryland
Zip: 20755
Email: jdwill2@nsa.gov
Phone Number: +1 (301) 688-2970
Ext.

Project Location:

Address: Fort George G. Meade
City/Vicinity: Fort Meade
Coordinates (if known): Latitude: 39.108724
Longitude: -76.771693
Waterway:

Project Description:

List federal and state sources of funding, permits, or other assistance (e.g. Bond Bill Loan of 2013, Chapter #; HUD/ CDBG; MDE/COE permit; etc.).	**Agency Type**	**Agency/Program/Permit Name**	**Project/Permit/Tracking Number (if applicable)**
	Federal	Department of Defense/National Security Agenc	

This project includes (check all applicable):
☒ New Construction ☒ Demolition ☐ Remodeling/Rehabilitation
☐ State or Federal Rehabilitation Tax Credits ☒ Excavation/Ground Disturbance ☐ Shoreline/Waterways/Wetlands
Other\Additional Description:

Known Historic Properties:

This project involves properties (check all applicable): ☐ Listed in the National Register ☐ Subject to an easement held by MHT
☐ Included in the Maryland Inventory of Historic Properties ☐ Designated historic by a local government
☒ Previously subject to archeological investigations
Property\District\Report Name: (McAloon et al. 1994; Hornum, et al. 1995; Hunter 1998

Attachments:

All attachments are required. Incomplete submittals may result in delays or be returned without comment.

☒ Aerial photograph or USGS Quad Map section with location and boundaries of project clearly marked.
☒ Project Description, Scope of Work, Site Plan, and\or Construction Drawings.
☒ Photographs (print or digital) showing the project site including images of all buildings and structures.
☒ Description of past and present land uses in project area (wooded, mined, developed, agricultural uses, etc).

MHT Determination:

☐ There are **NO HISTORIC PROPERTIES** in the area of potential effect
☐ The project will have **NO EFFECT** on historic properties
☐ The project will have **NO ADVERSE EFFECT** on historic properties
☐ The project will have **NO ADVERSE EFFECT WITH CONDITIONS**
☐ The project will have **ADVERSE EFFECTS** on historic properties
☐ **MHT REQUESTS ADDITIONAL INFORMATION**

MHT Reviewer: Date:

Submit printed copy of form and all attachments by mail to: Beth Cole, MHT, 100 Community Place, Crownsville, MD 21032

Revised 6/21/2013

Project Description

The Department of Defense (DoD) proposes to continue integrating the National Security Agency (NSA) East Campus with the NSA Main Campus through development of operational complex and headquarters space in the northern portion of the East Campus and in the 9800 Troop Support Area of Fort George G. Meade (Fort Meade) (see Figure 1). The Preferred Alternative for the Proposed Action includes implementation of the East Campus Integration Program (ECIP) entails construction and operation of new facilities for operations and headquarters space within the 150-acre ECIP project area and demolition of aged buildings and infrastructure. The ECIP project area, as shown in Figure 2, includes the locations being considered for development of operations and headquarters space; some parking facility location alternatives, and locations of buildings proposed for demolition are outside of the ECIP project area on NSA's Main Campus.

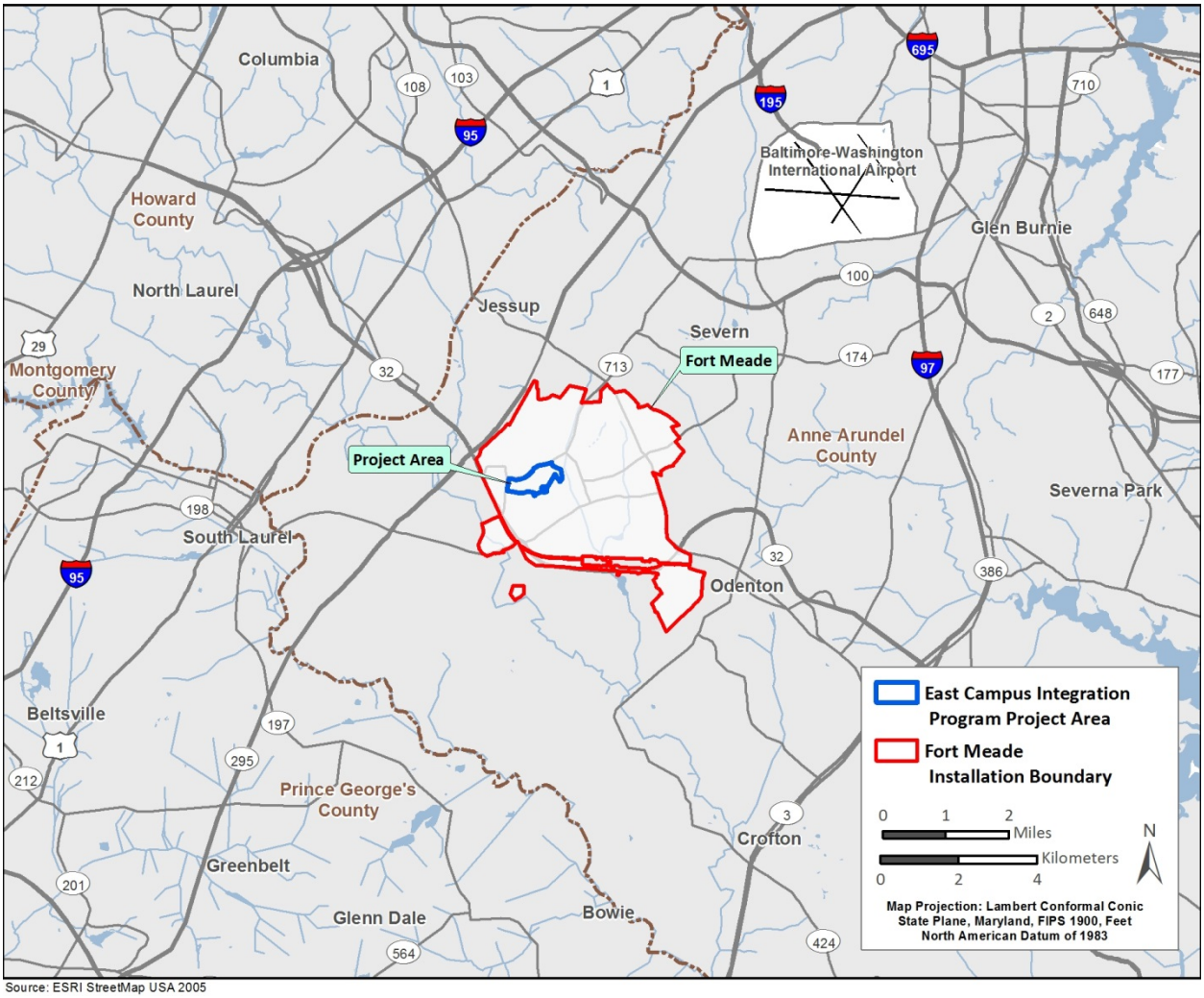
The ECIP consists of construction and operation of approximately 2.9 million ft^2 of new facilities for operations and headquarters space, and demolition of 1.9 million ft^2 of aged buildings and infrastructure. The NSA would consolidate mission elements, which would enable grouping services and support services across the NSA Campus based on function; facilitate a more collaborative environment and optimal adjacencies; and provide administrative capacity for an increase of 7,200 personnel currently located offsite. The Proposed Action would also consist of infrastructure supporting the proposed operational complex and headquarters space, including electrical substation, emergency generator capacity providing 121 megawatts of electricity; life-safety generators; building heating systems; utilities, including water, natural gas, and communications services; transportation infrastructure, including roads, parking structures, and sidewalks; and stormwater management facilities. Use of multi-level parking facilities were considered in lieu of surface parking.

The ECIP takes into account several factors, including mission requirements, the condition of current facilities (both on and off the NSA's Campus at Fort Meade), space planning, land availability, utility requirements, traffic and parking, and environmental impacts. A key factor is the mission co-location to provide a more efficient and effective work environment for mission-critical functions of the entire Intelligence Community.

The 2013 *NSA-Washington (NSAW) Facilities Master Plan* identifies NSA development in the northern portion of the East Campus and the 9800 Troop Support Area (i.e., ECIP project area) to create a contiguous NSA Campus that unites existing facilities with new structures. Additionally, the 2013 *Long Range Component of the Fort Meade Real Property Master Plan* designates both the East Campus and the 9800 Troop Support Area as part of the NSA expansion, and depicts both areas as part of the NSA Exclusive Use Area in the Future Land Use Plan. NSA use of these areas supports the 'inside-out' strategy of locating high-security functions at the center of the installation to meet DoD physical security requirements.

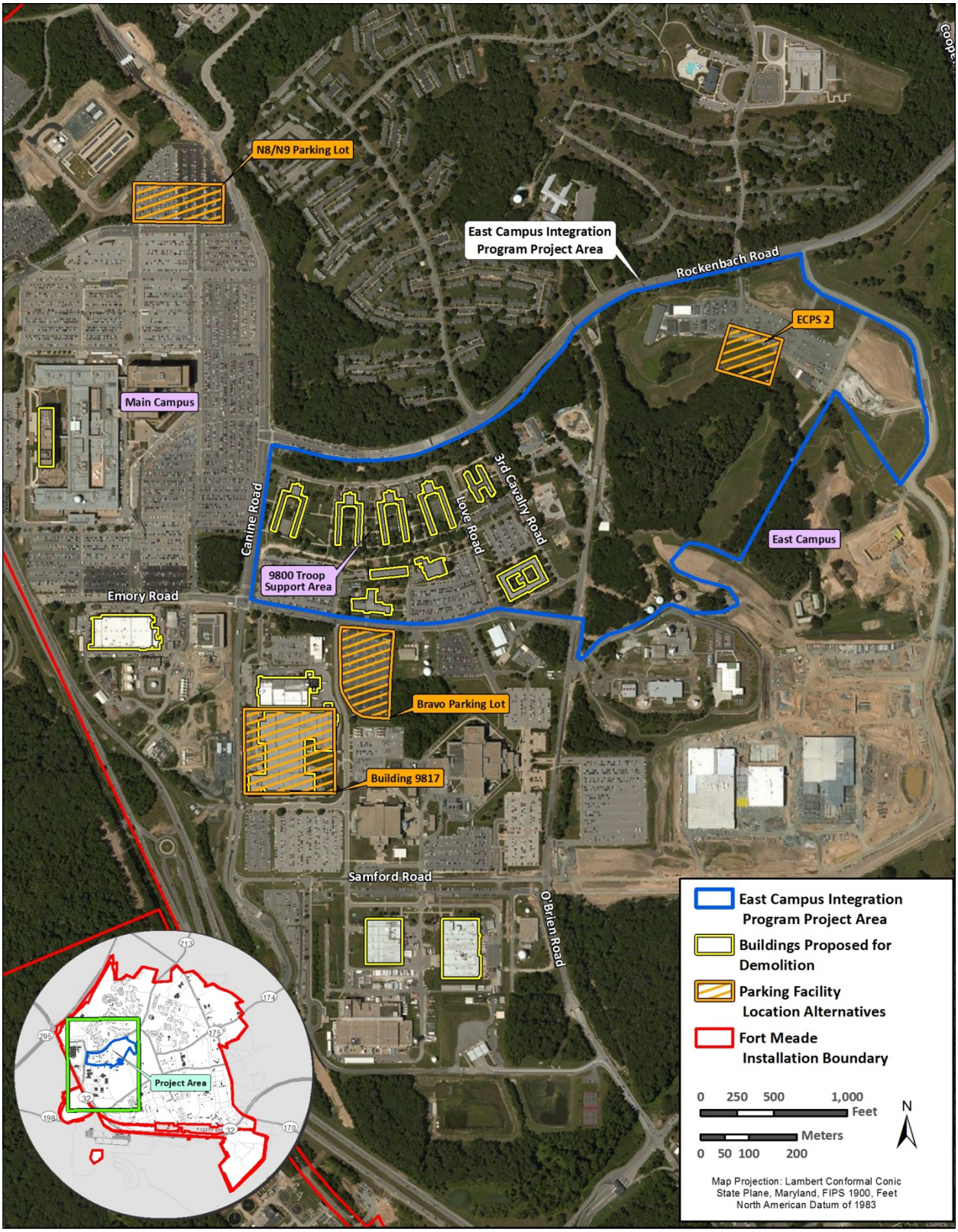
The DoD proposes to construct the ECIP over a period of approximately 10 years (fiscal year [FY] 2019 to 2029).

Figure 1. Location of Fort Meade



Source: ESRI StreetMap USA 2005

Figure 2. Proposed Action and Surrounding Areas



Principal Facilities

The DoD proposes to construct and operate approximately 2,880,000 ft^2 of operational complex and headquarters space consisting of five buildings. These facilities would consist of East Campus Building (ECB) 3, ECB 4, and ECB 5, each with approximately 800,000 ft^2, and two smaller buildings of 330,000 ft^2 and 150,000 ft^2. The buildings would include an open environment conducive to both physical and virtual collaboration; special purpose space, including support and enabler areas (e.g., lobbies, main reception, security); and supporting electrical, mechanical, fire protection/suppression, and security components.

Construction of the proposed buildings and the increase of personnel would require additional campus parking. The NSA Campus has limited developable land; therefore, the use of multi-level (i.e., at least four levels) parking structures are considered in lieu of surface parking. Parking lots are fully used most days, including overflow parking, so the net loss of any parking (i.e., at the 9800 Troop Support Area) would require replacement parking. The exact quantity, size, and capacity of parking structures would not be known until the detailed design process begins.

Because the development of the ECIP is in the planning stages, no detailed engineering or design work for proposed facilities has yet been accomplished. Therefore, the EIS does not consider various design factors in detail and makes general assumptions about the proposed development. The exact space requirements would not be known until the detailed design process begins.

As part of the Proposed Action, DoD would demolish approximately 1.9 million ft^2 of aged buildings and infrastructure on the NSA Main Campus (1,291,206 ft^2) and the 9800 Troop Support Area (592,269 ft^2) (Table 1). All nine buildings in the 9800 Troop Support Area would be demolished to provide room for the proposed facilities and supporting infrastructure. These buildings include Buildings 9801, 9802, 9803, 9804, 9805, 9810, 9827, 9828, and 9829. After construction of each of the proposed facilities on the East Campus and 9800 Troop Support Area are completed and personnel transferred to the facilities, Buildings 9703, 9705, 9800A, 9808, 9814, and 9817 on the NSA Main Campus would be vacated and demolished. Three surface parking lots in the 9800 Troop Support Area would be demolished to make room for the proposed buildings under the ECIP.

Table 1. Buildings Proposed for Demolition Under the Proposed Action

Building #	Year Constructed
Buildings in the ECIP Project Area	
9801	1954
9802	1954
9803	1954
9804	1954
9805	1954
9810	1954

Building #	Year Constructed
9827	1954
9828	1973
9829	1972
Buildings outside of the ECIP Project Area (on the NSA Main Campus)	
9800A	1968
9817	1968
9814	1965
9703	1973
9705	1976
9808	1957

Operational/Headquarters Complex Location Alternatives

The Preferred Alternative for the Proposed Action considers continued development, expansion, and integration of the NSA Campus into the East Campus and 9800 Troop Support Area, and the redevelopment of portions of the NSA Main Campus.

In the event that the 9800 Troop Support Area was not available in the future for the ECIP, alternative sites outside of Fort Meade are being considered to allow for planning flexibility. Under these alternatives, Building 9800A on the NSA Main Campus and all nine buildings in the 9800 Troop Support Area would not be demolished; and no proposed facilities would be constructed in the 9800 Troop Support Area. These alternatives are assumed to require space sufficient for 4,400 personnel that would relocate from space vacated by demolition of Buildings 9703, 9705, 9808, 9814, and 9817 (778,369 ft^2) on the NSA Main Campus and terminating leases at some leased Intelligence Community space in the Baltimore-Washington metropolitan area. These alternatives are located at National Business Park and Annapolis Junction Business Park, both located west of Fort Meade and the Baltimore-Washington Parkway (Figure 3). Construction of ECB 3, smaller buildings, and associated parking facilities would still occur on the northern portion of the East Campus under these alternatives.

Personnel and functions proposed to be located in the ECIP project area would instead occur in leased administrative facilities at either National Business Park or Annapolis Junction Business Park. Both alternatives would involve leasing existing or newly constructed UFC-qualified buildings of up to 1 million ft^2 of space. Security fencing at a 300-foot setback from buildings would be required. The leased facilities would already have been constructed. Under these alternatives, a total of 21 MW of onsite emergency power generation would be required, and life-safety generators would also be installed onsite. Any environmental requirements and permits would have been the responsibility of the facility owners, and are assumed to have been complied with and obtained prior to formal leasing arrangements.

Parking Facility Location Alternatives

The Proposed Action would require additional parking to accommodate the increase of personnel on the East Campus. The existing NSA Campus has limited developable land; therefore, multi-level (i.e., at least four levels) parking structures are being considered in lieu of surface parking.

The amount of parking that would be constructed is based on the assumed capacity required for full occupancy of the proposed buildings. The exact space requirements will become more refined as the detailed design process progresses. Reasonable parking facility location alternatives should have sufficient square footage to accommodate required project components, including security standoff-distances, avoid disturbing environmentally sensitive areas, minimize impacts on adjacent land uses, minimize the distance employees would have to walk, and be cost effective.

Four parking location alternatives were identified as meeting these criteria (see Figure 2). Depending on which operational/headquarters location alternatives would be implemented, at least three of the parking facility location alternatives would be constructed if the ECIP is fully implemented. At least one of the parking facility location alternatives would be constructed if off-post alternative(s) were implemented.

Following are the location alternatives for the proposed parking facilities for the ECIP.

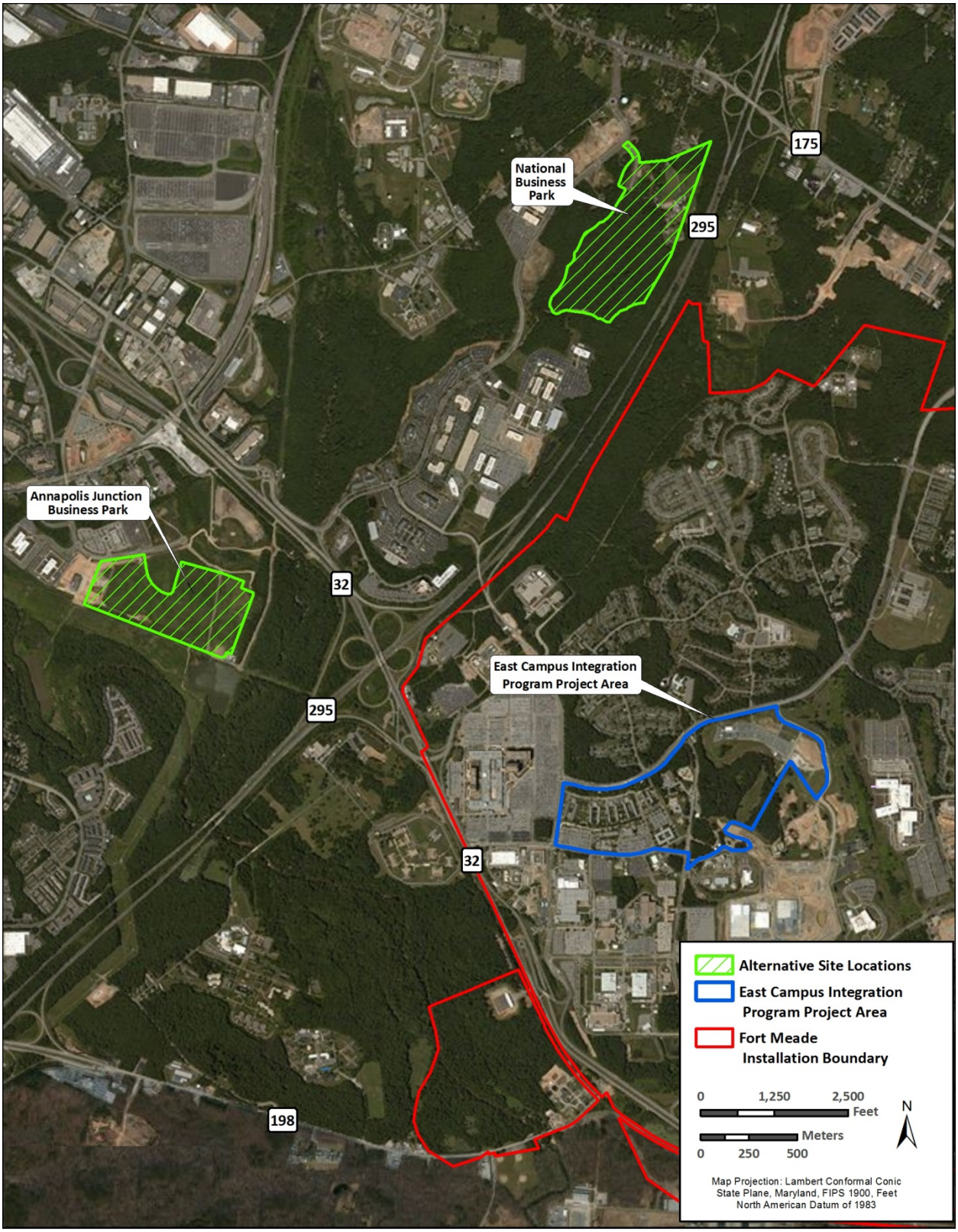
East Campus Parking Structure 2. The East Campus Parking Structure (ECPS) 2 would be located in the northeastern portion of the East Campus between Rockenbach Road and Cyber Road, which is a proposed new road that would generally run west-east through the ECIP project area and be south of and parallel to Rockenbach Road. The area proposed for ECPS 2 is currently being used as a staging area for ongoing construction in the southern portion of the East Campus.

Bravo Parking Lot. The Bravo parking lot is a 4.5-acre, surface parking lot on the NSA Main Campus. It is located south of the 9800 Troop Support Area at the southeastern corner of Emory Road and Wenger Road. The Bravo parking lot would be demolished, and a multi-level parking facility would be constructed in its place.

N8/N9 Parking Lot. The N8/N9 parking lot is a 7.1-acre surface parking lot on the NSA Main Campus. Approximately 3.7 acres of the lot could be redeveloped as a parking facility. It is located northwest of the intersection of Canine Road (access point to Maryland State Route [MD] 32) and Connector Road (access point to the Baltimore-Washington Parkway).

Building 9817. Building 9817 is proposed for demolition as part of the Proposed Action. It is located on the NSA Main Campus, on the northern side of Erskine Road and bordered by Canine Road to the west and Wenger Road to the east. Following demolition of Building 9817, a parking facility could be constructed on the 8.2-acre footprint.

Figure 3. Proposed Action Location Alternatives Outside of Fort Meade



Existing Conditions – Land Use

FORT MEADE

The NSA Campus, including the East Campus, is on Fort Meade. Fort Meade encompasses 5,131 acres in the northwestern corner of Anne Arundel County, Maryland. The post is primarily composed of administration, intelligence operations, instructional institutions, family housing, and support facilities. Fort Meade is bound by the Baltimore-Washington Parkway to the northwest, Annapolis Road (MD 175) to the northeast, and Patuxent Freeway (MD 32) to the south and west. Other significant nearby transportation arteries include U.S. Route 1 and Interstate (I)-95, which run parallel to and just to the west of the Baltimore-Washington Parkway. I-97, which connects Baltimore and Annapolis, is several miles east of Fort Meade.

ECIP PROJECT AREA

The ECIP project area includes the northern portion of the East Campus and the 9800 Troop Support Area (Figure 2). Additionally, three parking facility alternative sites and several buildings proposed for demolition under the Proposed Action are on the NSA Main Campus.

The 240-acre NSA East Campus is east of the NSA Main Campus and generally bordered by O'Brien Road to the west, Rockenbach Road to the north, Midway Branch to the east, and an undeveloped road extending east from Samford Road to the south. The northern portion of the East Campus is approximately 84 acres. This area is currently occupied by a staging area used for development of the southern portion of the East Campus.

The 49-acre 9800 Troop Support Area belongs to Fort Meade and is not currently part of the NSA Main or East campuses. The 9800 Troop Support Area includes barracks (some of which are currently being used for administrative functions), a dining facility, fitness center, post office, and support facilities, including those used to support NSA operations. An approximately 18-acre triangular site east of the 9800 Troop Support Area and west of the northern portion of the East Campus is also part of the ECIP project area. This area contains the Children's World Learning Center.

The NSA Main Campus includes administrative, laboratory, warehouse, and utility support facilities. Administrative uses are located throughout the campus with the main support/utility area located south of the 9800 Troop Support Area.

Land use within the ECIP project area and the NSA Main Campus, including the locations of parking facility alternatives and buildings proposed for demolition, is characterized as Professional/Institutional. The ECIP project area is bordered by Fort Meade Residential (Midway Common military family housing neighborhood) and Community (Argonne Hills Chapel Center) land uses to the north, and Professional/Institutional use (Defense Information Systems Agency) to the east on Fort Meade.

The East Campus is currently the NSA's primary development area on Fort Meade. Development of the East Campus provides an opportunity for the NSA to reorganize its campus structure by grouping major mission-supporting activities onsite.

The 2013 *NSAW Facilities Master Plan* identifies development by the NSA in the northern portion of the East Campus and the 9800 Troop Support Area (i.e., ECIP project area) in order to create a contiguous NSA Campus that unites existing facilities with new structures. Additionally, the 2013 *Long Range Component of the Fort Meade Real Property Master Plan* designates both the East Campus and the 9800 Troop Support Area as part of the NSA expansion, and depicts both areas as part of the NSA Exclusive Use Area in the Future Land Use Plan.

Existing Conditions – Cultural Resources

FORT MEADE

Originally known as Camp Meade, Fort Meade was established in 1917 as one of 32 military cantonments created by the Army after the United States' entry into World War I. The U.S. government commandeered 4,000 acres of land and purchased additional land bringing the total acreage to 9,349 acres. This land was typically agricultural in use or wooded. The main post at Camp Meade was completed by October 1918 at a cost of more than $18 million. The Camp included the 79th Infantry Division, an Officer's Training School, a Remount Depot, Ordnance Supply School, and the 154th Depot Brigade, which received classified training and assigned incoming trainees. More than 103,000 men were trained at Camp Meade during World War I. After the war, the Camp served as a demobilization center for troops returning from overseas service. More than 96,000 men were mustered out of service through Camp Meade.

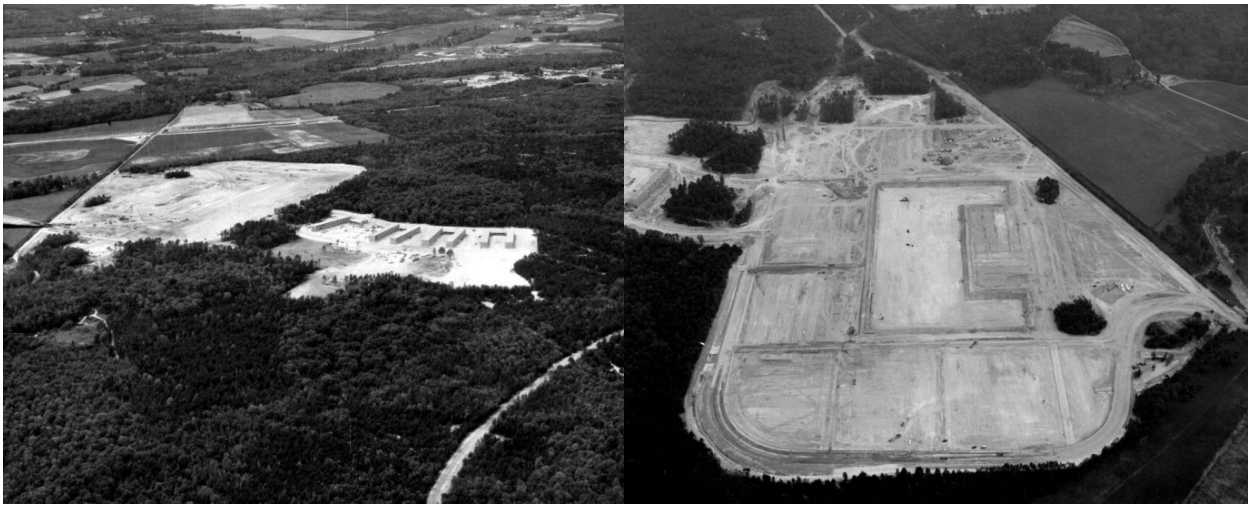
Camp Meade was designated a permanent installation in 1928 and was initially named Fort Leonard Wood. It was renamed Fort George G. Meade in 1929. During the inter-war years, Fort Meade was used as a training facility and the home of the Army's tank training school until 1932 when the training was transferred to Fort Benning. By 1940, the post contained nearly 500 temporary and permanent buildings. An $8 million building campaign began in 1940 to add additional training areas and expanded the post to 13,500 acres.

During World War II, Fort Meade saw increased construction related to the Army's mobilization efforts. The post served as a troop replacement depot and a prisoner of war camp for German and Italian prisoners. More than 1.5 million men were shipped overseas from Fort Meade. At the end of the war, Fort Meade served as a separation center for troops being discharged from military service and processed over 400,000 men back to civilian life. In total, more than 3.5 million men passed through Fort Meade during World War II.

During the Cold War Era, Fort Meade became the first military installation to employ the Nike-Ajax air defense unit. The air defense unit became operational under the 36th Antiaircraft Artillery Missile Battalion, which, as part of the 35th Antiaircraft Brigade, was responsible for the defense of Washington, DC. The NSA was established in 1952 by the National Security Act of 1947 and EO 10421, *Providing for the Physical Security of Facilities Important to the National Defense*. By 1953, Fort Meade was selected to house the headquarters of the NSA. As early as January 1955, interim operations were established by NSA at Fort Meade in existing buildings (see Figure 4). By 1957, construction of Building 9800 was complete and the NSA permanently moved to Fort Meade. The NSA has continued to grow and over the years has constructed new

buildings on the NSA Campus at Fort Meade, and is currently constructing facilities in the southern portion of the East Campus.

Figure 4. Aerial Photographs Showing the Future Site of the NSA Campus at Fort Meade, ca. 1955 (NSA 1012)



The Area of Potential Effect (APE) for the Preferred Alternative is indicated in Figure 5 and 6. As Section 106 consultation proceeds, the NSA will identify other interested parties, identify potential historic properties, and continue to follow the Section 106 consultation process as outlined in 36 Code of Federal Regulations (CFR) 800.

Two resources listed in the National Register of Historic Places (NRHP) are located just northwest of the ECIP project area. The Baltimore-Washington Parkway (AA-5) is a historic district that was listed in 1991. It is located approximately 0.5 mile northwest of Building 9800A. Grassland (AA-94) is an antebellum plantation listed in the NRHP in 1984, and located approximately 0.75 mile northwest of Building 9800A on the south side of Hercules Road.

ECIP PROJECT AREA

Historic and cultural resources at Fort Meade are detailed within the post's 2011 Integrated Cultural Resources Management Plan. Information on previous cultural resources investigations and their results are specified in detail in the Integrated Cultural Resources Management Plan and can be referred to for additional information.

Architectural and Archaeological Resources. Previous architectural investigations identified and evaluated a number of buildings located on Fort Meade, including the NSA Campus, which were built prior to 1960 for listing in the NRHP. Fort Meade has five historic properties, including the Fort Meade Historic District (AA-34), the water treatment plant (Building 8688), and three bridges (Llewellyn Avenue Bridge, Redwood Avenue Bridge, and Leonard Wood Avenue Bridge) constructed during World War II by prisoners of war. All are eligible for listing in the NRHP. None of the previously identified historic properties at Fort Meade are located within the APE.

The entirety of Fort Meade has been investigated for the presence of archaeological resources. There are a total of 41 known archaeological sites on Fort Meade; only one of these sites has

been determined eligible for listing in the NRHP (18AN1240). Site 18AN1240 is a Late Archaic Period base camp and is not located within the APE.

Further, the 1994 Cultural Resources Management Plan for Fort Meade included an archaeological predictive model completed for the entire installation, inclusive of the NSA Campus. The model was based on the results of a pedestrian survey, review of cartographic and archival materials, and limited field testing. Areas of previous disturbance were defined through a review of construction plans, map data, and master planning documents; the delineation of disturbance areas was then checked through pedestrian reconnaissance and vegetation studies. In this model, the NSA Campus was depicted almost entirely as previously disturbed. The exception to this was a narrow strip of land on the northwestern edge of the campus that was designated as “Disturbed High Potential” due to its location along a channelized stream. As identified in the 2006 Fort Meade Integrated Cultural Resources Management Plan, subsequent testing and investigations in 1995 and 1998 provided negative results and identified extensive disturbance. As a result, no further archaeological investigation should be required for the NSA Campus.

Resources of Traditional, Religious, or Cultural Significance to Native American Tribes. At present, no known traditional cultural properties or American Indian sacred sites are known to occur within or near the ECIP project area or at Fort Meade. While there are no federally recognized Indian tribes present in Maryland, seven federally recognized tribes elsewhere in the United States are believed to have a historical affiliation with the land occupied by Fort Meade.

NATIONAL BUSINESS PARK

A review of the files at the MHT indicates there is one historic property located at the National Business Park site, the Clark/Vogel House (AA-160), which was determined eligible for listing in the NRHP in 2008. The National Business Park is adjacent to the NRHP-listed Baltimore-Washington Parkway (AA-5), which was listed in the NRHP as a historic district in 1991. The site is also located directly south of the Jessup Survey District (AA-991), which is listed in the Maryland Inventory of Historic Properties.

ANNAPOLIS JUNCTION BUSINESS PARK

A review of the files at the MHT indicates there are no historic properties located at the Annapolis Junction Business Park site. However, the site is located directly south of the Annapolis Junction Survey District (AA-925), which is listed in the Maryland Inventory of Historic Properties. The Annapolis Junction Business Park is approximately 0.3 mile west of the Baltimore-Washington Parkway (AA-5), which is listed in the NRHP.

Project Location

Figure 5. Project Location and APE

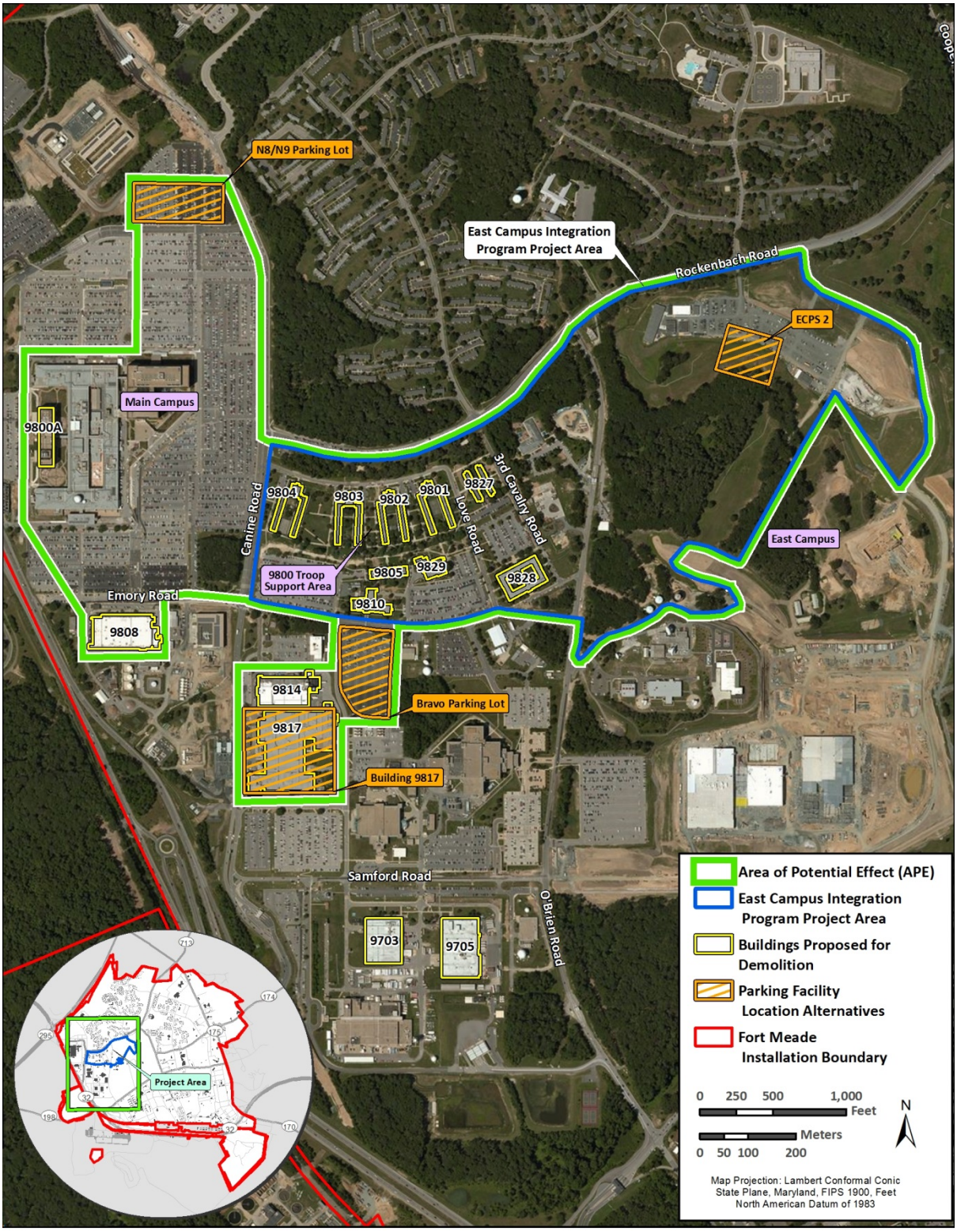
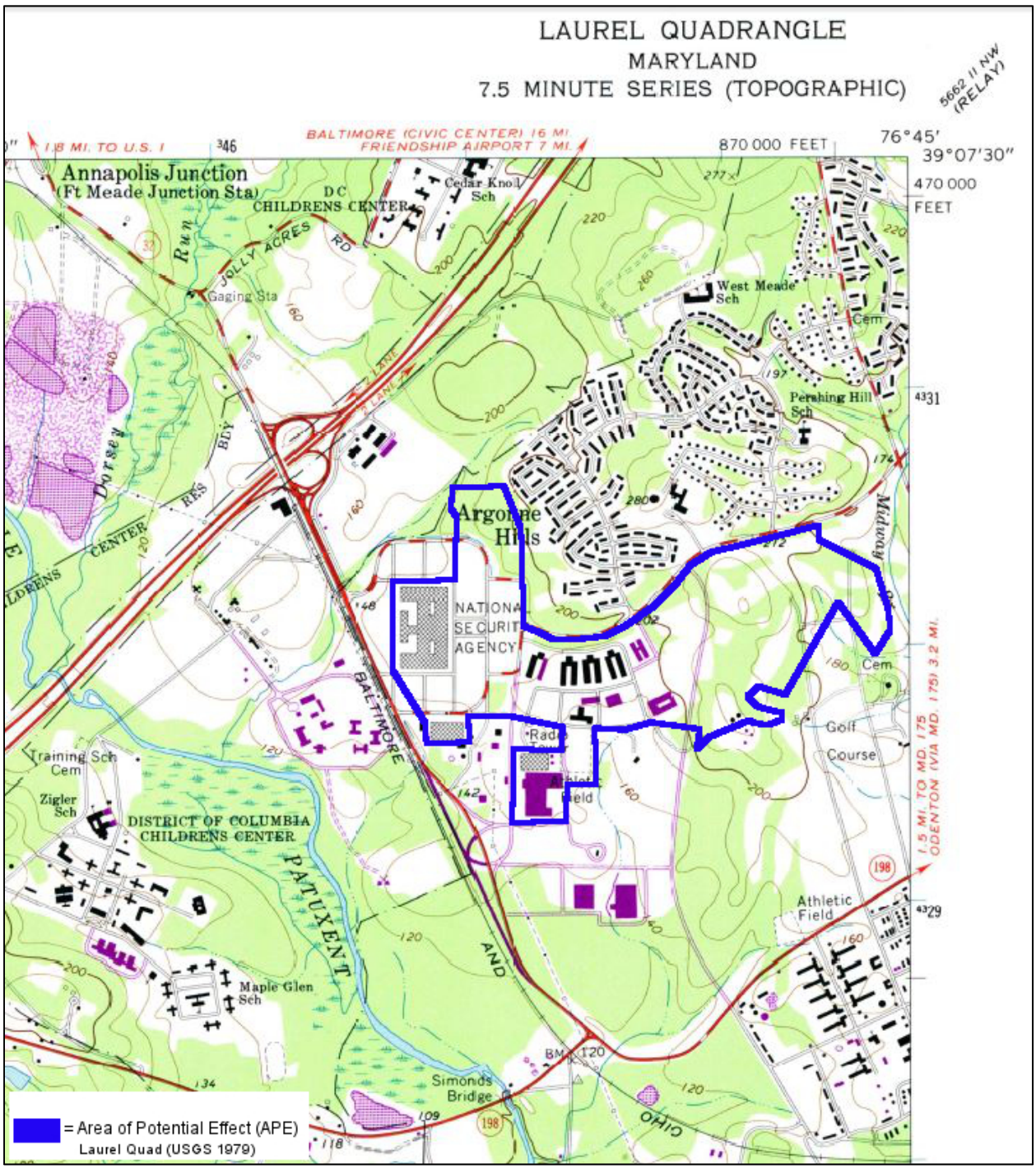


Figure 6. APE on Topographic Map (USGS 1979)



Maryland Department of Planning
Maryland Historical Trust

Larry Hogan, Governor
Boyd Rutherford, Lt. Governor

David R. Craig, Secretary
Wendi W. Peters, Deputy Secretary

September 22, 2015

Jeff Williams, Director
NSA, Environmental Sustainability
9800 Savage Road, Suite 6218
Fort Meade, MD 20755

Re: EIS – NSA East Campus Integration Program
Historic Preservation Review
Anne Arundel County, Maryland

Dear Mr. Williams,

The Maryland Historical Trust (Trust), a division of the Maryland Department of Planning, received notice of the above-referenced undertaking on July 23, 2015. We have reviewed the provided information and are writing to offer our initial comments and request additional documentation necessary to evaluate the project's effect on historic properties in accordance with Section 106 of the National Historic Preservation Act and Sections 5A-325 and 5A-326 of the Annotated Code of Maryland, as appropriate.

Project Description: According to information included with the submittal, the East Campus Integration Program entails the construction of new facilities integrating the National Security Agency East Campus with the NSA Main Campus and the demolition of existing buildings and infrastructure.

Identification of Historic Properties: The Maryland Inventory of Historic Properties does not contain any information about the history or condition of the **Preferred Alternative** site. Depending on the significance and integrity, such a property may be eligible for listing in the National Register of Historic Places. Because the potentially historic facility will be directly affected by the proposed undertaking, the property must be evaluated for National Register eligibility. The Department of Defense should take the following steps to identify, evaluate, and consider historic properties.

- Determine the National Register eligibility of properties within the APE. This will require the preparation of Determination of Eligibility (DOE) forms.
- Determine the effect of the project on historic properties and submit all relevant documentation to the Trust for review and comment.

DOE forms must contain sufficient description of buildings, structures, areas of land use, and the overall landscape of the property to evaluate significance and integrity under National Register Criterion C. This should include information regarding feature age, form, stylistic elements, methods of construction, materials, and condition. Forms must also contain sufficient historical context to evaluate the property under National Register Criteria A and B. This should include information derived from historic maps and land records; examination of the existing buildings, structures, and landscape as historical sources; and relevant information from existing reports and other secondary sources. All DOE forms must be completed by a qualified architectural historian,

preservationist, or historian and be accompanied by supporting materials as described in *General Guidelines for Compliance-Generated Determinations of Eligibility* and *Standards and Guidelines for Architectural and Historical Investigations in Maryland.* These documents and other information about completing a DOE form may be found on the Trust's website, http://mht.maryland.gov/projectreview_DOEGuide.shtml .

It is also important to note that the mid-19th century Clark/Vogel House (AA-760) is located within the eastern portion of the **National Business Park Alternative** Location for the project. This historic property was determined to be eligible for listing in the National Register of Historic Places in 2009. In the event that the Department of Defense must consider this particular alternative site for the expansion and integration of the NSA Campus, we would need to be provided with the materials listed below so that we could assess the project's potential effects on historic properties and determine what cultural resources investigations, if any, will be necessary to identify and evaluate historic properties within the project's Area of Potential Effect. We would need to be provided with:

- Drawings and/or a written scope of work illustrating any plans to construct, demolish, or remodel buildings or other structures.
- Site plans illustrating the location and boundaries of all proposed ground-disturbing activities and impact areas that will be involved in the undertaking.
- Photographs (print or digital) of the project site including images of *all* buildings and structures that may be affected by the project.

Upon our review of these plans and photographs, we would be able to provide informed recommendations regarding what, if any, cultural resources investigations (including archeological survey work) will be necessary prior to construction within the National Business Park location. Phase I archeological investigations may, in fact, be necessary, depending upon the location and extent of the proposed impact areas in relation to the mid-19th century Clark/Vogel House. All recommended survey work would need to be carried out by a qualified professional archeologist and performed in accordance with the *Standards and Guidelines for Archeological Investigations in Maryland* (Shaffer and Cole 1994).

Thank you for providing us with this initial opportunity to comment. We look forward to receiving the requested information and working with you to successfully complete the historic preservation requirements for the proposed undertaking. If you have questions or require assistance, please do not hesitate to contact me (regarding archeology) at dixie.henry@maryland.gov / 410-514-7638 or Amanda Apple (regarding buildings, structures, and cultural landscapes) at amanda.apple@maryland.gov.

Sincerely,

Dixie Henry

Dixie L. Henry, Ph.D.
Preservation Officer
Maryland Historical Trust

DLH \ ARA \ 201502992
CC: Jerald Glodek (Fort Meade)

NATIONAL SECURITY AGENCY
CENTRAL SECURITY SERVICE
Fort George G. Meade, Maryland 20755

November 10, 2015

Elizabeth Hughes
Director/State Historic Preservation Officer
Maryland Historical Trust
100 Community Place
Crownsville, MD 21032

RE: Environmental Impact Statement for the East Campus Integration Program (ECIP), Fort Meade, Maryland, Section 106 Consultation, Identification of Historic Properties, Assessment of Effect, Consulting Parties

Dear Ms. Hughes,

In response to MHT's letter dated September 22, 2015, and in accordance with Section 106 of the National Historic Preservation Act and Sections 5A-325 and 5A-326 of the Annotated Code of Maryland, as appropriate, enclosed please find a brief summary on the Section 106 efforts to date for the ECIP, which includes a revised map of the Area of Potential Effect (APE), the identification of historic properties, survey methods, an assessment of project effects, and a list of potential consulting parties for the Section 106 process. Also included are Regular Determination of Eligibility Forms for the 17 resources within the APE.

The architectural survey and evaluation of resources in the APE determined that one resource, Building 9800, is eligible for listing in the National Register of Historic Places (NRHP) under Criterion A. NSA seeks your concurrence on our finding that the ECIP will have no adverse effect on historic properties.

Should you have any questions or comments, please contact me by telephone at 301-688-2970, or email at jdwill2@nsa.gov.

Sincerely,

Jeffrey D. Williams

Jeffrey D. Williams
Director, Environmental Sustainability

Enclosures: Summary of Section 106 process, Determinations of Eligibility (Regular DOE Forms) and associated documentation for 16 resources

cc: Dixie Henry, Preservation Officer, Review and Compliance, MHT
Amanda Apple, Preservation Officer, Review and Compliance, MHT
Jerald Glodek, Fort Meade

Project Information

The Department of Defense (DoD) proposes to continue to integrate the National Security Agency (NSA) East Campus with the NSA Main Campus through development of operational complex and headquarters space in the northern portion of the East Campus and in the 9800 Troop Support Area of Fort George G. Meade (Fort Meade). Implementation of the East Campus Integration Program (ECIP) entails construction and operation of new facilities for operations and headquarters space within the 150-acre ECIP project area. The ECIP project area, as shown in Figure 1, includes the locations being considered for development of operations and headquarters space, some parking facility location alternatives, and locations of buildings proposed for demolition that are outside of the ECIP project area on NSA's main campus. The ECIP consists of construction and operation of approximately 2.9 million square feet of new facilities for operations and headquarters space, and demolition of 1.9 million square feet of buildings and infrastructure (Table 1). The DoD proposes to construct the ECIP over a period of approximately 10 years (FY 2019 to 2029).

All nine buildings in the 9800 Troop Support Area would be demolished to provide room for the proposed facilities and supporting infrastructure. These buildings include Buildings 9801, 9802, 9803, 9804, 9805, 9810, 9827, 9828, and 9829. After construction of each of the proposed facilities on the East Campus and 9800 Troop Support Area are completed and personnel transferred to the facilities, Buildings 9703, 9705, 9800A, 9808, 9814, and 9817 on the NSA Main Campus would be vacated and demolished. Three surface parking lots in the 9800 Troop Support Area would be demolished to make room for the proposed buildings under the ECIP.

Table 1. Buildings Proposed for Demolition under the Preferred Alternative

Building #	Year Constructed
Buildings in the ECIP Project Area	
9801	1954
9802	1954
9803	1954
9804	1954
9805	1954
9810	1954
9827	1954
9828	1973
9829	1972
Buildings outside of the ECIP Project Area (on the NSA Main Campus)	
9800A	1968
9817	1968
9814	1965

Building #	Year Constructed
9703	1973
9705	1976
9808	1957

Area of Potential of Effect

The Area of Potential Effect (APE) is defined as the geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties, if any such properties exist. The APE for the ECIP is shown in Figure 2 and includes all portions of the project area that might be affected by the undertaking.

Cultural Resources Survey and Evaluation

NSA contracted with HDR, Inc. to conduct an architectural survey and National Register of Historic Places (NRHP) evaluation of resources within the APE. The survey and evaluation were conducted by Ms. Jeanne Barnes and Mr. Paul Weishar, of HDR. Both meet the Secretary of the Interior's *Professional Qualification Standards* for architectural history; Ms. Barnes also meets the requirements for history.

HDR reviewed existing information on cultural resources historic properties, including a review of files at MHT to identify previously documented historic properties. Historic and cultural resources at Fort Meade are detailed within the installation's 2011 Integrated Cultural Resources Management Plan, which provided additional information on the project area. This search revealed that there were no previously identified historic properties within the NSA Campus or APE. Previous archaeological surveys and predictive models indicated the NSA Campus is almost entirely disturbed with little to no potential for archaeological resources and no further archaeological investigation should be required for the NSA Campus or APE.

Archival materials were gathered through the Fort Meade Department of Public Works, who provided building plans and Form 2877s that provided information on building construction and improvements over time. Additional information and historic photos were gathered from NSA and Fort Meade.

In accordance with Section 106 (36 CFR 800.4), Ms. Barnes conducted field work at NSA in June 2015. She was accompanied by Mr. Jeffrey Williams, Director of Environmental Sustainability and an official NSA photographer. NSA provided digital photographs of the buildings that were taken in June 2015 and October 2015. Because the project will be constructed through 2029, all resources constructed in 1979 or earlier were surveyed and evaluated. Building 9800C/D, built in 1986, was also evaluated for NRHP listing under Criteria Consideration G. A total of 17 buildings were surveyed and evaluated for NRHP listing.

Figure 1. Project Area

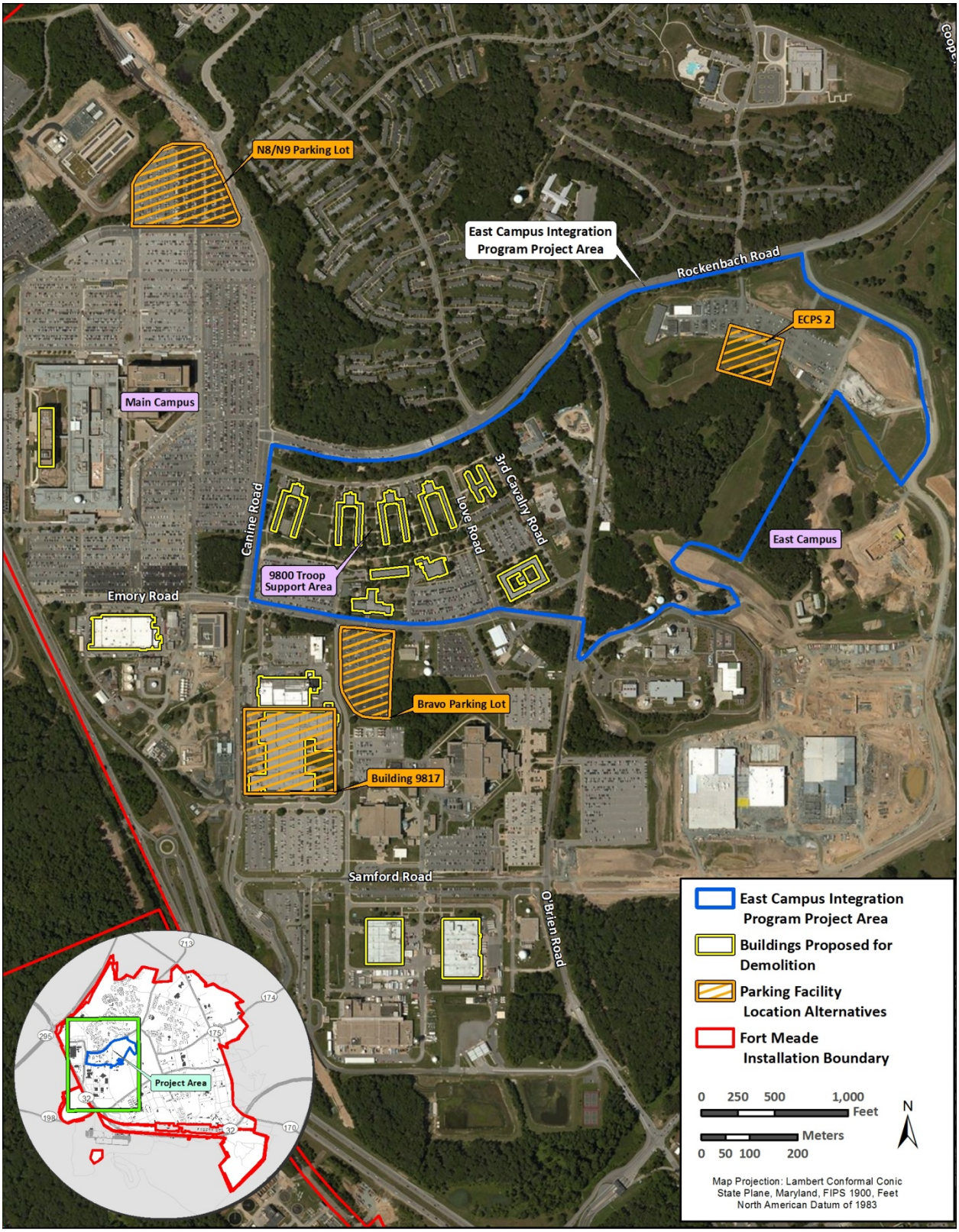
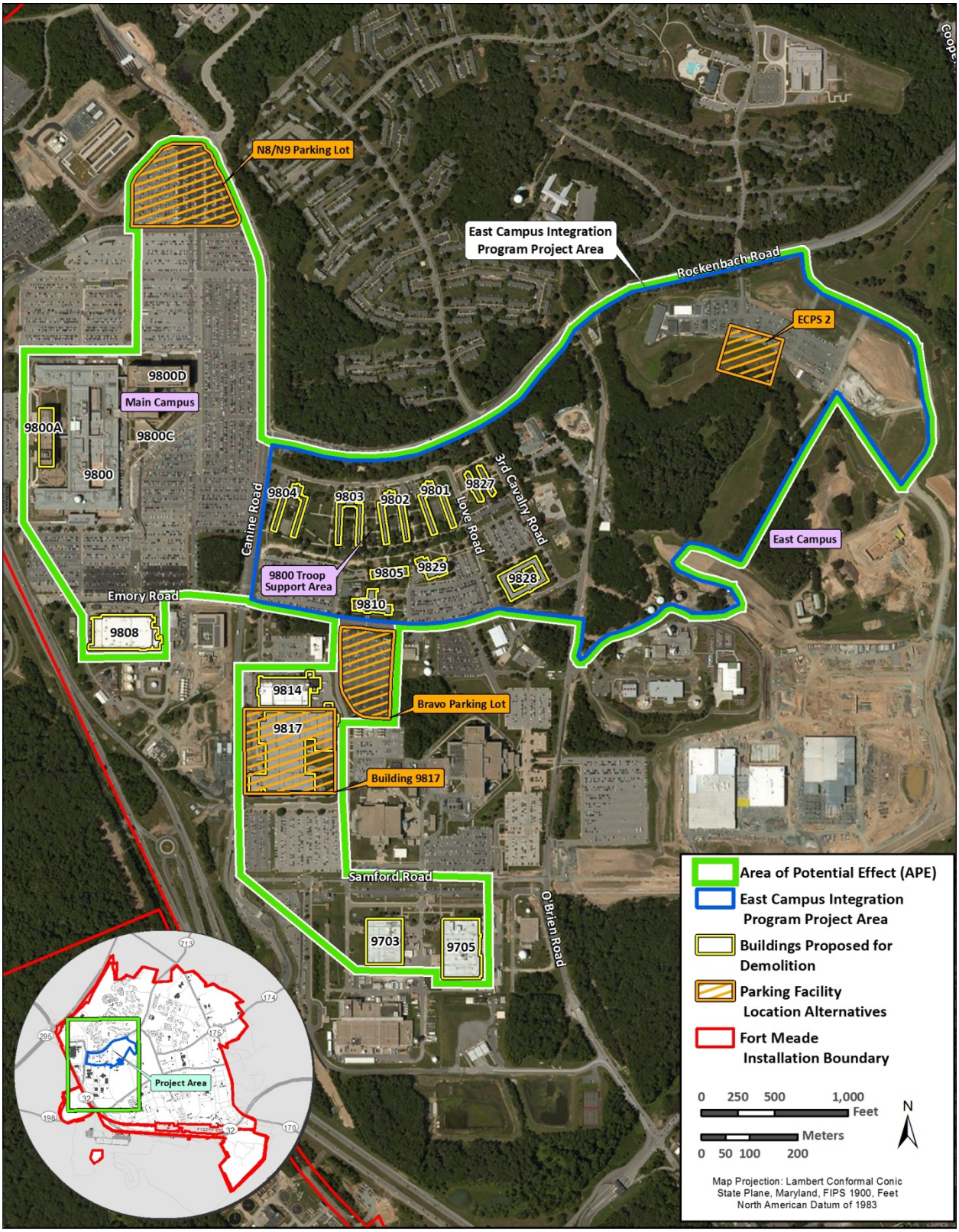


Figure 2. ECIP Area of Potential Effect (APE)



Ms. Barnes prepared a historic context of NSA and its campus in which to evaluate the buildings. Documents publicly released by NSA and an institutional history of NSA provided a wealth of information. Other historic contexts were also consulted, including *Army Unaccompanied Personnel Housing (UPH) Historic Context, 1946-1989* (Goodwin & Associates 2003), *Air Force and Navy Unaccompanied Personnel Housing During the Cold War Era (1946-1989)* (Goodwin & Associates 2011), *Historic Context for Evaluating Mid-Century Modern Military Buildings* (Hampton 2012), and *A Guide to Architecture and Engineering Firms of the Cold War Era* (Moore 2010).

Of the 17 resources surveyed, only one, Building 9800, was recommended eligible for listing in the NRHP (Table 2). Building 9800 is recommended eligible for listing in the NRHP under Criterion A. It was completed in 1957 and was the first purpose-built operations building constructed for NSA's campus and served as the first permanent home of the NSA. Plans for the building began in 1951, even before the NSA was officially established in 1952 and reflects the nation's Cold War-era consolidation and expansion of U.S. intelligence agencies. Building 9800 reflects the growth of post-war and Cold War-era intelligence gathering and the importance placed on COMINT and SIGINT activities.

Table 2. NRHP Eligibility Evaluations of Surveyed Resources

Building #	Year Constructed	NRHP Eligibility Evaluation
9800	1957	**Eligible**
9800A	1968	Not eligible
9801	1954	Not eligible
9800C/D	1986	Not eligible
9802	1954	Not eligible
9803	1954	Not eligible
9804	1954	Not eligible
9805	1954	Not eligible
9810	1954	Not eligible
9827	1954	Not eligible
9828	1973	Not eligible
9829	1972	Not eligible
9817	1968	Not eligible
9814	1965	Not eligible
9703	1973	Not eligible
9705	1976	Not eligible
9808	1957	Not eligible

Assessment of Effect

Section 106 of the NHPA requires the assessment of project effects on historic properties, i.e., those that are listed or eligible for listing in the NRHP. The criteria for adverse effects are

defined in the regulations and have been applied to the single historic property (Building 9800) in the project APE. An adverse effect is one that may alter, directly or indirectly, those characteristics of a historic property that make the property eligible for listing in the NRHP, including its location, design, setting, materials, workmanship, feeling, or association. Both temporary and long-term project impacts were considered and evaluated for their potential effects.

Only one historic property, Building 9800, is located within the ECIP APE. No changes or demolition are proposed for the building; it is not a part of the Propose Action under the ECIP Environmental Impact Statement (EIS). Demolition and construction activities surrounding Building 9800 may have temporary effects due to noise and vibration, however, these possible effects would not rise to the level of an adverse effect. Similarly, the demolition of Building 9800A, which is located adjacent to Building 9800, may have temporary effects, but those will not rise to the level of an adverse effect.

Because the development of the ECIP is in the planning stages, no detailed engineering or design work for proposed facilities has yet been accomplished. NSA will continue to consult with MHT in the future on the design of these associated proposed projects, as appropriate.

Consulting Parties

NSA has identified the following potential consulting parties in the Section 106 process for this project (Table 3). The consulting parties will be issued an invitation to participate in the Section 106 consultation process for the ECIP and provide their comments on the Proposed Action.

Table 3. ECIP Identified Potential Consulting Parties

Name, Title	Organization/Agency
Elizabeth Hughes State Historic Preservation Officer	Maryland Historical Trust
Steve Schuh County Executive	Anne Arundel County
Jerry Glodek Cultural Resources Manager	Fort George G. Meade
Richard Schaeffer President	National Cryptologic Museum Foundation
Kate Birmingham Cultural Resources Manager	National Capital Parks - East

Maryland Department of Planning
Maryland Historical Trust

February 12, 2016

Jeffery Williams, Director
NSA, Environmental Sustainability
9800 Savage Road, Suite 6218
Fort Meade, MD 20755

Re: EIS – NSA East Campus Integration Program DOEs
Historic Preservation Review
Anne Arundel County, Maryland

Dear Mr. Williams:

Thank you for providing the Maryland Historical Trust (Trust) with information related to the above-referenced project. On January 6, 2016 the Trust received 17 standard Determination of Eligibility (DOE) forms. It is our understanding that these materials were prepared as part of an environmental assessment. The Trust is reviewing the proposed undertaking for its effects on historic properties, pursuant to Section 106 of the National Historic Preservation Act of 1966, as amended, and offers the comments presented below.

We appreciate NSA's efforts to collect this valuable information about Maryland's cultural resources and provide the resulting documentation for our records. The completed DOE forms and required attachments were prepared by HDR, Inc. The forms are generally consistent with the General Guidelines for Compliance Generated DOEs and have been added to our archives for the benefit of future researchers. MHT concurs with the preparer's recommendation that Building 9800 identified as Maryland Inventory of Historic Properties number AA-2510-1 is eligible for listing in the National Register of Historic Places under Criteria A. The Trust also determined that Building 9800-A identified as AA-2510-15 is eligible for listing in the National Register of Historic Places under Criteria A as it represents the expansion of the agency in the 1960s.

In order to continue our review of the proposed undertaking and provide an informed assessment of the project's effects on historic and archeological properties, we request a detailed map/plans of the proposed integration program as it effect the built environment.

We thank you for your cooperation and assistance and we look forward to assisting you to complete historic preservation responsibilities for this undertaking. If you should have any questions regarding this matter, please contact Amanda Apple at amanda.apple@maryland.gov.

Sincerely,

Elizabeth Hughes
Director / State Historic Preservation Officer

EH\ARA \ 201600049

CC: Charles Wolfe, Mosaic Technologies Group (via email)

NATIONAL SECURITY AGENCY
CENTRAL SECURITY SERVICE
Fort George G. Meade, Maryland 20755

March 30, 2016

Elizabeth Hughes
Director/State Historic Preservation Officer
Maryland Historical Trust
100 Community Place
Crownsville, MD 21032

RE: Environmental Impact Statement (EIS) for the East Campus Integration Program (ECIP), Fort Meade, Maryland, Section 106 Consultation

Dear Ms. Hughes,

In a letter to the National Security Agency (NSA) dated February 12, 2016, MHT concurred with NSA's determination that Building 9800 is eligible for listing in the National Register of Historic Places (NRHP) and further indicated that Building 9800A is also eligible for listing. Building 9800A is proposed for demolition under the ECIP; thus, the demolition of Building 9800A would have an adverse effect on historic properties. MHT also requested additional project information to assist in the assessment of effects. The Draft EIS (subject of initial coordination letter on July 22, 2015) is currently undergoing internal review prior to public release and will be forwarded to MHT when it is available.

Attached is a revised assessment of effects given the eligibility of Building 9800A with a summary provided below. Please note that the ECIP is in the very early planning phase as befitting the NEPA action, and there are currently no detailed plans for design and construction. NSA will continue to consult with MHT through the planning and design phase of the ECIP.

- Under the Proposed Action, Building 9800A would be demolished. The demolition of this historic property would be an adverse effect. Demolition is required under the ECIP both due to the condition of the facility and to meet DOD requirements for "freeze the footprint" while constructing new facilities on the NSA Campus.
- No changes, alterations, or demolition are proposed for Building 9800 itself; it is not a part of the Proposed Action. Demolition activities adjacent to Building 9800 may have temporary, short-term effects due to noise and vibration; however, these possible effects would not rise to the level of an adverse effect.
- Building 9800 is located approximately 1,000 feet from the ECIP project area as well as the nearest parking facility proposed to support the ECIP project area (the N8/N9 parking lot site shown on Figure 1). This parking facility and the western portion of the ECIP project area closest to Building 9800 could contain facilities at least 4 stories in height. Given the wide expanses of parking lots north and northeast of Building 9800, the proposed new parking facility and buildings in the western portion of the ECIP project area may be visible from Building 9800. However, Building 9800's setting, including being surrounded by parking lots, is not essential to understanding the significance of the building as the first purpose-built home and operations building of the NSA, or its association with the growth of post-war and Cold War-era intelligence gathering. Therefore, , it is NSA's current understanding that the proposed new construction will not affect the integrity of Building 9800 and will have no adverse effects on historic properties.

NSA anticipates that a Memorandum of Agreement (MOA) will be developed with MHT to mitigate the adverse effect of the demolition of Building 9800A and to provide for continued consultation during the planning and design phase of the ECIP. We look forward to your comments and concurrence on the assessment of effects.

Should you have any questions or comments, please contact me by telephone at 301-688-2970, or email at jdwill2@nsa.gov.

Sincerely,

Jeffrey D. Williams

Jeffrey D. Williams
Director, Environmental Sustainability

cc: Amanda Apple, Preservation Officer, Review and Compliance, MHT
Beth Cole, Administrator, Review and Compliance, MHT

Project Information

The Department of Defense (DoD) proposes to continue to integrate the National Security Agency (NSA) East Campus with the NSA Main Campus through development of operational complex and headquarters space in the northern portion of the East Campus and in the 9800 Troop Support Area of Fort George G. Meade (Fort Meade). The Proposed Action includes implementation of the East Campus Integration Program (ECIP), which entails construction and operation of new facilities for operations and headquarters space within the 150-acre ECIP project area. The ECIP project area, as shown in Figure 1, includes the locations being considered for development of operations and headquarters space; some parking facility location alternatives, and locations of buildings proposed for demolition that are outside of the ECIP project area on NSA's main campus. The ECIP consists of construction and operation of approximately 2.9 million square feet of new facilities for operations and headquarters space and demolition of 1.9 million square feet of buildings and infrastructure (Table 1). The DoD proposes to construct the ECIP over a period of approximately 10 years (FY 2019 to 2029).

All nine buildings in the 9800 Troop Support Area would be demolished to provide room for the proposed facilities and supporting infrastructure. These buildings include Buildings 9801, 9802, 9803, 9804, 9805, 9810, 9827, 9828, and 9829. After construction of each of the proposed facilities on the East Campus and 9800 Troop Support Area are completed and personnel transferred to the facilities, Buildings 9703, 9705, 9800A, 9808, 9814, and 9817 on the NSA Main Campus would be vacated and demolished. Three surface parking lots in the 9800 Troop Support Area would be demolished to make room for the proposed buildings under the ECIP.

The Proposed Action would also consist of infrastructure supporting the proposed operational complex and headquarters space, including electrical substation, emergency generator capacity providing 121 megawatts of electricity; life-safety generators; building heating systems; utilities, including water, natural gas, and communications services; transportation infrastructure, including roads, parking structures, and sidewalks; and stormwater management facilities. Use of multi-level parking facilities were considered in lieu of surface parking.

The ECIP takes into account several factors, including mission requirements, the condition of current facilities (both on and off the NSA's Campus at Fort Meade), space planning, land availability, utility requirements, traffic and parking, and environmental impacts. A key factor is the mission co-location to provide a more efficient and effective work environment for mission-critical functions of the entire Intelligence Community. Under the ECIP, NSA would consolidate mission elements, which would enable grouping services and support services across the NSA Campus based on function; facilitate a more collaborative environment and optimal adjacencies; and provide administrative capacity for an increase of 7,200 personnel currently located offsite.

Figure 1. ECIP Project Area and Area of Potential Effect (APE)

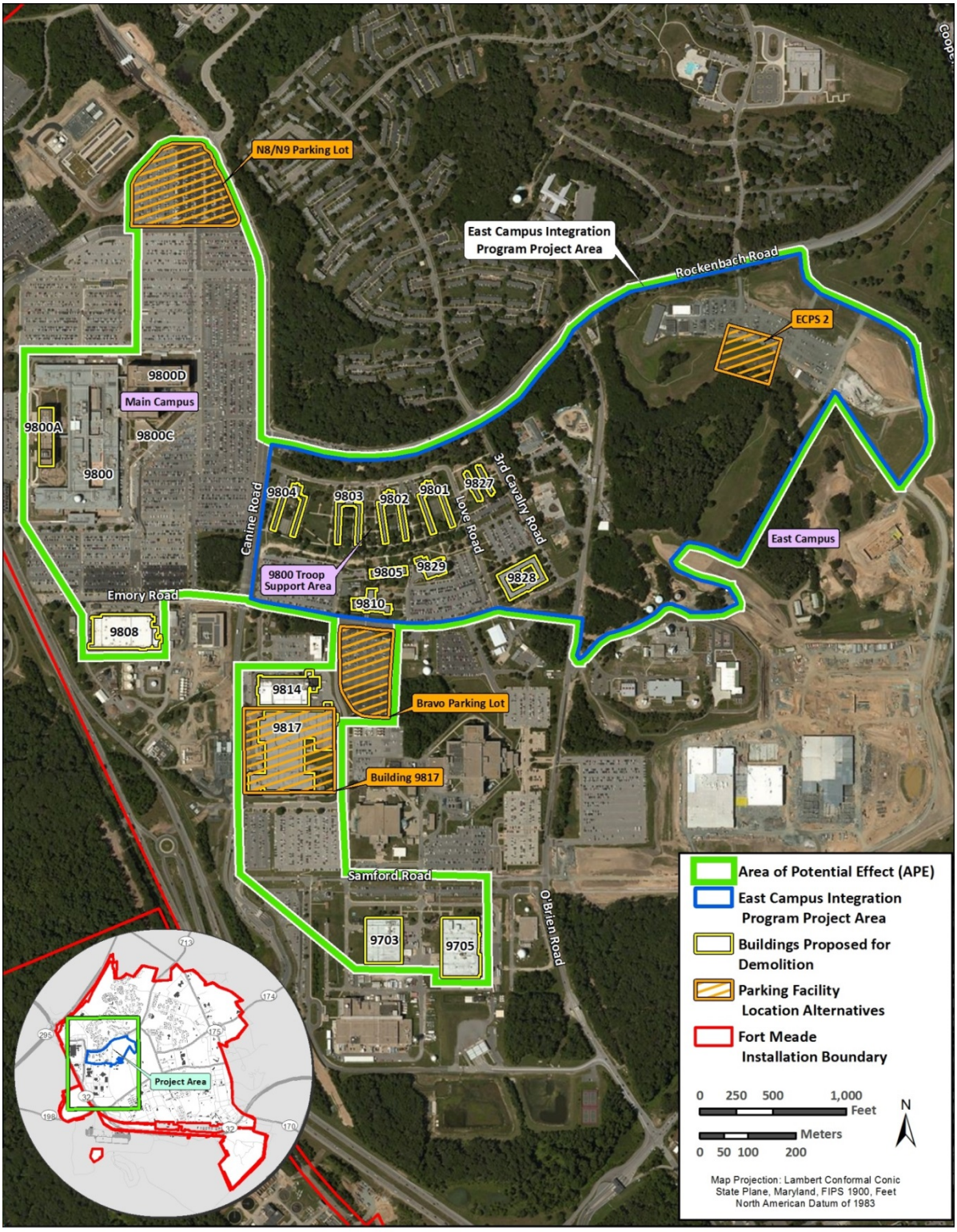


Table 1. Buildings Proposed for Demolition under the Preferred Alternative

Building #	Year Constructed	MIHP Number	NRHP Eligibility
Buildings in the ECIP Project Area			
9801	1954	AA-2510-14	Not eligible
9802	1954	AA-2510-13	Not eligible
9803	1954	AA-2510-12	Not eligible
9804	1954	AA-2510-11	Not eligible
9805	1954	AA-2510-10	Not eligible
9810	1954	AA-34_005_CRS	Not eligible
9827	1954	AA-2510-9	Not eligible
9828	1973	AA-2510-8	Not eligible
9829	1972	AA-2510-7	Not eligible
Buildings outside of the ECIP Project Area (on the NSA Main Campus)			
9800A	1968	AA-2510-15	**Eligible**
9817	1968	AA-2510-4	Not eligible
9814	1965	AA-2510-5	Not eligible
9703	1973	AA-2510-3	Not eligible
9705	1976	AA-2510-2	Not eligible
9808	1957	AA-2510-6	Not eligible

Principal Facilities

The DoD proposes to construct and operate approximately 2,880,000 ft^2 of operational complex and headquarters space consisting of five buildings. These facilities would consist of East Campus Building (ECB) 3, ECB 4, and ECB 5, each with approximately 800,000 ft^2, and two smaller buildings of 330,000 ft^2 and 150,000 ft^2. The buildings would include an open environment conducive to both physical and virtual collaboration; special purpose space, including support and enabler areas (e.g., lobbies, main reception, security); and supporting electrical, mechanical, fire protection/suppression, and security components.

Construction of the proposed buildings and the increase of personnel would require additional campus parking. The NSA Campus has limited developable land; therefore, the use of multi-level (i.e., at least four levels) parking structures are considered in lieu of surface parking. Parking lots are fully used most days, including overflow parking, so the net loss of any parking (i.e., at the 9800 Troop Support Area) would require replacement parking. The exact quantity, size, and capacity of parking structures would not be known until the detailed design process begins. Four alternatives for locations of parking structures are available and are discussed further in the Environmental Impact Statement (EIS). Depending on the locations of operational/headquarters buildings, at least three of the parking facility location alternatives would be constructed if the ECIP is fully implemented.

Because the development of the ECIP is in the planning stages, no detailed engineering or design work for proposed facilities has yet been accomplished. Therefore, the EIS does not consider various design factors in detail and makes general assumptions about the proposed development. The exact space requirements would not be known until the detailed design process begins. Therefore, the EIS does not consider various design factors in detail but makes general assumptions about the requirement associated with parking. Additional site-specific parking and transportation studies would also be accomplished during the design and engineering process to ensure efficient and safe use of space, ingress and egress, and movement patterns.

All proposed facilities would comply with Unified Facilities Criteria (UFC) 04-010-01, *DoD Minimum Antiterrorism Standards for Buildings*. Handicap accessibility design would comply with Federal and state requirements. In compliance with the Federal Guiding Principles identified in the 2006 Memorandum of Understanding (MOU) for *Federal Leadership in High Performance and Sustainable Buildings*; EO 13693, *Planning for Federal Sustainability in the Next Decade* (March 2015); *DoD Sustainable Buildings Policy* (December 2010); DoD Instruction 4170.11, *Installation Energy Management* (December 2009); and UFC 1-200-02, *High Performance and Sustainable Building Requirements* (changed November 2014), the operational complex and headquarters space would be designed, constructed, and managed in a sustainable and cost-effective manner to the maximum extent practicable. Facility and site design would place emphasis on maximizing operating efficiencies of building systems and minimizing the environmental footprint. The facilities would be energy-efficient and use sustainable technology, such as solar hot water systems and vertical rainwater collection cisterns, where feasible.

Supporting Infrastructure

Infrastructure supporting the proposed operational complex and headquarters space would include electrical substation, emergency generators; life-safety generators; building heating systems; utilities, including water, natural gas, and communications services; transportation infrastructure, including roads, parking structures, and sidewalks; and stormwater management facilities. The facilities are in the preliminary design stages and a detailed list of equipment is unavailable at this time.

Roads and sidewalks would be constructed to connect the proposed buildings and parking structures, and interconnect with existing buildings and the road/sidewalk network on the NSA Main Campus. These interconnections would be designed to promote a pedestrian-oriented campus by providing a logical interconnection between vehicles, pedestrians, and cyclists; and minimizing areas of conflict.

Stormwater management facilities would be designed to comply with the appropriate State of Maryland regulations, Section 438 of the Energy Independence and Security Act (EISA), NSA design standards, and the NSA-Washington Facilities Master Plan, as appropriate.

Area of Potential of Effect

The Area of Potential Effect (APE) for the ECIP is shown in Figure 1 and includes all geographic areas that might be affected by the undertaking. The APE remains unchanged from the Section 106 project initiation for this project submitted in November 2015.

Historic Properties in the APE

A site file search at MHT indicated there were no previously identified historic properties in the APE. Building 9810 (AA-34_005_CRS) was previously determined not eligible for listing in the NRHP. The entirety of Fort Meade has been investigated for the presence of archaeological resources. There are a total of 41 known archaeological sites on Fort Meade; only one of these sites has been determined eligible for listing in the NRHP (18AN1240). Site 18AN1240 is a Late Archaic Period base camp and is not located within the ECIP APE.

Because the ECIP project would be constructed through fiscal year 2029, all resources in the APE constructed in 1979 or earlier were surveyed and evaluated. A total of 16 buildings were surveyed and evaluated for NRHP listing. Of these, NSA determined that Building 9800 is eligible for listing in the NRHP. MHT concurred with that determination and found that Building 9800A was also eligible for listing in the NRHP (Table 1).

Assessment of Effect

Section 106 of the NHPA requires the assessment of project effects on historic properties (i.e., those that are listed or eligible for listing in the NRHP). The criteria for adverse effects are defined in the regulations and have been applied to the two historic properties (Buildings 9800 and 9800A) in the project APE. An adverse effect is one that may alter, directly or indirectly, those characteristics of a historic property that make the property eligible for listing in the NRHP, including its location, design, setting, materials, workmanship, feeling, or association. Both temporary and long-term project impacts were considered and evaluated for their potential effects. Demolition of a historic property is an adverse effect, by definition.

The demolition of Building 9800A is included as part of the Preferred Alternative; the demolition of this historic property would be an adverse effect. Building 9800A is adjacent to Building 9800; demolition activities surrounding Building 9800 may have temporary effects due to noise and vibration; however, these potential effects would not rise to the level of an adverse effect. No changes, alterations, or demolition are proposed for Building 9800 itself; it is not a part of the Proposed Action.

Building 9800 is located approximately 1,000 feet from the ECIP project area as well as the nearest parking facility proposed to support the ECIP project area (the N8/N9 parking lot site shown on Figure 1). This parking facility and the western portion of the ECIP project area closest to Building 9800 could contain facilities at least 4 stories in height. Given the wide expanses of parking lots north and northeast of Building 9800, the proposed new parking facility and buildings in the western portion of the ECIP project area may be visible from Building 9800. However, Building 9800's setting, including being surrounded by parking lots, is not essential to understanding the significance of the building as the first purpose-built home and operations building of the NSA, or its association with the growth of post-war and Cold War-era intelligence

gathering. Therefore, proposed new construction will not affect the integrity of Building 9800 and will have no adverse effects on historic properties.

Because the development of the ECIP is early in the planning stages, no detailed engineering or design work for proposed facilities has yet been accomplished. NSA will continue to consult with MHT on the design of the ECIP to avoid any other adverse effects to historic properties. NSA will work with MHT to develop a Memorandum of Agreement (MOA) mitigating the adverse effect of the demolition of Building 9800A, and will include provisions for continued consultation with MHT through the design phase of the project.

Consulting Parties

NSA has identified the following potential consulting parties in the Section 106 process for this project (Table 2). The consulting parties will be notified of the adverse effect and asked to provide their comments on the Proposed Action.

Table 2. ECIP Consulting Parties

Name, Title	Organization/Agency
Elizabeth Hughes State Historic Preservation Officer	Maryland Historical Trust
Steve Schuh County Executive	Anne Arundel County
Jerry Glodek Cultural Resources Manager	Fort George G. Meade
Richard Schaeffer President	National Cryptologic Museum Foundation
Kate Birmingham Cultural Resources Manager	National Capital Parks - East

NATIONAL SECURITY AGENCY
CENTRAL SECURITY SERVICE
Fort George G. Meade, Maryland 20755

July 1, 2016

Ms. Elizabeth Hughes, Director
State Historic Preservation Office
Maryland Historic Trust
Division of Historical and Cultural Programs
100 Community Place
Crownsville, MD 21032-2023

RE: Section 106 Consultation and Draft Environmental Impact Statement for the East Campus Integration Program, Fort Meade, Maryland

Dear Ms. Hughes:

Enclosed for your review and comment is a copy of the Draft Environmental Impact Statement (EIS) for the East Campus Integration Program at Fort Meade, Maryland. The Department of Defense (DoD) proposes to continue to develop operational complex and headquarters space at the National Security Agency's (NSA) East Campus on Fort Meade for use by NSA and the Intelligence Community. The purpose of the Proposed Action is to provide facilities that are fully supportive of the Intelligence Community's function and to continue to integrate the East Campus with the NSA Main Campus. The need for the action is to meet mission requirements, both internally at the NSA and within the Intelligence Community. The Draft EIS is being prepared in accordance with the National Environmental Policy Act (NEPA) (42 U.S.C. 4321, et seq.). A Notice of Availability for the Draft EIS will be published in the *Federal Register* on July 8, 2016, formally initiating a 45-day public review period.

As part of NSA's compliance with Section 106 of the National Historic Preservation Act, an architectural survey of 17 buildings in the Area of Potential Effect was conducted in 2015. Through consultation with MHT, two buildings (9800 and 9800A), were determined eligible for listing in the National Register of Historic Places. NSA conducted an assessment of effects and determined the project would have an adverse effect on historic properties resulting from the demolition of Building 9800A. NSA will develop a memorandum of agreement (MOA) in consultation with MHT to mitigate the adverse effect of the project on historic properties. To assist in your review, I am including a copy of the March 30, 2016 letter sent by NSA to MHT as background information that includes a revised assessment of effects given the eligibility of Building 9800A.

On August 3, 2016, the DoD will hold an open house from 4:30 to 5:00 p.m. and a public meeting from 5:00 to 7:00 p.m. at Severn Community Library, 2624 Annapolis Road, Severn, Maryland 21144. The public meeting may end earlier or later than the stated time depending on the number of persons wishing to speak. Public input from the meeting will be considered in preparation of the Final EIS and in development of the MOA.

NSA requests your review and comment on the Draft EIS in writing on or before August 22, 2016. Your input and comments are greatly appreciated. If you need additional information, please contact me at

(301) 688-2970 or send an email to jdwill2@nsa.gov for additional information. We look forward to hearing from you.

Sincerely,

Jeffrey D. Williams

Jeffrey D. Williams
Director, Environmental Sustainability

Enclosure:
Draft EIS
3/30/2016 NSA Letter

NATIONAL SECURITY AGENCY
CENTRAL SECURITY SERVICE
Fort George G. Meade, Maryland 20755

July 1, 2016

Ms. Kate Birmingham
Cultural Resources Manager
National Capital Parks East
1900 Anacostia Drive, SE
Washington, DC 20020

RE: Section 106 Consultation and Draft Environmental Impact Statement for the East Campus Integration Program, Fort Meade, Maryland

Dear Ms. Birmingham:

Enclosed for your review and comment is a copy of the Draft Environmental Impact Statement (EIS) for the East Campus Integration Program at Fort Meade, Maryland. The Department of Defense (DoD) proposes to continue to develop operational complex and headquarters space at the National Security Agency's (NSA) East Campus on Fort Meade for use by NSA and the Intelligence Community. The purpose of the Proposed Action is to provide facilities that are fully supportive of the Intelligence Community's function and to continue to integrate the East Campus with the NSA Main Campus. The need for the action is to meet mission requirements, both internally at the NSA and within the Intelligence Community. The Draft EIS is being prepared in accordance with the National Environmental Policy Act (NEPA) (42 U.S.C. 4321, et seq.). A Notice of Availability for the Draft EIS will be published in the *Federal Register* on July 8, 2016, formally initiating a 45-day public review period.

As part of NSA's compliance with Section 106 of the National Historic Preservation Act, an architectural survey of 17 buildings in the Area of Potential Effect was conducted in 2015. Through consultation with Maryland Historical Trust (MHT), two buildings (9800 and 9800A), were determined eligible for listing in the National Register of Historic Places. NSA conducted an assessment of effects and determined the project would have an adverse effect on historic properties resulting from the demolition of Building 9800A. NSA will develop a memorandum of agreement (MOA) in consultation with MHT to mitigate the adverse effect of the project on historic properties. As a potential interested party in the Section 106 consultation for the proposed East Campus Integration Program, NSA invites you to send any comments you may have on the effects of the proposed project on historic and cultural resources at Fort Meade.

On August 3, 2016, the DoD will hold an open house from 4:30 to 5:00 p.m. and a public meeting from 5:00 to 7:00 p.m. at Severn Community Library, 2624 Annapolis Road, Severn, Maryland 21144. The public meeting may end earlier or later than the stated time depending on the number of persons wishing to speak. We invite you to attend the meeting and provide your comments. Public input from the meeting will be considered in preparation of the Final EIS and in development of the MOA.

NSA requests your review and comments on the Draft EIS in writing on or before August 22, 2016. Please submit written comments by mail to "East Campus Integration Program EIS" c/o HDR, 2600 Park Tower Drive, Suite 100, Vienna, VA 22180, or by email to ECIPEIS@hdrinc.com.

Your input and comment are greatly appreciated. If you need additional information, please contact me at (301) 688-2970 or send an email to jdwill2@nsa.gov for additional information. We look forward to hearing from you.

Sincerely,

Jeffrey D. Williams

Jeffrey D. Williams
Director, Environmental Sustainability

Enclosure:
Draft EIS

APPENDIX F

REVIEW OF THE DRAFT EIS

Federal Register Draft EIS Notice of Availability (NOA)

Service Type: Telephone Switchboard Operations Service.
Mandatory for: Barksdale Air Force Base, Shreveport, LA.
Mandatory Source(s) of Supply: Louisiana Association for the Blind, Shreveport, LA.
Contracting Activity: Dept of the Air Force, FA7014 AFDW PK.
Service Type: Embroidery of USAF Service/Name Tapes & Emboss of Plastic Name Tags.
Mandatory for: Lackland Air Force Base, TX.
Mandatory Source(s) of Supply: Delaware Division for the Visually Impaired, New Castle, DE.
Contracting Activity: Dept of the Air Force, FA7014 AFDW PK.

Barry S. Lineback,

Director, Business Operations.

[FR Doc. 2016–16229 Filed 7–7–16; 8:45 am]

BILLING CODE 6353–01–P

DEPARTMENT OF DEFENSE

Office of the Secretary

Draft Environmental Impact Statement for the East Campus Integration Program, Fort Meade, Maryland

AGENCY: Department of Defense.

ACTION: Notice of availability; notice of public meeting; request for comments.

SUMMARY: The Department of Defense (DoD) announces the availability of the Draft Environmental Impact Statement (EIS) as part of the environmental planning process for the East Campus Integration Program at Fort George G. Meade, Maryland (hereafter referred to as Fort Meade). The DoD proposes to continue to develop operational complex and headquarters space at the National Security Agency's (NSA) East Campus on Fort Meade for use by NSA and the Intelligence Community. The purpose of the Proposed Action is to provide facilities that are fully supportive of the Intelligence Community's function and to continue to integrate the East Campus with the NSA Main Campus. The need for the action is to meet mission requirements, both internally at the NSA and within the Intelligence Community.

This notice announces a 45-day comment period and provides information on how to participate in the public review process. The public comment period for the Draft EIS will officially end 45 days after publication of the Notice of Availability in the **Federal Register**.

DATES: There will be an open house at 4:30 p.m. followed by a public meeting from 5:00 p.m. to 7:00 p.m. on August 3, 2016. The public meeting may end earlier or later than the stated time depending on the number of persons wishing to speak. All materials that are submitted in response to the Draft EIS should be received by August 22, 2016 to provide sufficient time to be considered in preparation of the Final EIS.

ADDRESSES: Copies of the Draft EIS are available for your review at the Medal of Honor Memorial Library, 4418 Llewellyn Avenue, Fort Meade, MD 20755; the Glen Burnie Regional Library, 1010 Eastway, Glen Burnie, MD 21060; the Odenton Regional Library, 1325 Annapolis Road, Odenton, MD 21113; and the Severn Library, 2624 Annapolis Road, Severn, Maryland 21144. You may also call 301–688–2970 or send an email to *ECIPEIS@hdrinc.com* to request a copy of the Draft EIS.

The open house and public meeting will be held at the Severn Library, 2624 Annapolis Road, Severn, Maryland 21144. Verbal and written comments will be accepted at the public meeting. You can also submit written comments to "East Campus Integration Program EIS" c/o HDR, 2600 Park Tower Drive, Suite 100, Vienna, VA 22180 or submit by email to *ECIPEIS@hdrinc.com.*

FOR FURTHER INFORMATION CONTACT: Mr. Jeffrey Williams at 301–688–2970, or email *jdwill2@nsa.gov.*

SUPPLEMENTARY INFORMATION:

Background: The NSA is a tenant DoD agency on Fort Meade. NSA is a high-technology communications and data processing organization. In order to meet mission requirements, both at the NSA and within the Intelligence Community, continued integration of the East Campus with the NSA Main Campus on Fort Meade through development of office, operational, and headquarters space is needed. In 2010, NSA completed an EIS that addressed development of facilities on the East Campus. The Record of Decision for the 2010 EIS allowed for initiation of construction currently occurring in the southern portion of the East Campus. This East Campus Integration Program Draft EIS addresses build-out of the northern portion of the East Campus and the adjacent 9800 Troop Support Area, and integration of the East Campus with the NSA Main Campus.

Proposed Action and Alternatives: The East Campus Integration Program was initiated to provide a modern office, operational, and headquarters complex to meet the growth requirements of the NSA and Intelligence Community. Development is proposed along the East Campus central core extending through the NSA Main Campus at Fort Meade. The Proposed Action consists of the construction of approximately 2,880,000 square feet of office, operational, and headquarters space supporting an increase of 7,200 people with the majority from local leases and government-owned buildings to the NSA Main Campus. The program also includes the demolition of approximately 1,900,000 square feet of buildings and infrastructure. Development would include associated infrastructure (*e.g.,* electrical substation, emergency generator capacity providing 121 megawatts of electricity, life-safety generators, building heating systems, utilities, roads, sidewalks, stormwater management facilities, and parking facilities).

Alternatives identified include four options for emergency power generation and various pollution control systems, two options for building heating systems, four options for locations of parking facilities, and acquisition of additional space at two existing, offsite leased locations. Emergency power generation alternatives are generators and combined generators and combustion turbines. Building heating system alternatives are packaged boilers and a hybrid building heating system consisting of packaged boilers and ground source heat pumps. Parking facility alternatives consist of at least three of the following locations: East Campus Parking Structure 2, Bravo parking lot, N8/N9 parking lot, and Building 9817. Use of multi-level parking facilities were considered in lieu of surface parking. In conjunction with some construction and demolition on the East Campus, lease of space outside of Fort Meade at National Business Park and Annapolis Junction Business Park (Alternatives 1 and 2, respectively) were considered. The No Action Alternative (not undertaking the East Campus Integration Program) is also analyzed in detail.

Summary of Environmental Impacts: The level of environmental impacts potentially resulting from the Proposed Action and alternatives would primarily be dependent on the alternative ultimately selected. Environmental impacts would generally be slightly more adverse for the Proposed Action than for Alternatives 1 and 2 due to the larger building footprints and number of additional personnel associated with the Proposed Action, although facilities and personnel would be consolidated in one location under the Proposed Action.

Generally, construction and demolition would result in some ground disturbance and increased traffic congestion at intersections near the installation and proximal to the build

sites, which would be expected regardless of the alternative selected. Operation of the East Campus Integration Program would be expected to result in long-term, negligible to moderate impacts on land use, noise, air quality, geological resources, water resources, biological resources, infrastructure, sustainability, hazardous materials and waste, and socioeconomic resources. Major impacts on transportation (levels of service) would occur during operation; however, traffic impacts are considered major under the existing conditions as levels of service are already degraded.

Best Management Practices and Mitigation Measures: The Proposed Action has the potential to result in adverse environmental impacts. The Proposed Action includes best management practices, mitigation measures, and design concepts to avoid adverse impacts to the extent practicable. Unavoidable impacts would be minimized or compensated for to the extent practicable. In accordance with Council on Environmental Quality regulations, mitigation measures are considered for adverse environmental impacts.

Copies of the Draft EIS are available for public review at local repositories and by request (see **ADDRESSES**). The DoD invites public and agency input on the Draft EIS. Please submit comments and materials during the 45-day public review period to allow sufficient time for consideration in development of the Final EIS (see **DATES**).

The DoD will consider all comments received and then prepare the Final EIS. As with the Draft EIS, DoD will announce the availability of the Final EIS and once again give you an opportunity for review and comment.

Dated: July 5, 2016.

Aaron Siegel,

Alternate OSD Federal Register Liaison Officer, Department of Defense.

[FR Doc. 2016–16175 Filed 7–7–16; 8:45 am]

BILLING CODE 5001–06–P

DEPARTMENT OF DEFENSE

Department of the Army, Corps of Engineers

Intent To Prepare an Integrated Feasibility/Environmental Impact Statement for the Proposed Tinian Harbor Modifications Project, Island of Tinian, Commonwealth of the Northern Mariana Islands

AGENCY: Department of the Army, U.S. Army Corps of Engineers (USACE), DoD.

ACTION: Notice of Intent.

SUMMARY: Pursuant to the section 102(2)(C) of the National Environmental Policy Act (NEPA) of 1969; the U.S. Army Corps of Engineers and the Commonwealth of the Northern Mariana Islands (CNMI), Municipality of Tinian (Municipality)/Commonwealth Ports Authority (CPA) gives notice that an Integrated Feasibility/Environmental Impact Statement (F/EIS) is being prepared for the Proposed Tinian Harbor Modifications Project, Island of Tinian, CNMI. This project is authorized under section 209 of the Rivers and Harbors Act of 1962 (Pub. L. 87–874) and will consider the implementation of navigation improvements at Tinian Harbor.

DATES: In order to be considered in the Draft F/EIS, comments and suggestions should be received within 30 days after the last public scoping meeting. Two public scoping meetings will be held in Saipan and Tinian in mid/late July 2016. A separate notice will be published for meeting times and places.

ADDRESSES: Mail written comments concerning this notice to: Mr. Milton Yoshimoto, Project Manager, Civil and Public Works Branch, Honolulu District, U.S. Army Corps of Engineers, Civil and Public Works Branch, Bldg 230, Fort Shafter, Hawaii 96858. Comment letters should include the commenter's physical mailing address and the project title in the subject line.

FOR FURTHER INFORMATION CONTACT: Mr. Milton Yoshimoto, Civil and Public Works Branch, Honolulu District, U.S. Army Corps of Engineers, Bldg 230, Fort Shafter, Hawaii 96858, (808) 835–4034, Email: *milton.t.yoshimoto@usace.army.mil.*

SUPPLEMENTARY INFORMATION: In accordance with NEPA, the Corps intends to prepare an F/EIS report. The primary Federal actions under consideration are: (1) Navigation improvement measures that expand the turning basin; (2) surge reduction measures by constructing protective structures at both harbors; and (3) dredging harbor sediments to allow larger vessels access to the harbor. The F/EIS reports shall meet the requirements of NEPA, including all applicable federal regulations implementing those statutes.

Evaluation will examine the costs and benefits of this project, as well as the environmental impacts of modifying the maintained dimensions of the existing harbor. The purpose of this effort is to conduct a study to assess the technical, environmental and economic feasibility in the implementation of navigation improvement at Tinian Harbor.

Project Site and Background Information: Tinian Harbor is the sole commercial harbor servicing the island of Tinian, CNMI and is owned and maintained by the CPA. Due to its isolation, the harbor is extremely important for the continual flow and transit of goods and materials for the small island community. The CNMI is threatened annually by typhoons and tropical storms which has resulted in the deterioration of the protective breakwater and harbor facilities. Failure of the breakwater would result in complete closure of the harbor, requiring costly air transport as the only remaining option to deliver essential commodities to the island. The project will focus on the repair/reconfiguration of the breakwater and an incremental analysis of the harbor depth to assure safe and efficient operation of commercial vessels.

Proposed Action(s): The study reports will assess the technical, environmental and economic feasibility in the implementation of navigation improvement. These include: (1) Navigation improvement measures that expand the federal turning basin; (2) surge reduction measures by constructing protective structures; and (3) expand and deepen the harbor basin and entrance channel to accommodate larger vessels by dredging.

Issues: Potentially significant issues associated with the project may include: aesthetics/visual impacts, air quality emissions, biological resource impacts, environmental justice, hazards and hazardous materials, hydrology and water quality, noise, traffic and transportation, and cumulative impacts from past, present, and reasonably foreseeable future projects.

Scoping Process: The U.S. Army Corps of Engineers is seeking participation and input of all interested federal, state, and local agencies, Native American groups, and other concerned private organizations or individuals on the scope of the F/EIS through this public notice. The purpose of the public scoping meeting is to solicit comments regarding the potential impacts, environmental issues, and alternatives associated with the proposed action to be considered in the study report. The meeting place, date, and time will be advertised in advance in local newspapers, and meeting announcement letters will be sent to interested parties. The draft F/EIS is expected to be available for public review and comment in the summer of 2017 and a public meeting will be held after its publication.

inoperative. These reports are used by EPA to determine compliance with the standards.

Form Numbers: None.

Respondents/affected entities: Nitric acid plants.

Respondent's obligation to respond: Mandatory (40 CFR part 60, subparts G and Ga).

Estimated number of respondents: 29 (total).

Frequency of response: Initially, occasionally and semiannually.

Total estimated burden: 2,190 hours (per year). Burden is defined at 5 CFR 1320.3(b).

Total estimated cost: $2,970,000 (per year), which includes $2,740,000 in both annualized capital/startup and operation & maintenance costs.

Changes in the Estimates: There is an adjustment increase in the total estimated burden as currently identified in the OMB Inventory of Approved Burdens. This increase is not due to any program changes. The change in the burden and cost estimates occurred due to industry growth in the past three years, resulting in an additional number of respondents that have become subject to Subpart Ga. Additionally, this ICR assumes that all respondents will have to familiarize themselves with regulatory requirements each year. These changes result in an increase in the number of responses, labor hours and costs, and total O&M costs.

Courtney Kerwin,

Acting Director, Collection Strategies Division.

[FR Doc. 2016–17287 Filed 7–21–16; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

[EPA–HQ–OAR–2015–0207; FRL 9948–46–OEI]

Information Collection Request Submitted to OMB for Review and Approval; Comment Request; Cellulosic Production Volume Projections and Efficient Producer Reporting

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice.

SUMMARY: The Environmental Protection Agency has submitted an information collection request (ICR), "Cellulosic Production Volume Projections and Efficient Producer Reporting" (EPA ICR No. 2551.01, OMB Control No. 2060–NEW) to the Office of Management and Budget (OMB) for review and approval in accordance with the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*). This is a request for approval of a new collection. Public comments were previously requested via the **Federal Register** (80 FR 15597) on March 24, 2015 during a 60-day comment period. This notice allows for an additional 30 days for public comments. A fuller description of the ICR is given below, including its estimated burden and cost to the public. An Agency may not conduct or sponsor and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number.

DATES: Additional comments may be submitted on or before August 22, 2016.

ADDRESSES: Submit your comments, referencing Docket ID Number EPA–HQ–OAR–2015–0207, to (1) EPA online using *www.regulations.gov* (our preferred method), by email to *a-and-r-docket@epa.gov*, Attention Air and Radiation Docket ID No. EPA–HQ–OAR–2015–0207, or by mail to: EPA Docket Center, Environmental Protection Agency, Mail Code 28221T, 1200 Pennsylvania Ave. NW., Washington, DC 20460, and (2) OMB via email to *oira_submission@omb.eop.gov*. Address comments to OMB Desk Officer for EPA.

EPA's policy is that all comments received will be included in the public docket without change including any personal information provided, unless the comment includes profanity, threats, information claimed to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute.

FOR FURTHER INFORMATION CONTACT: Jon Monger, Policy Advisor, Office of Transportation and Air Quality, Mail Code: 6401A, Environmental Protection Agency, 1200 Pennsylvania Ave. NW., Washington, DC 20460; telephone number: 202–564–0628; fax number: 202–564–1177; email address: *monger.jon@epa.gov*.

SUPPLEMENTARY INFORMATION: Supporting documents which explain in detail the information that the EPA will be collecting are available in the public docket for this ICR. The docket can be viewed online at *www.regulations.gov* or in person at the EPA Docket Center, WJC West, Room 3334, 1301 Constitution Ave. NW., Washington, DC. The telephone number for the Docket Center is 202–566–1744. For additional information about EPA's public docket, visit *http://www.epa.gov/dockets*.

Abstract: EPA is seeking to collect information from potential cellulosic biofuel producers to aid in determining the annual volume standards. This ICR includes a questionnaire form to facilitate the collection of this information. EPA would also like to use a data form to collect information from certain producers and importers who have requested and been approved to use an "efficient producer" pathway. This data form would standardize collection of selected data points and allow better and more efficient compliance with the RFS program. We inform respondents that they may assert claims of business confidentiality (CBI) for information they submit in accordance with 40 CFR 2.203.

Form Numbers: RFS Efficient Producer Data Form (RFS2500), RFS Cellulosic Biofuel Producer Questionnaire Form (RFS2700).

Respondents/affected entities: Producers, Importers of Renewable Fuels.

Respondent's obligation to respond: RFS Cellulosic Biofuel Producer Questionnaire Form is voluntary; RFS Efficient Producer Data Form is mandatory pursuant to Sections 114 and 208 of the Clean Air Act (CAA), 42 U.S.C. 7414 and 7542 for producers eligible to generate RINs through an efficient producer pathway pursuant to 40 CFR 80.1416.

Estimated number of respondents: 90 (total).

Frequency of response: Annually (RFS Cellulosic Biofuel Producer Questionnaire Form) or quarterly (RFS Efficient Producer Data Form).

Total estimated burden: 880 hours (per year). Burden is defined at 5 CFR 1320.03(b).

Total estimated cost: $101,920 (per year), includes no annualized capital or operation & maintenance costs.

Changes in the Estimates: There is no previous ICR for this collection.

Courtney Kerwin,

Acting Director, Collection Strategies Division.

[FR Doc. 2016–17285 Filed 7–21–16; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

[ER–FRL–9028–2]

Environmental Impact Statements; Notice of Availability

Responsible Agency: Office of Federal Activities, General Information (202) 564–7146 or *http://www.epa.gov/nepa*.

Weekly Receipt of Environmental Impact Statements (EISs)
Filed 07/11/2016 Through 07/15/2016, Pursuant to 40 CFR 1506.9.

Notice

Section 309(a) of the Clean Air Act requires that EPA make public its comments on EISs issued by other Federal agencies. EPA's comment letters on EISs are available at: *http://www.epa.gov/compliance/nepa/eisdata.html.*

EIS No. 20160164, Draft Supplemental, NRC, WY, Reno Creek In Situ Recovery Project, Supplement to the Generic Environmental Impact Statement for the In Situ Leach Uranium Facilities, Comment Period Ends: 09/06/2016, Contact: Jill Caverly 301–415–7674.

EIS No. 20160165, Final, USFWS, HI, Na Pua Makani Wind Project and Habitat Conservation Plan, Review Period Ends: 08/22/2016, Contact: Ms Jodi Charrier 808–792–9400.

EIS No. 20160166, Final, USFS, OR, Lower Joseph Creek Restoration Project, Review Period Ends: 08/23/2016, Contact: Anne Thomas 541–278–3860.

EIS No. 20160167, Draft Supplement, USACE, CA, Folsom Dam Raise Project, Comment Period Ends: 09/06/2016, Contact: Mariah Brumbaugh 916–557–6774.

EIS No. 20160168, Draft, NSA, MD, East Campus Integration Program, Comment Period Ends: 09/05/2016, Contact: Jeffrey Williams 301–688–2970.

EIS No. 20160169, Draft, BOEM, AK, Cook Inlet Planning Area Oil and Gas Lease Sale 244 Comment Period Ends: 09/06/2016, Contact: Caron McKee, 907–334–5200.

EIS No. 20160170, Final, BIA, IN, The Pokagon Band of Potawatomi Indians Fee-to-Trust Transfer for Tribal Village and Casino, Review Period Ends: 08/22/2016, Contact: Scott Doig 612–725–4514.

EIS No. 20160171, Final, BLM, UT, Moab Master Leasing Plan and Proposed Resource Management Plan Amendments, Review Period Ends: 08/22/2016, Contact: Brent Northrup 435–259–2151.

Amended Notices

EIS No. 20160132, Draft, FHWA, CO, US 50 Corridor East, Comment Period Ends: 08/12/2016, Contact: Patricia Sergeson 720–963–3073.

Revision to FR Notice Published 06/10/2016; Extending Comment Period from 07/29/2016 to 08/12/2016.

Dated: July 19, 2016.

Karin Leff,

Acting Director, NEPA Compliance Division, Office of Federal Activities.

[FR Doc. 2016–17382 Filed 7–21–16; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

[EPA–HQ–OECA–2012–0678; FRL–9948–06–OEI]

Information Collection Request Submitted to OMB for Review and Approval; Comment Request; NESHAP for Mineral Wool Production (Renewal)

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice.

SUMMARY: The Environmental Protection Agency has submitted an information collection request (ICR), "NESHAP for Mineral Wool Production (40 CFR part 63, subpart DDD) (Renewal)" (EPA ICR No. 1799.09, OMB Control No. 2060–0362), to the Office of Management and Budget (OMB) for review and approval in accordance with the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*). This is a proposed extension of the ICR, which is currently approved through July 31, 2016. Public comments were previously requested via the **Federal Register** (80 FR 32116) on June 5, 2015, during a 60-day comment period. This notice allows for an additional 30 days for public comments. A fuller description of the ICR is given below, including its estimated burden and cost to the public. An Agency may neither conduct nor sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

DATES: Additional comments may be submitted on or before August 22, 2016.

ADDRESSES: Submit your comments, referencing Docket ID Number EPA–HQ–OECA–2012–0678, to: (1) EPA online using *www.regulations.gov* (our preferred method), or by email to *docket.oeca@epa.gov,* or by mail to: EPA Docket Center, Environmental Protection Agency, Mail Code 28221T, 1200 Pennsylvania Ave. NW., Washington, DC 20460; and (2) OMB via email to *oira_submission@omb.eop.gov.* Address comments to OMB Desk Officer for EPA.

EPA's policy is that all comments received will be included in the public docket without change including any personal information provided, unless the comment includes profanity, threats, information claimed to be Confidential Business Information (CBI), or other information whose disclosure is restricted by statute.

FOR FURTHER INFORMATION CONTACT: Patrick Yellin, Monitoring, Assistance, and Media Programs Division, Office of Compliance, Mail Code 2227A, Environmental Protection Agency, 1200 Pennsylvania Ave. NW., Washington, DC 20460; telephone number: (202) 564–2970; fax number: (202) 564–0050; email address: *yellin.patrick@epa.gov.*

SUPPLEMENTARY INFORMATION: Supporting documents which explain in detail the information that the EPA will be collecting are available in the public docket for this ICR. The docket can be viewed online at *www.regulations.gov* or in person at the EPA Docket Center, EPA West, Room 3334, 1301 Constitution Ave. NW., Washington, DC. The telephone number for the Docket Center is 202–566–1744. For additional information about EPA's public docket, visit: *http://www.epa.gov/dockets.*

Abstract: The affected entities are subject to the General Provisions of the NESHAP (40 CFR part 63, subpart A), and any changes, or additions to the Provisions that are specified (40 CFR part 63, subpart DDD). Owners or operators of the affected facilities must submit initial notification reports, performance tests, and periodic reports and results. Owners or operators are also required to maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility, or any period during which the monitoring system is inoperative. Reports, at a minimum, are required semiannually.

Form Numbers: None.

Respondents/affected entities: Mineral wool production facilities.

Respondent's obligation to respond: Mandatory (40 CFR part 63, subpart DDD).

Estimated number of respondents: 8 (total).

Frequency of response: Initially and semiannually.

Total estimated burden: 2,130 hours (per year). Burden is defined at 5 CFR 1320.3(b).

Total estimated cost: $285,000 (per year), which includes $6,000 in either annualized capital/startup or operation & maintenance costs.

Changes in the Estimates: There is an adjustment increase in burden due to an update to the estimated respondent universe. During development of the 2015 amendment, EPA estimates that 8 mineral wool production facilities are currently subject to the standard. There is also an increase in the respondent labor costs due to additional compliance testing requirements from the 2015 amendment.

Courtney Kerwin,

Acting Director, Collection Strategies Division.

[FR Doc. 2016–17284 Filed 7–21–16; 8:45 am]

BILLING CODE 6560–50–P

Draft EIS NOA Newspaper Advertisements

The notice below was published in the Legal Notices section of the *Baltimore Sun* on July 10, 2016.

NOTICE OF AVAILABILITY AND REQUEST FOR COMMENTS
Environmental Impact Statement for the East Campus Integration Program at Fort Meade, Maryland

The Department of Defense (DoD) announces the availability of the Draft Environmental Impact Statement (EIS) as part of the environmental planning process for the East Campus Integration Program at Fort George G. Meade, Maryland under the National Environmental Policy Act (NEPA). The DoD is also completing Section 106 consultation under the National Historic Preservation Act (NHPA). The DoD proposes to continue to develop operational complex and headquarters space at the National Security Agency's (NSA) East Campus on Fort Meade for use by NSA and the Intelligence Community. The purpose of the Proposed Action is to provide facilities that are fully supportive of the Intelligence Community's function and to continue to integrate the East Campus with the NSA Main Campus. The need for the action is to meet mission requirements, both internally at the NSA and within the Intelligence Community. The DoD proposes to develop the East Campus central core extending through the NSA Main Campus at Fort Meade. The Proposed Action consists of the construction of approximately 2,880,000 square feet of office, operational, and headquarters space supporting an increase of 7,200 people with the majority from local leases and government-owned buildings to the NSA Main Campus. The program also includes the demolition of approximately 1,900,000 square feet of buildings and infrastructure. Development would include associated infrastructure (e.g., electrical substation, generator capacity providing 121 megawatts of electricity, life-safety generators, building heating systems, utilities, roads, sidewalks, stormwater management facilities, and parking facilities). The EIS considered four options for emergency power generation; two options for building heating systems; four options for locations of parking facilities; acquisition of additional space at two existing, offsite leased locations; and the No Action Alternative.

The DoD invites public and agency input on the Draft EIS. Copies of the Draft EIS are available for your review at the Medal of Honor Memorial Library, 4418 Llewellyn Avenue, Fort Meade, MD 20755; the Glen Burnie Regional Library, 1010 Eastway, Glen Burnie, MD 21060; the Odenton Regional Library, 1325 Annapolis Road, Odenton, MD 21113; and the Severn Community Library, 2624 Annapolis Road, Severn, MD 21144. You may also call (301) 688-6524 or send an email to ECIPEIS@hdrinc.com to request a copy of the Draft EIS.

On August 3, 2016, the DoD will hold an open house from 4:30 p.m. to 5:00 p.m. and a public meeting from 5:00 p.m. to 7:00 p.m. at the Severn Community Library, 2624 Annapolis Road, Severn, Maryland 21144. The public meeting may end earlier or later than the stated time depending on the number of persons wishing to speak. Verbal and written comments will be received at the public meeting. You can also submit written comments addressed to "East Campus Integration Program EIS," c/o HDR, 2600 Park Tower Drive, Suite 100, Vienna, VA 22180 or submitted by email to ECIPEIS@hdrinc.com. Written comments are requested by August 22, 2016, to ensure sufficient time to consider public input in preparation of the Final EIS.

Comments on this Proposed Action are requested. Verbal and written comments may be published in the EIS. Any personal information provided will be used only to identify your desire to make a statement during the public comment portions of the EIS process or to fulfill requests for copies of the EIS or associated documents. Private addresses will be compiled to develop a mailing list for those requesting copies of the Draft EIS or Final EIS. However, only the names of private citizens will appear in the EIS; personal addresses and phone numbers will not be published.

The notice below was published on page K1 of the *Washington Post* on July 10, 2016.

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for the East Campus Integration Program
at Fort Meade, Maryland

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Comments on this Proposed Action are requested. Verbal and written comments may be published in the EIS. Any personal information provided will be used only to identify your desire to make a statement during the public comment portions of the EIS process or to fulfill requests for copies of the EIS or associated documents. Private addresses will be compiled to develop a mailing list for those requesting copies of the Draft EIS or Final EIS. However, only the names of private citizens will appear in the EIS; personal addresses and phone numbers will not be published.

Draft EIS Interested Party List

The following agencies and individuals were sent copies of the Draft EIS.

Federally Elected Officials

The Honorable Benjamin Cardin
U.S. Senate
509 Hart Senate Office Building
Washington, DC 20510

The Honorable Barbara Mikulski
U.S. Senate
503 Hart Senate Office Building
Washington, DC 20510

The Honorable Elijah Cummings
U.S. House of Representatives
Maryland's 7th District
2235 Rayburn House Office Building
Washington, DC 20515

The Honorable John Delaney
U.S. House of Representatives
Maryland's 6th District
1632 Longworth House Office Building
Washington, DC 20515

The Honorable Donna F. Edwards
U.S. House of Representatives
Maryland's 4th District
2445 Rayburn House Office Building
Washington, DC 20515

The Honorable Andrew Harris, M.D.
U.S. House of Representatives
Maryland's 1st District
1533 Longworth House Office Building
Washington, DC 20515

The Honorable Steny Hoyer
U.S. House of Representatives
Maryland's 5th District
1705 Longworth House Office Building
Washington, DC 20515

The Honorable C.A. Dutch Ruppersberger
U.S. House of Representatives
Maryland's 2nd District
2416 Rayburn House Office Building
Washington, DC 20515

The Honorable John Sarbanes
U.S. House of Representatives
Maryland's 3rd District
2444 Rayburn House Office Building
Washington, DC 20515

The Honorable Chris Van Hollen
U.S. House of Representatives
Maryland's 8th District
1707 Longworth House Office Building
Washington, DC 20515

Federal Agency Contacts

Ms. Kate Birmingham
Cultural Resources Manager
National Capital Parks East
1900 Anacostia Drive, SE
Washington, DC 20020

Ms. Dionne Briggs
U.S. Fish and Wildlife Service
Patuxent Research Refuge
12100 Beech Forest Road, Room 138
Laurel, MD 20708-4036

Mr. Michael Butler
Fort Meade DPW-ED
4216 Roberts Avenue, Suite 5115
Fort Meade, MD 20755-7068

COL Thomas S. Rickard
Fort Meade
4551 Llewellyn Avenue
Fort Meade, MD 20755

Mr. Chris Gardner
Public Affairs Specialist
U.S. Army Corps of Engineers, Baltimore District
10 S. Howard Street, Room 11400
Baltimore, MD 21201

Mr. Jerry Glodek
Cultural Resources Manager
Fort Meade Directorate of Public Works,
Environmental Division
Building 2460
85th Med Battalion Avenue & Wilson Street
Fort Meade, MD 20755

Mr. Joel Gorder
Regional Environmental Coordinator
National Park Service, National Capital Region
1100 Ohio Drive, SW
Washington, DC 20424

Mr. Brian Higgins, PhD, PE
Washington Headquarters Services
Department of Defense
1314 Mayflower Drive
McLean, VA 22101-3402

Ms. Jennifer Hill
U.S. Fish and Wildlife Service
Patuxent Research Refuge
North Tract Visitor Contact Station
230 Bald Eagle Drive
Laurel, MD 20724

Mr. Jun Jo
Plans Specialist
Fort Meade Plans, Analysis and Integration
Office
4216 Roberts Ave, Room #115
Fort Meade, MD 20755

Ms. Vaso Karanikolis
USACE CENAB-PL
PO Box 1715
Baltimore, MD 21203-1715

Mr. Brad Knudsen
U.S. Fish and Wildlife Service
Patuxent Research Refuge
National Wildlife Visitor Center
10901 Scarlet Tanager Loop
Laurel, MD 20708-4027

Ms. Genevieve LaRouche
U.S. Fish and Wildlife Service
Chesapeake Bay Ecological Services Field
Office
177 Admiral Cochrane Drive
Annapolis, MD 21401-7307

Mr. Peter May
National Park Service
National Capital Region
Lands, Resources, and Planning Division
1100 Ohio Drive, SW
Washington, DC 20242

Ms. Mary Doyle
Fort Meade Public Affairs Office
4409 Llewellyn Avenue
Fort Meade, MD 20755

Mr. Robert Mocko
Environmental Protection Specialist
National Park Service
National Capital Parks-East
1900 Anacostia Drive SE
Washington, DC 20020

Mr. Lindy Nelson
U.S. Department of the Interior
Office of Environmental Policy & Compliance
Philadelphia Region
Custom House, Room 244
200 Chestnut Street
Philadelphia, PA 19106

Mr. Bruce Peacock
National Parks Service
Environmental Quality Division
1201 Oakridge Drive
Fort Collins, CO 80525

COL Bert Rice (retired)
Fort Meade PAIO
1217 Hillcrest Road
Odenton, MD 21113-2005

Ms. Barbara Rudnick
NEPA Team Leader
Office of Environmental Programs (3EA30)
USEPA, Region 3
1650 Arch Street
Philadelphia, PA 19106

Ms. Loretta Sutton
Office of Environmental Policy & Compliance
U.S. Department of the Interior
Main Interior Building (MS 2462)
1849 C Street, NW
Washington, DC 20240

Ms. Suzanne Teague
Fort Meade DPW-ED
Building 2460
85th Med Battalion Avenue & Wilson Street
Fort Meade, MD 20755-7068

State Elected Officials

The Honorable Vanessa E. Atterbeary
Maryland House of Delegates
Howard County, District 13
House Office Building, Room 424
6 Bladen Street
Annapolis, MD 21401

The Honorable Benjamin S. Barnes
Maryland House of Delegates
Anne Arundel & Prince George's County,
District 21
House Office Building, Room 151
6 Bladen Street
Annapolis, MD 21401

The Honorable Pamela Beidle
Maryland House of Delegates
Anne Arundel County, District 32
House Office Building, Room 165
6 Bladen Street
Annapolis, MD 21401

The Honorable Mark S. Chang
Maryland House of Delegates
Anne Arundel County, District 32
House Office Building, Room 160
6 Bladen Street
Annapolis, MD 21401

The Honorable James E. DeGrange
Maryland State Senate
Anne Arundel County, District 32
James Senate Office Building, Room 101
11 Bladen Street
Annapolis, MD 21401

The Honorable Barbara A. Frush
Maryland House of Delegates
Prince George's & Anne Arundel County,
District 21
House Office Building, Room 364
6 Bladen Street
Annapolis, MD 21401

The Honorable Guy J. Guzzone
Maryland State Senate
Howard County, District 13
James Senate Office Building, Room 121
11 Bladen St.
Annapolis, MD 21401

The Honorable Larry Hogan
Governor, State of Maryland
100 State Circle
Annapolis, MD 21401-1925

The Honorable Tony McConkey
Maryland House of Delegates
Anne Arundel County, District 33
House Office Building, Room 163
6 Bladen Street
Annapolis, MD 21401

The Honorable Joseline A. Peña-Melnyk
Maryland House of Delegates
Anne Arundel & Prince George's County
District 21
House Office Building, Room 425
6 Bladen Street
Annapolis, MD 21401

The Honorable Shane E. Pendergrass
Maryland House of Delegates
Howard County, District 13
House Office Building, Room 241
6 Bladent Street
Annapolis, MD 21401

The Honorable Douglas J.J. Peters
Maryland State Senate
Prince George's County, District 23
James Senate Office Building, Room 120
11 Bladen Street
Annapolis, MD 21401

The Honorable Edward R. Reilly
Maryland State Senate
Anne Arundel County, District 33
James Senate Office Building, Room 316
11 Bladen Street
Annapolis, MD 21401

The Honorable James Rosapepe
Maryland State Senate
Prince George's & Anne Arundel County, District 21
James Senate Office Building, Room 314
11 Bladen Street
Annapolis, MD 21401

The Honorable Boyd Rutherford
Lieutenant Governor, State of Maryland
100 State Circle
Annapolis, MD 21401-1925

The Honorable Sid Saab
Maryland House of Delegates
Anne Arundel County, District 33
House Office Building, Room 157
6 Bladen Street
Annapolis, MD 21401

The Honorable Theodore Sophocleus
Maryland House of Delegates
Anne Arundel County, District 32
House Office Building, Room 162
6 Bladen Street
Annapolis, MD 21401

The Honorable Frank S. Turner
Maryland House of Delegates
Howard County, District 13
House Office Building, Room 131
6 Bladen Street
Annapolis, MD 21401

The Honorable Geraldine Valentino-Smith
Maryland House of Delegates
Prince George's County, District 23A
House Office Building, Room 427
6 Bladen Street
Annapolis, MD 21401

The Honorable Michael E. Malone
Maryland House of Delegates
Anne Arundel County, District 33
House Office Building, Room 154
6 Bladen Street
Annapolis, MD 21401

State Agency Contacts

Joseph Bartenfelder, Secretary
Maryland Department of Agriculture
50 Harry S. Truman Parkway
Annapolis, MD 21401

Ms. Lori Byrne
Maryland Department of Natural Resources
Wildlife and Heritage Service
Tawes State Office Building E-1
580 Taylor Avenue
Annapolis, MD 21401

Ms. Molly Connolly
AACPS Board of Education
2644 Riva Road
Annapolis, MD 21401

Mr. R. Michael Gill, Secretary
Maryland Department of Commerce
World Trade Center
401 East Pratt St.
Baltimore, MD 21202 – 3316

Mr. Benjamin H. Grumbles, Secretary
Maryland Department of the Environment
Montgomery Park Business Center
1800 Washington Blvd.
Baltimore, MD 21230

Ms. Elizabeth Hughes, Director
State Historic Preservation Office
Maryland Historical Trust
Division of Historical and Cultural Programs
100 Community Place
Crownsville, MD 21032-2023

Ms. Karen G. Irons, P.E.
Maryland Department of the Environment
Air Quality Permits Program
1800 Washington Boulevard
Baltimore, MD 21230-1720

Ms. Linda Janey
Assistant Secretary, Clearinghouse
Maryland Department of Planning
Capital Planning and Review Division
301 West Preston Street, Suite 1104
Baltimore, MD 21201

Mr. Pete K. Rahn, Secretary
Maryland Department of Transportation
7201 Corporate Center Drive
P. O. Box 548
Hanover, MD 21076 - 0548

Mr. Bob Rosenbush
Maryland Department of Planning
301 West Preston Street
Room 1104
Baltimore, MD 21201-2365

Mr. E. Lee Starkloff
Maryland State Highway Association
(D5) District 5 Office
138 Defense Highway
Annapolis, MD 21401

Mr. Donald VanHassent
Maryland Department of Natural Resources
Maryland Forest Service
Tawes State Office Building E-1
580 Taylor Avenue
Annapolis, MD 21401

Locally Elected Officials

The Honorable Rushern L. Baker III
Prince George's County Executive
County Administration Building
14741 Governor Oden Bowie Drive
Suite 5032
Upper Marlboro, MD 20772-3050

The Honorable Allan Kittleman
Howard County Executive
George Howard Building
3430 Courthouse Drive
Ellicott City, MD 21043

The Honorable Andrew Pruski
Anne Arundel County Council
District 4
44 Calvert Street, 1st Floor
Annapolis, MD 21401

The Honorable Steven R. Schuh
Anne Arundel County Executive
44 Calvert Street
Annapolis, MD 21401

The Honorable Pete Smith
Anne Arundel County Council
District 1
1602 Severn Road
Severn, MD 21144

Local Agency Contacts

Annapolis and Anne Arundel County
Chamber of Commerce
49 Old Solomons Island Road
Suite 204
Annapolis, MD 21401

Anne Arundel County Public Information Office
Arundel Center
44 Calvert Street
Annapolis, MD 21401

Keli C. Kirby
Anne Arundel Soil Conservation District
2662 Riva Road, Suite 150
Annapolis, MD 21401

Baltimore Metropolitan Council
Offices at McHenry Row
1500 Whetstone Way, Suite 300
Baltimore, MD 21230

Chamber of Commerce
Baltimore/Washington Corridor
312 Marshall Avenue, Suite 104
Laurel, MD 20707-4824

Chamber of Commerce
West Anne Arundel County
8385 Piney Orchard Parkway
Odenton, MD 21113

Economic Alliance of Greater Baltimore
1 East Pratt Street, Suite 200
Baltimore, MD 21202

Howard County Office of Public Information
George Howard Building
3430 Courthouse Drive
Ellicott City, MD 21043

Mr. Musa L. Eubanks, Director
Office of Community Relations
14741 Governor Oden Bowie Drive
Upper Marlboro, MD 20772

Mr. Adam C. Ortiz, Director
Prince George's County Department of the Environment
1801 McCormick Drive, Suite 500
Largo, MD 20774

Mr. George G. Cardwell
Anne Arundel County
Office of Planning and Zoning
Heritage Office Complex
2664 Riva Road, MS 6403
Annapolis, MD 21401

Ms. Ginger Ellis
Anne Arundel County
Department of Public Works
Heritage Office Complex
2662 Riva Road
Annapolis, MD 21401

Mr. Brian Ulrich
Planning Administrator
Anne Arundel County
Office of Planning and Zoning, Transportation Division
Heritage Office Complex
2664 Riva Road, 4th Floor
Annapolis, MD 21401

Mr. James M. Irvin
Howard County
Department of Public Works
3430 Court House Drive
Ellicott City, MD 21043

Mr. Raj Kudchadkar
Howard County
Department of Planning and Zoning
3430 Court House Drive
Ellicott City, MD 21043

Mr. Valdis Lazdins
Howard County
Department of Planning and Zoning
3430 Court House Drive
Ellicott City, MD 21043

Stakeholder Groups

Mr. Tate Armstrong
Konterra Realty LLC
14401 Sweitzer Lane, Suite 200
Laurel, MD 20707

Ms. Megan Brockett
The Capital
888 Bestgate Road
Annapolis, MD 21401

BTB Coalition
Corresponding Secretary
8787 Branch Avenue, Suite 17
Clinton, MD 20735

Corvias Military Living
Program Office
3080 Ernie Pyle Street
Fort Meade, MD 20755

Seven Oaks Community Association
2210 Charter Oaks Boulevard
Odenton, MD 21113

Mr. William S. Barroll
Senior Vice President Asset Management/ Leasing
Corporate Office Properties Trust
6711 Columbia Gateway Drive, Suite 300
Columbia, MD 21046

Mr. Dan Donovan
Peach Orchard Civic Association
7903 Elberta Drive
Severn, MD 21144

Ms. Zoe Draughon
Restoration Advisory Board
2108 Brink Court
Odenton, MD 21113

Mr. Ian Duncan
Baltimore Sun
501 N. Calvert Street
Baltimore, MD 21202

Ms. Debbie Faux
Department of Public Works
Residential Communities Initiative
3081 Ernie Pyle Street
Fort Meade, MD 20755

Ms. Linda Greene
BWI Business Partnership
1302 Concourse Drive #105
Linthicum Heights, MD 21090

Mr. Mark Holt
SGI Federal, LLC
420 National Business Parkway, Suite 180
Annapolis Junction, MD 20701

Ms. Christina Jedra
The Capital
888 Bestgate Rd. Suite 104
Annapolis, MD 21401

Mr. Jon Korin, President
Bike Advocates for Annapolis & Anne Arundel County
P.O. Box 208
Arnold, MD 21012

Mr. Patrick Latimer
Research Manager
JLL
100 North Charles Street, Suite 1710
Baltimore, MD 21201

Ms. Ellen Moss
Jessup Improvement Association
PO Box 751
Jessup, MD 20794

Mr. Jeff Niesz
Pepco Energy Service
1300 North 17th Street, Suite 1500
Arlington, VA 22209

Mr. Tim O'Ferrall
Fort Meade Alliance
7467 Ridge Road, Suite 220
Hanover, MD 21076

Ms. Diana Sansesti
Laurel Cats, Inc.
P.O. Box 57
Laurel, MD 20725

Mr. Richard Schaeffer
President, National Cryptologic Museum Foundation
P.O. Box 1682
Fort George G. Meade, MD 20755

Mr. Frederick Tutman
Patuxent Riverkeeper
17412 Nottingham Road
Upper Marlboro, MD 20772

Ms. Cynthia Williams
Provinces Civic Association
7917 Citadel Drive
Severn, MD 21144

Tribal Contacts

Maryland Commission on Indian Affairs
301 West Preston Street, Suite 1500
Baltimore, MD 21201

Cedarville Band of Piscataway Indians
American Indian Cultural Center
16816 Country Lane
Waldorf, MD 20601

Piscataway Conoy Confederacy and Subtribes
PO Box 1484
LaPlata, MD 20646

Chief W. Frank Adams
Upper Mattaponi Tribe
5932 East River Road
King William, VA 23086

Chief Gene Adkins
Eastern Chickahominy Tribe
2895 Mt. Pleasant Road
Providence Forge, VA 23140

Chief Stephen Adkins
Chickahominy Tribe
8200 Lott Cary Road
Providence Forge, VA 23140

Chief Earl L. Bass
Nansemond Tribe
PO Box 6558
Portsmouth, VA 23703

Chief Dean Branham
Monacan Indian Nation
104 Walnut Place
Lynchburg, VA 24502

Chief Mark Custalow
Mattaponi Tribe
122 Wee-A-Ya Lane
West Point, VA 23181

Chief Robert Gray
Pamunkey Tribe
191 Lay Landing Road
King William, VA 23086

Chief Paula Pechonick
Delaware Tribe of Indians
Delaware Tribal Headquarters
170 NE Barbara
Bartlesville, OK 74006

Chief G. Anne Richardson
Rappahannock Tribe
5036 Indian Neck Road
Indian Neck, VA 23148

Private Citizens

Tammy Banta
Ellicott City, MD

Rusty Bristow
Hanover, MD

Bob Bruninga

Thomas Coppi
Odenton, MD

John DuVall

Roy Fordyce

David Fuller
Fort Myers, FL

Delmar "Del" J. Haley
Glen Burnie, MD

Steve Heisel
Upper Marlboro, MD

Roland Jeffers
Severna Park, MD

C.J. Kupec
Columbia, MD

Sean Molane

Victoria McNamer
Columbia, MD

John L. Meinhardt
Severn, MD

Toby Moore
Bridgeville, DE

George Osing
Ellicott City, MD

Dr. Stan Pendergrass
Odenton, MD

Thom Rosario
Odenton, MD

Gloria Westover
Glen Burnie, MD

Public Libraries

Medal of Honor Memorial Library
4418 Llewellyn Avenue
Fort Meade, MD 20755

Glen Burnie Regional Library
1010 Eastway
Glen Burnie, MD 21060

Odenton Regional Library
1325 Annapolis Road
Odenton, MD 21113

Severn Community Library
2624 Annapolis Road
Severn, MD 21144

Draft EIS NOA Distribution Letter (Example)

NATIONAL SECURITY AGENCY
CENTRAL SECURITY SERVICE
Fort George G. Meade, Maryland 20755

July 1, 2016

Ms. Barbara Rudnick
NEPA Team Leader
Office of Environmental Programs (3EA30)
USEPA, Region 3
1650 Arch Street
Philadelphia, PA 19106

RE: Draft Environmental Impact Statement for the East Campus Integration Program, Fort Meade, Maryland

Dear Ms. Rudnick:

The Department of Defense (DoD) announces the availability of the Draft Environmental Impact Statement (EIS) for the East Campus Integration Program at Fort Meade, Maryland. The DoD proposes to continue to develop operational complex and headquarters space at the National Security Agency's (NSA) East Campus on Fort Meade for use by NSA and the Intelligence Community. The purpose of the Proposed Action is to provide facilities that are fully supportive of the Intelligence Community's function and to continue to integrate the East Campus with the NSA Main Campus. The need for the action is to meet mission requirements, both internally at the NSA and within the Intelligence Community. The Draft EIS is being prepared in accordance with the National Environmental Policy Act (NEPA) (42 U.S.C. 4321, et seq.). It is anticipated that a Notice of Availability for the Draft EIS will be published in the *Federal Register* on July 8, 2016, formally initiating a 45-day public review period.

The DoD invites public and agency input on the Draft EIS. On August 3, 2016, the DoD will hold an open house from 4:30 to 5:00 p.m. and a public meeting from 5:00 to 7:00 p.m. at Severn Community Library, 2624 Annapolis Road, Severn, Maryland 21144. The public meeting may end earlier or later than the stated time depending on the number of persons wishing to speak.

Verbal and written comments will be received at the public meeting and considered in preparation of the Final EIS. You can also submit written comments by mail to "East Campus Integration Program EIS" c/o HDR, 2600 Park Tower Drive, Suite 100, Vienna, VA 22180, or by email to ECIPEIS@hdrinc.com. Written comments are requested by August 22, 2016, to ensure sufficient time to consider public input in preparation of the Final EIS.

Your comments on the enclosed Draft EIS are requested. Written and verbal comments may be published in the EIS. Any personal information provided will be used only to identify your desire to make a statement during the public comment portions of the EIS process or to fulfill requests for copies of the EIS or associated documents. Private addresses will be compiled to develop a mailing list for those requesting copies of the Draft or Final EIS. However, only the names of private citizens will appear in the EIS; personal addresses and phone numbers will not be published.

Printed on Recycled Paper

Your input and comment are greatly appreciated. If you need additional information, please contact me at (301) 688-2970 or send an email to jdwill2@nsa.gov for additional information. Thank you for your interest.

Sincerely,

Jeffrey D. Williams

Jeffrey D. Williams
Director, Environmental Sustainability

Enclosure:
Draft EIS

Environmental Impact Statement for the East Campus Integration Program at Fort Meade

THE NATIONAL ENVIRONMENTAL POLICY ACT

Background

The National Environmental Policy Act (NEPA) of 1969 was enacted to address concerns about environmental quality. NEPA establishes a national policy for attaining harmony between people and nature, for promoting efforts to eliminate damage to the environment, and for better understanding of ecological systems and natural resources. NEPA's main objectives are as follows:

- Ensure that Federal agencies evaluate the potential environmental impacts of proposed programs, projects, and actions before decisions are made to implement them.
- Inform the public of proposed Federal activities that have the potential to significantly affect environmental quality.
- Encourage and facilitate public involvement in the decisionmaking process.

What is an EIS?

An Environmental Impact Statement (EIS) is the most detailed analysis prescribed by the Council on Environmental Quality's regulations for implementing NEPA. An EIS is a detailed public document describing a proposed action, all alternative actions that were considered, and the environmental impacts of implementing a proposed action and reasonable alternatives.

Steps in the EIS Process

Public Involvement

Opportunities to participate in the NEPA process include submitting scoping comments, submitting comments on the Draft EIS and Final EIS, and attending public meetings.

Agency Coordination

NEPA mandates that local, state, and Federal agencies within the affected project area be given the opportunity to comment on proposed actions. These agencies are asked to identify specific areas or issues that should be addressed in the EIS.

Department of Defense

PROPOSED ACTION

Introduction

The Department of Defense (DoD) proposes to continue to develop operational complex and headquarters space at the National Security Agency's (NSA) East Campus on Fort Meade. The purpose of the Proposed Action is to provide facilities that are fully supportive of the Intelligence Community's function and to continue to integrate the East Campus site with the NSA Main Campus. The action is needed to meet mission requirements, both at the NSA and within the Intelligence Community.

Proposed Action

Development is proposed along the East Campus central core extending through the NSA Main Campus at Fort Meade. The Proposed Action would consist of the construction of approximately 2,880,000 square feet of office, operational, and headquarters space supporting an increase of 7,200 people. The East Campus Integration Program also includes demolition of approximately 1,900,000 square feet of buildings and infrastructure. Development would include associated infrastructure (e.g., electrical substation, generator capacity providing 121 megawatts of electricity, life-safety generators, building heating systems, utilities, roads, sidewalks, stormwater management facilities, and parking facilities).

The East Campus Integration Program takes into account several factors, including mission requirements, the condition of current facilities (both on and off NSA's Campus at Fort Meade), space planning, land availability, utility requirements, traffic and parking, and environmental impacts. A key factor is the mission collocation to provide a more efficient and effective work environment for mission-critical functions of the entire Intelligence Community.

Alternative options for emergency power generation, building heating systems, parking facilities, and lease of additional space at existing, offsite locations are described on the *Alternatives* fact sheet.

ALTERNATIVES

Site Development. The Proposed Action would occur in the northern portion of the East Campus and central core extending into the NSA Main Campus. Other location alternatives are discussed under *Leased Locations* below.

Emergency Power Generation. Four options for emergency power generation were considered potentially viable; two alternatives were carried forward for further detailed analysis in the EIS. These options include generators using different types of fuel, and a combination of generators and combustion turbines. In addition, pollution control system alternatives and alternatives for operational limits were evaluated for reducing air pollutant emissions.

Building Heating Systems. Three options for building heating systems were considered potentially viable; two alternatives were carried forward for further detailed analysis in the EIS. These options include packaged boilers and a hybrid building heating system consisting of packaged boilers and ground source heat pumps. In addition, evaluation of solar hot water heaters for buildings along with hot water boilers was included in the EIS.

Parking Facilities. The EIS analyzed four location alternatives for parking facilities for the East Campus. The locations would be within the NSA fenceline. Use of multi-level parking facilities were considered in lieu of surface parking.

Leased Locations. In lieu of full build-out at the East Campus, acquisition of additional space at one or two existing, offsite leased locations close to the NSA Campus, National Business Park and Annapolis Junction Business Park (Alternatives 1 and 2, respectively), were examined in the EIS.

No Action Alternative. The EIS also analyzed a No Action Alternative to provide a baseline of the existing conditions against which potential environmental and socioeconomic impacts of the Proposed Action and alternative actions were compared.

SUMMARY OF ENVIRONMENTAL IMPACTS

The environmental impacts potentially resulting from the Proposed Action and alternatives would primarily be dependent on the alternative ultimately selected. Impacts would generally be slightly more adverse for the Proposed Action than for leased locations outside of Fort Meade (i.e., Alternatives 1 and 2) due to the larger building footprints and number of additional personnel associated with the Proposed Action, although facilities and personnel would be consolidated in one location under the Proposed Action.

Potential construction-related adverse impacts on land use, noise environment, air quality, soils, water resources, biological resources, solid waste management, transportation, and hazardous materials and waste management, would be short-term and minor. Long-term, minor, adverse impacts would be expected on vegetation from clearing and grading of forested areas. A major impact on architectural resources would be expected due to demolition of a building determined eligible for the National Register of Historic Places.

Operation of the East Campus Integration Program would be expected to result in long-term, negligible to moderate, adverse impacts on land use, noise, air quality, geological resources, water resources, biological resources, infrastructure, sustainability, hazardous materials and waste, and socioeconomic resources. Adverse impacts on transportation would occur during operation; however, major, adverse impacts on transportation already exist due to current traffic levels.

Long-term, beneficial impacts on land use, sustainability, infrastructure, and socioeconomics (local economy) would be expected under the Proposed Action.

Under Alternatives 1 and 2, the offsite leased facilities would already have been constructed. Environmental requirements and permits would be the responsibility of the facility developers/owners, and are assumed to have been complied with and obtained prior to leasing arrangements. Impacts from construction on the northern portion of the East Campus would still occur under these alternatives.

Environmental Impact Statement for the East Campus Integration Program at Fort Meade

HOW TO MAKE COMMENTS

Pursuant to the Council on Environmental Quality's regulations, the DoD invites public participation in the NEPA process. Anyone wishing to provide comments, suggestions, or relevant information on the Proposed Action and alternatives may do so using one of the following methods.

By mail: "East Campus Integration Program EIS"
c/o HDR
2600 Park Tower Drive, Suite 100
Vienna, VA 22180

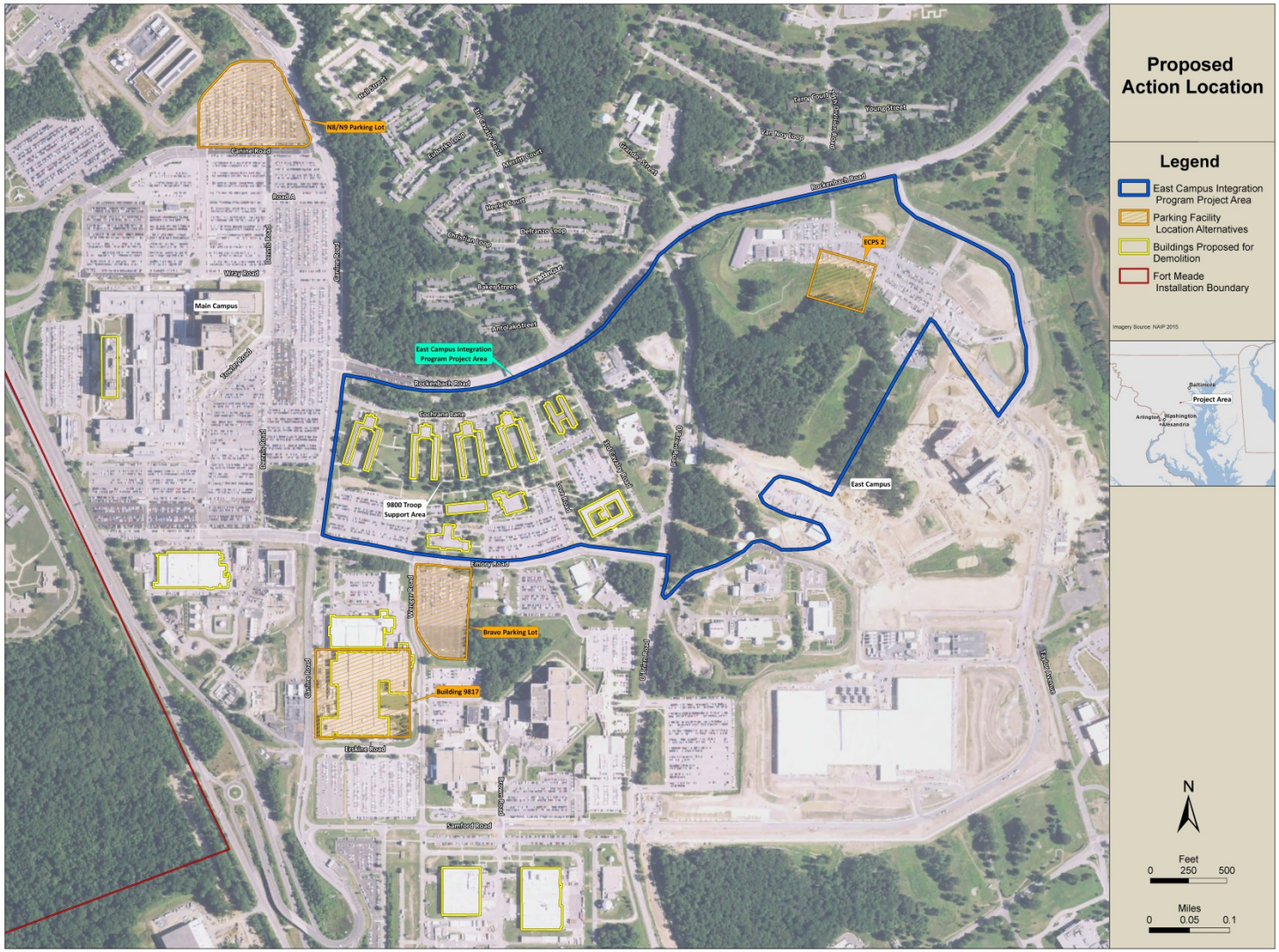
By email: ECIPEIS@hdrinc.com

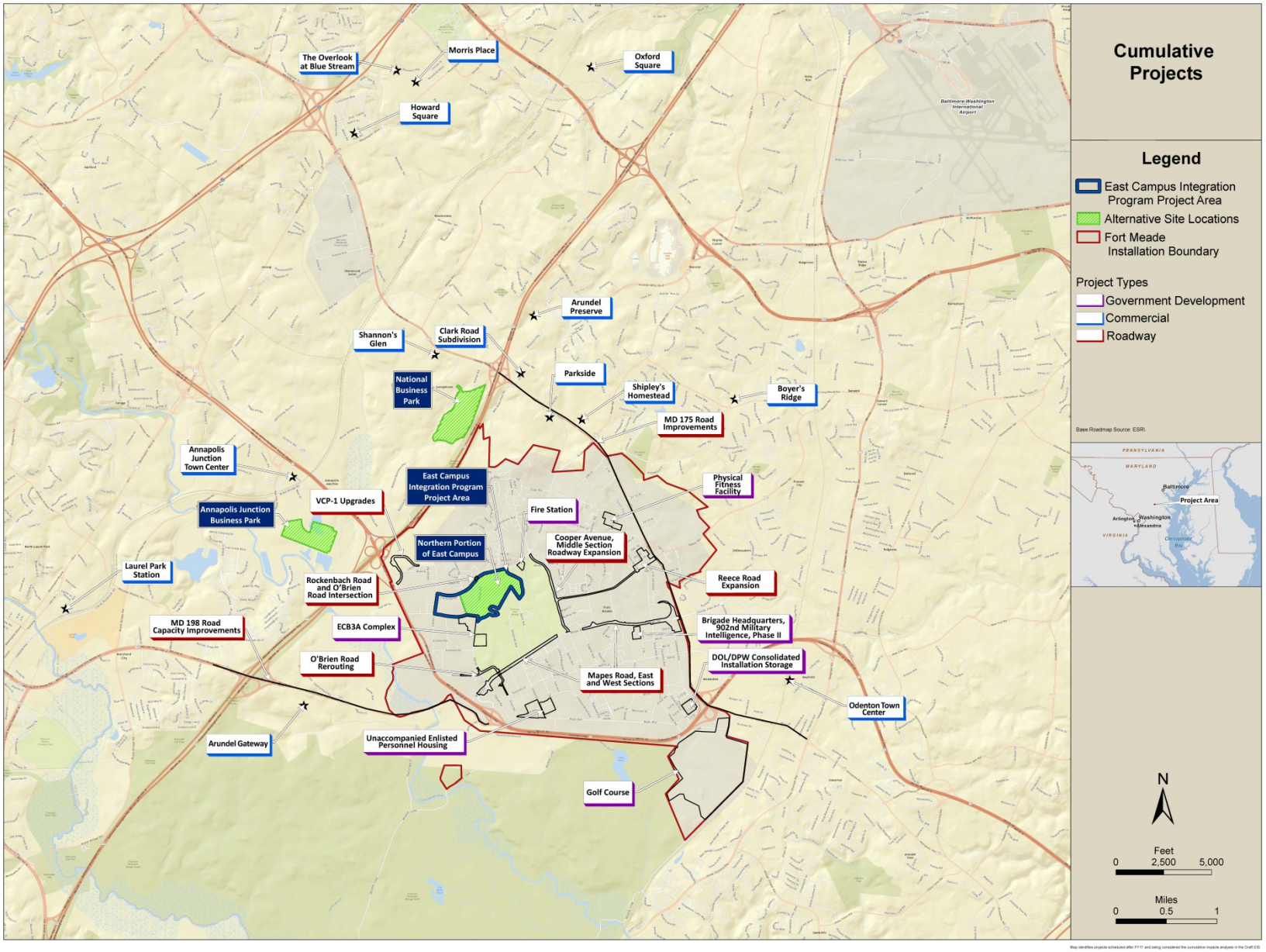
Comments and related material on the Draft EIS must be received by August 22, 2016, to be considered in the Final EIS. If you submit a comment, include your name and address, and identify your comments as for the "East Campus Integration Program EIS". Please be aware that written and oral statements could be published in the EIS. Private addresses will be compiled to develop a mailing list for those requesting copies of the Final EIS. However, only the names of private citizens will appear in the EIS; personal addresses and phone numbers will not be published.

Opportunities for Making Comments throughout EIS Development

Department of Defense

Draft EIS Public Meeting Posters




Cumulative Projects
Legend
East Campus Integration Program Project Area
Alternative Site Locations
Fort Meade Installation Boundary
Project Types
Government Development
Commercial
Roadway
Base Roadmap Source: ESRI
The Overlook at Blue Stream
Morris Place
Oxford Square
Howard Square
Arundel Preserve
Shannon's Glen
Clark Road Subdivision
Parkside
National Business Park
Shipley's Homestead
Boyer's Ridge
MD 175 Road Improvements
Annapolis Junction Town Center
East Campus Integration Program Project Area
Physical Fitness Facility
VCP-1 Upgrades
Annapolis Junction Business Park
Fire Station
Cooper Avenue, Middle Section Roadway Expansion
Northern Portion of East Campus
Laurel Park Station
Rockenbach Road and O'Brien Road Intersection
Reece Road Expansion
MD 198 Road Capacity Improvements
ECB3A Complex
Brigade Headquarters, 902nd Military Intelligence, Phase II
O'Brien Road Rerouting
DOL/DPW Consolidated Installation Storage
Mapes Road, East and West Sections
Odenton Town Center
Arundel Gateway
Unaccompanied Enlisted Personnel Housing
Golf Course
PENNSYLVANIA
MARYLAND
Baltimore
Project Area
Washington
Alexandria
VIRGINIA
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Draft EIS Public Meeting Transcript

DEPARTMENT OF DEFENSE

IN RE: PROPOSED ACTION
EAST CAMPUS INTEGRATION PROGRAM
AT FORT MEADE, MARYLAND
_____/

The Public Meeting in the above-mentioned matter was held on Wednesday, August 3, 2016, commencing at 5:05 p.m., at the Severn Community Library, Conference Room, 2624 Annapolis Road, Severn, Maryland 21144, before Robert A. Shocket, Notary Public.

REPORTED BY: Robert A. Shocket

Gore Brothers Reporting & Videoconferencing
410 837 3027 - Worldwide - www.gorebrothers.com

APPEARANCES:

PANEL:

HARRY WOLFE, Moderator, Mosaic Technologies

LEIGH HAGAN, HDR, Inc.

PATRICK SOLOMON, HDR, Inc.

PROCEEDINGS

MR. WOLFE: Ladies and gentlemen, it's a little after 5 o'clock, and we would like to call the meeting to order, so if everyone wants to take a seat. All right. Good evening and welcome to the public meeting for the proposed East Campus Integration Program for the Department of Defense at Fort Meade, Maryland. My name is Harry Wolfe and I represent Mosaic Technologies Group, one of the contractors preparing the Environmental Impact Statement, or EIS. With me tonight are Patrick Solomon and Leigh Hagan from HDR, the other contractor preparing the EIS.

Before we get started, I would like to cover a few details. I would ask that everybody take a moment to silence their cell phones if they haven't already done so. Additionally, there are two fire exits. One is in the back of the room, the same way you came in; the other here to my right, your left, up in the front. The restrooms -- all important thing -- are located out the back of the room in the library foyer.

If you haven't registered this evening, I would encourage you to do so at the registration table at the room entrance, back under the clock. If you provide your name and address, you'll be added to the mailing list and will receive announcements regarding this project. We have a stenographer present this evening and all verbal comments made as part of the formal meeting tonight will be recorded and kept in the official administrative record for this project. The.

Public meeting this evening will be conducted in two parts. During the first part of the meeting, we will present information on the proposed East Campus Integration Program at the NSA East Campus on Fort Meade. We will define the Proposed Action and Alternatives, and describe the environmental impact it analysis progresses that was undertaken. The second part of the meeting is your opportunity to provide comments on the environmental analysis.

So at this point I would like to turn things over to my colleagues from HDR who will provide some background information regarding this project, and

also detail the public participation aspect of the National Environmental Policy Act. Leigh, Patrick.

MS. HAGAN: Thanks, Harry. The East Campus Integration Program was initiated to continue to develop an operational complex and headquarters space for the NSA and the Intelligence Community. The purpose of the Proposed Action is to provide facilities that fully support the Intelligence Community's function and to continue to integrate the NSA East Campus with the Main Campus as a way to meet mission requirements.

Continued development and integration of the East Campus into the main NSA campus would requirement the demolition of approximately 1.9 million square feet of buildings and infrastructure on the NSA campus, and the construction of approximately 2.9 million square feet of office, operational, and headquarters space. The East Campus Integration Program would support an increase of 7,200 people on the installation that are currently using leased space within the local area. Development would include

associated infrastructure, such as an electrical substation, generator capacity providing 121 megawatts of electricity, life-safety generators, building heating systems, utilities, roads, sidewalks, stormwater management facilities, and parking facilities.

The DoD has looked at several alternatives. Alternatives include options for emergency power generation, building heating systems, and options for locations of parking facilities. The DoD has also looked at alternatives to onsite redevelopment of the East Campus, which includes lease of additional space at existing, off-site locations. Patrick?

MR. SOLOMON: The National Environmental Policy Act -- NEPA establishes the decision-making process to help officials of Federal agencies make decisions that are based on an understanding of environmental consequences, and take actions that protect, restore or enhance the environment. The NEPA decision-making process is founded on accurate scientific analysis, expert agency comments, and public

scrutiny. Through this process, we will continue to identify the environmental and socioeconomic issues that are truly significant.

The efforts of the NEPA decision-making process have been captured in the Draft EIS that has been prepared for the East Campus Integration Program. The EIS is a public document that describes in detail the Proposed Action, and all alternatives that are being considered. Each of the options have been evaluated for potential environmental impacts including an option to take No Action.

MS. HAGAN: Public involvement is a fundamental aspect of NEPA. Currently the DoD is seeking input from agencies and the public on the Draft EIS, including the Proposed Action, possible alternatives, and potential environmental impacts. A Notice of Availability was published on July 8th, 2016, and the Draft EIS was released for publicly input.

The intent of this public meeting is to receive your comments on the Draft EIS. In addition to verbal comments accepted at this meeting, written

comments on the Draft EIS can be submitted until August 22, 2016. Instructions for submitting written comments are available on the information fact sheets at the back of the room, titled "How to Make Comments," if you would like to pick up one of those on your way out if you haven't done so already.

Comments received on the Draft EIS will become public record and will be considered in preparation of the Final EIS. Following publication of the Final EIS there will be another opportunity for you to review the EIS and make comments for consideration in the final decision-making document for this project, which is called the Record of Decision, or ROD.

We are here tonight to listen to your views and concerns regarding environmental issues associated with the East Campus Integration Program at Fort Meade. Thank you.

MR. WOLFE: Thank you, Leigh and Patrick. So ladies and gentlemen, my role for this evening as moderator is to facilitate the public comment process. The goal is to ensure that every speaker has the

opportunity to make the comments that they would like to be heard by this group.

If you weren't here for the open house portion earlier this evening, all the public documents again, like we stated, are available in the back of the room. And I would encourage you to take copies with you.

Before we open the floor to comments, there are a few ground rules that I would like to review. Please begin making your comments by stating your name and any affiliation that you have so that the stenographer can transcribe it correctly for the record. If you have any written comments in addition to your verbal comments, please give those to me and we will make sure that they are, included in the record. Written and verbal comments do receive the same consideration so you only need to use one method when you provide a comment.

Those individuals who have signed up to speak will be called in the following order: Elected officials, and then other interested persons in the

order in which everyone signed the speaker sign-in sheet at the back of the room. Everyone who desires to speak needs to sign up on the speaker sign-in sheet at the registration table. Again, when you come to the microphone, please state your name and any affiliation. Each speaker will be allotted three minutes to speak. At the end of your three minutes, I will signal to you that your time is up; you may finish your sentence and then we will move on to the next speaker.

After all those wishing to comment have had one chance to speak, those with unfinished or additional comments may return to the floor and finish or add to your previous remarks. If you would like to speak, but have not yet registered, you can still do so at the registration table. So, before we get started, are there any questions? Okay. Very good. The floor is now open for public comments. Going once, going twice, okay. So, since no one wishes to speak at this time, we will call a recess and then reconvene if someone here wishes to make a public comment or if someone arrives later who wishes to make a public

comment.

In any event, we will close our meeting before we adjourn for the evening. One last chance. All right. Very good. This meeting is in recess.

(There was a break in the proceedings.)

MR. WOLFE: Okay. Ladies and gentlemen, we're going to get a format out of way. So the recess has ended like to call the meeting back to order briefly. Does anyone else wish to provide a verbal comment at this time? Okay. Very well. There are no more public comments. Thank you again for your participation in this public meeting. This meeting is adjourned.

(Meeting adjourned at 7:00 p.m.)

State of Maryland

Baltimore County, to wit:

I, ROBERT A. SHOCKET, a Notary Public of the State of Maryland, County of Baltimore, do hereby certify that the within-named proceedings personally took place before me at the time and place herein set out.

I further certify that the proceedings was recorded stenographically by me and this transcript is a true record of the proceedings.

I further certify that I am not of counsel to any of the parties, nor in any way interested in the outcome of this action.

As witness my hand this 15th day of August, 2016.

Robert A. Shocket

Robert A. Shocket

Notary Public

My Commission Expires:

November 23, 2018

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From: Mocko, Robert [mailto:robert_mocko@nps.gov]
Sent: Tuesday, July 26, 2016 11:22 AM
To: Williams, Jeffrey
Subject: Fort Meade EIS comments

Hi Jeffrey Williams -

The National Park Service (NPS) reviewed the EIS of the new construction at Ft. Meade. There are no physical impacts to NPS and no visual impacts to the Baltimore-Washington Parkway viewsheds. NPS-1

The only comment we have is the EIS states the parkway is categorized as a "freeway" similar to I-95. We would like the term to be updated to "Parkway" throughout the document (based on FHA glossary of terms: a highway that has full or partial access control, is usually located within a park or a ribbon of park-like developments, and prohibits commercial vehicles. Buses are not considered commercial vehicles in this case.) The term freeway connotes a roadway with limited access for high volume, high speed traffic. Parkway speeds vary between 45-55 on the mainline with ramps at lower speeds. The parkway is engineered, constructed and managed much differently than a freeway. NPS-2

Thanks for the opportunity to comment.

--
Robert Mocko
Environmental Protection Specialist / Compliance Coordinator
National Park Service
National Capital Parks-East
1900 Anacostia Dr SE
Washington, DC 20020
(202) 690-5170
Robert_Mocko@nps.gov

NPS-1: Comment noted. Thank you for the support.

NPS-2: Text was revised throughout the Environmental Impact Statement (EIS), where appropriate, to reflect that the Baltimore-Washington Parkway (MD 295) is a parkway. The term freeway was used because it is more similar to a freeway with interchanges and full access control than a traditional parkway. For this reason and per the Highway Capacity Manual, the classification of the Baltimore-Washington Parkway remained as freeway in the traffic capacity analysis.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Patuxent Research Refuge
12100 Beech Forest Road
Laurel, MD 20708-4036

AUG 3 0 2016

East Campus Integration Program EIS
c/o HDR
2600 Park Tower Drive, Suite 100
Vienna, VA 22180
ECIPEIS@hdrinc.com

Dear Sir/Madam:

Thank you for the opportunity for Patuxent Research Refuge, a unit of the U.S. Fish and Wildlife Service's National Wildlife Refuge System, to review and comment on the Draft Environmental Impact Statement for the East Campus Integration program at Fort Meade, MD.

Patuxent Refuge strongly prefers maintaining larger blocks of contiguous forest with as much interior acreage and as little fragmentation as possible. Additionally, 100-foot buffers along streams and drainages, and promotion of mature canopy forest for buffers rather than grass, would help with flood attenuation. The refuge already experiences high flood volumes in the rivers and streams from surrounding runoff during storm events.

We have compared the amount of forest shown in the draft EIS, dated June 2016, to current imagery in Google Earth, dated April 14, 2016. The images indicate some forest clearing has already taken place, since current imagery only shows approximately 23 acres of forest cover within the project area (rather than 45 acres). See Figures 1 and 2 below for reference. PRR-1

We note the U.S. Fish and Wildlife Services' Endangered Species program staff at the Chesapeake Bay Field Office (CBFO) already submitted a letter on September 22, 2015 to NSA c/o Jeffrey Williams, in response to last year's scoping effort. This consultation included a finding of "not likely to adversely affect" the Northern Long Eared Bat (NLEB) – a species recently listed under the Endangered Species Act - if forest clearing of greater than one acre takes place outside of the bat's active season (April 15 – August 30). That letter was based on the understanding that there were 45 acres of forest in the proposed project area. PRR-2

1

PRR-1: Figure 1 provided with this comment is a poster board presented at the East Campus Integration Program (ECIP) EIS open house and scoping meeting on January 27, 2015. The aerial imagery used for that poster board was dated December 2014. This aerial imagery was also used in several figures in the Draft EIS, and represented the latest imagery readily available at the time the figures were last updated. Based on the December 2014 aerial imagery, approximately 44 acres of forest/tree cover was calculated to be within the ECIP project area. Based on July 2016 aerial imagery, approximately 32 acres of forest/tree cover was calculated within the ECIP project area. The April 2016 Google Earth aerial imagery appears to have been taken when leaves were off deciduous trees; these areas are included in the 32 acres. The acreages have been revised in EIS Sections 3.7 and 4.7.

The areas cleared are for infrastructure development adjacent to East Campus Building (ECB) 2, the last phase of construction authorized under the 2010 Campus Development EIS for the East Campus. No clearing in advance of the results of the ECIP decision has occurred. Appropriate figures in the EIS have been updated with aerial imagery dated July 2016, as appropriate based on image quality and figure context, to show the latest conditions on the East Campus.

PRR-2: The areas cleared are for the last phase of construction for the facilities authorized under the 2010 Campus Development EIS for the East Campus. Time of year restrictions for this forest clearing were applied (i.e., clearing occurred between August 31–April 14). No clearing in advance of the results of the ECIP decision has occurred.

Acoustical surveys conducted in 2015 for NLEB on the refuge's nearby North Tract indicate a high likelihood of its existence on the refuge and perhaps surrounding forests off-refuge. We hope time of year restrictions for forest clearing, as explained in the previously mentioned consultation letter from CBFO, were applied. PRR-2

We respectfully request responses to the following questions:

1) The validity of the June 2016 Draft EIS maps. Was any activity undertaken prior to requesting public review of that activity, which would account for the discrepancy in the forest acreage figures? And; PRR-3

2) Was any forest cleared outside the April 15 to August 30 time frame? PRR-4

I look forward to your responses.

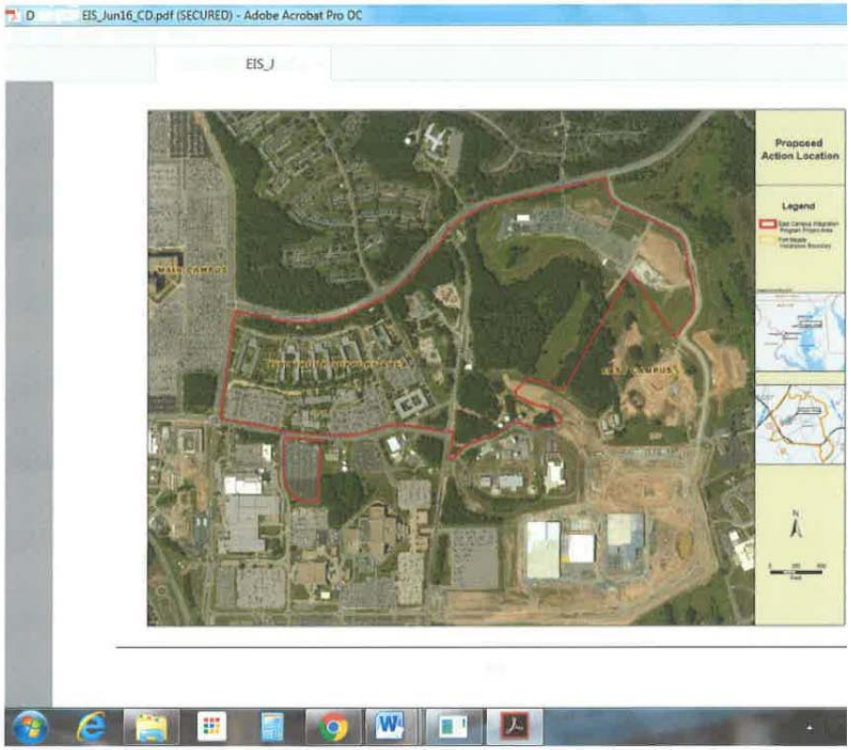
Sincerely,

Brad Knudsen

Brad Knudsen,
Refuge Manager

PRR-3: Please see the response to Comment PRR-1.

PRR-4: Please see the response to Comment PRR-2.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Proposed Action Location
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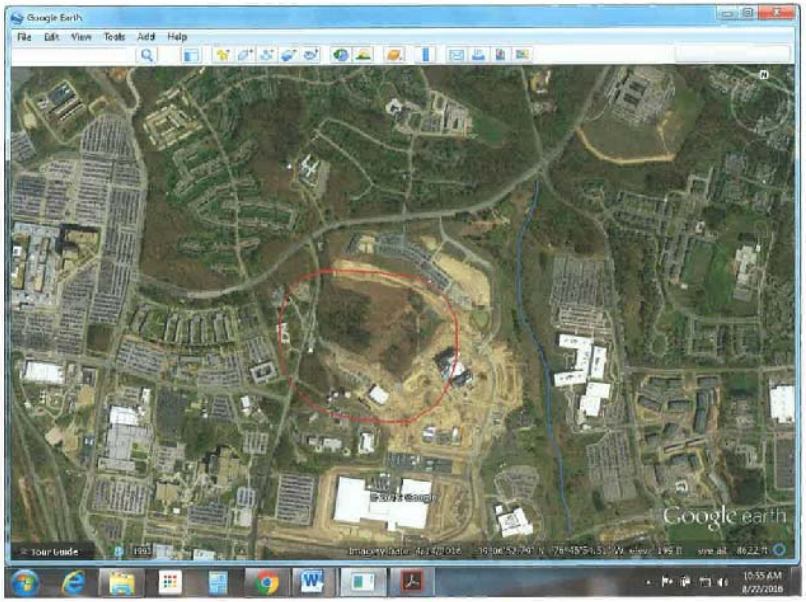
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8/22/2016

Comment 3

United States Department of the Interior

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

IN REPLY REFER TO:

September 2, 2016

9043.1
ER 16/0405

Mr. Jeffery Williams
Office of Occupational Health, Environmental, and Safety Services
9800 Savage Road, Suite 6218
Fort Meade, Maryland 27055

Dear Mr. Williams:

The U. S. Department of the Interior (Department) has no comment on the National Security Agency's Draft Environmental Impact Statement for the East Campus Integration Program, located in Fort Meade, Maryland. DOI-1

Thank you for the opportunity to comment.

Sincerely,

Lindy Nelson
Regional Environmental Officer

DOI-1: Comment noted. Thank you for the support.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

September 6, 2016

Mr. Jeffrey D. Williams
East Campus Integration Program EIS
c/o HDR, Suite 100
2600 Park Tower Drive
Vienna, VA 22180

Re: Draft Environmental Impact Statement for the East Campus Integration Program, Fort Meade, Maryland (CEQ #20160168)

Dear Mr. Williams:

In accordance with the National Environmental Policy Act (NEPA) of 1969, Section 309 of the Clean Air Act and Council on Environmental Quality (CEQ) regulations implementing NEPA (40 CFR 1500-1508), the U.S. Environmental Protection Agency has reviewed the Draft Environmental Impact Statement (DEIS) for the East Campus Integration Program (ECIP) in Fort Meade, Maryland. The DEIS has been prepared by the National Security Agency in compliance with NEPA.

The purpose of the Proposed Action is to provide facilities that are fully supportive of the Intelligence Community's function and to continue integrating the East Campus with the National Security Agency (NSA) Main Campus. The need for the Proposed Action is to meet mission requirements, both internally at the NSA and within the Intelligence Community.

The DEIS evaluates the Proposed Action (Preferred Alternative) which is to continue integrating the NSA East Campus with the NSA Main Campus through development of operational complex and headquarters space in the northern portion of the East Campus (approximately 84 acres) and the 9800 Troop Support Area (approximately 49 acres) west of the northwest portion of the East Campus to provide administrative capacity for an increase of 7,200 personnel currently located offsite.

The Proposed Action entails construction and operation of 2,880,000 square feet (ft^2) of new operational complex and headquarters space consisting of five buildings and supporting infrastructure within the 150-acre ECIP project area, and demolition of approximately 1.9 million ft^2 of buildings and infrastructure on the NSA Main Campus (1,291,206 ft^2) and the 9800 Troop Support Area (592,269 ft^2). The ECIP project area includes the locations being considered for development of operations and headquarters space; some parking facility location alternatives and locations of buildings proposed for demolition that are outside of this project area. The proposed infrastructure would include an electrical substation, emergency generator

capacity providing 121 megawatts (MW) of electricity; life-safety generators; building heating systems; utilities, including water, natural gas, and communications services; transportation infrastructure, including roads, parking structures, and sidewalks; and stormwater management facilities. Additionally, use of multi-level parking facilities would be considered in lieu of surface parking. The DOD proposes to develop the ECIP over a period of approximately 10 years (fiscal years 2019 to 2029).

In addition to the Proposed Action, two location alternatives outside of the Fort Meade area are also evaluated: the National Business Park/East Campus (Alternative 1) – this alternative would involve leasing existing or newly constructed Interagency Security Committee-qualified buildings at the northern end of the National Business Park. The other alternative is the Annapolis Junction Business Park/East Campus (Alternative 2) -- this alternative would involve a leased administrative facility at the southern end of Dorsey Run Road in the Annapolis Junction Business Park. Under these alternatives, a total of 21 MW of onside emergency power generation would be required. Life-safety generators would also be installed onsite. Construction of an 800,000 ft^2 building, other smaller buildings, and associated parking facilities on the northern portion of the East Campus would still occur under these alternatives. Under these alternatives, Building 9800A on the NSA Main Campus and all nine buildings in the 9800 Troop Support Area would not be demolished; and no proposed facilities would be constructed in the 9800 Troop Support Area.

In addition to Operational/Headquarters Complex Location Alternatives the DEIS evaluates Parking Facility Location Alternatives. They are: 1) East Campus Parking Structure 2 -- located in the northeastern portion of the East Campus; 2) the Bravo Parking Lot -- is a 4.5 acre, surface parking lot located south of the 9800 Troop Support Area which would be demolished and made into a multi-level parking facility; 3) N8/N9 Parking Lot – is a 7.1 acre surface parking lot on the NSA Main Campus that is located northwest of the intersection of Canine Road (access point to Maryland State Route 32 and Connector Road); and 4) Building 9817 – is proposed for demolition as part of the Proposed Action and it is located on the NSA Main Campus where a parking facility could be constructed on all or part of the 8.2 acre footprint.

EPA understands the purpose and need for the subject project. However, as a result of EPA's review of the DEIS, EPA developed comments and questions (presented in the enclosed Technical Comments document) for your consideration. Of particular interest, is the follow-up to the 2010 DEIS (Fort George G. Meade to Address Campus Development, Site M as an Operational Complex and to Construct and Operate Consolidated Facilities to Intelligence Community Use) in which DOD would consider development of Site M under three discrete phases identified for implementation over a horizon of approximately 20 years. It appears that the current EIS builds on NSA's goals as outlined in the 2010 EIS and that the connectivity of the two actions is not apparent especially within the cumulative effects discussion. Because the exact locations of the Proposed Action are not yet defined and resources cannot be accurately determined, it is difficult to do a full assessment. Please also consider specific comments included in the enclosure to this letter that address alternatives analysis, vegetation, hazardous materials and waste, transportation/parking, cultural resources, greenhouse gas/climate change, environmental justice and children's health. EPA-1

EPA rated the DEIS an EC-2 (Environmental Concerns/Insufficient Information), which indicates that we have environmental concerns regarding the proposal and that there is

EPA-1: Comment noted. Thank you for the comment. Responses are provided for the technical comments that follow below.

insufficient information in the document to fully assess the environmental impacts of this project. A copy of EPA's ranking system is enclosed for your reference and can be found on the EPA website at the following address: http://www.epa.gov/compliance/nepa/comments/ratings.html. EPA-1

Thank you for the opportunity to review this project. If you have questions regarding these questions/comments, the staff contact for this project is Karen DelGrosso; she can be reached at 215-814-2765 or delgrosso.karen@epa.gov.

Sincerely,

for Barbara Rudnick
NEPA Team Leader
Office of Environmental Programs

Enclosure (2)

Technical Comments

Proposed Action

In 2010, DOD prepared a DEIS and FEIS for the Campus Development Project at Fort George G. Meade (FGGM) that evaluated campus development initiatives involving construction of associated facilities for the National Security Agency (NSA) complex at FGGM. In this evaluation, DOD proposed to develop a portion of Fort Meade (referred to as "Site M") as an operational complex. The development of Site M (which consists of approximately 227 acres), would be considered under three discrete phases (Phase 1, Phase II and Phase III) over a horizon of approximately 20 years. Under Phase 1, development would occur (approximately 2012 to 2014) supporting 1.8 million square feet (ft^2) of facilities for a data center and associated administrative space. As noted in the Record of Decision, DOD's Preferred Alternative was to implement the Proposed Action (Phase 1) to develop "Site M" at Fort Meade as an operational complex and to construct and operate consolidated facilities for Intelligence Community Use. Implementation of the Preferred Alternative would provide up to 1.8 million square feet of facilities.

Page 1-1 states, "The Record of Decision (ROD) for the 2010 Campus Development EIS allowed for initiation of construction currently occurring in the southern portion of the East Campus. The Proposed Action identified in this EIS addresses build-out of the northern portion of the East Campus and the adjacent 9800 Troop Support Area, and integration of the East Campus with the NSA Main Campus." Even though the 2010 EIS and the current EIS may address different areas of the East Campus, the current EIS should discuss what has been implemented to date from the 2010 EIS. The EIS, and in particular the Cumulative Impacts discussion, does not distinguish actions implemented from the 2010 EIS. The current EIS should identify those completed actions and actions that may not have been completed. The 2010 Campus Development EIS projected 6,500 NSA personnel on the East Campus under the Preferred Alternative (Phase I), [Alternative 1 (Phases I and II) would support 8,000 personnel, and Alternative 2 (Phases I, II, III) would support 11,000 personnel.] If the 2010 EIS represented Phase I (the Preferred Alternative), does the current EIS represent Phase II of the 2010 EIS (which was projected to support approximately 8,000 personnel) or will additional environmental analysis be forthcoming? — EPA-2

Please discuss the development of Site M as a result of the 2010 EIS. Is there any overlap of Site M from the 2010 EIS to the current EIS? i.e., what has been done on Site M as a result of the 2010 EIS (or is yet planned); will the current proposed parking facility East Campus Parking Structure 2 (ECPS 2) be affected by actions proposed in the 2010 EIS (in particular, Site M)? As stated on page ES-3 "Construction of an 800,000 ft^2 building, other smaller buildings, and associated parking facilities on the northern portion of the East Campus would still occur under these alternatives." Since this is common for all location alternatives, please depict on a map where these buildings will be located and show proximity to the proposed ECPS 2.

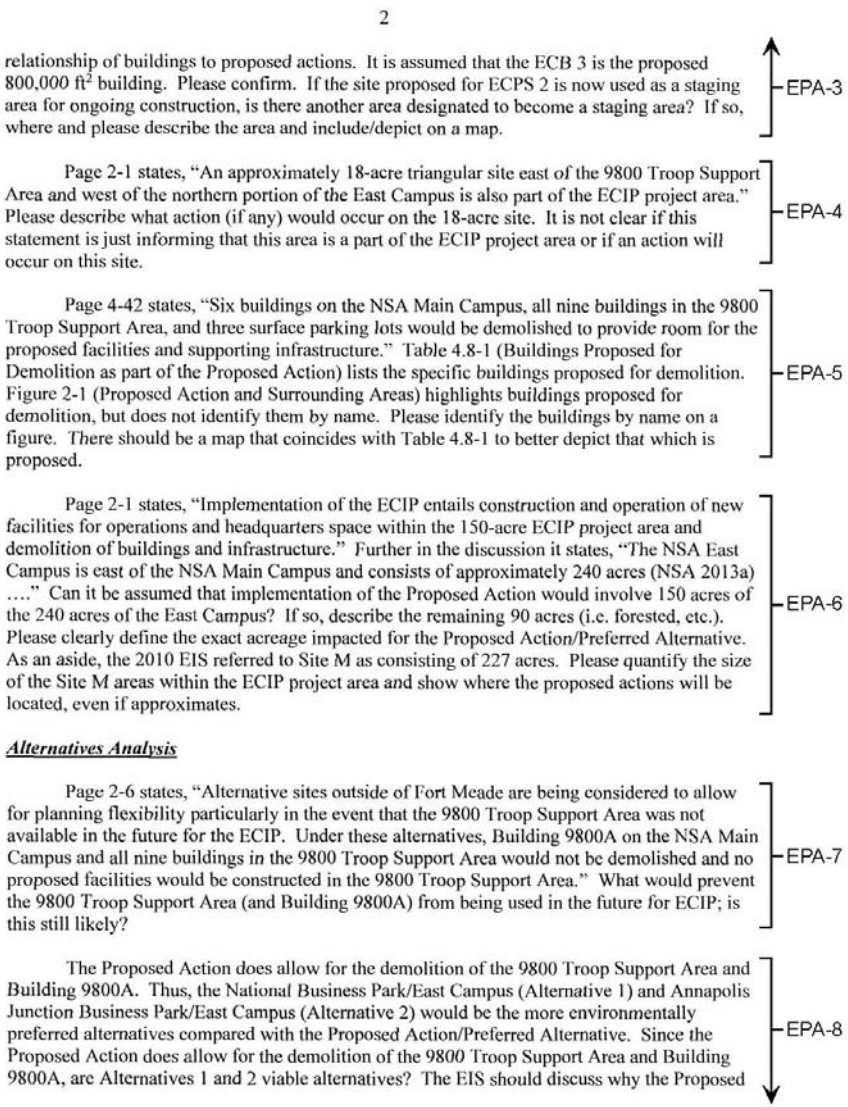
Page 2-9 states, "The area proposed for ECPS 2 is currently being used as a staging area for ongoing construction in the southern portion of the East Campus. ECPS 2 would be bordered to the west, north, and east by a potential reforestation area for ECB 2 (part of the action analyzed in the 2010 Campus Development EIS) and ECB 3, and to the south by the Venona Road corridor. ECPS 1 is in the southern portion of the East Campus, which is currently under construction." Please discuss/depict these referenced sites on a map to better understand the — EPA-3

EPA-2: The actions analyzed in the 2010 Campus Development EIS and documented in the associated Record of Decision (ROD) were clarified in Section 1.1 of the EIS. Text was also added to Section 2.5.1 to identify the East Campus Development project as a cumulative project, and in the cumulative impacts analysis in Section 5.1, where applicable. The analysis of the alternatives in the 2010 Campus Development EIS were based on the same general footprint at increasing development scales. The Department of Defense's (DoD's) course of action as stated in the ROD was to implement Phase I, but due to engineering reasons, DoD opted to initiate development in the southern portion of East Campus. The overall impacts evaluated are generally the same, and the southern portion of the East Campus was evaluated under the full Phase III buildout. The Phase I levels of development identified in the 2010 Campus Development EIS have been reached in terms of number of personnel, facility square footage, and air emissions, and as per the 2010 EIS, DoD is conducting the ECIP EIS analysis for buildout of the undeveloped remainder of the northern portion of the East Campus as well as the 9800 Troop Support Area to the east, which was not addressed in the 2010 EIS. ECPS 2 is intended to primarily support facilities constructed as part of the ECIP.

As stated in Section 2.1.2 of the EIS, because no detailed engineering or design work has been accomplished, the specific locations of proposed facilities and infrastructure have not been determined and are interchangeable within the ECIP project area, and were analyzed as such in the EIS. Impacts from development within the ECIP project area are identified in the EIS, and variation of locations of facilities and infrastructure would not introduce additional impacts. However, a new figure (Figure 2-2) has been added to the EIS to depict one potential conceptual site layout of the proposed facilities. The potential parking facility alternative locations were depicted in Figure 2-1 in the Draft EIS.

EPA-3: Please see the response to Comment EPA-2 regarding interchangeability of facilities within the ECIP project area. A new figure (Figure 2-2) has been added to the EIS to depict one potential conceptual site layout of the proposed facilities.

As stated in Section 2.1.2, ECB 3, 4, and 5 are 800,000-square foot (ft^2) buildings.



2

relationship of buildings to proposed actions. It is assumed that the ECB 3 is the proposed 800,000 ft^2 building. Please confirm. If the site proposed for ECPS 2 is now used as a staging area for ongoing construction, is there another area designated to become a staging area? If so, where and please describe the area and include/depict on a map. — EPA-3

Page 2-1 states, "An approximately 18-acre triangular site east of the 9800 Troop Support Area and west of the northern portion of the East Campus is also part of the ECIP project area." Please describe what action (if any) would occur on the 18-acre site. It is not clear if this statement is just informing that this area is a part of the ECIP project area or if an action will occur on this site. — EPA-4

Page 4-42 states, "Six buildings on the NSA Main Campus, all nine buildings in the 9800 Troop Support Area, and three surface parking lots would be demolished to provide room for the proposed facilities and supporting infrastructure." Table 4.8-1 (Buildings Proposed for Demolition as part of the Proposed Action) lists the specific buildings proposed for demolition. Figure 2-1 (Proposed Action and Surrounding Areas) highlights buildings proposed for demolition, but does not identify them by name. Please identify the buildings by name on a figure. There should be a map that coincides with Table 4.8-1 to better depict that which is proposed. — EPA-5

Page 2-1 states, "Implementation of the ECIP entails construction and operation of new facilities for operations and headquarters space within the 150-acre ECIP project area and demolition of buildings and infrastructure." Further in the discussion it states, "The NSA East Campus is east of the NSA Main Campus and consists of approximately 240 acres (NSA 2013a) …." Can it be assumed that implementation of the Proposed Action would involve 150 acres of the 240 acres of the East Campus? If so, describe the remaining 90 acres (i.e. forested, etc.). Please clearly define the exact acreage impacted for the Proposed Action/Preferred Alternative. As an aside, the 2010 EIS referred to Site M as consisting of 227 acres. Please quantify the size of the Site M areas within the ECIP project area and show where the proposed actions will be located, even if approximates. — EPA-6

Alternatives Analysis

Page 2-6 states, "Alternative sites outside of Fort Meade are being considered to allow for planning flexibility particularly in the event that the 9800 Troop Support Area was not available in the future for the ECIP. Under these alternatives, Building 9800A on the NSA Main Campus and all nine buildings in the 9800 Troop Support Area would not be demolished and no proposed facilities would be constructed in the 9800 Troop Support Area." What would prevent the 9800 Troop Support Area (and Building 9800A) from being used in the future for ECIP; is this still likely? — EPA-7

The Proposed Action does allow for the demolition of the 9800 Troop Support Area and Building 9800A. Thus, the National Business Park/East Campus (Alternative 1) and Annapolis Junction Business Park/East Campus (Alternative 2) would be the more environmentally preferred alternatives compared with the Proposed Action/Preferred Alternative. Since the Proposed Action does allow for the demolition of the 9800 Troop Support Area and Building 9800A, are Alternatives 1 and 2 viable alternatives? The EIS should discuss why the Proposed — EPA-8

The staging areas for the construction of the Proposed Action have not yet been determined, but would likely be located within the ECIP project area or on the site of a building proposed for demolition.

EPA-4: The ECIP project area includes the northern portion of the East Campus, the 18-acre triangular site, and the 9800 Troop Support Area. The entire ECIP project area is being considered for the proposed facilities and infrastructure.

EPA-5: Figure 2-1 has been revised to label the buildings proposed for demolition with the associated building number.

EPA-6: The East Campus is 240 acres, and includes the 84-acre northern portion of the East Campus, which is part of the Proposed Action, and the 156-acre southern portion of the East Campus, which is not part of the Proposed Action. The ECIP project area (150 acres) includes the northern portion of the East Campus (84 acres), and two areas that are not part of the East Campus (Site M) – the triangular site (18 acres) and the 9800 Troop Support Area (42 acres).

The Site M designation is no longer used, although it approximately equates to the East Campus.

EPA-7: As discussed in Section 2.1.1 of the EIS, the 9800 Troop Support Area is not currently part of the National Security Agency (NSA) Main Campus (i.e., NSA Exclusive Use Area) and is property under the control of Fort Meade. However, this area has been identified in both the Fort Meade and NSA master plans as being developed by NSA and as becoming part of the NSA Exclusive Use Area. If the 9800 Troop Support Area is not transferred to the NSA Exclusive Use Area, it would be unavailable for use by the NSA for the ECIP, and no buildings in that area would be demolished. Under this scenario, the northern portion of the East Campus would still be developed, but not all of the proposed facilities would fit in this area and, thus, additional space at locations outside of Fort Meade (National Business Park or Annapolis Junction Business Park) would be necessary to supplement the development on the East Campus. Building 9800A would also not be demolished under this scenario because its functions would not be transferred to the proposed facilities in the northern portion of the East Campus or a location outside of the Fort Meade under these alternatives.

EPA-8: Because the DoD can only lease existing facilities, but not direct the construction of facilities on land not owned by the Federal government, facilities at National Business Park and Annapolis Junction Business Park under Alternatives 1 and 2 would viably be constructed by current property owners at their own risk. As such, the impacts of such construction would be borne entirely by the property owner and would not be considered in the DoD lease. Therefore, Alternatives 1 and 2 are not necessarily less environmentally damaging than the Proposed Action. The property owners of National Business Park and Annapolis Junction Business Park have completed or would complete all appropriate environmental review prior to construction of facilities. Also, please see the response to Comment EPA-7. Text was added to Section 2.4 to indicate why the preferred alternative is the Proposed Action.

Section 2.2 discusses the rationale for elimination of other alternatives considered, including Operational/Headquarters Complex Location Alternatives.

Action is preferred over the two location alternatives. The comparison of the alternatives is the heart of the environmental document. The rationale for the selection of the preferred alternative should be clearly stated in the analysis and for the alternatives that are eliminated, the reasons for their elimination should be given. Please elaborate in Section 2.4 (Identification of the Preferred Alternative). EPA-8

Vegetation

Page 4-29 states, "Some activities associated with the Proposed Action would entail clearing of vegetation, grading, and paving in areas where there are no existing structures or infrastructure." The EIS should estimate the quantity of vegetation to be removed. In addition, the composition and characteristics of each community type should be summarized and the functions and total acreage indicated. This information is important so as to mitigate for the same or comparable resources. The EIS should also project the increase in impervious surface due to the Proposed Action. EPA-9

Page 4-38 states, "The total acreage of vegetation disturbed as a result of the Proposed Action would depend on the final design, layout, and site of the proposed structures and facilities, and the constraints of each of the sites. In keeping with the FCA, NSA would preserve or reforest acreage equal to 20 percent of the total area developed on the East Campus. Preservation of forested area or reforestation would be factored into the ECIP design process. Reforestation would occur on-site or nearby. Groups of three or more landscape trees can be planted as part of reforestation techniques. If reforestation is not entirely possible on-site, then alternative sites would be designated for reforestation." Even if there is not a final design or layout, there should be some general knowledge of where sites for structures and facilities can be placed in order to fully assess environmental impacts. This information is important in determining the best possible location for proposed sites and selecting site designs that avoid impacts to resources and maximize function of reforestation. Native plants are highly recommended. This information is critical to the environmental analysis and without it a proper assessment cannot be made. Please address within the FEIS. EPA-10

Prime Farmland Soils

Page 4-29 states, "The Downer-Hammonton complex, 2 to 5 percent slopes and the Patapsco-Evesboro-Fort Mott complex, 0 to 5 percent slopes are the only soils within the ECIP project area identified as prime farmland soils. Similar to other soils at the ECIP project area, these soils have been disturbed due to previous development and are not currently used for agriculture; therefore, no impacts on prime farmland would be expected." Does the Natural Resources Conservation Service (NRCS) have to be notified when prime farmland soils are impacted even though the soils are not currently used for agriculture? Please address. EPA-11

Hazardous Materials and Waste

Page 2-4 states, "Both the upgrades to the existing plants and the proposed plants would have associated switch gear, substation and associated equipment and duckbanks, air pollution control equipment, oil storage tanks, and urea storage tanks. Three days (72 hours) of fuel to operate any generators, if ultimately selected, would be stored onsite." Where are the proposed EPA-12

EPA-9: As stated in Section 4.7.2 of the EIS, the total acreage of vegetation disturbed would depend on the final design, layout, and site of the proposed facilities, and the constraints of each of the sites, which are not known at this time because no detailed engineering or design work has been accomplished. For these reasons, the specific increase in impervious surface is also not known. However, based on interpretation of July 2016 aerial imagery, it is estimated the Proposed Action could result in clearing of up to 32 acres of forest.

Section 3.7.2.1 describes the vegetation community types present in the ECIP project area. As stated in Section 4.7.2, the NSA would preserve or reforest acreage equal to 20 percent of the total area developed on the East Campus using native species. Preservation of forested area or reforestation would be factored into the ECIP design process. Additionally, the NSA would implement other best management practices (BMPs) to minimize ground and soil disturbance and impervious surfaces (also please see the responses to Comments EPA-17 and EPA-39).

EPA-10: Please see the response to Comment EPA-9.

EPA-11: Although some soils within the ECIP project area are characterized as prime farmland soils based on their physical characteristics, these soils are not considered prime farmland soils. As stated in Section 3.5.2.1 of the EIS, most of the NSA Campus and Fort Meade, including the ECIP project area, is identified as an urbanized area on the 2010 Census Urbanized Area Reference Map: Baltimore, Maryland and, therefore, is not considered farmland (i.e., prime or unique farmland and farmland of statewide or local importance) per 7 Code of Federal Regulations (CFR) § 658.2(a). Because the soils in the ECIP project area are not important farmland soils and are on a military installation that is not currently used for agriculture, the NRCS does not have to be notified.

EPA-12: Because no detailed engineering or design work has been accomplished, the specific locations of proposed facilities or temporary aboveground storage tanks have not been determined. See the response to Comment EPA-2 regarding the interchangeability of the proposed facilities and infrastructure within the ECIP project area, which were considered in the analysis of the Draft EIS. As such, the specific

plants, oil storage tanks and urea storage tanks to be located and what resources may be impacted?

Page 4-54 states, "Onsite storage of petroleum products for construction and demolition would be accomplished through the installation of temporary diesel and gasoline ASTs, as necessary. These ASTs would be removed following the completion of construction and demolition, and all contractors would use proper BMPs (e.g., secondary containment, inspections and spill kits) and adhere to Federal and state regulations and the applicable NSA SPCC Plan to minimize the potential for releases from the ASTs." The FEIS should identify where temporary diesel and gasoline ASTs would be installed and discuss potential resource impacts. EPA-12

Pages 4-55 and 4-56 state how hazardous waste would be addressed if encountered during land-clearing, excavation, grading, etc. However, there does not appear that these measures are formalized or documented in a plan. Please ensure that a Contingency Plan is in place to address hazardous waste (including asbestos, lead, PCBs, and ordnances) that may be discovered during construction. EPA-13

Page 4-56 states, "The footprint of construction and demolition overlaps with five other AOI sites (i.e., Site M – Parcel 1, Site M – Parcel 8, Non-SWMUs 12 and 13, FGGM 75, and FGGM 006-R-01), each of which are closed and require no further action." What is to be constructed in these locations (it is assumed the proposed parking facility will be between Site M – Parcels 1 and 8); however, is there anything else proposed? The FEIS should identify proposed construction on/near these sites. Please include FGGM 003-R-02 since this site overlaps a large percentage of the ECIP project area consisting of 322 acres. This large site has land use controls with long-term management and it is unclear in Figure 3.11-1 (Locations of AOI sites that overlap with the Proposed Action) how this area cannot be affected by the Proposed Action. Please address. EPA-14

Building Heating System Alternatives

EPA appreciates the analysis on the building heating system alternatives. Alternatives for building heating systems considered include packaged boilers, ground source heat pumps (GSHPs), and a hybrid heating system consisting of both boilers and GSHPs. Based on the evaluation, the packaged boiler and hybrid building heating system alternatives were carried forward for analysis in the EIS. The building heating systems alternatives should include specific details on the open space requirements (space constraints) for the Ground Source Heat Pump Alternative and possible locations for the GSHP. EPA-15

Page 2-11 states, "This alternative does not meet the evaluation criteria because combustion turbines cannot be used to complete the 15.4 MW of outstanding capacity at the existing emergency generators; this 15.4 MW of capacity must be met by generators." Since turbines can be sized for various outputs, it is unclear why the combustion turbine alternative was eliminated from further detailed analysis. Please explain. EPA-16

locations of the proposed facilities and temporary aboveground storage tanks within the ECIP project area would not change the impacts identified in Section 4.11.

EPA-13: Section 4.11.2 of the EIS states that all hazardous wastes would be managed in accordance with applicable NSA, U.S. Army, Federal, and state regulations. Text was added to Section 4.11.2 of the EIS to indicate that Fort Meade is still operating under a Federal Facilities Consent Decree, and any hazardous materials discovered during construction would be addressed under those EPA-mandated requirements, as had occurred at a construction site in the southern portion of the East Campus (halted construction, coordinated with Fort Meade for sampling and analysis, and determined way forward to address managing the site through the Installation Restoration Program).

EPA-14: Please see the response to Comment EPA-2 regarding why no specific locations for proposed facilities and infrastructure were identified in the EIS, but rather the locations were interchangeable within the ECIP project area. However, a new figure (Figure 2-2) has been added to the EIS to depict one potential conceptual site layout of the proposed facilities.

All area of interest (AOI) sites referenced in the comment, including site FGGM 003-R-02, are discussed in Sections 3.11.2.1 and 4.11.2, and depicted in Figure 3.11-1.

Section 4.11.2 indicates there would be short-term, minor, adverse impacts during land-clearing, excavation, and grading activities due to FGGM 003-R-02. Development activities would comply with the land use controls, which include obtaining dig permits prior to ground disturbance, presence of an unexploded ordnance (UXO) specialist during construction, and implementation of UXO avoidance procedures. As stated in Table 3.11-1, there is a low probability for human receptors to encounter munitions and explosives of concern at FGGM 003-R-02, which is compatible with the current and reasonably anticipated future land use.

EPA-15: Ground source heat pumps (GSHPs) would require extensive open space as noted in Section 2.2.3.2 of the EIS. Section 4.1.2 discusses land uses that could be co-located with GSHPs, and text regarding general open space requirements for potential GSHP scenarios

for different sized buildings have been added to this section. See the response to Comment EPA-2 regarding why no specific locations for proposed facilities and infrastructure were identified in the EIS, but rather the locations were generally interchangeable within the ECIP project area. The feasibility of a GSHP system for a facility is also dependent on soil capacity testing results in the vicinity of the proposed location of that facility.

EPA-16: As stated in Section 2.2.3.1, combustion turbines cannot be used to complete the capacity of the existing power plants. Text was added to Section 2.2.3.1 to explain that due to size of the existing power plants and the power distribution within the facility, the infrastructure was specifically designed to incorporate 15.4 MW of generators in the future. Therefore, use of turbines within the facility is not feasible.

5

Parking

Pages ES-3 and ES-4 discuss the parking facility location alternatives. The Bravo Parking Lot (4.5 acres) would be demolished and a multi-level parking facility would be constructed on all or part of the site. The N8/N9 Parking Lot is 7.1 acres and Building 9817 (8.2 acres) would be demolished and a parking facility would be constructed on all or part of the footprint. What is the history of building 9817? What would become of the area not used for the parking facility? The DEIS does not state the size of the proposed ECPS 2 parking structure. Please specify and address capacity proposed for each of the proposed parking structures, the number of spaces needed, and parking ratio per employee that each is to accommodate. The parking space alternatives should also include an estimate of the walking distances to the office facility buildings/complex. Calculation of added impervious surface should be included in the EIS and mitigation proposed. Parking designs should incorporate Low Impact Designs, runoff capture and infiltration, etc to the greatest extent possible. Commitment to these features should be made in the FEIS and ROD. — EPA-17

Page 4-8 states, "It is assumed that three of the four parking facility alternatives would be constructed under the Proposed Action." The text also states, "For purposes of the traffic study completed for this EIS, it was assumed those parking facilities would be located at the ECPS 2, Bravo, and Building 9817 parking facility alternative locations." Thus, it is assumed that these three parking facilities are the Preferred Alternative parking facilities. Please address why these parking facility alternatives were selected and why the N8/N9 Parking Lot was eliminated. As depicted in Figure 3.7-1, the location of ECPS 2 parking facility infringes upon the forested area. Is it possible to move the ECPS 2 parking facility or design the facility so that it does not impact the forested area? Again, the size of the ECPS 2 parking facility is not stated and it can be assumed that there is flexibility to adjust the facility at this stage of project planning. Doing so would show efforts to minimize impacts to forested areas to the maximum extent practical while continuing to sustain and support current and future missions. — EPA-18

Transportation Network

With the implementation of the Proposed Action, off-post roadways will be negatively impacted with many segments experiencing decreases in Level of Service (LOS) and increases in traffic density. For example, there will be substantial degradation of LOS at Vehicle Control Points (VCPs) and intersections east of Baltimore-Washington Parkway/MD 295, some LOS values falling to an F. We recommend that the EIS study describe proposed highway infrastructure projects to improve the interchange and other neighboring roads. Letters documenting coordination and communication with the Maryland State Highway Administration (SHA) should be included in the EIS. The EIS should identify capacity of local highways, projects currently planned and confirm if the proposed project will address new requirements. Coordination with National Park Service should also be documented. The EIS should estimate impacts that would be associated with improvements to regain LOS. Alternatives that would have less traffic impact to BWP should be considered. The EIS should begin to provide estimates on resources in the area, including aquatic, to identify any high quality resources that should be avoided to limit impact on stressed systems. — EPA-19

EPA-17: Building 9817 is an operations facility constructed in the 1960s that has been determined to be not eligible for the National Register of Historic Places (NRHP), and its use does not pose any issues for the Proposed Action. The site of Building 9817 is a potential location for a parking facility on all or part of the 8.2 acres. If this site is not selected for a parking facility, the building would not be demolished and would continue to be occupied, which would preclude development of some of the proposed ECIP facilities of similar size so that the personnel increase identified in this EIS is not exceeded.

As stated in Section 2.2.2 of the EIS, the exact space requirements for parking facilities would be refined as the detailed design process progresses. As depicted on Figure 2-1 and described in Section 4.2.2, ECPS 2 has a footprint of approximately 2.5 acres. The parking facility analysis described in Section 4.2.2 is based on a 1:1 ratio of employees to parking spots. It was assumed that employees driving to Fort Meade would choose where to park based on their preferred entrance point and specific work location on the installation, and the analysis was based on the relative footprint size available at each parking facility location. Specific capacities of the individual parking facilities would be determined during the detailed design phase. Section 4.2.2 also considers and discusses pedestrian traffic generated based on the parking facility alternatives.

The NSA has committed to incorporating low-impact development and environmental site design techniques, as required by the Maryland Department of the Environment (MDE) regulations (and has been doing so since 2 years prior to implementation of the regulations) and Section 438 of the Energy Independence and Security Act (EISA), and implementing other BMPs to avoid or minimize the impacts of impervious surfaces as stated in Sections 4.6 and 4.10 and Table ES-4 of the EIS and the ROD.

EPA-18: The parking facility alternative locations for the Preferred Alternative have not been selected. Because at least three of the parking facility location alternatives would be constructed if the ECIP was fully implemented, ECPS 2, Bravo, and Building 9817 were used to perform the traffic analysis because they are the sites closest to the ECIP project area and to the center of the NSA and East campuses and, therefore,

would likely experience greater traffic impacts than the new parking facilities on the campus perimeter. However, all the proposed parking facility locations are entirely within the NSA Campus, and any impacts from whichever permutations of facilities that are ultimately selected would remain within campus boundaries.

See the response to Comment EPA-17 regarding the size of the proposed parking facility location alternatives, including ECPS 2.

As stated in Section 4.7.2, the NSA would preserve or reforest acreage equal to 20 percent of the total area developed on the East Campus. Preservation of forested area or reforestation would be factored into the ECIP design process.

EPA-19: The identification and discussion of off-installation highway infrastructure projects that would improve level of service (LOS) at interchanges and other neighboring roads and the associated impacts due to regional development in addition to the Proposed Action is outside the scope of this EIS. Therefore, no proposed improvements were incorporated into the future traffic models or the traffic analyses. The EIS identified impacts on local highway capacity.

The Maryland State Highway Administration and National Park Service were provided notification of the Proposed Action during the scoping period and copies of the Draft EIS during the public review period, and submitted comments on the Draft EIS as noted in Appendix F of the EIS. The NSA/DoD will continue to coordinate with Federal, state, and local agencies to plan additional transportation improvements.

6

With off-post roadways being negatively impacted during construction and operation of the East Campus Integration Program, it is important to consider the impacts on the surrounding transportation networks. Greater detail into other known projects should be noted and future road improvements should be well coordinated with the East Campus Integration in order to limit the impacts on off-post roadways, many of which are high traffic areas.

- Is there a plan to implement roadway improvements that would be expected to address the LOS at failing intersections (i.e. LOS E or LOS F)? Planned improvements for neighboring roads including Route 198 and Route 175 should be explained. Potential impacts should be part of the secondary or cumulative impacts analysis.
- Transit options that have been identified should be included in the analysis. Methods to encourage staff to reduce single-occupancy commutes including car pool coordination, flex schedules or telework should be considered.
- Any secondary growth around base to support the expansion should be included in the secondary impact analysis.
- EPA recommends consideration of Maryland Department of Natural Resources Green Infrastructure (GI) mapping to determine if the project is in or near a natural Hub or Corridor. Suggestions for evaluating potential loss and maintaining GI should be included in this study.

EPA-20

Chesapeake Bay Protection and Restoration, EO 13508

Page 3-35 states, "The surface waters near the ECIP project area are associated primarily with the Little Patuxent River, a major tributary of the Patuxent River that eventually empties into the Chesapeake Bay." Because Fort Meade is in the Chesapeake Bay watershed, please discuss the Proposed Action in relation to EO 13508.

EPA-21

Cultural Resources

Page 3-51 states, "The Baltimore-Washington Parkway (AA-5) is a historic district that was listed in 1991. It is located approximately 0.5 miles northwest of Building 9800A." The EIS does not depict Building 9800A nor does it discuss elevations of the proposed parking structures. It is assumed that the parking structures can be at least 4 stories high (and possibly more). Is there any issue of height restrictions or have visual impacts been considered with regards to impacts to the listed resource? Please include any coordination and communication with the National Park Service; this coordination is important for acceptance of alternatives.

EPA-22

Page 3-52 states, "Fort Meade has five historic properties, including the Fort Meade Historic District (AA-34), the water treatment plant (Building 8688), and three bridges (Llewelyn Avenue Bridge, Redwood Avenue Bridge, and Leonard Wood Avenue Bridge) constructed during World War II by prisoners of war. All are eligible for listing in the NRHP. None of the previously identified historic properties at Fort Meade are located within the ECIP project area." In addition, Site 18AN1240 (Late Archaic Period base camp) has been determined eligible for listing in the NRHP, but it is not located within the ECIP project area. How far from the Proposed Action are these eligible resources? Is it possible that the Proposed Action can impact eligible resources indirectly due to construction? Please discuss and possibly depict resources on a map to show proximity to the Proposed Action.

EPA-23

EPA-20: Impacts of the ECIP on surrounding transportation networks were discussed in Section 4.2 of the EIS. Detail on known projects is provided in Section 2.5. DoD will continue to coordinate with state and local authorities to plan transportation improvements and identify funding sources. The bulleted comments are addressed below.

1. See the response to Comment EPA-19 regarding identification of off-installation highway infrastructure projects that would improve LOS, and discussion of impacts.

2. Existing transit options have been considered in the analysis. Text identifying methods to reduce single-occupancy commutes has been added to recommendations in Section 4.2.2 and Table ES-4. See the response to Comment HCPZ-5.

3. A 7 percent global growth rate (0.45 percent compounded annually over 14 years) was applied to the base existing model's traffic volumes to account for growth through 2029 in the region as described in the Traffic Impact Study (Appendix B of the EIS). No secondary population or business growth near Fort Meade due to the ECIP is expected as it would be transferred from other locations in the area.

4. Based on Maryland's Environmental Resource and Land Information Network (MERLIN), there are no GI Hubs or Corridors within the ECIP project area. The closest GI is a Hub approximately 0.3 mile west of the ECIP project area outside of Fort Meade, west of MD 32. A Hub is adjacent to National Business Park and Annapolis Junction Business Park, and Corridor is within National Business Park. Construction of facilities at National Business Park could affect the Corridor in that area, thereby potentially impacting wildlife; however, because the DoD would lease these buildings under Alternative 1, addressing this issue, including implementation of any measures necessary to minimize impacts, would be the responsibility of the site owner. No Hub would be impacted at Annapolis Junction Business Park.

EPA-21: Text discussing EO 13508 and associated impacts was added to Sections 3.6 and 4.6 of the EIS.

EPA-22: A label has been added to Figure 2-1 to identify Building 9800A.

Visual impacts on sensitive cultural resources were considered in Section

4.8.2 of the EIS. The height of facilities proposed to be constructed, including administrative and parking facilities, would not have adverse visual impacts on the Baltimore-Washington Parkway (AA-5), Grassland plantation (AA-94), Fort Meade Historic District (AA-34), or Buildings 9800 or 9800A. The proposed facilities would not be visible at the aforementioned historic properties due to distance and tree cover.

The National Park Service submitted a comment letter on the Draft EIS and stated there would be no impacts on the parkway (see Comment NPS-1).

EPA-23: The closest of the resources identified in the comment is located approximately 2,000 feet from the ECIP project area. The Area of Potential Effect (APE) for the Proposed Action, which is the geographic area that might be affected by the ECIP project, took into account direct and indirect impacts. All of the previously identified NRHP-eligible resources are located outside of the APE (the nearest are located along Mapes Road, south of the APE) and would not be affected by the Proposed Action.

Fort Meade does not wish to depict the location of sensitive cultural resources in publicly accessible documents.

7

Page 4-43 states, "Two resources, Buildings 9800 and 9800A, were determined eligible for listing in the NRHP. Building 9800 would not be demolished or altered as part of the Proposed Action. Building 9800A is proposed to be demolished, which would constitute an adverse effect under Section 106 of the NHPA. Because of the proximity of Buildings 9800 and 9800A, there is the potential for short-term noise and vibration impacts on Building 9800 resulting from the demolition of Building 9800A; however, these impacts would be temporary and minimal and would not rise to the level of an adverse effect." Please label all buildings mentioned in the EIS on a map, especially Buildings 9800 and 9800A. It is assumed that these buildings are part of the "9800 Troop Support Area" but it is not clear; these specific buildings should be set apart. Visually seeing these resources in connection with the Proposed Action along with approximate distances to resources should be specifically stated so as to properly analyze potential impacts. EPA-24

Greenhouse Gas Emissions/Climate Change

EPA appreciates the discussion of Greenhouse Gas (GHG) Emissions and Global Warming on pages 3-26 and 4-25. The Final EIS should not only ensure that implementation of the proposal incorporates within its design, measures to reduce GHG emissions, but also to adapt to climate change impacts. Alternatives should consider future climate scenarios and weather events from the National Climate Assessment (NCA), and describe how those scenarios may impact the project and its design. Any assessment done to identify climate trends and sustainable design should be mentioned in the NEPA analysis and design or construction commitments brought into a final document. CEQ released its final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in the National Environmental Policy Act Reviews. We recommend that this be referenced in the Final EIS. We recommend considering climate adaptation measures based on how future climate scenarios may impact the project. The U.S. Global Change Resource Program released the Third National Climate Assessment, the authoritative and comprehensive report on climate change and its impacts in the United States. For more information, please visit http://www.globalchange.gov. EPA-25

The FEIS alternatives analysis should, as appropriate, consider practicable changes to the proposal to make it more resilient to anticipated climate change. EPA further recommends that the Record of Decision commits to implementation of reasonable mitigation measures that would reduce or eliminate project-related GHG emissions as well as climate change adaptation resiliency design measures. EPA-26

Leadership in Energy and Environmental Design (LEED)

EPA appreciates the discussion of sustainability in the DEIS in particular incorporating sustainability development strategies such as LEED. Page 4-49 states, "Regulation-compliant sustainable building features that can be cost-effectively integrated to achieve development equivalent to a LEED rating would be incorporated to the maximum extent practicable for the Proposed Action." Since the Proposed Action (Preferred Alternative) is not the environmentally preferred alternative when comparing to the leasing options, Alternative 1 (National Business Park) and Alternative 2 (Annapolis Junction Business Park), and since both Alternative 1 and Alternative 2 have buildings that are LEED-Gold (and some LEED-Silver) certified, it should be EPA-27

EPA-24: All buildings proposed to be demolished have been labeled on Figure 2-1 of the EIS.

Buildings 9800 and 9800A are adjacent to one another, and are not within the 9800 Troop Support Area, but rather are west of the ECIP project area. Text has been added to Section 4.8.2 of the EIS to identify the approximate distance of Buildings 9800 and 9800A from the 9800 Troop Support Area and the ECIP project area.

EPA-25: Section 3.4.2.2 of the EIS provides an overview of future climate scenarios, and additional information from the U.S. Global Change Resource Program (USGCRP) Report has been incorporated. Additionally, this section was updated to describe the 2016 Council on Environmental Quality (CEQ) final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in the National Environmental Policy Act Reviews.

The two prominent concerns outlined in the USGCRP report for the area are reduced water availability and extreme weather, primarily hurricanes. Text was added to Section 4.4.2.3 and Table ES-4 of the EIS to indicate that safeguards against effects from future climate scenarios that were incorporated into the Proposed Action, including the implementation of water efficiency and sustainable design strategies and emergency power generation alternative, would be beneficial in the context of future climate scenarios.

EPA-26: The Proposed Action includes several safeguards against effects from climate change (e.g., water efficiency and sustainable design strategies and emergency power generation alternative) that were considered in the analysis. Text was added to Section 4.4.2.3 and Table ES-4 of the EIS to identify these safeguards. See the response to Comment EPA-25 for additional information on the strategies incorporated into the Proposed Action that would be beneficial in the context of future climate scenarios.

EPA-27: The DoD/NSA is committed to implementing the Leadership in Energy and Environmental Design (LEED)-similar Federal Guiding Principles for sustainable buildings and sustainability goals as practicable for the Preferred Alternative as described in Section 2.1.2.

8

the goal of the Proposed Action/Preferred Alternative to achieve LEED Gold/Silver certification, especially for newly constructed buildings. — EPA-27

The EIS mentions the need to accommodate a greater cooling load for East Campus than for the NSA main campus. In order to facilitate cooling of the facilities, green infrastructure such as rain garden installation on all/a portion of East Campus building roofs, such as parking facilities, may help increase cooling/heating efficiency as well as serve to satisfy stormwater requirements. — EPA-28

Environmental Laws, Regulations, and Executive Orders

The discussion provided in Section 1.3.1 (Environmental Laws, Regulations, and Executive Orders) and more specifically the Table 1-1 (List of Permits, Licenses, and Other Entitlements for the Proposed Action), should include the Executive Orders referenced in Section 3 (either directly or indirectly). For instance, EO 13693 (*Planning for Federal Sustainability in the Next Decade*), EO 11988 (*Floodplain Management*), EO 13508 (*Chesapeake Bay Protection and Restoration*), EO 12898 (*Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*), EO 13045 (*Protection of Children From Environmental Health Risks and Safety Risks*). In addition, please include Section 438 of the Energy Independence and Security Act (EISA) to the list. — EPA-29

Environmental Justice (EJ)

The EIS did not state the methodology used to identify EJ communities nor provide clear benchmarks for identification of EJ communities. It appears that the area used for comparison may be too large; as it incorporated data from Baltimore, which may not be appropriate for the project area. The assessment needs to consider all of the impacts and benefits that may occur during the project in the study area or adjacent to it, that may reasonably be anticipated to have an impact upon minority and/or low-income populations. The localization, proximity, and magnitude of those impact needs to be taken into account. The DEIS should analyze if a disproportionate number of EJ communities have construction-related truck traffic or noise, operational traffic or noise, potential surface water sedimentation in areas that are used for subsistence fishing, etc. — EPA-30

It is critical to identify all at-risk populations as accurately and inclusively as possible. It is important to be as inclusive as possible, to be sure to identify all those at risk and to assure their meaningful and appropriate participation, and to be sure that their interests, needs and concerns are appropriately heard and taken into account in decision making. EPA encourages the lead agency to conduct meaningful engagement of EJ communities. The DEIS should disclose if any accommodations, such as an interpreter or providing literature/project information in other languages, were needed or made available for non-English speaking communities. — EPA-31

Compliance with LEED, including the specific LEED rating levels, depends on congressional funding. See the response to Comment EPA-8 regarding the environmentally preferred alternative.

EPA-28: Comment noted. The greater cooling load for the East Campus is due to computer cooling requirements, not those for the facilities themselves; therefore, use of green roofs would not generally be beneficial for this greater cooling load. In addition to the sustainability objectives identified in Section 4.11, sustainable technologies identified in the comment would continue to be considered and implemented.

EPA-29: Section 1.3.1 of the EIS indirectly includes all relevant environmental laws, regulations, and EOs. Table 1-1 only identifies the permits, licenses, and specific coordination and approvals. All EOs and regulations that are relevant to the Proposed Action, including EOs 13693 and 11988 and EISA, are discussed elsewhere within the EIS, primarily in Sections 3 and 4. Text discussing EO 13508 and 13045 was added to Sections 3.6 and 3.12, respectively.

EPA-30: The region of influence (ROI) for the environmental justice (EJ) analysis considered the geographic areas from which NSA personnel that would work at the proposed facilities would commute, which includes Baltimore. Text was added to Section 3.12 of the EIS to indicate that the "50% test" was used as a benchmark to determine if communities within the EJ ROI were potential EJ communities. The minority and low-income populations in Anne Arundel County Census District 4, the five counties within the EJ ROI, and the City of Baltimore were not greater than 50 percent of the populations, nor were they meaningfully higher than comparison communities. Therefore, increased traffic and noise that could be experienced by off-installation populations would not be specifically disproportionate to EJ communities, but would affect all populations.

Other than increased traffic and associated noise, no other impacts from the ECIP would affect communities outside of Fort Meade or National Business Park/Annapolis Junction Business Park (for Alternatives 1 and 2), and none of these impacts would disproportionately affect EJ communities.

EPA-31: DoD accommodates all requests to ensure meaningful participation. No requests for interpreters were made prior to or during

9

- EPA recommends the following approach to determination of appropriate benchmarks.
  - Apply the 50% test (all areas that are more than 50% are areas of EJ concern. Benchmark value should be compared to the state or county average)
  - If the percent minority population is greater than the state or county average, then this would equal the Area of Potential EJ concern; OR
  - Set a benchmark that exceeds the state or county average by a given percentage (*e.g.,* taking 120% of the state or county average). (see below)
- We do not recommend the convention of adding 20 percentage points to the minority population percentage. Adding 20 percentage points to an average may have an unintended result on the assessment, particularly when the minority/low income population is a small percentage value. For example, if the percentage is five percent, adding 20 percentage points to that value increase the benchmark by 500%.
- We recommend a different methodology in order to be more protective of at-risk communities and more inclusive of potential communities of concern. We recommend using a benchmark calculated by taking the minority population percentage and then adding 20 percent of the value (for example, 5% x 1.2 (20 percent of 5)) = 6% a difference of 20%). This method is consistent, treating all populations the same way. We suggest that recalculated thresholds be used and reevaluate the impact assessment.

EPA-32

Protection of Children from Environmental Risks and Safety Risks Health, EO 13045

Page 2-1 states, "An approximate 18-acre triangular site east of the 9800 Troop Support Area and west of the northern portion of the East Campus is also part of the ECIP project area. This area is bordered by 3rd Cavalry Road to the west, Rockenbach Road to the north, and O'Brien to the east, and contains the Children's World Learning Center for employee childcare and the NSA recycling yard." The EIS did not discuss potential impacts to children's health. Since the childcare center is part of the ECIP project area, please discuss the Proposed Action and potential impacts to children, especially those at the center. Please identify approximate number of children that use the center, age of children, and whether children remain inside or spend time outside and potential environmental health impacts that can result from implementation of the Proposed Action.

EPA-33

Page 3-19 states, "A recent study found ambient noise levels for the installation to be between 55 and 65 dBA DNL, depending on the noise-sensitive receptor's proximity to major roadways NSA 2009). Therefore, the ambient noise levels at Fort Meade and ECIP project area fall into the "normally acceptable" range as defined by U.S. Army and HUD criteria." The 2009 noise study identified ambient noise levels of between 55 and 65 DNL to be in the "normally acceptable" range depending on noise-sensitive receptor's proximity to major roadways. Did the study consider noise sensitive receptors, in particular, the Children's World Learning Center? Where is the Children's World Learning Center in relation to the Proposed Action? The Children's World Learning Center should be identified on a map. Projected ambient noise exposure to children as a result of implementation of the Proposed Action and cumulative actions (past and future) should be discussed in the FEIS.

EPA-34

Executive Order 13045, Protection of Children from Environmental Health Risks and Safety Risks, requires each federal agency to identify and assess environmental health and safety risks to children. "Environmental health and safety risks" are defined as "risks to health or to

EPA-35

the January 2015 scoping open house/meeting or the August 2016 Draft EIS open house/meeting. While no project information or documents have been made available in a language other than English, no requests for such materials have been received.

EPA-32: Text was added to Section 3.12 of the EIS to indicate that the "50% test" was used as a benchmark to determine if the environmental justice ROI was a potential EJ community of concern. Also see response to Comment EPA-30.

EPA-33: Although, the Children's World Learning Center would likely be moved prior to the start of the ECIP, its current location is approximately 400 feet from the northern portion of the East Campus. Under the Proposed Action, the northern portion of the East Campus would likely be developed prior to the 9800 Troop Support Area; therefore, if the Children's World Learning Center is not moved at that time, it could be close to construction activities. Text was added to Section 4.12.2 of the EIS to discuss potential impacts to these children from construction.

The center is for preschool-aged children of NSA personnel. They would be kept inside during periods of noisy or dusty conditions, should they arise, but such conditions would be unlikely given the distance from construction and the prevailing wind direction to the east.

EPA-34: Text was added to Section 4.12.2 of the EIS to discuss potential impacts to these children from construction. Please also see the response to Comment EPA-33.

EPA-35: Please see the response to Comment EPA-34.

safety that are attributable to products or substances that the child is likely to come in contact with or ingest." When conducting assessments of environmental risks, the lead agency should consistently and explicitly take into account health risks to children and infants from environmental hazards. Therefore, to the extent permitted by law and appropriate, and consistent with the agency's mission, each Federal agency: shall make it a priority to identify and assess environmental health risks and safety risks that may disproportionately affect children; and shall ensure that its policies, programs, activities, and standards address disproportionate risks to children that result from environmental health risks or safety risks. Therefore, it is recommended that the EIS provide an assessment of potential exposures and susceptibilities to pollutants of concern for children, specific to the Proposed Action. EPA-35

Cumulative Impacts

It does not appear that the actions from the 2010 EIS are addressed and included in the Cumulative Effects Analysis. Page 2-14 states, "Because the baseline for the analysis in this EIS includes development of the southern portion of the East Campus, which would be completed or under construction by FY 2018, actions or projects that would be ongoing or starting in FY 2018 were considered for inclusion in the cumulative impacts analysis." Unfortunately, the current EIS does not distinguish what has actually occurred on the southern portion of the East Campus as a result of the 2010 EIS. Because of the distinct relationship of the southern portion of the East Campus and the proposed development on the northern portion of the East Campus, it is imperative to include these actions whether completed as a result of the 2010 EIS or yet to be developed within the cumulatives impact analysis. EPA-36

Page 2-15 states, "Past actions and development of the NSA Main Campus, the southern portion of the East Campus, and the vicinity of Fort Meade that could result in cumulative impacts are encompassed in the descritpion of the existing conditions provided in this EIS (see Section 3)." Unfortunately, grouping actions grossly undermines cumulative impacts and misrepresents existing conditions. The Council on Environmental Quality in 40 CFR 1508.7 defines cumulative impacts as "impacts on the environment which result from the incremental impact of the action when added to other **past**, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions." Therefore, the cumulative impacts assessment should include past actions and not assimilate them into existing conditions. EPA-37

The FEIS should include a list of projects that have resulted from the 2010 EIS and included in the analysis of cumulative impacts. It is assumed that the projects presented/discussed in Section 2.5.1 (Future Actions on Fort Meade) on page 2-15 and as depicted in Figure 2-3 (Locations of Other Actions under Consideration for Cumulative Impacts) as well as those referenced in Section 5 (Cumulative and Other Impacts) do not include projects that resulted from the 2010 EIS. Please discuss the projects that resulted from the 2010 EISs and include in the Cumulative Impacts Analysis. In addition, an Environmental Assessment (EA) -- Addressing the Construction and Operation of the Cyber Center for Education and Innovation (CCEI) – Home of the National Cryptologic Museum at Fort George G. Meade was not included in the cumulative impacts assessment. The new CCEI will be integrated with the NSA facility and infrastructure, allowing NSA to play a large role in the new CCEI's security, operations, and maintenance. This proposed action was not mentioned in the current DEIS. Please discuss EPA-38

EPA-36: Text was added to Section 2.5.1 of the EIS to describe the actions associated with the 2010 Campus Development EIS that have occurred recently or will occur by fiscal year 2018. Similarly, text considering the Campus Development project was added, where appropriate, to the cumulative impact analysis in Section 5.1. Please also see the response to Comment EPA-2.

EPA-37: The campus development in the southern portion of the East Campus (i.e., actions associated with the 2010 Campus Development EIS) has ongoing actions, and has been added to Section 2.5 of the EIS. No other specific nearby past major actions have been identified for cumulative impact analysis as they are pre-existing conditions already reflected in the Affected Environment chapter of the EIS and in place before the 2010 Campus Development Final EIS was issued. Please also see the response to Comment EPA-36.

EPA-38: The proposed museum/CCEI project has been added to the cumulative projects and impacts analysis in Sections 2.5.1 and 5.1 of the EIS, respectively. Please also see the response to Comment EPA-36.

where this proposed action will be in relation to the ECIP Proposed Action. In particular, please discuss potential cumulative effects from the increase in people expected on the NSA campus and campus roads. EPA-38

Page 5-1 states, "Adverse impacts would include loss of open space and forested areas as office, retail, and residential areas are constructed." What is the cumulative loss or approximate loss not just from open space/forest removal that would result from the Proposed Action, but also from the subsequent creation of impervious surfaces particularly in currently undeveloped areas? The EIS did not discuss in terms of vegetation loss and increase in impervious surfaces from 2010 EIS, the current EIS, and future actions. Please address. EPA-39

EPA-39: Section 5.1 of the EIS indicates that cumulative impacts would include permanent removal of forest and open field habitat, as well as increases in impervious surfaces. The cumulative impacts from forest clearing would be reduced by maintaining consistency with policies such as the state FCA, while cumulative impacts from impervious surfaces would be minimized through applicable compliance such as state stormwater regulations and Section 438 of EISA.

Comments from Fort Meade Directorate of Public Works Environmental Division

Page	Section	Comment	
3-35	3.6.2.1	Include the following text within the surface water section, "Fort Meade contains approximately 7.2 miles of perennial streams as well as other intermittent and ephemeral channels."	FMED-1
3-35 and 4-34	3.6.2.1 and 4.6.2	Include the following text within the surface water section, "Riparian buffers were incorporated into the Fort Meade Comprehensive Expansion Management Plan and subsequent Base Realignment and Closure projects to minimize impacts and degradation to waterbodies leading to the Chesapeake Bay. Fort Meade would maintain voluntary 100 foot riparian forest buffers along streams and abutting wetlands to the maximum extent practical. Streams that are proximate to project areas would be identified and field delineated in accordance with the USACE 1987 Wetland Delineation Manual and the Atlantic and Coastal Plain Supplement (November 2010); and classified using the Cowardin classification system."	FMED-2
3-35	3.6.2.1	W-2 In the wetlands section is actually an intermittent stream, this stream should be incorporated into the surface water section and removed from the wetland section. Additionally the 25ft buffer in figure 3.7-2 should be replaced with a 100 foot buffer mentioned in comment #2.	FMED-3
3-35	3.6.2.1	Wetlands at Obrien and Love not shown (see attached email). Please advise.	FMED-4
3-40	3.7.1	The 2013 DoD CZMA Memo you reference in 3.6.1 "volunteers" NSA and Fort Meade to demonstrate compliance with MD FCA. NSA and the Garrison demonstrate compliance with MD DNR FCA to the maximum extent practical by following the current FGGM FCA and Tree Management Policy.	FMED-5
Chapter 3&4	3&4 (Vegetation)	Include the following text in the appropriate paragraphs. If NSA has another concept, please contact me, "It is the intent of Fort Meade to maintain a campus like environment and conserve forested areas to the maximum extent practical in accordance with the Maryland Forest Conservation Act (FCA) while continuing to sustain and support current and future missions. This includes managing the Fort Meade forest conservation program in accordance with 2013 Memorandum of Understanding (MOU) between the State of Maryland and the United States Department of Defense (DoD) concerning federal consistency requirements of the Coastal Zone Management Act. Development and construction projects are required to follow the current Fort Meade Forest Conservation Act and Tree Management Policy. In keeping with the FCA standards, Fort Meade requires that the equivalent of 20% of the Project area be forested. All projects 40,000 SF or larger must comply with the Fort Meade policy. Other projects are evaluated on a case by case basis. As per MD FCA, site developments must preserve or establish 20% forest cover, regardless if the site was forested before the construction. Generally, linear utility and road projects are only required to preserve or establish 20% of the forest cover removed for the actual project. Should existing forest mitigation areas require disturbance, the project proponent shall replace the existing mitigation area at a two to one ratio above the required 20%. Street trees are to be replaced at a minimum of a 1:1 ratio, with preference given to the preservation of specimen trees. Specimen tree replacement ratios will be calculated on a case by case basis. Forestry practices that cannot feasibly be performed within the	FMED-6

FMED-1: Referenced text was added to Section 3.6.2.1 of the EIS.

FMED-2: Referenced text was added as appropriate to Section 3.6.2.1 of the EIS. Buffer maintenance measure has been added to Table ES-4 per response to Comment FMED-14.

FMED-3: The Wetlands subsection in Section 3.7.2.1 of the EIS identifies Wetland W-2 as a wetland but recognizes it is also an intermittent stream based on the report cited in the subsection. The EIS text is unchanged. The buffer has been increased to 100 feet on Figure 3.7-2, and Tables ES-3, 3.7-1, and 5.2-1 have been updated to reflect this buffer.

FMED-4: The area east of the intersection of O'Brien and Love roads in the extreme south-central point of the ECIP project area would not be impacted because no development is proposed in this area.

FMED-5: Text was revised in Section 3.7.1 of the EIS per comment.

FMED-6: Comment noted. The Proposed Action would meet Fort Meade Forest Conservation Act and Tree Management Policy requirements for project areas on the East Campus, and the DoD would also strive to do so in the redevelopment of sites not currently vegetated.

Comments from Fort Meade Directorate of Public Works Environmental Division

Page	Section	Comment
		project area shall be performed on other designated land areas within Fort Meade. The Installation participates in the Army's conservation reimbursable and fee collection program for forestry. This program exists to provide ecosystem-level management that supports and enhances the land's ability to support each installation's respective military missionscape, while simultaneously obtaining ecologically responsible results that satisfy all federally mandated requirements for natural resources. Program revenues are generated through the sale of forest products. The fair market value of all forest products removed due to the proposed action shall be deposited into the Army's Reimbursable Forestry Account to be utilized for natural resource activities and ecosystem management at Army installations."
3-42	3.7.2.1	FGGM vegetation boilerplate into, "Vegetative cover at Fort Meade consists of forest land, open land/meadow, and developed areas with maintained turf, and street trees. These components constitute Fort Meade's green infrastructure. Maryland's green infrastructure was mapped into hubs and corridors using satellite imagery, road and stream locations, biological data, and other information. Hubs are typically unfragmented forest areas hundreds or thousands of acres in size, and are vital to maintaining the state's ecological health. They provide habitat for native plants and animals, protect water quality and soils, regulate climate, and perform other critical functions. Corridors are linear remnants of natural land such as stream valleys and mountain ridges that allow animals, seeds, and pollen to move from one area to another. They also protect the health of streams and wetlands by maintaining adjacent vegetation. Preserving linkages (corridors) between the remaining blocks of Figure 4 4: Basewide Wetlands habitat (hubs) will ensure the long- term survival and continued diversity of Maryland's plants, wildlife, and environment. Fort Meade maintains both green infrastructure hubs and corridors. Less than one third of the Installation, approximately 1,500 acres, is now forested. Many native forests were cleared prior to the formation of Fort Meade for agriculture. Larger remaining forested tracts are located towards the perimeter of the Installation. Many of these larger tracts are connected by riparian forest corridors. Larger tracts are around 70 years old, but some stands predate the installation. Development at Fort Meade has resulted in forest fragments as well as recently planted reforestation areas. EEE Consulting, Inc. prepared a Planning Level Vegetation Surveys report in 2014 (EEE, 2014). The report included three components: a Flora Planning Level Survey Update and Floristic Inventory, a Rare, Threatened and Endangered (RTE) Species Planning Level Survey Update and a Vegetation Communities Planning Level Survey and Forest Mapping. Several Classification of Vegetation Communities of Maryland (CVSM) Alliances were identified within the Post. Definitions for CVCM alliances can be viewed at the following link: http://www.dnr.state.md.us/irc/docs/00015752.pdf. The top alliances identified through the methodology defined above are the Pinus virginiana forest alliance, Quercus falcata forest alliance, Liriodendron tulipifera forest alliance, Quercus prinus - (Quercus coccinea, Quercus velutina) forest alliance, Quercus alba - (Quercus rubra, Carya spp.) forest alliance, and the Quercus alba - Quercus (falcata, stellata) forest

FMED-6

FMED-7

FMED-7: Existing text in the Vegetation subsection of Section 3.7.2.1 is specific to the ECIP project area. However, some FGGM-wide text was added as appropriate in Section 3.7.2.1 of the EIS per comment. See the response to Comment EPA-20 regarding Green Infrastructure.

Comments from Fort Meade Directorate of Public Works Environmental Division

Page	Section	Comment
		Quercus falcata forest alliance) represent more than half of the alliances observed within Fort Meade. Pitch pine (Pinus rigida), a commonly documented species within Fort Meade, does not appear to be listed as an alliance occurring in the coastal plain of Maryland. The Virginia pine (Pinus virginiana) forest alliance lists pitch pine as a major component of the alliance. Another common pine species at Fort Meade, shortleaf pine (Pinus echinata) is also documented within most of the common alliances, and is primarily included in the Pinus virginiana forest alliance. (EEE, 2014). Four timber types were identified within the Post. The types identified were: Cove and Mixed Hardwood, Upland Hardwood, Pine Hardwood and Pine. A description of each type is provided below: Cove and Mixed Hardwoods: This is the most valuable timber type on the installation, consisting of a mixture of Yellow Poplar (Liriodendron tulipifera), Sweet Gum (Liquidambar styraciflua), Red Maple (Acer rubrum), Silver Maple (Acer saccharinum), River Birch (Betula nigra), Sycamore (Platanus occidentalis), American Elm (Ulmus americana), Black Walnut (Juglans nigra), Black Locust (Robinia pseudoacacia). Less important species include Catalpa (Catalpa speciosa) and Persimmon (Diospyros virginiana). Upland Hardwood: The timber species in this timber type consist of at least 80 percent hardwoods, and twenty percent pine. The hardwood types consist of White Oak (Quercus alba), Red Oak (Quercus rubra), Black Oak (Quercus velutina), Willow Oak (Quercus phellos), Scarlet Oak (Quercus coccinea), Post Oak (Quercus stellata), Hickory Species (Carya spp), American Beech (Fagus grandifolia). Less important species include Sassafras (Sassafras albidum), Flowering Dogwood (Cornus florida), Rhododendron (Rhododendron maximum) and American Holly (Hex opaca). Pine Hardwood: This timber type contains a mixture of upland hardwoods and pine in a combination ratio of from 20 to 80 percent of either species. Pine: This last timber type consists of three species of pine, Virginia Pine (Pinus virginiana), Pitch Pine (Pinus rigida) and Short Leaf Pine (Pinus echinata). Loblolly Pine and White Pine do not occur naturally, but grow well and have been planted in several small stands. The 2013 floristic inventory identified 450 taxa, including 28 invasive species, one state-endangered plant (Torrey's Rush, Juncus torreyi) and 134 taxa not previously identified in the 1994, 2001 or 2009 surveys. There are 711 total taxa identified within Fort Meade from 1994 to 2013. No federally-listed plants were identified (EEE, 2014). USACE conducted field surveys on Fort Meade from 19 to 23 September and 3 to 7 October 2011. The team surveyed approximately 1,315 acres of the total 5,253 acres of Fort Meade. Invasive species were observed on approximately 540 acres of the surveyed area. Thirty two invasive species were identified during the surveys. The species with the most surveyed occurrences were Asiatic bittersweet (Celastrus orbiculatus), Japanese honeysuckle (Lonicera japonica), Nepalese browntop (Microstegium vimineum) and mile-a-minute (Polygonum perfoliatum)."
3-42	3.7.2.1	Fort Meade has approximately "217" acres of wetland, not 159 acres. Please revise. Suggest removing stream, per comment #3, and revising wetland calculations.

FMED-7

FMED-8

FMED-8: The number of acres of wetlands on Fort Meade has been revised in Section 3.7.2.1 of the EIS per this comment. Please also see the response to Comment FMED-3.

Comments from Fort Meade Directorate of Public Works Environmental Division

Page	Section	Comment
3-44	3.7.2.1	Wildlife on Post is more diverse than characterized. Suggest revisions per provided wildlife surveys. Text from a recent EA is as follows, "In 2013 Environmental Systems Analysis, Inc. (ESA, Inc.) conducted a study for fauna and wildlife populations, including breeding amphibians and a Burba Lake fisheries study. Most of the observed animal species are common to Anne Arundel County and the Central Maryland area. During the fauna study a total of 13 bird and 11 mammal species were identified (Table 4-3). During the amphibian breeding 11 reptile and amphibian species were identified (Table 4-4). The species observed during the 2013 survey were very similar to those found in 2009 flora and fauna survey (USACE, 2009). Table #.#: Mammals and Birds Present in 2013 Scientific Name Common Name Odocoileus virginianus Deer Procyon lotor Raccoon Sciurus carolinensis Squirrel Urocyon cinereoargenteus Gray fox Homo sapien Person Didelphimorphia Opossum Lepus curpaeums Rabbit Zenaida macroura Mourning dove Vulpes vulpes Red fox Anas platyrhynchos Mallard Butorides virescens Green heron Cardinalis cardinalis Cardinal Agelaius phoeniceus Redwing blackbird Felis catus Domestic cat Cyanocitta cristata Blue jay Quiscalus quiscula Grackle Passeridae sp. Sparrow Fringillidae sp. Finch Branta canadensis Canada goose Corvus brachyrhynchos American crow Marmota monax Groundhog Species unknown Mouse Dumetella carolinensis Catbird Turdus migratorius Robin Table #.#: Reptiles and Amphibians Present in 2013 Scientific Name Common Name Pseudacris crucifer (frog) Spring peeper Lithobates clamitans melanota (frog) Northern green frog Rana sylvatica (frog) Wood frog Acris crepitans (frog) Eastern cricket frog Lithobates sphenocephalus (frog) Southern leopard frog Bufo americanus (toad) American toad Ambystoma opacum (salamander) Marbled salamander Ambystoma maculatum (salamander) Spotted salamander Terrapene carolina (turtle) Eastern box turtle Chelydra serpentine (turtle) Common snapping turtle Eumeces fasiatus (lizard) Five-lined skink

FMED-9

FMED-9: Existing text in the Wildlife subsection of Section 3.7.2.1 is specific to the ECIP project area and the species identified are not meant to be an exhaustive list of possible wildlife found in the area. However, FGGM-wide text was added as appropriate in Section 3.7.2.1 of the EIS per comment.

Comments from Fort Meade Directorate of Public Works Environmental Division

Page	Section	Comment	
Chapter 3&4	3&4 (Protected Species)	Include the following text, "The presence of the NLEB has been detected acoustically on Fort Meade, but no active summer roost trees or hibernacula have been confirmed on Post or in in Anne Arundel County to date. Fort Meade has started an informal consultation with the USFWS Chesapeake Bay Field Office. Threatened and Endangered Species Consultations will be coordinated with Fort Meade DPW-Environmental."	FMED-10
4-34	4.6.2	Will the intermittent stream, wetland, and 100 foot buffer be impacted? If not should these resources should be targeted for restoration?	FMED-11
4-38	4.7.2	Remaining portions of the forested corridor along Obrien road should be targeted for conservation (maximum extent practical). In addition to riparian corridors, the Obrien corridor should be used as an anchor point for reforestation projects.	FMED-12
ROD/4.7.2	ROD/4.7.2	Additional mitigation/BMPs - Add if not included, "Forest Conservation and Reforestation Plans will be submitted to the Fort Meade Directorate of Public Works Environmental Division for approval. No Forest Stand Delineation will be required by Fort Meade for these projects due to existing data. Forest Conservation Plans will incorporate the preservation of existing trees where possible. All designs would incorporate tree protection practices including, but not limited to, protective fencing around the critical root zone of trees, trunk protection, and root pruning. Tree preservation measures and required pruning should be performed by a certified arborist and shall be in accordance with American National Standards Institute (ANSI) standards. Tree planting and landscaping will be comprised of native plant species. No invasive species will be planted. Invasive species will be removed or controlled on the project sites (including potential restoration areas) prior to acceptance from the Directorate of Public Works. This will assist the Army to remain in compliance with the Invasive Species EO 13112."	FMED-13
ROD	ROD	Mitigation should include the current FGGM FCA and Tree Management Policy (DoD CZMA MOU), Compliance with Army Forestry Reimbursable Program, 100 Foot FGGM Water Quality Buffer, target restoration efforts: Obrien Road and Riparian Corridors. Coordinate TES consultations with FGGM DPW-ED.	FMED-14

FMED-10: Text was revised as appropriate in Sections 3.7 and 4.7 of the EIS per this comment.

FMED-11: As stated in Section 4.7.2, the intent is to avoid the wetland and buffer. Appropriate measures would be taken should it be determined that direct impacts would occur later in project planning phases.

FMED-12: Comment noted. Thank you for the support.

FMED-13: Comment noted. NSA will coordinate with Fort Meade Directorate of Public Works on review of Forest Conservation Plans. NSA would remain the approving authority for spaces inside of the NSA Exclusive Use Area. As stated in Section 4.7.2, 20 percent of forest cover would be preserved (where possible) or reestablished. Text added to Section 4.7.2 to supplement what is already reflected from much of the comment in the EIS text.

FMED-14: Text was added as appropriate to EIS Table ES-4, Section 4.7.2, and the ROD.

From: Lori Byrne -DNR-
To: ECIPEIS
Subject: DEIS for East Campus Integration Program, Fort George G. Meade, MD
Date: Tuesday, July 26, 2016 4:19:45 PM

To whom it may concern:

The Wildlife and Heritage Service has determined that there are no official State or Federal records for listed plant or animal species within the delineated area shown on the map provided. As a result, we have no specific concerns regarding potential impacts or recommendations for protection measures at this time. DNR-1

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.

--
Lori A. Byrne
Environmental Review Coordinator
MD DNR
Wildlife and Heritage Service
Tawes State Office Building
410-260-8573
Please use my new email address lori.byrne@maryland.gov*

DNR-1: Comment noted. Thank you for the support.

MARYLAND DEPARTMENT OF PLANNING

Larry Hogan, Governor
Boyd Rutherford, Lt. Governor

Wendi W. Peters, Secretary
Ewing McDowell, Deputy Secretary

August 19, 2016

Mr. Jeffrey Williams
Director, Environmental Sustainability
National Security Agency
Central Security Service
9800 Savage Road, Suite 6218
Fort Meade, MD 20755-6218

STATE CLEARINGHOUSE RECOMMENDATION

State Application Identifier: MD20160707-0634
Applicant: National Security Agency, Central Security Service
Project Description: Draft EIS for the East Campus Integration Program at Fort Meade: Scoping Report: Draft Traffic Impact Study (see MD20150108-0017)
Project Address: 9800 Savage Road, Suite 6218, Fort Meade, Maryland
Project Location: Anne Arundel County
Approving Authority: U.S. Department of Defense (NSA)
Recommendation: Consistent with Qualifying Comments and Contingent Upon Certain Actions

Dear Mr. Williams:

In accordance with Presidential Executive Order 12372 and (Code of Maryland Regulations) 34.02.01.04-.06, the State Clearinghouse has coordinated the intergovernmental review of the referenced project. This letter constitutes the State process review and recommendation based upon comments received to date. This recommendation is valid for a period of three years from the date of this letter.

Review comments were requested from the Maryland Departments of Natural Resources, Transportation, the Environment; the Governor's Office of Homeland Security, the Maryland Military Department; Anne Arundel County; and the Maryland Department of Planning, including the Maryland Historical Trust. As of this date, the Maryland Departments of Natural Resources, Transportation; the Governor's Office of Homeland Security; Anne Arundel County; and the Maryland Historical Trust have not submitted comments. **This recommendation is contingent upon the applicant considering and addressing any problems or conditions that may be identified by their review. Any comments received will be forwarded.** The Maryland Military Department had no comment.

The Maryland Department of the Environment (MDE) found this project to be generally consistent with their plans, programs, and objectives, but included certain qualifying comments summarized below.

301 West Preston Street - Suite 1101 - Baltimore - Maryland - 21201
Tel: 410.767.4500 - Toll Free: 1.877.767.6272 - TTY users: Maryland Relay - Planning.Maryland.gov

MD-1 **MD-1:** Comment noted. Thank you for the support.

MD-2 **MD-2:** Comment noted. Thank you for the support.

1. Any above-ground or underground petroleum storage tanks, which may be utilized, must be installed and maintained in accordance with applicable State and federal laws and regulations. Underground storage tanks must be registered and the installation must be conducted and performed by a contractor certified to install underground storage tanks by the Land Management Administration in accordance with (COMAR) 26.10. Contact the Oil Control Program at (410) 537-3442 for additional information.

2. If the proposed project involves demolition, any above-ground or underground petroleum storage tanks that may be on site must have contents and tanks along with any contamination removed. Please contact the Oil Control Program at (410) 537-3442 for additional information.

3. Any solid waste including construction, demolition and land clearing debris, generated from the subject project, must be properly disposed of at a permitted solid waste acceptance facility, or recycled if possible. Contact the Solid Waste Program at (410) 537-3315 for additional information regarding solid waste activities and contact the Waste Diversion and Utilization Program at (410) 537-3314 for additional information regarding recycling activities.

4. The Waste Diversion and Utilization Program should be contacted directly at (410) 537-3314 by those facilities which generate or propose to generate or handle hazardous wastes to ensure these activities are being conducted in compliance with applicable State and federal laws and regulations. The Program should also be contacted prior to construction activities to ensure that the treatment, storage or disposal of hazardous wastes and low-level radioactive wastes at the facility will be conducted in compliance with applicable State and federal laws and regulations. MD-3

5. Any contract specifying "lead paint abatement" must comply with Code of Maryland Regulations (COMAR) 26.16.01 - Accreditation and Training for Lead Paint Abatement Services. If a property was built before 1950 and will be used as rental housing, then compliance with (COMAR) 26.16.02 - Reduction of Lead Risk in Housing; and Environment Article Title 6, Subtitle 8, is required. Additional guidance regarding projects where lead paint may be encountered can be obtained by contacting the Environmental Lead Division at (410) 537-3825.

6. The proposed project may involve rehabilitation, redevelopment, revitalization, or property acquisition of commercial, industrial property. Accordingly, MDE's Brownfields Site Assessment and Voluntary Cleanup Programs (VCP) may provide valuable assistance to you in this project. These programs involve environmental site assessment in accordance with accepted industry and financial institution standards for property transfer. For specific information about these programs and eligibility, please contact the Land Restoration Program at (410) 537-3437.

The Maryland Department of Planning found this project to be consistent with its plans, programs, and objectives. MD-4

Any statement of consideration given to the comments should be submitted to the approving authority, with a copy to the State Clearinghouse. The State Application Identifier Number must be placed on any correspondence pertaining to this project. The State Clearinghouse must be kept informed if the approving authority cannot accommodate the recommendation.

MD-3: Comment noted. Section 4.11 of the EIS discusses management of hazardous materials and wastes, and coordination with MDE on these issues would occur as appropriate as planning progresses.

MD-4: Comment noted. Thank you for the support.

Please remember, you must comply with all applicable state and local laws and regulations. If you need assistance or have questions, contact the State Clearinghouse staff person noted above at 410-767-4490 or through e-mail at bob.rosenbush@maryland.gov. Thank you for your cooperation with the MIRC process.

Sincerely,

Myra L. Barnes

Myra Barnes, Lead Clearinghouse Coordinator

MB:BR

cc: Samantha Harris - ANAR
Tina Quinichette - MDOT
Amanda Degen - MDE
Greg Golden - DNR
Andrew Lauland - GOHS
Daniel Pyle - MILT
Peter Conrad - Planning
Beth Cole - MHT

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HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
3430 Courthouse Drive ■ Ellicott City, Maryland 21043 ■ 410-313-2350
Voice/Relay

Valdis Lazdins, Director FAX 410-313-3467

August 17, 2016

East Campus Integration Program EIS
c/o HDR
2600 Park Tower Drive
Suite 100, Vienna, VA 22180

Re: Draft Environmental Impact Statement (EIS) for the East Campus Integration Program at Fort Meade, Maryland

Thank you for the opportunity for Howard County to review the draft Environmental Impact Statement (EIS) for the East Campus Integration Program at Fort Meade which calls for the construction of approximately 2.9 million square feet of new operations and headquarters space in five buildings to consolidate 7,200 National Security Agency (NSA) service personnel who are currently off-site.

The Howard County's Department of Planning and Zoning (DPZ) and Office of Transportation (OoT), the two County agencies responsible for implementing regional policies, have reviewed the draft EIS. First, DPZ is responsible for the implementation of *PlanHoward2030*, Howard County's general plan, which identifies policy goals for future planning efforts and implementation actions both for Howard County and for the region. The County's Transportation Office provides management oversight of the County's interest and investment in the Central Maryland regional fixed route and paratransit services operated by the Regional Transportation Agency (RTA). OoT additionally leads the County's initiatives in transportation demand management (TDM); bicycle and pedestrian planning, programs and projects; long range regional and local transportation planning; and review of private and public sector land development plans. Both reviewing agencies implement regional policies which serve as the framework for the following discussion points and comments.

According to the draft EIS, the project would require the construction of supporting infrastructure including roads, utilities, stormwater management facilities, an electrical substation, emergency generators, heating systems, sidewalks, and parking structures. Due to the expansion of facilities and the number of new employees traveling to the campus, our comments will be centered on the regional transportation system.

Regional Transportation - Roads

Our overall regional transportation network is challenged by congestion. The regional and local economy relies on an efficient transportation system to allow people to get to employment, stores, recreation, places of worship, and home. According to *PlanHoward2030*, The Baltimore Metropolitan County travel model indicated that congestion and travel time delay in Howard County and the region will continue to increase. Model projections for vehicle travel hours indicate that from 2008-2035, vehicle hours of delay will increase by 57% (p. 91). Congestion can be mitigated either by increasing the capacity of roads and highways or by reducing demand. *PlanHoward2030* identifies our local key transportation improvements by 2025 and 2035 (see Map 7-1, Attachment 1).

According to the conclusions reached by the EIS's Traffic Impact Study in which the level of service (LOS) "E" or "F" is forecasted in Year 2029 on almost all study area freeway segments and interchanges, the impact of "Proposed Action" and other Build scenarios are minimized, concluding that the LOS on many of these facilities would be E or F in 2029 even without the project. If LOS cannot differentiate between a scenario with or without new, incremental trip generation (in this case, 6,800 vehicle trips), then a different unit of measure should be used to provide a quantitative basis for potential mitigation. For example, the difference in "person-hours of delay" between the "No-Build" scenario and the "build" scenarios would provide a more understandable measure of the impacts of new employees on the region's highway network. — HCPZ-1

Howard County supports the NSA's proposed transportation mitigation measures including better pedestrian and bicycle access and more shuttle buses. However nearly all the mitigation measures are on campus, whereas the traffic study projects high levels of congestion on the region's highways as well as an anticipated 5% employee participation rate in alternative commuting modes such as ride-sharing and carpooling. Given that this traffic will occur off-campus, the EIS should describe how the NSA can mitigate to promote alternative commute options to and from campus, including investigating options such as opening up the bridge north of MD 32 and across MD 295 for employees and contractors. — HCPZ-2

Regional Transportation - Transit

The draft EIS incorrectly identifies the Central Maryland Regional Transit (CMRT) as operating the local transit services. Regional public transit is provided by the Regional Transportation Agency of Central Maryland (RTA). RTA is an organization made up multiple jurisdictions to establish a more effective and efficient public transportation system across Central Maryland. *PlanHoward2030* supports the mission of the RTA which is to "expand and maximize the efficiency, investment, and connectivity of mid-corridor regional transit" with Anne Arundel County, Fort Meade and other jurisdictions (Policy 7.4- Enhance the accessibility and quality of existing and future transit services, p. 94). — HCPZ-3

In 2017 the RTA will begin operating a new bus transit route serving the Odenton and Savage MARC stations through Fort Meade and the National Business Park (see Attachment 2: RTA Route 504 Planned Alignment). The planned alignment of this service, RTA Route 504, will operate on MD 175 past Gates 3 & 5 as well as on the National Business Parkway north of Guilford Road to MD 175. The intersections of MD 175/Rockenbach Road as well as segments of Mapes Road and Reece Road will also be served but outside the locations of Vehicle Control Points. This future Route 504 service should be documented in the EIS. — HCPZ-4

Below are specific recommendations for your consideration:

1. Correct the description of existing services in the EIS as local transit is currently provided by the RTA, and no longer by Central Maryland Regional Transit (CMRT).
2. Coordinate state and regional planning and implementation for critical improvements and new transportation facilities (Policy 7.2, p. 87)
3. Prioritize and pursue cost-effective, long-term capacity improvements to the road and highway network to support future growth (Policy 7.3, p. 92)
4. Describe how the NSA can mitigate to promote alternative commute options to and from campus. Specifically, in order to reduce single occupancy vehicle commuting to and from campus, NSA should do the following:
   i) encourage increased use of the MARC train system,
   ii) provide increased shuttle buses to and from campus, and
   iii) contribute to improvements that would make biking and walking to and from campus safer and more attractive. These improvements would include:
      a. direct pedestrian and bicycle access from the Odenton MARC station to vicinal Vehicle Control Points;

— HCPZ-5

HCPZ-1: Transportation impacts in the EIS and Traffic Impact Study have been reported in LOS. However, for comparison, the summary tables in Section 4.2 and Appendix B of the EIS have been updated to identify impacts as delay (seconds per vehicle) or density (passenger cars per hour per lane), as appropriate.

HCPZ-2: NSA/DoD will continue to coordinate with Howard County and other local and state agencies to plan transportation improvements, including NSA transit and bike/pedestrian incentives.

HCPZ-3: Text in Appendix B, Section 2.2 has been revised to indicate that Regional Transportation Agency of Central Maryland (RTA) operates the Route K bus service.

HCPZ-4: Text in Appendix B, Section 2.2 has been revised to add the future RTA Route 504 bus service. However, this bus route would not bring NSA personnel close enough to walk to the NSA Campus, and NSA personnel cannot currently use their access badges at the Reece Road Gate where the bus route would access Fort Meade.

HCPZ-5: Corresponding responses to the numbered recommendations in the comment follow.

1. Please see the response to Comment HCPZ-3.

2. DoD continues to strive to ensure adequate traffic capacity through good analysis, engineering, and physical improvements. For example, VCP-2 (for traffic directly from and to the Baltimore-Washington Parkway via the bridge over the parkway north of MD 32) was recently improved to accommodate an increased traffic volume, and a similar project for VCP-1 on Canine Road is planned. Traffic signal timing on the NSA Campus is also continuously reviewed to facilitate better traffic flow. Coordination with state and local authorities to plan transportation improvements and identify funding sources is a necessity, and will continue.

3. Please see the response to Comment HCPZ-5 #2.

4. These recommendations have been added to Section 4.2, as appropriate, and will be considered as transportation planning for the ECIP progresses.

5. Due to bridge conditions and safety concerns as well as the existence of shuttle service, pedestrian and bicycle traffic will not be permitted on the bridge.

6. Please see the response to Comment HCPZ-4.

b. secure bicycle parking; and
c. coordination of off-site bike commuter improvements with the Maryland State Highway Administration and with Howard and Anne Arundel Counties.

5. Consider opening the bridge north of MD 32 across MD 295 to both bicyclists and pedestrians, in order to allow for safe travel between the two parts of campus without having to drive or take a bus.

6. Document the future Route 504 service in Section 2.5.1 of the EIS, "Future Actions on Fort Meade" as well as under "Bus Shuttles" in "Proposed Measures" for Transportation on page ES-17.

HCPZ-5

Thank you for the opportunity to comment on this draft Environmental Impact Statement for the East Campus Integration Program at Fort Meade. If you have any questions related to our comments, please contact Clive Graham, Administrator, Howard County Office of Transportation, at (410) 313-0702.

Sincerely,

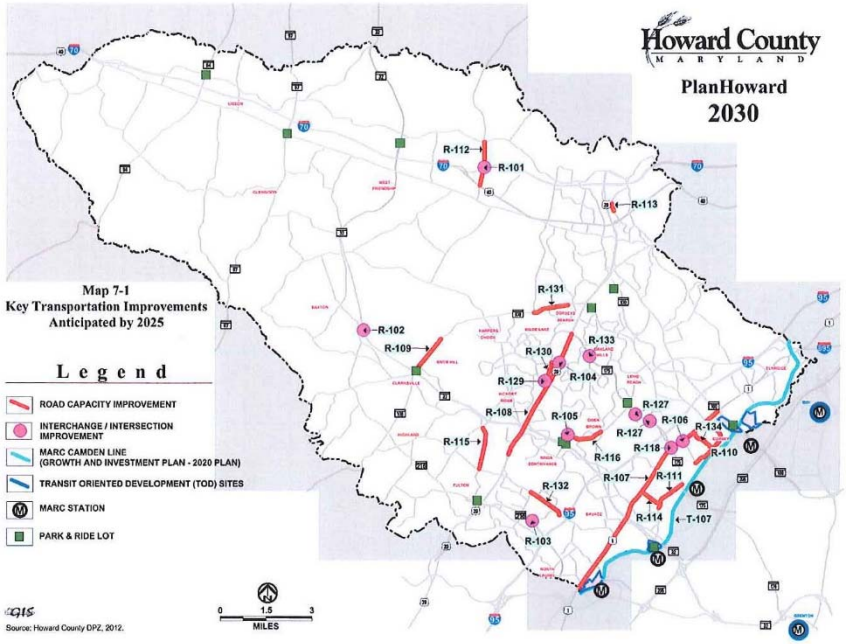
Valdis Lazdins, Director
Howard County Department of Planning and Zoning
George Howard Building
3430 Court House Drive
Ellicott City, Maryland 21043

cc: Raj Kudchadkar, Deputy Director, Howard County Department of Planning and Zoning
Clive Graham, Administrator, Howard County Office of Transportation
Kristin O'Connor, Chief, DCCP, Howard County Department of Planning and Zoning

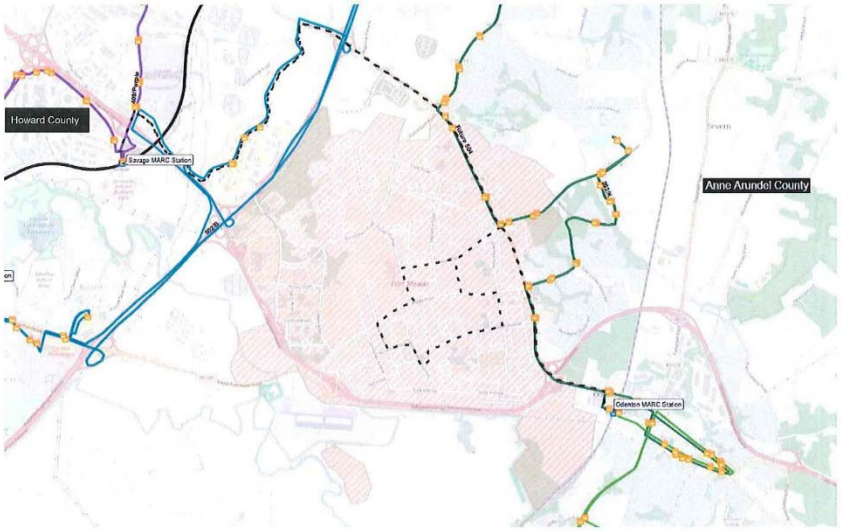
Attachments

Attachment I: *PlanHoward 2030* Map 7-1 Key Transportation Improvements Anticipated by 2025
Attachment 2: RTA Route 504 Planned Alignment

Attachment I: Map 7-1 Key Transportation Improvements Anticipated by 2025



Attachment 2: RTA Route 504 Planned Alignment



ANNE ARUNDEL COUNTY
M A R Y L A N D

Office of Planning and Zoning
Transportation Division
P.O. Box 6675
2664 Riva Road – 4th Floor
Annapolis, Maryland 21401

Steven R. Schuh, County Executive

August 22, 2016

HDR
2600 Park Tower Drive
Suite 100
Vienna, VA 22180

RE: East Campus Integration Program EIS

Dear Jeffrey Williams:

We have read with great interest the Draft EIS for the East Campus Integration Program and the "7,200 new personnel currently located offsite" and 1 million square feet of additional facility space that are proposed on East Campus.

We note that the majority of the proposed transportation measures in response to the increased LOS's at the MD 175 intersections as identified in the traffic study and congestion at the VCC's calls for on post improvements only. While the majority of the impacts would be felt on post, a significant reason for the impacts is the increased traffic coming onto the post, which will impact both the Fort and its users as well as the adjacent community. The County would like to partner with the Fort and the various agencies to come up with ways to reduce the traffic impacts to the area (both on and off campus) in the following areas:

Transit - The county is partnering with the Fort, MTA and RTA on a MARC Savage to MARC Odenton Shuttle with stops at Fort Meade and National Business Park, however there is little infrastructure improvements (such as transit transfer stations with shelters proposed at the gates) to encourage additional transit ridership. Likewise no programs or incentives for encouraging transit or carpool/vanpool are specifically identified. Encouraging additional transit and providing real amenities would increase usage and decrease the potential traffic impacts of the proposed action. — AAC-1

Bicycle and Pedestrian - Likewise the proposed transportation measures do call for a biped study of facilities on post however this is mostly limited to on post improvements and is limited in how to encourage biped commuting from off campus. NSA has recently initiated bike share and some coordination between the Fort, SHA and the County to provide a community wide system may encourage more employees to live closer to the Fort and walk or bike onto the post. — AAC-2

Roads - The EIS identifies the traffic impacts of the proposed action on MD 175 and some of the surrounding roadways, but not in a specific enough fashion for transportation planners to accurately determine the impact. The County and State have both been preparing road improvements to deal with the increased activity at the Fort since the inception of BRAC. The County looks forward to continued work with both partners in the process and the potential changes to the current plans for the roadways. One comment on the LOS tables in section 4 (4.2-1) would be that the impacts do not specifically identify — AAC-3

AAC-1: Transit infrastructure improvements would occur as part of proposed transit improvements identified at the end of Section 4.2.2. DoD will continue to coordinate with Anne Arundel County and other local and state agencies to plan transit improvements.

AAC-2: Section 4.2.2 of the EIS has been revised to indicate the proposed Bike/Pedestrian Accessibility Study should include NSA's bike share program outside of the installation and how it could impact commuters to/from Fort Meade.

AAC-3: Transportation impacts in the EIS and Traffic Impact Study have been reported in LOS. However for comparison, the summary tables in Section 4.2 and Appendix B of the EIS have been updated to identify impacts as delay (seconds per vehicle) or density (passenger cars per hour per lane), as appropriate.

the increased delay associated with the proposed action. While some intersections are LOS F in the no action alternative and remain F in the proposed action alternative, the amount of delay is not identified in the report nor in the appendices. This would lead one to believe that there is no impact, when in fact it is a worsening of the already failing condition, but how much is not presented. Figure 4.2-2 does show the actual delays calculated, a similar exhibit for the roadway intersections at the gates along MD 175 would be very beneficial in the final report for end user consumption. AAC-3

Additionally the specific traffic analysis files at the intersections should be provided in the appendices. This will let everyone accurately gauge the impact and allow the State and County to plan for improvements. It is unacceptable to simply state that failing conditions exist in the future no action alternative therefore the proposed action alternative failing conditions should not be mitigated. Having the data and specific delays at each intersection and by approach would allow the State and County to assess if specific improvements at those intersections may in fact mitigate the over 20,000 daily trips generated by the proposed action as identified in the study. Even if the Federal Government does not plan on addressing the increased congestion associated with the proposed action, the County and State will need this information to adequately plan for the future impacts. Likewise it would allow the County to provide this information to private developers as background traffic in the County's required TIS's to meet APFO requirements. Without the specific data both County planning efforts and review of proposed private developments will be less informed. AAC-4

Also, while part of the proposed measures is stated as "improve external roadways in coordination with other agencies" no discussion has been presented on what specific improvements are required, how much they would cost, who would be responsible for what parts and what funding mechanism would be used to pay for them.

One specific action that could assist all parties is a parallel facility to MD 175 to alleviate some of the local traffic using that facility. The County has identified the extension of Town Center Boulevard north to Reece Road (MD 174) through a portion of the Fort property. Any assistance on making this parallel facility a reality would be greatly appreciated and benefit all parties as the southern end is currently being extended to MD 175. AAC-5

Parking - Lastly there is a concern with the significant amount of increased parking proposed that would only encourage more single occupancy vehicle commuting onto the post. Limiting the parking on post would make parking more difficult of course but it would encourage ridesharing, biped and transit usage on post as well as for commuting purposes, and reduce the needed roadway improvements both on and off post. AAC-6

Please contact me if you have any questions or need clarification on any comments at 410-222-7440 or at pzulri44@aacounty.org We look forward to continuing our partnership as the plan moves forward.

Sincerely,

Brian Ulrich

Brian Ulrich, PE
Planning Administrator

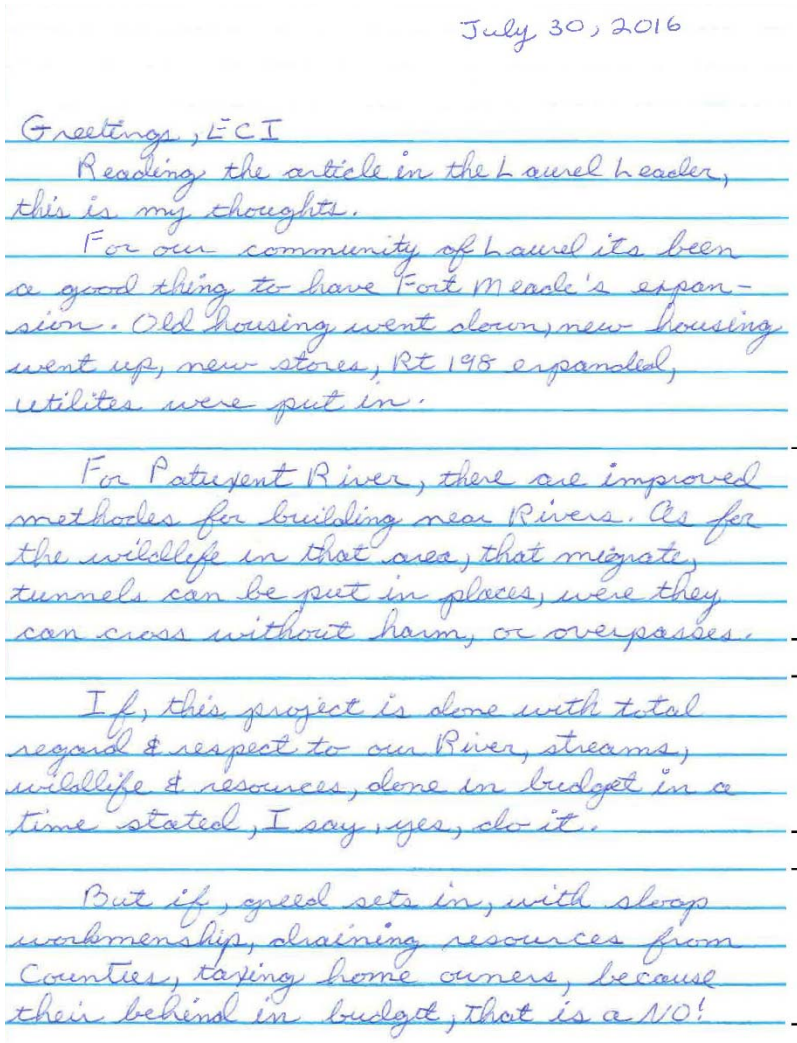
CC: Larry Tom, Planning & Zoning Officer
Lynn Miller, Asst. Planning & Zoning Officer

2

AAC-4: Transportation improvements to address failing conditions as a result of the Proposed Action are presented in EIS Section 4.2.2. Also see response to Comment AAC-5 regarding coordination to implement other improvements. The traffic analysis files associated with the Vistro 3.00-02 and Synchro 8 traffic models will be provided to Anne Arundel County with the submission of the Final EIS.

AAC-5: Improvement of external roadways is outside NSA/DoD jurisdiction; however, the NSA/DoD, through the NSA Community Liaison, will continue to coordinate with Anne Arundel County and other local and state agencies to plan transportation improvements and identify necessary funding sources. Suggested improvements to Town Center Boulevard should be coordinated with Fort Meade garrison personnel.

AAC-6: Thank you for the comment. On-campus parking options are being considered with alternative transportation modes in mind. See responses to Comments AAC-1 and AAC-2 regarding alternative transportation coordination.



July 30, 2016

Greetings, LCI

Reading the article in the Laurel Leader, this is my thoughts.

For our community of Laurel its been a good thing to have Fort Meade's expansion. Old housing went down, new housing went up, new stores, Rt 198 expanded, utilites were put in.

For Patuxent River, there are improved methodes for building near Rivers. As for the wildlife in that area, that migrate, tunnels can be put in places, were they can cross without harm, or overpasses.

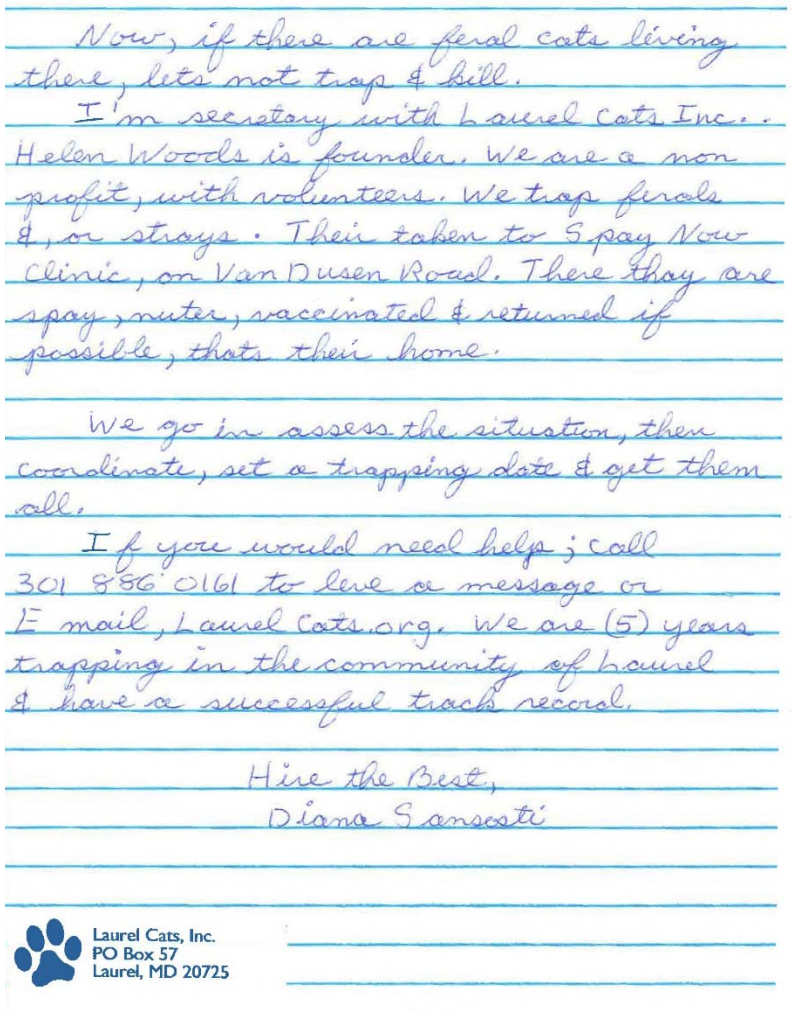
If, this project is done with total regard & respect to our River, streams, wildlife & resources, done in budget in a time stated, I say, yes, do it.

But if, greed sets in, with sloop workmenship, draining resources from Counties, taxing home owners, because their behind in budget, that is a NO!

LC-1: No surface waters would be disturbed during construction of the proposed ECIP. The Proposed Action would not be constructed near the Patuxent River. The northeastern corner of the ECIP project area would be approximately 250 feet west of the Midway Branch, a tributary of the Little Patuxent that eventually flows into the Patuxent River. Environmental site design and BMPs would be implemented to ensure that post-development hydrology meets pre-development hydrology, and stormwater management would be incorporated as required by Federal and state regulations. Although no locations in the ECIP project area necessitate the need for wildlife tunnels, the DoD will consider them in the future.

LC-2: Comment noted. Thank you for the support.

LC-3: The Federal government would fund and implement the Proposed Action, and counties would not be directly involved in providing resources for its construction on Fort Meade.



Now, if there are feral cats living there, lets not trap & kill.

I'm secretary with Laurel Cats Inc.. Helen Woods is founder. We are a non profit, with volunteers. We trap ferals & or strays. Their taken to Spay Now clinic, on Van Dusen Road. There they are spay, nuter, vaccinated & returned if possible, thats their home.

We go in assess the situation, then coordinate, set a trapping date & get them all.

If you would need help; call 301 856 0161 to leve a message or E mail, Laurel Cats.org. We are (5) years trapping in the community of Laurel & have a successful track record.

Hire the Best,
Diana Sansosti

Laurel Cats, Inc.
PO Box 57
Laurel, MD 20725

LC-4

LC-5

LC-4: Feral cats, if present on the NSA Campus, would be managed in accordance with the Fort Meade Integrated Pest Management Plan and other related guidance.

LC-5: Comment noted. Thank you for the support. See the response to Comment LC-4.

Bike Access for NSA Expansion

August 3, 2016

From Bicycle Advocates for Annapolis & Anne Arundel County

Contact: Jon Korin, president@bikeaaa.org or Glenn Gunter glenn.gunter@verizon.net

Support for Bicycle Improvements in the NSA Expansion

Bicycle Advocates for Annapolis & Anne Arundel County (BikeAAA) is an all-volunteer 501c3 promoting safe bicycling for transportation, recreation & fitness throughout Anne Arundel County. We originated as a project of the Leadership Anne Arundel Flagship program and now represent hundreds of cyclists. We support the commitment to *Complete Streets* by the state of Maryland and more recently by the Anne Arundel County Council. *Complete Streets* assures that investment in new roads and maintenance/renovation of existing roads will address the needs of multiple transportation modes including cars, trucks, bicycles and pedestrians. This nationally recognized strategy provides more safe transportation options at little incremental cost. Safe bicycle and pedestrian routes to work, school, shopping and other destinations reduces traffic, protects the environment, stimulates the local economy and addresses Anne Arundel's #1 health issue – obesity. It prepares Anne Arundel County for the transportation demands of the current and next generation.

The Anne Arundel County Pedestrian/Bicycle Master Plan updated in June, 2013 highlights the importance of major county "attractors" as key destinations for bicyclists and pedestrians. NSA/Ft. Meade is the largest employer in Anne Arundel County and therefore a critical destination. Moreover, increasing traffic and a growing millennial workforce both demand that we offer alternatives to automobiles. We have supported and applaud NSA and Ft. Meade's support for bike travel including the opening of the Connector Rd and Pepper Road Gate (Sally-Port) to bicycles, the Rt 175 shared-use path and the recent opening of NSA's bikeshare program which BikeAAA was proud to participate in. BikeAAA has also supported the planned bike/ped network in the Odenton Town Center Master Plan and we encourage NSA to advocate for and support its implementation. We encourage NSA to continue to support safe bike commuting as part of its planned expansion. More bike commuting means healthier employees, less traffic, improved air/water quality and less parking congestion. However, safe routes in and around the base are critical to getting more employees riding. We also advocate bike safety promotion and encouragement programs to assure safe driving by motorists and riding by cyclists entering and exiting NSA/Ft. Meade. BikeAAA will work with NSA/Ft. Meade on such programs.

BAAA-1

We applaud Ft. Meade, NSA, MDOT, SHA, Anne Arundel County & Howard County for supporting safe bicycle routes. We stand ready to support this and future projects that make Anne Arundel County a more livable, healthy, and economically attractive place to live, work and play.

BikeAAA is a 501c3 promoting safe cycling for transportation, recreation & fitness
www.bikeaaa.org BikeAAA, PO Box 208, Arnold, MD 21012

BAAA-1: Section 4.2.2 of the Draft EIS stated that the proposed expansion of the walking and bike paths in and adjacent to the ECIP project area would provide beneficial impacts. Although, the volume and clustering of pedestrians/bicyclists in certain areas is expected to increase after construction on the ECIP project area, it is anticipated that interconnection of the proposed buildings and parking facilities with safe and continuous pedestrian travel paths, walkways, and crosswalks would reduce the vehicular traffic on campus and the risk of pedestrian, including bicycle, accidents with vehicles. Additionally, the Draft EIS recommends that a Bike/Pedestrian Accessibility Study be conducted to identify locations for the installation and use of additional, continuous, and Americans with Disabilities Act-compliant bike/pedestrian facilities.

From: John Duvall
To: ECIPEIS
Subject: Construction Project
Date: Tuesday, July 26, 2016 6:52:18 AM

I retired from the Agency in 2003. When I retired there was talk of using 9800 and 9800A for storage due to the proximity of JD-1

Rt. 32. I still think that is a good idea. The Golf Courses on Ft. Meade should have never been destroyed, they were historic. Honestly, there are enough buildings on the Post, and Technology Drive to perform the Agency/Ciber missions, anyone who says there are not, needs to learn how to utilize Space and manage the Mission. More buildings is Not The Answer. As far as giving the County a financial boost, the County is doing just fine, new housing is everywhere, but the infrastructure isn't improving, and the traffic continues to be the problem..... JD-2

Wasn't an electrical substation just completed adjacent to Rt. 295 in the past couple of years ? Ft Meade was a nice post, somewhere to enjoy bringing your family. Now it's turning into a giant office complex, to accomplish what ? And Why ? JD-3

Where is the Open Space on Post ? The Patuxent Riverkeeper was correct once it's destroyed, it can't be replaced, so what is the cost, more congestion, and a major environmental impact.... JD-4

v/r,

John DuVall

JD-1: Thank you for the comment.

JD-2: The Fort Meade golf courses were determined not to be eligible for the NRHP by the Maryland Historic Trust.

JD-3: Thank you for the comment. It should be noted that the EIS is an analysis of potential environmental impacts, not a determination of facility or infrastructure conditions and needs. The quantity of buildings and space are not the only factors that were considered in determining the need for the Proposed Action. As noted in Section 2.1.1 of the Draft EIS, the ECIP takes several factors into account, including mission requirements (including the co-location and consolidation of missions), the condition of current facilities (both on and off NSA's Campus at Fort Meade), space planning, land availability, utility requirements, traffic and parking, and environmental impacts. The co-location and consolidation of mission elements would provide a more efficient and effective work environment through the grouping of services and support services across the NSA Campus based on function, facilitation a more collaborative environment and optimal adjacencies; and provision of capacity for up to 13,300 personnel.

JD-4: Comment noted. The ECIP project area (i.e., northern portion of the East Campus and the 9800 Troop Support Area) were previously designated for NSA expansion and development as identified in the NSA and Fort Meade master plans. Non-developed and open space areas exist throughout the NSA Campus and Fort Meade. Additionally, reforestation areas would be established in the ECIP project area. NSA would preserve or reforest acreage equal to 20 percent of the total area developed on the East Campus. The Patuxent Riverkeeper did not submit any comments to the DoD during the Draft EIS public review period.

From: roy fordyce
To: ECIPEIS
Subject: NSA projects
Date: Tuesday, July 26, 2016 7:59:21 PM

I totally support and appreciate whatever NSA can do to reduce terrorism and protect our people, in spite of environmental, traffic, other contraints.
Roy Fordyce

RF-1 **RF-1:** Comment noted. Thank you for the support.

From: Robert Bruninga
To: ECI-PEIS@hdrinc.com; ECIPEIS
Cc: bruninga@usna.edu; Wilson, Scott; Mike Jones -MEA-; Chris Rice; John Murach; Meg Andrews; Elizabeth Entwisle; Jill Sorensen; Andrew Farkas; Fred Hoover; Kristen Weiss
Subject: East Campus Integration Program EIS (NSA)
Date: Wednesday, July 27, 2016 10:42:50 AM

PUBLIC INPUT SOUGHT ON MAJOR NSA PROJECT at FT MEADE (due 3 Aug):

COMMENTS:

Environmental Impact of ECIPEIS can easily be mitigated if the plans simply include SOLAR panels on the tops of buildings and parking lots as appropriate. It has been shown that EACH 1 kW of solar panel mitigates the SAME CARBON emissions reduction as 25 MATURE TREES. BB-1

https://www.energysage.com/solar/101/should-you-cut-down-trees

At about 500 trees per acre, Just the solar panels over the 2 acre parking lot at AACO Community college (750 kW) for example is equivalent to the CREATION of over 37 acres of forest.

Secondly, including simple 120v standard electric outlets along several rows of parking spaces (at only $15 per outlet plus installation) can provide over 97% of all the possible EV charging-at-work which is a high priority goal of the Dept of Energy and Maryland. See the DOE Workplace Charging Challenge:
http://energy.gov/eere/vehicles/ev-everywhere-workplace-charging-challenge

Solar Charging each commuter EV of say 20 miles a day, further saves 16 tons of CO2 emissions annually per car or the CREATION of an ACRE of forest for every 16 EV's charged.
https://transportation-forms.stanford.edu/cost/calculator_results.php

As the LARGEST SINGLE employer in the state of Maryland, investing in these two simple clean energy, clean environment initiatives would have the greatest improvement impact on the environment in Maryland and our future. BB-2

Bob Bruninga, PE
Instructor, US Naval Academy
IEEE National Committee on Transportation and Aerospace
EV Association of DC/MD/VA
410-293-6417

BB-1: As stated in Section 4.10.2 of the Draft EIS, the Proposed Action would result in beneficial effects on energy consumption through reduced use of conventionally generated energy, which would be replaced by increased use of renewable and incorporation of energy efficient technologies in building and infrastructure development. As described in the section, solar water heating systems are being considered as part of the project. Other sustainable technologies, such as vertical rainwater collection cisterns, would be used where feasible, and plans for future development of the East Campus include investigating the use of additional solar technology for new facilities.

BB-2: Sustainable technologies are already in place on the NSA Campus and will continue to be considered as planning and design progresses.

From: Osing
To: ECIPEIS
Subject: Comments NSA construction
Date: Wednesday, July 27, 2016 6:29:50 PM

It sounds like environmental degradation to me. I am against this project moving forward. GO-1

George Osing

Ellicott City, MD

GO-1: Thank you for the comment.

From: C. J. Kupec
To: ECIPEIS
Subject: NSA/Fort Meade Construction
Date: Saturday, July 30, 2016 2:22:41 PM

I read with great interest the article about the NSA/Fort Meade construction in the Columbia Flyer issue of July 28.

Unfortunately, except for what amounts to a disclaimer (or, nobody gives a darn) in paragraph eight of the article, there are no details about how the worsening of morning and evening rush hour traffic will be addressed.

Obviously, a huge need already exists to widen Rte. 32 on both sides of the NSA/Fort Meade corridor. And, the net increase of 1,000,000 sq. ft. of buildings at NSA/Fort Meade will only exacerbate the problem.

C'mon folks, do come up with a solution other than to say, "Public, deal with it."

C. J. Kupec
Columbia, MD

CJK-1

CJK-1: Section 4.2 and Appendix B (Traffic Impact Analysis) provide analysis and recommendations to improve the transportation network. DoD continues to ensure adequate traffic capacity on Fort Meade and the NSA Campus through good analysis, engineering, and physical improvements. Coordination with local authorities to plan improvements and identify funding sources for off-installation projects would continue.

31 July 2016

East Campus Integration Program EIS
c/o HDR,
2600 Park Tower Drive, Suite 100,
Vienna, VA. 22180

REF: East Campus Integration Program EIS

I retired from NSA in 2013 after 35 years of service. During a large portion of my career I was an Organizational Safety and Health Representative (OSHRep) and later I was the Safety Manager for Operations (now the Signals Intelligence Directorate), with a majority of personnel and spaces affected by construction and renovations under my responsibility. I personally worked in several of the buildings mentioned in the EIS plan and involved in safety and health matters in others.

CONCUR - with the demolition of buildings:

- 9703 (SAB3)
- 9705 (SAB4)
- 9808 (SAB1)
- 9814 (SAB2)
- 9817 (Ops3)
- **** Troop Support Area (Buildings 9801, 02, 03, 04, 05, 10, 27, 28 and 29)

DJH-1

DJH-1: Comment noted. Thank you for the support.

DO NOT CONCUR - with the demolition of buildings:

- 9800 (Ops1), and/or
- 9800A (Annex)

DJH-2

DJH-2: Thank you for the comment. Building 9800 would not be demolished as part of the ECIP. Section 2.1.2 of the Draft EIS identifies the buildings proposed to be demolished.

Justification:

Buildings 9703 (SAB3), 9805 (SAB4) AND 9814 (SAB2) – are functionally outdated.

Building 9808 (SAB1) - the original building on the NSA Campus. Has had many work-around fixes to structural problems and health issues. This building is past due for replacement.

Building 9817 (Op3) - has an internal design that limits its functional use and the lab spaces are no longer needed. Ops3 has had some renovations. Weighing the cost/benefits, the demolition could be/is justified.

Building 9800 (Ops1) - is divided into eight (8) HVAC cores on four (4) floors. Building 9800 has gone thru complete core renovation (rehab)/reconstruction - making Building 9800 (Ops1) a new building that should last many years into the future.

During a core rehab (9800 and 9800A) the entire core area was gutting to the outside shell. The reconstruction included new windows, lighting, electrical, all communications lines, HVAC ductwork and control systems, flooring (removal of asbestos floor tile and installing raised flooring), fire protection systems and life safety code upgrades, plumbing, etc. The Asbestos Abatement Project part of the core rehab and include asbestos where and when found. The rehab/reconstruction involved one or more cores at a time. NSA spent tens or hundreds of million dollars the 9800a (Ops1) reconstruction.

Unless there is significant structural issues with Building 9800 demolition is not justified.]-DJH-3

Building 9800A (Annex) – has undergone a renovation not long ago. NSA spent millions dollars on Building 9800A reconstruction.

Unless there is significant structural issues with Building 9800A demolition is not justified.]-DJH-4

Note: The entire core projects, for both buildings (9800 and 9800A), were thoroughly planned and well managed by the Installation & Logistics Directorate.

A new building with a larger footprint or an increase in occupancy, replacing 9800A, will have a great and negative impact on the already extremely limited parking. Current employees of Buildings 9800 and 9800A are already parking near the museum. This parking lot is currently at capacity.]-DJH-5

Structurally, there is no need to demolish either of these buildings (9800 and 9800A). They are functional, sound and very well maintained. Further, it cannot be justify in tearing down a building after investing millions of taxpayer's dollars into total reconstruction.]-DJH-6

Following the 9-11 attacks there was some concern over both buildings being too close to Rt. 32 and the possibility shots or self-propelled rockets (RPG's) being fired from the highway.

Regardless of old buildings or new the distance from Rt. 32 is still the same and carries the same threat. At one time it was discussed of using Building 9800A as a storage building that would provide a partial barrier for 9800 (Ops1) from an attack from Rt. 32.

DJH-3: Please see the response to Comment DJH-2. It should be noted that the EIS is an analysis of potential environmental impacts, not a determination of facility or infrastructure conditions and needs.

DJH-4: Comment noted. See the response to Comment JD-3 regarding the factors being considered while developing the ECIP plan, and the response to Comment DJH-3 regarding the purpose of the EIS.

DJH-5: Sufficient parking would be constructed to accommodate personnel and visitors to the ECIP facilities, as well as to replace any existing parking lots that are demolished. The amount of parking that would be constructed is based on the assumed capacity required for full occupancy of the proposed buildings. At least three multi-level parking facilities would be constructed if the ECIP is fully implemented.

DJH-6: Building 9800 would not be demolished as part of the ECIP. See the response to Comment JD-3 regarding the factors that were considered when developing the ECIP, and response to Comment DJH-3 regarding the purpose of the EIS.

The demolition of one or both buildings would require moving a very large number of employees into temporary spaces or swing spaces, which does not exist at this time. If it's like anything in the past, areas designated as swing space also seem to disappear. Just relocating personnel during a core rehab was a nightmare. To relocate employees from an entire building would be a tremendous and close to an impossible task. — DJH-7

To remove employees from the numerous rental properties will require several very large buildings with an abundance of office space. The pay back savings for new buildings, including the costs invested to renovate and maintain the current structure(s), versus the cost of continuing to lease properties must be weighed to justify the final decision.

- funds invested in rehab/reconstruction of NSA owned buildings
- funds appropriated to maintain current structures
- funds invested in fitting up leased facilities
- funds lost in items abandoned in-place at leased facilities
- capitol projects funds required for new structures, include demolition

— DJH-8

I do not know the actual usable office space for Buildings 9800A or Ops2A (the taller, 11-story, dark glass building (Ops2A) located behind Building 9800). The EIS report lists Building 9800A as having 512,837 sq. ft. However, only approximately 385,000 are usable office space. And although Ops2A is larger, it has a center service core and two or three times the amount of hallways than Building 9800A. With the exception of two additional floors, Ops2A is not that significantly larger (usable office space). — DJH-9

Demolishing Building 9800A only to replace it with a building similar in size to Ops2A is a very large investment with only a slight increase of usable space. In addition, the demolition of 9800A so close to 9800 (Ops1) has significant hazards and will require the basic shutdown of Building 9800 (Ops1).

Other detrimental issues with the demolition of Building 9800A:

- demolition after investing millions in rehab/reconstruction of 9800A
- already limited parking
- security concern over the close proximity to Rt. 32
- relocating a large number of employees in 9800A to swing spaces
- limited public water supply/pressure (already taxed in 9800A)
- limited storm and waste water capacity

— DJH-10

Note: At the time of this writing, a request was submitted, under FOIA, to identify the amount of funds invested into Buildings 9800 and 9800A renovations and the dates they were completed. This information has not been received.

DJH-7: No swing space would be needed. Personnel would transition to new facilities over 5 to 7 years. A transition phasing plan would identify that new buildings and parking facilities not requiring demolition of existing buildings and parking lots would be constructed first, and personnel currently located on Fort Meade or the NSA Campus would transition to these new facilities. Personnel would be moved from buildings proposed for demolition into new buildings as they are constructed or as backfill in existing buildings. Then the demolition and the remaining buildings would be constructed, and the personnel currently located outside of Fort Meade would be transitioned.

DJH-8: Thank you for the comment. In addition to ongoing evaluation of costs/benefits and funding, see the response to Comment JD-3 regarding the factors that are being considered while developing the ECIP plan, and response to Comment DJH-3 regarding the purpose of the EIS.

DJH-9: Thank you for the comment. See the response to Comment DJH-3 regarding the purpose of the EIS.

DJH-10: Thank you for the comment. These concerns will be considered as ECIP and demolition plans progress. Detailed demolition plans have not yet been developed; however, through the use of appropriate demolition techniques there would be no hazards to Building 9800 during demolition. No swing spaces would be required in transferring personnel from Building 9800. Please also see the response to Comment DJH-7.

NSA may have created a portion of the space problem themselves. The area where the new North Campus Power Plant was built was designated years ago as the space for a new high-rise, large occupancy, building. The planning took place at the same time the property was purchased as a security buffer zone along Rt. 295. Senator Barbara Mikulski was actively involved in the acquisition of the security buffer zone property (purchased from Blobs Park). The new building to be constructed was a copy of the taller, 11-story, dark glass building (Ops2A) that is located behind Building 9800 (Ops1).

The North Campus Power Plant could have been moved closer to the museum that would have allowed plenty of space for a new building and sufficient parking.

Unless there is significant structural issues with buildings 9800 and/or 9800A the demolition of either building is not justified. DJH-11

Leased Facilities

NSA has gone thru the over-reliance of leased facilities before in the Airport Square complex, located near the Fort Meade Annex (FANX). They also went thru the removal and relocation of personnel from these leased facilities. During these phase contractors were removed from NSA facilities so Agency employees would have a space to occupy. Only to lease more space in the National Business Park complex.

NSA has invested a tremendous amount of money fitting up leased buildings to suit their mission/needs – not the building owner. There are many items installed by NSA that will remain and become the property of the building owner. NSA will also incur the cost of removing their secure systems making the leased facility ready for future (uncleared) occupancy. The cost to (1) fit up, (2) remove, and (3) make ready must be taken into account.

Most, but not all, leased facilities are office spaces. While moving personnel from leased facilities the type and size of buildings required will vary based on mission/needs. DJH-12

Recommendations:

The "Alternative Areas" mentioned in the East Campus Integration Program EIS should be given a much higher priority over the demolition of buildings 9800 a/o 9800A. New buildings should be constructed farther away from public highways to reduce the security threat by the proximity to Rt. 32. Using the Troop Support Area would eliminate the security issues. DJH-13

If the close proximity to a major highway is not an issue, what about the land purchased years ago as a buffer zone, along Rt. 295 north of the Tordella Building or the area north of the Cryptological Museum. Both of these wooded areas and should provide ample space for a new building and additional parking. DJH-14

DJH-11: Building 9800 would not be demolished as part of the ECIP. See the response to Comment JD-3 regarding factors that were considered when developing the ECIP, and response to Comment DJH-3 regarding the purpose of the EIS.

DJH-12: Thank you for the comment.

DJH-13: Building 9800 would not be demolished as part of the ECIP. Additionally, the decision whether to implement the Proposed Action or its alternatives will be fully considered by the decision makers.

DJH-14: Thank you for the comment. See the response to Comment JD-3 regarding the factors considered when identifying the ECIP project area.

NSA maintains a fleet of commuter shuttle buses that constantly run between their buildings. These shuttles already serve the museum and Tordella Building so the addition of another stop should not cause a problem. DJH-15

Currently there is massive construction of new buildings in the area east of the main NSA campus, east if O'Brien Rd. This area might be under the auspices of Fort Meade. If so, what about trading the buffer zone, along Rt. 295, to Fort Meade for equal space in this area? Trading the land to Fort Meade would maintain a security buffer zone.

NSA is only a tenant on Fort Meade and up until the last decade or so, the main and only tenant. Now a number of other government agencies have been moving onto Ft. Meade. With the exceptions spaces mentioned above, NSA is now land-locked. DJH-16

Another possible fix, to the NSA space problem, would be the purchase or acquisition of portions of the abandoned DC Children's Detention Center, just across Rt. 32 from Building 9800A.

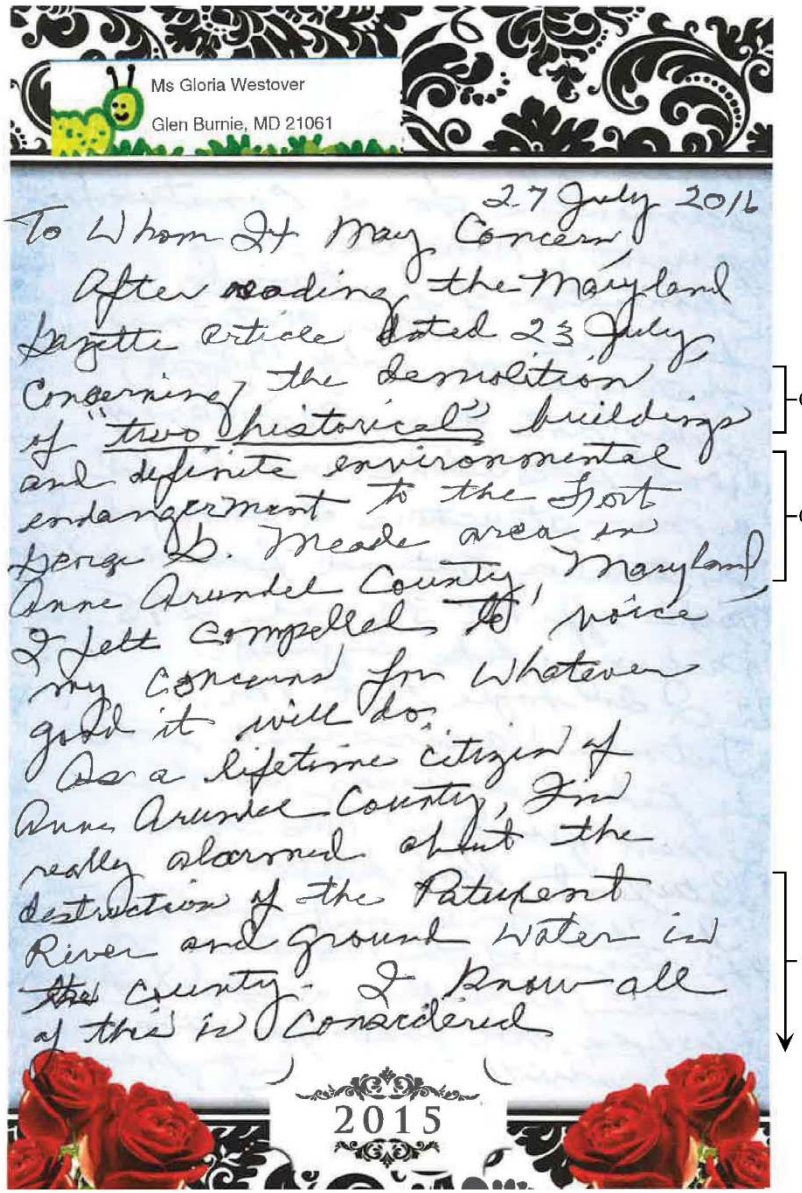
Respectfully Submitted,

Delmar "Del" J. Haley

Glen Burnie, Md. 21061

DJH-15: Comment noted, thank you for the support. Expansion of the existing shuttle bus system to provide service to the East Campus was considered as part of the Proposed Action, and is analyzed in the EIS.

DJH-16: Thank you for the comment. The area to the east of O'Brien Road is NSA's East Campus. There is sufficient space within the ECIP project area to implement the ECIP.



GW-1

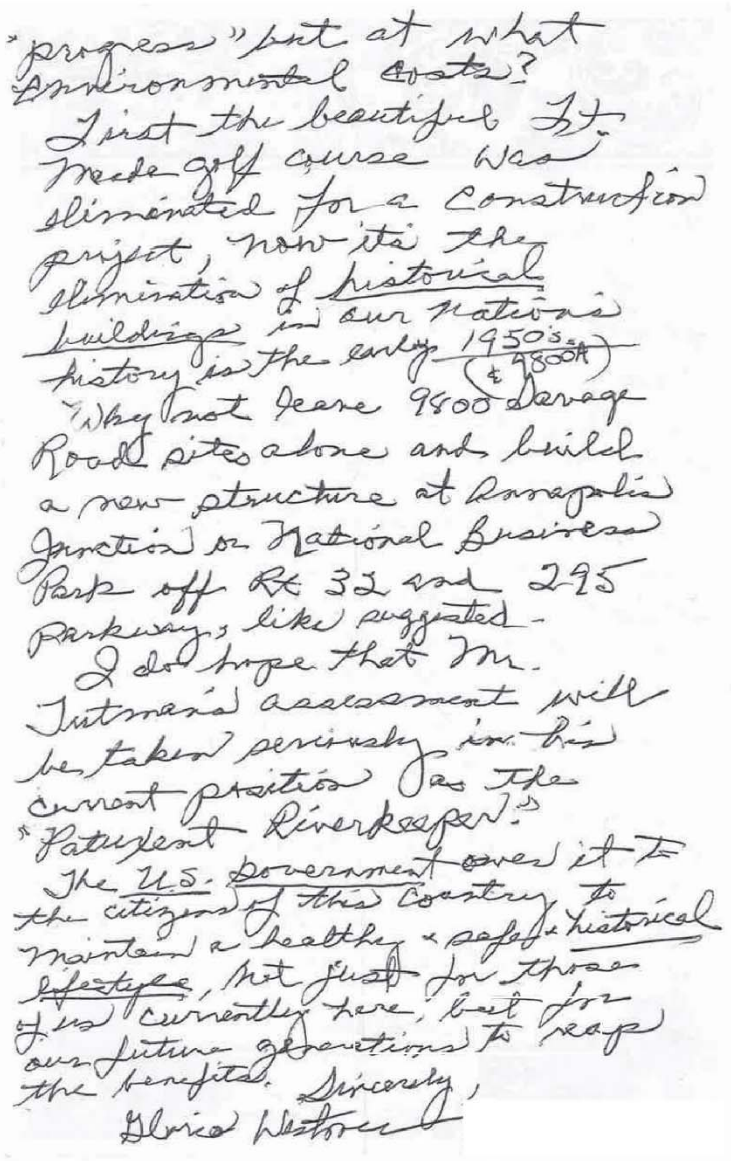
GW-2

GW-3

GW-1: Section 3.8.2.1 of the EIS states that Buildings 9800 and 9800A are eligible for listing in the NRHP. As noted in Section 2.1.2, of these two buildings, only Building 9800A is proposed to be demolished. Building 9800 would not be demolished.

GW-2: The EIS states the Proposed Action has the potential to result in adverse environmental impacts. However, the Proposed Action includes BMPs, mitigation measures, and design concepts to avoid adverse impacts to the extent practicable (see Table ES-4 in the EIS). Unavoidable impacts would be minimized or compensated for to the extent practicable.

GW-3: Thank you for the comment. As stated in Section 4.6.2 of the Draft EIS, negligible to minor, adverse impacts on water resources could occur due to sedimentation and erosion from construction and demolition activities. However, potential impacts on surface water would be reduced through implementation of environmental site design and BMPs. See also response to Comment LC-1.



"progress" but at what environmental costs?
First the beautiful 27 hole golf course was eliminated for a construction project, now its the elimination of historical buildings in our nations history is the early 1950's (& 1800's)
Why not leave 9800 Savage Road sites alone and build a new structure at Annapolis Junction or National Business Park off Rt 32 and 295 Parkways like suggested.
I do hope that Mr. Justman's assessment will be taken seriously in his current position as the "Patuxent Riverkeeper".
The U.S. government owes it to the citizens of this country to maintain a healthy & safe historical lifestyles, not just for those of us currently here, but for our future generations to reap the benefits. Sincerely,
Gloria Westover

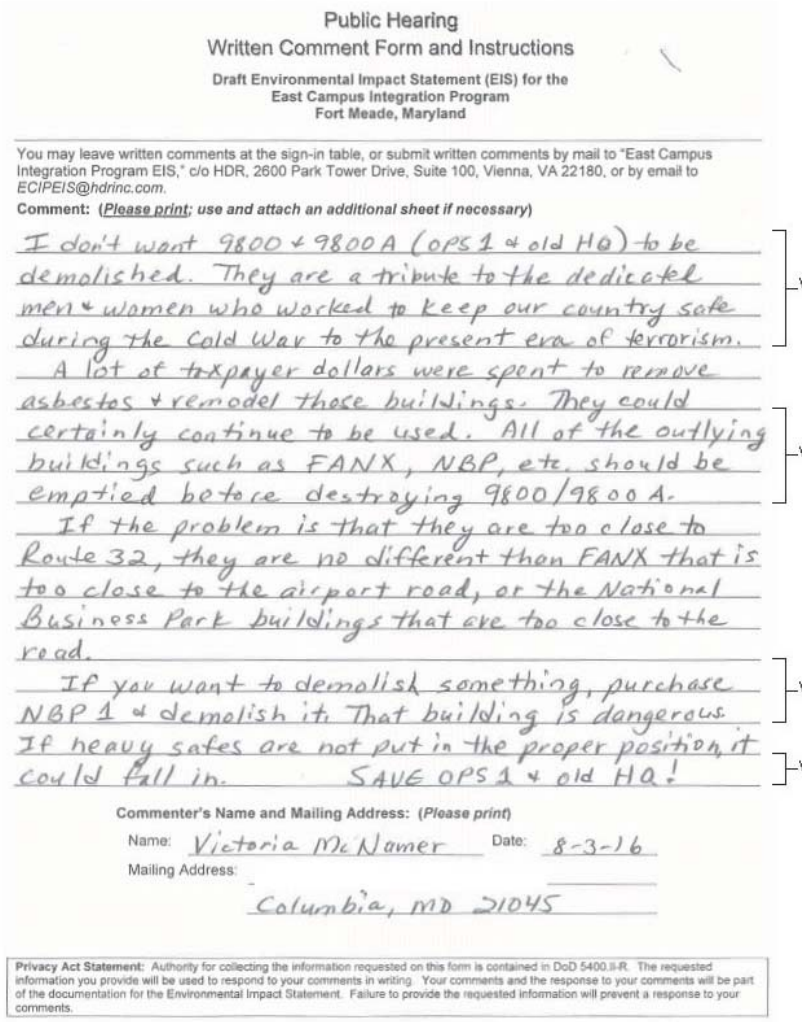
GW-3

GW-4

GW-5

GW-4: Please see response to Comment GW-1. Lease of existing or newly constructed buildings at National Business Park and Annapolis Junction Business Park were analyzed and are being considered as Alternatives 1 and 2, respectively.

GW-5: All substantive comments submitted during the scoping period and Draft EIS public review period were considered during preparation of the Draft EIS and Final EIS, respectively. The Patuxent Riverkeeper did not submit any comments to DoD during the Draft EIS public review period.



Public Hearing
Written Comment Form and Instructions

Draft Environmental Impact Statement (EIS) for the East Campus Integration Program Fort Meade, Maryland

You may leave written comments at the sign-in table, or submit written comments by mail to "East Campus Integration Program EIS," c/o HDR, 2600 Park Tower Drive, Suite 100, Vienna, VA 22180, or by email to *ECIPEIS@hdrinc.com*.

Comment: (*Please print; use and attach an additional sheet if necessary*)

I don't want 9800 & 9800A (OPS 1 & old HQ) to be demolished. They are a tribute to the dedicated men & women who worked to keep our country safe during the Cold War to the present era of terrorism. A lot of taxpayer dollars were spent to remove asbestos & remodel those buildings. They could certainly continue to be used. All of the outlying buildings such as FANX, NBP, etc. should be emptied before destroying 9800/9800A. If the problem is that they are too close to Route 32, they are no different than FANX that is too close to the airport road, or the National Business Park buildings that are too close to the road. If you want to demolish something, purchase NBP 1 & demolish it. That building is dangerous. If heavy safes are not put in the proper position, it could fall in. SAVE OPS 1 & old HQ!

VW-1
VW-2
VW-3
VW-4

Commenter's Name and Mailing Address: (*Please print*)

Name: Victoria McNamer Date: 8-3-16

Mailing Address:

Columbia, MD 21045

Privacy Act Statement: Authority for collecting the information requested on this form is contained in DoD 5400.11-R. The requested information you provide will be used to respond to your comments in writing. Your comments and the response to your comments will be part of the documentation for the Environmental Impact Statement. Failure to provide the requested information will prevent a response to your comments.

VW-1: Thank you for the comment. Building 9800 would not be demolished under the Proposed Action. As described in Section 4.8.2, the DoD will consult further with the Maryland Historic Trust to develop a Memorandum of Agreement regarding mitigation measures for demolition of Building 9800A. It should also be noted that the EIS is an analysis of potential environmental impacts, not a determination of facility or infrastructure conditions and needs.

VW-2: Please see the response to Comment VW-1. Under the Proposed Action, 7,200 personnel currently located in government-owned or -leased space outside of Fort Meade throughout the Baltimore-Washington metropolitan area would also be relocated to the proposed operational complex and headquarters space on the NSA East Campus.

VW-3: Demolition of off-site non-government-owned buildings is not feasible and outside the scope of this EIS.

VW-4: Please see the response to Comment VW-1.