

Appendices for
Draft
Environmental Impact Statement for
Implementation of
2005 Base Realignment and Closure (BRAC)
Recommendations and Related Army Actions at
Fort Belvoir, Virginia



prepared by
U.S. Army Corps of Engineers, Mobile District

with Technical Assistance from
Tetra Tech, Inc.
Fairfax, Virginia 22030

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Appendix A

***Intent to Prepare Environmental Impact Statements for
Realignment Actions Resulting from the 2005 Base Closure and
Realignment Commission's Recommendations***

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ROUTINE USES OF RECORDS MAINTAINED IN THE SYSTEM, INCLUDING CATEGORIES OF USERS AND THE PURPOSES OF SUCH USES:

In addition to those disclosures generally permitted under 5 U.S.C. 552a(b) of the Privacy Act, these records or information contained therein may specifically be disclosed outside the DoD as a routine use pursuant to 5 U.S.C. 552a(b)(3) as follows: The 'Blanket Routine Uses' published at the beginning of the Air Force's compilation of record system notices apply to this system.

POLICIES AND PRACTICES FOR STORING, RETRIEVING, ACCESSING, RETAINING, AND DISPOSING OF RECORDS IN THE SYSTEM:**STORAGE:**

Maintained in file folders, note books/binders, in computers and on computer output products.

RETRIEVABILITY:

Retrieved by name, Social Security Number and detachment number.

SAFEGUARDS:

Records are accessed by person(s) responsible for servicing the record system in performance of their official duties and by authorized personnel who are properly screened and cleared for need-to-know. records are stored in locked rooms and cabinets. Those in computer storage devices are protected by computer system software.

RETENTION AND DISPOSAL:

Records at unit of assignment are destroyed one year after acceptance of commission or one year after disenrollment. Records at HQ AFROTC for disenrolled cadets are destroyed after three years. Computer records are destroyed when no longer needed. Records are destroyed by tearing into pieces, shredding, pulping, macerating or burning. Computer records are destroyed by erasing, deleting or overwriting.

SYSTEM MANAGER(S) AND ADDRESS:

Director of Senior Program, Air Force Reserve Officer Training Corps, 551 East Maxwell Boulevard, Maxwell Air Force Base, AL 36112-6110, and Commander of appropriate AFROTC detachment.

Official mailing addresses are published as an appendix to the Air Force's compilation of systems of records notices.

NOTIFICATION PROCEDURE:

Individuals seeking to determine whether this system of records contains information on them should address inquiries to the AFROTC Detachment Commander at location of assignment. Official mailing addresses are published

as an appendix to the Air Force's compilation of system of records notices.

Request for information involving an investigation for disenrollment should be addressed to Commander, Air Force Reserve Officer Training Corps, 551 East Maxwell Boulevard, Maxwell Air Force Base, AL 36112-6110. Requests should include full name and SSN.

RECORD ACCESS PROCEDURES:

Individuals seeking to access records about themselves contained in this system should address requests to the AFROTC Detachment Commander at location of assignment. Official mailing addresses are published as an appendix to the Air Force's compilation of systems of records notices.

Request for information involving an investigation for disenrollment should be addressed to Commander, Air Force Reserve Officer Training Corps, 551 East Maxwell Boulevard, Maxwell Air Force Base, AL 36112-6110. Requests should include full name and SSN.

CONTESTING RECORD PROCEDURES:

The Air Force rules for accessing records, and for contesting contents and appealing initial agency determinations are published in Air Force Instruction 33-332; 32 CFR part 806b; or may be obtained from the system manager.

RECORD SOURCE CATEGORIES:

Sources of records in the system are educational institutions, secondary and higher learning; government agencies; civilian authorities; financial institutions; previous employer; individual recommendations, interviewing officers; and civilian medical authorities.

EXEMPTIONS CLAIMED FOR THE SYSTEM:

Portions of this system may be exempt under the provisions of 5 U.S.C. 552a(k)(5), as applicable, but only to the extent that disclosure would reveal the identity of a confidential source.

Parts of this system may be exempt pursuant to 5 U.S.C. 552a(k)(5), but only to the extent that disclosure would reveal the identity of a confidential source.

[FR Doc. 05-23131 Filed 11-22-05; 8:45 am]

BILLING CODE 5001-06-M

DEPARTMENT OF DEFENSE**Department of the Army****Intent To Prepare Environmental Impact Statements for Realignment Actions Resulting From the 2005 Base Closure and Realignment Commission's Recommendations**

AGENCY: Department of the Army, DoD.

ACTION: Notice of intent.

SUMMARY: The Defense Base Closure and Realignment (BRAC) Commissions were established by Public Law 101-510, the Defense Base Closure and Realignment Act of 1990 (BRAC Law), to recommend military installations for realignment and closure. The 2005 Commission's recommendations were included in a report which was presented to the President on September 8, 2005. The President approved and forwarded this report to Congress on September 16, 2005. Since a joint resolution to disapprove these recommendations did not occur within the statutorily provided time period, these recommendations have become law and must be implemented in accordance with the requirements of the BRAC Law.

The BRAC Law exempts the decision-making process of the Commission from the provisions of the National Environmental Policy Act of 1969 (NEPA). The Law also relieves the Department of Defense from the NEPA requirement to consider the need for closing, realigning, or transferring functions and from looking at alternative installations to close or realign. Nonetheless, the Department of the Army must still prepare environmental impact analyses during the process of property disposal, and during the process of relocating functions from a military installation being closed or realigned to another military installation after the receiving installation has been selected but before the functions are relocated. These analyses will include consideration of the direct and indirect environmental and socioeconomic effects of these actions and the cumulative impacts of other reasonably foreseeable actions affecting the installations.

The Department of the Army intends to prepare individual Environmental Impact Statements (EIS) pursuant to section 102(2)(C) of NEPA, regulations of the Council on Environmental Quality (40 CFR 1500-1508), and the Army NEPA regulation (32 CFR 651 *et seq.*) for each of the actions listed below.

Opportunities for public participation will be announced in the respective local newspapers. The public will be

invited to participate in scoping activities for each EIS and comments from the public will be considered before any action is taken to implement these actions.

Environmental Impact Statements are planned for each of the following realignment actions:

a. Fort Meade, Maryland. The BRAC realignment action will co-locate and consolidate Department of Defense information and information technology missions at Fort Meade.

(1) EIS alternatives could include evaluating siting locations for structures and related projects within Fort Meade that involve new building construction only or new building construction combined with renovation of existing facilities. The alternatives would evaluate areas to provide for construction of, but not be limited to, six to eight 4-story administration buildings, a full day care child development center, a standard-design Whole Barracks Complex, and a physical fitness center.

(2) The proposed BRAC action may have significant environmental impacts due to the infrastructure and facilities construction that will be required to accommodate an estimated increase of over 5,500 personnel. Significant issues to be analyzed in the EIS may include potential impacts to air quality from increased vehicle emissions, installation and regional traffic increases, land use changes, natural resources, water use, solid waste, cultural resources, and cumulative impacts from increased burdens to the facility based on projected growth.

b. Aberdeen Proving Ground (APG), Maryland. APG will be receiving numerous Army, Navy and Air Force activities to transform it into a full spectrum research, development, acquisition center for Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) Defense Chemical and Biological Systems. The Army Test and Evaluation Command Headquarters and Civilian Personnel Offices will also be consolidated at APG.

(1) Alternatives to be examined in the EIS could include alternative distribution of new activities between APG and the Edgewood Area for military field training exercises; alternative siting schemes for placement of buildings and related infrastructure to accommodate an increase of about 15,000 Army personnel within the APG and Edgewood Area. These may include siting schemes for new building construction only, or new building

construction combined with renovation of existing facilities.

(2) The proposed BRAC action may have significant environmental impacts due to the large amount of infrastructure and facilities construction that will be required to accommodate an increase of personnel and military training operations. Significant issues to be analyzed in the EIS will include on-post and local air quality conditions, on-post and regional traffic conditions, housing, socioeconomic, noise due to increased vehicle use, threatened and endangered species to include bald eagle habitat, historic buildings and archeological resources, wetlands, biological resources, land use, and community facilities and services.

c. Fort Belvoir, Virginia. Fort Belvoir will be receiving numerous Department of Defense activities from leased space within the National Capital Region (NCR); National Geospatial Intelligence Agency units from various NCR leased locations and Bethesda, Maryland; primary and secondary medical care functions from Walter Reed Medical Center to a new, expanded DeWitt Army Hospital; and inventory control point functions for consumable items to the Defense Logistics Agency from the Naval Support Activist, Mechanisburg and Wright-Patterson Air Force Base, Ohio.

(1) EIS alternatives may consist of moving all activities to the Fort Belvoir Main Post, moving all activities to the Engineer Proving Ground (EPG), or moving a portion of the activities to the Main Point and a portion to the EPG. Other alternatives could include alternative land locations for specific projects within Fort Belvoir, within the EPG, or a combination of both; new construction only; new construction combined with renovation of existing facilities; alternative facility siting schemes, or other modifications of specific projects.

(2) The proposed BRAC action may have significant environmental impacts due to the large amount of infrastructure and facilities construction that will be required to accommodate an estimated increase of over 18,000 personnel. Significant issues to be analyzed in the EIS will include potential impacts to air quality condition in the Northern Virginia region, transportation systems in the Northern Virginia region, traffic conditions with Fort Belvoir, threatened and endangered species, historic buildings and archeological resources, wetlands, biological resources, land use, and community facilities and services.

d. Fort Lee, Virginia. Fort Lee will receive the Transportation Center and School from Fort Eustis, Virginia, and

the Ordnance Center and School from Aberdeen Proving Ground, Maryland. These functions will be consolidated with the Quartermaster Center and School, the Army Logistics Management College, and Combined Arms Support Command to establish a Combat Service Support Center at Fort Lee.

(1) Alternatives to be examined in the EIS may include the usage of only Fort Lee for field training exercises, the usage of other military installations (Fort A.P. Hill) for field training exercises, or a combination of both; alternative land locations for specific projects with Fort Lee and Fort A.P. Hill; new construction only; new construction combined with renovation of existing facilities; alternative facility siting schemes, or other modifications of specific projects.

(2) The proposed BRAC action may have significant environmental impacts due to the large amount of infrastructure and facilities construction that will be required to accommodate an estimated increase of over 7,000 personnel. Significant issues to be analyzed in the EIS will include air quality conditions, traffic conditions, noise due to increased training activities, threatened and endangered species, historic buildings and archeological resources, wetlands, biological resources, land use, and community facilities and services.

e. Fort Benning, Georgia. Fort Benning will receive the Armor Center and School from Fort Knox, Kentucky; 81st Regional Readiness Center from Fort Gillem, Georgia; and the U.S. Army Reserve Center from Columbus, Georgia.

(1) Alternatives to be examined by the EIS may consist of alternative siting locations with Fort Benning for facility construction projects, new construction only, renovation and use of existing facilities, or a combination of both new construction and use of existing facilities, and usage of alternatives land locations within Fort Benning for training activities.

(2) As a result of new construction and training activities associated with moving nearly 10,000 personnel to Fort Benning, the BRAC action has the potential to cause significant environmental impacts to threatened and endangered species such as the red-cockaded woodpecker, archeological sites, wetlands, soil erosion, and increased noise impacts to the surrounding public.

f. Fort Sam Houston, Texas. Navy and Air Force medical training activities from various locations within the U.S. and the 59th Medical Wing from Lackland Air Force Base, Texas, will move to Fort Sam Houston to form a Department of Defense medical training

center. The Army Installation Management Agency (IMA) Headquarters from Virginia, the Northwest IMA Regional office from Illinois, and the Army Environmental Center from Maryland will also move to Fort Sam Houston.

(1) Alternatives to be examined in the EIS could consist of alternative locations within Fort Sam Houston for siting facility construction, new construction only, renovation and use of existing facilities (to include historic buildings), or a combination of both new construction and use of existing facilities, and usage of alternative locations within Camp Bullis, a sub-post of Fort Sam Houston, for training activities.

(2) As a result of moving approximately 9,000 new personnel to Fort Sam Houston and associated new construction, renovation and training activities, implementing the proposed BRAC action could have potential significant impacts to traffic on and off post, air quality and historic properties, to include contributing elements of the Fort Sam Houston National Historic Landmark District.

g. Fort Carson, Colorado. Fort Carson will receive a Heavy Brigade Combat team and a Unit of Employment Headquarters from Fort Hood, Texas, and the inpatient care services from the U.S. Air Force Academy, Colorado. Another Infantry Brigade Combat Team from overseas could also be transferred to Fort Carson as a result of the BRAC recommendation.

(1) Alternatives that may be considered in the Fort Carson EIS could include phasing movement of units to the fort, alternative siting locations within the post of placement of new facilities, construction of only new facilities, utilization and renovation of existing facilities, a combination of new construction and utilization of existing facilities, and utilization of alternative locations within Fort Carson for training activities.

(2) Fort Carson will gain approximately 10,000 Army personnel as a result of the BRAC action. Construction of new facilities, renovation of existing infrastructure and additional training activities could have significant environmental impacts on Fort Carson and its environs. Impacts could concur to local air and water quality, archaeological resources, noise and traffic.

h. Pinion Canyon Maneuver Site, Colorado. Pinion Canyon Maneuver Site (PCMS) is a subpost of Fort Carson and a primary training area for units stationed at Fort Carson and other Army posts. The new combat units stationed

at Fort Carson will increase the training tempo at the PCMS.

(1) The EIS to be prepared for the PCMS will examine a number of implementation alternatives that could include alternative placement of new construction projects, alternative locations within the PCMS for training activities, and alternative timing for units to conduct training activities at the PCMS.

(2) The Fort Carson BRAC action has the potential to significantly impact natural resources at the PCMS since the approximately 10,000 new personnel to be stationed there will now be training at the PCMS on a regular basis. New construction and increased training activities at the PCMS could have an impact on archaeological resources, natural resources, air and water quality, and soil erosion.

FOR FURTHER INFORMATION CONTACT: Public Affairs Office of the affected installations or the appropriate higher headquarters as indicated: (1) Fort Meade, MD—(301) 677-1301; (2) Aberdeen Proving Ground, MD—(410) 278-1147; (3) Fort Belvoir, VA—(703) 805-2583; (4) Fort Lee, VA—(804) 734-6862; (5) Fort Benning, GA—(706) 545-3438; (6) Fort Sam Houston, TX—(210) 221-1099; (7) Fort Carson and Pinion Canyon Maneuver Site, CO—(910) 396-2122/5600.

Dated: November 18, 2005.

Addison D. Davis IV,

Deputy Assistant Secretary of the Army (Environment, Safety and Occupational Health), OASA(I&E).

[FR Doc. 05-23162 Filed 11-22-05; 8:45 am]

BILLING CODE 3710-08-M

DEPARTMENT OF DEFENSE

Defense Logistics Agency

Privacy Act of 1974; Systems of Records

AGENCY: Defense Logistics Agency.

ACTION: Notice to add a system of records.

SUMMARY: The Defense Logistics Agency proposes to add a system of records notice to its inventory of record systems subject to the Privacy Act of 1974 (5 U.S.C. 552a), as amended.

DATES: This action will be effective without further notice on December 23, 2005 unless comments are received that would result in a contrary determination.

ADDRESSES: Send comments to the Privacy Act Officer, Headquarters, Defense Logistics Agency, ATTN: DP,

8725 John J. Kingman Road, Stop 2533, Fort Belvoir, VA 22060-6221.

FOR FURTHER INFORMATION CONTACT: Ms. Susan Salus at (703) 767-6183.

SUPPLEMENTARY INFORMATION: The Defense Logistics Agency notices for systems of records subject to the Privacy Act of 1974 (5 U.S.C. 552a), as amended, have been published in the **Federal Register** and are available from the address above.

The proposed system report, as required by 5 U.S.C. 552a(r) of the Privacy Act of 1974, as amended, was submitted on October 5, 2005, to the House Committee on Government Reform, the Senate Committee on Homeland Security and Governmental Affairs, and the Office of Management and Budget (OMB) pursuant to paragraph 4c of Appendix I to OMB Circular No. A-130, 'Federal Agency Responsibilities for Maintaining Records About Individuals,' dated February 8, 1996 (February 20, 1996, 61 FR 6427).

Dated: November 17, 2005.

L.M. Bynum,

OSD Federal Register Liaison Officer, Department of Defense.

SYSTEM NAME:

Information Technology Access and Control Records.

SYSTEM LOCATION:

Director, Information Operations, Headquarters Defense Logistics Agency, ATTN: J-6, 8725 John J. Kingman Road, Stop 6226, Fort Belvoir, VA 22060-6221, and the Defense Logistics Agency field activities. Official mailing addresses are published as an appendix to DLA's compilation of systems of records notices.

CATEGORIES OF INDIVIDUALS COVERED BY THE SYSTEM:

Defense Logistics Agency (DLA) civilian and military personnel, contractor employees, and individuals requiring access to DLA-controlled networks, computer systems, and databases.

CATEGORIES OF RECORDS IN THE SYSTEM:

System contains documents relating to requests for and grants of access to DLA computer networks, systems, or databases. The records contain the individual's name; social security number; citizenship; physical and electronic addresses; work telephone numbers; office symbol; contractor/employee status; computer logon addresses, passwords, and user identification codes; type of access/permissions required; verification of need to know; dates of mandatory

Appendix B
Agency Coordination and Scope of Statement

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DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, UNITED STATES ARMY GARRISON, FORT BELVOIR
9820 FLAGLER ROAD, SUITE 213
FORT BELVOIR, VIRGINIA 22060-5928

REPLY TO
ATTENTION OF

Directorate of Public Works

JAN 16 2007

Mr. Eric Davis
U.S. Fish and Wildlife Service
Virginia Field Office
6669 Short Lane
Gloucester, Virginia 23061

Dear Mr. Davis:

On September 8, 2005, the Base Realignment and Closure (BRAC) Commission recommended certain realignment actions occur at Fort Belvoir, Virginia. These recommendations were approved by the President on September 15, 2005, and forwarded to Congress. Congress did not alter any of the BRAC Commission's recommendations, and on November 9, 2005, the recommendations became law. The BRAC Commission recommendations must now be implemented as provided for in the Defense Base Closure and Realignment Act of 1990 (Public Law 101-510), as amended.

Under the National Environmental Policy Act (NEPA), the Army is proposing the following at Fort Belvoir, an active military installation located in Fairfax County in Northern Virginia performing a variety of missions and functions for the National Capital Region (NCR): realignment of approximately fifty-nine agencies/activities to relocate to Fort Belvoir, including, but are not limited to: (1) primary and secondary medical care functions from Walter Reed Army Medical Center to a new DeWitt Hospital; (2) Army and DoD organizations such as the Washington Headquarters Service from NCR leased space; and (3) National Geospatial Agency units from various NCR leased locations and Bethesda, Maryland. The installation's land use plan will be updated for the siting of new BRAC associated facilities and projects. The complete text of the BRAC Commission's recommendations are at <http://www.brac.gov/deliberations.aspx>.

The purpose of this letter is to inform you of this undertaking and to ask for your input during this process. If you so choose, the Army will periodically ask for your review and input as it proceeds with its Draft Environmental EIS (DEIS) and Final EIS (FEIS). If you are not interested in these issues, the Army will remove you from its distribution list upon your request. The Army is requesting you identify any issues likely to have an impact on the environment, or to be controversial during the planning process.

"EXCELLENCE THROUGH SERVICE"

The BRAC Commission recommendations for 2005 will result in the relocation of approximately 22,000 additional personnel to Fort Belvoir, Virginia. The Army has determined approximately 7 million square feet of built space, primarily for administrative use, will be required to accommodate realigned activities. In accordance with the requirement of the NEPA the Army is conducting an EIS. The EIS will assess a reasonable range of siting alternatives as well as a No Action Alternative. Consultation required under the National Historic Preservation Act will be initiated concurrent with the EIS.

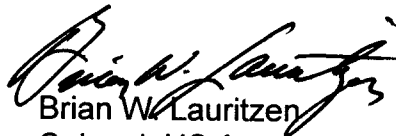
In accordance with NEPA, the Army is assessing the potential impacts that the proposed action could have on environmental, cultural, and socioeconomic resources. The DEIS will be provided to you for your review. A DEIS is anticipated to be available to the public in February 2007 and a Final EIS is anticipated to be available in June 2007.

The following are included for your review:

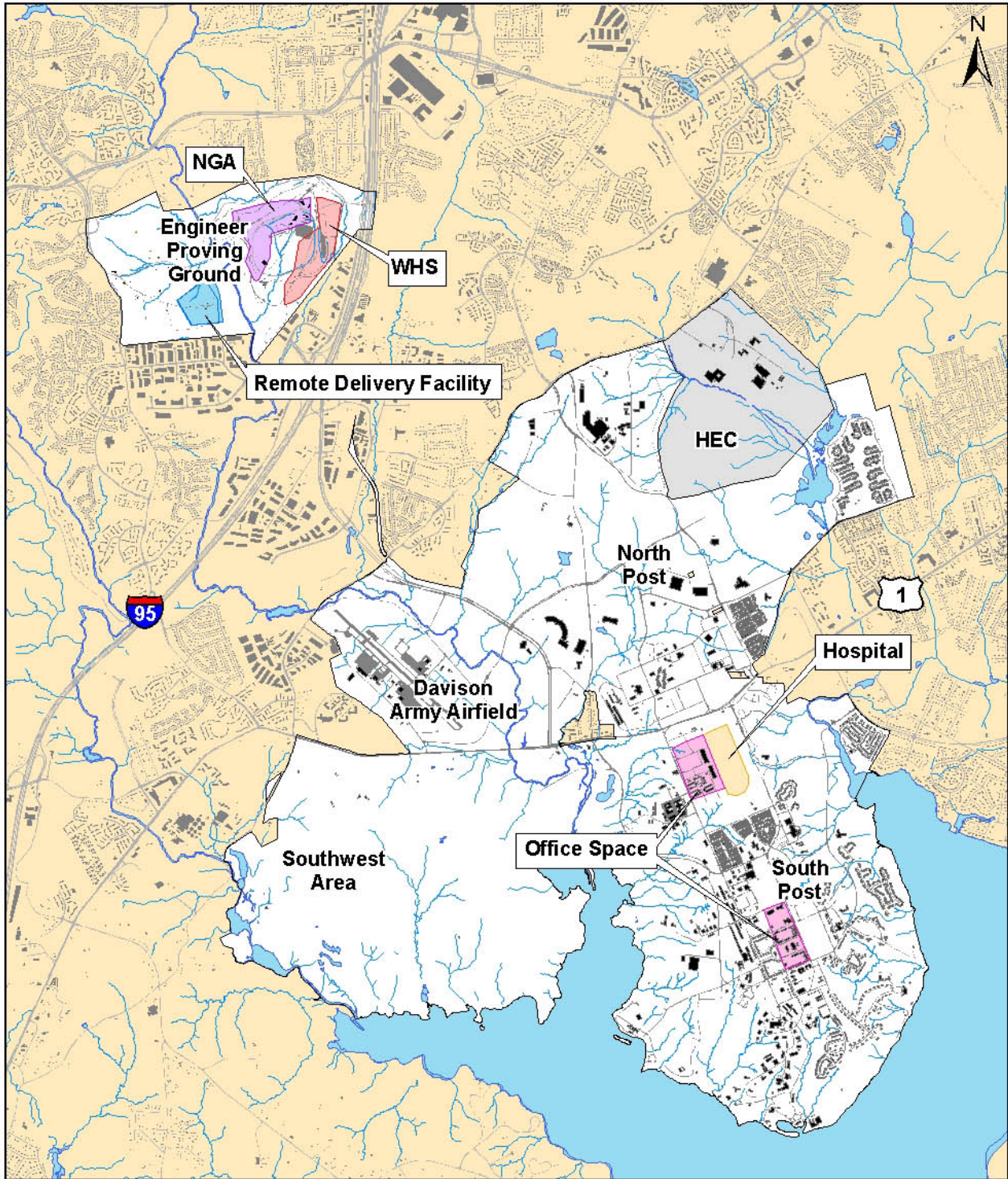
- a. Figure 1 shows the preferred locations of the proposed BRAC development
- b. Figure 2 shows the proposed future land use designations for Fort Belvoir
- c. Enclosure 1 contains more specific detail on the various BRAC realignment actions that will occur at Fort Belvoir
- d. Enclosure 2 provides a list of the projects that will be analyzed in the EIS

It is requested your input be provided within 30 days of receipt of this letter if you are interested in this matter, or if you wish to be removed from the distribution list for receiving further information. If you have any questions or require further information regarding this BRAC action, point of contact is Bill Sanders, Director of Public Works, at 703-806-3017 or bill.l.sanders@belvoir.army.mil.

Sincerely,


Brian W. Lauritzen
Colonel, US Army
Installation Commander

Enclosures



LEGEND

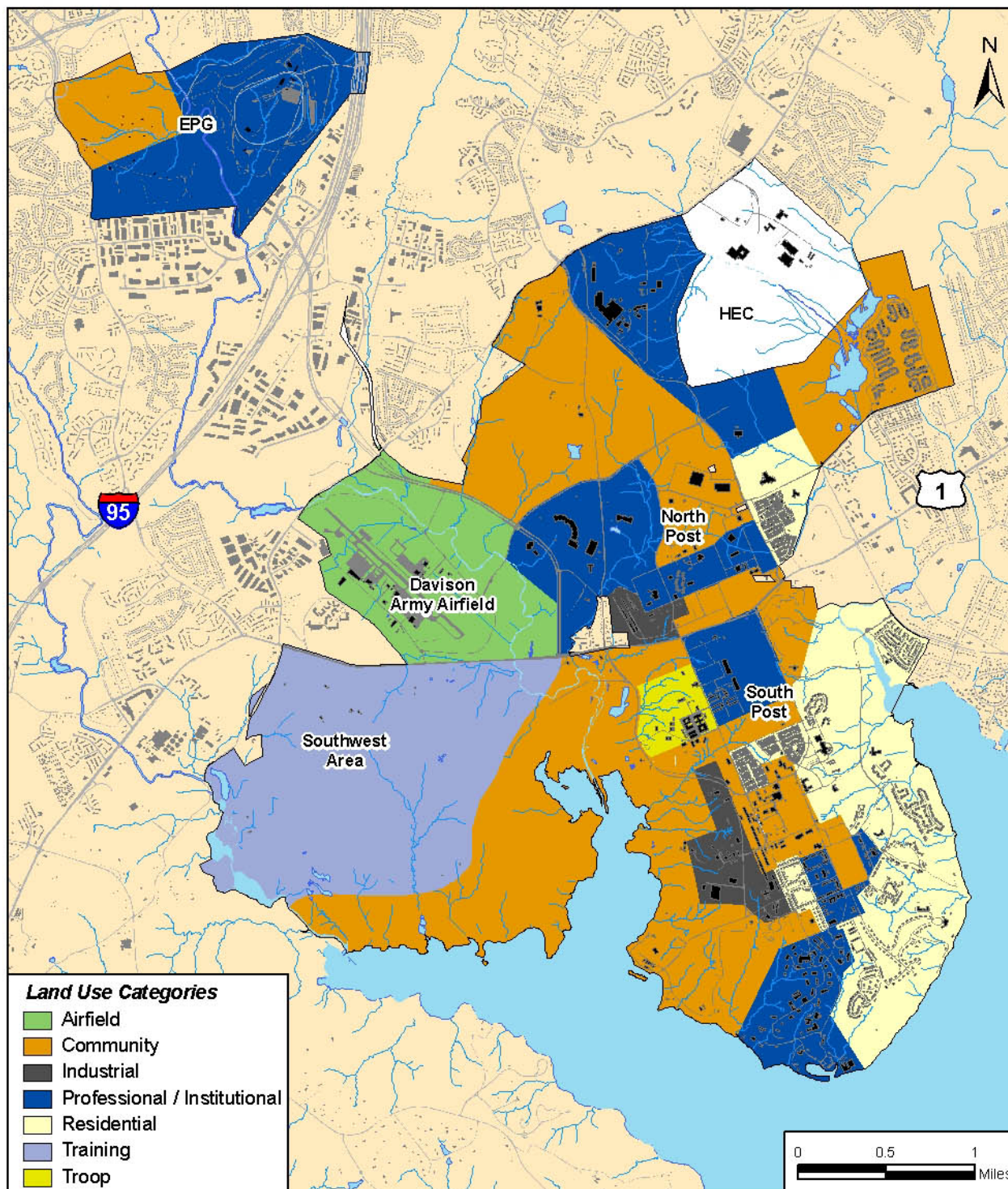
- Installation Property
- Building
- Surface Water

Proposed BRAC Development

Fort Belvoir, Virginia

Sources: Fort Belvoir GIS, 2006; Fairfax County GIS, 2006.

Figure 1



Proposed Land Use Designations

Fort Belvoir, Virginia

Figure 2

Sources: Fort Belvoir GIS, 2006; Fairfax County GIS, 2006.

2005 BRAC Recommendations for Fort Belvoir, Virginia

The BRAC Commission made 35 recommendations concerning Fort Belvoir. The essence of each recommendation is outlined below.

Realign Fort Belvoir, VA by relocating and consolidating Sensors, Electronics, and Electronic Warfare Research, Development and Acquisition activities to Aberdeen Proving Ground, MD except the Night Vision and Electronic Sensors Directorate (the Night Vision Lab) and the Project Manager Night Vision/Reconnaissance, Surveillance and Target Acquisition (PM NV/RSTA), and by relocating and consolidating Information Systems Research and Development and Acquisition (except for the Program Executive Office, Enterprise Information Systems) to Aberdeen Proving Ground, MD.

Realign the PM Acquisition, Logistics and Technology Enterprise Systems and Services (ALTESS) facility at 2511 Jefferson Davis Hwy, Arlington, VA, a leased installation, by relocating and consolidating into the Program Executive Office, Enterprise Information Systems at Fort Belvoir, VA.

Realign Fort Belvoir, VA, by relocating Army Prime Power School training to Fort Leonard Wood, MO.

Realign Fort Belvoir, VA, by relocating the Army Criminal Investigation Command (CID) to Marine Corp Base Quantico, VA.

Realign Ballston Metro Center, a leased installation in Arlington, VA, by relocating the U.S. Army Legal Agency to Fort Belvoir, VA.

Close 1500 Wilson Boulevard and Presidential Towers, leased installations in Arlington, VA, by relocating offices accommodating Pentagon Renovation temporary space to Fort Belvoir, VA.

Close Metro Park III and IV (6350 and 6359 Walker Lane), a leased installation in Alexandria, VA, by relocating the Defense Contract Management Agency Headquarters to Fort Lee, VA.

Realign 400 Army Navy Drive, a leased installation in Arlington, VA, by relocating the Office of the Secretary of Defense, Washington Headquarters Services, and the DoD Inspector General to Fort Belvoir, VA.

Realign the Webb Building, a leased installation in Arlington, VA, by relocating the Department of Defense Education Activity and the Defense Human Resources Activity to Fort Belvoir, VA.

Realign Rosslyn Plaza North, a leased installation in Arlington, VA, by relocating offices accommodating Pentagon Renovation temporary space, Washington Headquarters Services and the Defense Human Resources Activity to Fort Belvoir, VA.

Realign Crystal Gateway North, a leased installation in Arlington, VA, by relocating the Office of the Secretary of Defense, Washington Headquarters Services, and the DoD Inspector General to Fort Belvoir, VA.

Realign 2001 North Beauregard Street, 621 North Payne Street, Ballston Metro Center, Crystal Square 4, Crystal Square 5, Crystal Plaza 6, 4015 Wilson Boulevard, Skyline 5, and Skyline 6, leased installations in Northern VA, by relocating the Office of the Secretary of Defense to Fort Belvoir, VA.

Realign Crystal Mall 3, a leased installation in Arlington, VA, by relocating the Office of the Secretary of Defense and the Defense Finance and Accounting Service at Fort Belvoir, VA.

Realign Hoffman 1, Crystal Gateway 1, Crystal Gateway 2, Crystal Gateway 3, and the James K. Polk Building, leased installations in Northern VA, by relocating the Office of the Secretary of Defense and Washington Headquarters Services to Fort Belvoir, VA.

Realign the Nash Street Building, a leased installation in Arlington, VA, by relocating the Defense Human Resources Activity to Fort Belvoir, VA.

Realign Alexandria Tech Center IV, a leased installation in Alexandria, VA, by relocating the Defense Technology Security Administration to Fort Belvoir, VA.

Realign 1400-1450 South Eads Street, a leased installation in Arlington, VA, by relocating the DoD Inspector General to Fort Belvoir, VA.

Realign 1401 Wilson Boulevard, a leased installation in Arlington, VA, by relocating the Office of the Secretary of Defense, Washington Headquarters Services, and Defense Human Resources Activity to Fort Belvoir, VA.

Realign 1555 Wilson Boulevard, a leased installation in Arlington, VA, by relocating offices of the Office of the Secretary of Defense and Defense Human Resources Activity to Fort Belvoir, VA.

Realign Crystal Mall 2-3-4 and Skyline 4, leased installations in Northern VA, by relocating Washington Headquarters Services to Fort Belvoir, VA.

Close the Suffolk Building, a leased installation in Falls Church, VA. Relocate all Missile Defense Agency (MDA) functions, except the Ballistic Missile Defense System Sensors Directorate, to Redstone Arsenal, AL.

Realign 176 the Space and Missile Defense Command (SMDC) Building, a leased installation in Huntsville, AL. Relocate all functions of the Missile Defense Agency to Redstone Arsenal, AL.

Realign Federal Office Building 2, Arlington, VA, by relocating a Headquarters Command Center for the Missile Defense Agency to Fort Belvoir, VA, and by relocating all other functions of the Missile Defense Agency, except the Command and Control Battle Management and Communications Directorate, to Redstone Arsenal, AL.

Realign Fort Belvoir, VA, by relocating Soldier Magazine to Fort Meade, MD.

Realign Fort Belvoir, VA by relocating Army Materiel Command (AMC) and the Security Assistance Command (USASAC, an AMC major subordinate command) to Redstone Arsenal, AL.

Close National Geospatial-Intelligence Agency (NGA) Dalecarlia and Sumner sites, Bethesda, MD; Reston 1, 2 and 3, leased installations in Reston, VA; Newington buildings 8510, 8520, and 8530, Newington, VA; and Building 213 a leased installation at the South East Federal Center, Washington, DC. Relocate all functions to a new facility at Fort Belvoir, VA. Realign the National Reconnaissance Office facility, Westfields, VA, by relocating all NGA functions to a new facility at the Fort Belvoir, VA. Consolidate all NGA National Geospatial-Intelligence College functions on Fort Belvoir into the new facility at Fort Belvoir, VA.

Realign Walter Reed Army Medical Center, Washington, DC, as follows: relocate all tertiary (sub-specialty and complex care) medical services to National Naval Medical Center, Bethesda, MD,

establishing it as the Walter Reed National Military Medical Center Bethesda, MD; relocate Legal Medicine to the new Walter Reed National Military Medical Center Bethesda, MD; relocate sufficient personnel to the new Walter Reed National Military Medical Center Bethesda, MD, to establish a Program Management Office that will coordinate pathology results, contract administration, and quality assurance and control of DoD second opinion consults worldwide; relocate all non-tertiary (primary and specialty) patient care functions to a new community hospital at Ft Belvoir, VA; relocate the Office of the Secretary of Defense supporting unit to Fort Belvoir, VA; disestablish all elements of the Armed Forces Institute of Pathology except the National Medical Museum and the Tissue Repository; relocate the Armed Forces Medical Examiner, DNA Registry, and Accident Investigation to Dover Air Force Base, DE; AFIP capabilities not specified in this recommendation will be absorbed into other DoD, Federal, or civilian facilities, as necessary; relocate enlisted histology technician training²²³ to Fort Sam Houston, TX; relocate the Combat Casualty Care Research sub-function (with the exception of those organizational elements performing neuroprotection research) of the Walter Reed Army Institute of Research (Forest Glen Annex) and the Combat Casualty Care Research sub-function of the Naval Medical Research Center (Forest Glen Annex) to the Army Institute of Surgical Research, Fort Sam Houston, TX; relocate Medical Biological Defense Research of the Walter Reed Army Institute of Research (Forest Glen Annex) and Naval Medical Research Center (Forest Glen Annex) to Fort Detrick, MD, and consolidate it with US Army Medical Research Institute of Infectious Diseases; relocate Medical Chemical Defense Research of the Walter Reed Army Institute of Research (Forest Glen Annex) to Aberdeen Proving Ground, MD, and consolidate it with the US Army Medical Research Institute of Chemical Defense; and close the main post.

Realign Fort Belvoir, VA, by relocating the Chemical Biological Defense Research component of the Defense Threat Reduction Agency to Edgewood Chemical Biological Center, Aberdeen Proving Ground, MD.

Realign Naval Support Activity Mechanicsburg, PA, as follows: relocate the Budget/Funding, Contracting, Cataloging, Requisition Processing, Customer Services, Item Management, Stock Control, Weapon System Secondary Item Support, Requirements Determination, Integrated Materiel Management Technical Support Inventory Control Point functions for Consumable Items, except those Navy items associated with Nuclear Propulsion Support, Level 1/Subsafe and Deep Submergence System Program (DSSP) Management, Strategic Weapon Systems Management, Design Unstable/Preproduction Test, Special Waivers, Major End Items and Fabricated or Reclaimed items to Defense Supply Center Columbus, OH, and reestablish them as Defense Logistics Agency Inventory Control Point functions; disestablish the procurement management and related support functions for Depot Level Repairables and designate them as Defense Supply Center Columbus, OH, Inventory Control Point functions; and relocate the oversight of Budget/Funding, Contracting, Cataloging, Requisition Processing, Customer Services, Item Management, Stock Control, Weapon System Secondary Item Support, Requirements Determination, Integrated Materiel Management Technical Support Inventory Control Point functions for Consumable Items and the oversight of procurement management and related support functions for Depot Level Repairables to the Defense Logistics Agency, Fort Belvoir, VA.

Realign Marine Corps Base, Albany, GA, as follows: relocate the Budget/Funding, Contracting, Cataloging, Requisition Processing, Customer Services, Item Management, Stock Control, Weapon System Secondary Item Support, Requirements Determination, Integrated Materiel Management Technical Support Inventory Control Point functions for any residual Consumable Items to Defense Supply Center Columbus, OH, and reestablish them as Defense Logistics Agency Inventory Control Point functions; disestablish the procurement management and related support functions for Depot Level Repairables and designate them as Defense Supply Center Columbus, OH, Inventory Control Point functions; and relocate the oversight of Budget/Funding, Contracting, Cataloging, Requisition Processing, Customer Services, Item Management, Stock Control, Weapon System Secondary Item Support,

Requirements Determination, Integrated Materiel Management Technical Support Inventory Control Point functions for Consumable Items and the oversight of procurement management and related support functions for Depot Level Repairables to the Defense Logistics Agency, Fort Belvoir, VA.

Realign Wright-Patterson Air Force Base, OH, by relocating the oversight of Budget/Funding, Contracting, Cataloging, Requisition Processing, Customer Services, Item Management, Stock Control, Weapon System Secondary Item Support, Requirements Determination, Integrated Materiel Management Technical Support Inventory Control Point functions for Consumable Items and the oversight of procurement management and related support functions for Depot Level Repairables to the Defense Logistics Agency, Fort Belvoir, VA.

Realign Fort Belvoir, VA, by assigning the oversight of Budget/Funding, Contracting, Cataloging, Requisition Processing, Customer Services, Item Management, Stock Control, Weapon System Secondary Item Support, Requirements Determination, Integrated Materiel Management Technical Support Inventory Control Point functions for Consumable Items and the oversight of procurement management and related support functions for Depot Level Repairables to the Defense Logistics Agency, Fort Belvoir, VA.

Realign Fort Belvoir, VA, by relocating Defense Threat Reduction Agency National Command Region conventional armament Research to Eglin Air Force Base, FL.

Enclosure 2

List of Projects to be Analyzed in Fort Belvoir BRAC EIS

Project number	Project title	Fiscal year
65416	NGA Administrative Facility	2007–11
64234	WHS Administrative Facility	2008–10
67320	MDA Facility	2008–09
64238	Hospital	2008–11
64241	Dental Clinic	2010–11
64293	Medical Guest House	2009
65871	NARMC Headquarters Building	2009
67959	Infrastructure	2008–09
64076	Emergency Services Center (EPG)	2008
65448	Network Operations Center (part of PEO EIS)	2010
65447	USANCA Support Facility	2008
55661	Child Development Center (NGA)	2011
55662	Child Development Center	2011
65450	Administrative Facility (Bldgs 211, 215, 219, 220)	2011
63571	Access Control Point	2009
66228	AMC Relocatables	2007
65592/67231	PEO EIS Administrative Facility	2007
62752	Network Enterprise Communications Facility (AKO)	2008
61450/65747	Gunston Road Improvements	2010
54347	Structured Parking Facility, 200 Area	2011
62892	Modernize Barracks	2011
64531	Expand and Renovate PX	2007
57508	Corps of Engineers Integration Office (Temporary)	2007
54898	MWR Family Travel Camp	2007–10



DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, UNITED STATES ARMY GARRISON, FORT BELVOIR
9820 FLAGLER ROAD, SUITE 213
FORT BELVOIR, VIRGINIA 22060-5928

REPLY TO
ATTENTION OF

JAN 16 2007

Directorate of Public Works

Mr. Robert Hargrove, Division Director
U.S. Environmental Protection Agency
Office of Federal Activities
1200 Pennsylvania Avenue, NW
Room 7241
Washington, DC 20044

Dear Mr. Hargrove:

On September 8, 2005, the Base Realignment and Closure (BRAC) Commission recommended certain realignment actions occur at Fort Belvoir, Virginia. These recommendations were approved by the President on September 15, 2005, and forwarded to Congress. Congress did not alter any of the BRAC Commission's recommendations, and on November 9, 2005, the recommendations became law. The BRAC Commission recommendations must now be implemented as provided for in the Defense Base Closure and Realignment Act of 1990 (Public Law 101-510), as amended.

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"EXCELLENCE THROUGH SERVICE"

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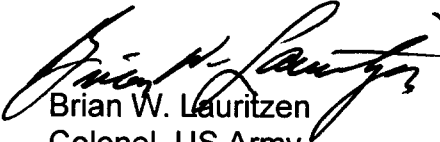
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Sincerely,


Brian W. Lauritzen
Colonel, US Army
Installation Commander

Enclosures



DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, UNITED STATES ARMY GARRISON, FORT BELVOIR
9820 FLAGLER ROAD, SUITE 213
FORT BELVOIR, VIRGINIA 22060-5928

REPLY TO
ATTENTION OF

Directorate of Public Works

JAN 16 2007

Mr. William Arguto, NEPA-Federal Facilities
U.S. Environmental Protection Agency Region 3
Attn: 3EA30 - NEPA
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

Dear Mr. Arguto:

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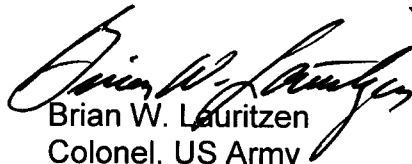
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Sincerely,


Brian W. Lauritzen
Colonel, US Army
Installation Commander

Enclosures



DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, UNITED STATES ARMY GARRISON, FORT BELVOIR
9820 FLAGLER ROAD, SUITE 213
FORT BELVOIR, VIRGINIA 22060-5928

REPLY TO
ATTENTION OF

Directorate of Public Works

JAN 16 2007

Mr. Willie R. Taylor, Director
U.S. Department of the Interior
Office of Environmental Policy and Compliance
1849 C Street, NW, Room 2342
Washington, DC 20240

Dear Mr. Taylor:

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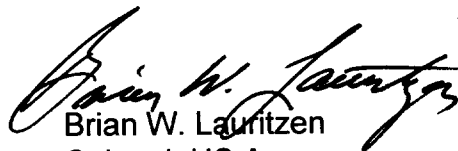
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Sincerely,



Brian W. Lauritzen
Colonel, US Army
Installation Commander

Enclosures



DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, UNITED STATES ARMY GARRISON, FORT BELVOIR
9820 FLAGLER ROAD, SUITE 213
FORT BELVOIR, VIRGINIA 22060-5928

REPLY TO
ATTENTION OF

Directorate of Public Works

JAN 16 2007

Ms. Denise Doetzer, State Conservationist
USDA, Natural Resources Conservation Service
1606 Santa Rosa Rd, Suite 209
Richmond, Virginia 23229-5014

Dear Ms. Doetzer:

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Sincerely,



Brian W. Lauritzen
Colonel, US Army
Installation Commander

Enclosures



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US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, UNITED STATES ARMY GARRISON, FORT BELVOIR
9820 FLAGLER ROAD, SUITE 213
FORT BELVOIR, VIRGINIA 22060-5928

REPLY TO
ATTENTION OF

JAN 16 2007

Directorate of Public Works

Mr. John Nichols
National Marine Fisheries Service
Habitat Conservation Division
904 South Morris St.
Oxford, Maryland 21654

Dear Mr. Nichols:

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FORT BELVOIR, VIRGINIA 22060-5928

REPLY TO
ATTENTION OF

JAN 16 2007

Directorate of Public Works

Lamar Hunt, NEPA Oversight Team Leader
US Department of Transportation
400 7th St. SW, Room 3222
Washington, DC 20590

Dear Mr. Hunt:

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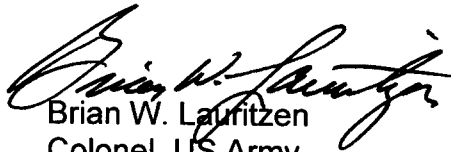
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Enclosures



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9820 FLAGLER ROAD, SUITE 213
FORT BELVOIR, VIRGINIA 22060-5928

REPLY TO
ATTENTION OF

Directorate of Public Works

JAN 16 2007

Ms. Ellie Irons, Program Manager
Virginia Department of Environmental Quality
P.O. Box 10009
Richmond, Virginia 23219

Dear Ms. Irons:

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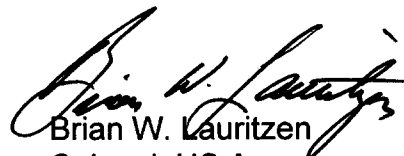
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Sincerely,


Brian W. Lauritzen
Colonel, US Army
Installation Commander

Enclosures



DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, UNITED STATES ARMY GARRISON, FORT BELVOIR
9820 FLAGLER ROAD, SUITE 213
FORT BELVOIR, VIRGINIA 22060-5928

REPLY TO
ATTENTION OF

JAN 16 2007

Directorate of Public Works

Ms. Rene Hypes
Virginia Department of Conservation and Recreation
Division of Natural Heritage
217 Governor Street
Richmond, Virginia 23219

Dear Ms. Hypes:

On September 8, 2005, the Base Realignment and Closure (BRAC) Commission recommended certain realignment actions occur at Fort Belvoir, Virginia. These recommendations were approved by the President on September 15, 2005, and forwarded to Congress. Congress did not alter any of the BRAC Commission's recommendations, and on November 9, 2005, the recommendations became law. The BRAC Commission recommendations must now be implemented as provided for in the Defense Base Closure and Realignment Act of 1990 (Public Law 101-510), as amended.

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Sincerely,



Brian W. Lauritzen
Colonel, US Army
Installation Commander

Enclosures



Information Services Order Form

Please check the services desired and provide details in the spaces provided. You do not have to fill in all of the spaces in order to submit the form. Due to a technical issue, online submission is currently unavailable, please print out and mail the form to:

Project Review Coordinator

DCR Division of Natural Heritage

217 Governor St.

Richmond, VA 23219

Voice: (804) 786-7951 Fax: (804) 371-2674

The following 3 services are free of charge; however, due to staff and budget constraints we ask that you submit serious inquiries only, please.

- Rare Vascular Plant Species of Virginia
- Rare Animal Species of Virginia
- County Lists of Natural Heritage Resources (also available on our website at www.dcr.state.va.us/dnh/nhrinfo.htm).

For county lists, please specify the counties of interest:

Fairfax County

The following services have varying charges associated with them, please read all the documentation carefully and be sure to fill in all the necessary fields.

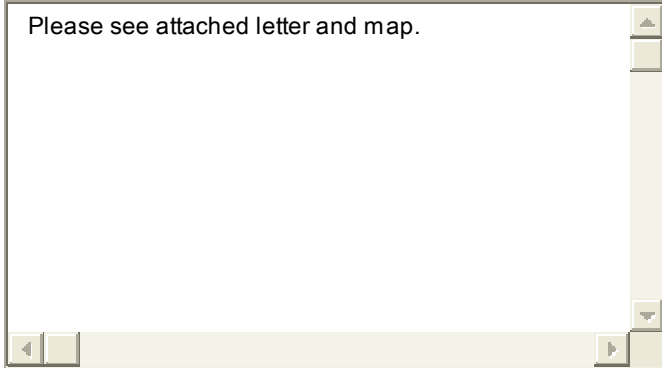
Project Review.....\$60 per site; add \$35 for 1-5 occurrences, \$60 for 6 or more occurrences

- Project Review

Details: Describe project below, please include detailed project description, Location information, Conditions (photographs if available). Fax additional information as necessary.

In order to ensure an accurate assessment, please **fax a site map** (preferably from a USGS topo) to:

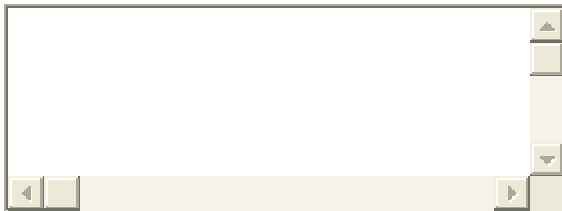
Environmental Review Coordinator @ (804) 371-2674.



Natural Heritage Resource Reports & Maps

- County Conservation Sites Maps (specify counties).....\$20/county
- Custom NHR Maps (describe, call for more information).....\$60/hour
- Custom NHR Reports (describe, call for more information)....\$60/hour
- Digital Conservation Sites Subscription Service (specify area of interest; complete [license agreement](#))
 - Less than 1 county or 12 quads).....\$1000/yr.
 - 13-100 quads.....\$3500/yr.
 - statewide coverage.....\$6000/yr.

Please provide details below:



-
- Priority Service**(3 day turnaround).....\$200 surcharge

Conditions:

1. Digitized DCR natural heritage resource locational data for GIS or map production, whether provided by DCR digitally or entered by the client from tables or reports, may not be used without first completing a data licensing

agreement with DCR Division of Natural Heritage. A License form is available [here](#) .

2. Although DCR-DNH data are closely quality controlled, DCR-DNH makes no warranty as to the fitness of the data for any purpose.
3. Any publication of data provided by DCR, whether as text, table or map, must acknowledge *Virginia DCR-Natural Heritage Program*, and include the date the data were provided by DCR.
4. If fees are assessed, an invoice will be included with the response. Payment is due within 30 days of receipt. **Minimum charge for hourly fees is \$60.**

I understand and agree to the above conditions: Yes

Send data and invoice (if applicable) to:

(Please be sure to include a phone number so we may contact you if we have any questions regarding your data needs)

Name: Patrick Solomon

Email: patrick.solomon@tetrattech-ffx.com

Company: Tetra Tech, Inc.

Address: 10306 Eaton Place, Suite 340

City: Fairfax

State: VA

Zip Code: 22030

Phone: 703-385-6000

Taxpayer ID#:

Clear Form

[Go back to the Information Services page](#)

Return to the Virginia Natural Heritage Program [home page](#)



DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, UNITED STATES ARMY GARRISON, FORT BELVOIR
9820 FLAGLER ROAD, SUITE 213
FORT BELVOIR, VIRGINIA 22060-5928

REPLY TO
ATTENTION OF

Directorate of Public Works

JAN 16 2007

Ms. Kathy Graham
Virginia Department of Game and Inland Fisheries
4010 West Broad Street
Richmond, Virginia 23230

Dear Ms. Graham:

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Sincerely,



Brian W. Lauritzen
Colonel, US Army
Installation Commander

Enclosures



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HEADQUARTERS, UNITED STATES ARMY GARRISON, FORT BELVOIR
9820 FLAGLER ROAD, SUITE 213
FORT BELVOIR, VIRGINIA 22060-5928

REPLY TO
ATTENTION OF

Directorate of Public Works

JAN 16 2007

Mr. Bill Bolger
National Park Service
200 Chestnut Street Room 370
Philadelphia, Pennsylvania 19106

Dear Mr. Bolger:

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9820 FLAGLER ROAD, SUITE 213
FORT BELVOIR, VIRGINIA 22060-5928

REPLY TO
ATTENTION OF

Directorate of Public Works

JAN 16 2007

Mr. Marc Holma, Architectural Historian
Department of Historic Resources
2801 Kensington Avenue
Richmond, Virginia 23221

Dear Mr. Holma:

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Installation Commander

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FORT BELVOIR, VIRGINIA 22060-5928

REPLY TO
ATTENTION OF

Directorate of Public Works

JAN 16 2007

Ms. Karenne Wood
Virginia Council on Indians
PO Box 1475
Richmond, Virginia 23218

Dear Ms. Wood:

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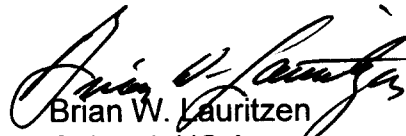
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Sincerely,


Brian W. Lauritzen
Colonel, US Army
Installation Commander

Enclosures



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US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, UNITED STATES ARMY GARRISON, FORT BELVOIR
9820 FLAGLER ROAD, SUITE 213
FORT BELVOIR, VIRGINIA 22060-5928

REPLY TO
ATTENTION OF

Directorate of Public Works

JAN 16 2007

Mr. Russell Townsend
Tribal Historic Preservation Officer
Eastern Band of the Cherokee Nation
PO Box 455
Cherokee, North Carolina 28719

Dear Mr. Townsend:

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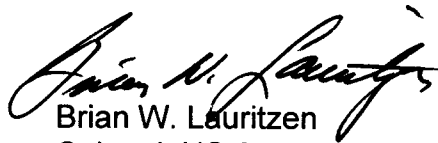
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Installation Commander

Enclosures



DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, UNITED STATES ARMY GARRISON, FORT BELVOIR
9820 FLAGLER ROAD, SUITE 213
FORT BELVOIR, VIRGINIA 22060-5928

REPLY TO
ATTENTION OF

Directorate of Public Works

JAN 16 2007

Ms. Lisa Stopp
THPO/NAGPRA Representative
United Keetoowah Band of Cherokee Indians in Oklahoma
P.O. Box 189
Park Hill, Oklahoma 74431

Dear Ms. Stopp:

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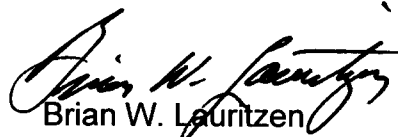
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- c. Enclosure 1 contains more specific detail on the various BRAC realignment actions that will occur at Fort Belvoir
- d. Enclosure 2 provides a list of the projects that will be analyzed in the EIS

It is requested your input be provided within 30 days of receipt of this letter if you are interested in this matter, or if you wish to be removed from the distribution list for receiving further information. If you have any questions or require further information regarding this BRAC action, point of contact is Bill Sanders, Director of Public Works, at 703-806-3017 or bill.l.sanders@belvoir.army.mil.

Sincerely,



Brian W. Lauritzen
Colonel, US Army
Installation Commander

Enclosures



DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, UNITED STATES ARMY GARRISON, FORT BELVOIR
9820 FLAGLER ROAD, SUITE 213
FORT BELVOIR, VIRGINIA 22060-5928

REPLY TO
ATTENTION OF

Directorate of Public Works

JAN 16 2007

Neil Patterson, Jr., Director
Tuscarora Environmental Program
2045 Upper Mountain Road
Sanborn, New York 14132

Dear Mr. Patterson:

On September 8, 2005, the Base Realignment and Closure (BRAC) Commission recommended certain realignment actions occur at Fort Belvoir, Virginia. These recommendations were approved by the President on September 15, 2005, and forwarded to Congress. Congress did not alter any of the BRAC Commission's recommendations, and on November 9, 2005, the recommendations became law. The BRAC Commission recommendations must now be implemented as provided for in the Defense Base Closure and Realignment Act of 1990 (Public Law 101-510), as amended.

Under the National Environmental Policy Act (NEPA), the Army is proposing the following at Fort Belvoir, an active military installation located in Fairfax County in Northern Virginia performing a variety of missions and functions for the National Capital Region (NCR): realignment of approximately fifty-nine agencies/activities to relocate to Fort Belvoir, including, but are not limited to: (1) primary and secondary medical care functions from Walter Reed Army Medical Center to a new DeWitt Hospital; (2) Army and DoD organizations such as the Washington Headquarters Service from NCR leased space; and (3) National Geospatial Agency units from various NCR leased locations and Bethesda, Maryland. The installation's land use plan will be updated for the siting of new BRAC associated facilities and projects. The complete text of the BRAC Commission's recommendations are at <http://www.brac.gov/deliberations.aspx>.

The purpose of this letter is to inform you of this undertaking and to ask for your input during this process. If you so choose, the Army will periodically ask for your review and input as it proceeds with its Draft Environmental EIS (DEIS) and Final EIS (FEIS). If you are not interested in these issues, the Army will remove you from its distribution list upon your request. The Army is requesting you identify any issues likely to have an impact on the environment, or to be controversial during the planning process.

“EXCELLENCE THROUGH SERVICE”

The BRAC Commission recommendations for 2005 will result in the relocation of approximately 22,000 additional personnel to Fort Belvoir, Virginia. The Army has determined approximately 7 million square feet of built space, primarily for administrative use, will be required to accommodate realigned activities. In accordance with the requirement of the NEPA the Army is conducting an EIS. The EIS will assess a reasonable range of siting alternatives as well as a No Action Alternative. Consultation required under the National Historic Preservation Act will be initiated concurrent with the EIS.

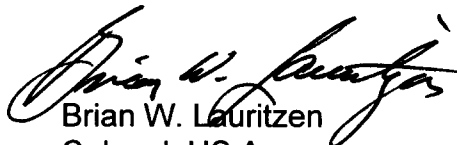
In accordance with NEPA, the Army is assessing the potential impacts that the proposed action could have on environmental, cultural, and socioeconomic resources. The DEIS will be provided to you for your review. A DEIS is anticipated to be available to the public in February 2007 and a Final EIS is anticipated to be available in June 2007.

The following are included for your review:

- a. Figure 1 shows the preferred locations of the proposed BRAC development
- b. Figure 2 shows the proposed future land use designations for Fort Belvoir
- c. Enclosure 1 contains more specific detail on the various BRAC realignment actions that will occur at Fort Belvoir
- d. Enclosure 2 provides a list of the projects that will be analyzed in the EIS

It is requested your input be provided within 30 days of receipt of this letter if you are interested in this matter, or if you wish to be removed from the distribution list for receiving further information. If you have any questions or require further information regarding this BRAC action, point of contact is Bill Sanders, Director of Public Works, at 703-806-3017 or bill.l.sanders@belvoir.army.mil.

Sincerely,


Brian W. Lauritzen
Colonel, US Army
Installation Commander

Enclosures

L. Preston Bryant, Jr.
Secretary of Natural Resources



Joseph H. Maroon
Director

COMMONWEALTH of VIRGINIA
DEPARTMENT OF CONSERVATION AND RECREATION

217 Governor Street
Richmond, Virginia 23219-2010
(804) 786-7951 FAX (804) 371-2674

January 25, 2007

Patrick Solomon
Tetra Tech, Inc.
10306 Eaton Palce, Suite 340
Fairfax, VA 22030

Dear Mr. Solomon:

In response to your recent request, please find enclosed the following information:

Natural Heritage Resources of Virginia: Rare Plants (2006)
Natural Heritage Resources of Virginia: Rare Animals (2006)
Natural Heritage Resource Search- Fairfax County

I hope that you find this information helpful. Additional natural heritage information may be obtained on our website at <http://www.dcr.virginia.gov/dnh>. Please feel free to contact me at 804-371-2708 if you have any questions. Thank you for the opportunity to provide this information.

Sincerely,

A handwritten signature in black ink, appearing to read "S. René Hypes".

S. René Hypes
Project Review Coordinator

Natural Heritage Resources by County

Your Search Criteria:
 Fairfax County(ies)
 Search run: 01-23-2007

[See Map](#)

On the map page, set page orientation to landscape to print map.
 Click highlighted scientific names below to go to NatureServe report.

[Search Menu](#)

Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Status	Last Year Observed
Fairfax						
BIRDS						
<i>Botaurus lentiginosus</i>	American Bittern	G4	S1B,S2N			1998
<i>Gallinula chloropus</i>	Common Moorhen	G5	S1B,S1N		SC	1987
<i>Haliaeetus leucocephalus</i>	Bald Eagle	G5	S2S3B,S3N	LT,PDL	LT	2002
<i>Nyctanassa violacea</i>	Yellow-crowned Night-heron	G5	S2S3B,S3N		SC	1993
<i>Podilymbus podiceps</i>	Pied-billed Grebe	G5	S1S2B,S3N			1992
<i>Rallus elegans</i>	King Rail	G4	S2B,S3N			1999
BIVALVIA (MUSSELS)						
<i>Alasmidonta varicosa</i>	Brook Floater	G3	S1		LE	pre-
COLEOPTERA (BEETLES)						
<i>Cicindela formosa generosa</i>	A Tiger Beetle	G5T5	SH			ND
<i>Lordithon niger</i>	Black Lordithon Rove Beetle	GU	SH			ND
COMMUNITIES						
Natural Community	Acidic Oak - Hickory Forest	GNR	SNR			2005
Natural Community	Basic Mesic Forest	GNR	SNR			2005
Natural Community	Basic Oak - Hickory Forest	GNR	SNR			2005
Natural Community	Coastal Plain / Piedmont Acidic Seepage Swamp	GNR	SNR			1995
Natural Community	Coastal Plain/Piedmont Basic Seepage Swamp	GNR	SNR			2005
Natural Community	Eastern Hemlock - Hardwood Forest	GNR	SNR			2004
Natural Community	Floodplain Pond / Pool	GNR	SNR			2003

Natural Community	Low-elevation Basic Outcrop Barren	GNR	SNR		2003
Natural Community	Low-elevation Boulderfield Forest / Woodland	GNR	SNR		2005
Natural Community	Mesic Mixed Hardwood Forest	GNR	SNR		2005
Natural Community	Montane Mixed Oak / Oak - Hickory Forest	GNR	SNR		2004
Natural Community	Mountain/Piedmont Acidic Woodland	GNR	SNR		2005
Natural Community	Piedmont / Coastal Plain Oak - Beech / Heath Forest	GNR	SNR		2004
Natural Community	Piedmont / Mountain Floodplain Forest	GNR	SNR		2005
Natural Community	Riverside Outcrop Barren	GNR	SNR		2005
Natural Community	Riverside Prairie	GNR	SNR		2005
Natural Community	Rocky Bar and Shore	GNR	SNR		2004
Natural Community	Sand / Gravel / Mud Bar and Shore	GNR	SNR		2004
Natural Community	Tidal Freshwater Marsh	GNR	SNR		2000
Natural Community	Upland Depression Swamp	GNR	SNR		2003

CRUSTACEA (AMPHIPODS, ISOPODS & DECAPODS)

<u>Stygobromus kenki</u>	Rock Creek Groundwater Amphipod	G2G3	SH	SOC		1973
<u>Stygobromus phreaticus</u>	Northern Virginia Well Amphipod	G2G3	S1	SOC		2003
<u>Stygobromus pizzinii</u>	Pizzini's Amphipod	G3G4	S1S2		SC	2005
<u>Stygobromus sp. 15</u>	A Groundwater Amphipod	G1	S1	SOC		2005

LEPIDOPTERA (BUTTERFLIES & MOTHS)

<u>Callophrys irus</u>	Frosted Elfin	G3	S2?			1938
<u>Callophrys polios</u>	Hoary Elfin	G5	S1S3			1978
<u>Speyeria idalia</u>	Regal Fritillary	G3	S1			pre-

NON-VASCULAR PLANTS

Sphagnum subtile	Delicate Peatmoss	G5?Q	S1S2			1919
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ODONATA (DRAGONFLIES & DAMSELFLIES)

<u>Celithemis martha</u>	Martha's Pennant	G4	S2			1978
<u>Epithea costalis</u>	Stripe-winged Baskettail	G5	S2			1914
<u>Gomphus fraternus</u>	Midland Clubtail	G5	S1			1980
<u>Gomphus ventricosus</u>	Skillet Clubtail	G3	S1			1974
<u>Nehalennia gracilis</u>	Sphagnum Sprite	G5	S2			1995
<u>Stylurus laurae</u>	Laura's Clubtail	G4	S2			1932

OTHER

Bald eagle roost		G3	SNR			1995
------------------	--	----	-----	--	--	------

Great Blue Heron Rookery		G5	S2		1994
PLECOPTERA (STONEFLIES)					
<u>Acroneuria flinti</u>	Manassas Stonefly	GH	SH		1962
REPTILES					
<u>Glyptemys insculpta</u>	Wood Turtle	G4	S2	LT	2003
TURBELLARIA (FLATWORMS)					
<u>Sphalloplana holsingeri</u>	Holsinger's Groundwater Planarian	G1G2	SH	SOC	1973
<u>Sphalloplana subtilis</u>	Bigger's Groundwater Planarian	G1G2	SH	SOC	1973
VASCULAR PLANTS					
<u>Agalinis auriculata</u>	Earleaf Foxglove	G3	S1		1986
<u>Amelanchier nantucketensis</u>	Nantucket shadbush	G3Q	S1		2004
<u>Arabis shortii</u>	Short's Rockcress	G5	S2		2002
<u>Asclepias purpurascens</u>	Purple Milkweed	G5?	S2		2003
<u>Buchnera americana</u>	Blue-hearts	G5?	S1S2		1922
<u>Cabomba caroliniana</u>	Carolina Fanwort	G3G5	S1		1980
<u>Carex cristatella</u>	Crested Sedge	G5	S2		1994
<u>Carex davisii</u>	Davis' Sedge	G4	S1		2004
<u>Carex decomposita</u>	Epiphytic Sedge	G3	S2		1917
<u>Carex lacustris</u>	Lake-bank Sedge	G5	S1		1899
<u>Carex straminea</u>	Straw Sedge	G5	S1		2003
<u>Carex tenera</u>	Slender Sedge	G5	S1?		1993
<u>Carex vestita</u>	A Sedge	G5	S2		1995
<u>Cerastium arvense ssp. velutinum</u>	A Field Chickweed	G5T4?	S2?		2003
<u>Cirsium altissimum</u>	Tall Thistle	G5	S1		1902
<u>Cirsium carolinianum</u>	Carolina Thistle	G5	S1		1915
<u>Cuscuta polygonorum</u>	Smartweed Dodder	G5	S2?		1902
<u>Desmodium cuspidatum var. cuspidatum</u>	Toothed Tick-trefoil	G5T5?	S2		2003
<u>Diarrhena obovata</u>	A Beakgrain	G4G5	S1		1991
<u>Dichantheium annulum</u>		GNR	S1		1907
<u>Echinocystis lobata</u>	Wild Mock-cucumber	G5	S1?		1948
<u>Eleocharis compressa</u>	Flat-stemmed Spike-rush	G4	S2		2003
<u>Enemion biternatum</u>	False Rue-anemone	G5	S1		1988
<u>Eriocaulon parkeri</u>	Parker's Pipewort	G3	S2		1933
<u>Eryngium yuccifolium var. yuccifolium</u>	Rattlesnake-master	G5T5	S2		1935
<u>Erythronium albidum</u>	White Trout-lily	G5	S2		2005
<u>Geum laciniatum var. trichocarpum</u>	Rough Avens	G5T3T5	S2?		1994
<u>Hasteola suaveolens</u>	Sweet-scented Indian-plantain	G3	S2		2005
<u>Helianthus occidentalis</u>	Mcdowell Sunflower	G5	S1		2003
<u>Hemicarpha micrantha</u>	Dwarf Bulrush	G5	S1		2004
<u>Lathyrus palustris</u>	Vetchling	G5	S1		1995

<u><i>Maianthemum stellatum</i></u>	Starflower False Solomon's-seal	G5	S2?		2004
<u><i>Matteuccia struthiopteris</i> var. <i>pennsylvanica</i></u>	Ostrich Fern	G5T5	S1		2004
<u><i>Micranthemum micranthemoides</i></u>	Nuttall's Micranthemum	GH	SH		1899
<u><i>Moehringia lateriflora</i></u>	Grove Sandwort	G5	S1		1990
<u><i>Oligoneuron rigidum</i> var. <i>rigidum</i></u>	Stiff Goldenrod	G5T5	S2		1990
<u><i>Onosmodium virginianum</i></u>	Virginia False-gromwell	G4	S2		2003
<u><i>Orthilia secunda</i></u>	One-sided Wintergreen	G5	SH		1915
<u><i>Phacelia ranunculacea</i></u>	Blue Scorpion-weed	G4	S1		2005
<u><i>Plantago cordata</i></u>	Heart-leaved Plantain	G4	SH		1924
<u><i>Platanthera peramoena</i></u>	Purple Fringeless Orchis	G5	S2		1989
<u><i>Potamogeton amplifolius</i></u>	Large-leaf Pondweed	G5	S1S2		1922
<u><i>Potamogeton robbinsii</i></u>	Flatleaf Pondweed	G5	SH		1915
<u><i>Potamogeton zosteriformis</i></u>	Flatstem Pondweed	G5	S1		1915
<u><i>Prunus pumila</i> var. <i>susquehanae</i></u>	Sand Cherry	G5T4	S1		1970
<u><i>Pycnanthemum torrei</i></u>	Torrey's Mountain-mint	G2	S2?	SOC	2005
<u><i>Pyrola chlorantha</i></u>	Greenish-flowered Wintergreen	G5	SH		1915
<u><i>Quercus prinoides</i></u>	Dwarf Chinquapin Oak	G5	S1		1975
<u><i>Ranunculus ambigens</i></u>	Water-plantain Spearwort	G4	S1		1995
<u><i>Ranunculus hederaceus</i></u>	Long-stalked Crowfoot	G5	SH		1968
<u><i>Rhododendron arborescens</i></u>	Smooth Azalea	G4G5	S2		2004
<u><i>Rorippa sessiliflora</i></u>	Stalkless Yellowcress	G5	S1		2004
<u><i>Schoenoplectus fluviatilis</i></u>	River Bulrush	G5	S2		1995
<u><i>Sida hermaphrodita</i></u>	Virginia Mallow	G3	S1		1979
<u><i>Silene nivea</i></u>	Snowy Campion	G4?	S1		1994
<u><i>Solidago racemosa</i></u>	Sticky Goldenrod	G3?	S1		2005
<u><i>Solidago rupestris</i></u>	Rock Goldenrod	G4?	S1		2004
<u><i>Spartina pectinata</i></u>	Freshwater Cordgrass	G5	S2		2003
<u><i>Stellaria alsine</i></u>	Trailing Stitchwort	G5	SNR		2005
<u><i>Triphora trianthophora</i></u>	Nodding Pogonia	G3G4	S1		2002
<u><i>Valeriana pauciflora</i></u>	Valerian	G4	S2		2004
<u><i>Vitis rupestris</i></u>	Sand Grape	G3	S1?		2002

Note: On-line queries provide basic information from DCR's databases at the time of the request. They are NOT to be substituted for a project review or for on-site surveys required for environmental assessments of specific project areas.

Need Additional Information? For more detailed information on locations of Natural Heritage Resources submit an [information request](#).

Want to Contribute? If you have information on locations of natural heritage resources, please fill out and submit a [rare species sighting form](#)

Return to the [Online Information page](#)



Scope of Statement

for the Environmental Impact Statement for Base Realignment
and Closure (BRAC) 2005 Implementation & Master Plan
Update at Fort Belvoir, Virginia

Prepared for:
Fort Belvoir, Virginia
and
**US Army Corps of Engineers,
Mobile District**

Prepared by:
Tetra Tech, Inc.
10306 Eaton Place, Suite 340
Fairfax, VA 22030

August 2006



*Scope of Statement for the Environmental Impact Statement
for Base Realignment and Closure (BRAC) 2005 Implementation
&
Master Plan Update at Fort Belvoir, Virginia*



prepared for

*Fort Belvoir, Virginia
&
US Army Corps of Engineers, Mobile District*

by

Tetra Tech, Inc.
10306 Eaton Place, Suite 340
Fairfax, VA 22030

August 2006

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Acronyms and Abbreviations

AMC	Army Materiel Command
BNVP	Belvoir New Vision Planners
BRAC	Base Realignment and Closure
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
DIA	Defense Intelligence Agency
EIS	Environmental Impact Statement
EQC	Environmental Quality Corridor
MDA	Missile Defense Agency
MSF	Million Square Feet
NEPA	National Environmental Policy Act
NGA	National Geospatial Agency
NOI	Notice of Intent
NST	NEPA Support Team
NV/RSTA	Project Manager Night Vision/Reconnaissance, Surveillance and Target Acquisition
PEO EIS	Program Executive Office Enterprise Information Systems
WHS	Washington Headquarters Services

SECTION 1.0 INTRODUCTION

The Department of the Army and Fort Belvoir conducted public scoping to solicit input to help identify all relevant issues that should be addressed in the Environmental Impact Statement (EIS) being prepared for the Base Realignment and Closure (BRAC) action at Fort Belvoir, Virginia.

This report contains the details of the public scoping and communications effort, which included letters, media announcements, and an open house public meeting held in Springfield, Virginia, on June 7, 2006. This report presents an analysis of the comments received during the open comment period and presents conclusions relating to the scope of the EIS.

1.1 BACKGROUND

The Army is realigning functions and closing installations as mandated by Title XXX of the National Defense Authorization Act for Fiscal Year 2002, Public Law 107-107. The 2002 BRAC law amended the Defense Base Closure and Realignment Act of 1990, Public Law 101-510, by authorizing another round of realignments and closures in 2005. The Army is implementing discretionary realignments and disposing of the excess property made available by the closing actions to support the national force structure objectives. The BRAC law exempts consideration of the need for the action or alternative installations in preparing environmental documentation pursuant to the National Environmental Policy Act of 1969 (NEPA). However, an appropriate level of NEPA documentation is required to analyze how the BRAC actions will be implemented for concurrent actions, both BRAC-directed and discretionary, at each installation that is receiving realigned missions.

The overview below outlines the BRAC Commission's 2005 recommendations for Fort Belvoir, Virginia, under provisions of the Defense Base Closure and Realignment Act of 1990. A detailed description of the Commission's recommendations is at www.brac.gov/finalreport.asp and is provided in Appendix A.

The Commission recommended the realignment of the following agencies/activities with relocation to Fort Belvoir, Virginia:

- National Geospatial-Intelligence Agency (NGA)
- Washington Headquarters Services (WHS)
- Army Leased Space
- Program Executive Office Enterprise Information Systems (PEO EIS)
- Missile Defense Agency Headquarters Command Center (MDA)
- DeWitt Army Community Hospital
- National Museum of the United States Army
- Selected Defense Intelligence Agency (DIA) activities from leased space to Rivanna Station, Charlottesville, Virginia (to be analyzed under a separate NEPA document from this EIS)

The Commission also recommended the realignment of the following agencies/activities to move from Fort Belvoir:

- The Army Materiel Command (AMC) Headquarters and the U.S. Army Security Assistance Command to Redstone Arsenal, Alabama
- The Army Prime Power School to Fort Leonard Wood, Missouri
- The U.S. Army Criminal Investigation Command Headquarters to Quantico, Virginia
- The Soldiers Magazine to Fort Meade, Maryland
- The Defense Threat Reduction Agency, Chemical Biological Defense Research to Aberdeen Proving Ground, Maryland
- The Defense Threat Reduction Agency conventional armaments research functions to Eglin Air Force Base, Florida
- The Army Research Office to the National Naval Medical Center, Bethesda, Maryland
- The Sensors, Electronics, and Electronic Warfare Research, Development and Acquisition activities to Aberdeen Proving Ground, Maryland, except the Night Vision and Electronic Sensors Directorate (the Night Vision Lab) and the Project Manager Night Vision/Reconnaissance, Surveillance and Target Acquisition (PMNV/RSTA)
- The Information Systems Research and Development and Acquisition (except for the Program Executive Office, Enterprise Information Systems) to Aberdeen Proving Ground, Maryland

The BRAC Commission recommendations for relocating administrative, medical, and special/intelligence missions to Fort Belvoir will result in the relocation of approximately 22,000 personnel to the installation, which could require the construction of approximately 6- to 7-million square feet of new facilities, plus parking; new roads or road improvements (on- and off-site) and possibly the creation of a new multimodal transportation infrastructure; new utilities; other base support; and use or renovation of existing space. The BRAC realignment activities at Fort Belvoir consist of administrative, research, and other special missions to be placed in newly constructed, renovated, or existing buildings. No new field training facilities will be required.

The Army's overall goal for this BRAC action is to complete realignment by September 14, 2011. The Army procured the services of an urban planner, Belvoir New Vision Planners (BNVP) to develop siting alternatives for the BRAC action and future development at Fort Belvoir. BNVP is tasked with transforming Fort Belvoir into a world-class facility that supports a community of military and national security organizations as well as updating the installation's master plan. The master plan effort will gather tenant requirements and desires and develop courses of action for siting the BRAC and non-BRAC missions at Fort Belvoir. The Army will concurrently conduct the master plan process and prepare the BRAC realignment EIS. The EIS will analyze the long-range component of the master plan and address potential impacts, including impacts from changes in land use designations from the 1993 master plan as well as potential land use compatibility issues. Therefore, the information developed by the urban planner is required for analysis in the BRAC realignment EIS.

1.2 PURPOSE OF SCOPING

Under regulations issued by the Council on Environmental Quality (CEQ)¹, the evaluation of potential environmental effects of federal actions is open to the public. Public participation in the NEPA process promotes both open communications between the public and the Army and better decision making. All persons and organizations that have a potential interest in the proposed action, including minority, low-income, disadvantaged, and Native American groups, are urged to participate in the NEPA environmental analysis process.

Public participation opportunities with respect to the proposed action are guided by CEQ and Army regulations.² These regulations provide for five major aspects of public participation available in conjunction with preparation of this EIS: (1) Notice of Intent, (2) scoping, (3) 45-day public review of the draft EIS, (4) public hearing on the draft EIS, and (5) 30-day public review of the final EIS.

Throughout this process, the public can obtain information on the status and progress of the proposed action and the EIS through the Fort Belvoir Public Affairs Office by calling the Directorate of Public Affairs at 703-805-5001 or visiting the BNVP Web site (www.belvoirnewvision.com) and clicking “Links and Resources.”

1.3 INITIAL SCOPE OF THE ANALYSIS

The Notice of Intent (NOI), informing the public that an EIS will be prepared is the first formal step in the NEPA public involvement process. The notice is published in the *Federal Register* by the agency proposing the action. The NOI includes a description of the proposed action and gives the name and address of an agency contact person. The NOI declaring the Army’s intent to prepare an EIS for realignment of Fort Belvoir was published in the *Federal Register* on November 23, 2005 (Appendix B).

Numerous issues and concerns will affect selection of alternatives and identification of issues to be addressed in the EIS. A representative listing of such issues includes land use, aesthetics and visual resources, air quality, noise, geology and soils, water resources, biological resources, cultural resources, socioeconomics, transportation, utilities, and hazardous and toxic substances. The EIS will consider a range of alternatives to accommodate BRAC recommendations for the realignment of Fort Belvoir including a No Action Alternative. The EIS will also evaluate alternative siting locations at the installation for agencies and activities relocating to Fort Belvoir, the associated master plan update, and cumulative effects.

The following sections describe the process of scoping and efforts to solicit public and agency input to refine the scope of the EIS (Section 2.0), summarize the comments received during the scoping process (Section 3.0), and describe the issues that will be addressed in the EIS, as well as those that will not be addressed (Section 4.0). Appendix C and Appendix H contain press

¹ Council on Environmental Quality *Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act*, Title 40 of the *Code of Federal Regulations* (CFR) Parts 1500–1508.

² *Environmental Analysis of Army Actions*, 32 CFR Part 651.

releases, letters, brochures, and other information provided at the scoping meetings and throughout the scoping process, as well as the public comments received during the open comment period.

SECTION 2.0 SCOPING PROCESS SUMMARY

The scoping meeting was an integral part of a broader scoping effort the Army conducted to help clarify issues of major concern, identify any information sources available to analyze and evaluate impacts, and obtain public input on the range and acceptability of alternatives. The alternatives will include options for construction, siting and design of facilities, and the types and extent of transportation improvements needed to accommodate the new facilities.

The overall scoping process consisted of the following elements:

- Publishing the NOI in the *Federal Register*
- Distributing a public notice to newspapers
- Mailing of public and agency scoping letters
- Conducting a public scoping meeting to inform the public about the BRAC Commission's recommendations for Fort Belvoir and solicit oral and written comments on the issues that should be addressed in the EIS
- Reviewing, analyzing, and evaluating oral and written comments received within the open comment period

2.1 NOTICE OF INTENT

As described above, the NOI (see Appendix B) was published in the *Federal Register* on November 23, 2005, informing the public that an EIS will be prepared. This is the first formal step in the NEPA public involvement process. The NOI encouraged public participation to promote open communication on the issues surrounding the proposal. All federal, state, tribal, and local agencies and other persons and organizations were urged to participate in the scoping process. The following contact was listed as a source for additional information:

Public Affairs Office
Fort Belvoir, VA
703-805-2583

2.2 PUBLIC NOTICE FOR NEWSPAPERS

Advertisements were published in several newspapers in the region (Table 2-1 and Appendix C). The advertisements included information on the proposed action, as well as the date and location of the public scoping meeting. The following contact information was provided for readers with questions or comments:

Directorate of Public Works
ATTN: BRAC EIS Comments
9430 Jackson Loop, Suite 100
Fort Belvoir, VA 22060-5116
703-805-5001
environmental@belvoir.army.mil.
www.belvoirnewvision.com (click on “Links and Resources”)

Table 2-1
Advertised public notices

Date of publication	Publication	Location
May 25 and June 1, 2006	Mount Vernon Gazette	Mount Vernon, VA
May 28, 2006	Washington Post	Washington, DC
June 1, 2006	Fort Belvoir News	Fort Belvoir, VA
June 1, 2006	Springfield Times	Springfield, VA

2.3 PUBLIC AND AGENCY SCOPING LETTERS

Agency and public scoping letters (Appendix D) were mailed on May 17, 2006, to 188 individuals, organizations, tribes, and state and federal agencies (Appendix E) to inform them about the proposed action at Fort Belvoir, solicit their input concerning issues that should be addressed in the EIS, and invite them to attend the public scoping meeting.

The letters included information about the BRAC action at Fort Belvoir, the scope of the EIS, directions to the meeting, and instructions for submitting comments concerning the proposed action.

Fort Belvoir provided the mailing. The letters instructed recipients to send written comments to the Fort Belvoir Directorate of Public Works no later than July 2, 2006, or to submit written or oral comments at the scoping meeting. The Directorate of Public Works and the Web site (www.belvoirnewvision.com) were identified as resources for obtaining further information on the EIS.

2.4 PUBLIC SCOPING MEETING

The public scoping meeting was held on June 7, 2006, from 7:00 p.m. to 9:30 p.m. at the Hilton Springfield Hotel in Springfield, Virginia. The venue was chosen because of facility availability and accessibility to the public throughout the Fort Belvoir region. More than 100 members of the public (including representatives from federal, state, and local agencies and the press) attended the public scoping meeting.

COL Brian Lauritzen, Fort Belvoir Garrison Commander, kicked off the public scoping meeting by welcoming attendees and explaining the meeting’s format and layout. COL Lauritzen then introduced the Honorable Dana Kaufman, Fairfax County Supervisor, Lee District, who also welcomed attendees to the meeting.

An open house format was used at the meeting. Nine stations with displays (Appendix F), PowerPoint presentations (Appendix G), and handouts (Appendix H) were available for viewing. Each booth was staffed by personnel from the Army, Fort Belvoir, the BRAC NEPA Support Team (NST), and representatives from the BNVP, Master Planning Team.

The interactive stations presented information on NEPA; population, economics, and the proposed action; traffic and air quality; natural, historic, and archeological resources; and other EIS elements. Additionally, welcome, court reporter, and comment tables were available to provide information and accept oral and written comments.

Attendees were welcomed at the entrance and provided a handout of all the display materials, a color brochure, and a comment form. Attendees were asked to sign in (Appendix I) and were provided instructions for viewing the displays, which they were encouraged to visit in any sequence they desired. A Scoping Meeting Participants' Guide display at the welcome station provided further guidance on how to proceed through the exhibit hall and provide comments.

Throughout the room, pens and forms were available for attendees to submit their comments in the comment box. A computer was also available for submitting online comments. Across the hall, a private room for submitting oral comments to a court reporter was available with a display detailing how comments would be used. Army and other master planning and environmental experts were available to answer questions.

In addition to the public scoping meeting, the Army reserved a time to meet with federal, state and local agency officials to discuss the scope of the EIS. This meeting was conducted at 1:30 p.m. on June 7, 2006, before the public scoping meeting, at the Hilton Springfield Hotel. About 30 people representing approximately 15 agencies attended the meeting (a roster of the attendees is provided in Appendix J). Ms. Susan Holtham, BRAC NST, opened the meeting with a brief background of the BRAC EIS process and the proposed action at Fort Belvoir. Colonel Brian Lauritzen, Fort Belvoir Garrison Commander, stated that the public scoping process is an opportunity to identify issues and draw out agency concerns. The meeting was then opened for questions. Members of the audience representing federal, state, and local agencies asked questions or offered comments, and the BRAC NST provided input for discussion. Questions on planning, transportation, socioeconomic, environmental resources, cultural resources, and the scoping process were all raised during this meeting. The following issues were discussed at length:

- Siting of new development (particularly the DeWitt Hospital)
- The locations from which new personnel will be coming
 - Potential for shift in residence for these personnel
 - Potential for influx of new school-aged children into Fairfax County
- Impacts to transportation and potential mitigation measures
- Funding for transportation improvements
- Preservation and public access for the Environmental Quality Corridor (EQC) on the Engineering Proving Ground (EPG) and the wildlife refuges on the Main Post
 - Maintenance of the forest and wildlife corridor through the installation

- The ability of agency representatives and the public to make substantive comments at this stage in the planning process
- The need to have the master plan completed before conducting the EIS

A summary of the discussion points is provided in Appendix J.

Following the public scoping meeting, the BRAC NST conducted a debriefing meeting. Overall impressions of the public's response to each booth were noted as were frequently asked questions, comments or concerns. A summary of this meeting is included in Appendix K.

2.5 PUBLIC COMMENTS

Written comments were accepted by mail, e-mail, online, or in person at the public scoping meeting. Additionally, a court reporter was available at the public scoping meeting to accept oral comments. No comments were submitted to the court reporter. The Army requested that all comments concerning the EIS be submitted by July 2, 2006, addressed to the Fort Belvoir Directorate of Public Works, ATTN: EIS Comments, 9430 Jackson Loop, Suite 100, Fort Belvoir, VA 22060-5116; by e-mail to: environmental@belvoir.army.mil; or on the BNVP Web site: www.belvoirnewvision.com (click on "Links and Resources").

The following section contains a review, analysis, and evaluation of the comments received during the scoping process. Appendix L contains the scoping comments received as of July 2, 2006, and a copy of each of the original public comment forms that were submitted.

SECTION 3.0 COMMENT ANALYSIS

Each comment received during the scoping process for the EIS for Fort Belvoir was carefully reviewed and grouped into one of the following six categories of common issues: socioeconomics, cultural resources, traffic and transportation, land use, natural resources, and other. After the initial review, the issues were studied further to determine the issues of specific concern. As a result, 72 specific concerns were identified.

Table 3-1 lists the six categories of issues identified and the specific concerns for each category. The manner in which the issues can be addressed in the EIS is noted in the right-hand column. Any new issues identified following the close of the scoping comment period or during the 45-day public comment period following publication of the Draft EIS (to be published in winter 2006–2007) will be incorporated into the Scope of Statement appendix in the Final EIS. The EIS section addressing each issue will be included in a third column that will be added to Table 3.1 in the Scope of Statement appendix in the Draft EIS.

**Table 3-1
Issues identified during scoping**

Issues raised in the scoping process for consideration in the EIS	Response to comments
Socioeconomics	
<ul style="list-style-type: none"> • Need to know the potential impact on local schools and their capacity to accommodate the number of incoming students, both during the construction phase and after military and civilian personnel move to the post. • Need to accurately estimate the number of school-aged children who will be coming to the Fort Belvoir area as a result of BRAC 2005. • Potential for the need to construct new schools/expand existing schools to accommodate the expected influx of school-aged students, particularly in Fairfax County. • Need for federal funding to support the hiring of teaching and support staff and the full range of other professionals necessary to ensure an appropriate education; the purchase of desks, chairs, tables, computers, and other classroom resources. • Need for increased support for extracurricular activities (particularly club sports) as the percentage of students from military families increases. • Request for federal resources to conduct a study of the socioeconomic and environmental effects of the changes at Fort Belvoir on the Fairfax County Public School system. • Request for designation of the Fairfax County Public Schools as a “cooperating agency. • Local communities will not have a sufficient tax base for hiring teachers and creating additional space to accommodate the influx of students. • Examine the real commuter, road, and air quality impacts; include the precise number of contractors serving DOD entities to be relocated and the dollar figures of contracts under which these contractors perform. • Include precise lease language for commercial, for-profit, opportunities on federal property and include an assessment of the economic impact of these commercial activities if they had been located in adjacent Fairfax County commercial space. • Include precise numbers of bedrooms in the proposed housing to plan the precise number of children who will attend Fairfax County Public Schools. 	<ul style="list-style-type: none"> • Will be analyzed in this EIS • The number of school-aged children will be included in this EIS as such information becomes available • Beyond the scope of this EIS • Beyond the scope of this EIS • Beyond the scope of this EIS • Beyond the scope of this EIS • Comment noted • Comment noted • Transportation and air quality effects will be addressed in the EIS; contractor estimates will be included as they become available • Beyond the scope of this EIS • The RCI program will address this issue
Cultural resources	
<ul style="list-style-type: none"> • Request that the Army continue to consult with the Department of Historic Preservation (DHP) on the impact that the BRAC actions will have on historic properties and archaeological sites at Fort Belvoir. • Request that construction within sight of the Friends Meetinghouse at Woodlawn be screened from view. • Request that Woodlawn Gate be closed and access to the Meetinghouse at Woodlawn from Route 1 be restored. 	<ul style="list-style-type: none"> • The Army will consult with the SHPO on this issue • Will be analyzed in this EIS • Will be analyzed in this EIS

**Table 3-1
Issues identified during scoping**

Issues raised in the scoping process for consideration in the EIS	Response to comments
Traffic and transportation	
<ul style="list-style-type: none"> • Need to know the potential impact on local transportation, especially the increased congestion on I-495 and I-95. • Need to expand and improve public transportation regionally to accommodate the increase in population in the area. • Consider the numerous additional private contractors that will be required to relocate to the immediate vicinity of Fort Belvoir. • The Army should consider both direct and indirect transportation effects of the proposed BRAC action at Fort Belvoir, along with mitigation measures. • Any serious analysis of the long-term Fort Belvoir transportation needs must consider more than just the final segment of the Fairfax County Parkway and the I-95 fourth lane. • Need to consider electric bus or light rail systems for employees who commute and visitors to Fort Belvoir to minimize disruption to surrounding communities, traffic, noise, and air pollution. • Need for better data on the number of current and future commuters coming from each ZIP Code area. • The hospital should be located at the Engineering Proving Ground (EPG) to avoid the traffic problems if it is on the Main Post. • A grade-separated intersection needs to be constructed for the Fairfax County Parkway and the street that provides access to Greenspring Village to the north and to the residential development to the south. • Incorporating “demand management” of traffic. • Conduct annual audits and publication of mandatory mass transit for all employees, and contractors, and residents. • Build links to mass transit at Springfield and Huntington Metro. • Need to evaluate the density of the project and the adequacy of infrastructure to support development; rail extension, more road construction, etc. • Need to study the BRAC impacts on the GW Parkway and the GW Memorial Highway. • Do not include the replacement of the Woodlawn Road project in the BRAC EIS. • Request that the Army coordinate with the Virginia Railway Express (VRE) on any proposals to mitigate BRAC impacts that rely on increased use of VRE • The alternatives should identify approaches and mitigation that promote transportation mobility, accessibility and multi-modal transportation choices, minimizes single-occupant vehicle use and encourages transit use. 	<ul style="list-style-type: none"> • Will be analyzed in this EIS • Will be analyzed in this EIS • Contractor estimates will be included in the EIS as they become available • Will be analyzed in this EIS • Will be analyzed in this EIS • Comment noted • Comment noted • Comment noted • Comment noted • Comment noted • Beyond the scope of this EIS • Comment noted • Will be analyzed in the EIS • Impacts to traffic in the vicinity of Fort Belvoir will be analyzed in this EIS • It is being addressed in the EA being prepared for the Federal Highway Administration • The Army will coordinate with VRE • Will be analyzed in this EIS

**Table 3-1
Issues identified during scoping**

Issues raised in the scoping process for consideration in the EIS	Response to comments
<ul style="list-style-type: none"> • The Council on Government's (COG) Traffic model is not appropriately scaled for use in this analysis 	<ul style="list-style-type: none"> • The traffic analysis will use both the regional COG model and a scaled sub-area model to assess the changes in travel patterns and volumes; using these two models will provide the appropriate scale
Land use	
<ul style="list-style-type: none"> • The hospital should not be located at EPG because it is too difficult to find. • Need to design development projects to minimize impacts on natural resources. • Need to consider constructing all buildings in accordance with principles of sustainable development, including building parking areas to minimize runoff and impermeable surfaces, using green roofing and solar power, and recycling of grey water. • Recommend conducting any in-stream activities during low- or no-flow conditions, using nonerodible cofferdams to isolate the construction area, blocking no more than 50 percent of the streamflow at any time, stockpiling excavated material in a manner that prevents reentry into the stream, restoring original streambed and streambank contours, revegetating barren areas with native vegetation, and implementing strict erosion and sediment control measures. • Ensure that all, or at least part of, the development is Low Impact Development. Use any unoccupied buildings for expansion instead of building new structures if they are not needed. • Request for the continued accommodation of the Mount Vernon High School Crew Team on-base. • Request that, due to noise issues, the National Army Museum not be located near the Friends Meetinghouse at Woodlawn, that its proposed location be moved to EPG. • Suggest use of parking garages instead of parking lots to minimize footprint. • Eliminate free employee parking. 	<ul style="list-style-type: none"> • Comment noted • Comment noted • Comment noted • Comment noted • Comment noted • Comment noted • Comment noted • Comment noted • Comment noted
Natural resources	
<ul style="list-style-type: none"> • Need to consider relocating stream channels rather than filling or channelizing. • Need to maintain undisturbed wooded buffers of at least 100 feet in width around all on-site wetlands and on both sides of all perennial streams. • Consider not using storm water management ponds or in-stream storm water management ponds for mitigation of wetland impacts. • Suggest designing storm water controls to replicate and maintain the hydrographic condition of the site prior to construction. • Consider the use of Low Impact Development practices such as bioretention areas and grass swales. 	<ul style="list-style-type: none"> • Comment noted • Comment noted • Comment noted • Comment noted • Comment noted

**Table 3-1
Issues identified during scoping**

Issues raised in the scoping process for consideration in the EIS	Response to comments
<ul style="list-style-type: none"> • Consider building parking decks instead of parking lots because of environmental impact studies that have been done that show the ways in which parking lots affect wetlands and runoff. • Include a wildlife corridor at all costs to conserve what wildlife there is on and near the installation. • Preserve wetlands to prevent damage to the river system and to preserve endangered and threatened species. • Consider construction of stream crossings using clear-span bridges rather than culverts if possible. If not, recommend countersinking culverts below the streambed at least 6 inches, or use bottomless culverts to allow passage of aquatic organisms. • EIS should identify all 100-year floodplains and Resource Protection Areas • Fort Belvoir should participate in ongoing watershed planning efforts • Concern with potential intensification of development in the southwest area • Consider installing floodplain culverts to carry bankfull discharges. • EIS should analyze the use of LEEDS certifications for all buildings and site development. • Use of green roofs. • Evaluate all alternatives for how, and how effectively, they can achieve the compact, mixed use, pedestrian-friendly, sustainable and connected urban designs that represent a significant component of the "Belvoir New Vision Goals." • It is essential to commit to avoidance of impacts to tidal and nontidal wetlands. 	<ul style="list-style-type: none"> • Comment noted • Comment noted • Comment noted • Comment noted • Will be evaluated in the EIS • Comment noted • Comment noted • Comment noted • Will be evaluated in the EIS • Comment noted • Will be addressed under the master plan analysis • Will be analyzed in the EIS
Other	
<ul style="list-style-type: none"> • Include the Mount Vernon Council of Citizens Association (MVCCA) as a formal entity among your cooperating agencies. • Please create a forum to better involve conservation organizations. • Information presented at the scoping meeting was insufficient. • A more holistic appraisal of the impacts of the BRAC action was expected. • Design all BRAC EIS public scoping components and outreach programs to follow precisely the procedures used in the Woodrow Wilson Bridge Project. • All project mitigation must be unequivocally included in the projects and the project funding. 	<ul style="list-style-type: none"> • Comment noted • Comment noted • Comment noted • Direct, indirect, and cumulative effects from the preferred alternative for the BRAC action will be in the Draft EIS in the winter of 2006–2007 • Comment noted • Mitigation requiring funding will be included in the Record of Decision (ROD)

**Table 3-1
Issues identified during scoping**

Issues raised in the scoping process for consideration in the EIS	Response to comments
<ul style="list-style-type: none"> • The public has never been presented the alternatives or the BRAC project in a meaningful way. • The public comments are due the same week that the alternatives are being narrowed. This violates the principles of NEPA, and the community is opposed to this process. • Conduct new baseline studies that reflect the cumulative effects of the non-BRAC projects that have occurred since the 1994 master plan, including DTRA, RCI, DLA, etc. for air quality, water quality, open space, traffic counts, child attendance in local schools. • Conduct multiple scoping meetings using the public hearing forum of audience and podium with microphone. • Address the statutory requirements for <i>threat reduction measures</i> and define how the projects meet or exceed the standards and where in the National Capital Region the standards <i>are not followed</i>. • The EIS should include information on risk and threat assessments sufficient to identify and evaluate appropriate security measures. • EIS should address potential need for additional utilities • Due to inadequate public notifications and public information, extend the deadline for receipt Scoping Comments to September 15, 2006. 	<ul style="list-style-type: none"> • The alternatives are being developed with the public feedback throughout the scoping process. The alternatives will be presented in the Draft EIS in winter 2006–2007 • The public comments collected during the initial phase of the scoping process will be used to aid in the process of selecting a range of alternatives. The alternatives will be presented in the Draft EIS in winter 2006–2007. A 45-day public comment period begins after releasing the Draft EIS. During this comment period the public will have additional opportunities to provide feedback before the Final EIS is published. • Will be analyzed in the cumulative impacts section of the EIS, which covers effects of past, present and future reasonable and foreseeable actions • A public hearing will occur following release the Draft EIS in winter 2006–2007. • The EIS will address security issues on Fort Belvoir, however, security issues outside of the installation are beyond the scope of this EIS. • Security measures will be addressed in the master plan analysis • Will be addressed in the EIS • The scoping process continues beyond the deadline for submission of comments to be included in the Scope of Statement. The Army will continue to accept comments beyond July 2, 2006, for use in defining the scope of the EIS. In addition, a 45-day public comment period begins after releasing the Draft EIS in the winter of 2006–2007.

SECTION 4.0 CONCLUSIONS

Comments submitted by members of the public and representatives of federal, state, and local agencies generally fall into one of four categories: impacts on Fairfax County Public Schools (33 percent); traffic and transportation (27 percent); potential impacts to the environment (20 percent); and preservation of cultural resources/historic properties (13 percent). The consistency of comments received has provided the Army with an understanding of the issues that the public would like the EIS to address.

Appendix A

BRAC Recommendations

2005 BRAC Recommendations for Fort Belvoir, Virginia

The BRAC Commission made 35 recommendations concerning Fort Belvoir. The essence of each recommendation is outlined below.

Realign Fort Belvoir, VA by relocating and consolidating Sensors, Electronics, and Electronic Warfare Research, Development and Acquisition activities to Aberdeen Proving Ground, MD except the Night Vision and Electronic Sensors Directorate (the Night Vision Lab) and the Project Manager Night Vision/Reconnaissance, Surveillance and Target Acquisition (PM NV/RSTA), and by relocating and consolidating Information Systems Research and Development and Acquisition (except for the Program Executive Office, Enterprise Information Systems) to Aberdeen Proving Ground, MD.

Realign the PM Acquisition, Logistics and Technology Enterprise Systems and Services (ALTESS) facility at 2511 Jefferson Davis Hwy, Arlington, VA, a leased installation, by relocating and consolidating into the Program Executive Office, Enterprise Information Systems at Fort Belvoir, VA.

Realign Fort Belvoir, VA, by relocating Army Prime Power School training to Fort Leonard Wood, MO.

Realign Fort Belvoir, VA, by relocating the Army Criminal Investigation Command (CID) to Marine Corp Base Quantico, VA.

Realign Ballston Metro Center, a leased installation in Arlington, VA, by relocating the U.S. Army Legal Agency to Fort Belvoir, VA.

Close 1500 Wilson Boulevard and Presidential Towers, leased installations in Arlington, VA, by relocating offices accommodating Pentagon Renovation temporary space to Fort Belvoir, VA.

Close Metro Park III and IV (6350 and 6359 Walker Lane), a leased installation in Alexandria, VA, by relocating the Defense Contract Management Agency Headquarters to Fort Lee, VA.

Realign 400 Army Navy Drive, a leased installation in Arlington, VA, by relocating the Office of the Secretary of Defense, Washington Headquarters Services, and the DoD Inspector General to Fort Belvoir, VA.

Realign the Webb Building, a leased installation in Arlington, VA, by relocating the Department of Defense Education Activity and the Defense Human Resources Activity to Fort Belvoir, VA.

Realign Rosslyn Plaza North, a leased installation in Arlington, VA, by relocating offices accommodating Pentagon Renovation temporary space, Washington Headquarters Services and the Defense Human Resources Activity to Fort Belvoir, VA.

Realign Crystal Gateway North, a leased installation in Arlington, VA, by relocating the Office of the Secretary of Defense, Washington Headquarters Services, and the DoD Inspector General to Fort Belvoir, VA.

Realign 2001 North Beauregard Street, 621 North Payne Street, Ballston Metro Center, Crystal Square 4, Crystal Square 5, Crystal Plaza 6, 4015 Wilson Boulevard, Skyline 5, and Skyline 6, leased installations in Northern VA, by relocating the Office of the Secretary of Defense to Fort Belvoir, VA.

Realign Crystal Mall 3, a leased installation in Arlington, VA, by relocating the Office of the Secretary of Defense and the Defense Finance and Accounting Service at Fort Belvoir, VA.

Realign Hoffman 1, Crystal Gateway 1, Crystal Gateway 2, Crystal Gateway 3, and the James K. Polk Building, leased installations in Northern VA, by relocating the Office of the Secretary of Defense and Washington Headquarters Services to Fort Belvoir, VA.

Realign the Nash Street Building, a leased installation in Arlington, VA, by relocating the Defense Human Resources Activity to Fort Belvoir, VA.

Realign Alexandria Tech Center IV, a leased installation in Alexandria, VA, by relocating the Defense Technology Security Administration to Fort Belvoir, VA.

Realign 1400-1450 South Eads Street, a leased installation in Arlington, VA, by relocating the DoD Inspector General to Fort Belvoir, VA.

Realign 1401 Wilson Boulevard, a leased installation in Arlington, VA, by relocating the Office of the Secretary of Defense, Washington Headquarters Services, and Defense Human Resources Activity to Fort Belvoir, VA.

Realign 1555 Wilson Boulevard, a leased installation in Arlington, VA, by relocating offices of the Office of the Secretary of Defense and Defense Human Resources Activity to Fort Belvoir, VA.

Realign Crystal Mall 2-3-4 and Skyline 4, leased installations in Northern VA, by relocating Washington Headquarters Services to Fort Belvoir, VA.

Close the Suffolk Building, a leased installation in Falls Church, VA. Relocate all Missile Defense Agency (MDA) functions, except the Ballistic Missile Defense System Sensors Directorate, to Redstone Arsenal, AL.

Realign 176 the Space and Missile Defense Command (SMDC) Building, a leased installation in Huntsville, AL. Relocate all functions of the Missile Defense Agency to Redstone Arsenal, AL.

Realign Federal Office Building 2, Arlington, VA, by relocating a Headquarters Command Center for the Missile Defense Agency to Fort Belvoir, VA, and by relocating all other functions of the Missile Defense Agency, except the Command and Control Battle Management and Communications Directorate, to Redstone Arsenal, AL.

Realign Fort Belvoir, VA, by relocating Soldier Magazine to Fort Meade, MD.

Realign Fort Belvoir, VA by relocating Army Materiel Command (AMC) and the Security Assistance Command (USASAC, an AMC major subordinate command) to Redstone Arsenal, AL.

Close National Geospatial-Intelligence Agency (NGA) Dalecarlia and Sumner sites, Bethesda, MD; Reston 1, 2 and 3, leased installations in Reston, VA; Newington buildings 8510, 8520, and 8530, Newington, VA; and Building 213 a leased installation at the South East Federal Center, Washington, DC. Relocate all functions to a new facility at Fort Belvoir, VA. Realign the National Reconnaissance Office facility, Westfields, VA, by relocating all NGA functions to a new facility at the Fort Belvoir, VA. Consolidate all NGA National Geospatial-Intelligence College functions on Fort Belvoir into the new facility at Fort Belvoir, VA.

Realign Walter Reed Army Medical Center, Washington, DC, as follows: relocate all tertiary (sub-specialty and complex care) medical services to National Naval Medical Center, Bethesda, MD,

establishing it as the Walter Reed National Military Medical Center Bethesda, MD; relocate Legal Medicine to the new Walter Reed National Military Medical Center Bethesda, MD; relocate sufficient personnel to the new Walter Reed National Military Medical Center Bethesda, MD, to establish a Program Management Office that will coordinate pathology results, contract administration, and quality assurance and control of DoD second opinion consults worldwide; relocate all non-tertiary (primary and specialty) patient care functions to a new community hospital at Ft Belvoir, VA; relocate the Office of the Secretary of Defense supporting unit to Fort Belvoir, VA; disestablish all elements of the Armed Forces Institute of Pathology except the National Medical Museum and the Tissue Repository; relocate the Armed Forces Medical Examiner, DNA Registry, and Accident Investigation to Dover Air Force Base, DE; AFIP capabilities not specified in this recommendation will be absorbed into other DoD, Federal, or civilian facilities, as necessary; relocate enlisted histology technician training²²³ to Fort Sam Houston, TX; relocate the Combat Casualty Care Research sub-function (with the exception of those organizational elements performing neuroprotection research) of the Walter Reed Army Institute of Research (Forest Glen Annex) and the Combat Casualty Care Research sub-function of the Naval Medical Research Center (Forest Glen Annex) to the Army Institute of Surgical Research, Fort Sam Houston, TX; relocate Medical Biological Defense Research of the Walter Reed Army Institute of Research (Forest Glen Annex) and Naval Medical Research Center (Forest Glen Annex) to Fort Detrick, MD, and consolidate it with US Army Medical Research Institute of Infectious Diseases; relocate Medical Chemical Defense Research of the Walter Reed Army Institute of Research (Forest Glen Annex) to Aberdeen Proving Ground, MD, and consolidate it with the US Army Medical Research Institute of Chemical Defense; and close the main post.

Realign Fort Belvoir, VA, by relocating the Chemical Biological Defense Research component of the Defense Threat Reduction Agency to Edgewood Chemical Biological Center, Aberdeen Proving Ground, MD.

Realign Naval Support Activity Mechanicsburg, PA, as follows: relocate the Budget/Funding, Contracting, Cataloging, Requisition Processing, Customer Services, Item Management, Stock Control, Weapon System Secondary Item Support, Requirements Determination, Integrated Materiel Management Technical Support Inventory Control Point functions for Consumable Items, except those Navy items associated with Nuclear Propulsion Support, Level 1/Subsafe and Deep Submergence System Program (DSSP) Management, Strategic Weapon Systems Management, Design Unstable/Preproduction Test, Special Waivers, Major End Items and Fabricated or Reclaimed items to Defense Supply Center Columbus, OH, and reestablish them as Defense Logistics Agency Inventory Control Point functions; disestablish the procurement management and related support functions for Depot Level Repairables and designate them as Defense Supply Center Columbus, OH, Inventory Control Point functions; and relocate the oversight of Budget/Funding, Contracting, Cataloging, Requisition Processing, Customer Services, Item Management, Stock Control, Weapon System Secondary Item Support, Requirements Determination, Integrated Materiel Management Technical Support Inventory Control Point functions for Consumable Items and the oversight of procurement management and related support functions for Depot Level Repairables to the Defense Logistics Agency, Fort Belvoir, VA.

Realign Marine Corps Base, Albany, GA, as follows: relocate the Budget/Funding, Contracting, Cataloging, Requisition Processing, Customer Services, Item Management, Stock Control, Weapon System Secondary Item Support, Requirements Determination, Integrated Materiel Management Technical Support Inventory Control Point functions for any residual Consumable Items to Defense Supply Center Columbus, OH, and reestablish them as Defense Logistics Agency Inventory Control Point functions; disestablish the procurement management and related support functions for Depot Level Repairables and designate them as Defense Supply Center Columbus, OH, Inventory Control Point functions; and relocate the oversight of Budget/Funding, Contracting, Cataloging, Requisition Processing, Customer Services, Item Management, Stock Control, Weapon System Secondary Item Support,

Requirements Determination, Integrated Materiel Management Technical Support Inventory Control Point functions for Consumable Items and the oversight of procurement management and related support functions for Depot Level Repairables to the Defense Logistics Agency, Fort Belvoir, VA.

Realign Wright-Patterson Air Force Base, OH, by relocating the oversight of Budget/Funding, Contracting, Cataloging, Requisition Processing, Customer Services, Item Management, Stock Control, Weapon System Secondary Item Support, Requirements Determination, Integrated Materiel Management Technical Support Inventory Control Point functions for Consumable Items and the oversight of procurement management and related support functions for Depot Level Repairables to the Defense Logistics Agency, Fort Belvoir, VA.

Realign Fort Belvoir, VA, by assigning the oversight of Budget/Funding, Contracting, Cataloging, Requisition Processing, Customer Services, Item Management, Stock Control, Weapon System Secondary Item Support, Requirements Determination, Integrated Materiel Management Technical Support Inventory Control Point functions for Consumable Items and the oversight of procurement management and related support functions for Depot Level Repairables to the Defense Logistics Agency, Fort Belvoir, VA.

Realign Fort Belvoir, VA, by relocating Defense Threat Reduction Agency National Command Region conventional armament Research to Eglin Air Force Base, FL.

Appendix B

Notice of Intent

ROUTINE USES OF RECORDS MAINTAINED IN THE SYSTEM, INCLUDING CATEGORIES OF USERS AND THE PURPOSES OF SUCH USES:

In addition to those disclosures generally permitted under 5 U.S.C. 552a(b) of the Privacy Act, these records or information contained therein may specifically be disclosed outside the DoD as a routine use pursuant to 5 U.S.C. 552a(b)(3) as follows: The 'Blanket Routine Uses' published at the beginning of the Air Force's compilation of record system notices apply to this system.

POLICIES AND PRACTICES FOR STORING, RETRIEVING, ACCESSING, RETAINING, AND DISPOSING OF RECORDS IN THE SYSTEM:**STORAGE:**

Maintained in file folders, note books/binders, in computers and on computer output products.

RETRIEVABILITY:

Retrieved by name, Social Security Number and detachment number.

SAFEGUARDS:

Records are accessed by person(s) responsible for servicing the record system in performance of their official duties and by authorized personnel who are properly screened and cleared for need-to-know. records are stored in locked rooms and cabinets. Those in computer storage devices are protected by computer system software.

RETENTION AND DISPOSAL:

Records at unit of assignment are destroyed one year after acceptance of commission or one year after disenrollment. Records at HQ AFROTC for disenrolled cadets are destroyed after three years. Computer records are destroyed when no longer needed. Records are destroyed by tearing into pieces, shredding, pulping, macerating or burning. Computer records are destroyed by erasing, deleting or overwriting.

SYSTEM MANAGER(S) AND ADDRESS:

Director of Senior Program, Air Force Reserve Officer Training Corps, 551 East Maxwell Boulevard, Maxwell Air Force Base, AL 36112-6110, and Commander of appropriate AFROTC detachment.

Official mailing addresses are published as an appendix to the Air Force's compilation of systems of records notices.

NOTIFICATION PROCEDURE:

Individuals seeking to determine whether this system of records contains information on them should address inquiries to the AFROTC Detachment Commander at location of assignment. Official mailing addresses are published

as an appendix to the Air Force's compilation of system of records notices.

Request for information involving an investigation for disenrollment should be addressed to Commander, Air Force Reserve Officer Training Corps, 551 East Maxwell Boulevard, Maxwell Air Force Base, AL 36112-6110. Requests should include full name and SSN.

RECORD ACCESS PROCEDURES:

Individuals seeking to access records about themselves contained in this system should address requests to the AFROTC Detachment Commander at location of assignment. Official mailing addresses are published as an appendix to the Air Force's compilation of systems of records notices.

Request for information involving an investigation for disenrollment should be addressed to Commander, Air Force Reserve Officer Training Corps, 551 East Maxwell Boulevard, Maxwell Air Force Base, AL 36112-6110. Requests should include full name and SSN.

CONTESTING RECORD PROCEDURES:

The Air Force rules for accessing records, and for contesting contents and appealing initial agency determinations are published in Air Force Instruction 33-332; 32 CFR part 806b; or may be obtained from the system manager.

RECORD SOURCE CATEGORIES:

Sources of records in the system are educational institutions, secondary and higher learning; government agencies; civilian authorities; financial institutions; previous employer; individual recommendations, interviewing officers; and civilian medical authorities.

EXEMPTIONS CLAIMED FOR THE SYSTEM:

Portions of this system may be exempt under the provisions of 5 U.S.C. 552a(k)(5), as applicable, but only to the extent that disclosure would reveal the identity of a confidential source.

Parts of this system may be exempt pursuant to 5 U.S.C. 552a(k)(5), but only to the extent that disclosure would reveal the identity of a confidential source.

[FR Doc. 05-23131 Filed 11-22-05; 8:45 am]

BILLING CODE 5001-06-M

DEPARTMENT OF DEFENSE**Department of the Army****Intent To Prepare Environmental Impact Statements for Realignment Actions Resulting From the 2005 Base Closure and Realignment Commission's Recommendations**

AGENCY: Department of the Army, DoD.

ACTION: Notice of intent.

SUMMARY: The Defense Base Closure and Realignment (BRAC) Commissions were established by Public Law 101-510, the Defense Base Closure and Realignment Act of 1990 (BRAC Law), to recommend military installations for realignment and closure. The 2005 Commission's recommendations were included in a report which was presented to the President on September 8, 2005. The President approved and forwarded this report to Congress on September 16, 2005. Since a joint resolution to disapprove these recommendations did not occur within the statutorily provided time period, these recommendations have become law and must be implemented in accordance with the requirements of the BRAC Law.

The BRAC Law exempts the decision-making process of the Commission from the provisions of the National Environmental Policy Act of 1969 (NEPA). The Law also relieves the Department of Defense from the NEPA requirement to consider the need for closing, realigning, or transferring functions and from looking at alternative installations to close or realign. Nonetheless, the Department of the Army must still prepare environmental impact analyses during the process of property disposal, and during the process of relocating functions from a military installation being closed or realigned to another military installation after the receiving installation has been selected but before the functions are relocated. These analyses will include consideration of the direct and indirect environmental and socioeconomic effects of these actions and the cumulative impacts of other reasonably foreseeable actions affecting the installations.

The Department of the Army intends to prepare individual Environmental Impact Statements (EIS) pursuant to section 102(2)(C) of NEPA, regulations of the Council on Environmental Quality (40 CFR 1500-1508), and the Army NEPA regulation (32 CFR 651 *et seq.*) for each of the actions listed below.

Opportunities for public participation will be announced in the respective local newspapers. The public will be

invited to participate in scoping activities for each EIS and comments from the public will be considered before any action is taken to implement these actions.

Environmental Impact Statements are planned for each of the following realignment actions:

a. Fort Meade, Maryland. The BRAC realignment action will co-locate and consolidate Department of Defense information and information technology missions at Fort Meade.

(1) EIS alternatives could include evaluating siting locations for structures and related projects within Fort Meade that involve new building construction only or new building construction combined with renovation of existing facilities. The alternatives would evaluate areas to provide for construction of, but not be limited to, six to eight 4-story administration buildings, a full day care child development center, a standard-design Whole Barracks Complex, and a physical fitness center.

(2) The proposed BRAC action may have significant environmental impacts due to the infrastructure and facilities construction that will be required to accommodate an estimated increase of over 5,500 personnel. Significant issues to be analyzed in the EIS may include potential impacts to air quality from increased vehicle emissions, installation and regional traffic increases, land use changes, natural resources, water use, solid waste, cultural resources, and cumulative impacts from increased burdens to the facility based on projected growth.

b. Aberdeen Proving Ground (APG), Maryland. APG will be receiving numerous Army, Navy and Air Force activities to transform it into a full spectrum research, development, acquisition center for Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) Defense Chemical and Biological Systems. The Army Test and Evaluation Command Headquarters and Civilian Personnel Offices will also be consolidated at APG.

(1) Alternatives to be examined in the EIS could include alternative distribution of new activities between APG and the Edgewood Area for military field training exercises; alternative siting schemes for placement of buildings and related infrastructure to accommodate an increase of about 15,000 Army personnel within the APG and Edgewood Area. These may include siting schemes for new building construction only, or new building

construction combined with renovation of existing facilities.

(2) The proposed BRAC action may have significant environmental impacts due to the large amount of infrastructure and facilities construction that will be required to accommodate an increase of personnel and military training operations. Significant issues to be analyzed in the EIS will include on-post and local air quality conditions, on-post and regional traffic conditions, housing, socioeconomic, noise due to increased vehicle use, threatened and endangered species to include bald eagle habitat, historic buildings and archeological resources, wetlands, biological resources, land use, and community facilities and services.

c. Fort Belvoir, Virginia. Fort Belvoir will be receiving numerous Department of Defense activities from leased space within the National Capital Region (NCR); National Geospatial Intelligence Agency units from various NCR leased locations and Bethesda, Maryland; primary and secondary medical care functions from Walter Reed Medical Center to a new, expanded DeWitt Army Hospital; and inventory control point functions for consumable items to the Defense Logistics Agency from the Naval Support Activist, Mechanisburg and Wright-Patterson Air Force Base, Ohio.

(1) EIS alternatives may consist of moving all activities to the Fort Belvoir Main Post, moving all activities to the Engineer Proving Ground (EPG), or moving a portion of the activities to the Main Point and a portion to the EPG. Other alternatives could include alternative land locations for specific projects within Fort Belvoir, within the EPG, or a combination of both; new construction only; new construction combined with renovation of existing facilities; alternative facility siting schemes, or other modifications of specific projects.

(2) The proposed BRAC action may have significant environmental impacts due to the large amount of infrastructure and facilities construction that will be required to accommodate an estimated increase of over 18,000 personnel. Significant issues to be analyzed in the EIS will include potential impacts to air quality condition in the Northern Virginia region, transportation systems in the Northern Virginia region, traffic conditions with Fort Belvoir, threatened and endangered species, historic buildings and archeological resources, wetlands, biological resources, land use, and community facilities and services.

d. Fort Lee, Virginia. Fort Lee will receive the Transportation Center and School from Fort Eustis, Virginia, and

the Ordnance Center and School from Aberdeen Proving Ground, Maryland. These functions will be consolidated with the Quartermaster Center and School, the Army Logistics Management College, and Combined Arms Support Command to establish a Combat Service Support Center at Fort Lee.

(1) Alternatives to be examined in the EIS may include the usage of only Fort Lee for field training exercises, the usage of other military installations (Fort A.P. Hill) for field training exercises, or a combination of both; alternative land locations for specific projects with Fort Lee and Fort A.P. Hill; new construction only; new construction combined with renovation of existing facilities; alternative facility siting schemes, or other modifications of specific projects.

(2) The proposed BRAC action may have significant environmental impacts due to the large amount of infrastructure and facilities construction that will be required to accommodate an estimated increase of over 7,000 personnel. Significant issues to be analyzed in the EIS will include air quality conditions, traffic conditions, noise due to increased training activities, threatened and endangered species, historic buildings and archeological resources, wetlands, biological resources, land use, and community facilities and services.

e. Fort Benning, Georgia. Fort Benning will receive the Armor Center and School from Fort Knox, Kentucky; 81st Regional Readiness Center from Fort Gillem, Georgia; and the U.S. Army Reserve Center from Columbus, Georgia.

(1) Alternatives to be examined by the EIS may consist of alternative siting locations with Fort Benning for facility construction projects, new construction only, renovation and use of existing facilities, or a combination of both new construction and use of existing facilities, and usage of alternatives land locations within Fort Benning for training activities.

(2) As a result of new construction and training activities associated with moving nearly 10,000 personnel to Fort Benning, the BRAC action has the potential to cause significant environmental impacts to threatened and endangered species such as the red-cockaded woodpecker, archeological sites, wetlands, soil erosion, and increased noise impacts to the surrounding public.

f. Fort Sam Houston, Texas. Navy and Air Force medical training activities from various locations within the U.S. and the 59th Medical Wing from Lackland Air Force Base, Texas, will move to Fort Sam Houston to form a Department of Defense medical training

center. The Army Installation Management Agency (IMA) Headquarters from Virginia, the Northwest IMA Regional office from Illinois, and the Army Environmental Center from Maryland will also move to Fort Sam Houston.

(1) Alternatives to be examined in the EIS could consist of alternative locations within Fort Sam Houston for siting facility construction, new construction only, renovation and use of existing facilities (to include historic buildings), or a combination of both new construction and use of existing facilities, and usage of alternative locations within Camp Bullis, a sub-post of Fort Sam Houston, for training activities.

(2) As a result of moving approximately 9,000 new personnel to Fort Sam Houston and associated new construction, renovation and training activities, implementing the proposed BRAC action could have potential significant impacts to traffic on and off post, air quality and historic properties, to include contributing elements of the Fort Sam Houston National Historic Landmark District.

g. Fort Carson, Colorado. Fort Carson will receive a Heavy Brigade Combat team and a Unit of Employment Headquarters from Fort Hood, Texas, and the inpatient care services from the U.S. Air Force Academy, Colorado. Another Infantry Brigade Combat Team from overseas could also be transferred to Fort Carson as a result of the BRAC recommendation.

(1) Alternatives that may be considered in the Fort Carson EIS could include phasing movement of units to the fort, alternative siting locations within the post of placement of new facilities, construction of only new facilities, utilization and renovation of existing facilities, a combination of new construction and utilization of existing facilities, and utilization of alternative locations within Fort Carson for training activities.

(2) Fort Carson will gain approximately 10,000 Army personnel as a result of the BRAC action. Construction of new facilities, renovation of existing infrastructure and additional training activities could have significant environmental impacts on Fort Carson and its environs. Impacts could concur to local air and water quality, archaeological resources, noise and traffic.

h. Pinion Canyon Maneuver Site, Colorado. Pinion Canyon Maneuver Site (PCMS) is a subpost of Fort Carson and a primary training area for units stationed at Fort Carson and other Army posts. The new combat units stationed

at Fort Carson will increase the training tempo at the PCMS.

(1) The EIS to be prepared for the PCMS will examine a number of implementation alternatives that could include alternative placement of new construction projects, alternative locations within the PCMS for training activities, and alternative timing for units to conduct training activities at the PCMS.

(2) The Fort Carson BRAC action has the potential to significantly impact natural resources at the PCMS since the approximately 10,000 new personnel to be stationed there will now be training at the PCMS on a regular basis. New construction and increased training activities at the PCMS could have an impact on archaeological resources, natural resources, air and water quality, and soil erosion.

FOR FURTHER INFORMATION CONTACT: Public Affairs Office of the affected installations or the appropriate higher headquarters as indicated: (1) Fort Meade, MD—(301) 677-1301; (2) Aberdeen Proving Ground, MD—(410) 278-1147; (3) Fort Belvoir, VA—(703) 805-2583; (4) Fort Lee, VA—(804) 734-6862; (5) Fort Benning, GA—(706) 545-3438; (6) Fort Sam Houston, TX—(210) 221-1099; (7) Fort Carson and Pinion Canyon Maneuver Site, CO—(910) 396-2122/5600.

Dated: November 18, 2005.

Addison D. Davis IV,

Deputy Assistant Secretary of the Army (Environment, Safety and Occupational Health), OASA(I&E).

[FR Doc. 05-23162 Filed 11-22-05; 8:45 am]

BILLING CODE 3710-08-M

DEPARTMENT OF DEFENSE

Defense Logistics Agency

Privacy Act of 1974; Systems of Records

AGENCY: Defense Logistics Agency.

ACTION: Notice to add a system of records.

SUMMARY: The Defense Logistics Agency proposes to add a system of records notice to its inventory of record systems subject to the Privacy Act of 1974 (5 U.S.C. 552a), as amended.

DATES: This action will be effective without further notice on December 23, 2005 unless comments are received that would result in a contrary determination.

ADDRESSES: Send comments to the Privacy Act Officer, Headquarters, Defense Logistics Agency, ATTN: DP,

8725 John J. Kingman Road, Stop 2533, Fort Belvoir, VA 22060-6221.

FOR FURTHER INFORMATION CONTACT: Ms. Susan Salus at (703) 767-6183.

SUPPLEMENTARY INFORMATION: The Defense Logistics Agency notices for systems of records subject to the Privacy Act of 1974 (5 U.S.C. 552a), as amended, have been published in the **Federal Register** and are available from the address above.

The proposed system report, as required by 5 U.S.C. 552a(r) of the Privacy Act of 1974, as amended, was submitted on October 5, 2005, to the House Committee on Government Reform, the Senate Committee on Homeland Security and Governmental Affairs, and the Office of Management and Budget (OMB) pursuant to paragraph 4c of Appendix I to OMB Circular No. A-130, 'Federal Agency Responsibilities for Maintaining Records About Individuals,' dated February 8, 1996 (February 20, 1996, 61 FR 6427).

Dated: November 17, 2005.

L.M. Bynum,

OSD Federal Register Liaison Officer, Department of Defense.

SYSTEM NAME:

Information Technology Access and Control Records.

SYSTEM LOCATION:

Director, Information Operations, Headquarters Defense Logistics Agency, ATTN: J-6, 8725 John J. Kingman Road, Stop 6226, Fort Belvoir, VA 22060-6221, and the Defense Logistics Agency field activities. Official mailing addresses are published as an appendix to DLA's compilation of systems of records notices.

CATEGORIES OF INDIVIDUALS COVERED BY THE SYSTEM:

Defense Logistics Agency (DLA) civilian and military personnel, contractor employees, and individuals requiring access to DLA-controlled networks, computer systems, and databases.

CATEGORIES OF RECORDS IN THE SYSTEM:

System contains documents relating to requests for and grants of access to DLA computer networks, systems, or databases. The records contain the individual's name; social security number; citizenship; physical and electronic addresses; work telephone numbers; office symbol; contractor/employee status; computer logon addresses, passwords, and user identification codes; type of access/permissions required; verification of need to know; dates of mandatory

Appendix C

Scoping Newspaper Advertisements



**Department of the Army, Fort Belvoir
Public Notice of Scoping Meeting For
Environmental Impact Statement
Base Realignment and Closure (BRAC) Action**

June 7, 2006

Hilton Springfield Hotel
6550 Loisdale Road, Springfield, VA
7:00 p.m.—9:30 p.m.

In compliance with the National Environmental Policy Act, the Department of the Army will conduct a Public Scoping Meeting on Wednesday, June 7, 2006, at the location and time listed above to solicit input on the scope of the Environmental Impact Statement (EIS) for the Base Realignment and Closure (BRAC) action for Fort Belvoir, Virginia. The purpose of the Scoping Meeting is to seek public input on the issues that should be addressed in the EIS. Federal, state, and local agencies, federally recognized tribes, individuals, and organizations that have an interest are urged to participate. The meeting is open to the public and will be held open-house style. Members of the public may attend at their convenience during the above time period.

The Department of the Army invites open comment on the activities proposed to implement the BRAC Commission's recommendation pertaining to Fort Belvoir. The EIS will evaluate the potential environmental, socioeconomic, and transportation effects associated with the proposed BRAC action. The EIS will consider a range of alternatives to accommodate the BRAC Commission's recommendations. The EIS will also evaluate updating the Fort Belvoir Master Plan to accommodate the proposed action.

Written and oral comments concerning issues to be addressed in the EIS will be taken at the Scoping Meeting. A court reporter will be available to record oral comment and a translator for the hearing impaired will also be available. In addition, written questions or comments may be submitted to Directorate of Public Works, ATTN: BRAC EIS Comments, 9430 Jackson Loop, Suite 100, Fort Belvoir, VA 22060-5116 or by e-mail to environmental@belvoir.army.mil. Information is also available online by going to the www.belvoirnewvision.net website and clicking on EIS. Please call the Fort Belvoir Public Affairs Office at 703-805-5001 with any questions about the Scoping Meeting. The deadline for submitting written comments on the scope of the EIS is July 2, 2006.

Appendix D

Public and Agency Scoping Letters



DEPARTMENT OF THE ARMY
INSTALLATION MANAGEMENT AGENCY
HEADQUARTERS, UNITED STATES ARMY GARRISON, FORT BELVOIR
9820 FLAGLER ROAD, SUITE 213
FORT BELVOIR, VIRGINIA 22060-5928

REPLY TO
ATTENTION OF

May 17, 2006

Directorate of Public Works

Dear Sir or Madam:

The Department of the Army is preparing an Environmental Impact Statement (EIS) pursuant to Section 102(2)(C) of the National Environmental Policy Act that will evaluate potential environmental, transportation, and socioeconomic effects associated with implementation of the Base Realignment and Closure (BRAC) action at Fort Belvoir, Virginia. The BRAC Commission recommended the realignment of approximately fifty-nine agencies and activities to Fort Belvoir. The realignment action includes, but is not limited to: Primary and secondary medical care functions from Walter Reed Medical Center to a new expanded DeWitt Hospital; Army and DoD organizations from the National Capital Region (NCR) leased space; National Geospatial-Intelligence Agency units from various NCR leased space locations and Bethesda, Maryland; elements of the Naval Support Activity, Mechanicsburg, Pennsylvania and Wright-Patterson Air Force Base to the Defense Logistics Agency; and, selected Defense Intelligence Agency (DIA) activities from leased space to Rivanna Station, Charlottesville, Virginia. The EIS will consider a range of alternatives based on various development scenarios to accommodate the installation's current and projected BRAC missions and requirements. The No Action Alternative will also be evaluated. The Army is seeking your input to help determine the appropriate scope of the EIS.

The Army invites you to participate in a public scoping meeting led by Mobile District, U.S. Army Corps of Engineers on June 7, 2006, from 7:00 p.m. to 9:30 p.m. at the Hilton Springfield, 6550 Loisdale Road, Springfield, VA 22150. The public scoping meeting will be held in an open-house style. A court reporter will be available to record oral comment and a translator for the hearing impaired will also be available.

Written and oral comments on issues to be addressed in the EIS may be submitted at the meeting. For more information on the EIS, please contact the Fort Belvoir Directorate of Public Works at 703-806-4007. Please submit comments to Fort Belvoir Directorate of Public Works, ATTN: BRAC EIS Comments, 9430 Jackson Loop, Suite 100, Fort Belvoir, VA 22060-5116 or by e-mail to environmental@belvoir.army.mil. Information is also available online by going to the www.belvoirnewvision.net website and clicking on EIS. The deadline for submitting written comments on the scope of the EIS is July 2, 2006.

Sincerely,

Brian W. Lauritzen
Colonel, US Army
Garrison Commander

“EXCELLENCE THROUGH SERVICE”

Department of the Army, Fort Belvoir

Public Scoping Meeting for Environmental Impact Statement Base Realignment and Closure Action

Hilton Springfield
6550 Loisdale Road
Springfield, VA 22150
June 7, 2006
7:00 p.m. to 9:30 p.m.

Driving Directions

COMING FROM THE NORTH:

From U.S. Interstate Highway I-95 South, take Exit 169A Franconia Road (Route 644 East).

At the first stop light, turn right on Loisdale Road.

At the Hilton sign turn right into the parking lot.

FROM THE NORTHEAST:

From I-495/I-95 South, exit at 169 for I-95 South & Springfield (644), Springfield, Franconia Road.

At the first light, turn right.

At the Hilton sign turn right into the parking lot.

COMING FROM THE SOUTH:

From U.S. Interstate Highway I-95 North, take Exit 169A Franconia Road (Route 644 East).

At the first stop light, turn left on Loisdale Road.

At the next light turn left onto Loisdale Court.

The Hilton parking lot is at the end of the court on the right.



DEPARTMENT OF THE ARMY
INSTALLATION MANAGEMENT AGENCY
HEADQUARTERS, UNITED STATES ARMY GARRISON, FORT BELVOIR
9820 FLAGLER ROAD, SUITE 213
FORT BELVOIR, VIRGINIA 22060-5928

REPLY TO
ATTENTION OF

May 17, 2006

Directorate of Public Works

Dear Sir or Madam:

The Department of the Army is preparing an Environmental Impact Statement (EIS) pursuant to Section 102(2)(C) of the National Environmental Policy Act that will evaluate potential environmental, transportation, and socioeconomic effects associated with implementation of the Base Realignment and Closure (BRAC) action at Fort Belvoir, Virginia. The BRAC Commission recommended the realignment of approximately fifty-nine agencies and activities to Fort Belvoir. The realignment action includes, but is not limited to: Primary and secondary medical care functions from Walter Reed Medical Center to a new expanded DeWitt Hospital; Army and DoD organizations from the National Capital Region (NCR) leased space; National Geospatial-Intelligence Agency units from various NCR leased space locations and Bethesda, Maryland; elements of the Naval Support Activity, Mechanicsburg, Pennsylvania and Wright-Patterson Air Force Base to the Defense Logistics Agency; and, selected Defense Intelligence Agency (DIA) activities from leased space to Rivanna Station, Charlottesville, Virginia. The EIS will consider a range of alternatives based on various development scenarios to accommodate the installation's current and projected BRAC missions and requirements. The No Action Alternative will also be evaluated. The Army is seeking your input to help determine the appropriate scope of the EIS.

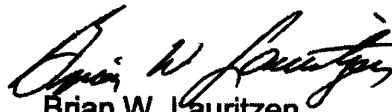
The Army invites your agency to participate in an agency pre-scoping meeting led by Mobile District, Army Corps of Engineers from 1:00 p.m. to 3:00 p.m. on June 7, 2006, at the Hilton Springfield, 6550 Loisdale Road, Springfield, VA 22150. The general public scoping meeting is scheduled for that night from 7:00 pm to 9:30 pm. The public scoping meeting will be held in an open-house style. A court reporter will be available to record oral comment and a translator for the hearing impaired will also be available.

Written and oral comments on issues to be addressed in the EIS may be submitted at the meeting. For more information on the EIS please contact the Fort Belvoir Directorate of Public Works at 703-806-4007. Please submit comments to Fort Belvoir Directorate of Public Works, ATTN: BRAC EIS Comments, 9430 Jackson Loop, Suite 100, Fort Belvoir, VA 22060-5116 or by e-mail to environmental@belvoir.army.mil. Information is also available online by going to the www.belvoirnewvision.net website and clicking on EIS. The deadline for submitting written comments on the scope of the EIS is July 2, 2006.

“EXCELLENCE THROUGH SERVICE”

Please respond to Courtney Colvin at (703) 385-6000 or via e-mail:
Courtney.colvin@tetrattech-ffx.com no later than Monday, June 5, 2006 regarding
attendance.

Sincerely,

A handwritten signature in black ink, appearing to read "Brian W. Lauritzen". The signature is written in a cursive style with a large initial "B".

Brian W. Lauritzen
Colonel, US Army
Garrison Commander

Department of the Army, Fort Belvoir

**Pre-scoping and Scoping Meeting
for
Environmental Impact Statement
Base Realignment and Closure Action**

Hilton Springfield
6550 Loisdale Road
Springfield, VA 22150

June 7, 2006

1:00 p.m. to 3:00 p.m. (Pre-scoping Agency Meeting)

7:00 p.m. to 9:30 p.m. (Public Scoping Meeting)

Driving Directions

COMING FROM THE NORTH:

From U.S. Interstate Highway I-95 South, take Exit 169A Franconia Road (Route 644 East).

At the first stop light, turn right on Loisdale Road.

At the Hilton sign turn right into the parking lot.

FROM THE NORTHEAST:

From I-495/I-95 South, exit at 169 for I-95 South & Springfield (644), Springfield, Franconia Road.

At the first light, turn right.

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COMING FROM THE SOUTH:

From U.S. Interstate Highway I-95 North, take Exit 169A Franconia Road (Route 644 East).

At the first stop light, turn left on Loisdale Road.

At the next light turn left onto Loisdale Court.

The Hilton parking lot is at the end of the court on the right.

Appendix E

Public and Agency Scoping Mailing Lists

Fort Belvoir EIS
Public Scoping Mailing List

The Virginia Conservation Network
1001 East Broad Street, Suite LL 35-C
Richmond, VA 23219

Mr. Tim Aiken
Congressman Moran's Office, 8th District,
House of Rep.
5115 Franconia Rd, Ste B
Washington, DC 20510-4603

Honorable David Albo
Virginia State Senate
6350 Rolling Mill Pl, Ste. 102
Springfield, VA 22150

Honorable George Allen
United States Senate
204 Russell Senate Office Bldg.
Washington, DC 20510-4603

Honorable Kristen Amundson
44th District
P.O. Box 143
Mt. Vernon, VA 22121

Mr. Frank Anderson
Defense Acquisition University
9820 Belvoir Road
Fort Belvoir, VA 22060-5565

Honorable Hilda Barg
Prince William County Board of Supervisors
15941 Donald Curtis Drive
Woodbridge, VA 22191

Ms. Glynn Bates
Hayfield Secondary School
7630 Telegraph Road
Alexandria, VA 22310

Ms. Lucy Beauchamp
Prince William County School Board
P. O. Box 389
Manassas, VA 20108

Mr. Sylvester Berdux
Mount Vernon Chamber of Commerce
4201 Pickering Place
Alexandria, VA 22309-2820

Mr. Errol Bergsagel
Mount Vernon Council of Citizens Associations
4402 Grenada Street
Alexandria, VA 22309

Reverend Donald Binder
Pohick Church
9301 Richmond Highway
Lorton, VA 22079

Ms. Stephanie Bisson
Woodlawn Elementary School
8505 Highland Lane
Alexandria, VA 22309

Mr. Al Bornman
Mount Vernon Council of Citizens Associations
1903 Sword Lane
Alexandria, VA 22308

Mr. Eric Brent
Mt Vernon High School
8515 Old Mt. Vernon Rd.
Alexandria, VA 22309

Ms. Courtney Bulger
Fairfax County Public Schools
10700 Page Avenue
Fairfax, VA 22309

Dr. Douthard Butler
Rotary Club
6909 Lamp Post Lane
Alexandria, VA 22306

Mr. John Byers
Mount Vernon Planning Commission
8218 Chancery Court
Alexandria, VA 22308

Honorable Maureen Caddigan
Prince William County Board of Supervisors
15941 Cardinal Drive
Woodbridge, VA 22191

Mr. Mike Campbell
Prince William County Schools
PO Box 389
Manassas, VA 20108

Ms. Isis Castro
Mt. Vernon School Board
2404 Culpepper Road
Alexandria, VA 22308

Mr. Joseph Chudzik
Mason Neck Citizen Association
Post Office Box 612
Lorton, VA 22079

Mr. John Cogbill, IIII
National Capital Planning Commission
401 9th St., NW, North Lobby, Ste.500
Washington, DC 20576

Mr. Frank Cohn
Mount Vernon Council of Citizens Association
PO Box 7041
Alexandria, VA 22307-7041

Ms. Heather Colistra
Fairfax County Chamber of Commerce
8230 Old Courthouse Road, Ste.350
Vienna, VA 22182-3853

Honorable Sean Connaughton
Prince William County Board of Supervisors
1 County Complex Court
Woodbridge, VA 22192

Doctor Jack Dale
Fairfax County Public Schools
10700 Page Avenue
Fairfax, VA 22030

Ms. Karen Darner
Arlington Committee of 100
969 S. Buchanan Street
Arlington, VA 22204

Honorable Thomas Davis
11th District, Virginia
224 Cannon House Office Bldg
Washington, DC 20515-4611

Mr. Otha Davis
Walt Whitman Intermediate School
2500 Parkers Lane
Alexandria, VA 22306

Fort Belvoir EIS
Public Scoping Mailing List

Mr. Jim Davis
Mount Vernon Council of Citizens Association
8810 Old Mount Vernon Rd.
Alexandria, VA 22309

Delegate Nicole Denike
Virginia House of Delegates
P.O. Box 8
Occoquan, VA 22125

Honorable Jeannemarie Devolites Davis
Virginia's 34th District
PO Box 936
Vienna, VA 22183-0966

Mr. Dave Dickson
Virginia Commission for Military Bases
PO Box 798
Richmond, VA 23218

Ms. Holly Dougherty
Mount Vernon-Lee Chamber of Commerce
8804-D Pear Tree Village Center
Alexandria, VA 22309

Ms. Jackie Edwards
Fort Belvoir Federal Credit Union
8725 John J. Kingsman, Ste.1842
Fort Belvoir, VA 22060-6220

Mr. Mark Emery
Fairfax Cty Public Schools School Board
10700 Page Avenue
Fairfax, VA 22030

Honorable William Euille
Mayor's Office City of Alexandria
301 King St. 2nd Fl, Ste. 2300
Alexandria, VA 22314

Mr. John Fedorshik
Federation of Lorton Communities
PO Box 442
Lorton, VA 22199

Ms. Betsy Fenske
Fairfax County Schools
6520 Diana Lane
Alexandria, VA 22310

Ms. Katy Fike
Mount Vernon-Lee Chamber of Commerce
8804-D Pear Tree Village Center
Alexandria, VA 22309

Mr. William Files
Quander Road School
6400 Quander Road
Alexandria, VA 22307

Honorable Jay Fisette
Arlington Board of Supervisors
2100 Clarendon Blvd Ste 300
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Appendix F

Public Scoping Meeting Displays

Welcome

Welcome to the Public Scoping meeting for the Environmental Impact Statement (EIS) of BRAC 2005 Implementation and Master Plan Update at Fort Belvoir, Virginia.

The purpose of this meeting is to solicit input on the scope of the EIS and to identify issues and alternatives to be addressed in the study.

**June 7, 2006
7:00 p.m.–9:30 p.m.**

Information Stations

1. Welcome (sign-in)
2. NEPA
3. BRAC Action
4. Transportation
5. Natural & Cultural Resources
6. Written Comments
7. Oral Comments
8. Media



EIS Scoping Meeting Participant's Guide

- 1) Please sign in at the Welcome Station and take a brochure.
- 2) View the displays in any order you choose.
- 3) To submit written comments on the scope of the EIS:
 - At the Written Comments station, please complete a hard copy Comment Form and place it in the basket provided.

OR

- To submit comments later, see below and visit the Written Comments station for further instructions.
- 4) To submit oral comments on the scope of the EIS:
 - Oral comments may be submitted to the court reporter at the Oral Comments station.

**If you wish to submit comments at a later time,
you may use the following methods:**

Online Comment Form:
www.belvoirnewvision.com
(click on EIS)

E-mail:
environmental@belvoir.army.mil

Mail:
Attn: EIS Comments
Fort Belvoir Directorate of Public Works
9430 Jackson Loop, Suite 100
Fort Belvoir, VA 22060-5116

ALL COMMENTS MUST BE RECEIVED OR POSTMARKED BY JULY 2, 2006



Master Plan Update

Fort Belvoir's Master Plan Update will produce a new standard of excellence for federal urban design and development at Fort Belvoir; develop and implement a new vision for Fort Belvoir that is creative, achievable, and lasting; and create a program for integration and development that is structured and proactive.

The Master Plan Update will occur concurrently with the implementation of the Base Realignment and Closure (BRAC) action at Fort Belvoir. This Master Plan Update will involve a comprehensive look at how Fort Belvoir has evolved since its 1993 Master Plan and how best to accommodate for its anticipated growth and expanded missions due to BRAC and other actions in the future. A team of experienced planners, engineers, architects, and environmental and transportation experts have been selected by the U.S. Army Corps of Engineers to lead the realignment of Fort Belvoir. The team is going by the name of Belvoir New Vision Planners (BNVP).

Growth

Fort Belvoir anticipates a twofold increase in its workforce by 2011 with the addition of approximately 22,000 people. Its expanding role as a Community Support Center for its approximately 150,000 regional clients is a key component of this growth.

Key tenant agencies contributing to this substantial increase include the National Geospatial Intelligence Agency, Department of Defense (DoD) Washington Headquarters Services, and the Army Lease Service. Other development includes expansion of DeWitt Army Hospital and construction of the National Museum of the U.S. Army.

Vision

Fort Belvoir will be the mission support center for the U.S. Army and the DoD in the National Capital Region. Regionally, the BRAC Program will relocate Army and DoD activities from around the Capital region (some from unsecured locations) to Fort Belvoir. Fort Belvoir is preparing to accept these missions and, concurrently, grow as the Community Support Center for this expanded client base.

Fort Belvoir is transforming into a world-class installation with diversity, sustainability, and connectivity, while conserving and protecting sensitive natural habitats and respecting its history. Community support facilities and services would also be expanded as part of this growth.

Fort Belvoir Master Plan Update Planning Principles

Fort Belvoir is using smart growth principles and mixed-use development in its planning. Goals and guiding principles for planning include:

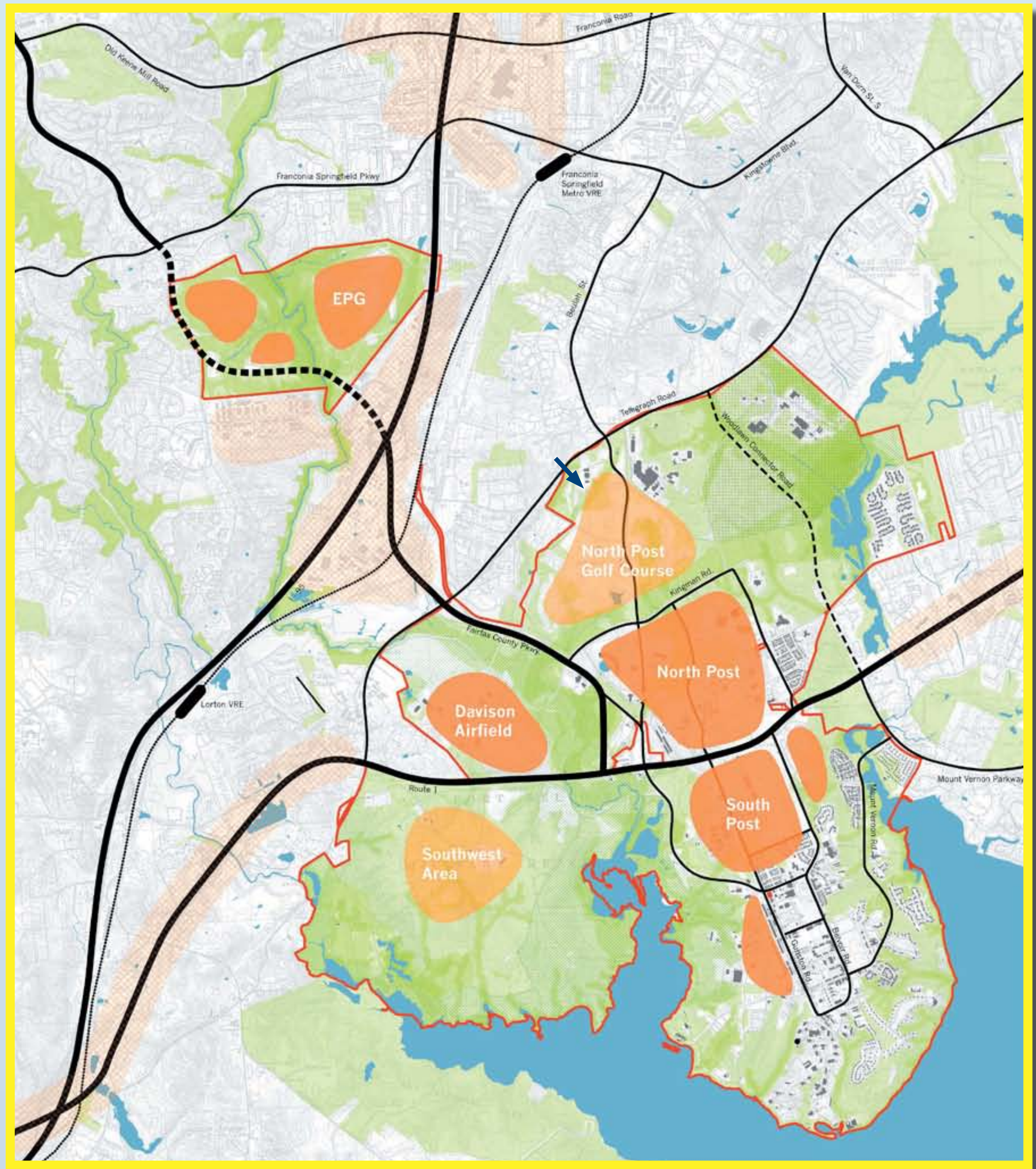
- Transform Fort Belvoir
- Create a world-class installation
- Achieve a diversity of use and activities
- Build an urban place of high quality
- Achieve high-sustainability standards
- Conserve and protect sensitive natural habitats
- Emphasize connectivity
- Establish walkable neighborhoods
- Emphasize the public realm
- Respect Fort Belvoir's history

BRAC

Development Scenarios

Approximately 4,500 acres of land on Fort Belvoir are suitable for development. Of this land, approximately one-half has already been developed. A significant portion of Fort Belvoir land that was deemed less than ideal for development, however, could be developed with proper mitigation and/or specialized engineering.

A few areas that were identified as developable are in areas identified as having constraints. These exceptions lie in areas where buffers and environmentally sensitive lands were designated after existing structures were built (e.g., the Officer's Club, eastern portions of Dogue Creek Village, and northeastern portions of George Washington Village).



Development Scenarios Being Considered

Using its guiding principles, BNVP is evaluating six potential development areas. Each development scenario involves new development, redevelopment, and infill. Some combination of the development areas below would be used to support the BRAC program.

- North Post
- South Post
- Engineer Proving Ground (EPG)
- Davison Army Airfield
- North Post Golf Course
- Southwest Area

The EIS will consider impacts to the following resource areas in the vicinity of Fort Belvoir:

- Land Use
- Aesthetics and Visual Resources
- Air Quality
- Noise
- Geology and Soils
- Water Resources
- Biological Resources
- Cultural Resources
- Socioeconomics
- Transportation
- Utilities
- Hazardous and Toxic Substances

Agency Coordination

To achieve smart growth and make on-post transportation and development decisions that are strategic within a regional perspective, the Army continues to coordinate closely with federal, state, and local agencies, and with state and local leaders including but not limited to:

- National Capital Planning Commission (NCPC)
- U.S. Fish and Wildlife Service (USFWS)
- U.S. Environmental Protection Agency (USEPA)
- Virginia Department of Environmental Quality (VDEQ)
- Virginia Department of Transportation (VDOT)
- Virginia State Historic Preservation Office (VA SHPO)
- Virginia Department of Game and Inland Fisheries (VGIF)
- Virginia Department of Conservation and Recreation (VDCR)
- Fairfax County
- Metropolitan Washington Council of Governments (MWCOCG)
- Washington Metropolitan Area Transit Authority (WMATA)



Transportation

Background

- Fairfax County has more than 1 million residents and is expected to grow to 1.2 million residents by 2025
- Many regional transportation facilities already provide insufficient levels of service
- Previous planning efforts have identified many improvement options

BRAC Impacts

- Approximately 22,000 employees will relocate to Fort Belvoir
- Consistent with previous and current land use plans (but on an accelerated schedule)
- Proposed action is within employment and population forecasts for the area
- The vast majority of expected additional employees already live and work in the region

Potential Improvements

The EIS will identify transportation improvements required to mitigate the impacts of the proposed action. Improvement concepts and designs are likely to come from either approved planning documents or ongoing studies in the area including:

- Improvements proposed in regional, state, and local, long-range plans
 - TransAction 2030 (regional)
 - Constrained Long Range Plan (CLRP)
 - Six-Year Improvement Program
 - Fairfax County Transportation Plan (local)
- Improvements developed as part of ongoing studies
 - Fort Belvoir Master Plan
 - Springfield Connectivity Study
 - I-95 HOT Lanes Study

Fort Belvoir Traffic Network

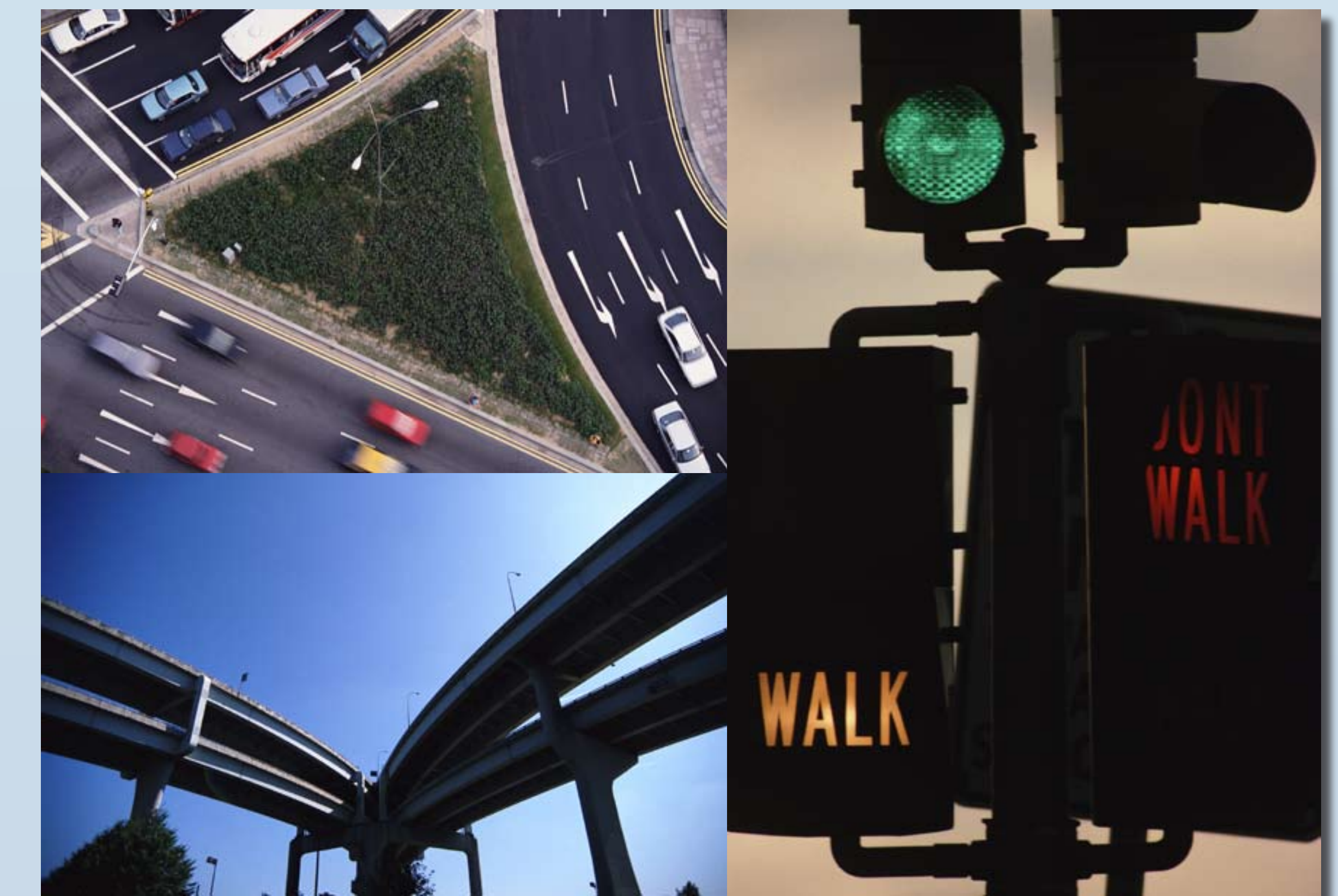


The above map highlights major roads in the transportation network in the vicinity of Fort Belvoir. Arrows show the origins and estimated numbers of workers commuting to Fort Belvoir following BRAC 2005 Implementation.



Transportation Goals

- Support and enhance an integrated, multimodal transportation system that includes:
 - Improved transit service
 - Increased road and transit capacity
 - Connections between potential activity centers
- Recognize the linkage between transportation and land use
- Develop proactive transportation management programs
- Promote a “park once” strategy
- Promote ridesharing
- Respect historical and environmental factors



Commitment of Approach

- Regional
 - Cumulative impacts
- Sub-regional
 - Secondary impacts
- Local
 - Access and facility design
- On-post
 - Internal circulation



Natural and Cultural Resources

- A detailed analysis of Fort Belvoir's environmental and cultural resources is being performed utilizing data from Fort Belvoir's Directorate of Public Works and Geographic Information Systems Department.
- Natural and cultural features will be analyzed to identify potential development conflicts and areas potentially suitable for development.



Current Conditions

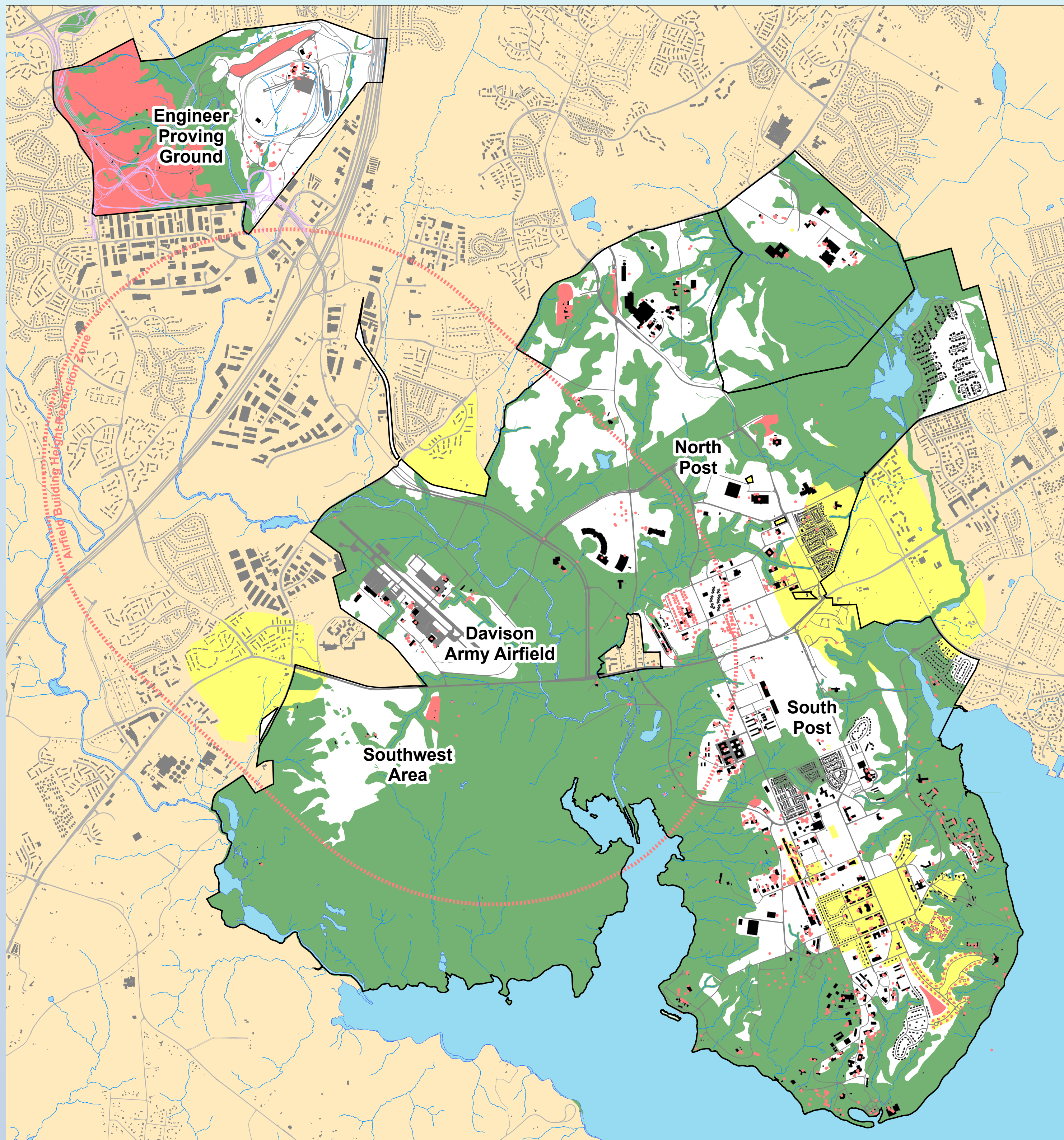
- Fort Belvoir supports rich flora and fauna.
 - Small-whorled pogonia (state endangered, federally threatened)
 - Wood turtle (state threatened)
 - Bald eagle (federally threatened)
 - 263 species of birds including 61 Partners in Flight priority species, one of which is only known to occur at Fort Belvoir.
 - Wetlands (1,700 acres)
- Fort Belvoir has a rich history and is home to a variety of historic and cultural resources.



Analysis

- Studies of wetlands, flora, fauna, endangered species, and historic and archaeological resources are being undertaken.
- The EIS will use the results of these studies to determine impacts of the BRAC action to natural, historic, and archaeological resources.
- Areas that are considered generally not suitable for development include land within:
 - Wetlands
 - Floodplains
 - Regulated wildlife habitats
 - Regulated historic and archaeological features
 - Riparian and foraging buffer along the installation's waterways (Dogue Creek, Potomac River, Gunston Cove, Accotink Bay, and Pohick Bay)
 - The forest and wildlife corridor that diagonally traverses the North Post from the installation's boundary at Huntley Meadow's Park to the Davison Army Airfield
 - Steep slopes (>15 percent)





LEGEND

Natural Features

- Threatened and Endangered Species
- Forest and Wildlife Corridor
- EPG Environmental Quality Corridor
- Steep Slopes
- Wildlife Refuges and Conservation Areas
- Resource Protection Areas
- 100-Year Flood Zones
- Riparian Areas
- Wetlands

Cultural and Historic Features

- Fort Belvoir Main Post Historic District
- Historic Buildings
- Other Historic District Overlays
- Cemeteries
- Archaeological Sites

Operational Features

- Airfield Approach Zone
- Building Height Restriction Zone
- Easements
- Former Training Ranges
- Solid Waste Management Units
- Former Landfills



Natural, Cultural, and Operational Features

Fort Belvoir, Virginia

Written Comments

All comments received will be used to assist in identifying alternatives and determining the scope of the EIS. A summary of the comments and responses will be included in the Draft EIS. Following publication of the Draft EIS, a 45-day public comment period will allow input from the public on the proposed action and alternatives and the adequacy of the evaluation. The Army will make the Final EIS available for public review no less than 30 days prior to issuing the Record of Decision (ROD). The BNVP website (www.belvoirnewvision.com) will be updated regularly as a means to keep the public informed of the most current information regarding the BRAC action at Fort Belvoir.

If you would like to submit written comments on the scope of the Environmental Impact Statement, please complete a hard copy Comment Form and place it in the basket.

If you wish to submit comments at a later time, you may use the following methods:

- Online Comment Form:
Go to the **www.belvoirnewvision.com** Web site and click on EIS
- E-mail: environmental@belvoir.army.mil
- Mail:
Attn: BRAC EIS Comments
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ALL COMMENTS MUST BE RECEIVED OR POSTMARKED BY JULY 2, 2006



Oral Comments

All comments received will be used to assist in identifying alternatives and determining the scope of the EIS. A summary of the comments and responses will be included in the Draft EIS. Following publication of the Draft EIS, a 45-day public comment period will allow input from the public on the proposed action and alternatives and the adequacy of the evaluation. The Army will make the Final EIS available for public review no less than 30 days prior to issuing the Record of Decision (ROD). The BNVP website (www.belvoirnewvision.com) will be updated regularly as a means to keep the public informed of the most current information regarding the BRAC action at Fort Belvoir.

Oral comments on the scope of the Environmental Impact Statement may be recorded for the public record. Oral comments may be submitted to the court reporter at this station.



Appendix G

Public Scoping Meeting
National Environmental Policy Act
PowerPoint Presentation

Scoping Meeting

for the
Environmental Impact Statement (EIS)

for BRAC 2005 Implementation and Master Plan
Update of Fort Belvoir, Virginia



What is the National Environmental Policy Act (NEPA)?

- A federal law that requires the identification and analysis of potential environmental effects of certain proposed federal actions and alternatives before those actions take place
- A "full disclosure" law with provisions for public access to and public participation in the federal decision-making process



What is NEPA?

(continued)

- **A statutory requirement triggered by major federal actions that could significantly affect the quality of the human environment**

- **A mechanism for**
 - **Evaluating potential environmental impacts**
 - **Incorporating public involvement into the federal decision-making process**



An EIS...

- **Is prepared in accordance with NEPA and presents the results of analyses of the environmental effects of a proposed action and its alternatives.**
- **Includes opportunities for public involvement in agency planning.**
- **Is prepared when a proposed action could cause significant environmental effects.**



An EIS...

(continued)

- **Includes analyses of land use, socioeconomics, cultural resources, transportation, air, noise, utilities, hazardous and toxic materials and wastes, geology and soils, water resources, and biological resources.**
- **Includes a description of the baseline environmental and socioeconomic conditions against which effects of the proposed action are evaluated.**



An EIS...

(continued)

- **Identifies potential consequences and appropriate mitigation (methods to lessen adverse impacts).**



What is Scoping?

- **Scoping is a part of the EIS preparation process through which a federal agency describes a proposed action and possible alternatives and seeks input from other agencies, organizations, and the public on potentially affected resources, environmental issues to be considered, and the agency's planned approach to the analysis to be conducted.**



Elements of the Scoping Process

- Identifying issues to be addressed in the EIS
- Identifying major issues of concern
- Eliminating nonrelevant issues
- Delineating the study area(s)
- Identifying potential alternatives



Purposes of this Scoping Meeting

- To inform the public of what is currently being considered for inclusion in the EIS
- To collect public input that will help the Army prepare the EIS
- To use public input to develop the scope of the EIS, modify or update the description of the proposed action and alternatives, and identify the resource areas likely to be affected



Legislative, Regulatory & Interagency Framework

- **The National Environmental Policy Act of 1969 (NEPA): PL 91-190**
- **40 *Code of Federal Regulations* (CFR) 1500-1508: Council on Environmental Quality Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act**
- **32 CFR Part 651: Environmental Analysis of Army Actions**



Legislative, Regulatory & Interagency Framework

(continued)

- **National Historic Preservation Act**
- **Clean Water Act**
- **Endangered Species Act**
- **Fish and Wildlife Coordination Act**
- **Clean Air Act**
- **Coastal Zone Management Act**



Steps in Preparing an EIS

- Define the proposed action, alternatives, and decisions to be made.
- Identify what needs to be analyzed (scoping); refine the proposed action and alternatives.
- Gather data, conduct analyses, and identify environmental effects of the proposed action and alternatives.
- Publish a Draft EIS for public and agency review.



Steps in Preparing an EIS

(continued)

- **Conduct a public meeting on the Draft EIS to solicit comments.**
- **Publish a Final EIS for public and agency review.**
- **Publish a Record of Decision.**



What are the Decisions to be Made?

- How best to implement the BRAC recommendation for Fort Belvoir
- How best to accommodate Fort Belvoir's anticipated long-term growth



What is the Proposed Action?

- **The proposed action is to realign Fort Belvoir according to BRAC law and to update the Fort Belvoir Master Plan. The Commission recommended the realignment of approximately 22,000 people composed of 59 agencies or activities to relocate to Fort Belvoir. These include, but are not limited to:**
 - **Primary and secondary medical care functions from Walter Reed Medical Center to a new, expanded DeWitt Hospital**



What is the Proposed Action?

(continued)

- **Army and DoD organizations from National Capital Region (NCR) leased space**
- **National Geospatial-Intelligence Agency (NGA) units from various NCR leased locations and Bethesda, Maryland**
- **Selected Defense Intelligence Agency (DIA) activities from leased space to Rivanna Station, Charlottesville, Virginia (to be analyzed under a separate NEPA document).**



What this EIS WILL evaluate:

- BRAC 2005 Implementation
- Update of the Fort Belvoir Master Plan
- Impacts that the BRAC 2005 Implementation for Fort Belvoir will have on the transportation network
- Cumulative effects:
 - National Museum of the U.S. Army
 - Potential off-post transportation improvements
 - Proposed connector road between Route 1 and Telegraph Road
 - Information Dominance Center (DoD Agency)
 - Full analysis for each of these projects will be covered under separate NEPA documents



What this EIS will NOT evaluate:

- **Effects to Crystal City resulting from relocation of Army and Department of Defense (DoD) organizations to Fort Belvoir. The decision of whether to realign Fort Belvoir was made by the BRAC Commission and Congress, became law on November 9, 2005, and is not subject to NEPA.**
- **Effects of the potential off-post transportation improvements identified in the EIS**
- **Ongoing installation construction projects**



Alternatives

- A “no action” alternative: A “baseline” alternative required by NEPA. Baseline alternative is the set of conditions as of November 2005.
- Development center locations (i.e. North Post, South Post, Engineer Proving Ground (EPG), Davidson Army Airfield, North Post Golf Course, Southwest Area, or combinations of locations).
- New construction, renovation, or a combination of the two.



Alternatives

(continued)

- **Evaluation of a single land use plan and iterations of alternative land use plans as they are developed**



Resource Areas to be Considered in the EIS

- Land Use
- Aesthetics and Visual Resources
- Air Quality
- Noise
- Geology and Soils
- Water Resources
- Biological Resources
- Cultural Resources
- Socioeconomics
- Transportation
- Utilities
- Hazardous and Toxic Substances



Impacts to be Identified and Discussed in the EIS

- **Direct and indirect impacts**
- **Short-term and long-term impacts**
- **Cumulative impacts**
- **Mitigation of impacts**
- **Irreversible and irretrievable commitments of resources**
- **Adverse impacts that cannot be avoided**
- **Short-term uses of the environment and maintenance and enhancement of long-term productivity**



Public Involvement Opportunities

- Scoping meeting (oral or written comments)
- Public review of Draft EIS (45 days)
- Public meeting on Draft EIS (oral or written comments)
- Final EIS (written comments)

Public notices will be issued when the Draft and Final EISs are released for review.



Projected EIS Schedule

- **Public Scoping Meeting**
 - June 7, 2006, Hilton Springfield Hotel, Springfield, Virginia
 - Deadline to Submit Scoping Comments: July 2, 2006
- **Draft EIS Available for Review**
 - December 2006 (45 days)
- **Draft EIS Public Meeting**
 - January 2007



Projected EIS Schedule

(continued)

- **Draft EIS Comments Due**
 - 45 days from publication of Notice of Draft EIS in *Federal Register*; February 2007
- **Final EIS Available for Review**
 - May 2007 (30 days)
- **Final EIS Comments Deadline**
 - 30 days from Final EIS publication



Projected EIS Schedule

(continued)

- **Record of Decision Available**
 - **Minimum of 30 days after release of Final EIS**

Draft and Final EISs will be available at libraries and on the Web.



Appendix H

Public Scoping Meeting Handouts

Public Scoping Meeting for the Environmental Impact Statement for **BRAC 2005** Implementation and Master Plan Update at Fort Belvoir, Virginia

June 7, 2006

7:00 p.m.–9:30 p.m.

Hilton Springfield Hotel

6550 Loisdale Road

Springfield, Virginia 22150

Lead Agency:

Department of the Army



What is BRAC?

Congress passed a law authorizing Base Realignment and Closure (BRAC) recommendations at Department of Defense (DoD) installations in November 2005, the fifth BRAC round since 1988. The purpose of the BRAC recommendations was to authorize another round of realignments and closures to keep up with evolving global security requirements. The BRAC action at Fort Belvoir includes relocating 59 DoD agencies and activities, primarily from the DC metropolitan area, onto Fort Belvoir.

What is the National Environmental Policy Act?

The National Environmental Policy Act (NEPA) of 1969 requires the analysis of potential environmental effects associated with major federal actions. NEPA ensures that federal agencies consider social and environmental factors along with the technical and economic components of a decision. The agency must identify potential impacts on resources such as water, air, wildlife, cultural resources, land use, recreation, and aesthetics, and consider alternatives to the proposed action. NEPA also requires that the responsible federal official consult with relevant federal and state agencies, federally recognized tribes, and the public to determine these impacts.

NEPA is a "full disclosure" law with provisions for public access to, and full participation in, the federal decision-making process. The Act's intent is to protect, restore, and enhance the environment through well-informed federal decisions. Two NEPA documents will be created in the course of this action:

- An **Environmental Impact Statement (EIS)** that analyzes any potential significant environmental and socioeconomic impacts associated with implementing the BRAC recommendations and the updated Master Plan.

- A **Record of Decision (ROD)** that documents the final decision on the proposed action, on the basis of the information presented in the EIS. It may specify mitigation measures (methods to lessen negative impacts) and monitoring programs to be undertaken.

What is the U.S. Army's Enhanced Use Lease (EUL) Program?

The National Defense Authorization Act authorizes Department of Defense installations to obtain leasing opportunities. The program is intended to improve federal property utilization, provide revenue to the installation, reduce installation operating costs, enhance mission performance by fostering cooperation between military services and the private sector, and introduce valuable federal property into the local job market. A lease may be entered into only if the Secretary of the Army considers it advantageous to the United States in terms that promote national defense or are in the public interest. EULs may be considered for the Master Plan and EIS efforts at Fort Belvoir.

What is the purpose of this scoping meeting?

The purpose of this scoping meeting is to seek input from individuals, community organizations, federally recognized Indian tribes, and federal, state, and local agencies on issues and concerns relating to the scope of an EIS that is being prepared for implementation of the BRAC Commission's recommendation for realignment of Fort Belvoir and update of the Fort Belvoir Master Plan. Specifically, the Army is seeking public input on the action alternatives to be analyzed and the environmental and socioeconomic impacts to be addressed in the EIS. This meeting also serves as an opportunity, consistent with the regulations implementing Section 106 of the National Historic Preservation Act, for interested parties to submit their views on any potential historic preservation issues raised by the proposed action.

What is the meeting format and what topics will be addressed?

This meeting is open-house style, with information booths available to help attendees identify potential issues and concerns to be addressed in the EIS. The booths provide information on such topics as the development plans under consideration for Fort Belvoir, the timeline for preparing the EIS, and other public involvement opportunities that will occur throughout the EIS process. Army and Fort Belvoir representatives are available to answer questions.

You can submit written comments concerning the EIS at the Written Comments station or by sending them via regular mail or via e-mail (see *How do I submit*





comments on the scope of the EIS?). Oral comments may be submitted to the Oral Comments station.

What is the Proposed Action?

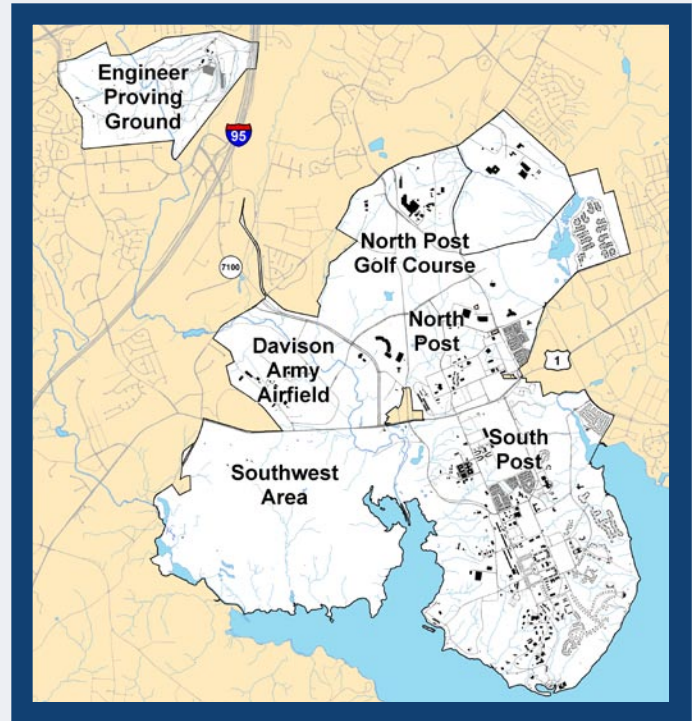
The BRAC Commission proposed that the Army realign Fort Belvoir according to BRAC law and update Fort Belvoir's Master Plan. The Commission recommended the realignment of approximately 22,000 people composed of 59 agencies or activities to relocate to Fort Belvoir. These include, but are not limited to:

- Primary and secondary medical care functions from Walter Reed Medical Center to a new, expanded DeWitt Hospital
- Army and DoD organizations from National Capital Region (NCR) leased space
- National Geospatial-Intelligence Agency (NGA) units from various NCR leased locations and Bethesda, Maryland
- Selected Defense Intelligence Agency (DIA) activities from leased space to Rivanna Station, Charlottesville, Virginia (to be analyzed under a separate NEPA document)

While the Army recognizes that Crystal City will be impacted by the relocation of agencies and organizations to Fort Belvoir, it is not in the scope of this EIS to evaluate those impacts.

What alternatives will be addressed in the EIS?

The Army is considering the redevelopment of six areas to accommodate realignment activities and Fort Belvoir's vision for long-term growth: North Post, South Post, Engineer Proving Ground (EPG), Davison Army Airfield, North Post Golf Course, and the Southwest Area (see inset map). The EIS will evaluate suitable developable areas that would be designed to accommodate up to 7 million square feet of new building space for new tenants and expanding of existing office space for existing tenants. Each area will contain new development, redevelopment, and infill. Some combination of the development areas being considered would be used to support the BRAC program. From the results of the EIS and after considering all relevant factors, the Army must decide how to best implement the BRAC action at Fort Belvoir.



What is the timeline for this EIS and what other opportunities for public comment will be offered?

In addition to this initial comment opportunity, the public will have two additional opportunities to comment:

Winter of 2007: The Army will complete a Draft EIS and make it available for public review. At that time, it will publish a Notice of Availability (NOA) will be published in the *Federal Register*, place notices in local newspapers, and hold a public hearing to facilitate public comment. The Army will accept written and oral comments will be accepted for a period of 45 days from the date the NOA is published.

Summer of 2007: The Army will complete a Final EIS and make it available for public review. At that time, it will publish an NOA in the *Federal Register* and place notices in local newspapers. The Army will accept written and oral comments for a period of 30 days from the date the NOA is published.

How do I submit comments on the scope of the EIS?

The Department of the Army and Fort Belvoir welcome your input on the issues and concerns that should be addressed in the EIS. Comments may be submitted in the following ways:

Scoping Meeting

Oral comments and written comments may be submitted at the June 7, 2006, scoping meeting.

Web Site

Comments may be submitted online at: www.belvoirnewvision.com (click on EIS)

E-mail

Comments may be e-mailed to: environmental@belvoir.army.mil

Mail

Comments may be mailed to:
Attn.: EIS Comments
Fort Belvoir Directorate of Public Works
9430 Jackson Loop, Suite 100
Fort Belvoir, VA 22060-5116

All comments must be received or postmarked by July 2, 2006, to be considered in preparation of the Draft EIS.

EIS Timeline

Public Scoping Meeting

Springfield, VA June 7, 2006

Scoping Comments Deadline July 2, 2006

Draft EIS Available for Review Winter 2007

Draft EIS Public Hearing Winter 2007

Draft EIS Comments Due 45 days from publication of the Notice of Availability of the Draft EIS in the Federal Register

Final EIS Available for Review Summer 2007

Record of Decision Summer 2007



Comment Form

Environmental Impact Statement for BRAC 2005 Implementation and Master Plan Update at Fort Belvoir, Virginia

NOTE: All information submitted will become public record.

1. Your information:

Name: _____

Title: _____

Agency/Organization: _____

Address: _____

City, State, Zip: _____

Phone: _____

E-mail: _____

Please send a CD copy of the EIS to me.

2. Please check the one affiliation that best represents your role or interest in the EIS:

Fort Belvoir Resident

State Government

School/University

Civic Organization

Federally Recognized Tribe

County

Recreational Organization

Private Citizen

Federal Government

Business/Commercial Organization

Environmental Organization

Other: _____

3. EIS Areas of Concern. Please check the appropriate boxes and write your specific comments about the area of concern in # 4 below. More Comment Forms are provided at the Comment station if you need additional space.

Construction

Traffic and Transportation

Cultural Resources/Historic Properties

Socioeconomics

Wetlands, Wildlife, Endangered Species

Noise

Native American Resources

Air Quality

Water Quality

Other: _____

(More comment sheets are available if you need additional space.)

Appendix I

Public Scoping Meeting Attendance Roster

Public

Attendee Roster

June 7, 2006 BRAC EIS Scoping Meeting - Fort Belvoir, Virginia

If you wish to have your name listed in the administrative record, please enter your name and address below.

I would like my name added to the administrative record as having participated in the scoping meeting.

I would like to receive a CD copy of the EIS.

Name: Frank Cohn
Organization: Transp. Committee MDCCA
Address: 8809 Gateshead Rd
City, State, ZIP: Alexandria, VA 22309
Phone: 703-780-5698
E-mail: FCohn22309@aol.com

I would like my name added to the administrative record as having participated in the scoping meeting.

I would like to receive a CD copy of the EIS.

Name: JOHN BELTUCH
Organization: FALFAX CO. PUBLIC SCHOOLS
Address: 10640 PAGE AVE
City, State, ZIP: FALFAX, VA 22030
Phone: 703.246.3609
E-mail:

I would like my name added to the administrative record as having participated in the scoping meeting.

I would like to receive a CD copy of the EIS.

Name: LOIS M. PASSMAN
Organization: MOUNT VERNON COUNCIL
Address: 8354 ORANGE COURT
City, State, ZIP: ALEXANDRIA VA 22309
Phone: 703-780-4736
E-mail: LMPassman@msn.com

I would like my name added to the administrative record as having participated in the scoping meeting.

I would like to receive a CD copy of the EIS.

Name: GWELLMAN
Organization:
Address: 7707A HAINES PT WAY
City, State, ZIP: ALEX VA 22316
Phone:
E-mail: CROSWIRE@Cox.NET

I would like my name added to the administrative record as having participated in the scoping meeting.

I would like to receive a CD copy of the EIS.

Name: Dale Rumberger
Organization: South County Secondary School
Address: 8501 Silverbrook Rd.
City, State, ZIP: Lebanon Va 22079
Phone: 703-446-1604
E-mail: dalerumberger@scps.edu

I would like my name added to the administrative record as having participated in the scoping meeting.

I would like to receive a CD copy of the EIS.

Name: Allan Anderson
Organization: KBR
Address: 8350 Alban Rd, Suite 103
City, State, ZIP: Springfield, VA 22150
Phone: 703-325-2834 x176
E-mail: allananderson@allan.h.anderson@us.army.mil

Public

Attendee Roster

June 7, 2006 BRAC EIS Scoping Meeting - Fort Belvoir, Virginia

If you wish to have your name listed in the administrative record, please enter your name and address below.

I would like my name added to the administrative record as having participated in the scoping meeting.

I would like to receive a CD copy of the EIS.

Name: Michael W. Kenda
Organization: URS Corporation
Address: 13825 Sunrise Valley Dr.
City, State, ZIP: Fairfax, VA 20171
Phone: (703) 713-6526
E-mail: wkenda@urscorp.com

I would like my name added to the administrative record as having participated in the scoping meeting.

I would like to receive a CD copy of the EIS.

Name: LON CALDWELL
Organization: WEST SPRINGFIELD CIVIC ASSOC.
Address: 8609 OLD KEENE MILL RD.
City, State, ZIP: SPRINGFIELD, VA 22152-2813
Phone: 703-569-1527
E-mail: _____

I would like my name added to the administrative record as having participated in the scoping meeting.

I would like to receive a CD copy of the EIS.

Name: Jim Simms
Organization: USACE
Address: 10 S Howard St
City, State, ZIP: Baltimore MD 21201
Phone: 410 962 0684
E-mail: James.L.Simms@usace.army.mil

I would like my name added to the administrative record as having participated in the scoping meeting.

I would like to receive a CD copy of the EIS.

Name: James Van Zee
Organization: Northern Virginia Regional Commission
Address: 3060 Wilhams Dr. # 510
City, State, ZIP: Fairfax VA 22031
Phone: 703-642-4030
E-mail: jvanzee@norva-region.org

I would like my name added to the administrative record as having participated in the scoping meeting.

I would like to receive a CD copy of the EIS.

Name: Mr & Mrs Williams
Organization: _____
Address: 1707 Aftaynes Pt
City, State, ZIP: 22315
Phone: _____
E-mail: _____

I would like my name added to the administrative record as having participated in the scoping meeting.

I would like to receive a CD copy of the EIS.

Name: _____
Organization: _____
Address: _____
City, State, ZIP: _____
Phone: _____
E-mail: _____

Public

Attendee Roster

June 7, 2006 BRAC EIS Scoping Meeting - Fort Belvoir, Virginia

If you wish to have your name listed in the administrative record, please enter your name and address below.

I would like my name added to the administrative record as having participated in the scoping meeting.

I would like to receive a CD copy of the EIS.

Name: Doreen James
Organization: Woodlawn Friends Meeting
Address: 4009 Gibbs St. (Quakets)
City, State, ZIP: Alex VA 22309
Phone: 703.360.2989
E-mail: wjames@earthlink.net

I would like my name added to the administrative record as having participated in the scoping meeting.

I would like to receive a CD copy of the EIS.

Name: Oanh Tran
Organization: Washington Gas
Address: 6706 Whittier Ave.
City, State, ZIP: McLean, VA 22101
Phone: 240-460-0055
E-mail: oanhj@washgas.com

I would like my name added to the administrative record as having participated in the scoping meeting.

I would like to receive a CD copy of the EIS.

Name: Pauline Heenter
Organization: PAO
Address: 9820 Flagler Rd Suite 201
City, State, ZIP: Fort Belvoir, VA 22060
Phone: 703-805-2034
E-mail: Pauline.E.Hunter@belvoir.army.mil

I would like my name added to the administrative record as having participated in the scoping meeting.

I would like to receive a CD copy of the EIS.

Name: HARRISON A. GLADSON
Organization: FAIRFAX COUNTY PARK AUTHORITY
Address: _____
City, State, ZIP: _____
Phone: _____
E-mail: AGLASS@COX.NET

I would like my name added to the administrative record as having participated in the scoping meeting.

I would like to receive a CD copy of the EIS.

Name: David Hand
Organization: USACE Baltimore District
Address: PO Box 1715 CENAB-PL-E
City, State, ZIP: Baltimore MD 21203-1715
Phone: 410 962 8154
E-mail: David.b.hand@usace.army.mil

I would like my name added to the administrative record as having participated in the scoping meeting.

I would like to receive a CD copy of the EIS.

Name: _____
Organization: _____
Address: _____
City, State, ZIP: _____
Phone: _____
E-mail: _____

Public

Attendee Roster

June 7, 2006 BRAC EIS Scoping Meeting - Fort Belvoir, Virginia

If you wish to have your name listed in the administrative record, please enter your name and address below.

I would like my name added to the administrative record as having participated in the scoping meeting.
 I would like to receive a CD copy of the EIS.
 Name: Doty Bunch
 Organization: Fort Belvoir FCU
 Address: 14040 Central Loop
 City, State, ZIP: Woodbridge, VA 22193
 Phone: 703 730 1200 x 5144
 E-mail: dbunch@ftbfcu.org

I would like my name added to the administrative record as having participated in the scoping meeting.
 I would like to receive a CD copy of the EIS.
 Name: Mr. Mrs Robert Knauer
 Organization:
 Address: 15419 Duckling Place
 City, State, ZIP: Woodbridge VA 22191
 Phone: 703-680-5063
 E-mail: bobknauer@verizon.com

I would like my name added to the administrative record as having participated in the scoping meeting.
 I would like to receive a CD copy of the EIS.
 Name: PAIGE WEBER
 Organization: MUCC
 Address: 3120 WATERSIDE LN
 City, State, ZIP: ALEX VA 22309
 Phone: 703-609-7249 c / 703-780-8880 A
 E-mail: paigeweber@verizon.com

I would like my name added to the administrative record as having participated in the scoping meeting.
 I would like to receive a CD copy of the EIS.
 Name: SHARON BARNES - Representing Senator Toddy Fuller
 Organization: State Senator LINDA T. Toddy Fuller
 Address: PO Box 73
 City, State, ZIP: ALEXANDRIA, VA 22121
 Phone: 703 765-1130
 E-mail: TPuller@aol.com

I would like my name added to the administrative record as having participated in the scoping meeting.
 I would like to receive a CD copy of the EIS.
 Name: Robert Rorhbaum
 Organization:
 Address: 7936 Birchtree Ct.
 City, State, ZIP: Springfield VA 22152
 Phone:
 E-mail:

I would like my name added to the administrative record as having participated in the scoping meeting.
 I would like to receive a CD copy of the EIS.
 Name: Bill Sanders
 Organization: Fort Belvoir DPW
 Address: 9430 Jackson Loop
 City, State, ZIP: Fort Belvoir, VA 22600
 Phone: 703-866-3617
 E-mail: bill.l.sanders@belvoir.army.mil

Your information will not be used for any purpose other than to mail a copy of the EIS to you.

Public

Attendee Roster

June 7, 2006 BRAC EIS Scoping Meeting - Fort Belvoir, Virginia

If you wish to have your name listed in the administrative record, please enter your name and address below.

I would like my name added to the administrative record as having participated in the scoping meeting.
 I would like to receive a CD copy of the EIS.
 Name: RANDOLPH L. THOMPSON
 Organization: DCE
 Address: 220 SPRING ST. STE 530
 City, State, ZIP: 20107 WELDON, VA
 Phone: 703 758 7507
 E-mail: rthompson@thinkdce.com

I would like my name added to the administrative record as having participated in the scoping meeting.
 I would like to receive a CD copy of the EIS.
 Name: DAVID S CLINE
 Organization: PRIME WILLIAM COUNTY PUBLIC SCHOOLS
 Address: P.O. Box 389
 City, State, ZIP: MANASSAS, VA 20108
 Phone: 703-791-8753
 E-mail: DCCLINE@PWCS.edu

I would like my name added to the administrative record as having participated in the scoping meeting.
 I would like to receive a CD copy of the EIS.
 Name: EARL FLANNAGAN
 Organization: TRANS ADVISORY COMMISSION
 Address: 3117 WINDSOR E Lane
 City, State, ZIP: Qlney Va 22309
 Phone: 703-780-4769
 E-mail: earlflanagan@verizon.net

I would like my name added to the administrative record as having participated in the scoping meeting.
 I would like to receive a CD copy of the EIS.
 Name: ROBERT REDMOND
 Organization: RFHA
 Address: 8301 GRACEWAY DR
 City, State, ZIP: Lorton VA 22079
 Phone: 703-339-7060
 E-mail: RJRM1R@aol.com

I would like my name added to the administrative record as having participated in the scoping meeting.
 I would like to receive a CD copy of the EIS.
 Name: Judy Riggan
 Organization: Woodlawn Friends Meeting
 Address: 2405 Nemeth Court
 City, State, ZIP: Alexandria VA 22304
 Phone: 703-765-3025
 E-mail: rjgganjm@verizon.net

I would like my name added to the administrative record as having participated in the scoping meeting.
 I would like to receive a CD copy of the EIS.
 Name: Jeff Mckay
 Organization: Lee Dist Bos
 Address: 6121 Francisco Rd
 City, State, ZIP: Alex VA 22310
 Phone: 703 971 6262
 E-mail: jeff.mckay@fairfaxcounty.gov

Your information will not be used for any purpose other than to mail a copy of the EIS to you.

Public

Attendee Roster

June 7, 2006 BRAC EIS Scoping Meeting - Fort Belvoir, Virginia

If you wish to have your name listed in the administrative record, please enter your name and address below.

I would like my name added to the administrative record as having participated in the scoping meeting.

I would like to receive a CD copy of the EIS.

Name: Mysses S. James
Organization: Washington Metropolitan Philharmonic Assoc.
Address: 4009 Gibbs St
City, State, ZIP: Alexandria, VA 22309
Phone: 703-799-8229
E-mail: wmpa@earthlink.net

I would like my name added to the administrative record as having participated in the scoping meeting.

I would like to receive a CD copy of the EIS.

Name: Patricia DeVore
Organization: Polnick
Address: 8404 SKY VIEW DR
City, State, ZIP: ALEXANDRIA 22009
Phone: 703-799-9101
E-mail: e-pat@nism.com

I would like my name added to the administrative record as having participated in the scoping meeting.

I would like to receive a CD copy of the EIS.

Name: _____
Organization: _____
Address: _____
City, State, ZIP: _____
Phone: _____
E-mail: _____

I would like my name added to the administrative record as having participated in the scoping meeting.

I would like to receive a CD copy of the EIS.

Name: _____
Organization: _____
Address: _____
City, State, ZIP: _____
Phone: _____
E-mail: _____

I would like my name added to the administrative record as having participated in the scoping meeting.

I would like to receive a CD copy of the EIS.

Name: _____
Organization: _____
Address: _____
City, State, ZIP: _____
Phone: _____
E-mail: _____

I would like my name added to the administrative record as having participated in the scoping meeting.

I would like to receive a CD copy of the EIS.

Name: _____
Organization: _____
Address: _____
City, State, ZIP: _____
Phone: _____
E-mail: _____

Public

Attendee Roster

June 7, 2006 BRAC EIS Scoping Meeting - Fort Belvoir, Virginia

If you wish to have your name listed in the administrative record, please enter your name and address below.

I would like my name added to the administrative record as having participated in the scoping meeting.

I would like to receive a CD copy of the EIS.

Name: DANIEL D. O'BRIEN
Organization: FACILITY PLANNING DPW
Address: 9430 JACKSON LOOP
City, State, ZIP: FORT BELVOIR, VA 22060-5116
Phone: 703 806-0043
E-mail: daniel.obrien@us.army.mil

I would like my name added to the administrative record as having participated in the scoping meeting.

I would like to receive a CD copy of the EIS.

Name: JOHN D. PATRICK
Organization: SPR
Address: 6713 WINDWARD PL
City, State, ZIP: SPRINGFIELD, VA 22150
Phone: 703-509-1948
E-mail:

I would like my name added to the administrative record as having participated in the scoping meeting.

I would like to receive a CD copy of the EIS.

Name: BRANKA BECKS
Organization: NAVMAR APPLIED SCIENCE
Address: 105 KENNEDY
City, State, ZIP: ALEXANDRIA VA 22305
Phone: 703.517.1158
E-mail: becksb@navmar.com

I would like my name added to the administrative record as having participated in the scoping meeting.

I would like to receive a CD copy of the EIS.

Name: RICK FREEMAN
Organization: FORT BELVOIR FEDERAL CREDIT UNION
Address: 14040 CENTRAL LOOP
City, State, ZIP: WOODBRIDGE VA 22193
Phone: 703-730-1800
E-mail:

I would like my name added to the administrative record as having participated in the scoping meeting.

I would like to receive a CD copy of the EIS.

Name: PHILLIP BEFENBROCK
Organization: OFFICE OF DELEGATE KRIS AMUNDSON
Address: PO BOX 143
City, State, ZIP: MT. VERNON, VA 22121
Phone: 703-619-0444
E-mail: KRISIN44TH@COM

I would like my name added to the administrative record as having participated in the scoping meeting.

I would like to receive a CD copy of the EIS.

Name: BRETT KENNEDY
Organization: OFFICE OF SUPERVISOR HYLANS
Address: 2511 PARKERS LANE
City, State, ZIP: ALEXANDRIA VA 22306
Phone: 7-760-7514
E-mail: BRETT.KENNEDY@FAIRFAXCOUNTY.GOV

Public

Attendee Roster

June 7, 2006 BRAC EIS Scoping Meeting - Fort Belvoir, Virginia

If you wish to have your name listed in the administrative record, please enter your name and address below.

- I would like my name added to the administrative record as having participated in the scoping meeting.
- I would like to receive a CD copy of the EIS.

Name: PHILIP LATASA
 Organization: Friends of Accotuck Creek
 Address: 8502 Barrington CT #N
 City, State, ZIP: Springfield, VA 22152
 Phone: _____
 E-mail: _____

.....

- I would like my name added to the administrative record as having participated in the scoping meeting.
- I would like to receive a CD copy of the EIS.

Name: Brian Fisher
 Organization: CACTI International Inc.
 Address: 8350 Alban Road, Suite 103
 City, State, ZIP: Springfield, VA 22150-2316
 Phone: 703-325-2384 ext 116
 E-mail: cfisher@cacti.com

.....

- I would like my name added to the administrative record as having participated in the scoping meeting.
- I would like to receive a CD copy of the EIS.

Name: PATRICIA TYSON
 Organization: _____
 Address: 6641 Mount Vernon Highway
 City, State, ZIP: Alexandria, VA 22309
 Phone: _____
 E-mail: T.Tyson@midspring.com

- I would like my name added to the administrative record as having participated in the scoping meeting.
- I would like to receive a CD copy of the EIS.

Name: Gres Evers
 Organization: Northon VA Soil & Water Conservation District
 Address: 8400 Oakford Dr
 City, State, ZIP: Springfield VA 22152
 Phone: 703 644-1227
 E-mail: _____

.....

- I would like my name added to the administrative record as having participated in the scoping meeting.
- I would like to receive a CD copy of the EIS.

Name: MARK CAJONET
 Organization: _____
 Address: 6641 Mount Vernon Hwy
 City, State, ZIP: Alexandria VA 22309
 Phone: 703 407 9115
 E-mail: mcajonet@esginc.com

.....

- I would like my name added to the administrative record as having participated in the scoping meeting.
- I would like to receive a CD copy of the EIS.

Name: A.J. Caputo
 Organization: Clark
 Address: 2 Bethesda Metro Center
 City, State, ZIP: Bethesda MD 20814
 Phone: 703-787-2064
 E-mail: a.j.caputo@clarkreality.com

Public

Attendee Roster

June 7, 2006 BRAC EIS Scoping Meeting - Fort Belvoir, Virginia

If you wish to have your name listed in the administrative record, please enter your name and address below.

- I would like my name added to the administrative record as having participated in the scoping meeting.
- I would like to receive a CD copy of the EIS.

Name: Jerry Lelansty
 Organization: _____
 Address: 8140 Hedge Creek Way
 City, State, ZIP: Springfield VA 24553
 Phone: _____
 E-mail: lelansty@verizon.net

- I would like my name added to the administrative record as having participated in the scoping meeting.
- I would like to receive a CD copy of the EIS.

Name: Vivian Watts (Delegate-394D)
 Organization: Va House of Delegates
 Address: 8717 Mary Lee Lane
 City, State, ZIP: Annandale VA 22003
 Phone: 703-978-2989
 E-mail: vwatts@erols.com

- I would like my name added to the administrative record as having participated in the scoping meeting.
- I would like to receive a CD copy of the EIS.

Name: _____
 Organization: _____
 Address: _____
 City, State, ZIP: _____
 Phone: _____
 E-mail: _____

- I would like my name added to the administrative record as having participated in the scoping meeting.
- I would like to receive a CD copy of the EIS.

Name: AUSTIN WHITMAN
 Organization: _____
 Address: 444 PARK RD
 City, State, ZIP: WASHINGTON DC 20010
 Phone: _____
 E-mail: _____

- I would like my name added to the administrative record as having participated in the scoping meeting.
- I would like to receive a CD copy of the EIS.

Name: _____
 Organization: _____
 Address: _____
 City, State, ZIP: _____
 Phone: _____
 E-mail: _____

- I would like my name added to the administrative record as having participated in the scoping meeting.
- I would like to receive a CD copy of the EIS.

Name: _____
 Organization: _____
 Address: _____
 City, State, ZIP: _____
 Phone: _____
 E-mail: _____

Public

Attendee Roster

June 7, 2006 BRAC EIS Scoping Meeting - Fort Belvoir, Virginia

If you wish to have your name listed in the administrative record, please enter your name and address below.

- I would like my name added to the administrative record as having participated in the scoping meeting.
- I would like to receive a CD copy of the EIS.

Name: Jo Ann Blanke
 Organization: Ft Belvoir
 Address: _____
 City, State, ZIP: 703-805-3056
 Phone: joann.blanke@belvoir.army.mil
 E-mail: _____

- I would like my name added to the administrative record as having participated in the scoping meeting.
- I would like to receive a CD copy of the EIS.

Name: Glenda Booth
 Organization: Archubim Society of No Va
 Address: 7708 Laurelwood Rd
 City, State, ZIP: Glendaleville VA 22308
 Phone: 703-765-5233
 E-mail: glendabooth@aol.com

- I would like my name added to the administrative record as having participated in the scoping meeting.
- I would like to receive a CD copy of the EIS.

Name: LARA FRITS
 Organization: SOUTHWEST FRUITFAX DEN.CORP.
 Address: 8000A PINE TREE VILLAGE CT
 City, State, ZIP: ALEXANDRIA VA 22309
 Phone: 703 360 5008
 E-mail: lara.frits@stfdc.org

* Fairfax Co.
 Wetlands Board

Your information will not be used for any purpose other than to mail a copy of the EIS to you.

- I would like my name added to the administrative record as having participated in the scoping meeting.
- I would like to receive a CD copy of the EIS.

Name: Richard F. Neel Jr.
 Organization: Southwest Fairfax Development Corp.
 Address: 8800-A Plantree Village Ct
 City, State, ZIP: Alexandria VA 22309
 Phone: 703 360-5008
 E-mail: rckneel@nova.org

- I would like my name added to the administrative record as having participated in the scoping meeting.
- I would like to receive a CD copy of the EIS.

Name: Ken Longmyer
 Organization: Ken Longmyer Inc Congress
 Address: PO B 892
 City, State, ZIP: Mcminnville VA
 Phone: 703 945-532-3108
 E-mail: kenlo@ngmyer.com

- I would like my name added to the administrative record as having participated in the scoping meeting.
- I would like to receive a CD copy of the EIS.

Name: Del. Mark Sickles
 Organization: House of Delegates, 43rd Dist
 Address: P.O. Box 10628
 City, State, ZIP: Alex. Va 22310
 Phone: (703) 722-6440
 E-mail: delmsickles@house.state.va.us

Public

Attendee Roster

June 7, 2006 BRAC EIS Scoping Meeting - Fort Belvoir, Virginia

If you wish to have your name listed in the administrative record, please enter your name and address below.

- I would like my name added to the administrative record as having participated in the scoping meeting.
- I would like to receive a CD copy of the EIS.

Name: Aurora Shapleigh
 Organization: Greenhorne & O'Mara
 Address: 6110 Frost Place
 City, State, ZIP: Laurel MD 20707
 Phone: 301-982-2899
 E-mail: ashapleigh@g-and-o.com

- I would like my name added to the administrative record as having participated in the scoping meeting.
- I would like to receive a CD copy of the EIS.

Name: Chris Lopez
 Organization: Congressman Tom Davis
 Address: 2340 Blurb
 City, State, ZIP: Green Washington D.C. 20515
 Phone: 202 225 1492
 E-mail: Chris.Lopez@mail.house.gov

- I would like my name added to the administrative record as having participated in the scoping meeting.
- I would like to receive a CD copy of the EIS.

Name: Richard Turner
 Organization: _____
 Address: 164 CAMERON STATION BLVD
 City, State, ZIP: ALEXANDRIA VA 22304
 Phone: 703-567-3700
 E-mail: rturner164@msn.com

- I would like my name added to the administrative record as having participated in the scoping meeting.
- I would like to receive a CD copy of the EIS.

Name: DON Wilkos
 Organization: RE/MAX 100
 Address: 5501 Backlick Rd #100
 City, State, ZIP: Springfield VA 22151
 Phone: 703 658 4727
 E-mail: rcaldersforlife@mls.com

- I would like my name added to the administrative record as having participated in the scoping meeting.
- I would like to receive a CD copy of the EIS.

Name: Heath Bungard
 Organization: Congressman ~~Jim Moran~~ Jim Moran
 Address: 2231 E.HOB
 City, State, ZIP: DC 20515
 Phone: 202 225 4376
 E-mail: heathbungard@mail.house.gov

- I would like my name added to the administrative record as having participated in the scoping meeting.
- I would like to receive a CD copy of the EIS.

Name: MARION SPANZO
 Organization: Taxpayer
 Address: 7910 JOURNEY LN
 City, State, ZIP: SPRINGFIELD VA 22153
 Phone: 703-440-8507
 E-mail: jls-mls@cox.net

Public

Attendee Roster

June 7, 2006 BRAC EIS Scoping Meeting - Fort Belvoir, Virginia

If you wish to have your name listed in the administrative record, please enter your name and address below.

- I would like my name added to the administrative record as having participated in the scoping meeting.
- I would like to receive a CD copy of the EIS.

Name: ANH MINH TRAN
 Organization: JOBIN REALTY
 Address: 6507 SYDENSTRICKER RD
 City, State, ZIP: Burke VA 22015
 Phone: 703 209 0745
 E-mail: ANHMINHTRAN@MIRLS.COM

- I would like my name added to the administrative record as having participated in the scoping meeting.
- I would like to receive a CD copy of the EIS.

Name: PAUL E. GAGNON
 Organization: Lee District Lead User Transpo
 Address: PO Box 10413
 City, State, ZIP: Frederick VA 22310
 Phone: 703 960 2840
 E-mail: freefax@cox.net

- I would like my name added to the administrative record as having participated in the scoping meeting.
- I would like to receive a CD copy of the EIS.

Name: _____
 Organization: _____
 Address: _____
 City, State, ZIP: _____
 Phone: _____
 E-mail: _____

- I would like my name added to the administrative record as having participated in the scoping meeting.
- I would like to receive a CD copy of the EIS.

Name: Neal F. Mc Bride, Secy.
 Organization: South Run Coalition
 Address: c/o 8201 Southrun Road
 City, State, ZIP: Springfield VA 22153
 Phone: 703-455-0395
 E-mail: neal@mcbride@cox.net

- I would like my name added to the administrative record as having participated in the scoping meeting.
- I would like to receive a CD copy of the EIS.

Name: PURVAGNA AMIN
 Organization: ERG
 Address: 14555 AVON PARKWAY, SUITE 200
 City, State, ZIP: CHANTILLY, VA 20151
 Phone: (703) 633-1712
 E-mail: PURVAGNA.AMIN@ERG.COM

- I would like my name added to the administrative record as having participated in the scoping meeting.
- I would like to receive a CD copy of the EIS.

Name: _____
 Organization: _____
 Address: _____
 City, State, ZIP: _____
 Phone: _____
 E-mail: _____

Your information will not be used for any purpose other than to mail a copy of the EIS to you.

STAFF

Attendee Roster

June 7, 2006 BRAC EIS Scoping Meeting - Fort Belvoir, Virginia

If you wish to have your name listed in the administrative record, please enter your name and address below.

I would like my name added to the administrative record as having participated in the scoping meeting.

I would like to receive a CD copy of the EIS.

Name: TIMOTHY LAVALLEE
 Organization: LPES
 Address: 1403 LAWNES CREEK CD
 City, State, ZIP: SMITHFIELD VA 23430
 Phone: (757) 357-0730
 E-mail: tlavallee@pesinc.com

I would like my name added to the administrative record as having participated in the scoping meeting.

I would like to receive a CD copy of the EIS.

Name: KENO HOST
 Organization: BHVP
 Address: 200 DUNBAR FIELD RD
 City, State, ZIP: ALEX VA
 Phone: 703 545 2208
 E-mail: khcost@BHSI.COM

I would like my name added to the administrative record as having participated in the scoping meeting.

I would like to receive a CD copy of the EIS.

Name: JEFF MORAN
 Organization: TETRA TECH
 Address: 10306 Eaton Place
 City, State, ZIP: Fairfax VA 22030
 Phone: 703-385-6000
 E-mail:

I would like my name added to the administrative record as having participated in the scoping meeting.

I would like to receive a CD copy of the EIS.

Name: Patrick Solomon
 Organization: Tetra Tech
 Address: 10306 Eaton Place Ste 340
 City, State, ZIP: Fairfax VA 22030
 Phone: 703.385-6000 x117
 E-mail: patrick.solomon@tetra tech-fairfax.com

I would like my name added to the administrative record as having participated in the scoping meeting.

I would like to receive a CD copy of the EIS.

Name: Curman Calvin
 Organization: Tetra Tech
 Address: 10306 Eaton Place Suite 340
 City, State, ZIP: Fairfax VA 22030
 Phone: 703-385-6000
 E-mail:

I would like my name added to the administrative record as having participated in the scoping meeting.

I would like to receive a CD copy of the EIS.

Name: Michelle Cannella
 Organization: Tetra Tech
 Address: 10306 Eaton Place Suite 340
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 Phone: 703-385-6000
 E-mail: michelle.cannella@tetratech-fairfax.com

Appendix J

Agency Scoping Meeting Discussion Points and Attendance Roster

Fort Belvoir Agency Scoping Meeting
June 7, 2006 1:30PM – Springfield Hilton Hotel – Springfield, VA

Discussion Points

- Will the public have the same input opportunity as the agencies?
 - Yes, using the written comment form or online comment form, via email, or through the court reporter to submit oral comments.

- Will the public have the group forum opportunity as the agencies do this afternoon?
 - No, there will be a formal public hearing later in the EIS process (winter of 2006–2007)
 - All the public comments received throughout the scoping process will be compiled and presented in the Scope of Statement, which will become part of the public record.
 - Ask questions of technical experts

- How will the BRAC EIS and the master plan be coordinated, in particular, the siting of the facilities on Fort Belvoir?
 - The EIS and the master plan are being prepared concurrently.

- The Master Plan needs to be decided first to do NEPA analysis of a preferred alternative.
 - Typically the master planning process is conducted ahead of the EIS process; however, because of the accelerated schedule for implementation of the BRAC actions, the master planning and EIS teams are working closely to coordinate the two efforts.

- If the NEPA process (EIS) reveals issues with the Master Plan's preferred alternative (facility locations) late in the process, (winter 2006–2007), will there be time to change/modify alternatives (facility locations?)
 - Yes, it is possible for the Army to revise alternatives.
 - An EIS can go forth to the Public Draft EIS stage without a preferred alternative and determine a preferred alternative at that point on the basis of public input.

- Will there still be enough time if that happens—it is a very narrow window of time to complete the EIS and master plan.
 - The EIS will analyze the entire footprint for proposed facilities, so some movement of siting of facilities within the footprint could occur without significantly impacting the schedule.
 - If it is determined that the preferred alternative is no longer viable, we will already have done the investigation at other locations (through analysis of other alternatives considered) to determine their suitability for development.
 - If an area is added to an alternative that was not previously considered, the EIS schedule would be affected.

Fort Belvoir Agency Scoping Meeting
June 7, 2006 1:30PM – Springfield Hilton Hotel – Springfield, VA

Discussion Points

- Additional follow-up NEPA analysis such as a Supplemental EA could be done if needed for specific sites.
- What about agency coordination?
 - Coordination letters to federal, state, and local agencies will be sent.
 - The Commonwealth of Virginia has a “one stop shop” for distribution of EIS materials (i.e., Public Draft EIS) in which Ms. Ellie Irons of the Virginia Department of Environmental Quality (VDEQ) coordinates distribution of the EIS to all Virginia agencies.
- What is the relationship between the Belvoir New Vision Planners (BNVP) and the BRAC NEPA Support Team (NST)?
 - There is direct overlap between the two, and consistent coordination and sharing of information between them. In fact there are two firms that are members of both teams.
- The July 7 report will identify site locations of 80 percent of the proposed facilities on Fort Belvoir. The locations of the facilities will change the nature of transportation and infrastructure required to accommodate the facilities. State and local agencies will be impacted by these facility sitings, particularly transportation agencies. We (State and local representatives) need enough time to budget and plan to accommodate growth on Fort Belvoir (roads, rail, etc.). Where will the money come from to fund all these improvements?
 - The BRAC NST will take all concerns back to the planners regarding timing of the Master Plan and EIS and the impact on local agency planning constraints.
- What if the master plan finds that Fort Belvoir *cannot* accommodate the proposed square footage?
 - BNVP has determined that the proposed square footage will fit in multiple configurations. At this time that is not a concern. A screening process to minimize impacts to sensitive environmental areas on Fort Belvoir is also being conducted.
- What is the region of influence of transportation and other impacts of BRAC action analyzed in the EIS? What about mitigation?
 - The region of influence has not been defined at this stage.
 - The EIS will propose mitigation, but will not conduct analysis of the proposed mitigation or implement the mitigation. Who is responsible for the proposed mitigation will depend on what the proposed mitigation is.
- Will there be specific detail in the EIS about the potential for off-post transportation improvements (transportation mitigation)?

Fort Belvoir Agency Scoping Meeting
June 7, 2006 1:30PM – Springfield Hilton Hotel – Springfield, VA

Discussion Points

- There will be general recommendations put forth for transportation improvements in the EIS that are based on the results of the impacts analysis.
- There will be a negotiation process between the Army and appropriate agencies to determine funding mechanisms for the required transportation improvements.
- Will the federal government lease office space on Fort Belvoir to the private sector? This would affect local transportation issues/development. The local government needs to be made aware of this decision.
 - Leasing of federal land (Enhanced Use Leases [EULs]) is being considered for developers to construct office space.
- 22,000 *jobs* will be relocated to Fort Belvoir. What about collateral contractors that will be subsequently drawn to Fort Belvoir?
 - This will be addressed in the EIS. Planners are analyzing the issue and will be making estimates. The EIS will also analyze impacts on the local economy, schools, and utilities.
- I'm concerned that the mitigation will not be analyzed, just proposed. How do we know the mitigation will be sufficient?
 - Mitigation measures will be recommended on the basis of the results of the impacts analysis to be conducted as part of the EIS.
- The master plan is to be completed in May 2007. Will the EIS be finalized at this time?
 - Development of the master plan and the Draft EIS are being conducted concurrently.
 - The Public Draft EIS with the master plan update is anticipated to be available in the winter of 2006-2007.
- It would help local agencies/commenting agencies to have interim drafts and comment periods, and longer comment periods. We need to see this document before it is final.
 - The Public Draft EIS will have a 45-day comment period in the Winter of 2006–2007. The Final EIS will have a 30-day comment period in the summer of 2007.
- Will the comments received today be on the BNVP Web site? If so, when?
 - Yes. The comment period ends July 2. Comments received will be included as part of the Scope of Statement report to be posted on the Web site sometime in mid-July.

Agency Scoping Meeting

Attendee Roster

June 7, 2006 BRAC EIS Scoping Meeting - Fort Belvoir, Virginia

If you wish to have your name listed in the administrative record, please enter your name and address below.

- I would like my name added to the administrative record as having participated in the scoping meeting.
- I would like to receive a CD copy of the EIS.

Name: FRED SERDEN
 Organization: Fairfax Co. DPZ
 Address: Herbert Bldg
 City, State, ZIP: Fairfax VA 22035
 Phone: 703-324-1262
 E-mail: FRED.SERDEN@FAIRFAXCOUNTY.GOV

- I would like my name added to the administrative record as having participated in the scoping meeting.
- I would like to receive a CD copy of the EIS.

Name: _____
 Organization: _____
 Address: _____
 City, State, ZIP: _____
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 E-mail: _____

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 Phone: _____
 E-mail: _____

- I would like my name added to the administrative record as having participated in the scoping meeting.
- I would like to receive a CD copy of the EIS.

Name: Dana Feath
 Organization: Prince William Co.
 Address: 1 South Cooper Ct
 City, State, ZIP: PW, VA 22192
 Phone: 703-7926600
 E-mail: dfeaton@pw.gov

- I would like my name added to the administrative record as having participated in the scoping meeting.
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Name: _____
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 City, State, ZIP: _____
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Agency Scoping Meeting

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- I would like my name added to the administrative record as having participated in the scoping meeting.
- I would like to receive a CD copy of the EIS.

Name: Andrew Schaeffer
 Organization: WHS
 Address: 1501 Wilson Blvd.
 City, State, ZIP: Rosslyn, VA
 Phone: 703-696-0108
 E-mail: Andrew.Schaeffer.civ@whs.mil

- I would like my name added to the administrative record as having participated in the scoping meeting.
- I would like to receive a CD copy of the EIS.

Name: Marcia Hanson, Ambulatory
 Organization: Board of Superv.
 Address: 2511 Parkview Ln
 City, State, ZIP: Alva 22306
 Phone: 703 780 5178
 E-mail: marcia.hanson@fairfaxcounty.gov

- I would like my name added to the administrative record as having participated in the scoping meeting.
- I would like to receive a CD copy of the EIS.

Name: _____
 Organization: _____
 Address: _____
 City, State, ZIP: _____
 Phone: _____
 E-mail: _____

- I would like my name added to the administrative record as having participated in the scoping meeting.
- I would like to receive a CD copy of the EIS.

Name: Robert J. Klugiewicz Jr
 Organization: Pentagon WHS
 Address: Room 5E330, Pentagon
 City, State, ZIP: Washington, DC 20301-1155
 Phone: 703 692 4779
 E-mail: Robert.Klugiewicz@whs.mil

- I would like my name added to the administrative record as having participated in the scoping meeting.
- I would like to receive a CD copy of the EIS.

Name: _____
 Organization: _____
 Address: _____
 City, State, ZIP: _____
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 E-mail: _____

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Name: _____
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 E-mail: _____

Agency Scoping Meeting

Attendee Roster

June 7, 2006 BRAC EIS Scoping Meeting - Fort Belvoir, Virginia

If you wish to have your name listed in the administrative record, please enter your name and address below.

- I would like my name added to the administrative record as having participated in the scoping meeting.
- I would like to receive a CD copy of the EIS.

Name: J R Byers
 Organization: Fairfax County Planning Commission
 Address: 2000 Govt Ctr Hwy
 City, State, ZIP: Fairfax VA 22035
 Phone: 703-324-2865
 E-mail: j.byers@cox.net

- I would like my name added to the administrative record as having participated in the scoping meeting.
- I would like to receive a CD copy of the EIS.

Name: ROBERT H. McDONALD
 Organization: VA P.O.T.I.
 Address: 14685 AVION PKWY, STE 345
 City, State, ZIP: CHANTILLY VA 20151
 Phone: 703-383-2226
 E-mail: ROBERT.MCDONALD@VIRGINIA.POTI.GOV

- I would like my name added to the administrative record as having participated in the scoping meeting.
- I would like to receive a CD copy of the EIS.

Name: MARK G CANALE
 Organization: FAIRFAX COUNTY DOT
 Address: BOSS GOVERNMENT CTR PKWY SAITE
 City, State, ZIP: FAIRFAX VA 22035 1034
 Phone: 703-324-1177
 E-mail: MARK.CANALE@FAIRFAXCOUNTY.GOV

- I would like my name added to the administrative record as having participated in the scoping meeting.
- I would like to receive a CD copy of the EIS.

Name: Brian Higgins
 Organization: WHS-DFW
 Address: 155 Defense 1314 Mayflower Drive
 City, State, ZIP: McLean VA 22101
 Phone: 703-697-5066
 E-mail: Brian.Higgins@whs.mil

- I would like my name added to the administrative record as having participated in the scoping meeting.
- I would like to receive a CD copy of the EIS.

Name: PAT THOMAS
 Organization: PW COUNTY PLANNING
 Address: 1 COUNTY COMPLEX COURT
 City, State, ZIP: PRINCEWILLIAM, VA 22192
 Phone: 703/792-7058
 E-mail: pthomas1@pwccgov.org

- I would like my name added to the administrative record as having participated in the scoping meeting.
- I would like to receive a CD copy of the EIS.

Name: _____
 Organization: _____
 Address: _____
 City, State, ZIP: _____
 Phone: _____
 E-mail: _____

Agency Scoping Meeting

Attendee Roster

June 7, 2006 BRAC EIS Scoping Meeting - Fort Belvoir, Virginia

If you wish to have your name listed in the administrative record, please enter your name and address below.

- I would like my name added to the administrative record as having participated in the scoping meeting.
- I would like to receive a CD copy of the EIS.

Name: Bob Ross
 Organization: BRAC office
 Address: 2511 Crystal Drive
 City, State, ZIP: Arlington, VA
 Phone: 703-402-2878
 E-mail: Robert.Ross@HQA.ARMY.MIL

- I would like my name added to the administrative record as having participated in the scoping meeting.
- I would like to receive a CD copy of the EIS.

Name: MARCEA KICOS
 Organization: DPW EMD
 Address: 8443 Silver Glen Dr house
 City, State, ZIP: Dunfries, VA 22026
 Phone: 703-806-0020 UK
 E-mail: KICOS@BEVVOIR.ARMY.MIL

- I would like my name added to the administrative record as having participated in the scoping meeting.
- I would like to receive a CD copy of the EIS.

Name: Kevin Kivimaki
 Organization: SpecPro, contractor to DPW-ENDD
 Address: 5070 Missions Drive
 City, State, ZIP: Dunfries VA 22025
 Phone: 703-806-0627
 E-mail: Kivimaki.k@belvoir.army.mil

- I would like my name added to the administrative record as having participated in the scoping meeting.
- I would like to receive a CD copy of the EIS.

Name: Kelly Lease
 Organization: ft. Belvoir DPW-ENDD
 Address: _____
 City, State, ZIP: _____
 Phone: 703-806-4008
 E-mail: Kelly.lease@us.army.mil.

- I would like my name added to the administrative record as having participated in the scoping meeting.
- I would like to receive a CD copy of the EIS.

Name: Doug Baker
 Organization: Bearing Point
 Address: _____
 City, State, ZIP: _____
 Phone: 703 2532493
 E-mail: _____

- I would like my name added to the administrative record as having participated in the scoping meeting.
- I would like to receive a CD copy of the EIS.

Name: Don Dees
 Organization: Fort Belvoir PAO
 Address: 9820 Flagler Road
 City, State, ZIP: 22060
 Phone: 703 805 2402
 E-mail: donald.dees@belvoir.army.mil

Agency Scoping Meeting

Attendee Roster

June 7, 2006 BRAC EIS Scoping Meeting - Fort Belvoir, Virginia

If you wish to have your name listed in the administrative record, please enter your name and address below.

- I would like my name added to the administrative record as having participated in the scoping meeting.
- I would like to receive a CD copy of the EIS.

Name: Chuck Ferguson
 Organization: SDDCTEA
 Address: 720 THIMBLE SHOALS BLVD, STE 130
 City, State, ZIP: Newport News, VA 23606-
 Phone: (757) 599-1117
 E-mail: Chuck.Ferguson@TEA.ARMY.MIL

- I would like my name added to the administrative record as having participated in the scoping meeting.
- I would like to receive a CD copy of the EIS.

Name: Randy Hodson
 Organization: NOVA UD&I
 Address: 1485 Aviation Pkwy
 City, State, ZIP: Charlottesville VA
 Phone: (703) 383-2316
 E-mail: Randy.Hodson@NorVirginia.gov

- I would like my name added to the administrative record as having participated in the scoping meeting.
- I would like to receive a CD copy of the EIS.

Name: Mike Bettes
 Organization: Tetra Tech
 Address: 10306 Eaton Pl S.R. 340
 City, State, ZIP: Fairfax, VA 22030
 Phone: _____
 E-mail: Mike.Bettes@TetraTech-Px.com

- I would like my name added to the administrative record as having participated in the scoping meeting.
- I would like to receive a CD copy of the EIS.

Name: Jana Curven
 Organization: VHB
 Address: 8300 BOONE BLVD
 City, State, ZIP: VIENNA VA 22182
 Phone: 703 847 3071
 E-mail: jcurven@vhr.com

- I would like my name added to the administrative record as having participated in the scoping meeting.
- I would like to receive a CD copy of the EIS.

Name: Barbara Horton
 Organization: NGA NCE PMO
 Address: 12310 Sunrise Valley Dr.
 City, State, ZIP: Reston VA 20191
 Phone: 703-735-3142
 E-mail: hortonbb@nga.mil

- I would like my name added to the administrative record as having participated in the scoping meeting.
- I would like to receive a CD copy of the EIS.

Name: Bob Bauer
 Organization: Pentagon BRAC Program Office
 Address: Pentagon
 City, State, ZIP: _____
 Phone: 703-785-2043
 E-mail: bobert.bauer@whs.mil

Agency Scoping Meeting

Attendee Roster

June 7, 2006 BRAC EIS Scoping Meeting - Fort Belvoir, Virginia

If you wish to have your name listed in the administrative record, please enter your name and address below.

I would like my name added to the administrative record as having participated in the scoping meeting.

I would like to receive a CD copy of the EIS.

Name: Peter Clive
Organization: SDDCTEA Def Acc Rd Program
Address: 720 Thimble Shoals Blvd Suite 130
City, State, ZIP: Newport News, VA 23606
Phone: 757 599-1117
E-mail: Peter.Clive@tea.army.mil

I would like my name added to the administrative record as having participated in the scoping meeting.

I would like to receive a CD copy of the EIS.

Name: Christopher R. Reed
Organization: Virginia DOT
Address: 14685 Aviation Hwy
City, State, ZIP: Chantilly VA 20151
Phone: 703.503.2080
E-mail: Christopher.Reed@virginia DOT.gov

I would like my name added to the administrative record as having participated in the scoping meeting.

I would like to receive a CD copy of the EIS.

Name: Derek Mann 49
Organization: Fort Belvoir OPW-ENRD (contractor)
Address: 9430 Jackson loop
City, State, ZIP: Fort Belvoir, VA 22060-5116
Phone: 703-801-3859
E-mail: derek.manning@us.army.mil

I would like my name added to the administrative record as having participated in the scoping meeting.

I would like to receive a CD copy of the EIS.

Name: Robert J Klugiewicz Jr
Organization: DoD DOD WHS
Address: Pentagon
City, State, ZIP: _____
Phone: 703-692-4779
E-mail: Robert.Klugiewicz@whs.mil

I would like my name added to the administrative record as having participated in the scoping meeting.

I would like to receive a CD copy of the EIS.

Name: Tanya Husick
Organization: DRPT
Address: 6507 Old Carpenters Rd
City, State, ZIP: Fairfax VA 22030
Phone: 703-934-4636
E-mail: Tanya.husick@drpt.virginia.gov

I would like my name added to the administrative record as having participated in the scoping meeting.

I would like to receive a CD copy of the EIS.

Name: SERRY HYLAND
Organization: Fanfan BUS
Address: _____
City, State, ZIP: _____
Phone: _____
E-mail: _____

Appendix K

Debriefing Meeting Summary

Following the Public Scoping Meeting, the Base Realignment and Closure (BRAC) National Environmental Policy Act (NEPA) Support Team (NST) and the Belvoir New Vision Planners (BNVP) convened for a debriefing meeting. Technical staff from each of the information booths provided comments on issues that the public raised; frequently asked questions, comments, or concerns; and general feedback. Below is a summary of the information gathered at that meeting.

Verbal comments given to the BRAC NST and BNVP at the scoping meeting:

Planning issues

- Commented on planning principles; hope they can be adhered to.
- Wanted to know impacts of significant areas of development for BRAC on Fort Belvoir.
- What would the density of the development proposed for the Engineering Proving Ground (EPG) be, and how would the access roads be aligned?
- Several questions were asked about where things were going to be sited, and the siting process in general.
- Will the new Dewitt Hospital partner with INOVA Fairfax Hospital?
- A gentleman who had formerly worked for the Veterans Administration felt the hospital needs to be at EPG. Keeping the hospital on Main post would be a traffic nightmare, and that EPG was a better location from the transportation aspect.

Transportation issues

- Liked map showing directions and origins of relocated workers.
- Why does there not appear to be a tree buffer being maintained along the western edge of EPG to shield the residential neighborhoods from the Parkway. This [may have] been an agreement made in the past.
- The discussion at the transportation booth was almost exclusively focused on the issue of where people are coming from and whether there is likely to be a significant shift in employee's residential locations. Most citizens the BNVP staff spoke with were satisfied with our sample size and approach. However, the agencies, Fairfax County in particular continues to be very concerned that we do not have a full Zip Code listing of current and incoming employees. While they recognize that while we have about 15,000 Zip Codes from incoming agencies, these were obtained at different times from different sources. The BNVP staff does not believe the overall pattern would change. It has been the similar for years, and how it changes over the next 5 years is driven by several factors. It is unlikely to shift percentages more than 2 to 4 percent from any direction.
- Most citizens seemed supportive of the development but were very concerned or even alarmed that the program would proceed without adequate funding for transportation improvements.
- Most citizens felt extending Metro or some form of rail transit was essential.

- In terms of specific suggestions, most are waiting to see specific proposals and concepts. However, quite a few asked what would be done to Route 1, and there were suggestions to extend a road across Southwest Post parallel to Route 1.
- There was strong support for rail south along Route 1 to Fort Belvoir.
- There were a lot of questions regarding what we would study and how far off-post our studies would go. In that regard it does take up to 6 or 7 miles before traffic destined to Fort Belvoir drops below 10 percent of the traffic flow or becomes insignificant.

Socioeconomic issues

- Wanted to know if the number of housing units on-post will increase.
- What will happen to school enrollment as a result of BRAC influx of personnel into the area?
- Retirees versus active workers: very different perspectives of development.

Environmental issues

- Want to see preservation of the Environmental Quality Corridor (EQC) on EPG and the wildlife refuges on the Main Post.
- Could the EQC be open to public access? A past agreement Fort Belvoir made to delineate and adopt the EQC and the refuges was cited.
- Want to continue to have or allow public access to Accotink Creek
- Wanted to know why the Accotink Bay Wildlife Refuge was being shown on a display board as "secondary development area." Did not agree with that area being indicated for development.
- General questions were asked about existing environmental conditions. One person seemed most interested in conservation of shoreline areas and eagle habitats.
- Several people were concerned with the maintenance of the wildlife corridor through the installation. One person asked what effect the connector road would have on the corridor.

Cultural issues

- One resident lives within the Mount Air historic overlay district. Her house is directly across the street from the North Post Golf Course and was concerned by its development. She wants to retain the wooded scene presented by the golf course. She was also concerned about the idea that the hospital would be moved off of South Post. She feels that having the hospital on Main Post is more convenient for both patients and visitors as they have access to the PX, Officers' Club, and so on. That would not be the case if the hospital were to move to EPG.

Scoping issues

- This process is not far enough along to be able to provide substantive comments.
- A representative of the Audubon Society of Northern Virginia provided a letter of scoping comments to the BRAC NST.
- Copies of the display boards were requested to be made available on the BNVP Web site.

Other notes

- Media representatives were in attendance, including reporters from the *Washington Post* and *Mount Vernon Gazette*. Overall reaction from the media was positive
- Some members of the public questioned if this all there is. Data is lacking and there was no formal public forum or presentation.

Appendix L

Submitted Comments

Date Received 6/7/2006

Comment From:

Scoping Meeting

Comment Type

Submitted in writing at meeting

Attended Scoping Meetin

Requests Name in Admin Recor

Requests Copy of EI

Commentor Type

State Government

Commentor Type Other Description

First Name

Vivian

Last Name

Watts

Telephone

(703)978-2989

E-mail

watts@erols.com

Organization/Affiliation

Virginia General Asseembly

Title

Delegate - 39th House District

Address 1

8717 Mary Lee Lane

Address 2

City

Annandale

State

VA

Zip

22003

County

Additional Information

Issue Area

Traffic and Transportation

Sub Issue:

EIS Area of Concern

Other

EIS Areas of Concern Other Description

traffic and transportation

Entire Comment

In addition to providing transit access to the Metro system, my biggest concern is off-site traffic impact from development of the largest employment site in Fairfax County.

Specifically, a grade-separated intersection needs to be constructed for the Fairfax Parkway and the street which provide access to Greenspring Village to the north and to the residential development to the south. This should be done as early in the development Engineering Proving Ground as possible, because existing levels of traffic on the Parkway have already resulted in at least one fatal incident.

The problems of traffic volume and speeds on what drivers on the Parkway regard as a high-speed facility is exacerbated by the fact that (1) the intersection is already 6+ lanes wide, (2) is the only access out of the two residential areas, and (3) Greenspring Village is a major senior citizen residential community of approximately 2,000 units. There is no capacity to absorb any additional traffic.

Comment Form

Environmental Impact Statement for BRAC 2005 Implementation and Master Plan Update at Fort Belvoir, Virginia

NOTE: All information submitted will become public record.

1. Your information:

Name: Frank Cohn
Title: Chair, Transportation Committee
Agency/Organization: Mount Vernon Council of Citizens Associations (MVCCA)
Address: 8809 Gateshead Rd
City, State, Zip: Alexandria, VA 22309
Phone: 703-780-5698
E-mail: FCohn22309@aol.com

Please send a CD copy of the EIS to me.

2. Please check the one affiliation that best represents your role or interest in the EIS:

- | | |
|---|---|
| <input type="checkbox"/> Fort Belvoir Resident | <input type="checkbox"/> Recreational Organization |
| <input type="checkbox"/> State Government | <input type="checkbox"/> Private Citizen |
| <input type="checkbox"/> School/University | <input type="checkbox"/> Federal Government |
| <input type="checkbox"/> Civic Organization | <input type="checkbox"/> Business/Commercial Organization |
| <input type="checkbox"/> Federally Recognized Tribe | <input type="checkbox"/> Environmental Organization |
| <input type="checkbox"/> County | <input checked="" type="checkbox"/> Other: <u>Citizen Association</u>
<u>(your neighbors!)</u> |

3. EIS Areas of Concern. Please check the appropriate boxes and write your specific comments about the area of concern in # 4 below. More Comment Forms are provided at the Comment station if you need additional space.

- | | |
|--|--|
| <input type="checkbox"/> Construction | <input checked="" type="checkbox"/> Noise |
| <input checked="" type="checkbox"/> Traffic and Transportation | <input type="checkbox"/> Native American Resources |
| <input checked="" type="checkbox"/> Cultural Resources/Historic Properties | <input checked="" type="checkbox"/> Air Quality |
| <input checked="" type="checkbox"/> Socioeconomics | <input checked="" type="checkbox"/> Water Quality |
| <input checked="" type="checkbox"/> Wetlands, Wildlife, Endangered Species | <input type="checkbox"/> Other: _____ |

4. Please write your comments in the space provided below. *formal entity among your*
Include the MVCCA as a *Coordinating Agencies*.
There are 3 Co-Chairs, any one of those
can represent the Council on an individual basis.
It seems appropriate to make direct contact
with your neighbors apart from your political
coordination with local government officials.
The Council has numerous Committees which
merge with the subjects listed in par 3.
While my Committee is Transportation, others
are named Environment & Recreation, Public Safety,
Affordable Housing, etc. spanning the interests
reflected in the EIS.

Web Site

Comments may be submitted online at: www.belvoirnewvision.com (click on EIS)

E-mail Comments may be e-mailed to: environmental@belvoir.army.mil

Mail

Comments may be mailed to:

Attn.: EIS Comments

Fort Belvoir Directorate of Public Works

9430 Jackson Loop, Suite 100

Fort Belvoir, VA 22060-5116

**All comments must be received or postmarked by July 2, 2006
to be considered in preparation of the Draft EIS.**

(More comment sheets are available if you need additional space.)

Comment Form

Environmental Impact Statement for BRAC 2005 Implementation and Master Plan Update at Fort Belvoir, Virginia

NOTE: All information submitted will become public record.

1. Your information:

Name: _____

Title: _____

Agency/Organization: _____

Address: _____

City, State, Zip: _____

Phone: _____

E-mail: _____

Please send a CD copy of the EIS to me.

2. Please check the one affiliation that best represents your role or interest in the EIS:

- | | |
|---|---|
| <input type="checkbox"/> Fort Belvoir Resident | <input type="checkbox"/> Recreational Organization |
| <input type="checkbox"/> State Government | <input type="checkbox"/> Private Citizen |
| <input type="checkbox"/> School/University | <input type="checkbox"/> Federal Government |
| <input type="checkbox"/> Civic Organization | <input type="checkbox"/> Business/Commercial Organization |
| <input type="checkbox"/> Federally Recognized Tribe | <input type="checkbox"/> Environmental Organization |
| <input type="checkbox"/> County | <input type="checkbox"/> Other: _____ |

3. EIS Areas of Concern. Please check the appropriate boxes and write your specific comments about the area of concern in # 4 below. More Comment Forms are provided at the Comment station if you need additional space.

- | | |
|---|--|
| <input type="checkbox"/> Construction | <input type="checkbox"/> Noise |
| <input type="checkbox"/> Traffic and Transportation | <input type="checkbox"/> Native American Resources |
| <input type="checkbox"/> Cultural Resources/Historic Properties | <input type="checkbox"/> Air Quality |
| <input type="checkbox"/> Socioeconomics | <input type="checkbox"/> Water Quality |
| <input type="checkbox"/> Wetlands, Wildlife, Endangered Species | <input type="checkbox"/> Other: _____ |

(More comment sheets are available if you need additional space.)

4. Please write your comments in the space provided below.

I spoke to the transportation table people. They seem to have very poor info about how many people currently take mass transit or "slug." They said it was 15%. At Bellston and Rosslyn, the figure is much higher. I believe mass transit improvements are being deliberately sidelined in this process. A big mistake.

Web Site

Comments may be submitted online at: www.belvoirnewvision.com (click on EIS)

E-mail Comments may be e-mailed to: environmental@belvoir.army.mil

Mail

Comments may be mailed to:

Attn.: EIS Comments

Fort Belvoir Directorate of Public Works

9430 Jackson Loop, Suite 100

Fort Belvoir, VA 22060-5116

**All comments must be received or postmarked by July 2, 2006
to be considered in preparation of the Draft EIS.**

(More comment sheets are available if you need additional space.)

Comment Form

Environmental Impact Statement for BRAC 2005 Implementation and Master Plan Update at Fort Belvoir, Virginia

NOTE: All information submitted will become public record.

1. Your information:

Name: _____

Title: _____

Agency/Organization: _____

Address: _____

City, State, Zip: _____

Phone: _____

E-mail: _____

Please send a CD copy of the EIS to me.

2. Please check the one affiliation that best represents your role or interest in the EIS:

Fort Belvoir Resident

State Government

School/University

Civic Organization

Federally Recognized Tribe

County

Recreational Organization

Private Citizen

Federal Government

Business/Commercial Organization

Environmental Organization

Other: _____

3. EIS Areas of Concern. Please check the appropriate boxes and write your specific comments about the area of concern in # 4 below. More Comment Forms are provided at the Comment station if you need additional space.

Construction

Traffic and Transportation

Cultural Resources/Historic Properties

Socioeconomics

Wetlands, Wildlife, Endangered Species

Noise

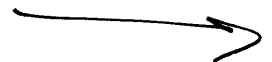
Native American Resources

Air Quality

Water Quality

Other: _____

(More comment sheets are available if you need additional space.)



4. Please write your comments in the space provided below.

— CONSIDER IMPACT ON FAIRFAX CO. PUBLIC SCHOOLS (FCPS)

— CONSIDER EXISTING FACILITIES AS WELL AS NEED FOR ADDING FCPS TO BUILD ADDITIONAL FACILITIES SHOULD THE NEED ARISE —

— THANK YOU

Web Site

Comments may be submitted online at: www.belvoirnewvision.com (click on EIS)

E-mail Comments may be e-mailed to: environmental@belvoir.army.mil

Mail

Comments may be mailed to:

Attn.: EIS Comments

Fort Belvoir Directorate of Public Works

9430 Jackson Loop, Suite 100

Fort Belvoir, VA 22060-5116

All comments must be received or postmarked by July 2, 2006 to be considered in preparation of the Draft EIS.

(More comment sheets are available if you need additional space.)

Comment Form

Environmental Impact Statement for BRAC 2005 Implementation and Master Plan Update at Fort Belvoir, Virginia

NOTE: All information submitted will become public record.

1. Your information:

Name: Glenda Booth
Title: Vice President
Agency/Organization: Audubon Society of NoVa
Address: 7708 Tauxemont Rd
City, State, Zip: Alexandria, VA 22308
Phone: 703-765-5233
E-mail: gbooth123@aol.com

Please send a CD copy of the EIS to me.

2. Please check the one affiliation that best represents your role or interest in the EIS:

- | | |
|---|--|
| <input type="checkbox"/> Fort Belvoir Resident | <input type="checkbox"/> Recreational Organization |
| <input type="checkbox"/> State Government | <input type="checkbox"/> Private Citizen |
| <input type="checkbox"/> School/University | <input type="checkbox"/> Federal Government |
| <input type="checkbox"/> Civic Organization | <input type="checkbox"/> Business/Commercial Organization |
| <input type="checkbox"/> Federally Recognized Tribe | <input checked="" type="checkbox"/> Environmental Organization |
| <input type="checkbox"/> County | <input type="checkbox"/> Other: _____ |

3. EIS Areas of Concern. Please check the appropriate boxes and write your specific comments about the area of concern in # 4 below. More Comment Forms are provided at the Comment station if you need additional space.

- | | |
|--|---|
| <input type="checkbox"/> Construction | <input checked="" type="checkbox"/> Noise |
| <input type="checkbox"/> Traffic and Transportation | <input checked="" type="checkbox"/> Native American Resources |
| <input checked="" type="checkbox"/> Cultural Resources/Historic Properties | <input checked="" type="checkbox"/> Air Quality |
| <input type="checkbox"/> Socioeconomics | <input checked="" type="checkbox"/> Water Quality |
| <input checked="" type="checkbox"/> Wetlands, Wildlife, Endangered Species | <input type="checkbox"/> Other: <u>All natural resources</u> |

(More comment sheets are available if you need additional space.)

4. Please write your comments in the space provided below.

Please create a forum to better involve conservation organizations; make a presentation to the Green Group; answer our Feb. letter.

Give us data + info on your terms "sensitive" and "suitable" ("suitable for development")

Web Site

Comments may be submitted online at: www.belvoirnewvision.com (click on EIS)

E-mail Comments may be e-mailed to: environmental@belvoir.army.mil

Mail

Comments may be mailed to:

Attn.: EIS Comments

Fort Belvoir Directorate of Public Works

9430 Jackson Loop, Suite 100

Fort Belvoir, VA 22060-5116

All comments must be received or postmarked by July 2, 2006 to be considered in preparation of the Draft EIS.

(More comment sheets are available if you need additional space.)

Comment Form

Environmental Impact Statement for BRAC 2005 Implementation and Master Plan Update at Fort Belvoir, Virginia

NOTE: All information submitted will become public record.

1. Your information:

Name: KURT THOMPSON
Title: _____
Agency/Organization: 8108 LITTLE RIDGE LANE
Address: FAIRFAX STATION, VA
City, State, Zip: 22039
Phone: 703 690-8092
E-mail: kkthompson1@cox.net

Please send a CD copy of the EIS to me.

2. Please check the one affiliation that best represents your role or interest in the EIS:

- | | |
|---|---|
| <input type="checkbox"/> Fort Belvoir Resident | <input type="checkbox"/> Recreational Organization |
| <input type="checkbox"/> State Government | <input checked="" type="checkbox"/> Private Citizen |
| <input type="checkbox"/> School/University | <input type="checkbox"/> Federal Government |
| <input type="checkbox"/> Civic Organization | <input type="checkbox"/> Business/Commercial Organization |
| <input type="checkbox"/> Federally Recognized Tribe | <input type="checkbox"/> Environmental Organization |
| <input type="checkbox"/> County | <input type="checkbox"/> Other: _____ |

3. EIS Areas of Concern. Please check the appropriate boxes and write your specific comments about the area of concern in # 4 below. More Comment Forms are provided at the Comment station if you need additional space.

- | | |
|--|--|
| <input type="checkbox"/> Construction | <input type="checkbox"/> Noise |
| <input checked="" type="checkbox"/> Traffic and Transportation | <input type="checkbox"/> Native American Resources |
| <input type="checkbox"/> Cultural Resources/Historic Properties | <input type="checkbox"/> Air Quality |
| <input checked="" type="checkbox"/> Socioeconomics | <input type="checkbox"/> Water Quality |
| <input checked="" type="checkbox"/> Wetlands, Wildlife, Endangered Species | <input type="checkbox"/> Other: _____ |

(More comment sheets are available if you need additional space.)

Comment Form

Environmental Impact Statement for BRAC 2005 Implementation and Master Plan Update at Fort Belvoir, Virginia

NOTE: All information submitted will become public record.

1. Your information:

Name: MARK GIONET
Title: _____
Agency/Organization: _____
Address: 8641 MOUNT VERNON HIGHWAY
City, State, Zip: ALEXANDRIA, VA 22309
Phone: 703 780-0925 / 407-9115
E-mail: mgionet@LSG INC.COM

Please send a CD copy of the EIS to me.

2. Please check the one affiliation that best represents your role or interest in the EIS:

- | | |
|---|---|
| <input type="checkbox"/> Fort Belvoir Resident | <input type="checkbox"/> Recreational Organization |
| <input type="checkbox"/> State Government | <input checked="" type="checkbox"/> Private Citizen |
| <input type="checkbox"/> School/University | <input type="checkbox"/> Federal Government |
| <input type="checkbox"/> Civic Organization | <input type="checkbox"/> Business/Commercial Organization |
| <input type="checkbox"/> Federally Recognized Tribe | <input type="checkbox"/> Environmental Organization |
| <input type="checkbox"/> County | <input type="checkbox"/> Other: _____ |

3. EIS Areas of Concern. Please check the appropriate boxes and write your specific comments about the area of concern in # 4 below. More Comment Forms are provided at the Comment station if you need additional space.

- | | |
|--|--|
| <input type="checkbox"/> Construction | <input type="checkbox"/> Noise |
| <input checked="" type="checkbox"/> Traffic and Transportation | <input type="checkbox"/> Native American Resources |
| <input checked="" type="checkbox"/> Cultural Resources/Historic Properties | <input checked="" type="checkbox"/> Air Quality |
| <input checked="" type="checkbox"/> Socioeconomics | <input checked="" type="checkbox"/> Water Quality |
| <input checked="" type="checkbox"/> Wetlands, Wildlife, Endangered Species | <input type="checkbox"/> Other: _____ |

(More comment sheets are available if you need additional space.)

4. Please write your comments in the space provided below.

① TONIGHT'S MEETING WAS INSUFFICIENT AS AN OVERVIEW OF THE PROCESS & HOPEFULLY IS NOT INDICATIVE OF THE OUTREACH EFFORTS THAT WILL BE CONDUCTED DURING THE PROCESS. LITTLE ACTUAL INFORMATION WAS AVAILABLE CONCERNING THE ^{PROPOSED} ACTION - ACCORDING TO ONE REPRESENTATIVE, ^{AT THE MEETING} THE ACTUAL TENANT AGENCIES ETC ARE STILL BEING IDENTIFIED, WITH DECISIONS STILL FORTHCOMING. THE PUBLIC COMMENT PERIOD SHOULD BE HELD OPEN UNTIL AFTER SUCH DECISIONS.

② MATERIAL PRESENTED ON DEVELOPMENT SCENARIOS ILLUSTRATED "~~PROPOSED~~" DEVELOPABLE AREAS WITHOUT PROVIDING ANY INFORMATION ON WHAT CRITERIA / ~~DATA~~ WAS USED TO MAKE SUCH A DETERMINATION. THE STATEMENT THAT "4,500 ACRES OF LAND ON FT. BELVOIR ARE SUITABLE FOR DEVELOPMENT" SEEMS A BIT PREMATURE IF RESOURCE AND IMPACT STUDIES HAVE YET TO BE CONDUCTED.

③ FROM WHAT LITTLE WAS PRESENTED, THIS ACTION WILL HAVE ENORMOUS IMPACTS ON LOCAL QUALITY OF LIFE, NATURAL RESOURCES ON THE POTOMAC RIVER, TRAFFIC & TRANSPORTATION AND MANY OTHER FACTORS. IT WILL BE MASSIVELY EXPENSIVE.

④ ALTERNATIVES TO BE CONSIDERED SHOULD BE PRESENTED BEFORE THE PUBLIC BEFORE THE DRAFT EIS IS ISSUED. INPUT MUST BE CONSIDERED FROM THE PUBLIC IN THE DEVELOPMENT OF ALTERNATIVES.

⑤ ALTERNATIVES MUST BE SIGNIFICANTLY DIFFERENT & TEST A REALISTIC RANGE OF OPTIONS FOR FACILITY SITING, PROTECTION OF RESOURCES, TRANSPORTATION ALTERNATIVES ETC.

Web Site

Comments may be submitted online at: www.belvoirnewvision.com (click on EIS)

E-mail Comments may be e-mailed to: environmental@belvoir.army.mil

Mail

Comments may be mailed to:

Attn.: EIS Comments

Fort Belvoir Directorate of Public Works

9430 Jackson Loop, Suite 100

Fort Belvoir, VA 22060-5116

**All comments must be received or postmarked by July 2, 2006
to be considered in preparation of the Draft EIS.**

(More comment sheets are available if you need additional space.)

Comment Form

Environmental Impact Statement for BRAC 2005 Implementation and Master Plan Update at Fort Belvoir, Virginia

NOTE: All information submitted will become public record.

1. **Your information:**

Name: Dale Rumberger
Title: Principal, South County Secondary School
Agency/Organization: same ↑
Address: 8501 Silverbrook Road
City, State, Zip: Horizon, Va 22079-3008
Phone: 703-446-1604
E-mail: dale.rumberger@seps.edu

Please send a CD copy of the EIS to me.

2. **Please check the one affiliation that best represents your role or interest in the EIS:**

- | | |
|---|---|
| <input type="checkbox"/> Fort Belvoir Resident | <input type="checkbox"/> Recreational Organization |
| <input type="checkbox"/> State Government | <input type="checkbox"/> Private Citizen |
| <input checked="" type="checkbox"/> School/University | <input type="checkbox"/> Federal Government |
| <input type="checkbox"/> Civic Organization | <input type="checkbox"/> Business/Commercial Organization |
| <input type="checkbox"/> Federally Recognized Tribe | <input type="checkbox"/> Environmental Organization |
| <input type="checkbox"/> County | <input type="checkbox"/> Other: _____ |

3. **EIS Areas of Concern. Please check the appropriate boxes and write your specific comments about the area of concern in # 4 below. More Comment Forms are provided at the Comment station if you need additional space.**

- | | |
|---|---|
| <input type="checkbox"/> Construction | <input type="checkbox"/> Noise |
| <input checked="" type="checkbox"/> Traffic and Transportation | <input type="checkbox"/> Native American Resources |
| <input type="checkbox"/> Cultural Resources/Historic Properties | <input type="checkbox"/> Air Quality |
| <input type="checkbox"/> Socioeconomics | <input type="checkbox"/> Water Quality |
| <input type="checkbox"/> Wetlands, Wildlife, Endangered Species | <input checked="" type="checkbox"/> Other: <u>enrollment impact</u> |

(More comment sheets are available if you need additional space.)

4. Please write your comments in the space provided below.

I have consistently heard about the size of the BRAC effect on Ft. Belvoir. What has not been shared, studied or released is the potential impact on local schools, a timeline published on a website linking office closure and move to Ft B timeline, the # of employees moving. In short, I would have expected a display showing the # of jobs by year (estimated) or the % of base employees with school age children. It appears that the local schools will just adapt.

I do know that the PEP School Bd and base officials have had preliminary meetings. There is some dialogue underway. But to mention flora and fauna concerns and not at least show concern for either the schools or the military families / defense experts families by showing or sharing the potential impact is callous to both groups.

I expected better and a more holistic appraisal of the impact.

Web Site



Comments may be submitted online at: www.belvoirnewvision.com (click on EIS)

E-mail Comments may be e-mailed to: environmental@belvoir.army.mil

Mail

Comments may be mailed to:

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(More comment sheets are available if you need additional space.)

Tuesday, June 06, 2006

How is the I-495 to I-95 S arrangement going to be structured to prevent the bottleneck of having to cross 2 lanes to get into I-95 South?

Lee P. Schroeder

Did you ever consider conducting a poll of the DeWitt Health Care Network beneficiaries to get their ideas for the location of the BRAC hospital at Fort Belvoir?
You apparently did such a survey for commuters to Ft. Belvoir.. Isn't service and easy access to healthcare beneficiaries just as important? Many of those commuters will probably be healthcare beneficiaries who will get their health care at the new hospital.

Francis C. Houts
LTC USA (RTD)
703-780-3374
houtsf@erols.com

I am a 75 year old army veteran. I have lived in the Mt. Vernon area for 33 years and have received at least 95% of my medical care at DeWitt. Of the various locations I have heard mentioned for the location of the new DeWitt, the Engineering Proving ground is absolutely the worse.

In the 33 years I have lived here, when I heard this location mentioned I did not know how to drive to it. I knew roughly where it was located but could not give specific directions to anyone. Many people asked me where it was located and I could not tell them how to get to the roving Ground. I have been to some meetings and it is clear that the Fairfax County Supervisors, the local state delegate and senator and the 2 Virginia senators and local Representatives have all given their support to locating the hospital at the Engineering Proving Grounds. This is for the benefits of the local jurisdictions rather than for the benefits to those service personnel, active and retired and their families, who will use this medical facility.

Fairfax supervisors always complain about what the army has wanted to do at Ft. Belvoir.

The bottom line with Fairfax County is the dollar and they don't want to pay anything but want to get all the benefits. The Army always seems to "cave in" and give the County what it wants or gets the messy end of the stick. Of course, it is always shown to be a "win/win" situation.

The Engineering Proving Grounds is not considered by many of us to be part of Ft. Belvoir.

There is no physical connection between the Proving Ground and Ft. Belvoir like between North and South Post.

My choice would be the 9-hole golf course at the Route 1 entrance; followed by the location for the proposed Army Museum or across Route 1 from the main entrance on the area used for soccer and other activities.

Francis C. Houts
LTC USA (RTD)
703-780-3373
fhouts@erols.com

Patricia Tyson

8641 Mount Vernon Highway

Alexandria Virginia 22309

T_Tyson@mindspring.com

793 780-0925

Fort Belvoir BRAC EIS Scoping Comments

June 7, 2006

Public Involvement

The website link for providing comments did not work. I am submitting this US Mail and by email to Fort Belvoir EIS (environmental@belvoir.army.mil).

The public scoping for BRAC EIS for Fort Belvoir has been totally inadequate. Design all BRAC EIS public components and outreach programs to follow precisely the procedures used in the Woodrow Wilson Bridge Project: include presentations to small groups throughout the process, use multiple media forums for outreach and adjust the design of the project and phasing based on public input received throughout the process of design and implementation.

Background

Completely separate from BRAC, Fort Belvoir has undertaken huge growth in facilities and infrastructure. But the Master Plan has not been updated since 1994. An EIS Scoping public meeting was held Nov. 17, 2003. Nothing further has been done on the Master Plan EIS, to respond or address the cumulative effects of these multiple facilities, many in non-conformance with the 1994 Master Plan, nor to address the public comments made submitted for that. How will the public scoping comments for the Updated Master Plan be addressed in the propose EIS to address both BRAC and the Master Plan update.

Cumulative effects have not been addressed on the change to population, traffic patterns, loss of habitat, air and water quality degradation or loss of open space resulting from this incremental growth. The base line for this information also has not been updated to reflect this growth and destruction in natural resources and species of concern or listed Endangered Species. In this unknown baseline data is the enormous growth in the use of private contractors for military and non-military functions on Post, yet there has not been a count of these, non-civilian and non-military employees since 1994. All of these effects must be evaluated prior to initiating a study of the effect of BRAC on the environment and community.

US Army Garrison Fort Belvoir has a long history of hollow and unfulfilled commitments made in multiple Environmental Assessments and in the Integrated Natural Resources Management Plan and in Agreements to protect the Chesapeake Bay (the Federal Facilities Compliance Agreement). Among these are unfulfilled and unfunded commitments to mass transit, water quality Best Management Practices (BMP's), conservation protection areas including Refuge boundary definitions. Therefore, all mitigation identified in the BRAC and Master Plan EIS documents must be based on commitments of real funding and real enforcement mechanisms, including annual audits for compliance with all conditions; public disclosures of all violations with fines that prevent subsequent phases of project completion. The Army must be accountable for non-compliance. Nothing less will assure the public that these measures will be undertaken.

BRAC

Federal undertakings in the routine growth on Fort Belvoir have to meet the National Environmental Policy Act (NEPA) requirement to evaluate **all the viable alternatives**. The BRAC EIS must thoroughly examine all methods to minimize the enormous, destructive and disruptive consequences of this Fort Belvoir BRAC 2005 and to commit to adopting the most stringent measures to minimize adverse project impacts. All project mitigation must be unequivocally included in the projects and the project funding. All mitigation noted in the EIS study narrative text must be included in any charts and graphic or other sections of the EIS indicating degree of impact.

The scoping for this EIS is vital to the adequacy of the EIS in addressing all specific impacts, in order to define any necessary mitigation measures and in order to identify the funding of all mitigation measures necessary to minimize the anticipated environmental, social, economic and quality of life impacts from this huge project on the environment, and the community. Nevertheless, the public has never been presented the alternatives or the BRAC project in a meaningful way. The public comments are due the same week that the Alternatives are being narrowed. This violates the principles of NEPA and the community is opposed to this process.

The EIS must include studying mitigation that will minimize impacts, including:

- The use of parking garages to reduce the footprint of parking lots
- Incorporating LEEDS certified standards for all buildings and site development
- The use of "Green roofs"
- Maintenance of 250 foot vegetated buffers along all streambeds,
- Incorporating "demand management" of traffic,
- Eliminating free employee parking
- Annual audits and publication of mandatory mass transit for all employees, and contractors, and residents.
- Building links to mass transit at Springfield and Huntington Metro
- Evaluation of the density of project and the adequacy of infrastructure to support development; i.e. dense projects may support rail extension; sprawl will require more road construction.
- In order to determine where the commuters will be originating, provide the precise zip code numbers and the employees who reside in these zip codes for all the relocating entities and use these to determine BRAC impacts to local road networks.
- Study the impacts to the GW Parkway and the GW Memorial Highway from BRAC.
- In order to plan the precise number of children to be schooled in Fairfax County public schools, include the precise numbers of bedrooms in the proposed housing.
- In order to examine the real commuter and road and air quality impacts, include the precise number of contractors currently serving DOD entities to be relocated and the dollar figures of the contracts under which these contractors perform.
- Include precise lease language for any commercial, for-profit, opportunities on Federal property and include an assessment of the economic impact of these commercial activities if they had been located in adjacent Fairfax County commercial space.

1) As is always true with DoD projects, funding for mitigation is not likely to be forthcoming, unless it is clearly part of the project and is timed sequentially to occur first as a condition of the project and completion of subsequent phases. Concurrency of necessary infrastructure and mitigation measures will only come with an exhaustive, scientific, reasoned EIS and the mitigation measures designed as project integral components. We expect these infrastructure improvements to be funded through BRAC to benefit BRAC implementation and minimize the disruptions anticipated on the community. Anything less is unacceptable.

- 2) Anything that should have been included in the stalled, incomplete updated Master Plan EIS that is addressed in the BRAC EIS, must be subject to evaluation of **all viable alternatives**.
- 3) Using the base line information contained in the outdated Master Plan 1994 for the BRAC EIS, will not reflect the real, degraded environmental and traffic conditions from this incremental growth that has occurred since. None of the subsequent Environmental Assessments has addressed cumulative effects, as required by law. Undertake new baseline studies reflecting the cumulative effects of these multiple non-BRAC projects, including DTRA, RCI, DTRA, etc. for air quality, water quality, open space, traffic counts, child attendance in local schools (reflecting RCI bedroom counts and projections), etc.
- 4) It is essential to commit to avoidance of impacts to tidal and non-tidal wetlands; if avoidance is not possible, proximate mitigation sites and proven methods. Update the new species and habitat information from recent surveys conducted by the DPW Public Works Natural Resources office and incorporate the findings and recommendations of the Integrated Natural Resources Management Plan into the EIS and mitigation measures for the BRAC project.
- 5) Conduct multiple scoping meetings using the public hearing forum of audience and podium with microphone. Advertise these at a minimum of three weeks in advance of meetings on radio, newspapers, etc. The format of multiple displays and self-education proposed for the June 7th meeting does not adequately inform the public, nor does the public have an opportunity to adequately present views to their elected officials and project officers.
- 6) Design all BRAC EIS public components and outreach programs to follow precisely the procedures used in the Woodrow Wilson Bridge Project: include presentations to small groups throughout the process, use multiple media forums for outreach and adjust the design of the project and phasing based on public input received throughout the process of design and implementation.
- 7) Address the statutory requirements for **threat reduction measures** and define how the projects meet or exceed the standards and where in the National Capital Region the standards ARE NOT FOLLOWED. Examine the threat of creating a target by consolidation the disparate offices dealing with sensitive intelligence.
- 8) Do not include the replacement of the Woodlawn Road project in the BRAC EIS. Initiate necessary traffic counts to project traffic impacts to the George Washington Parkway and the George Washington Memorial Highway.
9. Due to inadequate public notifications and public information, extend the deadline for receipt Scoping Comments to September 15, 2006.
- 10) Post all the public scoping comments on a public website and publish this web address in the Washington Post, the Alexandria Gazette, the Mount Vernon Gazette and the Washington Post Examiner.

Comment Form

Environmental Impact Statement for BRAC 2005 Implementation and Master Plan Update at Fort Belvoir, Virginia

NOTE: All information submitted will become public record.

1. **Your information:**

Name: Judy Riggan
Title: Woodlawn Friends (Quaker) Meeting - member
Agency/Organization: ↓
Address: 2405 Nemeth Court
City, State, Zip: Alexandria VA 22306
Phone: 703-765-3025
E-mail: rigginjm@verizon.net

Please send a CD copy of the EIS to me.

2. **Please check the one affiliation that best represents your role or interest in the EIS:**

- | | |
|---|--|
| <input type="checkbox"/> Fort Belvoir Resident | <input type="checkbox"/> Recreational Organization |
| <input type="checkbox"/> State Government | <input type="checkbox"/> Private Citizen |
| <input type="checkbox"/> School/University | <input type="checkbox"/> Federal Government |
| <input type="checkbox"/> Civic Organization | <input type="checkbox"/> Business/Commercial Organization |
| <input type="checkbox"/> Federally Recognized Tribe | <input type="checkbox"/> Environmental Organization |
| <input type="checkbox"/> County | <input checked="" type="checkbox"/> Other: <u>Quaker Meeting - historic church religious</u> |

3. **EIS Areas of Concern. Please check the appropriate boxes and write your specific comments about the area of concern in # 4 below. More Comment Forms are provided at the Comment station if you need additional space.**

- | | |
|--|--|
| <input type="checkbox"/> Construction | <input checked="" type="checkbox"/> Noise |
| <input checked="" type="checkbox"/> Traffic and Transportation | <input type="checkbox"/> Native American Resources |
| <input checked="" type="checkbox"/> Cultural Resources/Historic Properties | <input checked="" type="checkbox"/> Air Quality |
| <input type="checkbox"/> Socioeconomics | <input checked="" type="checkbox"/> Water Quality |
| <input checked="" type="checkbox"/> Wetlands, Wildlife, Endangered Species | <input type="checkbox"/> Other: _____ |

(More comment sheets are available if you need additional space.)

4. Please write your comments in the space provided below.

as a nearby resident, I am concerned that adequate, thoughtful attention be given to traffic and environmental impact.

As a member of the Woodlawn Friends (Quaker) meeting, I ask that careful attention be given to protecting our 1850s NRHP-eligible meetinghouse and burial grounds that sit in the woods at the intersection of Route 1 and Woodlawn Rd. We look forward to the Road Connector leading to a land swap that removes the Woodlawn Rd. security gate and restores the historic quality of place to the land connecting us to Woodlawn Plantation

More important, the Friends need to have an environment of silence preserved in order to practice our worship on Sundays (and other special services). For this and reasons Web Site above, we are concerned about

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E-mail Comments may be e-mailed to: environmental@belvoir.army.mil

Mail

Comments may be mailed to:
Attn.: EIS Comments
Fort Belvoir Directorate of Public Works
9430 Jackson Loop, Suite 100
Fort Belvoir, VA 22060-5116

All comments must be received or postmarked by July 2, 2006 to be considered in preparation of the Draft EIS.

(More comment sheets are available if you need additional space.)

impact of NMUSA, and request it be located at the EPG site away from Route 1.

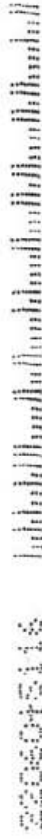
Puggin
2405 Nemeth Ct.
Alex. VA 22306



DAYTONA BEACH
FL 321 1.1
30 JUN 2006 PM

EIS Comments
Fort Belvoir Directorate of Public Works
9430 Jackson Loop, Suite 100
Fort Belvoir, VA

22060-5116



22060-5116

Nancy James

From: Nancy James [nrjames@earthlink.net]
Sent: Friday, June 30, 2006 17:19
To: 'environmenta@belvoir.army.mil'
Subject: resubmission of comment form

Nancy R. James
Religious Society of Friends (Quakers)
Home Address: 4009 Gibbs Street
Alexandria, VA 22309
703-360-2989
nrjames@earthlink.net

I represent an historical/religious organization.

I am concerned about cultural resources/historic properties and noise.

I am a member of Alexandria Friends Meeting at Woodlawn. Our address is 8990 Woodlawn Road, Ft. Belvoir, VA 22060. Our one+ acre site is completely surrounded by the Post. Our meetinghouse, 150 years old, is on the left as one turns into Woodlawn Road from Route One. It and the graveyard behind are all that remain of extensive Quaker holdings that pre-dated the Civil War. Continual First Day meetings (Sunday services) have been held there since those early times. This property is now under consideration for inclusion in the National Registry of Historic Places.

My concern is first historical: to preserve this remnant of a rich past in a setting as close to the original as possible. Specifically I ask that construction within sight of the meetinghouse be screened from our view, that the security measures put in place after 9/11 outside Woodlawn Gate be removed and the gate itself closed, and that safe, direct access to our meetinghouse from Route One be restored.

Secondly, and this is primary, that Friends practice of silent worship be honored and allowed to continue undisturbed. Specifically, I request that the National Army Museum not be located nearby. I understand realistic interactive exhibits are planned which will include artillery firings, helicopter fly-bys and landings and other extremely loud, warlike simulations. Please display these elsewhere.

Thank you for this opportunity for consideration.

Sincerely, Nancy R. James

Comment Form

Environmental Impact Statement for BRAC 2005 Implementation and Master Plan Update at Fort Belvoir, Virginia

NOTE: All information submitted will become public record.

1. Your information:

Name: _____

Title: _____

Agency/Organization: _____

Address: _____

City, State, Zip: _____

Phone: _____

E-mail: _____

Please send a CD copy of the EIS to me.

2. Please check the one affiliation that best represents your role or interest in the EIS:

- | | |
|---|---|
| <input type="checkbox"/> Fort Belvoir Resident | <input type="checkbox"/> Recreational Organization |
| <input type="checkbox"/> State Government | <input type="checkbox"/> Private Citizen |
| <input type="checkbox"/> School/University | <input type="checkbox"/> Federal Government |
| <input type="checkbox"/> Civic Organization | <input type="checkbox"/> Business/Commercial Organization |
| <input type="checkbox"/> Federally Recognized Tribe | <input type="checkbox"/> Environmental Organization |
| <input type="checkbox"/> County | <input type="checkbox"/> Other: _____ |

3. EIS Areas of Concern. Please check the appropriate boxes and write your specific comments about the area of concern in # 4 below. More Comment Forms are provided at the Comment station if you need additional space.

- | | |
|---|--|
| <input type="checkbox"/> Construction | <input type="checkbox"/> Noise |
| <input type="checkbox"/> Traffic and Transportation | <input type="checkbox"/> Native American Resources |
| <input type="checkbox"/> Cultural Resources/Historic Properties | <input type="checkbox"/> Air Quality |
| <input type="checkbox"/> Socioeconomics | <input type="checkbox"/> Water Quality |
| <input type="checkbox"/> Wetlands, Wildlife, Endangered Species | <input type="checkbox"/> Other: _____ |

(More comment sheets are available if you need additional space.)

4. Please write your comments in the space provided below.

See attached letter.

Glenda Booth
Audubon Society
of No. Va

703-765-5233

gbooth123@aol.
com

Web Site

Comments may be submitted online at: www.belvoirnewvision.com (click on EIS)

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Mail

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Fort Belvoir Directorate of Public Works

9430 Jackson Loop, Suite 100

Fort Belvoir, VA 22060-5116

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(More comment sheets are available if you need additional space.)

COPY

**Audubon Society of Northern Virginia
4022 Hummer Road
Annandale, Virginia 22003**

June 7, 2006

Fort Belvoir Directorate of Public Works
ATTN: BRAC EIS Comments
9430 Jackson Loop
Suite 100
Fort Belvoir, Virginia 22060-5116

Dear Directorate of Public Works:

On behalf of the 3,500 members of the Audubon Society of Northern Virginia, we present the following comments and questions on the scope of the Army's Environmental Impact Statement associated with the Base Realignment and Closure process for Fort Belvoir. Thank you for including these scoping comments in the public record to be addressed in EIS.

We thank you for the first of the public scoping meetings on June 7, 2006 and hope to have many other opportunities for public involvement, as we requested in our February 13, 2006, attached letter to Colonel Brian W. Lauritzen, Installation Commander. We look forward to your answer to our letter.

The U. S. Department of Defense's 25 million acres have 600 rare plants and animals, including 20 percent of all federally-listed threatened and endangered species, according to the Nature Conservancy. This is the highest concentration of threatened and endangered species of any federal land manager, according to the American Planning Association. In many areas, like heavily urbanized Northern Virginia, DOD properties may be the only remaining habitat for threatened and endangered species. In our view, our nation must do more to protect these species not less, as they represent the rich genetic reservoir of life that should not be lost.

Fort Belvoir is located in a county of one million people and in a metropolitan area of almost 5 million. At 13.5 square miles or 8,656 acres in size, Fort Belvoir is a major property owner and has a tremendous impact on the area's natural resources. It is in a county where the tree cover has dropped from 75 percent in the 1970s to 40 percent today, according to the Fairfax County Urban Forestry Division. (American Forests recommends that suburban residential zones have at least 50 percent tree cover because tree cover is directly related to environmental quality and a sound "green infrastructure.")

Eighty percent of the county's streams were in fair to poor condition in 2005, up from 70 percent in 2004. Fairfax County does not meet federal air quality standards for ozone and particulates. Many area parks typically have between 25 and 35 percent non-native plants which out-compete native vegetation. The Potomac River received a grade of C+ by the Interstate Commission on the Potomac River Basin in 2005. With growing development, congestion, population density and impervious surfaces, the county is facing some likely irreversible environmental damage.

The installation's website notes that 39 percent of the installation is "environmentally sensitive." There are two refuges on the installation: Accotink Bay Wildlife Refuge and the Jackson Abbott Wildlife Wetlands Refuge, totaling 1,506 acres and we commend you for maintaining those refuges. The installation has some of Northern Virginia's most productive tidal wetlands and an extensive shoreline.

We ask that the EIS address the following questions:

What criteria are used to define "environmentally sensitive" in the Natural Resources Management Plan and on the Fort Belvoir website? What is the geographic scope of the natural resources and areas that are included?

How and what number of public hearings will be held on the scope of the EIS so that people can present formal comments to a panel and a public audience?

For the data being used as the baseline for the BRAC EIS, what is the source of the data and from what year?

Will Fort Belvoir include in the BRAC EIS the full range of alternatives required under the National Environmental Policy Act? If not, why not?

If you only examine a "no build" scenario and the proposed project, won't full consideration of other alternatives be foreclosed? If so, what is the basis for this decision, a narrowing of the consideration of options?

What mitigation measures will be considered and included in the EIS to avoid and minimize all environmental impacts? Will the full range of mitigation measures be considered?

We request that the following included in the evaluation:

- Low-impact development techniques for stormwater runoff
- Pervious surfaces, e.g., for parking lots
- Minimization of lawns and turf grass
- Green roofs for buildings
- Garages instead of parking lots

Convenient access to public transportation
LEEDS-certified green buildings
Use of natural light and energy conservation in buildings
Vegetative buffers along streambeds and borders of natural areas
Natural landscaping
Tree preservation and planting
Use of native plants
Purchase and use of low-polluting vehicles and other equipment
Reduction in use of herbicides, pesticides, and fertilizers and use of sound nutrient management plans
Avoidance of impacts to tidal and non-tidal wetlands; if avoidance is not possible, on-site and in-kind mitigation
Flexible working hours
Telecommuting
Recycling
Environmentally-sensitive disposal of fuel and other military ordnance and supplies, including hazardous materials and solid waste
A thorough study of cumulative impacts of the BRAC process, especially in light of the multiple facilities built in recent years, many apparently not in compliance with the installation's 1994 master plan
Funding required and its availability to meet the required project mitigation measures

It is our understanding that the Defense Authorization Act of 2003 created the Readiness and Environmental Protection Initiative, which encouraged installations to collaborate with state and local governments and conservation groups to strengthen conservation in and near military training areas. We believe that this current BRAC process presents an excellent opportunity to work with the local community and conservation organizations to implement this law and to prevent further degradation of our natural resources.

We also stand ready to work with you to fulfill the requirements of the National Environmental Policy Act, the federal Clean Air Act, the federal Clean Water Act, the Resource Conservation and Recovery Act, the Endangered Species Act, and other federal environmental laws, as well as the state's efforts to increase wetlands and clean up the Potomac River and Chesapeake Bay.

We look forward to hearing from you.

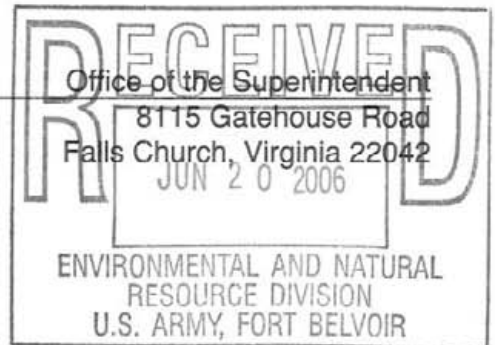
Sincerely,

Glenda C. Booth
Vice-President
Tel. 703-765-5233;gbooth123@aol.com



FAIRFAX COUNTY
PUBLIC SCHOOLS

June 8, 2006



Donald N. Carr
Director of Public Affairs
United States Army Fort Belvoir
9820 Flagler Road Suite 201
Fort Belvoir, VA 22060

Dear Mr. Carr:

I am writing on behalf of Jack D. Dale, Superintendent, Fairfax County Public Schools. Attached is a letter that Dr. Dale sent to Robert Templin regarding the impact of the Base Realignment and Closure Commission.

Since we were unable to attend the June 7, 2006 Public Scoping Meeting, Dr. Dale would like the letter to be entered into the official record per your recommendation to Dan Storck, Fairfax County School Board, Mount Vernon District.

Thank you for your attention to this matter. If you need anything, please contact me at Christine.Donohue@fcps.edu or 571-423-1010.

Sincerely,

A handwritten signature in cursive script that reads 'Christine W. Donohue'.

Christine W. Donohue
Chief of Staff

CWD/slk
Attachment



**FAIRFAX COUNTY
PUBLIC SCHOOLS**

Jack D. Dale, Superintendent
Burkholder Administrative Center
10700 Page Avenue
Fairfax, Virginia 22030

September 26, 2005

Robert G. Templin, Jr.
President
Northern Virginia Community College
4001 Wakefield Chapel Road
Annandale, VA 22004-2790

Dear Dr. Templin:

Pending the ratification of the recommendations of the Base Realignment and Closure Commission (BRAC) by the President and Congress, it appears Fort Belvoir will face a significant expansion. Several thousand military and civilian personnel offices are expected to relocate, causing an influx of personnel and their families into the Fort Belvoir area with potential impacts on the Fairfax County Public Schools.

The purpose of this letter is to enlist the federal government's assistance to ensure a smooth and well-planned transition. To this end, we request federal resources to conduct a study of the socioeconomic and environmental impacts of the changes at Fort Belvoir and designation of the Fairfax County Public Schools as a "cooperative public agency," allowing our participation in the decision-making process under the National Environmental Policy Act (NEPA).

The relocation of thousands of jobs into the Fort Belvoir area will require substantial planning, timing, resources, and expense to ensure that high quality education will be sustained in this area of the county. Should an influx of students materialize, Fairfax County Public Schools may well need supplemental capital resources to increase school capacity both at Fort Belvoir Elementary School and at other area schools. We may also have to devise a plan to realign school boundaries.

In order to understand the impact of the shifts, it is necessary to have some insight into the size, mobility, and household income of personnel to be relocated during the next five to ten years. In an effort to provide a foundation for the impact study, the following questions should be asked of Fort Belvoir and the Department of Defense:

- What is the location by zip code of the current workforce that will be reassigned?
- What are the numbers of the current workforce who currently own, lease, or rent their residence?
- What are the number of children per household by zip code, age, and type of residence?
- What are the plans for phasing personnel for work assignment relocation? How many personnel will be relocated by what end dates?
- How many will be military personnel and how many will be contractors?
- What is the household income (in ranges) of personnel by phase?
- Will there be response-time or distance-from-base requirements for off-base personnel?

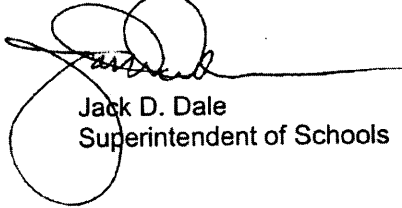
Robert G. Templin, Jr.
September 26 2005
Page 2

- What additional on-base housing is planned for Fort Belvoir over what periods of time?
- How many families are expected to relocate to Fort Belvoir from outside of a commutable vicinity (e.g., from other states)?

According to local officials, Fort Belvoir's chief planner was in the process of releasing a new master plan for the base when he was alerted of the BRAC recommendation to accommodate the expected increase in workers. Assuming that he is back to the drawing board, Fairfax County Public Schools would like to be involved in the new planning blueprint for the base. We would like to provide the best education possible to the military families we will be hosting, and this can be accomplished most efficiently by being involved in the initial planning stages and throughout the process.

Prospects for development increasing in the Fort Belvoir area will be an incredible opportunity but also a significant challenge. It is our hope that you will consider our requests and contact us if you should have any further questions. Thank you for your continued support of the students of Fairfax County and of the Fairfax County Public Schools.

Sincerely,



Jack D. Dale
Superintendent of Schools

JDD:mak



Mount Vernon Crew Boosters, Inc.

P.O. Box 205

Mount Vernon, Virginia 22121-0205

www.mvcrew.com

June 15, 2006

The Mount Vernon High School Crew team requests the Master planner to consider the following information while developing the Fort Belvoir master plan. Crew is a club sport offered at Mount Vernon, the assigned high school for all high school aged students of those stationed or living near Fort Belvoir. As a youth sport, Mount Vernon Crew relies on Fort Belvoir's support by allowing access to the water from the base as well as a small area on the base for team assets. With the estimated influx of 21,000 additional personnel to Fort Belvoir, the number of students being assigned to Mount Vernon High School will increase as well. This year alone, the crew team had 62% of its members military affiliated. We anticipate that our military affiliation will increase as more personnel are assigned to the Fort Belvoir area.

Space needs for the Crew on Fort Belvoir:

The Mount Vernon Crew needs access to the water from Fort Belvoir either from the marina or another suitable location where we can place a water level floating dock of least 55 feet long into launchable water. The team also needs space to secure 4 flat bottom jonboats, open space to place several racks for crew shell storage 60 feet apart in length and 10 feet apart in width without obstacles nearby to allow for movement of the crew shells off and on the racks, open space to place 2 racks 10 feet tall by 5 feet wide for storage of oars, space that meets environmental standards for a 4 x 4 gas storage shed, space near the crew shell racks to place a 10 x 8 vinyl storage building and several small vinyl storage containers for team equipment, and a flat area large enough to be able to park the team's 45 foot long trailer for loading and unloading team equipment.

Current use of space on Fort Belvoir:

The Mount Vernon High School Crew team has used the marina located on the south post of Fort Belvoir for 5 years. The team practices out of the marina during the crew season from mid February through the end of May (Monday through Sunday) but maintains some assets there throughout the year. The drainage ditch that separates the main marina and the Point serves as the crew area. Static crew assets include: 3 sets of wooden storage crew shell racks placed directly in the ditch, a 10 x 8 vinyl storage shed and a few small vinyl containers near the edge of the ditch, a wooden oar rack near the vinyl containers, a small floating dock at the extreme outer area of the marina channel, and a metal gas storage building near the floating dock ramp. Team launches are secured to the floating dock during the season and stored under the wooden crew shell racks during the off-season. Crew shells are stored on the team's trailer in the RV lot also located on the south post of Fort Belvoir. The team does not use the marina office, building, bathrooms or docks either during the season or off-season.



Mount Vernon Crew Boosters, Inc.

P.O. Box 205

Mount Vernon, Virginia 22121-0205

www.mvcrew.com

Requested additions to the crew space at the Fort Belvoir marina:

The team requests permission to put up an additional set of wooden storage crew shell racks near the ones currently in the crew site and a second gas shed. Additionally, the team would like to build protective covers on top and around the storage racks to help preserve crew shells and be allowed to store our shells on the racks during the off season.

Secondary location for crew space on Fort Belvoir:

Should the marina close or become unsuitable for use by the crew team, we request access to Tompkins Basin in the area near the Archery range on south post. Crew has low impact to the surrounding area and wildlife and uses access to the water for only the 14 weeks of the crew season. The floating dock that would be built and placed in Tompkins Basin by the team would remain at this location throughout the year for use by anyone authorized base access.

Thank you for your time and consideration of the needs of the Mount Vernon High School Crew team on Fort Belvoir.



Robin Jones
President, Mount Vernon Crew Boosters, Inc.

Attachments:

- 1) Google map of crew assets at the Fort Belvoir marina
- 2) Proposed secondary location for crew on Fort Belvoir (Attachment 1: Tompkins Basin)
- 3) Proposed layout of crew assets at Tompkins Basin



Proposed position of temporary racks

Proposed position of Mount Vernon Fuel shed

WP shed

MV shed

Boat Racks

Gas

Dock



Image © 2006 DigitalGlobe

© 2006 Google™

Pointer 38° 42'20.84"N 77° 07'43.74"W elev 0 ft

Streaming ||||| 100%

Eye alt 524 ft



Tomkins Basin, Fort Belvoir
Proposed Crew site

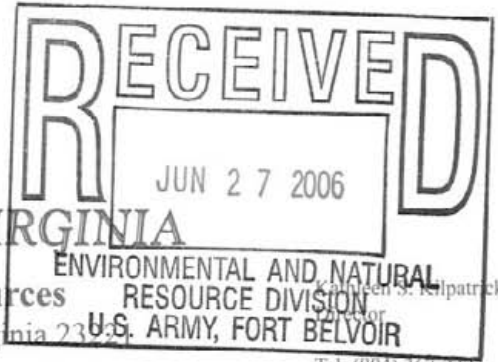
Archery range



© 2005 Google

Pointer 38°41'04.21" N 77°09'22.13" W elev 3 ft Streaming ||| Castle Park

3120 ft



COMMONWEALTH of VIRGINIA

Department of Historic Resources

2801 Kensington Avenue, Richmond, Virginia 23221

ENVIRONMENTAL AND NATURAL RESOURCE DIVISION
U.S. ARMY, FORT BELVOIR

Kathleen S. Kilpatrick
Director
Tel: (804) 367-2323
Fax: (804) 367-2391
TDD: (804) 367-2386
www.dhr.virginia.gov

L. Preston Bryant, Jr.
Secretary of Natural Resources

June 5, 2006

Colonel Brian W. Lauritzen
Department of the Army
Installation Management Agency
Headquarters, U.S. Army Garrison, Fort Belvoir
Directorate of Installation Support
9820 Flagler Road, Suite 213
Fort Belvoir, Virginia 22060-5928

Re: BRAC Actions at Fort Belvoir
Ft. Belvoir, Fairfax County
DHR File No. 2006-0820

Dear Colonel Lauritzen:

We have received your invitation to the June 7, 2006, pre-scoping meeting regarding the upcoming Base Realignment and Closure (BRAC) actions at Fort Belvoir. Unfortunately, we will be unable to send a representative to the meeting; however, we welcome the opportunity to provide preliminary comments concerning this undertaking.

As you may know, there is an identified historic district at Fort Belvoir that is eligible for listing in the National Register of Historic Places. Section 106 of the National Historic Preservation Act, as amended, and its implementing regulations 36 CFR Part 800, require a federal agency to take into account the effect of its undertakings on historic properties listed in or eligible for the National Register and to afford the Advisory Council on Historic Preservation the opportunity to comment. The Section 106 regulations allow a federal agency to coordinate the steps of the process with other environmental reviews as long as the requirements of Section 106 are met. We, therefore, request that the Army continue to consult with the Department of Historic Resources (DHR) on the impact that the BRAC actions will have on historic properties and archaeological sites at Fort Belvoir.

If you have any questions about our comments, please call me at (804) 367-2323, Ext. 114.

Sincerely,

Marc Holma, Architectural Historian
Office of Review and Compliance

Administrative Services
10 Courthouse Avenue
Petersburg, VA 23803
Tel: (804) 863-1624
Fax: (804) 862-6196

Capital Region Office
2801 Kensington Ave.
Richmond, VA 23221
Tel: (804) 367-2323
Fax: (804) 367-2391

Tidewater Region Office
14415 Old Courthouse Way, 2nd Floor
Newport News, VA 23608
Tel: (757) 886-2807
Fax: (757) 886-2808

Roanoke Region Office
1030 Penmar Ave., SE
Roanoke, VA 24013
Tel: (540) 857-7585
Fax: (540) 857-7588

Winchester Region Office
107 N. Kent Street, Suite 203
Winchester, VA 22601
Tel: (540) 722-3427
Fax: (540) 722-7535



COMMONWEALTH of VIRGINIA

Office of the Governor

P.O. Box 1475
Richmond, Virginia 23218

Pierce R. Homer
Secretary of Transportation

(804) 786-8032
Fax: (804) 786-6683
TTY: (800) 828-1120

June 30, 2006

Dr. Craig College
Deputy Assistant Chief of Staff Installation Management
600 Army Pentagon
Washington, DC 20310

Colonel Brian W. Lauritzen
Garrison Commander
9820 Flagler Road, # 213
Fort Belvoir, VA 22060

Dear Gentlemen:

The purpose of this letter is to provide formal comment to the Department of the Army on the scope of the EIS that will evaluate potential environmental, transportation, and socioeconomic effects associated with the implementation of the BRAC action at Fort Belvoir. This letter is in direct response to the May 17 request for scoping commentary on the Fort Belvoir EIS.

The Virginia Transportation Secretariat supports the mission of numerous military installations across the Commonwealth and coordinates highway, rail, transit, airspace, and port activities with these installations on a daily basis. We are proud of our military commitments and our long history of jointly defining and solving transportation problems.

Fort Belvoir is a valuable asset to the United States, the Commonwealth of Virginia, and Fairfax County. Continued development of Fort Belvoir, based on the BRAC mandates, will bring enormous change to the entire Northern Virginia region. It is incumbent upon the Army to have a fully-scoped, comprehensive analysis of all impacts, and in particular direct and indirect transportation impacts, of the BRAC decision at Fort Belvoir.

The BRAC plan to add over 20,000 jobs at Fort Belvoir, doubling the present employment at the Fort, will have a major impact on land use and transportation in the entire Northern Virginia region. In addition, numerous additional private contractors will be required to relocate to the immediate vicinity of the Fort. The combined effect of these relocations will seriously challenge not only the regional transportation network, but also the ability of Fort Belvoir to safely and efficiently deliver its workforce to the various Fort Belvoir worksites in a timely manner.

Dr. College and Mr. Lauritzen
June 30, 2006
Page 2

Because of this, it is imperative that transportation infrastructure in the region, including I-95, regional transit services and facilities, Route 1, and the Fairfax County Parkway, be studied as part of the land use planning, management, and development at Fort Belvoir. Moreover, construction of transportation infrastructure necessary to support the BRAC decision must also be an obligation of the federal government. The only way that we, and I believe that includes the federal, state, and local governments, can insure that there is an appropriate and timely integration of the land use and transportation planning issues associated with the transition at Fort Belvoir, is to include highway and transit infrastructure in the overall land use management and development plan for Fort Belvoir.

To this end, please accept this letter as our formal request to the Army to include highway and transit infrastructure in the planning of the necessary BRAC-related improvements and land use decisions made at Fort Belvoir. The Army should consider both the direct and indirect transportation impacts of the proposed BRAC action at Fort Belvoir, as well as appropriate mitigation measures for these direct and indirect impacts. These infrastructure needs will extend beyond the completion of the final segment of the Fairfax County Parkway.

As you know, the completion of the final segment of the Fairfax County Parkway has been delayed for several years by environmental contamination on the Engineer Proving Ground site. In an effort to accelerate that project, we have asked the Department of the Army to assume responsibility for the final design and construction of the final segment of the Parkway, and that the Army consider using the Eastern Federal Lands Division of the Federal Highway Administration to administer a design-build contract for the Parkway project. This arrangement would allow environmental remediation to occur at the same time as the final design and construction of the final segment of the Parkway. This arrangement also is consistent with other project agreements on military bases in Virginia, including Fort Belvoir.

Virginia will provide approximately \$89 million in construction funding for this Fairfax County Parkway project and approximately \$4 million worth of completed preliminary engineering work. Once the project and directly-related environmental remediation is complete, the Commonwealth will accept the Parkway into the state system of highways for long term maintenance and operations. This arrangement will allow the Department of the Army, in consultation with the Commonwealth and the Federal Highway Administration, to design and construct the Fairfax County Parkway in a way that better integrates the limited available transportation capacity with the specific land uses and security needs of Fort Belvoir.

In addition, Virginia will fully fund and construct a fourth lane on I-95, from Rt.123 to the Fairfax County Parkway, at an estimated cost of approximately \$75 million.

I need to underscore, however, that any serious analysis of the long-term Fort Belvoir transportation needs must consider more than just the final segment of the Fairfax County Parkway and the I-95 fourth lane.

Dr. College and Mr. Lauritzen
June 30, 2006
Page 2

Should you have any questions or if you desire that we meet regarding the issues and concerns expressed in the letter, please give me a call. I look forward to continuing our long and successful history of defining and solving transportation and security problems in and around our prized military installations.

Sincerely,



Pierce R. Homer

PRH:ah

Copy: The Honorable John Warner
The Honorable George Allen
The Honorable Tom Davis
The Honorable Jim Moran
The Honorable Gerald Connally
Mr. Gregory A. Whirley, Sr.
Mr. Matthew Tucker
The Honorable John Beall

Monday, June 19, 2006

We received a meeting notice and request for comments on the scope of the upcoming EIS related to BRAC actions at Fort Belvoir. We offer the following comments and recommendations:

According to our records, numerous wildlife and wildlife resources are known from the Fort Belvoir area of Fairfax County. This includes doucmentations of the following listed species: Federal Threatened State Threatened bald eagle (*Haliaeetus leucocephalus*), State Threatened wood turtle (*Clemmys insculpta*) and State Threatened peregrine falcon (*Falco peregrinus*). Also known in the project area are a number of streams listed as either confirmed or potential anadromous fish use areas and streams designated a Threatened and Endangered Species Waters known to support wood turtle. We recommend that the EIS fully address the habitats available in areas expected to be impacted by the BRAC actions at Fort Belvoir and how the proposed impacts may affect these habitats and the wildlife that inhabit them.

We typically recommend the following to reduce impacts associated with development on our natural resources:

We recommend that the project be designed so as to avoid and minimize impacts to undisturbed forest, wetlands, and streams to the fullest extent practicable. Avoidance and minimization of impact may include relocating stream channels as opposed to filling or channelizing as well as using, and incorporating into the development plan, a natural stream channel design and wooded buffers. We recommend maintaining undisturbed wooded buffers of at least 100 feet in width around all on-site wetlands and on both sides of all perennial and intermittent streams. We recommend maintaining wooded lots to the fullest extent possible. We generally do not support proposals to mitigate wetland impacts through the construction of stormwater management ponds, nor do we support the creation of in-stream stormwater management ponds. We are willing to assist the applicant in developing a plan that includes open-space, wildlife habitat, and natural stream channels which retain their wooded buffers. We recommend that the stormwater controls for this project be designed to replicate and maintain the hydrographic condition of the site prior to the change in landscape. This should include, but not be limited to, utilizing bioretention areas, and minimizing the use of curb and gutter in favor of grassed swales. Bioretention areas (also called rain gardens) and grass swales are components of Low Impact Development (LID). They are designed to capture stormwater runoff as close to the source as possible and allow it to slowly infiltrate into the surrounding soil. They benefit natural resources by filtering pollutants and decreasing downstream runoff volumes. We recommend conducting any in-stream activities during low or no-flow conditions, using non-erodible cofferdams to isolate the construction area, blocking no more than 50% of the streamflow at any given time, stockpiling excavated material in a manner that prevents reentry into the stream, restoring original streambed and streambank contours, revegetating barren areas with native vegetation, and implementing strict erosion and sediment control measures. Due to future maintenance costs associated with culverts, and the loss of riparian and aquatic habitat, we prefer stream crossings to be constructed via clear-span bridges. However, if this is not possible, we recommend countersinking any culverts below the streambed at least 6 inches, or the use of bottomless culverts, to allow passage of aquatic organisms. We also recommend the installation of floodplain culverts to carry bankfull

discharges.

We recommend that the EIS address these recommendations and ways that the Department of the Army can proceed with needed activities on the base while adhering to our recommendations and protecting our natural resources to the greatest extent possible. Without a clear understanding of what activities may occur, we are unable at this time to make specific recommendations on how such activities may impact the wildlife of the Commonwealth and/or how the Army may mitigate or compensate for such impacts.

The Virginia Department of Game and Inland Fisheries maintains a system of databases called the Virginia Fish and Wildlife Information Service (VAFWIS). The VAFWIS contains up-to-date information on all of Virginia's wildlife resources. We recommend use of the VAFWIS during the initial planning stages of any project in order to identify wildlife resources (e.g., threatened or endangered species, trout streams, colonial waterbird nesting colonies) that may be impacted by a project. Basic access to the VAFWIS is available via our website, <http://vafwis.org/WIS/ASP/default.asp>. Subscriptions to the VAFWIS, which allow a greater level of access, also are available. Alternatively, project managers can request Initial Project Reviews by our VAFWIS staff. For information on these services, please contact Shirl Dressler at 804-367-6913. There is no charge to government bodies/agencies for these services.

Thank you for the opportunity to comment. Please do not hesitate to contact us as needed during this EIS process.

Amy Martin
Environmental Services Biologist
VDGIF, Wildlife Diversity

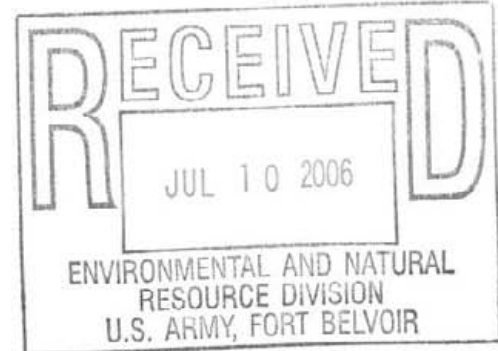


Virginia Railway Express

1500 King Street • Suite 202 • Alexandria, Virginia 22314-2730 • (703) 684-1001 • FAX (703) 684-1313
Web Site: <http://www.vre.org> • E-Mail: gotrains@vre.org

June 30, 2006

Directorate of Public Works
9430 Jackson Loop, Suite 100
Fort Belvoir, VA 22060-5116
Attn: BRAC EIS Comments



To Whom it May Concern:

The Virginia Railway Express' (VRE) planning department has reviewed the BRAC scoping meeting materials presented at the June 7, 2006 scoping meeting and would like to offer comments on the master planning effort underway to accommodate the base realignment and closure actions identified for Ft. Belvoir. We are pleased to see the planning effort includes transportation goals supporting and enhancing an integrated, multimodal transportation system. We are writing to ensure, however, that the Army and master planning/EIS team fully understand VRE's operating environment and the impacts that may result from the BRAC action.

The VRE Lorton Station is located approximately three miles from the Ft. Belvoir main post and Davision Airfield sites. VRE's Franconia-Springfield Station is located approximately 2.5 miles from the Engineer Proving Ground site. Both stations are on VRE's Fredericksburg line, which serves commuters from Prince William and Stafford counties, the City of Fredericksburg and other points south. VRE service is oriented northbound (to Union Station in Washington, DC) in the mornings and southbound (to Fredericksburg) in the evenings. There are currently six northbound trains during the morning commuting period and six southbound trains during the evening commuting period on the Fredericksburg line. VRE operates a single southbound mid-day train to Fredericksburg that leaves Union Station at 12:55 pm. VRE also operates service from Manassas and western Fairfax County; Manassas line trains do not stop at either the Franconia-Springfield or Lorton Stations, however.

VRE capacity and service frequency is limited by track capacity, available rolling stock (i.e., rail cars/passenger seats and locomotives), parking capacity at outlying stations, and train storage. VRE capacity expansion is currently constrained by the availability of capital funding as well as limitations within the existing operating agreement between VRE and CSX Corporation, who owns the tracks over which VRE operates between Washington, DC and Fredericksburg.

- A Transportation Partnership -

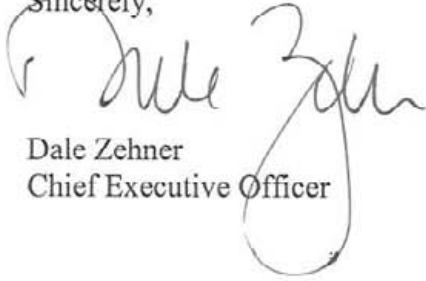
Northern Virginia
Transportation Commission
4350 North Fairfax Drive, Suite 720
Arlington, Virginia 22203
(703) 524-3322

Potomac and Rappahannock
Transportation Commission
14700 Potomac Mills Road
Woodbridge, Virginia 22192
(703) 583-7782

Given the current growth constraints facing VRE, any proposals to mitigate BRAC impacts that rely on increased use of VRE must be heavily coordinated with our agency. Expansion plans must address all elements of the VRE core network (i.e., rolling stock, parking and storage/maintenance facilities) in tandem.

I thank you for this opportunity to comment and look forward to working with you during the BRAC planning process.

Sincerely,

A handwritten signature in black ink, appearing to read "Dale Zehner". The signature is fluid and cursive, with a large loop at the end of the last name.

Dale Zehner
Chief Executive Officer



VIRGINIA RAILWAY EXPRESS

A Transportation Partnership
1500 King Street, Suite 202, Alexandria, Virginia 22314-2730



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0004380697 JUN 30 2006
MAILED FROM ZIP CODE 22314

Directorate of Public Works
9430 Jackson Loop, Suite 100
Fort Belvoir, VA 22060-5116
Attn: BRAC EIS Comments

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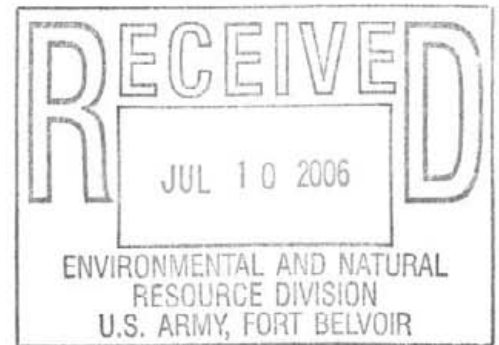
COUNTY OF PRINCE WILLIAM

4379 Ridgewood Center Drive, Prince William, Virginia 22192-5308
(703) 792-6820 Metro 631-1703 Fax (703) 792-6828

DEPARTMENT OF
PUBLIC WORKS

Thomas Brunn
Director

June 30, 2006



Fort Belvoir Directorate of Public Works
ATTN: BRAC EIS Comments
9430 Jackson Loop, Suite 100
Fort Belvoir, VA 22060-5116

To Whom It May Concern:

Thank you for the opportunity to comment on the scope for the EIS related to the BRAC initiative at Fort Belvoir.

As the BRAC analysis for transportation is being done for Fort Belvoir, please take into consideration that the Council of Government's (COG) Traffic model which will be used in this analysis, is done on a large scale regional basis. BRAC impact, although large in a local scale, it will get minimized in a model of that size.

Also, the COG model does not do an effective job in determining traffic patterns due to changes in mode (such as transit, car/vanpooling, and slugging). A change from a location in the central core to a suburban community would definitely have a change in traffic pattern and mode choice a commuter is using, especially those currently living in Prince William County and other suburban jurisdictions. These shifts are not shown in a COG scale model and would not even make a significant impact in the numbers. A more scale oriented traffic analysis with adjustable factors needs to be completed to see the true changes in trips and mode shifts that would affect this area.

Thanks again for the opportunity to comment and if you have any questions, please call Ricardo Canizales at (703) 792-5985.

Sincerely,

Tom Blaser
Transportation Division Chief

Cc: Susan Roltsch, Assistant County Executive
Dana Fenton, Legislative Affairs Director

TB\rd\c:\Blaser\BRAC

An Equal Opportunity Employer





COUNTY OF PRINCE WILLIAM
4379 Ridgewood Center Drive
Prince William, Virginia 22192-5308

RETURN SERVICE REQUESTED

NO VA 220

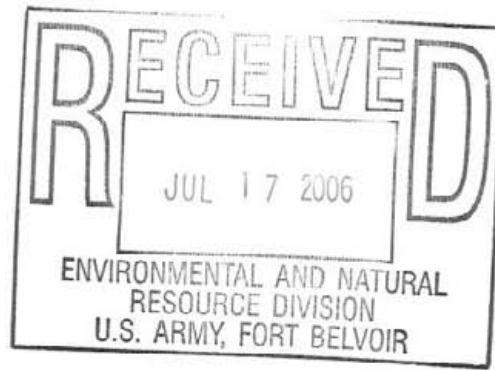
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Fort Belvoir Directorate of Public Works
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9430 Jackson Loop, Suite 100
Fort Belvoir, VA 22060-5116

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United States Senate
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Committee on Government Reform
U.S. House of Representatives
The Honorable Tom Davis

Mayor
District of Columbia
The Honorable Anthony A. Williams

Chairman
Council of the District of Columbia
The Honorable Linda W. Cropp

Executive Director

Patricia E. Gallagher, AICP

IN REPLY REFER TO:
NCPC File No. 6598

JUL - 7 2006

Directorate of Public Works
ATTN: BRAC EIS Comments
9430 Jackson Loop, Suite 100
Fort Belvoir, VA 22060-5116

To Whom It May Concern:

Thank you for opportunity to comment on the scope of the environmental impact statement (EIS) for the Base Realignment and Closure (BRAC) action for Fort Belvoir, Virginia. The National Capital Planning Commission (NCPC) is the federal government's central planning agency for the National Capital Region. NCPC has certain review responsibilities for Fort Belvoir's master plan and individual projects, and therefore seeks to ensure that the environmental documentation provides effective information.

Within the time constraints associated with the BRAC action, we believe that the Department of the Army has made a strong commitment to planning for anticipated growth in a manner that will transform Fort Belvoir into a model of smart, sustainable development. We encourage the Army to continue to seek early and continuous public and stakeholder involvement in this planning process, as it will substantially enhance the outcome of this process. The EIS should consider the BRAC action in the context of the other master plan and project activities, such as the proposed museum.

NCPC prepares the *Comprehensive Plan for the National Capital Region: Federal Elements*, which provides policy direction for federal development (see attached copy). The Federal Elements address many of the topic areas discussed below, such as transportation, historic preservation and urban design, and form the basis of our scoping comments. Three principles shape the Federal Elements:

- **Accommodate federal and national capital activities:** Safely and efficiently accommodate government functions while promoting the highest design quality.

July 6, 2006

Page 2

- **Reinforce “smart growth” and sustainable development planning principles:** Orient development to transit options; protect environmental and natural resources, organize new development in compact land use patterns; promote opportunities for infill development to take advantage of existing public infrastructure, and adapt and reuse existing historic and underutilized buildings to preserve the unique identities of local neighborhoods....recognize(s) the interrelationships between economic growth environmental quality and livability, and the responsibility that citizens have to preserve their communities and quality of life for future generations.
- **Support local and regional planning and development objectives:** We encourage Fort Belvoir to use the Comprehensive Plan policies as a tool in the EIS process to evaluate how, and how effectively, alternatives meet federal planning goals in the region, and to identify measures that could allow alternatives to more successfully reach these goals.

The Belvoir New Vision consultant team has identified options which should form the basis for three alternatives that, at a minimum, should be analyzed in the EIS. The EIS should analyze, for each alternative, how, and how effectively, each alternative addresses the following issues, as well as mitigation measures that would allow each alternative to address impacts or more effectively meet certain planning objectives. The analyses should be comparative, identifying differences between each alternative.

All of the alternatives should be evaluated for how, and how effectively, they can achieve the compact, mixed-use, pedestrian-friendly, sustainable and connected urban designs that represent a significant component of the “Belvoir New Vision Goals.” Where these goals cannot be met, the EIS should identify mitigation to better achieve these goals.

Each alternative in the EIS should provide detailed *comparative* analyses on how, and how effectively, the significant increase in generated trips, and location and mode shifts are addressed, as well as the impacts to the capacity of the surrounding transportation network and the quality of the infrastructure. The alternatives should identify approaches and mitigation that promote transportation mobility, accessibility and multi-modal transportation choices, minimizes single-occupant vehicle use and encourages transit use. The transportation analyses should identify all assumptions regarding transportation infrastructure that will be built, and as appropriate, identify the impacts if infrastructure is not built.

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Page 3

The amount, location and design of parking, as well as parking demand, should be analyzed for each alternative. Analyses should focus on how effectively each alternative minimizes the overall need for parking, minimizes the land demands of parking, and addresses the design of parking facilities to support sustainable, "smart-growth" objectives.

We encourage including extensions of fixed transit services within one or more alternatives. While the need to meet BRAC-imposed deadlines and current financial resources appear to constrain short-term options for fixed transit extensions, inclusion of this feature will provide information that will be useful in evaluating different alternatives and preparing designs that could readily integrate future transit proposals.

Alternative analyses should address improving circulation and connections between the different areas of the Fort Belvoir installation, particularly north and south post. Further, connections and circulation to the surrounding community should be evaluated. This should include identifying and assessing current, proposed or temporary street and access closures resulting from security needs that could impact traffic and circulation.

NCPC recognizes that security measures are critical to ensure force protection and mission continuity. Fort Belvoir will be accommodating uses with different security needs, and as such, this presents opportunities to use site selection, design strategies, and other measures to ensure security and *also* support resident, worker and public access to appropriate facilities and services; provide accessible and well-designed public spaces; and minimize impacts on surrounding communities. The EIS should include information on risk and threat assessments sufficient to identify and evaluate appropriate security measures. We would welcome the opportunity to work with Fort Belvoir regarding strategies to meet both security and urban design objectives, and have also attached NCPC's *National Capital Urban Design and Security Plan*.

Fort Belvoir includes significant environmentally sensitive areas, including forests, streams, shorelines, and habitat areas. It also contains areas of historic and cultural significance. For each alternative there should be an evaluation of how, and how successfully, the resources will be protected and proposed development will be integrated development with these resources. Where full protection cannot be provided, mitigation measures should be identified. Further, we encourage consideration of alternatives and/or mitigation that improves connections between open spaces on the installation sites as well as to regional systems.

July 6, 2006

Page 4

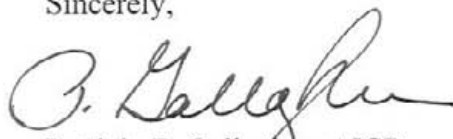
We encourage inclusion of alternatives that examine the full range of options for locating development to fulfill the development needs created by the BRAC action, such as the use of the airport, golf course, or sites proposed for remediation. Further, we encourage consideration of alternatives and/or mitigation measures that provide additional housing and services at the installation. This will result in useful planning information for decision-makers.

Each of the alternatives should be evaluated for their impacts on air, water and soil, both during construction and long term. Mitigation should be identified as appropriate. Further, Fort Belvoir has areas that require environmental remediation, and the alternatives should be evaluated considering how remediation issues may limit development opportunities, as well as how development may influence remediation strategies.

The significant growth directed at Fort Belvoir will result in increased demands for and shifts in housing, services, retail and office space, not only on the installation, but in the surrounding community. We encourage alternative analyses that identify and evaluate the likely shifts in demand for housing, services and office space, and infrastructure needs. Further, we encourage the Army to continue their coordination with Fairfax County and other stakeholders to determine how the different alternatives could provide opportunities to support local economic and community development objectives; such as future redevelopment along Route 1.

Our agency looks forward to working with Fort Belvoir representatives, other stakeholders, and the consultant team throughout the process. We are currently reviewing prior Commission documents to identify other relevant comments, and will provide those under separate cover as needed. These comments have been prepared by staff and do not reflect an adopted position on the part of the Commission. Please call Julia Koster, at 202.482.7211, if you have any questions or need further information.

Sincerely,



Patricia E. Gallagher, AICP
Executive Director

Attachment

cc: John Cogbill, Chair, National Capital Planning Commission
Ralph Newton, Acting Director, Washington Headquarter Services
Colonel Brian Lauritzen, Field Artillery Installation Commander, Ft. Belvoir

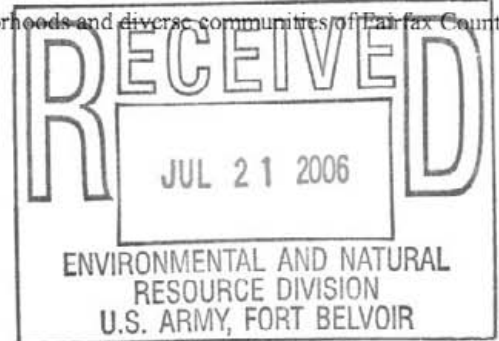


County of Fairfax, Virginia

To protect and enrich the quality of life for the people, neighborhoods and diverse communities of Fairfax County

July 10, 2006

Colonel Brian W. Lauritzen, Commander
U.S. Army Garrison Fort Belvoir
ATTN: BRAC EIS Comments
9430 Jackson Loop, Suite 100
Fort Belvoir, VA 22060-5116



Dear Colonel Lauritzen:

Fairfax County's staff attended the public agency scoping meeting held on June 7, 2006 and has reviewed some of the initial information that has been provided regarding the scope of the Environmental Impact Statement (EIS) for Base Realignment and Closure (BRAC) actions for Fort Belvoir. We also attended the June 22, 2006 Board of Advisors meeting at which Belvoir New Vision Planners presented three potential development strategies for the accommodation of BRAC requirements. We are submitting the attached comments for consideration as you begin the important process of preparing an EIS for BRAC related actions. These comments were endorsed by the Fairfax County Board of Supervisors on July 10, 2006.

The proposed relocation of approximately 22,000 employees and an undetermined number of contractors to Fort Belvoir, the Engineer Proving Ground (EPG), and/or the GSA Warehouses and private properties approximate to these locations will present profound challenges and significant opportunities in the southern portion of Fairfax County. We appreciate that the BRAC actions may assist revitalization efforts in Springfield and along the Richmond Highway corridor. Absent substantial thought and commitment from the U.S. Army, however, BRAC will also create severe adverse impacts that could degrade the quality of life and the quality of the environment in southern Fairfax County for years, if not decades, to come. Our attached comments highlight numerous concerns that we have regarding these potential impacts, including concerns regarding impacts to the area's already-stressed transportation system, impacts to parks and recreation facilities, impacts relating to housing, impacts to governmental services and utilities, and impacts to air, water, ecological, and cultural resources. The EIS and associated master planning documents must satisfactorily address all of these concerns if this effort is to ultimately succeed.

We wish to place a particular emphasis on linkages between relocation activities and transportation considerations. Transportation facilities are insufficient to address existing demands, much less the demands that an additional 22,000 employees and related growth will create. The EIS should clearly identify the full extent of impacts that the BRAC actions and related development will create and should evaluate these impacts within the context of broader land use changes that are under way and that can be anticipated in southern Fairfax County.

Department of Planning and Zoning

Director's Office

12055 Government Center Parkway, Suite 700

Fairfax, Virginia 22035

Phone 703-324-1325 FAX 703-324-3337

www.fairfaxcounty.gov/dpz/

Colonel Brian W. Lauritzen

July 10, 2006


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There should be a clear commitment to the funding and immediate implementation of mitigation measures that will both minimize the number of additional motor vehicle trips that the BRAC actions will generate and ensure that additional transit and road facilities and improvements will be provided that will be sufficient to at least meet the demands that will be generated by BRAC and related development.

We understand the tremendous pressures that Fort Belvoir is under to accommodate the additional activities at Fort Belvoir and EPG within the legally mandated BRAC time frame, but wish to stress the need to ensure that implementation of BRAC mandates will not occur at the expense of the quality of life and the quality of the environment at Fort Belvoir, at the Engineer Proving Ground, at the GSA Warehouses and in southern Fairfax County.

We offer our assistance to project consultants at all stages of the EIS and master planning processes and strongly encourage project consultants to work closely with us throughout the process. Fairfax County would also like the elements in our Comprehensive Plan (including the Transportation Plan) to serve as a guide in the EIS development. As a major stakeholder in this process, we wish to be integrated into all key phases of this planning process. Toward this end, I am designating Fred Selden, Director of the Planning Division of the Department of Planning and Zoning (DPZ), Noel Kaplan, a Senior Environmental Planner with DPZ, and Mark Canale, a Senior Transportation Planner with the county's Department of Transportation, as Fairfax County's principal points of contact for the Fort Belvoir BRAC EIS and master planning efforts. They will take the lead in facilitating coordination between the project consultants and county staff. Fred and Noel can be reached at 703-324-1380; Mark can be reached at 703-324-1100.

Sincerely,


James P. Zook
Director

JPZ:NHK

cc: Fairfax County Board of Supervisors
Fairfax County Planning Commission
Fairfax County School Board
Anthony H. Griffin, County Executive
Robert A. Stalzer, Deputy County Executive
Katharine D. Ichter, Director, Department of Transportation
Jimmie D. Jenkins, Director, Department of Public Works and Environmental Services
Gloria Addo-Ayensu, Director, Department of Health
Michael A. Kane, Director, Fairfax County Park Authority
Paula C. Sampson, Director, Department of Housing and Community Development

Colonel Brian W. Lauritzen

July 10, 2006

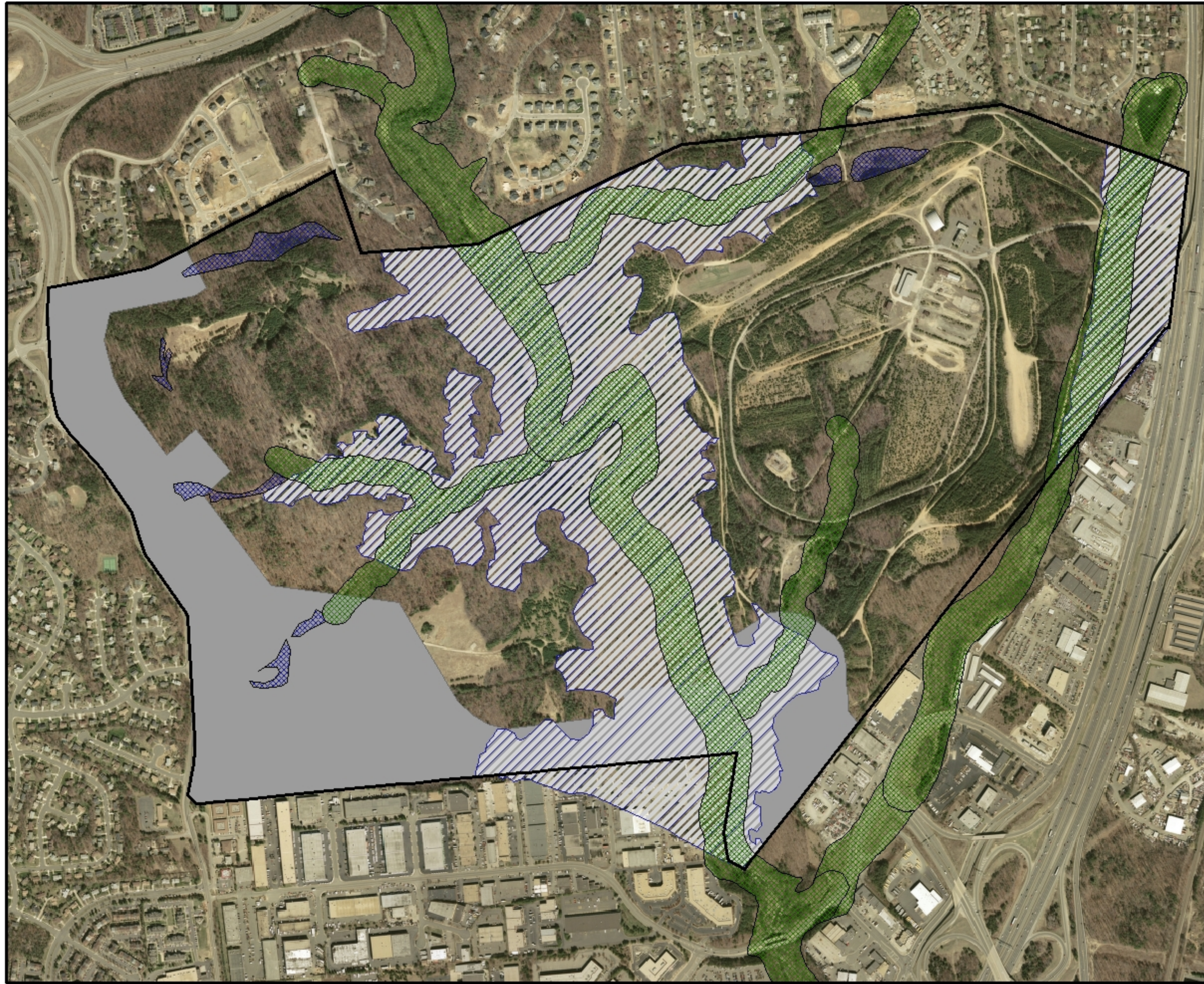
Page 3

Jack D. Dale, Superintendent, Fairfax County Public Schools

Sandra Stallman, Manager, Park Planning Branch, Fairfax County Park Authority

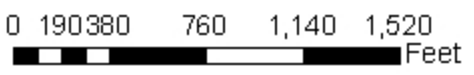
Southeast Fairfax Development Corporation

Central Springfield Area Revitalization Council



Engineer Proving Ground (EPG)

Fort Belvoir, Virginia



Scale of aerial photo
 Flight date 2002
 Prepared 7/2005
 by Fairfax County DPZ

Legend

-  EPG Gross Buildable Area
-  Wetlands
-  Resource Protection Areas (RPA)
-  Environmental Quality Corridor (EQC)
-  Fairfax County Parkway Right of Way

Potential Buildable Area	
EPG Gross Building Area	795 acres
Environmental Constraints (RPA, EQC, Wetlands)	292 acres
VDOT Improvements	173 acres
EPG Net Buildable Area	391 acres

General

1. The EIS and Master Plan should be comprehensive in nature, to include consideration of development on the Main Post, the Engineer Proving Ground and the GSA Warehouses, as well as the broader context of regional development conditions (e.g., future development in Springfield and along the Richmond Highway corridor).
2. With respect to the Master Plan update and NEPA documentation, the county should be integrated into the review of each key deliverable product (e.g., 30%, 60%, 95% submissions of the Master Plan and related maps), and sufficient time (at least three weeks for each document) should be built into the schedule to allow for a county review of, and comment on, these materials. Coordination with the county should occur prior to formal submissions to Army and/or Department of Defense staff in the decision making process. This would allow county concerns to be addressed prior to the documentation gaining Army/DOD-level approval.
3. We appreciate the opportunity that was provided to us to meet with project consultants on May 9, 2006 and recommend continued, regular coordination between the project team and county review staff. Further, we recommend that county staff be provided with specific points of contact for coordination and communication on land use, transportation, environmental, parks and recreation, public facilities, and school issues.
4. The planning process should be flexible enough to adapt to changes that may occur to Fairfax County's Comprehensive Plan as well as development and redevelopment projects that may occur in the area during the process.

Alternatives

1. A “no action” alternative should incorporate an appropriate “baseline” that identifies existing development and should recognize the transportation improvements necessary to correct existing deficiencies and achieve an acceptable level of service on the supporting transportation network. The no action alternative should also address how Fort Belvoir has increased its working population at a pace that has exceeded the ability of the infrastructure to support this level of development. A “no action” alternative that is based on the existing Master Plan would, in our view, be inappropriate, as Fort Belvoir has already exceeded the projected 2015 working population that was envisioned in the 1993 Master Plan, while many of the planned road improvements anticipated to serve this working population have not been completed. Future land use alternatives can then be compared with this baseline.

2. At the June 22 Board of Advisors meeting, Belvoir New Vision Planners presented three potential development strategies for the accommodation of BRAC requirements: one approach would concentrate new development on the Main Post; another approach would concentrate new development at EPG (as well as the General Services Administration property in Springfield); and the third would disperse development on the Main Post (including Davison Army Airfield), EPG, and the GSA site. We look forward to analyses documenting what the effects that each of these approaches would have on the environment and recommend that particular scrutiny be placed on the effects that concentration of development in any one location could have on transportation facilities and other infrastructure.
3. We encourage the Army to consider alternative locations for BRAC development that might be outside of Fort Belvoir but close to a transit facility. Toward this end, we are encouraged that the GSA property is now being considered for BRAC facilities.
4. With respect to the GSA site, we recommend that the Belvoir New Vision Planners work closely with county staff on the development of potential connections between this site and the nearby Franconia-Springfield Metrorail/Virginia Rail Express stations.

Transportation--General

1. Transportation analyses performed in support of the EIS should be coordinated with modeling and analyses that have been performed as part of the County's Transportation Plan update process.
2. The EIS should clearly document, for all alternatives, where both current and relocated employees and contractors reside and what the anticipated number and timing of vehicular trips to and from both the Main Post and the EPG site will be. To what extent will highway facilities be able to accommodate increased trips?
3. Transportation improvements should be provided and appropriately phased in order to correct transportation deficiencies and to achieve an acceptable level of service on the transportation network in support of existing and new development. Road and transit improvements based on present and projected commuting patterns through Fairfax County should be provided to accommodate the existing and additional trips to and from the Main Post and EPG sites. Analysis should be sufficiently comprehensive to consider the need for improvements beyond the immediate vicinity of the Main Post and EPG.
4. Are current access points into Fort Belvoir and EPG as currently constructed able to handle the number of vehicles entering the installation at the peak hour period? Will signal modifications need to be implemented along Richmond Highway and the Fairfax County Parkway to accommodate the changes in commuting patterns?
5. The EIS should identify specific measures that will be applied to optimize the use of Metro, the Fairfax Connector, Virginia Rail Express, and Park and Ride facilities in order to reduce single occupancy vehicle use.

6. An effective Transportation Demand Management (TDM) program should be incorporated for existing and future development. Goals should be established for specific percentage reductions in single-occupant vehicle usage. Ridesharing, carpooling, van pooling, bus, VRE, Metro, establishment of park and ride/transit facilities, and limiting available parking are just some of the methods that can be incorporated into an effective TDM program.
7. In addition to commuting patterns of employees, the EIS should address the extent to which transit service will be available to provide connections between new office development at Fort Belvoir/EPG and commercial establishments in neighboring areas. The establishment of a fixed guideway link and/or a shuttle bus service from the Franconia-Springfield Metrorail/VRE stations as well as an on-post shuttle system should also be considered, and the EIS should address both on- and off-post transit service.
8. The EIS should evaluate the possible use of the abandoned coal train line right-of-way for some type of transit link to and from Fort Belvoir Main Post.
9. The completion of the Fairfax County Parkway and the Connector Road that will establish a new link between Richmond Highway and Telegraph Road are two current projects that are critical needs in the area. In our view, both projects **must** be in place prior to the BRAC-related relocations of employees. These projects face funding and/or environmental issues that may delay their completion in sufficient time to support these relocations. The EIS should consider and identify the impacts that will occur if either or both of these projects are not in place by 2011.
10. The EIS must address how BRAC related development will be phased to the availability of necessary roadway and transit improvements.

Transportation—Main Post

1. The EIS should consider improvements to transit connections between existing transit facilities (Metrorail, VRE, bus service, park and ride lots, etc.) and Fort Belvoir and EPG. The extension of Metrorail should be considered, but implementation of such an extension within the BRAC time frame is unrealistic and should only be considered as a long range enhancement. Construction of park and ride facilities to the south of Fort Belvoir, a bus rapid transit extension from the existing REX service, and/or implementation of express service from Franconia-Springfield Metro/VRE, the Lorton VRE station, or from Prince William County are all possible considerations.
2. The EIS should address the over-capacity projected in past environmental assessments for the Richmond Highway/Fairfax County Parkway, Richmond Highway/Backlick Road, Richmond Highway/Pohick Road, Richmond Highway/Belvoir Road, and Kingman Road/Fairfax County Parkway intersections, as well as over-capacity at the I-95 ramps and the Fairfax County Parkway. Improvements should be provided to correct these deficiencies.

3. The EIS should consider the provision of an additional grade-separated connection between the North and South Post areas along with access that would improve traffic flow and reduce backups at the existing entrance gates.

Transportation—Engineer Proving Ground

1. The proximity of the Engineer Proving Ground site to the Franconia-Springfield Metrorail and Virginia Railway Express stations may afford opportunities to optimize the use of this transit resource. The EIS should address the extent to which employees can be expected to commute to the area via Metrorail and the extent to which transit connections between the EPG site and the Franconia-Springfield station could increase commuting via transit to the site. Will such transit connections be provided? Will development design at the EPG site emphasize these connections if the proposed development indicates a demand for them?
2. The remaining segment of the Fairfax County Parkway should be constructed prior to the relocation of significant numbers of employees to Fort Belvoir. The EIS should address the timing of this critical transportation project as it relates to any “build” alternative.
3. The EIS should address future over-capacity concerns associated with Backlick Road at EPG and the I-95 ramps at the Fairfax County Parkway (which will relate to development at both the Main Post and EPG). The EIS should also discuss the current design concept for the Fairfax County Parkway and access to EPG from the Parkway. Improvements should be provided to correct any deficiencies associated with these intersections and facilities.

Nonmotorized Transportation

1. The EIS should include a map of planned pedestrian and bicycle trails and demonstrate how they will connect to those shown on the adopted Countywide Trails Plan. Development of appropriate segments within and adjacent to Fort Belvoir should be examined. Furthermore, trails along Richmond Highway and the Richmond Highway/Telegraph Road connector road as well as the Potomac Heritage Trail should be identified and incorporated onto the map of planned trails. The EIS should identify mechanisms through which new trails will be funded and constructed.
2. The EIS should address the extent to which pedestrian and bicycle connections will be provided between on-post and/or near-post housing and on-site employment areas.
3. The EIS should address the extent to which pedestrian connections and facilities (e.g. bus shelters) will be provided in order to facilitate transit use by new and existing employees.
4. The EIS should address the extent to which new office buildings will be designed to accommodate bicycle commuting (e.g., secure parking facilities, locker and shower facilities).
5. The Accotink Stream Valley provides a major greenway corridor through the Springfield area of Fairfax County. The Cross County Trail, a 40-mile trail that runs from the Occoquan River in Lorton to the Potomac River in Great Falls, traverses a portion of the Accotink Stream Valley. As the EPG site is developed, additional trails along the Accotink Stream Valley

should be developed and planned to link up with the Cross County Trail to provide a link between the EPG area and the Springfield Community Business Center as well as Lake Accotink to the north.

Development Envelopes/Design—General

1. Fort Belvoir should continue to incorporate high quality landscape and architectural design elements in its Master Plan. The EIS should address landscaping and design considerations; natural landscaping and green building approaches should be considered. The EIS should encourage the establishment of a vegetation management plan that would control invasive species and promote the establishment of native species in open space areas.
2. The EIS should identify design concepts that will result in compact development envelopes, thereby increasing open space, reducing impervious cover, and reducing associated adverse environmental impacts. Toward this end, the use of shared parking and structured parking should be evaluated.
3. The EIS should address the extent to which support retail uses will be provided to serve new office development.
4. The development associated with BRAC provides an opportunity for implementation of “Green Building” practices such as those promoted by the U.S. Green Building Council. The EIS should identify the extent to which new development will be designed to meet or exceed federal guiding principles for high performance and sustainable buildings.

Development Envelopes—Engineer Proving Ground

1. The EIS should document how development of the EPG site will occur in a manner that is consistent with Fairfax County’s Comprehensive Plan. Toward this end, development should be concentrated to the east of the Accotink Creek stream valley (recognizing the Environmental Quality Corridor, as noted later in these comments). The area west of the EQC is designated in the Comprehensive Plan for public park use and other needed public uses; planned park land should be dedicated to the Fairfax County Park Authority for park purposes. The 2003 Defense Authorization included dedication of a 135-acre portion of this area to FCPA.
2. The Engineer Proving Ground represents an opportunity to address much of the existing and projected parkland and recreational facility deficits in the Springfield Planning District. The Comprehensive Plan for this area includes 225 acres of Stream Valley/Greenway parkland, 60 acres to be developed as a complex of lighted active recreation fields for use as a sports complex, and 25 acres to be developed as a multi-use activity center for cultural and seasonal events.

Development Envelopes—GSA Warehouses

1. The EIS should evaluate the opportunities and challenges that are posed by the immediate proximity of this site to transit, as well as the site's proximity to the consortia health care university campus.

Demand for Services—General

1. The EIS should provide information regarding the estimated number of employees who will probably move their residences to the Fort Belvoir area as a result of the BRAC actions and should document the effects that these relocations will have on county services. Particular housing, schools, utilities, park and recreation, and emergency service concerns are noted below.
2. Similarly, the EIS should provide information regarding the estimated number of contractors who will probably move their businesses to the Fort Belvoir area as a result of the BRAC actions and should document the effects that these relocations will have on community services.

Housing

1. Increases in on-site housing supply and off-site housing demand associated with growth at Fort Belvoir should be clearly documented. For off-site housing, estimates should include that range of sales and rental rates that would be considered affordable to residents.

Schools

1. The EIS should identify the magnitude of the anticipated increase in number of school age children that will result from the anticipated on-post and off-post development resulting from employment growth at Fort Belvoir.
2. If a significant increase in the number of school age children is anticipated, the EIS should identify sites for new schools that will be sufficient to accommodate the expected increase and should identify federal funding that can be made available for school construction.

Utilities

1. The EIS should address capacities of sewer and water facilities as they relate to anticipated levels of development.
2. Where needed to accommodate anticipated growth, sewer and water facilities should be expanded in capacity. For each alternative, the EIS should identify the need and funding sources for any system expansions that will be needed as a result of the alternative.

Parks and Recreation

1. Fort Belvoir provides recreation and community services that support its residents and employees. The EIS should include a needs assessment that projects the overall needs of its population for indoor and outdoor recreation and leisure facilities, open space, community services, and cultural and environmental programs. The EIS should address how the needs identified will be met on-site, and if not met on-site, the impact of the demand for these facilities on existing park and recreation resources in the area. Project consultants are encouraged to consult guidance regarding service levels for ten key types of recreational facilities that has been developed by the Fairfax County Park Authority; this guidance has been incorporated into the Parks and Recreation section of Policy Plan volume of Fairfax County's Comprehensive Plan. FCPA has recently conducted a Countywide Park and Recreation Needs Assessment that projects park and recreation needs through 2013 and will be pleased to provide information collected through this process. The Mount Vernon and Lee District areas are deficient in many recreational facility types and additional impacts cannot be easily absorbed without expanding or building new facilities. This deficiency is especially high for athletic fields, specifically rectangular fields.
2. The EIS should identify the extent to which, if any, each alternative would result in future development on areas that are now developed with (or designated for) recreational use. To offset any loss of redesignated recreation areas, additional recreation facilities should be identified and evaluated as part of the EIS process.
3. Pole Road Park, Grist Mill Park, Woodlawn Park, Huntley Meadows Park, Historic Huntley, Mount Air Historic Site, the Berman Tract, Kingstowne Park, Island Creek Park, Levelle W. Dupell Park, Pohick Estates Park, Southgate Park and Lorton Park are located in the immediate vicinity of Fort Belvoir. Other parkland in the vicinity of Fort Belvoir includes Pohick Bay Regional Park, as well as state- and federally-owned parkland on Mason Neck. Hooes Road Park, West Springfield Park, Rolling Forest Park, Rolling Wood School Site Park, Saratoga Park, Accotink Stream Valley Park and Pohick Stream Valley Park are located in the immediate vicinity of the EPG site. Laurel Hill is a large countywide park that also serves this area. Most of these parks contain extensive environmental and cultural resource preservation areas. The EIS should comprehensively analyze impacts to FCPA-owned land in the area that may include air quality, water quality and quantity, noise levels, flora and fauna habitat changes, cultural and historic resources, environmental resources, and park facility capacity and recreation service levels. It is imperative that any off-site impacts to parkland from development, stormwater management changes, construction, or other activities at Fort Belvoir be anticipated and mitigated.
4. As noted earlier, much of the area west of the EQC on the Engineer Proving Ground site should be dedicated for park purposes, consistent with the county's Comprehensive Plan.

Emergency Services

1. The EIS should address the additional demands that 22,000 new employees (and the still to be determined number of employees with associated federal contractors) will create on emergency services and the extent to which Fort Belvoir will be providing these services. The EIS should document funding needs and sources for additional emergency service needs.

DeWitt Army Hospital Relocation and Expansion

1. The EIS should evaluate opportunities that INOVA Mount Vernon Hospital may provide in supporting the post and the relocation of medical care functions from the Walter Reed Medical Center.

Air Quality

1. Air quality analyses should consider both on- and off-post traffic congestion and measures that will be taken to reduce vehicle trips and vehicle miles traveled. The analysis should not be limited to carbon monoxide and particulate concentrations but should also evaluate development options with respect to emissions of precursors of atmospheric ozone.

Ecological Resources--General

1. The EIS should address how impacts to wetlands will be minimized.
2. The EIS should address how any unavoidable impacts to wetlands will be mitigated. Mitigation/compensation should occur as close to the areas of impact as possible; the Stormwater Planning Division of the Fairfax County Department of Public Works and Environmental Services (703-324-5500) may be able to provide guidance regarding wetland mitigation/compensation opportunities.
3. Environmental Quality Corridors (EQCs) as defined in the County's Policy Plan should be protected. The EIS should recognize the EQC policy and address how new development will be designed consistent with this policy.

Ecological Resources—Main Post

1. We commend Fort Belvoir for its environmental stewardship efforts and recommend that the BRAC-related efforts serve to reinforce and, where possible, expand upon these efforts. The ecologically significant natural resource areas identified in Fort Belvoir's Integrated Natural Resource Management Plan (INRMP) should be recognized as a fundamental planning factor, and efforts should continue to be made to protect and enhance these areas. Toward that end, the EIS should address the compatibility of all options with the full extent of significant natural resources as identified in the INRMP, with particular focus on the southwestern portion of the post (see below) and efforts to protect, and perhaps augment, Fort Belvoir's Forest and Wildlife Corridor (particularly in areas where this corridor is narrow). Direct and indirect impacts (e.g., potential for impacts by invasive species due to edge effects) should be addressed, as should be potential mitigation measures.
2. We are particularly concerned with the possible intensification of development in the southwestern portion of the post. This area contains mature upland forest with low levels of fragmentation, adjoins the Accotink Bay National Wildlife Refuge, and protects both the Accotink and Pohick Creeks as they enter the tidal regime of the Potomac River at Pohick Bay

and Gunston Cove. Combined with the federal, state and regional park land already existing in this area, the southwest area represents an area of particular ecological significance that should be protected to the greatest extent possible.

3. The EIS should identify sensitive areas along the Accotink Creek corridor that are critical for protection of the main stem of Accotink Creek as it approaches the Accotink Bay National Wildlife Refuge.
4. The EIS should assess potential impacts to the Jackson Abbot Wildlife Refuge on Dogue Creek. This refuge is southwest of Huntley Meadows Park on the main stem of Dogue Creek. Protection and expansion of this refuge is critical to protect the wetlands and sensitive wildlife along the Dogue Creek corridor and in close proximity to the county's wildlife preserve at Huntley Meadows Park. This action would also support the county's Comprehensive Plan, which calls for the protection of the Environmental Quality Corridor associated with Dogue Creek.
5. The EIS should assess the impacts of shoreline development, to include recreational, office, residential, etc. on Gunston Cove, the Potomac River and the mouth of Dogue Creek. Of particular note is possible recreational facility development on Gunston Cove. This area already has high use by recreational boats from Pohick Bay Regional Park and is experiencing conflicts with natural resource protection and passive recreation. This area also has one of the highest year-round concentrations of Bald Eagles and other species of concern.
6. New development should be concentrated within areas of the Post that have already been developed or otherwise disturbed.

Ecological Resources—Engineer Proving Ground

1. The entirety of the Environmental Quality Corridor (EQC) associated with Accotink Creek and its tributaries as well as other RPA and wetland areas, as delineated by staff and represented on the attached map (the areas in question are those that are identified as “non-buildable area” located outside of the area being dedicated for the Fairfax County Parkway), should be preserved in, and, where applicable, restored to, a natural condition. The EQC should be dedicated to the County for incorporation into the Stream Valley Park system. The RPA along the eastern property boundary and disconnected wetland area in the northeastern portion of the site should also be dedicated to FCPA.

Water Resources

1. The EIS should identify all 100-year floodplains (applying the county's definition) and all Resource Protection Areas (applying the recently revised designation criteria) on the Main Post and the Engineer Proving Ground. These areas should be protected consistent with county policy and regulations.
2. In defining boundaries of Resource Protection Areas, Post-specific information regarding locations of perennial streams and wetlands should be used to augment county maps of

Chesapeake Bay Preservation Areas. Where perennial streams are known to exist, protection of these streams and associated buffer areas consistent with the text of the Chesapeake Bay Preservation Ordinance should be pursued, even if these areas are not identified as RPAs on county maps (note that the county has not performed perennial stream evaluations on Fort Belvoir property).

3. The EIS should recognize watershed management planning efforts that are under way in Fairfax County; Fort Belvoir should participate in the watershed management planning efforts for Dogue Creek, Accotink Creek, and Pohick Creek as these efforts get started.
4. Project consultants should coordinate with the Stormwater Planning Division of the Department of Public Works and Environmental Services on the identification of stream and stormwater management projects in the area of the Main Post and EPG. A point of contact within the Stormwater Planning Division is Matt Meyers, who can be reached at 703-324-5500.
5. The EIS should identify any body of water on or near the Main Post or EPG that is included on the list of impaired waters designated pursuant to Section 303(d) of the Clean Water Act and should address the implications of these designations. Pohick Bay, other tidal waters, and nontidal portions of Accotink Creek on the Main Post and EPG are considered to be impaired.
6. The EIS should address how impacts to streams will be minimized.
7. The EIS should address how any unavoidable impacts to streams will be mitigated. Mitigation/compensation should occur as close to the areas of impact as possible; the Stormwater Planning Division of the Fairfax County Department of Public Works and Environmental Services (703-324-5500) may be able to provide guidance regarding stream mitigation/compensation opportunities.
8. At a minimum, Fort Belvoir should provide erosion and sediment control measures, stormwater management measures, and water quality best management practices that are consistent with county requirements. The EIS should clearly establish that these requirements will be satisfied.
9. The EIS should address opportunities to minimize impervious cover and to use other low impact development and better site design techniques. For all new development and redevelopment at Fort Belvoir, designs should be pursued that would serve, to the extent possible, to replicate predevelopment hydrologic conditions through infiltration of stormwater runoff.

Site Contamination

1. The EIS should identify sites on the Main Post, Engineer Proving Ground, and GSA Warehouses that have been subject to contamination and the status of efforts to clean these sites. The EIS should further identify the relationship, if any, between site contamination issues and siting decisions for new development.

Cultural Resources

1. The EIS should identify the potential impacts of each alternative on historic and archaeological resources. Projects impacting on cultural resources should comply with the Secretary of Interior's Standards and planning should be done in accordance with these standards. If a determination is made that project activities (undertakings) have the potential to adversely affect cultural resources on or near Fort Belvoir, the Areas of Potential Effect should be identified and mitigation to protect the resources should include the preparation of a Memorandum of Agreement or Programmatic Agreement allowing for the involvement of the Advisory Council on Historic Preservation, Virginia Department of Historic Resources, Fairfax County Park Authority Cultural Resource Management and Protection Section, Alexandria Friends Meeting – Religious Society of Friends, and the National Trust for Historic Preservation as signatories to such agreements. Any new development and construction activities within the Fairfax County Woodlawn and Pohick Church Historic Overlay Districts and within the District's viewsheds should be subject to review and comment by Fairfax County.
2. A statement should be included in the EIS that would require all Section 106 archeological work (scopes of work and reports) be coordinated with the Fairfax County Park Authority. It is a requirement under Section 106 that consultation be made with all interested parties, of which the Park Authority is the prime one regarding archeology. Having done much of the survey work in that area and conducted data recovery on the Barnes/Owsley Plantation located there, FCPA is the most knowledgeable entity regarding the archeology on Fort Belvoir. The property has numerous significant prehistoric and historic sites including the ca. 1700 grave of Maj. Thomas Owsley, which has yet to be located.

Other

1. We have previously expressed concern about a possible Old Colchester Road site for the proposed National Museum of the U.S. Army and wish to reiterate this concern in light of new uncertainty regarding where on Fort Belvoir this facility may be located. The cumulative impacts of the museum, BRAC, and other programmed development at Fort Belvoir should be addressed in the EIS. In addition to environmental and transportation impacts, impacts to the Fairfax County Woodlawn and Pohick Church Historic Overlay Districts and viewsheds associated with these districts should be considered in any siting decision for this facility.
2. The EIS should document anticipated operations at Davison Army Airfield and identify associated noise impacts. Of particular interest would be any differences that might occur in airfield operations under the various options.

Appendix C

***Coastal Zone Management Act (CZMA)
Consistency Determination
for Proposed BRAC Implementation
at Fort Belvoir***

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Coastal Zone Management Act (CZMA) Consistency Determination For Proposed Implementation of BRAC at Fort Belvoir

This document provides the Commonwealth of Virginia with the Fort Belvoir Consistency Determination under CZMA section 307(c) (1) and 15 CFR Part 930, sub-part C, for implementation of BRAC actions at the installation. The information in this Consistency Determination is provided pursuant to 15 CFR section 930.39. The proposed action involves those activities described below.

[The following paragraphs of text summarize the proposed federal activity. A full description of the proposed activity may be found in the Environmental Impact Statement for the Implementation of the 2005 Base Realignment and Closure Commission's Recommendations and Related Army Actions at Fort Belvoir, Virginia, which is incorporated by reference into this Consistency Determination].

In July 2006, the Army considered three conceptual development strategies to address the question of where facilities could be sited for a net increase of 22,000 personnel being assigned to Fort Belvoir.¹ That review process resulted in identification of a preferred land use strategy that reflected the best aspects of each of the three conceptual development strategies.² The preferred land use strategy was then used as the basis for the proposed amendment to Fort Belvoir's land use plan.

Accommodation of personnel being realigned must take into account the needs of six major groups slated for realignment by the BRAC Commission: Washington Headquarters Services (WHS), consisting of WHS and elements of the Office of the Secretary of Defense and defense agencies; National Geospatial-Intelligence Agency (NGA); various Army entities moving from leased space in the National Capital Region (NCR) (collectively referred to as *Army Lease*); U.S. Army Medical Command³ (MEDCOM); Program Executive Office, Enterprise Information Systems (PEO EIS); and Missile Defense Agency Headquarters Command Center (MDA HQCC). Details of the BRAC Commission's recommendation can be found at <http://www.brac.gov>.

Proposed Facilities

The proposed BRAC facilities would be sited as follows. NGA and WHS would be on the eastern portion of EPG. Army lease units, agencies, and activities would be on South Post at sites on Gunston Road and Belvoir Road. The Dewitt Army Community Hospital complex would be on the South Post golf course. PEO EIS and MDA would be on South Post at sites on Gunston Road and Belvoir Road. Other associated actions supporting these functions, such as child care facilities and the Post Exchange expansion, would be located at various sites throughout Fort Belvoir.

Construction and renovation of facilities to support approximately 22,000 additional personnel at Fort Belvoir would result in more than 7 million square feet of new and renovated built space and about 7 million square feet of parking structures.

¹ The three conceptual development strategies—Town Center, City Center, and Satellite Campus—are discussed in detail in Section 3.0, Alternatives.

² Chief considerations in evaluating the conceptual development strategies included transportation needs, environmental constraints, utilities and infrastructure requirements and availability, security, existing and future development potential, constructability, implementation (schedule and risk), and cost.

³ This group essentially involves relocations of functions and personnel from Walter Reed Army Medical Center to a new DeWitt Army Community Hospital proposed at Fort Belvoir.

Fort Belvoir would require essentially two types of construction projects. First, Fort Belvoir must construct or renovate facilities to create working space or other types of special use space for the proposed additional workforce. Second, Fort Belvoir must expand its general support capabilities to meet the needs of a larger on-post population.

The following provides details on facilities construction and renovation projects that are proposed to occur through fiscal year 2011.

- *NGA Administrative Facility* (65416, Fiscal Year (FY) 2007-11, Map Number (MN) 1 in Figure 2-6). This project would provide a 2,419,000-square-foot Sensitive Compartmented Information Facility for use by the NGA sited on east EPG.
- *WHS Administrative Facility* (64234, FY 2008–10, MN 2). This project would provide 2,219,000 square feet of secure administrative space for various units, agencies, and activities relocating to Fort Belvoir from leased facilities in the NCR sited on east EPG. The project would include uninterruptible power supply and standby power generation.
- *MDA Facility* (MDA 580, FY 2008–09, MN 3). This project would provide a 107,000 square foot administrative facility to serve as the MDA Headquarters Command Center sited in the 200 Area on the South Post.
- *Hospital* (64238, 65676, and 65677, FY 2008–10, MN 4). This project, incrementally funded, would provide a new hospital. Primary facilities would include the hospital (868,800 square feet), special foundations, central energy plant, helipad, ambulance shelter (2,200 square feet), vehicle parking garage, and building information systems sited on South Post golf course.
- *Dental Clinic* (64241, FY 2010-11, MN 5). This project would provide a 16,000-square-foot expansion to the existing dental clinic in Building 1099.
- *North Atlantic Regional Medical Center Headquarters (NARMC HQ) Building* (65871, FY 2009, MN 6). This project would construct a 50,000-square-foot general administration building sited on South Post golf course.
- *Corps of Engineers Integration Office (Temporary)* (FY 2007, MN 7). This project would involve the location of approximately 36,100 square feet of temporary facilities to house personnel of the Baltimore District Corps of Engineers. One facility would be located on EPG, north of existing Cissna Road and northwest of Building 5073, and another on the proposed hospital site.
- *Infrastructure* (64097, 67487, and 67959, FY 2008–10, MN 8). This project would provide a 25,000-square-foot communications center, access control facilities, one 10,000-square-foot heating plant building, one 10,000-square-foot refrigeration and air conditioning, and water, sewer, and electrical services for the EPG. The project includes approximately 80 acres of new road surfaces, replacement of two bridges, and construction of one new bridge. The project also includes demolition of 57,000 square feet of existing space.

- *Emergency Services Center* (64076, FY 2008, MN 9). This project would provide 14,700 square feet of space and 15,000 square yards of maintenance apron for emergency services functions at EPG.
- *Network Operations Center* (part of PEO EIS) (65448, FY 2010, MN 10). This project would provide a 6,525-square-foot operations center, a 10,000-square-foot storage area, and a 14,000-square-yard satellite yard sited on southern portion of South Post.
- *U.S. Army Nuclear and Chemical Agency Support Facility* (65447, FY 2008, MN 11). This project, which would provide 20,000 square feet of space, is required to support U.S. Army Nuclear and Chemical Agency (USANCA) personnel as part of BRAC 2005. Building 238 would be renovated to accommodate USANCA personnel.
- *Child Development Center (NGA)* (55661, FY 2011, MN 12). This project would provide a child development center having 19,590 square feet of space and a 24,430-square-foot outdoor area for 244 children sited on east EPG.
- *Child Development Center (EPG)* (55662, FY 2011, MN 13). This project would provide a child development center having 24,000 square feet of space and a 40,300-square-foot outdoor area for 303 children sited on east EPG.
- *Administrative Facility* (Buildings 211, 214, 215, and 220) (65450, FY 2011, MN 14). This project is required to implement BRAC 2005 by modernizing existing facilities to provide 133,000 square feet of general and secure administrative space and structured parking for various units, agencies, and activities relocating to Fort Belvoir from leased facilities in the NCR sited in the 200 Area on the South Post.
- *Access Control Point* (63571, FY 2009, MN 15). This project would construct an access control point (ACP) with vehicle inspection station, access control building (280 square feet), booth, and canopy, vehicle turnarounds, security lighting, and backup generator, and a two-lane access road (306,000 square feet) with sidewalks/bike path, street lighting, drainage, traffic signal, and Richmond Highway (U.S. Route 1) left and right turns. The access point is sited just north of U.S. Route 1.
- *AMC Relocatables* (66228, FY 2007, MN 16). This project would purchase the facilities at Fort Belvoir that were procured to house the headquarters function of the U.S. Army Materiel Command (AMC). Facilities consist of two modular, two-story office buildings having a total of 230,000 square feet of space. These buildings include open and closed office space along with special purpose areas to include an Emergency Operations Center (EOC), sensitive compartmented information facility (SCIF), auditorium, secure and nonsecure conference rooms, video teleconference center, technical library, data process center, and office support space. The facilities are located along Gunston Road.
- *PEO EIS Administrative Facility* (65592/67231, FY 2007, MN 17). Project Number 65592 would provide 290,000 square feet of general administrative space and a parking garage, and Project Number 67321 would provide an additional 157,400 square feet of secure administrative space sited in the 200 Area on the South Post.

- *Structured Parking Facility, 200 Area* (54347, FY 2011, MN 18). This project would construct a parking structure with a capacity of 400 parking spaces in the 200 Area of South Post.
- *Modernize Barracks* (62892, FY 2011, MN 19). This project would provide renovations to six barracks buildings in the McRee Barracks Complex on North Post.
- *MWR Family Travel Camp* (66807, FY 2007–10, MN 20). This project would provide a Morale, Welfare, and Recreation (MWR) Family Travel Camp with 52 recreational vehicle (RV) campsites, a camp support facility, 15 cabins, and 12 tent sites in four phases, each of which would be complete and usable upon completion. The camp support facility would include a laundry section, camper's lounge space, restrooms/showers, and vending machine space. The project would also include relocating the existing Johnson Road to provide better camp circulation and space, landscaping, site lighting, sewage lift stations, and utility upgrades. The area is sited on the southwest corner of South Post.

Refer to Section 4.0, Affected Environment and Consequences, for further discussion.

Consistency Determination

The Virginia Coastal Resources Management Program contains the applicable enforceable policies in the left column of the table below. Fort Belvoir has determined that the implementation of the BRAC Commission's recommendations would affect the land or water uses or natural resources of Virginia as described in the right column of the table below.

Based upon the information, data, and analysis, as contained in the EIS, Fort Belvoir finds that the proposed action is consistent to the maximum extent practicable with the enforceable policies of the Virginia Coastal Resources Management Program. Pursuant to 15 CFR section 930.41, the Virginia Coastal Resources Management Program has 60 days from the receipt of this document in which to concur with or object to this Consistency Determination, or to request an extension under 15 CFR section 930.41(b). Virginia's concurrence will be presumed if its response is not received by Fort Belvoir on the 60th day from receipt of this determination. The Commonwealth's response should be sent to Mr. Patrick McLaughlin, Fort Belvoir Department of Public Works-Environmental and Natural Resources Division, 9430 Jackson Loop, Fort Belvoir, Virginia, 22060.

Applicable Enforceable Policy	Effects of the Federally Proposed Action
<p>Fisheries Management</p> <p>The program stresses the conservation and enhancement of finfish and shellfish resources and the promotion of commercial and recreational fisheries to maximize food production and recreational opportunities. This program is administered by the Virginia Marine Resources Commission (VMRC) (Virginia Administrative Code (VAC) §28.2-200 to §28.2-713) and the Virginia Department of Game and Inland Fisheries (VDGIF) (VAC §29.1-100 to §29.1-570).</p> <p>The State Tributyltin (TBT) Regulatory Program has been added to the Fisheries Management program. The General Assembly amended the Virginia Pesticide Use and Application Act as it related to the possession, sale, or use of marine antifoulant paints containing TBT. The use of TBT in boat paint constitutes a serious threat to important marine animal species. The TBT program monitors boating activities and boat painting activities to ensure compliance with TBT regulations promulgated pursuant to the amendment. The VMRC, VDGIF, and Virginia Department of Agriculture and Consumer Services (VDACS) share enforcement responsibilities (VAC §3.1-249.59 to §3.1-249.62).</p>	<p>NO EFFECT</p> <p>The proposed action would not involve building, dumping, or otherwise trespassing on or over, encroaching on, taking or using any material from the beds of the bays, ocean, rivers, streams, or creeks within Virginia. The proposed action would not have a reasonably foreseeable effect on fish spawning, nursery, or feeding grounds, and therefore none on fisheries management.</p> <p>No paints containing TBT will be used under this proposed action.</p>
<p>Subaqueous Lands Management</p> <p>The management program for subaqueous lands establishes conditions for granting or denying permits to use state-owned bottomlands based on considerations of potential effects on marine and fisheries resources, wetlands, adjacent or nearby properties, anticipated public and private benefits, and water quality standards established by the Virginia Department of Environmental Quality (VDEQ), Water Division. The program is administered by VMRC (VAC §28.2-1200 to §28.2-1213).</p>	<p>NO EFFECT</p> <p>No subaqueous land use is proposed under this action. This project involves no encroachments in, on, or over state-owned submerged lands. Should it be determined that utility crossings be required under Accotink Creek instead of under road bridge decks, the installation would apply for a subaqueous lands permit.</p>

<p>Wetlands Management</p> <p>The purpose of the wetlands management program is to preserve tidal wetlands, prevent their despoliation, and accommodate economic development in a manner consistent with wetlands preservation.</p> <p>(i) The tidal wetlands program is administered by VMRC (VAC §28.2-1301 through §28.2-1320).</p> <p>(ii) The Virginia Water Protection Permit program administered by VDEQ includes protection of wetlands—both tidal and non-tidal. This program is authorized by VAC §62.1-44.15.5 and the Water Quality Certification requirements of Section 401 of the Clean Water Act of 1972.</p>	<p>MINOR EFFECT</p> <p>The proposed action would not affect any tidal wetlands at Fort Belvoir. Up to two acres of non-tidal wetland disturbance could occur, and the proposed action would require a Virginia Water Protection (VWP) Permit if any of the following activities are conducted in a wetland:</p> <ol style="list-style-type: none"> 1. New activities to cause draining that significantly alters or degrades existing wetland acreage or functions. 2. Filling or dumping. 3. Permanent flooding or impounding. 4. New activities that cause significant alteration or degradation of existing wetland acreage or functions. <p>During the course of the proposed action, once the precise amount of impact is determined, the installation would apply for a VWP permit prior to commencing the activity. Additionally, the installation would prepare and adhere to a Sediment and Erosion Control Plan to prevent sedimentation from entering surface waters (see non-point source pollution control section below).</p>
<p>Dunes Management</p> <p>Dune protection is carried out pursuant to The Coastal Primary Sand Dune Protection Act and is intended to prevent destruction or alteration of primary dunes. This program is administered by VMRC (VAC §28.2-1400 through §28.2-1420).</p>	<p>NO EFFECT</p> <p>No permanent alteration of or construction upon any coastal primary sand dune will take place under the proposed action.</p>
<p>Non-point Source Pollution Control</p> <p>Virginia's Erosion and Sediment Control Law requires soil-disturbing projects to be designed to reduce soil erosion and to decrease inputs of chemical nutrients and sediments to the Chesapeake Bay, its tributaries, and other rivers and waters of the Commonwealth. This program is administered by the Virginia Department of Conservation and Recreation (VDCR) (VAC §10.1-560 et seq.).</p>	<p>MINOR EFFECT</p> <p>The proposed action would require a substantial amount of ground disturbance for facility construction. The construction activities would comply with the installation's Storm Water Pollution Prevention Plan (SWPPP) and Virginia Pollutant Discharge Elimination System (VPDES) Municipal Sanitary Storm Sewer Systems (MS4) permit requirements. Construction contractors would be using phase erosion, sediment control, and post-construction best management practices (BMPs) as effective storm water controls. Site-specific storm water management plans developed by the construction contractors will provide information relevant to each activity. A storm water drainage system master plan study is planned to be conducted by the installation to identify current deficiencies and determine infrastructure needs to meet BRAC requirements and long-term growth to 2030.</p>

<p>Point Source Pollution Control</p> <p>The point source program is administered by the State Water Control Board pursuant to VAC §62.1-44.15. Point source pollution control is accomplished through the implementation of the National Pollutant Discharge Elimination System (NPDES) permit program established pursuant to Section 402 of the federal Clean Water Act and administered in Virginia as the VPDES permit program.</p>	<p>MINOR EFFECT</p> <p>Fort Belvoir holds the following VPDES permits: MS4, wastewater treatment for mobile reverse osmosis water purification units, general permit for storm water discharges from construction sites, and general permit for storm water discharges associated with industrial activities. Fort Belvoir would work with VDEQ to revise the permits as necessary as the BRAC program was implemented, and would adhere to all conditions of the permits. Storm water discharged through conveyances, such as separate storm sewers, ditches, channels or other conveyances are considered point sources under the Clean Water Act (CWA), and subject to regulation through the National Pollutant Discharge Elimination System (NPDES) permit program. Fort Belvoir's MS4 permit requires the contractor to comply with the installations' permit prior to construction activities. This includes submitting a sediment and erosion control plan to DPW-ENRD when more than 1 acre of ground is disturbed.</p>
<p>Shoreline Sanitation</p> <p>The purpose of this program is to regulate the installation of septic tanks, set standards concerning soil types suitable for septic tanks, and specify minimum distances that tanks must be placed away from streams, rivers, and other waters of the Commonwealth. This program is administered by the Virginia Department of Health (VAC §32.1-164 through §32.1-165).</p>	<p>NO EFFECT</p> <p>Fort Belvoir relies on its sanitary sewer system and does not employ septic systems.</p>
<p>Air Pollution Control</p> <p>The program implements the federal Clean Air Act to provide a legally enforceable State Implementation Plan (SIP) for the attainment and maintenance of the National Ambient Air Quality Standards (NAAQS). This program is administered by the State Air Pollution Control Board (VAC §10-1.1300).</p>	<p>MINOR EFFECT</p> <p>The estimated emissions from the Preferred Alternative would cause minor increases in emissions, which would conform to the SIP, would not be expected to contribute to a violation of any federal, state, or local air regulations, or introduce localized carbon monoxide (CO) concentrations greater than the NAAQS.</p>
<p>Coastal Lands Management</p> <p>A state-local cooperative program administered by the VDCR's Division of Chesapeake Bay Local Assistance and 84 localities in Tidewater, Virginia established pursuant to the Chesapeake Bay Preservation Act; VAC §10.1-2100 through §10.1-2114 and Chesapeake Bay Preservation Area Designation and Management Regulations; Virginia Administrative Code 9 VAC10-20-10 et seq.</p>	<p>MINOR EFFECT</p> <p>Buffer areas of not less than 100 feet adjacent to and landward of the components listed in 9 VAC 10-20-80. Approximately 14 acres of Resource Protection Areas would be impacted by the Preferred Alternative, however, encroachment would be limited to road and utility corridors. BMPs will be developed and implemented in accordance with the NPDES SWPPP. Site-specific storm water management plans will be developed by the construction contractors prior to site disturbance activities.</p>

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TRANSPORTATION SUPPORTING DOCUMENTATION

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Table D-1: Turning Movement Counts—Existing Conditions

Intersections and Time Period		NB			SB			EB			WB		
		L	T	R	L	T	R	L	T	R	L	T	R
Commerce St./ Old Keene Mill Rd.	am	0	0	0	60	0	130	275	2385	0	0	845	45
	pm	0	0	0	170	0	450	290	1280	0	0	2345	150
Commerce St./ Amherst Ave.	am	20	1175	90	85	375	115	245	105	15	100	60	20
	pm	110	460	95	135	1015	370	265	245	90	170	245	30
Commerce St./ Backlick Rd.	am	50	165	240	200	40	45	65	255	40	50	165	290
	pm	80	345	360	460	95	75	60	380	40	80	345	360
Commerce St./ Franconia Rd.	am	590	205	165	255	135	260	80	405	615	45	1145	367
	pm	795	285	275	570	360	225	70	695	990	105	945	440
Backlick Rd./ Calamo St.	am	80	1710	890	5	585	25	20	10	30	30	5	5
	pm	75	855	390	15	1800	40	25	10	30	180	15	20
Loisdale Rd./ Spring Mall Dr.	am	0	430	210	140	260	0	225	270	45	200	0	170
	pm	0	400	205	625	620	0	200	265	20	245	0	185
Franconia Springfield Parkway./ Spring Village Dr.	am	40	5	190	95	5	25	50	4055	15	55	1380	90
	pm	45	5	150	90	10	50	70	1905	95	250	4130	100
Franconia Springfield Parkway EB Ramp./ Backlick Rd.	am	170	1380	5	5	565	85	1375	5	250	5	5	5
	pm	260	990	5	5	1095	255	615	5	160	5	5	5
Franconia Springfield Parkway WB Ramp./ Backlick Rd.	am	275	2480	0	0	470	325	180	0	185	0	0	0
	pm	470	1135	0	0	1095	1115	215	0	260	0	0	0
Franconia Springfield Parkway./ I-95 HOV Ramps	am	195	0	240	0	0	0	195	2725	0	0	1330	155
	pm	0	0	0	270	0	500	0	1590	300	530	2975	0
Franconia Springfield Parkway EB Ramp./ Frontier Dr.	am	0	230	120	325	495	0	615	5	825	0	0	0
	pm	0	990	520	1055	250	0	525	5	165	0	0	0
Franconia Springfield Parkway WB Ramp./ Frontier Dr.	am	140	705	0	0	890	165	0	0	0	20	5	570
	pm	580	755	0	0	1540	910	0	0	0	20	5	625
Franconia Springfield Parkway./ Beulah St.	am	1055	670	145	95	210	340	420	1420	500	95	1140	200
	pm	780	515	235	220	455	365	410	2120	860	205	1270	165
Fairfax County Parkway./ Fullerton Rd.	am	10	235	1150	670	685	5	10	15	10	600	10	50
	pm	5	310	1290	985	520	5	5	20	15	640	20	170
Fairfax County Parkway./ Terminal Rd.	am	60	1185	20	90	2345	335	25	5	145	10	5	75
	pm	25	1900	15	40	1305	80	215	10	5	20	5	55
Fairfax County Pkwy SB Ramps./ Telegraph Rd.	am	0	0	0	120	0	220	0	1160	110	190	230	0
	pm	0	0	0	225	0	575	0	450	35	165	980	0
Fairfax County Pkwy NB Ramps./ Telegraph Rd.	am	20	5	225	0	0	0	330	950	0	0	400	175
	pm	115	0	325	0	0	0	205	470	0	0	1030	220
Fairfax County Parkway./ John J Kingman Rd.	am	30	940	395	1095	910	60	15	60	20	20	20	130
	pm	30	885	45	160	760	10	40	20	55	430	25	1015
Telegraph Rd./ Beulah St.	am	5	110	50	260	490	275	380	770	20	230	300	70
	pm	30	405	190	95	210	465	335	465	15	90	740	265
Telegraph Rd./ S. Van Dorn St.	am	0	0	0	310	0	85	145	885	0	0	645	395
	pm	0	0	0	480	0	260	85	670	0	0	820	400
Route 1./ Telegraph Rd. - Old Colchester Rd.	am	15	170	260	50	20	210	880	2115	5	15	580	75
	pm	5	25	30	70	175	800	220	715	55	150	1960	35
Route 1./ Fairfax County Parkway.	am	0	0	0	840	0	20	340	2085	0	0	650	920
	pm	0	0	0	635	0	350	65	730	0	0	1880	675
Route 1./ Backlick Rd. - Pohick Rd.	am	115	15	10	165	75	10	15	1840	1070	100	1445	100
	pm	1100	70	25	185	15	10	5	1220	140	10	1430	90
Route 1./ Belvoir Rd.	am	155	0	85	0	0	0	0	1720	295	270	1590	0
	pm	80	0	185	0	0	0	0	1420	20	170	1450	0
Route 1./ Woodlawn Rd.	am	0	0	0	70	0	25	70	1735	0	0	1835	130
	pm	0	0	0	240	0	80	85	1510	0	0	1540	165
Route 1./ Old Mill Rd.	am	445	50	85	25	60	150	120	1245	440	180	1370	10
	pm	340	135	110	25	25	100	200	1210	340	55	1285	20
Loisdale Rd./ GSA Access Rd	am	0	605	10	100	975	0	0	0	0	15	0	85
	pm	0	505	10	30	525	0	0	0	0	15	0	55

Table D-2: Turning Movement Counts—No Action Alternative

Intersections and Time Period													
		NB			SB			EB			WB		
		L	T	R	L	T	R	L	T	R	L	T	R
Commerce St./ Amherst Ave.	am	40	1270	120	90	430	120	250	130	30	120	70	20
	pm	130	470	140	180	1050	380	280	320	110	190	260	30
Commerce St./ Backlick Rd.	am	50	170	320	260	50	50	60	310	40	70	190	360
	pm	90	390	440	510	120	80	80	510	50	90	370	370
Backlick Rd./ Calamo St.	am	100	1790	990	10	770	30	30	10	40	40	10	10
	pm	100	970	420	15	1910	40	30	10	50	210	20	20
Loisdale Rd./ Spring Mall Dr.	am	0	490	220	150	360	0	250	300	60	250	0	190
	pm	0	470	205	700	810	0	240	280	30	250	0	200
Franconia Springfield Parkway./ Spring Village Dr.	am	50	10	210	110	10	30	60	4090	20	60	1390	100
	pm	50	10	160	110	20	70	100	1900	110	270	4130	130
Franconia Springfield Parkway EB Ramp./ Backlick Rd.	am	170	1410	10	10	620	110	1500	10	220	10	10	10
	pm	250	1020	10	10	1140	350	750	10	140	10	10	10
Franconia Springfield Parkway WB Ramp./ Backlick Rd.	am	240	2550	0	0	490	400	250	0	180	0	0	0
	pm	460	1170	0	0	1070	1370	330	0	310	0	0	0
Franconia Springfield Parkway./ I-95 HOV Ramps	am	250	0	280	0	0	0	310	2970	0	0	1380	230
	pm	0	0	0	420	0	530	0	1640	350	600	3300	0
Franconia Springfield Parkway EB Ramp./ Frontier Dr.	am	0	250	140	400	560	0	690	5	890	0	0	0
	pm	0	1050	540	1070	280	0	590	5	190	0	0	0
Franconia Springfield Parkway WB Ramp./ Frontier Dr.	am	150	790	0	0	930	190	0	0	0	30	5	610
	pm	670	770	0	0	1570	950	0	0	0	30	5	680
Franconia Springfield Parkway./ Beulah St.	am	1100	780	150	110	220	390	550	1540	520	90	1110	230
	pm	760	680	260	290	570	430	480	2260	810	230	1400	220
Fairfax County Parkway./ Terminal Rd.	am	90	1200	40	150	2380	400	30	10	170	20	10	80
	pm	40	1950	30	60	1355	90	230	30	10	30	10	50
Fairfax County Pkwy SB Ramps./ Telegraph Rd.	am	0	0	0	180	0	270	0	1450	150	230	230	0
	pm	0	0	0	290	0	690	0	560	60	230	1120	0
Fairfax County Pkwy NB Ramps./ Telegraph Rd.	am	30	5	320	0	0	0	440	1170	0	0	430	200
	pm	160	0	370	0	0	0	280	570	0	0	1210	240
Fairfax County Parkway./ John J Kingman Rd.	am	40	1020	460	1110	1010	60	20	90	20	20	20	160
	pm	40	970	60	200	820	10	50	30	70	490	20	1130
Telegraph Rd./ Beulah St.	am	10	140	60	270	480	290	560	910	30	250	320	100
	pm	30	420	190	130	220	620	430	490	20	120	730	320
Telegraph Rd./ S. Van Dorn St.	am	0	0	0	450	0	130	220	1020	0	0	660	460
	pm	0	0	0	630	0	360	140	680	0	0	830	580
Route 1./ Telegraph Rd. - Old Colchester Rd.	am	20	190	250	80	20	250	1190	2120	10	30	540	130
	pm	10	30	30	100	190	950	280	700	50	150	1990	60
Route 1./ Fairfax County Parkway.	am	0	0	0	930	0	30	390	2050	0	0	660	1000
	pm	0	0	0	660	0	360	70	760	0	0	1900	710
Route 1./ Backlick Rd. - Pohick Rd.	am	130	20	20	180	80	20	20	1780	1190	120	1460	110
	pm	1180	110	40	190	20	10	10	1280	140	20	1490	60
Route 1./ Belvoir Rd.	am	120	0	110	0	0	0	0	1760	210	310	1590	0
	pm	80	0	180	0	0	0	0	1480	30	170	1490	0
Route 1./ Old Mill Rd.	am	460	130	100	310	140	260	240	1250	320	250	1420	250
	pm	360	260	120	340	60	230	340	1200	260	100	1300	280
Loisdale Rd./ GSA Access Rd	am	0	640	20	110	1000	0	0	0	0	20	0	90
	pm	0	650	30	30	560	0	0	0	0	20	0	60

Table D-3: Turning Movement Counts—Preferred Alternative

Intersections and Time Period													
		NB			SB			EB			WB		
		L	T	R	L	T	R	L	T	R	L	T	R
Commerce St./ Amherst Ave.	am	40	1260	150	120	480	120	260	160	30	170	100	40
	pm	140	550	160	210	1070	380	300	350	100	210	290	50
Commerce St./ Backlick Rd.	am	70	180	310	260	110	60	100	350	60	70	230	320
	pm	100	430	450	510	120	110	100	560	60	90	390	390
Backlick Rd./ Calamo St.	am	100	1800	1010	10	1090	30	30	10	50	60	10	10
	pm	100	1090	430	20	1920	40	30	10	50	220	30	30
Loisdale Rd./ Spring Mall Dr.	am	0	490	240	200	430	0	260	310	70	260	0	200
	pm	0	520	230	700	840	0	240	340	30	260	0	200
Franconia Springfield Parkway./ Spring Village Dr.	am	170	20	470	60	60	30	60	3820	250	670	1570	80
	pm	330	60	780	90	30	70	90	1790	270	500	3900	90
Franconia Springfield Parkway EB Ramp./ Backlick Rd.	am	140	1420	10	10	780	190	1510	0	140	10	10	10
	pm	280	1000	10	10	1060	390	820	0	210	10	10	10
Franconia Springfield Parkway WB Ramp./ Backlick Rd.	am	220	2540	0	0	580	610	290	0	150	0	0	0
	pm	430	1200	0	0	1020	1340	340	0	290	0	0	0
Franconia Springfield Parkway./ I-95 HOV Ramps	am	310	0	290	0	0	0	380	2930	0	0	1780	230
	pm	0	0	0	420	0	580	0	1860	340	620	3380	0
Franconia Springfield Parkway EB Ramp./ Frontier Dr.	am	0	260	140	400	570	0	690	5	890	0	0	0
	pm	0	1050	560	1080	280	0	840	5	200	0	0	0
Franconia Springfield Parkway WB Ramp./ Frontier Dr.	am	170	790	0	0	940	490	0	0	0	30	5	620
	pm	660	1020	0	0	1560	960	0	0	0	30	5	700
Franconia Springfield Parkway./ Beulah St.	am	1110	810	170	120	220	370	460	1560	460	100	1240	240
	pm	720	680	240	290	580	440	540	2320	860	220	1340	230
Fairfax County Parkway./ Terminal Rd.	am	100	1540	40	130	2450	410	40	10	170	20	10	70
	pm	70	1925	50	40	1470	70	220	40	30	50	10	30
Fairfax County Pkwy SB Ramps./ Telegraph Rd.	am	0	0	0	170	0	290	0	1360	160	260	250	0
	pm	0	0	0	280	0	750	0	530	70	260	1050	0
Fairfax County Pkwy NB Ramps./ Telegraph Rd.	am	80	5	470	0	0	0	600	930	0	0	420	190
	pm	170	0	380	0	0	0	280	520	0	0	1150	250
Fairfax County Parkway./ John J Kingman Rd.	am	50	1390	680	910	1340	50	20	40	60	80	20	220
	pm	40	1280	70	250	1080	20	50	40	60	450	20	1140
Telegraph Rd./ Beulah St.	am	10	140	50	310	420	290	580	800	20	240	300	130
	pm	30	410	180	140	230	660	420	470	20	110	720	330
Telegraph Rd./ S. Van Dorn St.	am	0	0	0	460	0	130	230	1010	0	0	750	480
	pm	0	0	0	640	0	360	160	790	0	0	850	570
Route 1./ Telegraph Rd. - Old Colchester Rd.	am	20	180	260	70	10	280	1100	2240	10	30	990	160
	pm	10	30	40	200	140	860	260	1040	40	210	2000	80
Route 1./ Fairfax County Parkway.	am	0	0	0	1260	0	90	710	1860	0	0	1070	1240
	pm	0	0	0	730	0	440	150	1130	0	0	1870	870
Route 1./ Backlick Rd. - Pohick Rd.	am	260	70	110	250	90	10	20	2010	1100	200	1690	140
	pm	1240	110	110	170	90	10	10	1680	180	80	1850	110
Route 1./ Belvoir Rd.	am	320	0	280	0	0	0	0	2040	320	400	1600	0
	pm	210	0	120	0	0	0	0	1790	160	320	1840	0
Route 1./ Old Mill Rd.	am	530	130	120	310	120	270	290	1420	440	260	1400	250
	pm	560	210	140	370	60	380	440	1220	340	90	1440	270
Loisdale Rd./ GSA Access Rd	am	0	650	20	110	1110	0	0	0	0	20	0	90
	pm	0	760	30	30	560	0	0	0	0	20	0	60

Table D-4: Turning Movement Counts—Town Center Alternative

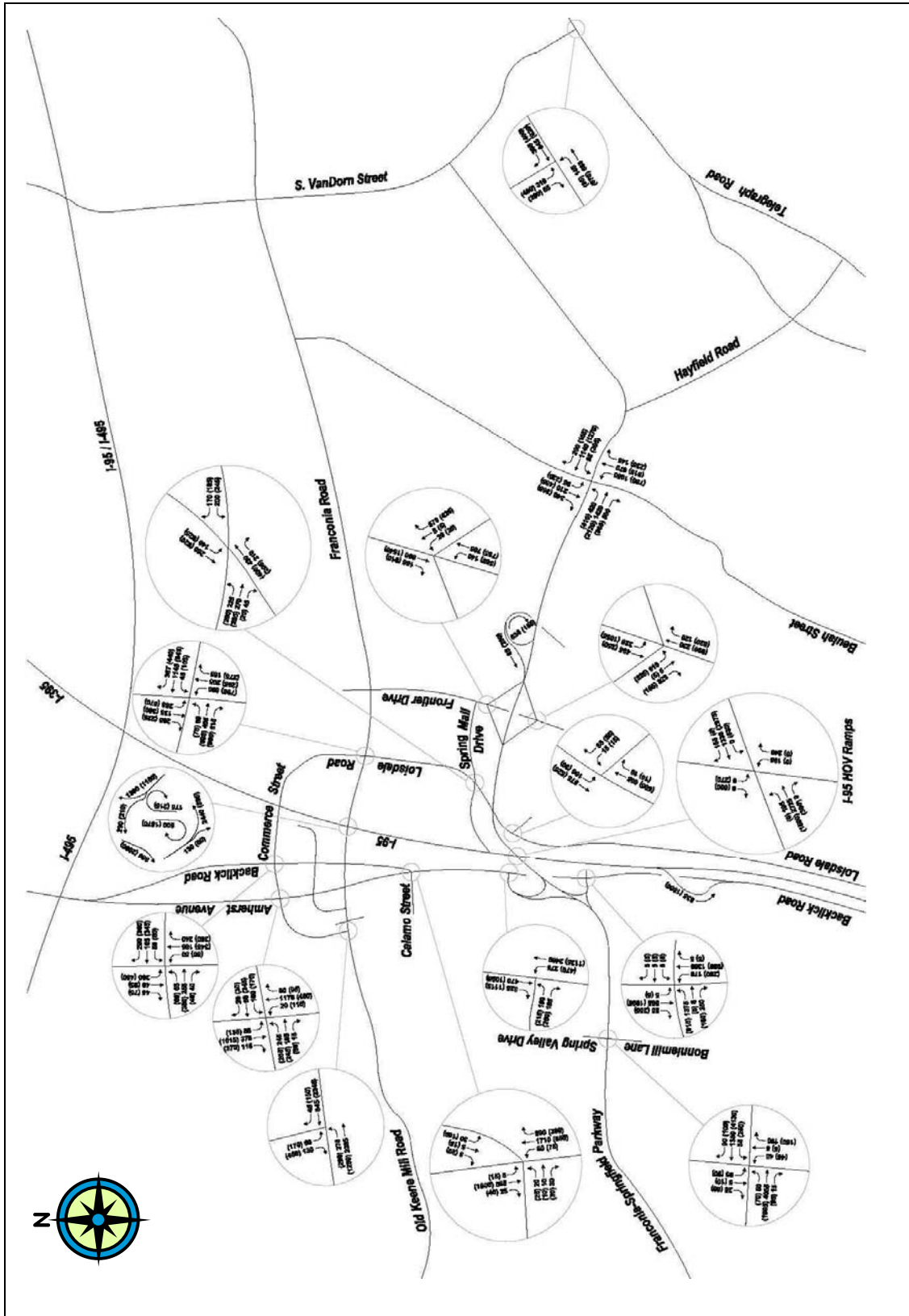
Intersections and Time Period													
		NB			SB			EB			WB		
		L	T	R	L	T	R	L	T	R	L	T	R
Commerce St./ Amherst Ave.	am	40	1290	130	110	460	130	260	150	30	140	80	30
	pm	130	530	150	200	1070	380	310	340	110	220	300	50
Commerce St./ Backlick Rd.	am	60	180	310	280	70	70	80	340	50	70	210	350
	pm	90	410	460	510	120	100	90	550	60	100	410	390
Backlick Rd./ Calamo St.	am	100	1790	1010	20	930	40	30	10	50	50	10	10
	pm	90	1030	420	30	1910	40	30	10	50	210	20	30
Loisdale Rd./ Spring Mall Dr.	am	0	480	250	230	410	0	260	300	70	250	0	210
	pm	0	530	220	700	820	0	260	320	30	250	0	240
Franconia Springfield Parkway./ Spring Village Dr.	am	50	10	210	110	10	30	60	4060	20	60	1500	100
	pm	50	10	160	110	20	70	100	1940	110	270	4090	130
Franconia Springfield Parkway EB Ramp./ Backlick Rd.	am	170	1410	10	10	700	130	1500	0	220	10	10	10
	pm	280	1000	10	10	1080	390	780	0	140	10	10	10
Franconia Springfield Parkway WB Ramp./ Backlick Rd.	am	220	2560	0	0	530	460	270	0	170	0	0	0
	pm	440	1190	0	0	1050	1340	330	0	290	0	0	0
Franconia Springfield Parkway./ I-95 HOV Ramps	am	250	0	280	0	0	0	310	2950	0	0	1470	230
	pm	0	0	0	410	0	500	0	1640	320	540	3300	0
Franconia Springfield Parkway EB Ramp./ Frontier Dr.	am	0	260	140	620	570	0	690	5	890	0	0	0
	pm	0	1050	560	1080	280	0	640	5	200	0	0	0
Franconia Springfield Parkway WB Ramp./ Frontier Dr.	am	150	790	0	0	1150	270	0	0	0	30	5	620
	pm	660	780	0	0	1560	960	0	0	0	30	5	900
Franconia Springfield Parkway./ Beulah St.	am	1140	730	190	110	310	330	520	1320	830	180	1050	270
	pm	870	710	290	280	580	430	450	2310	850	230	1430	210
Fairfax County Parkway./ Terminal Rd.	am	70	1550	30	160	2990	450	50	10	160	10	10	70
	pm	40	2370	30	70	1500	100	250	20	10	30	10	50
Fairfax County Pkwy SB Ramps./ Telegraph Rd.	am	0	0	0	220	0	310	0	1380	170	270	230	0
	pm	0	0	0	280	0	750	0	520	70	270	1020	0
Fairfax County Pkwy NB Ramps./ Telegraph Rd.	am	100	5	530	0	0	0	560	1000	0	0	450	150
	pm	180	0	390	0	0	0	300	500	0	0	1130	260
Fairfax County Parkway./ John J Kingman Rd.	am	40	1930	900	1810	1840	50	20	90	20	70	20	340
	pm	30	1450	170	460	1130	10	40	50	60	900	20	1840
Telegraph Rd./ Beulah St.	am	10	210	70	260	1080	320	580	900	50	370	320	80
	pm	70	800	290	90	320	600	380	490	30	100	830	220
Telegraph Rd./ S. Van Dorn St.	am	0	0	0	500	0	130	240	1020	0	0	850	480
	pm	0	0	0	640	0	360	200	880	0	0	830	590
Route 1./ Telegraph Rd. - Old Colchester Rd.	am	20	170	270	80	10	260	1120	2480	10	30	1010	170
	pm	10	30	40	190	150	840	240	910	40	200	2340	90
Route 1./ Fairfax County Parkway.	am	0	0	0	1560	0	160	1090	1730	0	0	1070	1420
	pm	0	0	0	860	0	820	230	910	0	0	1820	1060
Route 1./ Backlick Rd. - Pohick Rd.	am	700	20	80	240	120	20	20	1580	1690	250	1570	200
	pm	1210	430	150	150	110	10	10	1500	270	120	1670	100
Route 1./ Belvoir Rd.	am	220	0	630	0	0	0	0	1780	130	650	1790	0
	pm	250	0	320	0	0	0	0	1700	100	430	1710	0
Route 1./ Old Mill Rd.	am	630	150	100	370	130	400	350	1380	440	260	1680	260
	pm	540	230	130	350	60	340	450	1410	380	90	1440	270
Loisdale Rd./ GSA Access Rd	am	0	650	20	110	1150	0	0	0	0	20	0	90
	pm	0	800	30	30	560	0	0	0	0	20	0	60

Table D-5: Turning Movement Counts—City Center Alternative

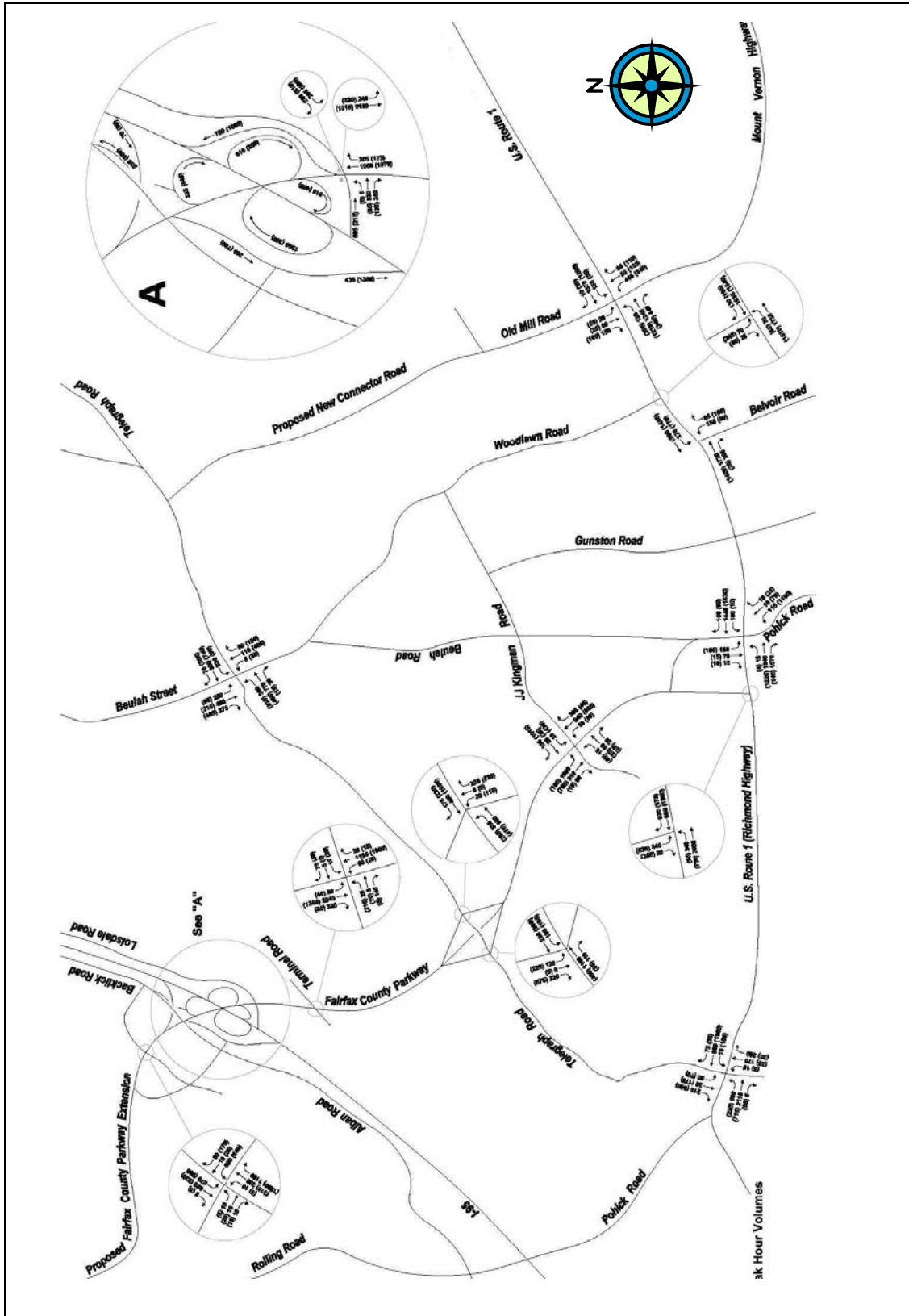
Intersections and Time Period													
		NB			SB			EB			WB		
		L	T	R	L	T	R	L	T	R	L	T	R
Commerce St./ Amherst Ave.	am	30	1270	140	140	530	120	260	160	30	170	100	40
	pm	150	610	160	210	1070	380	310	330	90	210	320	60
Commerce St./ Backlick Rd.	am	80	180	320	260	120	100	100	360	60	70	240	310
	pm	120	450	460	520	120	120	100	530	60	90	400	390
Backlick Rd./ Calamo St.	am	100	1800	1020	20	1130	30	30	10	50	60	10	10
	pm	100	1140	430	20	1920	50	40	10	50	210	20	30
Loisdale Rd./ Spring Mall Dr.	am	0	490	240	200	875	0	260	310	420	335	0	200
	pm	0	1190	380	700	830	0	240	350	30	260	0	230
Franconia Springfield Parkway./ Spring Village Dr.	am	180	30	480	60	60	30	60	3800	270	680	1600	80
	pm	360	20	780	80	40	70	120	1690	390	680	3710	110
Franconia Springfield Parkway EB Ramp./ Backlick Rd.	am	140	1420	10	10	780	190	1510	0	140	10	10	10
	pm	270	1010	10	10	1070	400	840	0	210	10	10	10
Franconia Springfield Parkway WB Ramp./ Backlick Rd.	am	240	2530	0	0	570	620	300	0	160	0	0	0
	pm	410	1220	0	0	1060	1350	340	0	290	0	0	0
Franconia Springfield Parkway./ I-95 HOV Ramps	am	310	0	290	0	0	0	390	2950	0	0	1870	230
	pm	0	0	0	410	0	580	0	1950	330	620	3380	0
Franconia Springfield Parkway EB Ramp./ Frontier Dr.	am	0	260	140	400	570	0	690	5	890	0	0	0
	pm	0	1050	560	1080	280	0	890	5	200	0	0	0
Franconia Springfield Parkway WB Ramp./ Frontier Dr.	am	170	790	0	0	940	540	0	0	0	30	5	620
	pm	660	1070	0	0	1560	960	0	0	0	30	5	700
Franconia Springfield Parkway./ Beulah St.	am	1120	810	170	120	220	380	480	1550	460	100	1240	240
	pm	730	670	250	290	590	420	510	2300	870	230	1320	230
Fairfax County Parkway./ Terminal Rd.	am	100	1560	40	130	2360	410	40	10	170	20	10	70
	pm	70	1925	40	40	1530	70	220	40	30	50	10	30
Fairfax County Pkwy SB Ramps./ Telegraph Rd.	am	0	0	0	170	0	280	0	1380	140	240	270	0
	pm	0	0	0	290	0	750	0	530	60	250	1060	0
Fairfax County Pkwy NB Ramps./ Telegraph Rd.	am	80	5	470	0	0	0	600	930	0	0	420	190
	pm	170	0	370	0	0	0	280	540	0	0	1160	240
Fairfax County Parkway./ John J Kingman Rd.	am	40	1270	580	1000	1230	50	30	10	90	100	20	270
	pm	40	1230	80	240	1090	10	50	30	70	560	20	1080
Telegraph Rd./ Beulah St.	am	10	140	50	300	410	280	570	810	20	240	310	120
	pm	30	410	180	150	240	680	420	480	20	90	720	330
Telegraph Rd./ S. Van Dorn St.	am	0	0	0	450	0	130	220	1010	0	0	720	460
	pm	0	0	0	640	0	360	130	740	0	0	850	560
Route 1./ Telegraph Rd. - Old Colchester Rd.	am	20	180	260	70	10	300	1130	2180	10	30	880	130
	pm	10	30	40	170	170	870	270	980	50	180	2030	70
Route 1./ Fairfax County Parkway.	am	0	0	0	1120	0	70	580	1910	0	0	980	1090
	pm	0	0	0	730	0	560	170	1010	0	0	1790	850
Route 1./ Backlick Rd. - Pohick Rd.	am	330	30	20	340	90	40	40	1800	1190	80	1710	150
	pm	1060	200	70	210	50	10	10	1530	200	40	1570	90
Route 1./ Belvoir Rd.	am	150	0	180	0	0	0	0	1950	220	400	1600	0
	pm	60	0	190	0	0	0	0	1770	30	350	1810	0
Route 1./ Old Mill Rd.	am	520	130	110	310	130	260	280	1430	440	270	1390	250
	pm	550	170	150	380	60	360	420	1190	330	90	1440	270
Loisdale Rd./ GSA Access Rd	am	0	650	140	1000	1110	0	0	0	0	20	0	90
	pm	0	760	30	30	560	0	0	0	0	170	0	960

Table D-6: Turning Movement Counts—Satellite Campuses Alternative

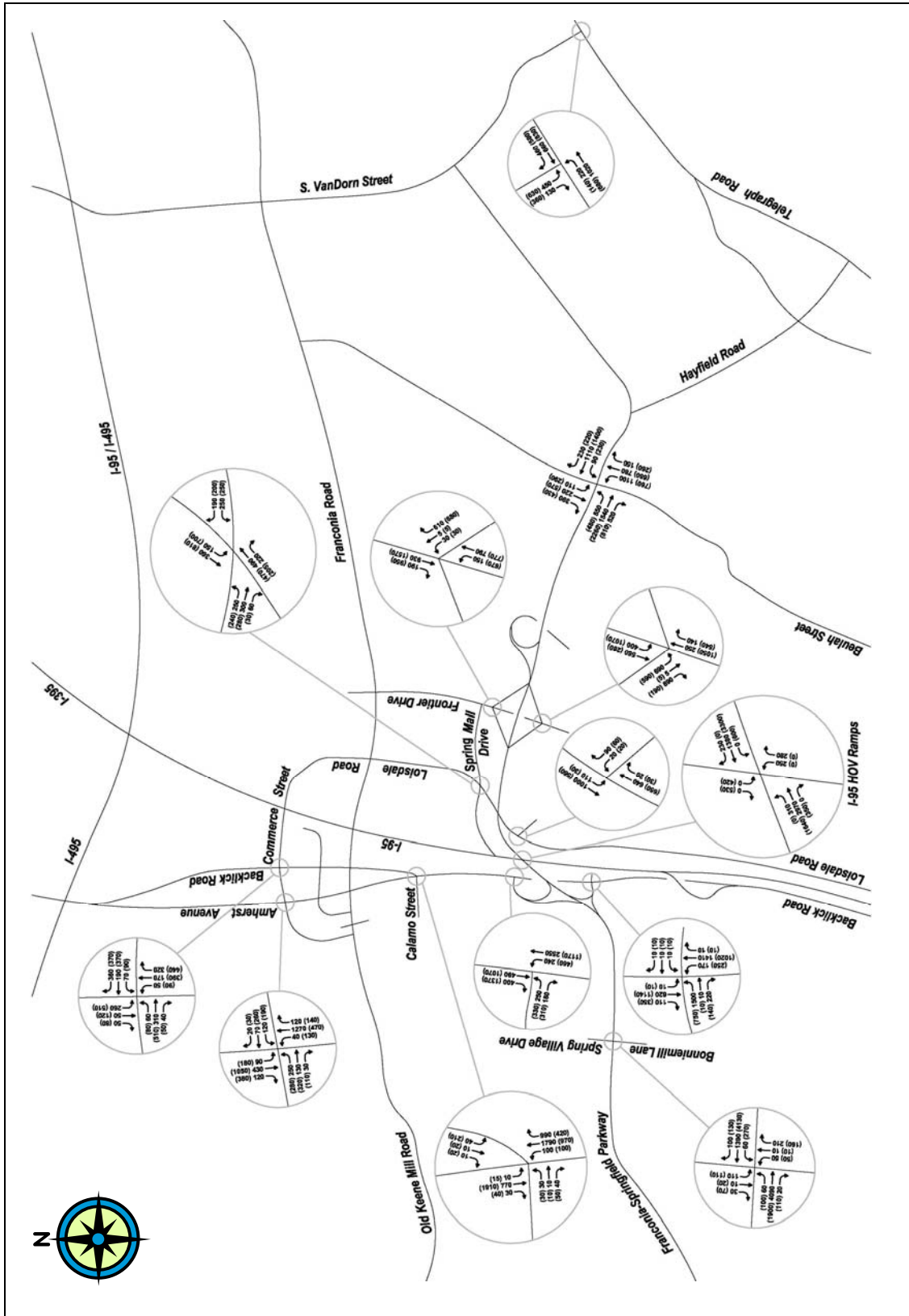
Intersections and Time Period													
		NB			SB			EB			WB		
		L	T	R	L	T	R	L	T	R	L	T	R
Commerce St./ Amherst Ave.	am	40	1290	130	110	480	130	260	150	30	140	80	30
	pm	130	530	160	220	1060	380	290	360	100	230	290	50
Commerce St./ Backlick Rd.	am	60	180	310	280	70	70	80	340	50	70	210	350
	pm	90	410	460	510	120	100	140	550	60	100	410	390
Backlick Rd./ Calamo St.	am	100	1790	1010	20	910	40	30	10	50	40	10	10
	pm	90	1010	410	30	1910	40	30	10	50	210	20	30
Loisdale Rd./ Spring Mall Dr.	am	0	480	250	210	430	0	260	300	70	250	0	210
	pm	0	550	240	720	800	0	260	320	30	270	0	260
Franconia Springfield Parkway./ Spring Village Dr.	am	50	10	210	110	10	30	60	4040	20	60	1480	100
	pm	50	10	160	110	20	70	100	1970	110	270	4090	130
Franconia Springfield Parkway EB Ramp./ Backlick Rd.	am	140	1440	10	10	690	140	1470	0	200	10	10	10
	pm	290	990	10	10	1070	380	780	0	180	10	10	10
Franconia Springfield Parkway WB Ramp./ Backlick Rd.	am	210	2580	0	0	540	460	250	0	150	0	0	0
	pm	440	1190	0	0	1030	1340	350	0	330	0	0	0
Franconia Springfield Parkway./ I-95 HOV Ramps	am	250	0	280	0	0	0	310	2950	0	0	1370	230
	pm	0	0	0	410	0	500	0	1640	320	550	3380	0
Franconia Springfield Parkway EB Ramp./ Frontier Dr.	am	0	260	140	580	570	0	690	5	890	0	0	0
	pm	0	1050	560	1080	280	0	630	5	200	0	0	0
Franconia Springfield Parkway WB Ramp./ Frontier Dr.	am	150	790	0	0	1110	250	0	0	0	30	5	620
	pm	660	770	0	0	1560	960	0	0	0	30	5	850
Franconia Springfield Parkway./ Beulah St.	am	1130	750	180	110	310	350	510	1390	770	160	1070	260
	pm	840	740	290	280	580	410	420	2330	790	220	1410	200
Fairfax County Parkway./ Terminal Rd.	am	70	1560	30	160	3080	440	50	10	170	20	10	70
	pm	50	2480	40	60	1410	90	240	30	10	30	10	50
Fairfax County Pkwy SB Ramps./ Telegraph Rd.	am	0	0	0	250	0	420	0	1410	110	290	470	0
	pm	0	0	0	320	0	700	0	720	80	270	1020	0
Fairfax County Pkwy NB Ramps./ Telegraph Rd.	am	230	5	460	0	0	0	700	860	0	0	510	90
	pm	210	0	310	0	0	0	340	690	0	0	1220	170
Fairfax County Parkway./ John J Kingman Rd.	am	340	1280	950	1270	1450	330	100	20	330	160	20	420
	pm	60	1400	150	340	1020	20	430	30	230	690	20	1360
Telegraph Rd./ Beulah St.	am	10	210	70	350	850	350	530	890	20	250	470	120
	pm	50	650	250	100	260	600	450	450	30	120	730	300
Telegraph Rd./ S. Van Dorn St.	am	0	0	0	470	0	130	240	1020	0	0	850	480
	pm	0	0	0	640	0	360	170	880	0	0	830	590
Route 1./ Telegraph Rd. - Old Colchester Rd.	am	20	190	250	60	10	280	1240	2260	10	30	1030	150
	pm	10	30	40	240	200	990	230	930	30	160	2170	90
Route 1./ Fairfax County Parkway.	am	0	0	0	1550	0	140	940	1620	0	0	980	1420
	pm	0	0	0	830	0	720	210	1000	0	0	1820	930
Route 1./ Backlick Rd. - Pohick Rd.	am	290	10	10	210	70	50	70	1780	1330	50	1890	170
	pm	1100	390	100	140	120	10	10	1570	260	80	1640	80
Route 1./ Belvoir Rd.	am	230	0	350	0	0	0	0	1810	200	520	1760	0
	pm	310	0	250	0	0	0	0	1660	140	390	1600	0
Route 1./ Old Mill Rd.	am	600	160	100	350	130	350	350	1440	450	270	1620	260
	pm	510	280	110	360	60	410	450	1410	370	90	1420	270
Loisdale Rd./ GSA Access Rd	am	0	650	20	110	1180	0	0	0	0	20	0	90
	pm	0	830	30	30	560	0	0	0	0	20	0	60



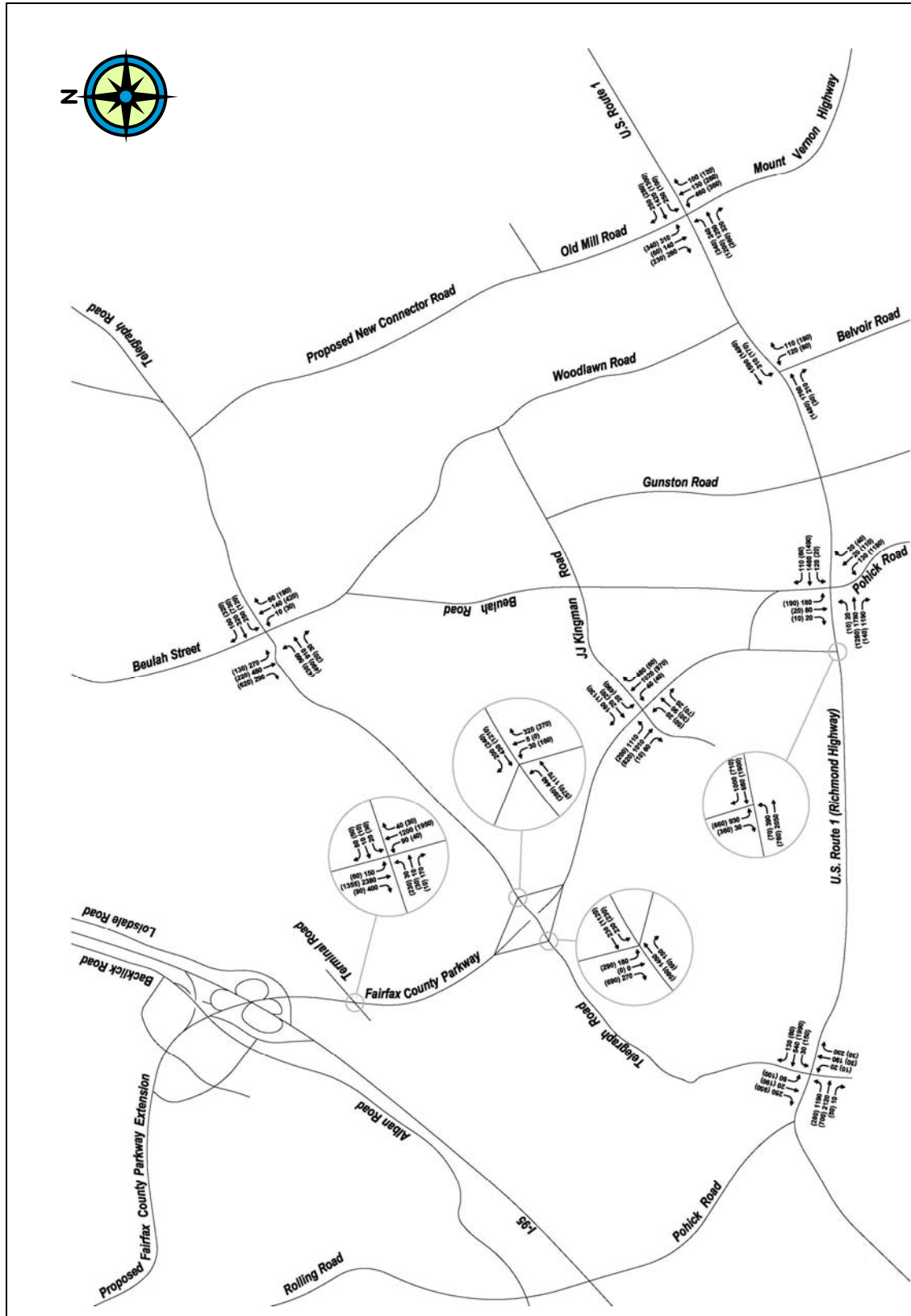
AM Peak Hour Turning Movement Counts for Existing Conditions—North
Fort Belvoir, Virginia
Figure D-1



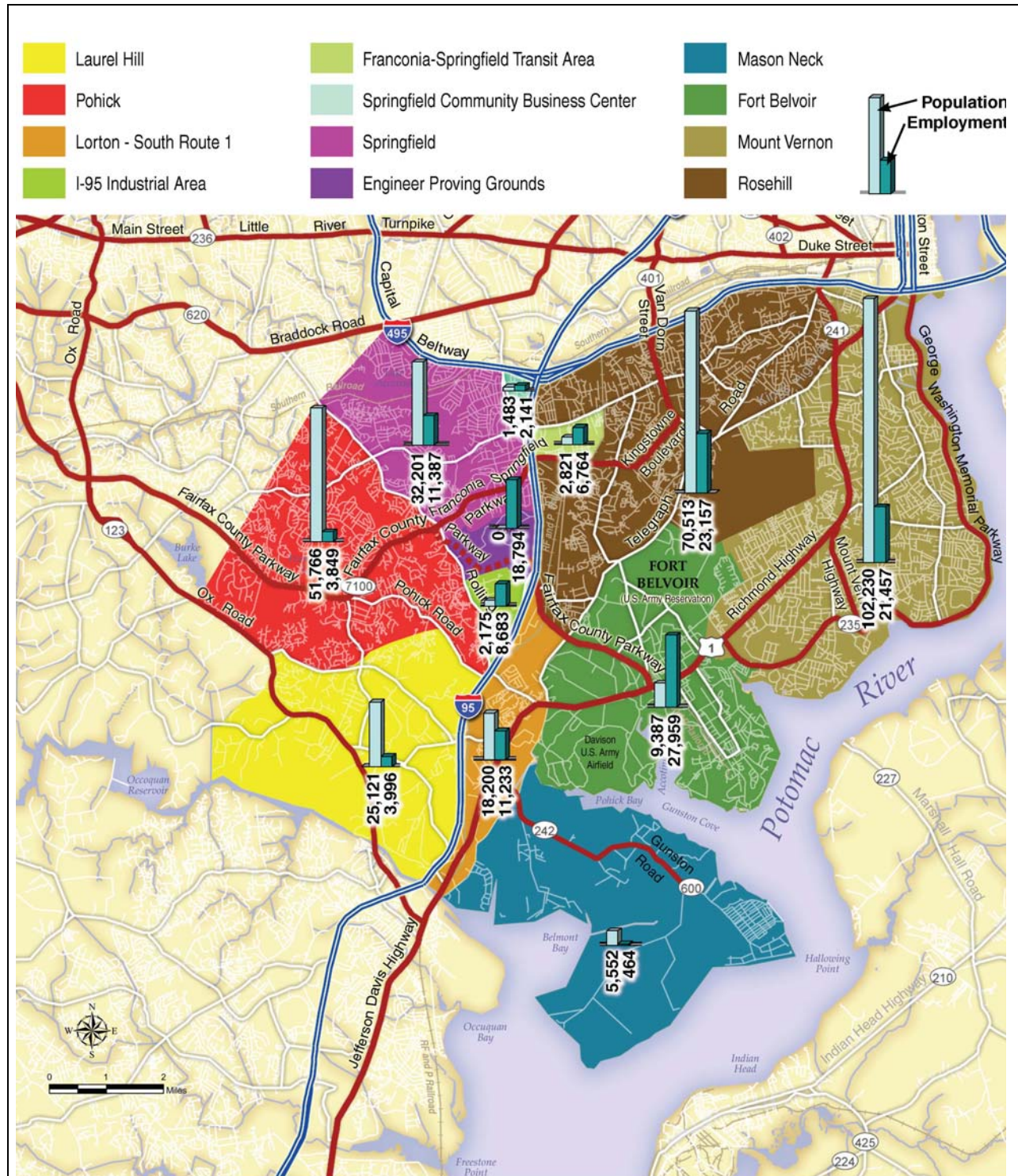
AM Peak Hour Turning Movement Counts for Existing Conditions—South Fort Belvoir, Virginia
Figure D-2



AM Peak Hour Turning Movement Counts for No Action Alternative—North Fort Belvoir, Virginia
Figure D-3



AM Peak Hour Turning Movement Counts for No Action Alternative—South Fort Belvoir, Virginia
Figure D-4

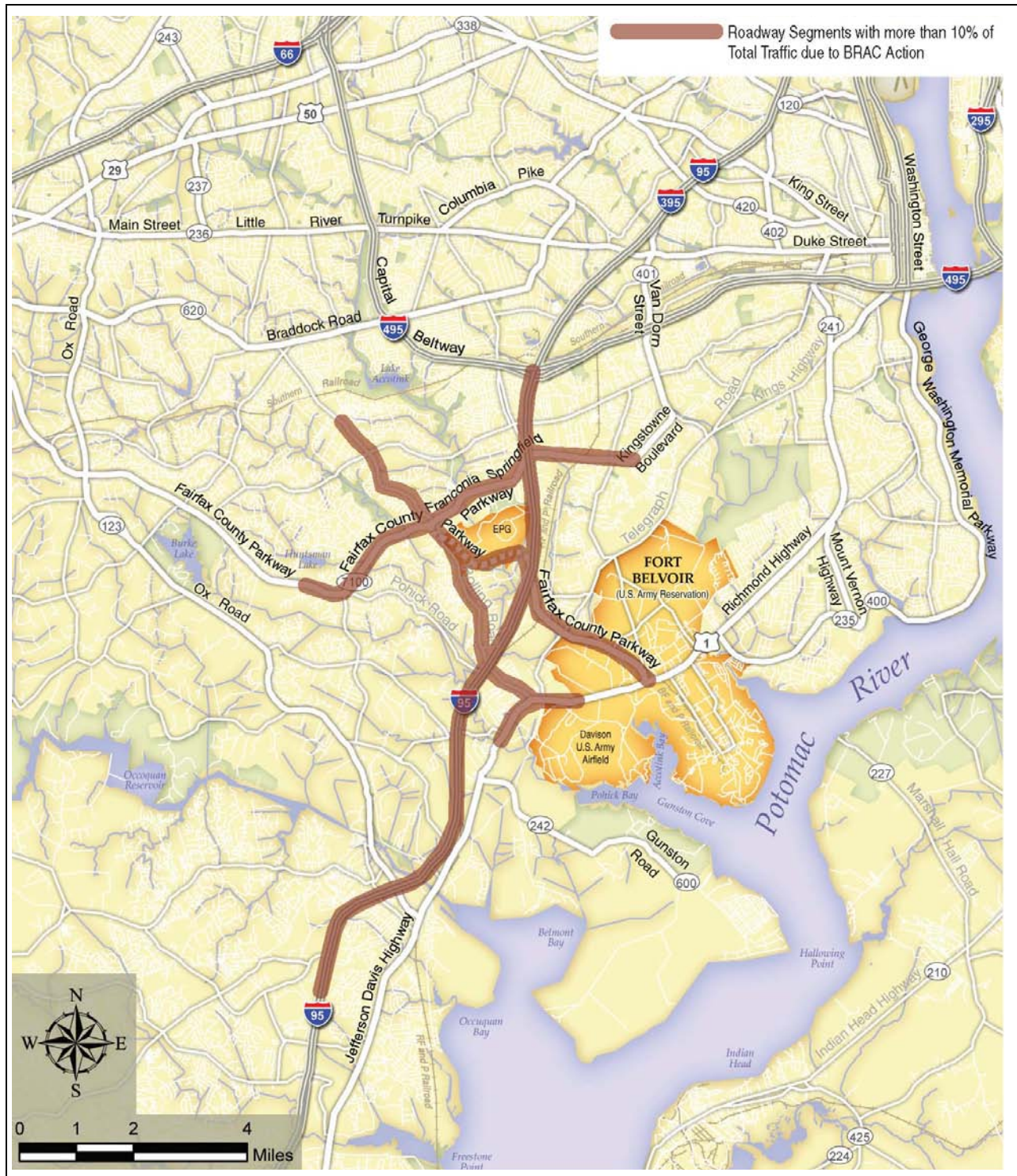


LEGEND
 Interstate Highway
 Highway
 River/ Water

2011 Population and Employment for the Preferred Alternative

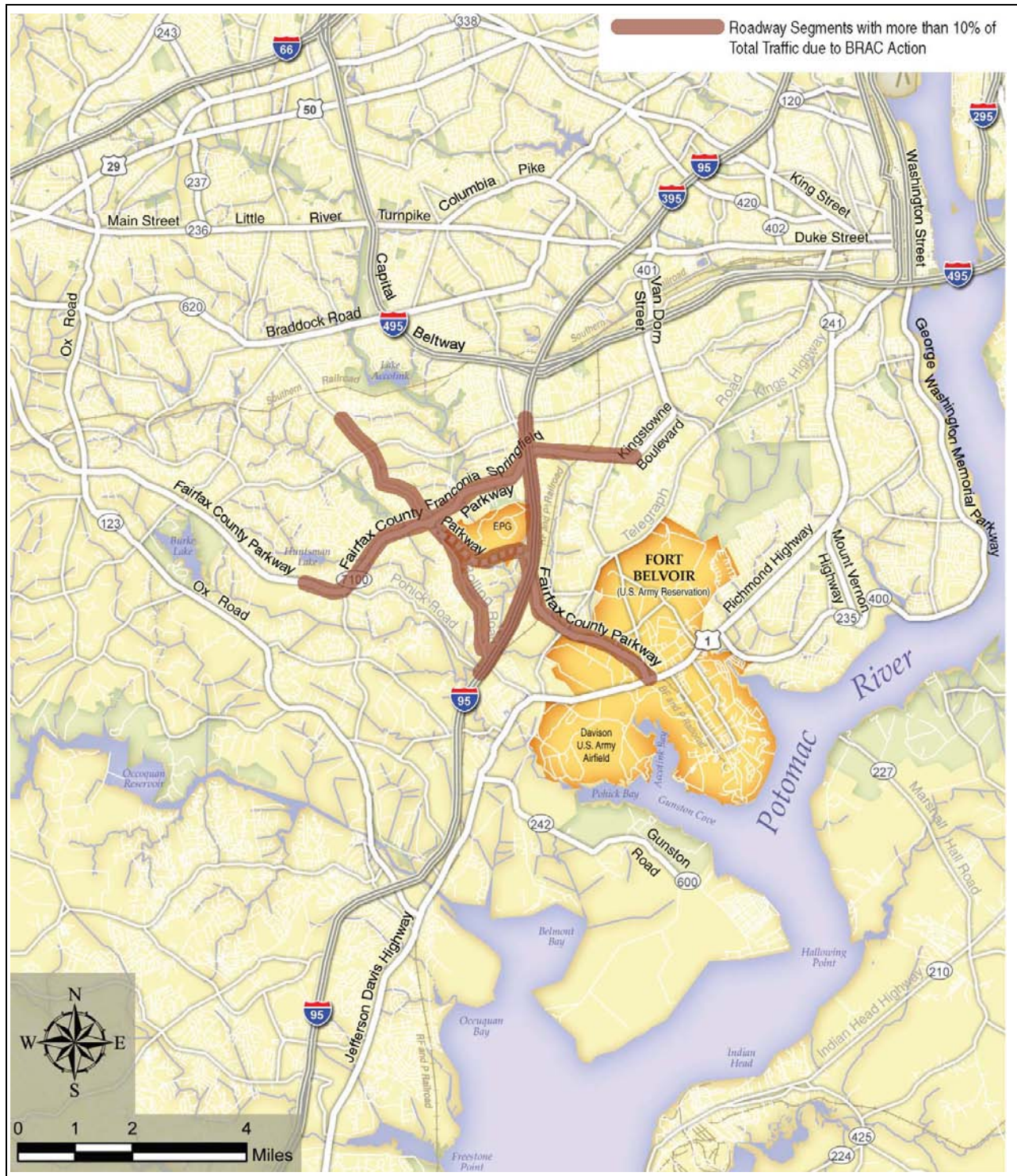
Fort Belvoir, Virginia

Figure D-5



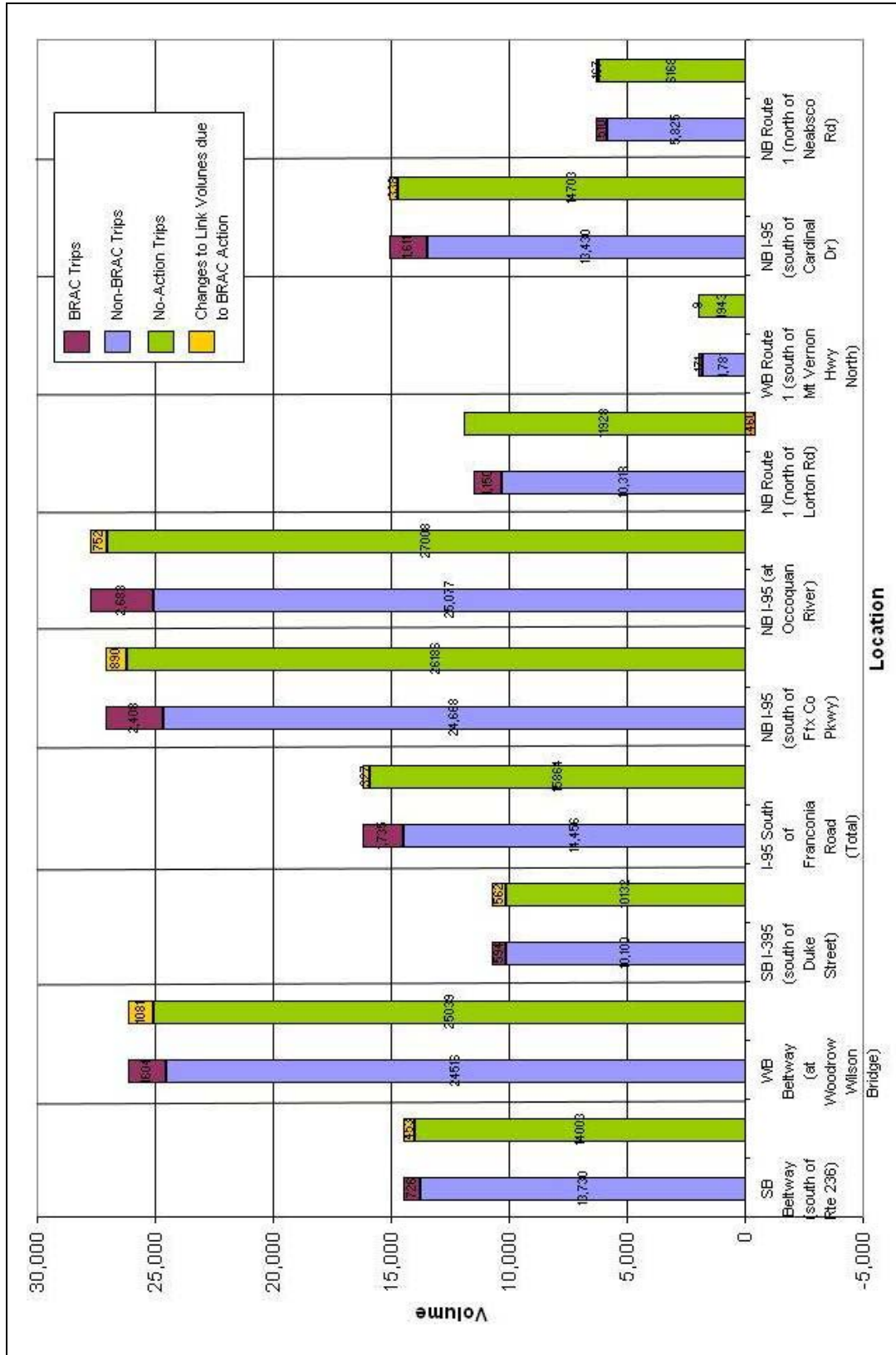
LEGEND
River/ Water

**AM Peak Period Influence Area
Preferred Alternative
Fort Belvoir, Virginia
Figure D-6**



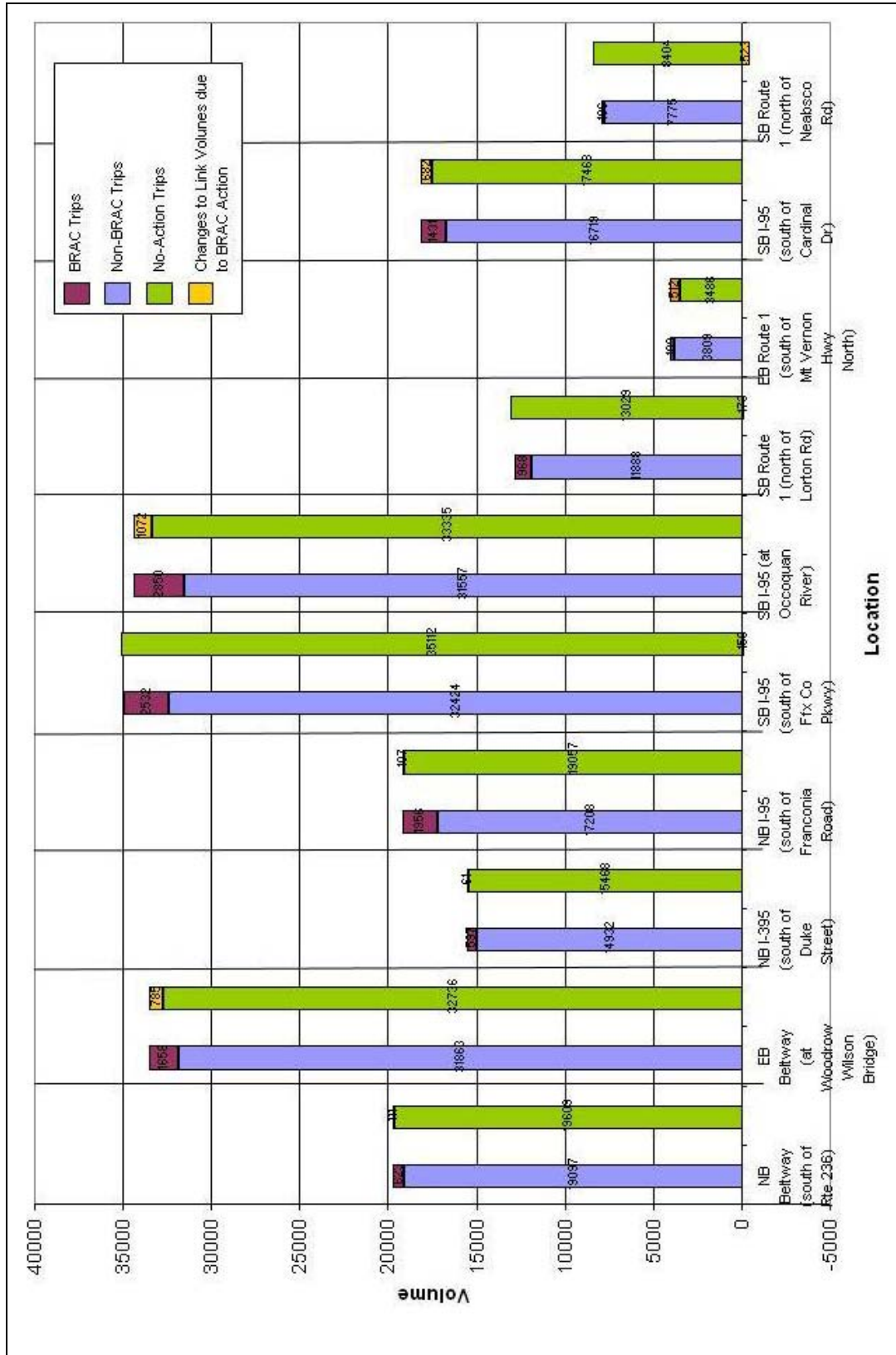
LEGEND
River/ Water

**PM Peak Period Influence Area
Preferred Alternative
Fort Belvoir, Virginia
Figure D-7**

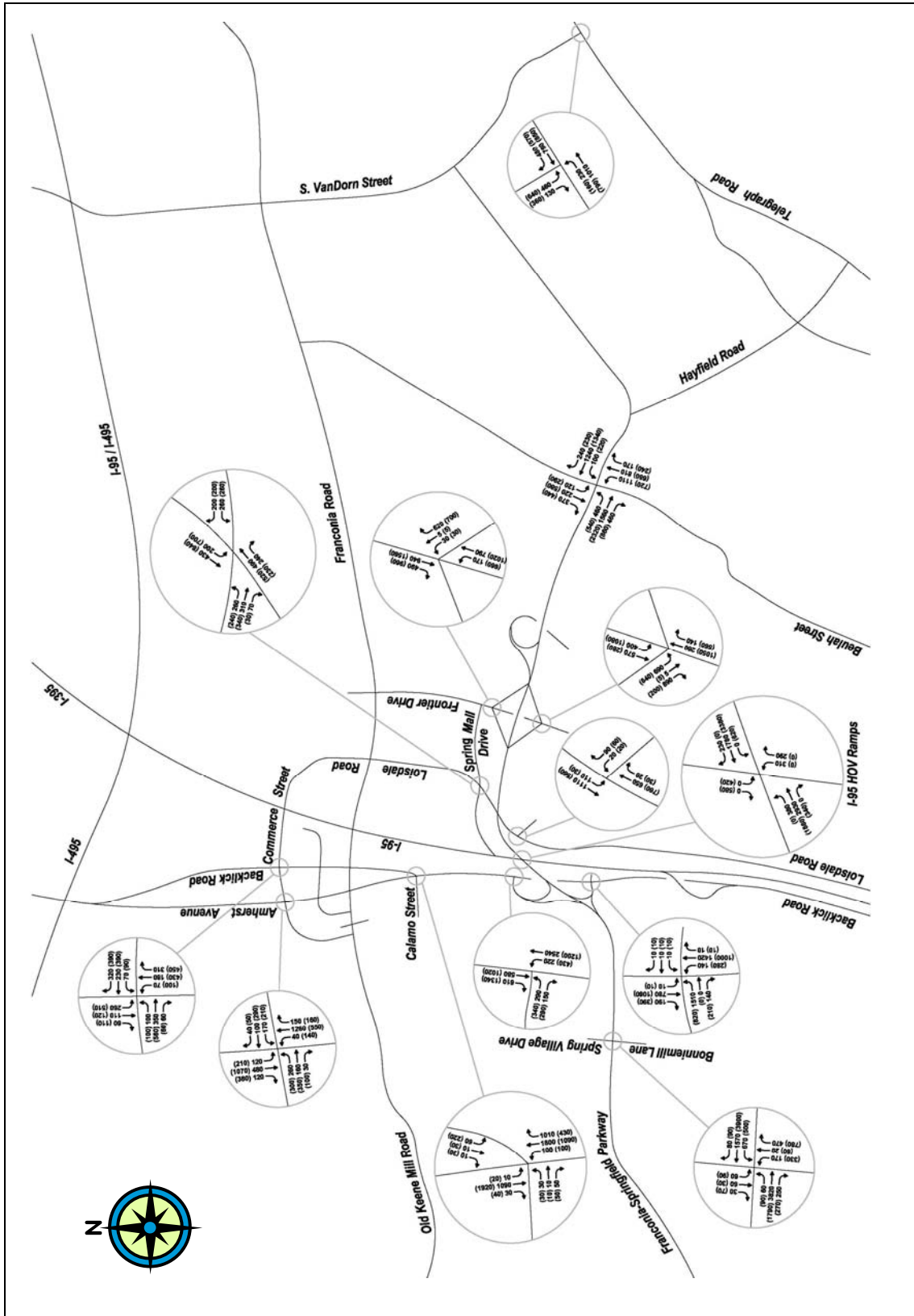


Key Locations Comparison Between Preferred Alternative and No Action Alternative—AM Peak Period—Trips Toward Fort Belvoir and EPG
Fort Belvoir, Virginia

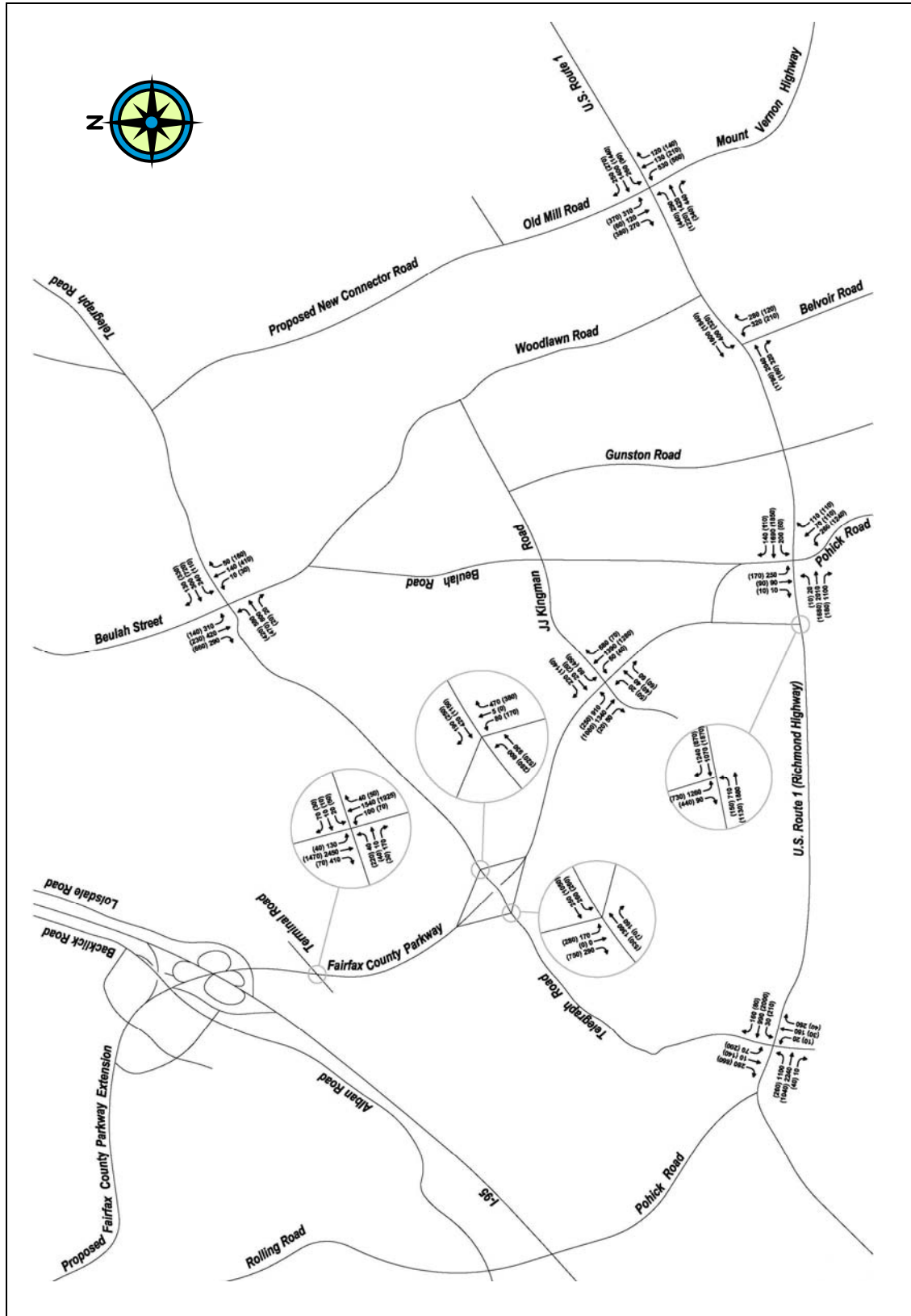
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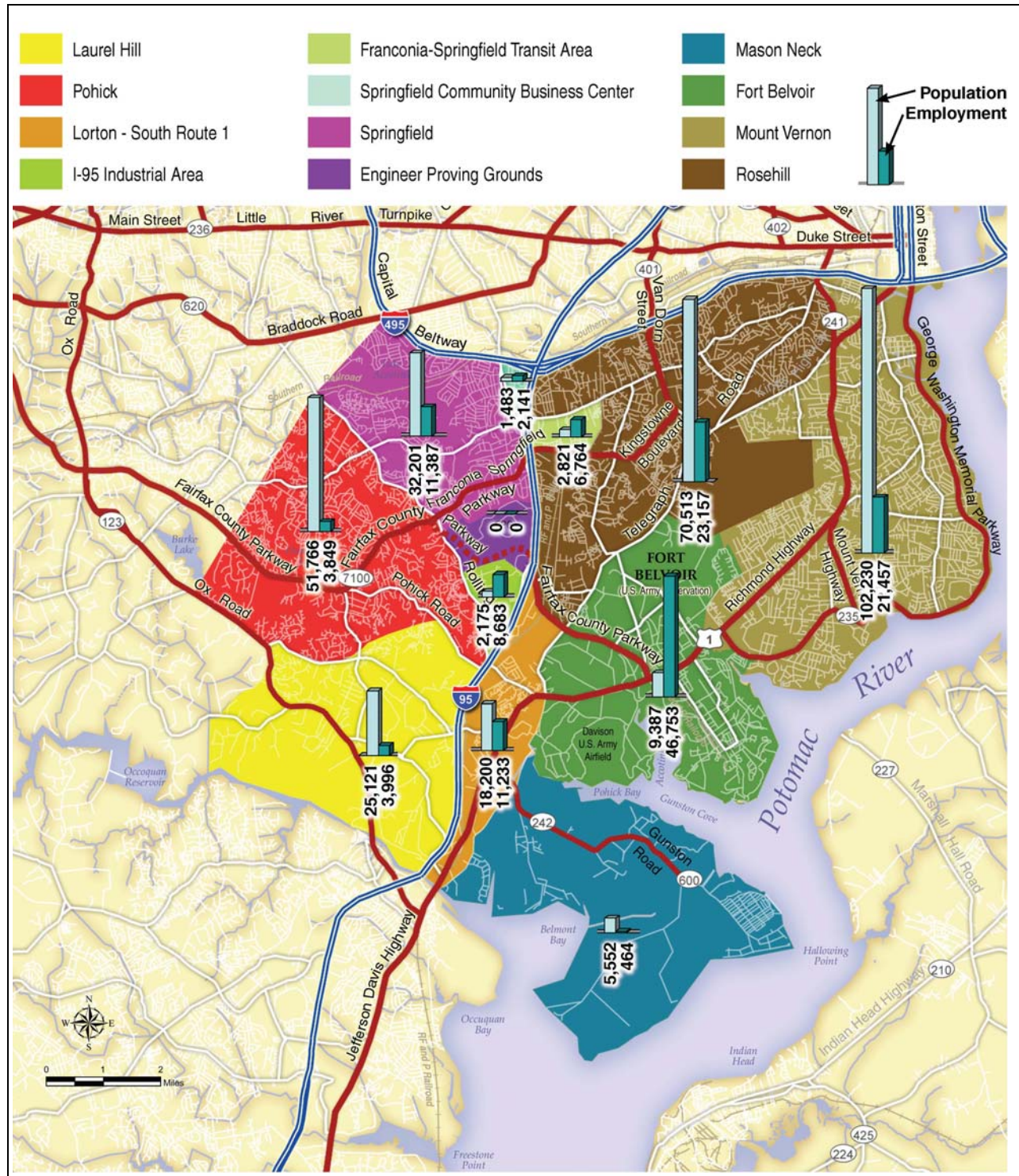
Key Locations Comparison Between Preferred Alternative and No Action Alternative—PM Peak Period—Trips Toward Fort Belvoir and EPG
 Fort Belvoir, Virginia
 Figure D-9



AM Peak Hour Turning Movement Counts for Preferred Alternative—North
Fort Belvoir, Virginia
Figure D-10



AM Peak Hour Turning Movement Counts for Preferred Alternative—South
Fort Belvoir, Virginia
Figure D-11



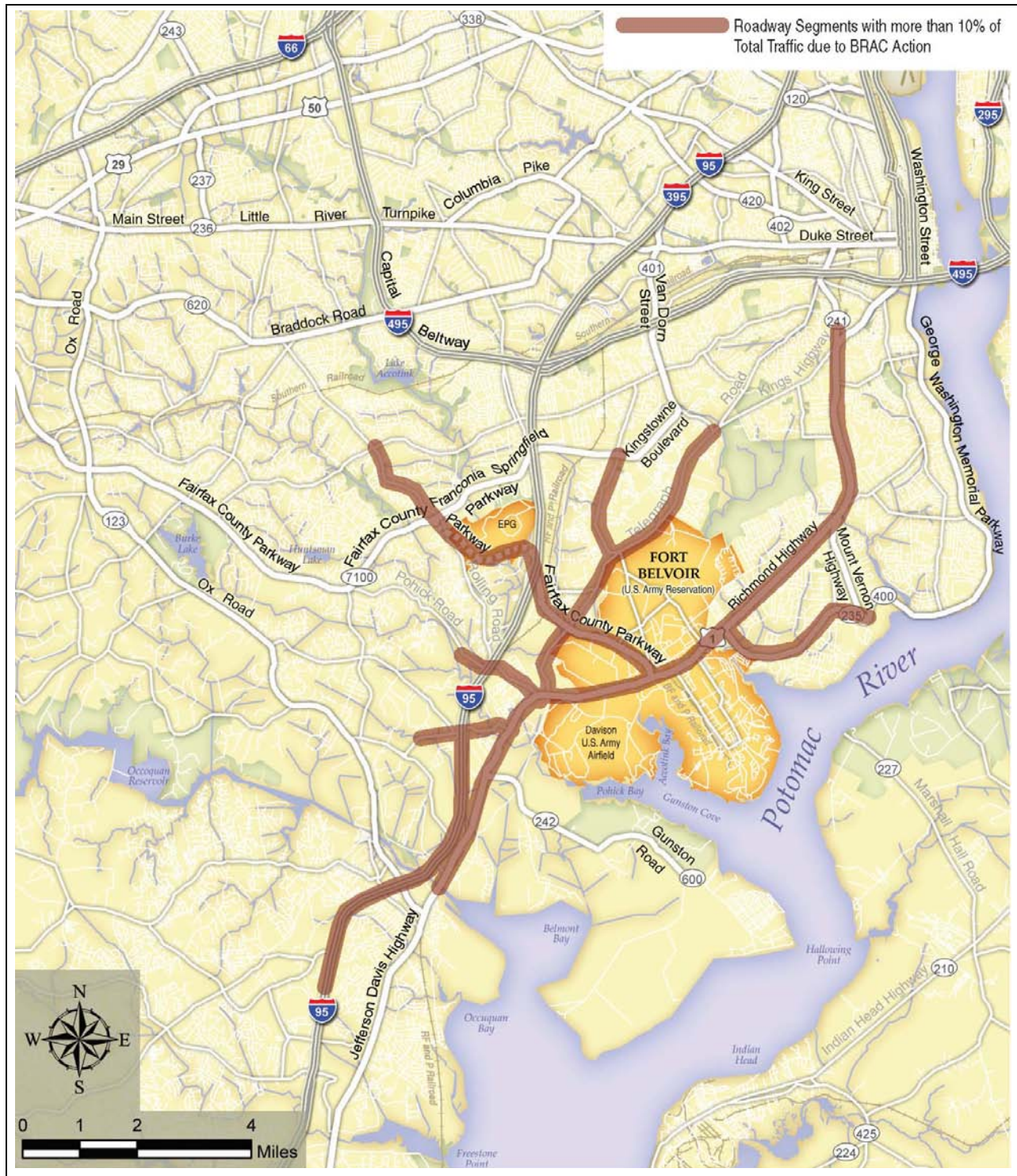
LEGEND

- Interstate Highway
- Highway
- River/ Water

**Town Center Alternative
Population and Employment**

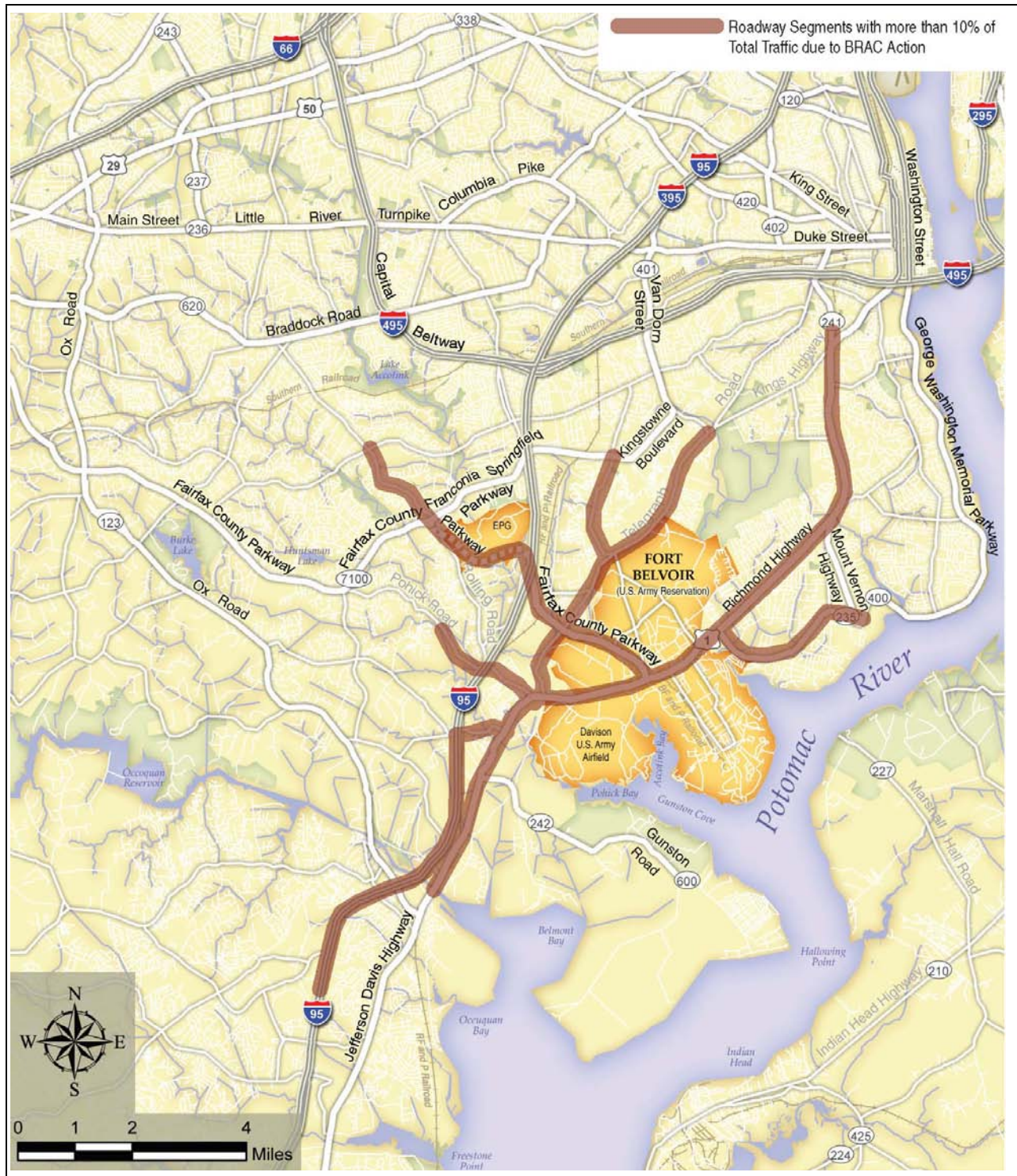
Fort Belvoir, Virginia

Figure D-12



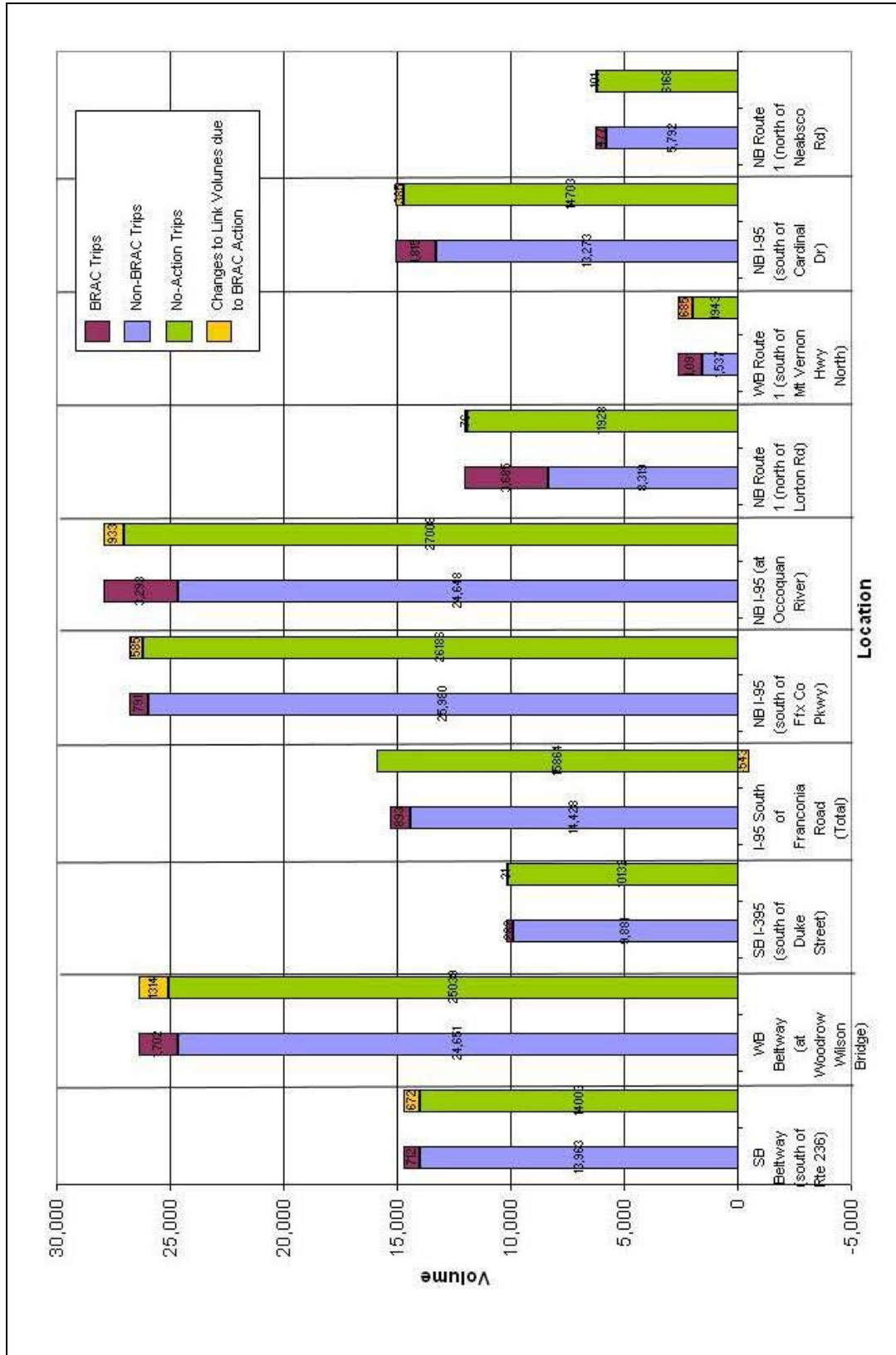
**AM Peak Period Influence Area
Town Center Alternative
Fort Belvoir, Virginia**

Figure D-13

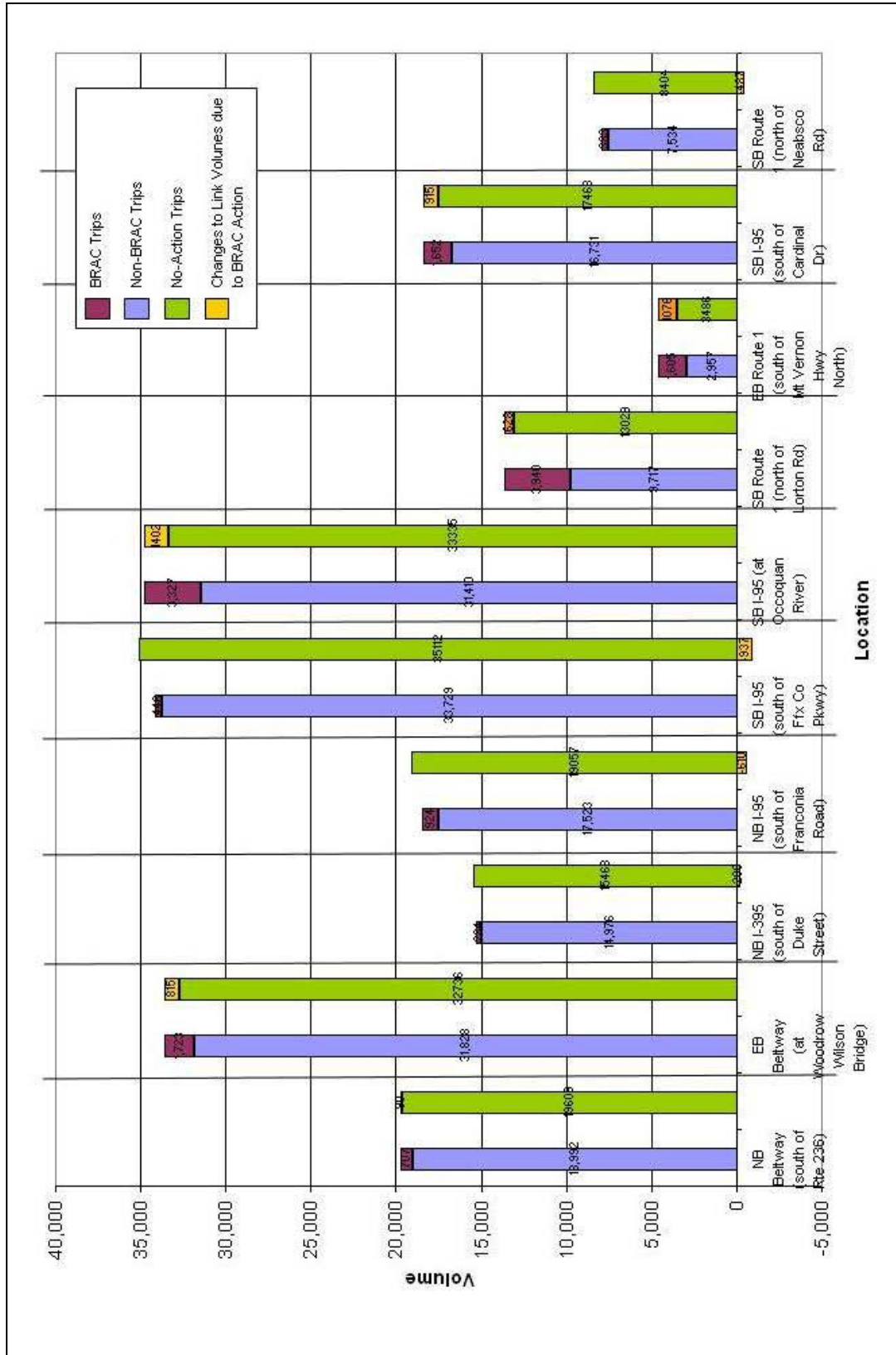


LEGEND
River/ Water

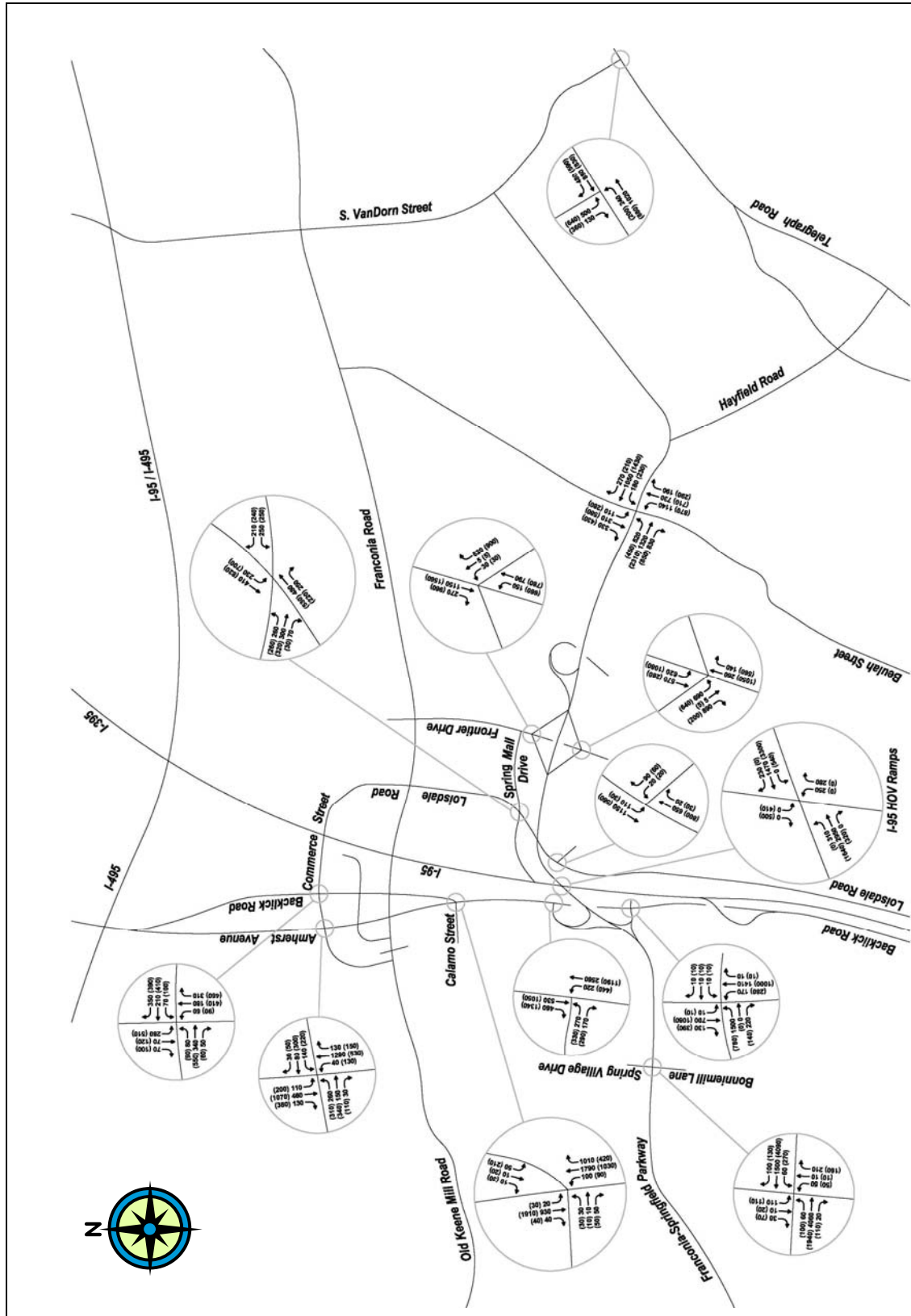
**PM Peak Period Influence Area
Town Center Alternative
Fort Belvoir, Virginia
Figure D-14**



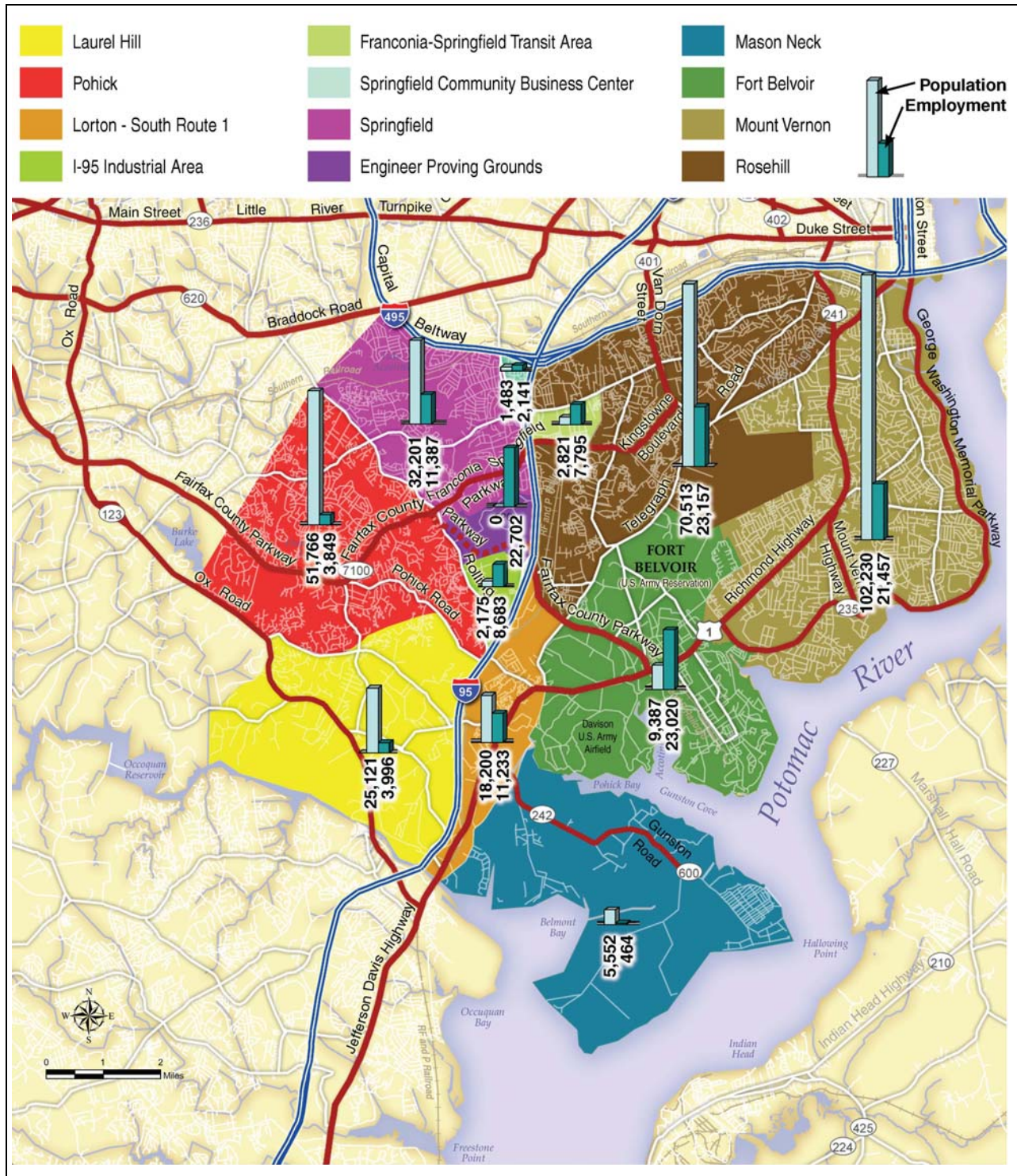
Key Locations Comparison Between Town Center Alternative and No Action Alternative—AM Peak Period—Trips Toward Fort Belvoir and EPG Fort Belvoir, Virginia
Figure D-15



Key Locations Comparison Between Town Center Alternative and No Action Alternative—PM Peak Period—Trips Toward Fort Belvoir and EPG Fort Belvoir, Virginia
Figure D-16



AM Peak Hour Turning Movement Counts for Town Center Alternative—North Fort Belvoir, Virginia
Figure D-17



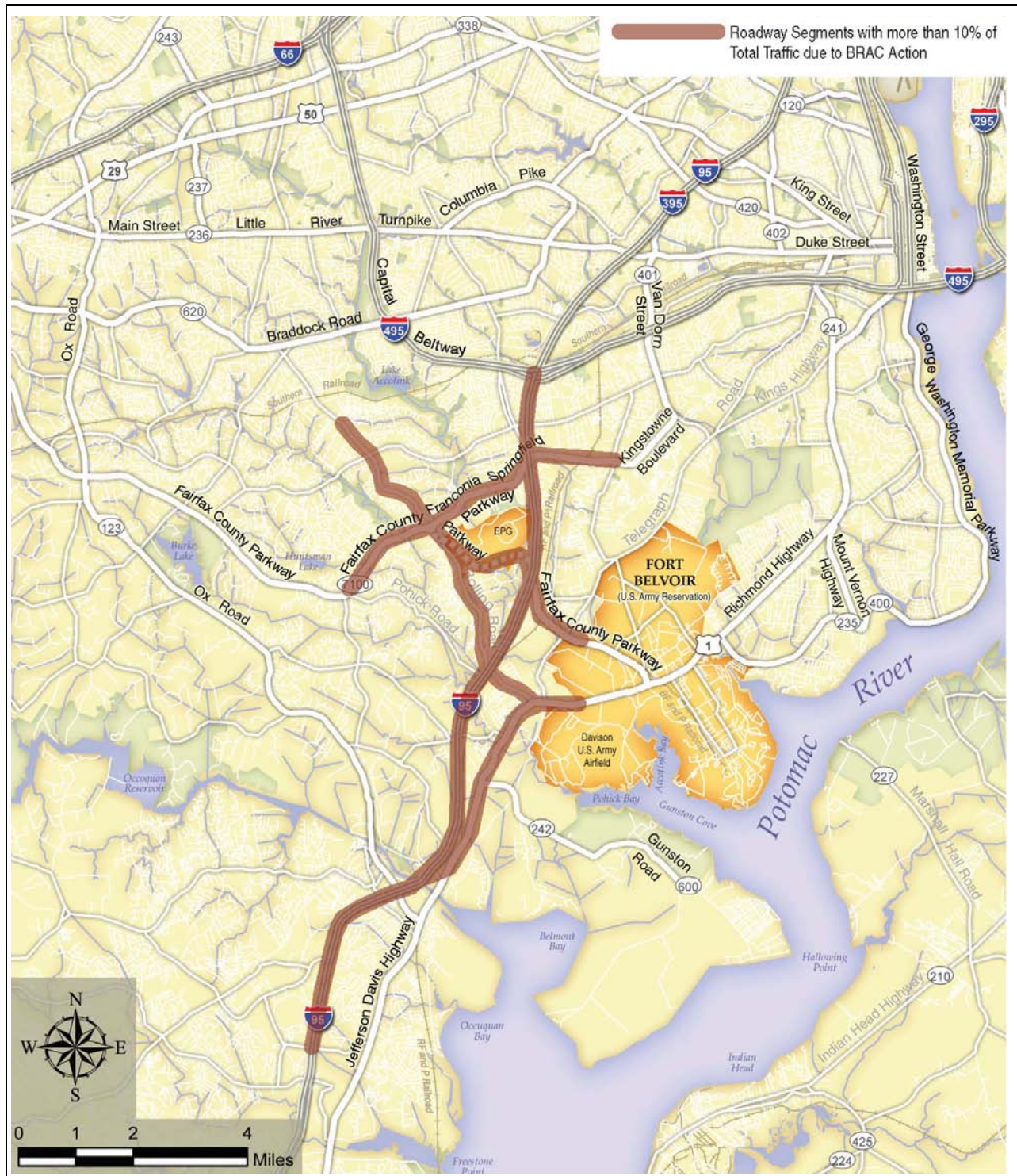
LEGEND

- Interstate Highway
- Highway
- River/ Water

**City Center Alternative
Population and Employment**

Fort Belvoir, Virginia

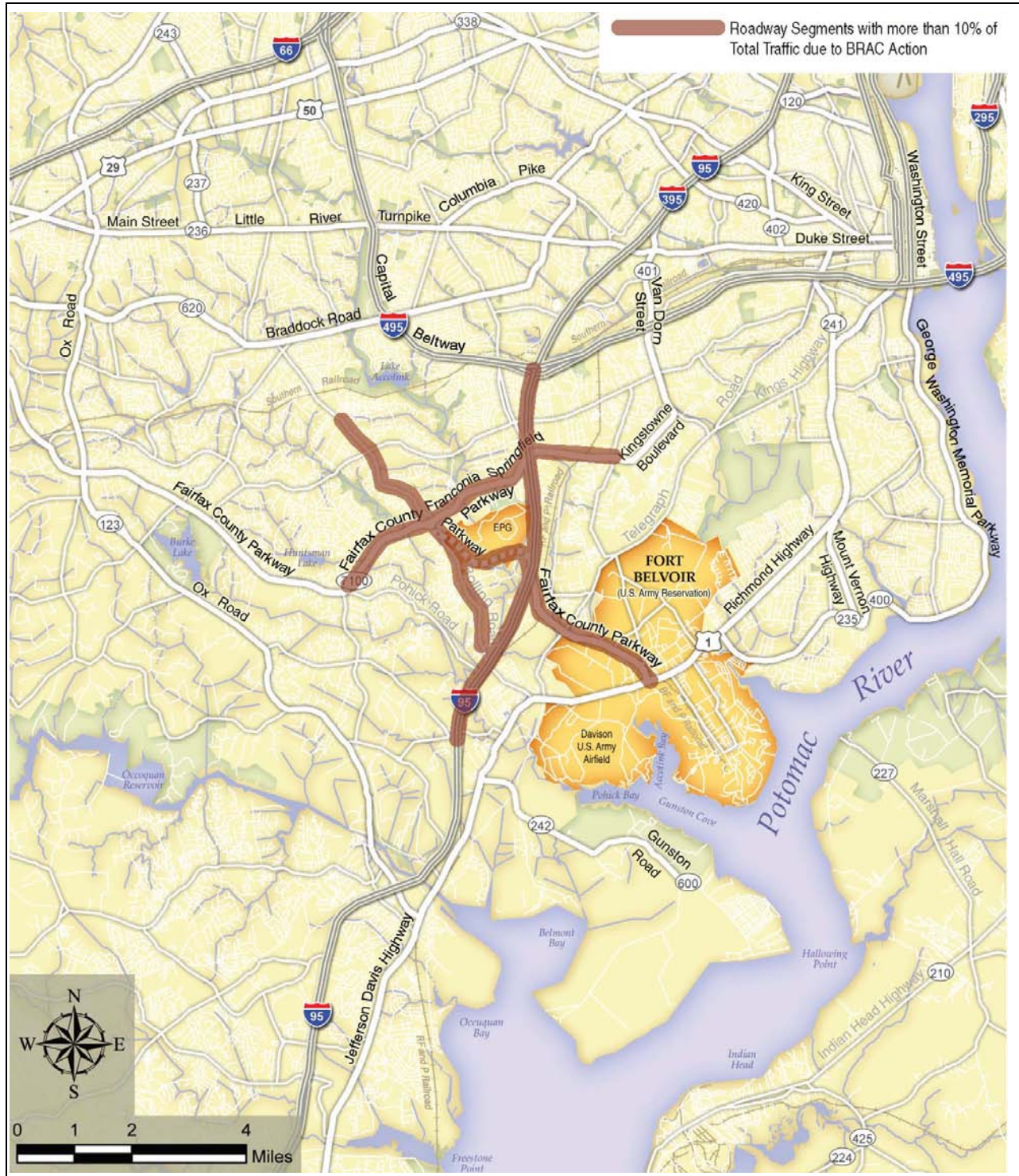
Figure D-19



LEGEND
■ River/ Water

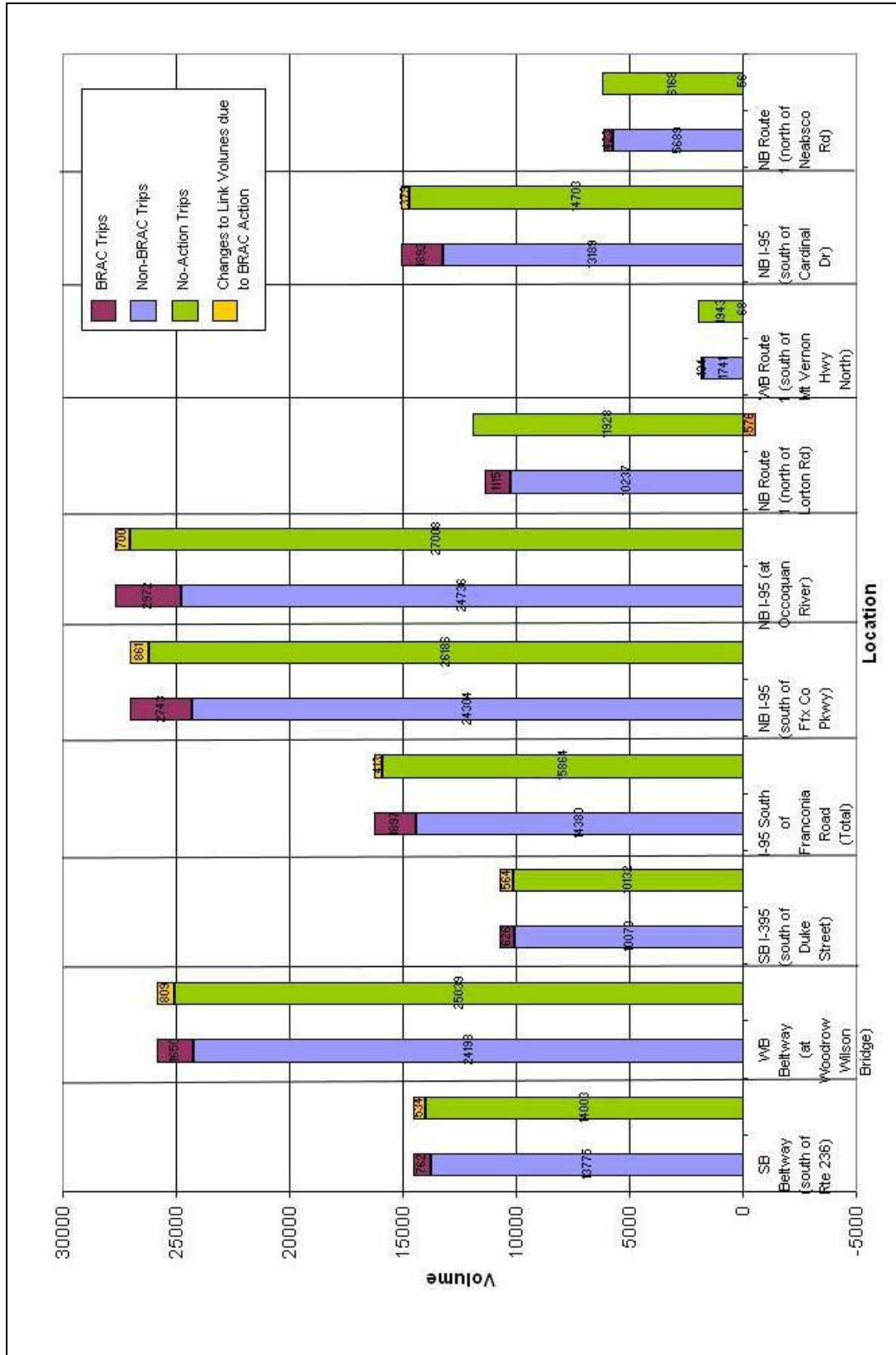
**AM Peak Period Influence Area
 City Center Alternative
 Fort Belvoir, Virginia**

Figure D-20



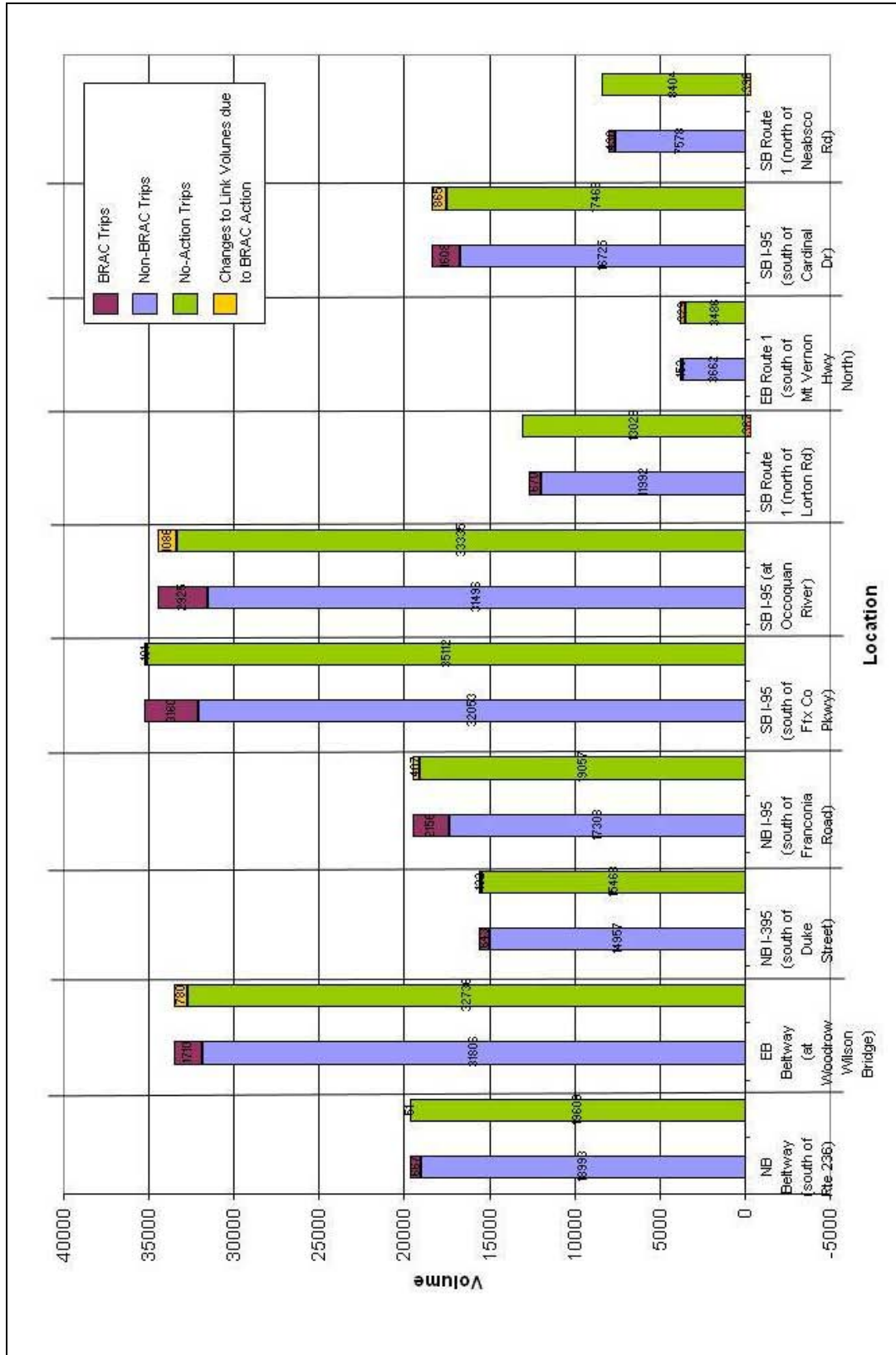
LEGEND
River/ Water

**PM Peak Period Influence Area
City Center Alternative
Fort Belvoir, Virginia
Figure D-21**



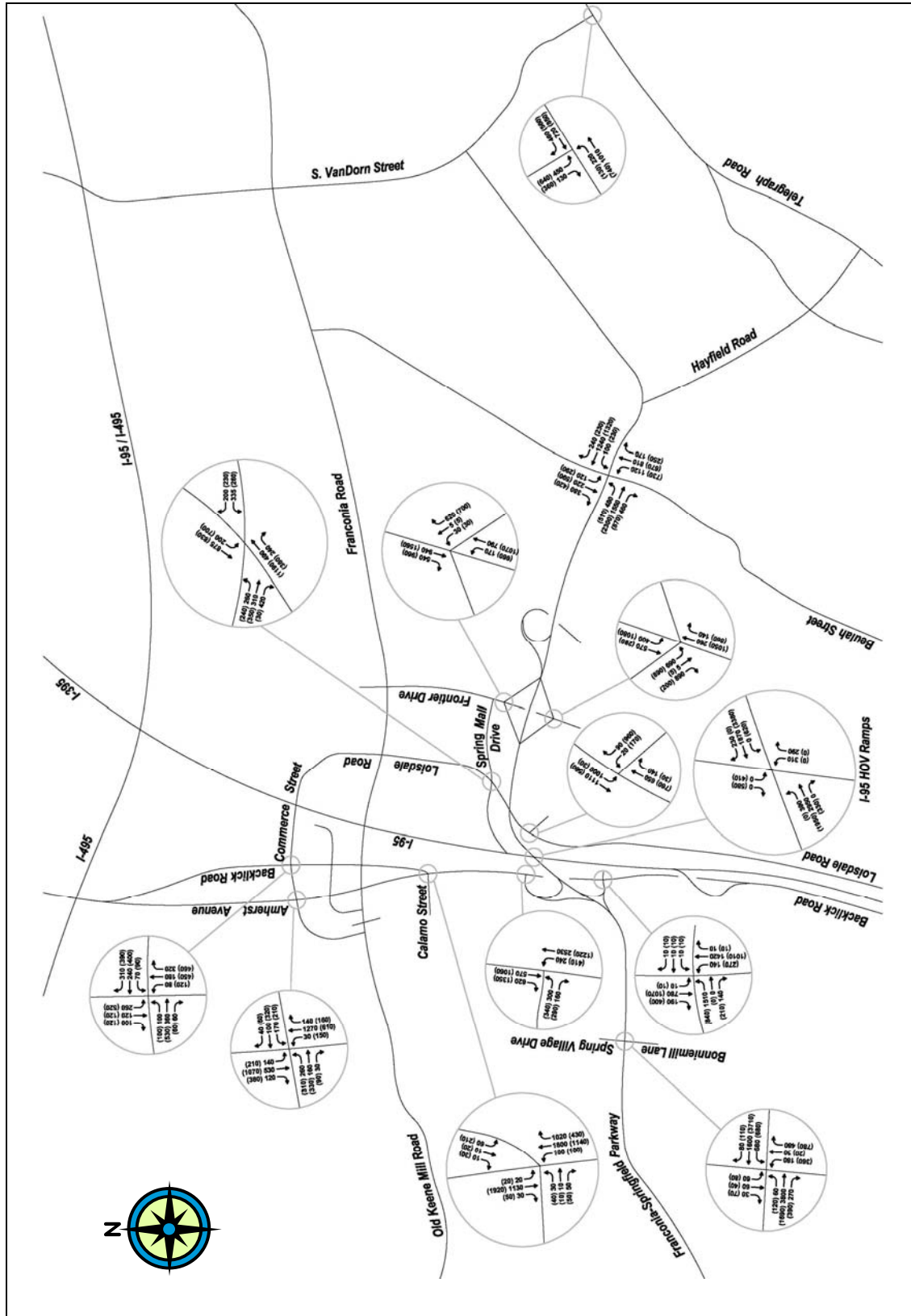
Key Locations Comparison Between City Center Alternative and No Action Alternative—AM Peak Period—Trips Toward Fort Belvoir and EPG Fort Belvoir, Virginia

Figure D-22

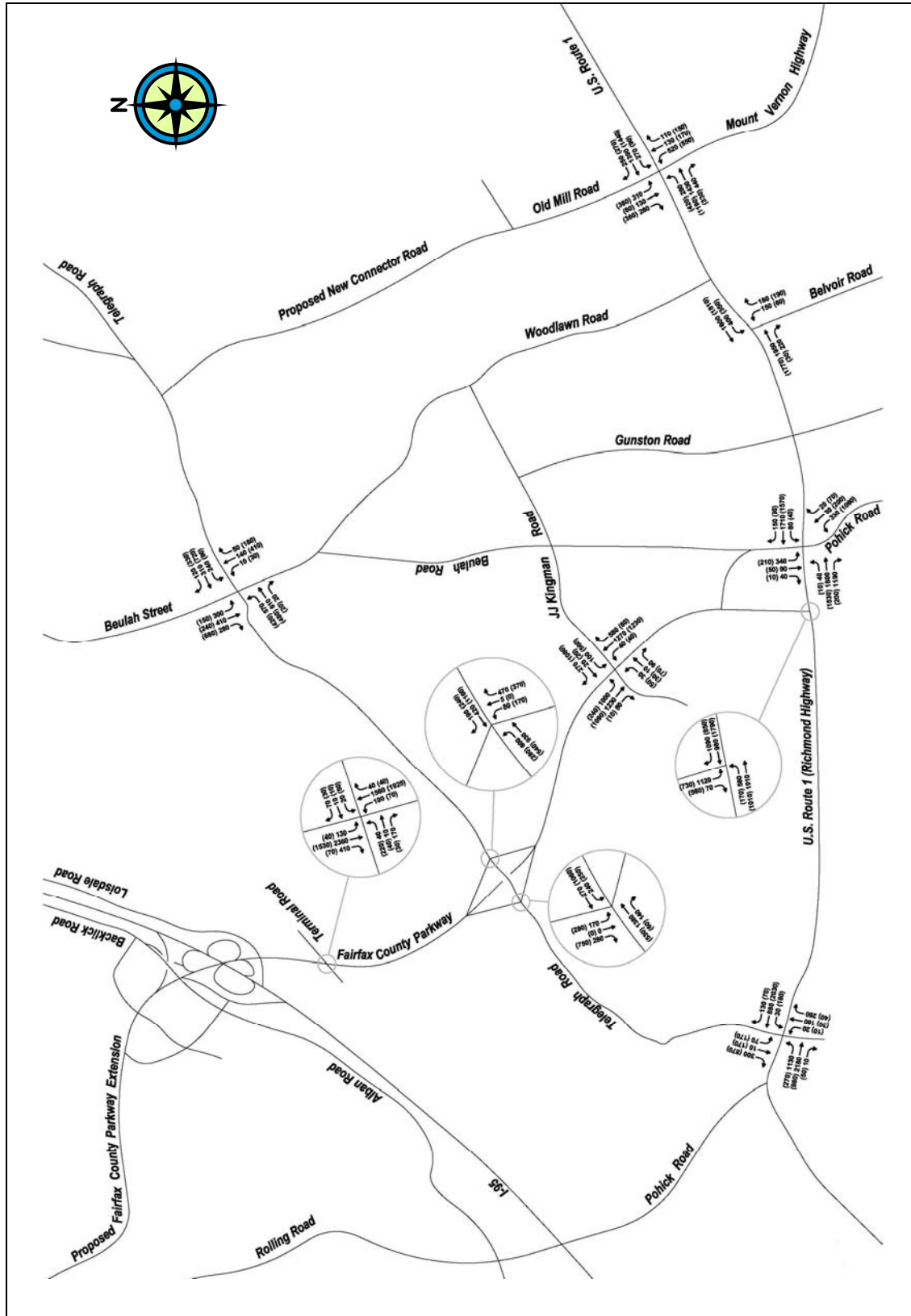


Key Locations Comparison Between City Center Alternative and No Action Alternative—PM Peak Period—Trips Toward Fort Belvoir and EPG
Fort Belvoir, Virginia

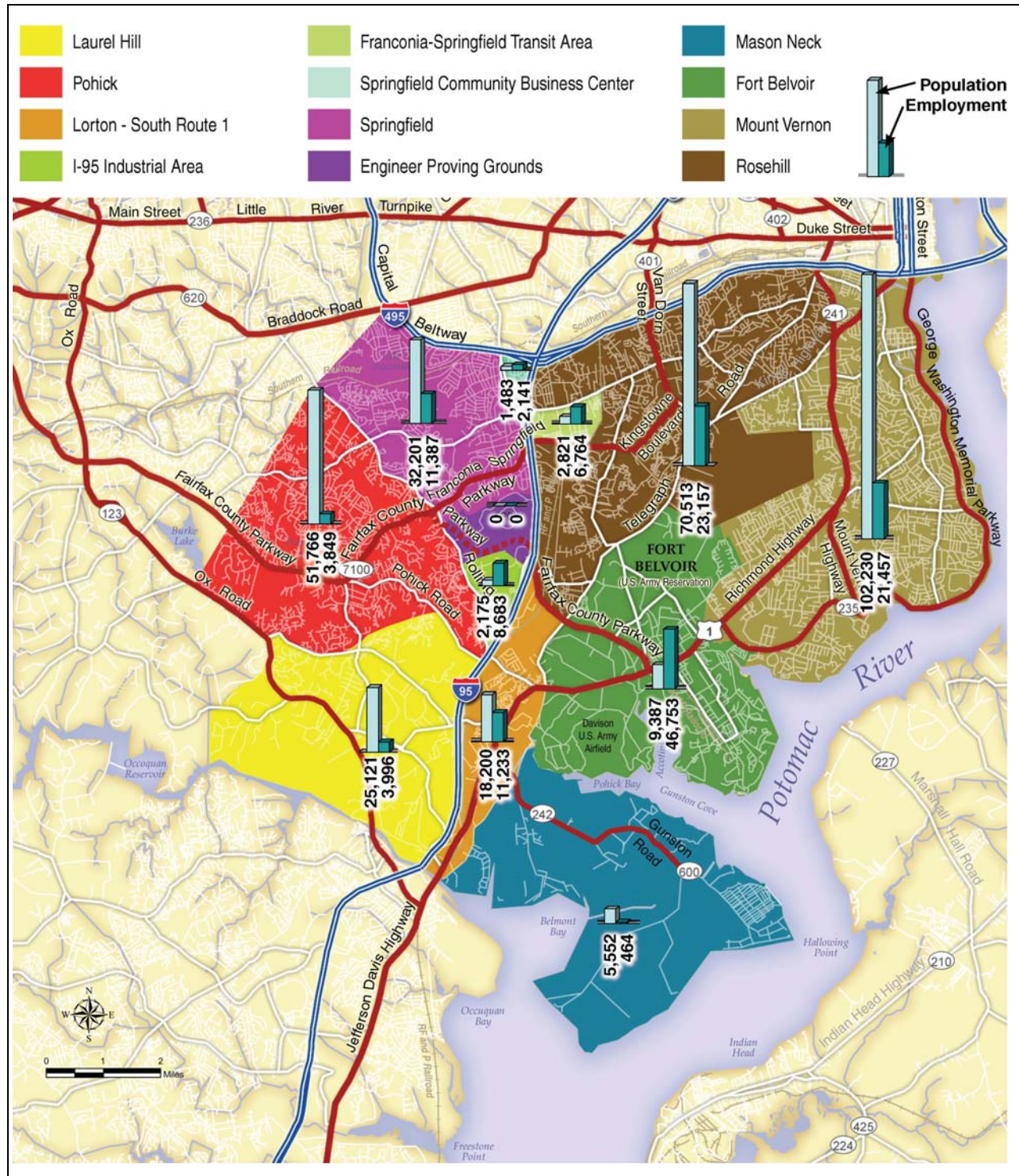
Figure D-23



AM Peak Hour Turning Movement Counts for City Center Alternative—North
Fort Belvoir, Virginia
Figure D-24



**AM Peak Hour Turning Movement Counts for City Center Alternative—South
Fort Belvoir, Virginia
Figure D-25**

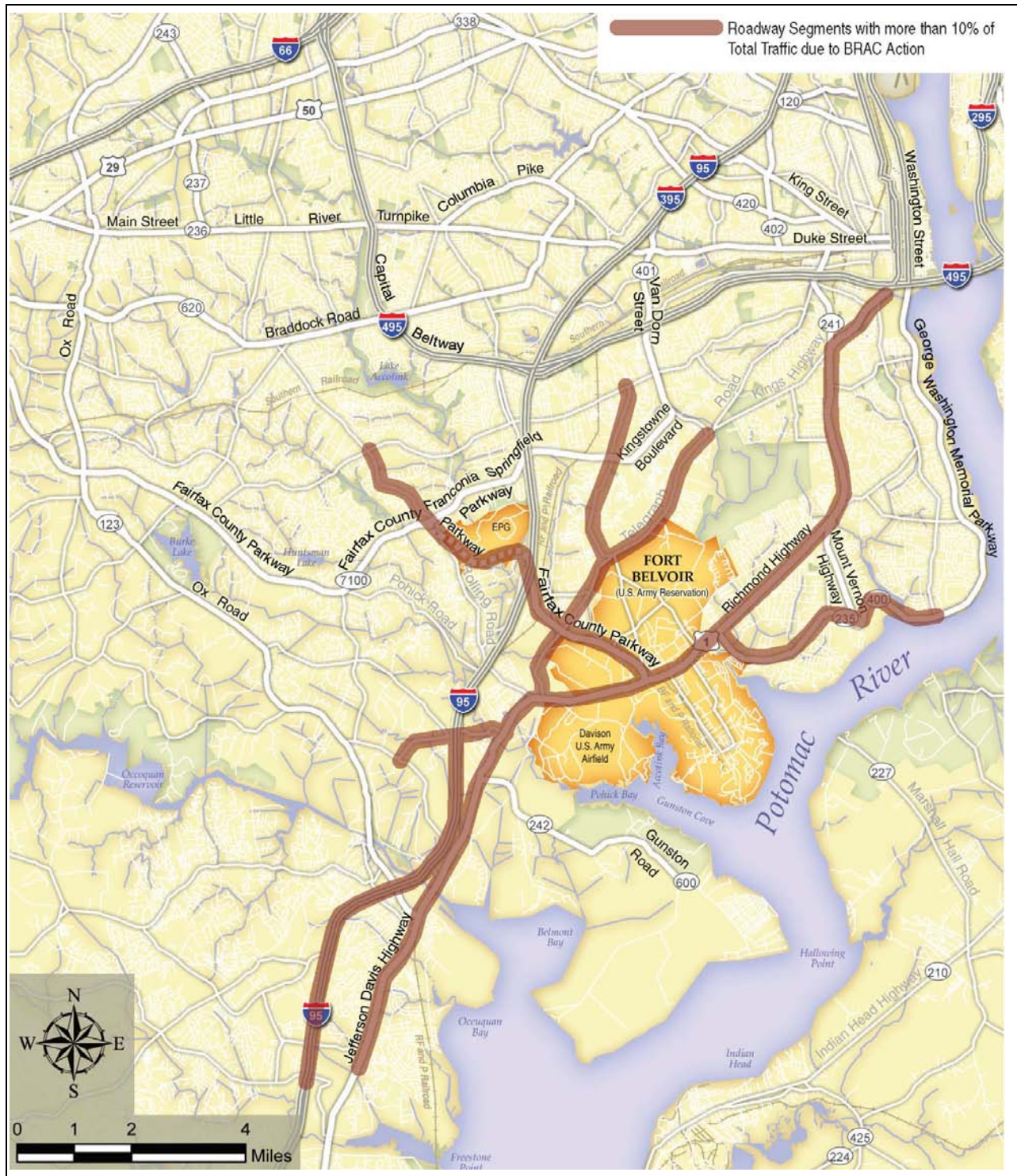


LEGEND
 Interstate Highway
 Highway
 River/ Water

**Satellite Campuses Alternative
 Population and Employment**

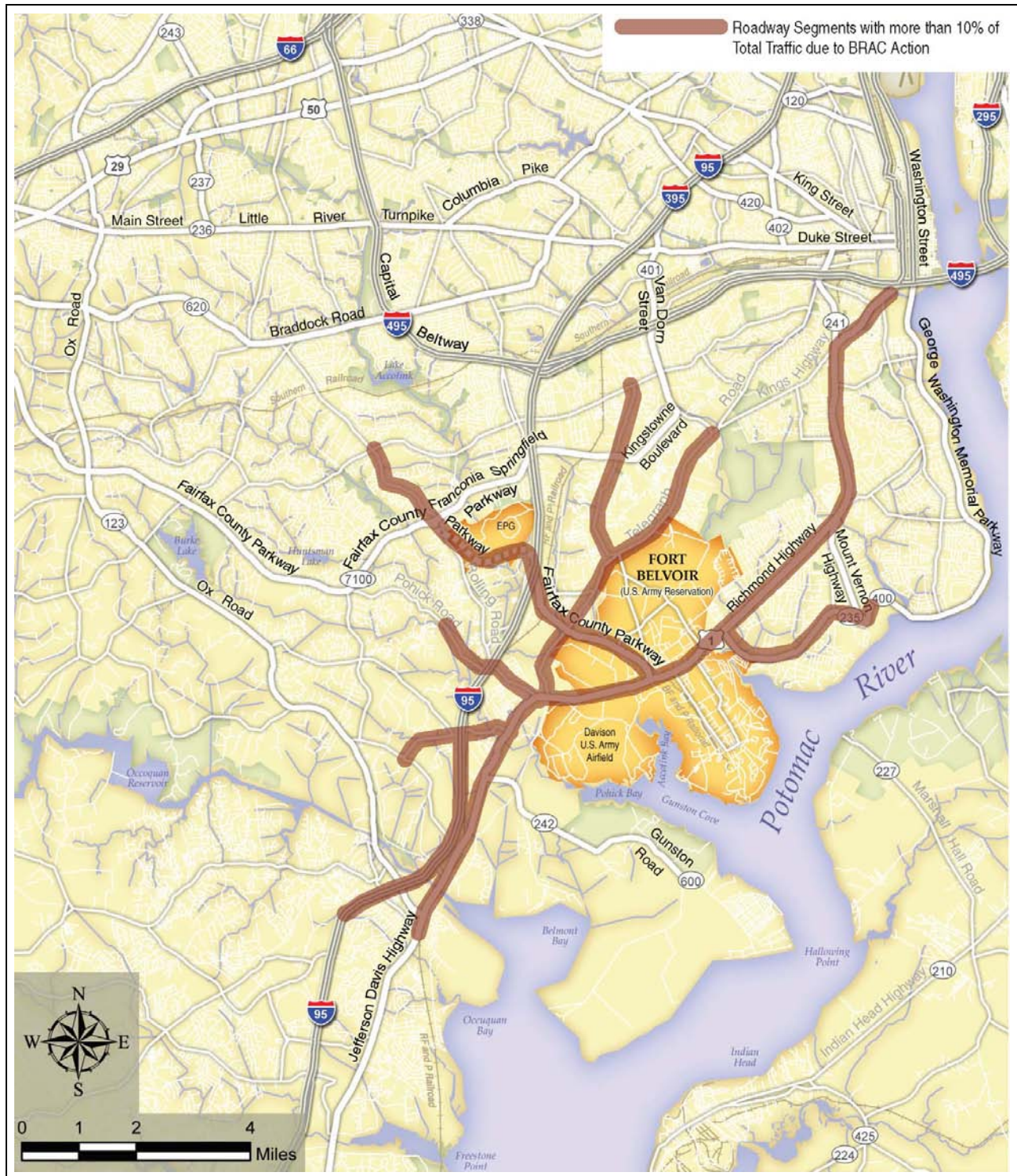
Fort Belvoir, Virginia

Figure D-26



LEGEND
River/ Water

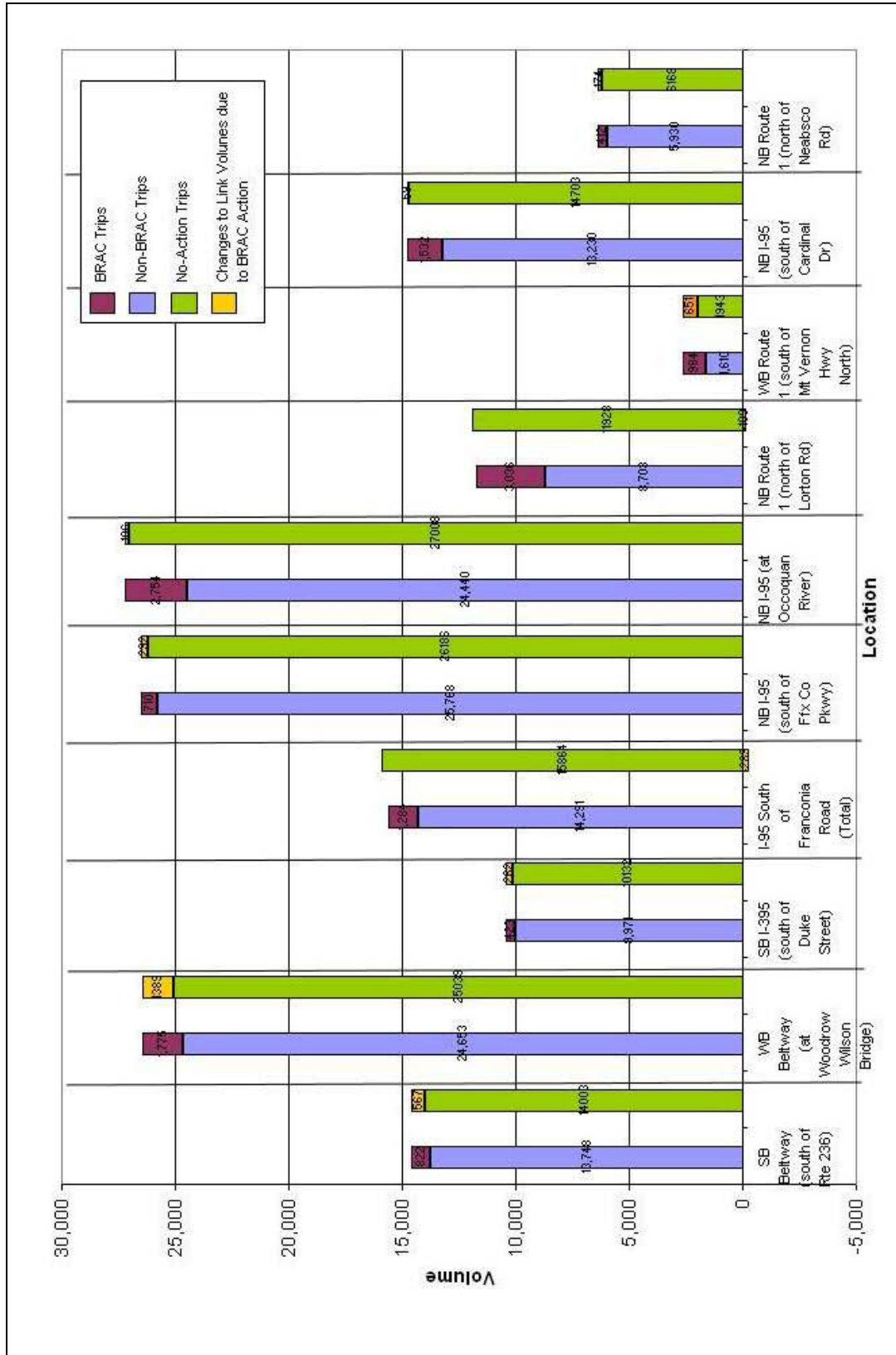
**AM Peak Period Influence Area
Satellite Campuses Alternative
Fort Belvoir, Virginia
Figure D-27**



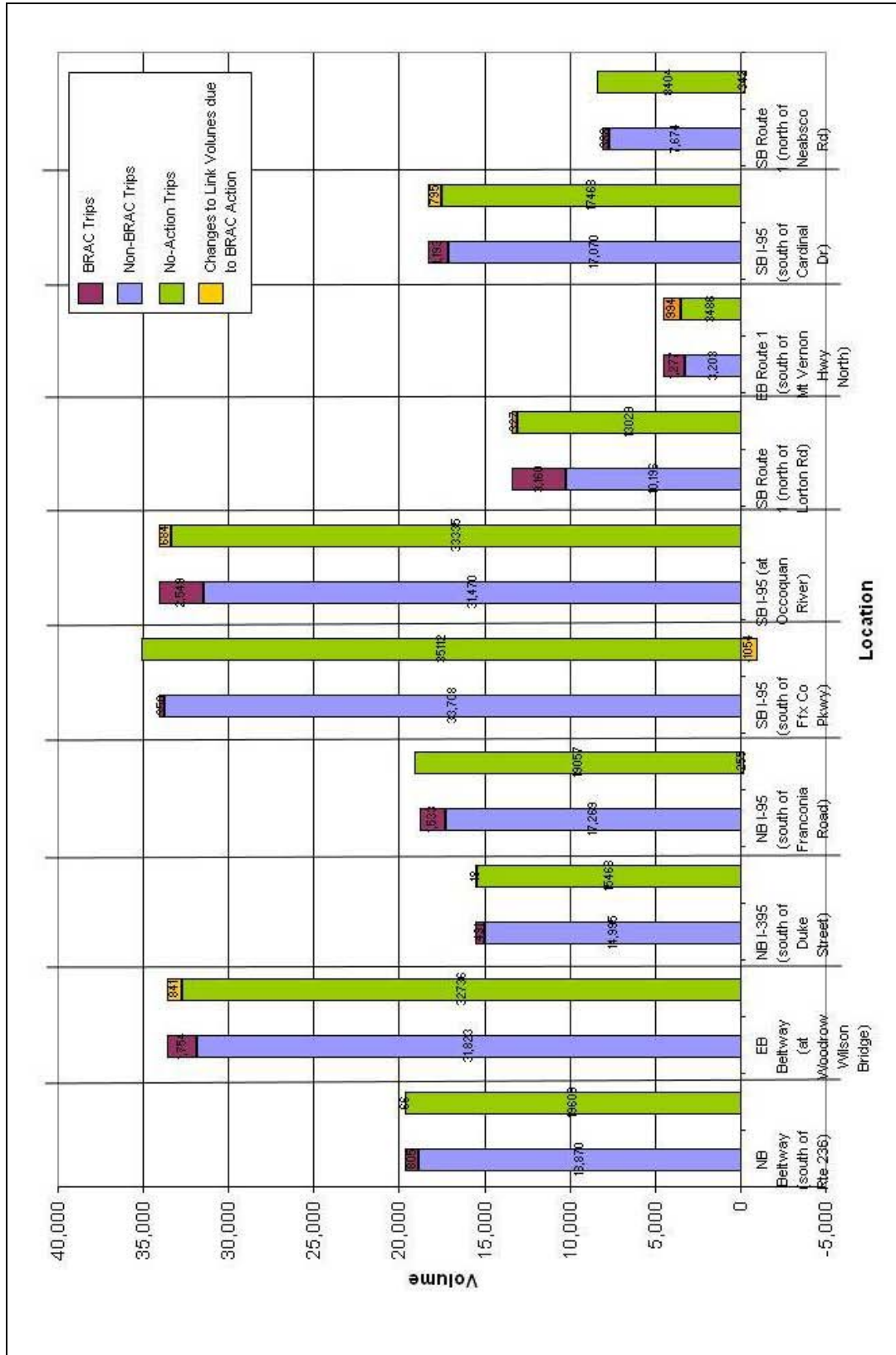
PM Peak Period Influence Area Satellite Campuses Alternative

Fort Belvoir, Virginia

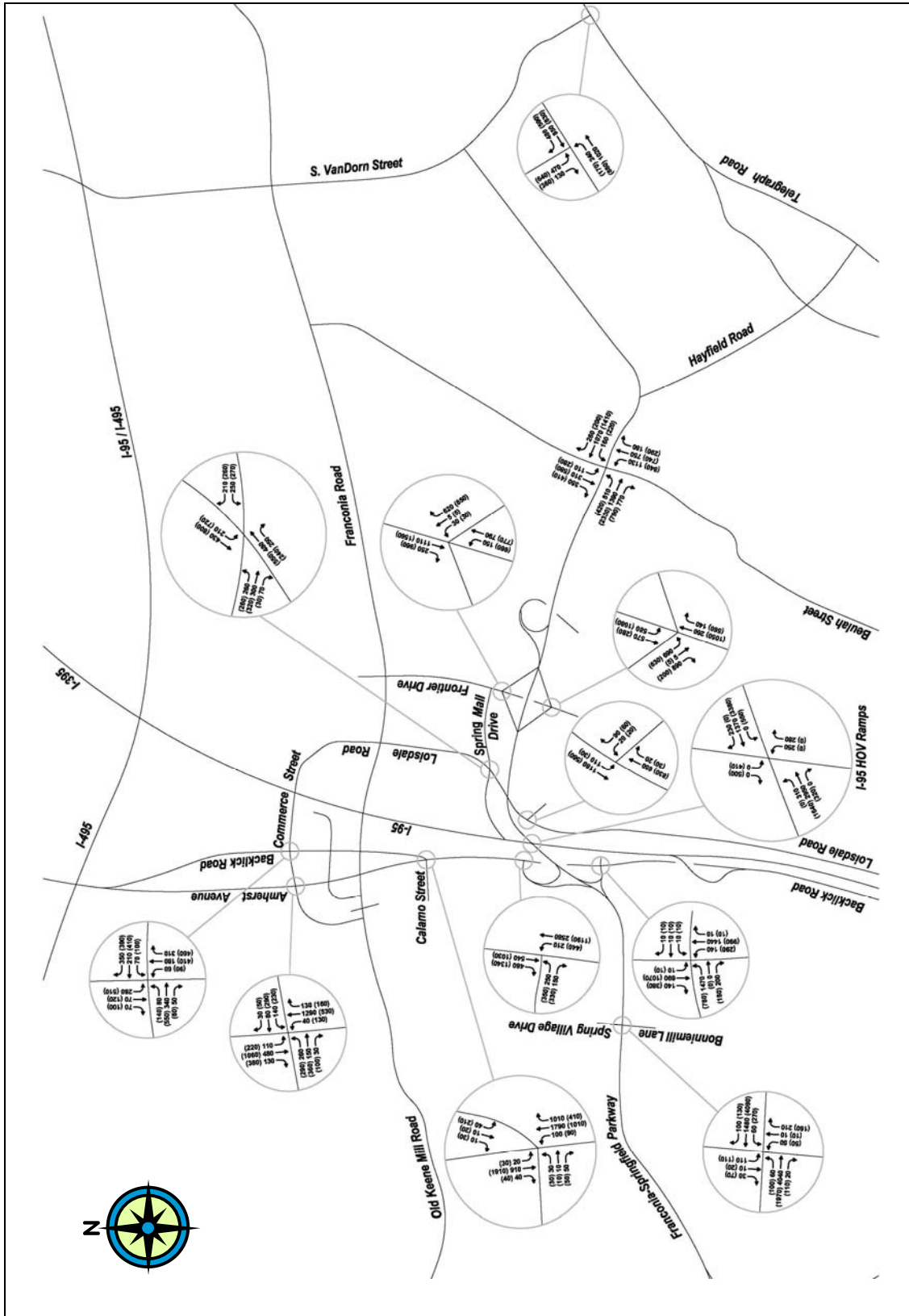
Figure D-28



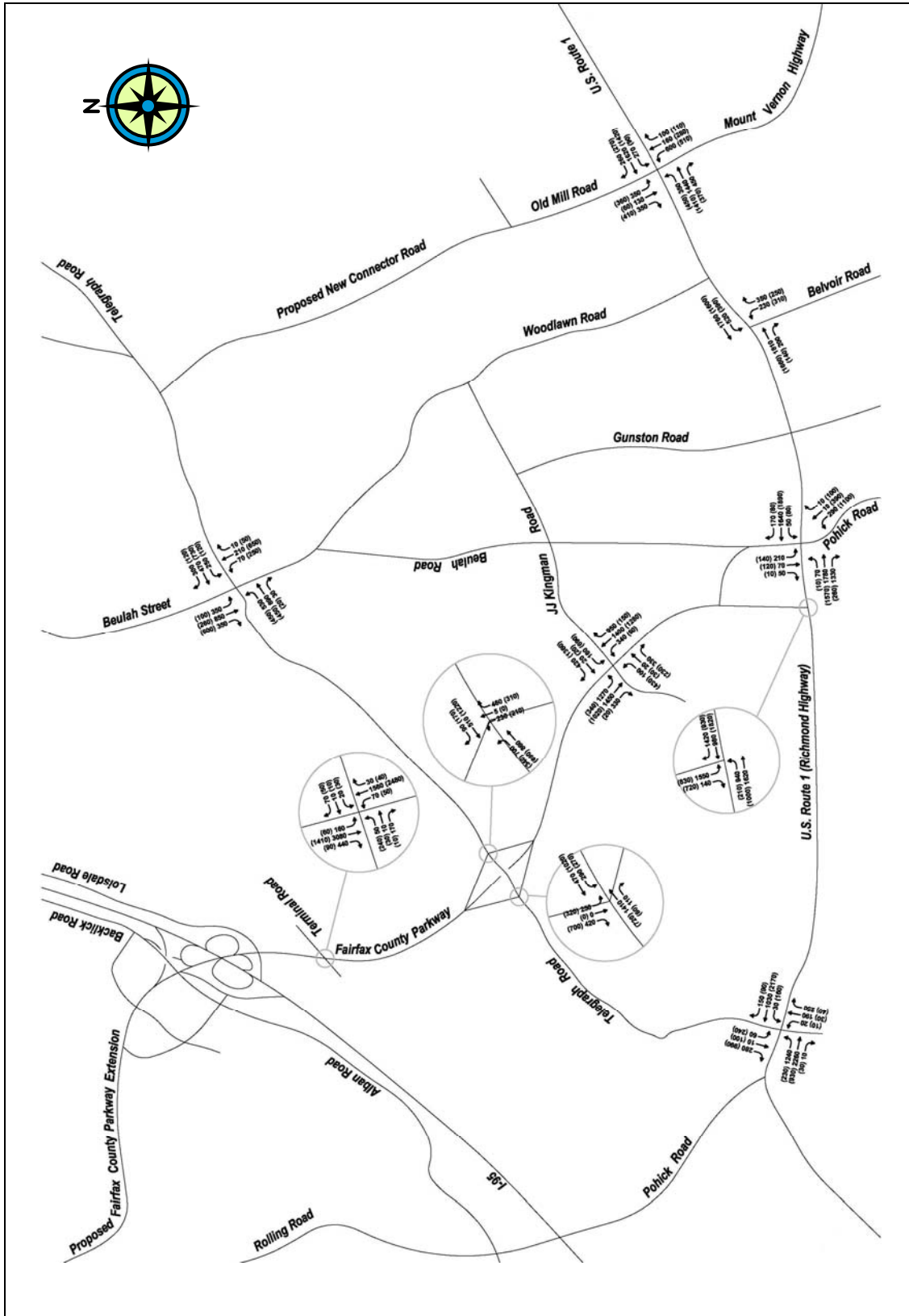
Key Locations Comparison Between Satellite Campuses Alternative and No Action Alternative—AM Peak Period—Trips Toward Fort Belvoir and EPG Fort Belvoir, Virginia
Figure D-29



Key Locations Comparison Between Satellite Campuses Alternative and No Action Alternative—PM Peak Period—Trips Toward Fort Belvoir and EPG Fort Belvoir, Virginia
Figure D-30



AM Peak Hour Turning Movement Counts for Satellite Campuses Alternative—North
Fort Belvoir, Virginia
Figure D-31



AM Peak Hour Turning Movement Counts for Satellite Campuses Alternative—South
Fort Belvoir, Virginia
Figure D-32

Appendix E

AIR QUALITY SUPPORTING DOCUMENTATION

E.1 – Draft General Conformity Determination

E.2 – Vehicle Micro-scale CO Concentration Modeling

E.3 – Criteria Air Pollutant—Sources and Impacts

E.4 – Permitted Sources of Air Emissions—Potential-to-emit Calculations

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APPENDIX E.1
DRAFT GENERAL CONFORMITY DETERMINATION

***Draft General Conformity Determination for Implementation of 2005
Base Realignment and Closure (BRAC) Recommendations and Related
Army Actions at Fort Belvoir, Virginia***



Prepared for

Fort Belvoir, Virginia

by the

U.S. Army Corps of Engineers, Mobile District

March 2007

EXECUTIVE SUMMARY

The U.S. Army is in the process of preparing a Draft Environmental Impact Statement (DEIS) to assess implementation of the Base Realignment and Closure (BRAC) Commission's recommendations at Fort Belvoir, Virginia, and the update to the installation's land use plan. Fort Belvoir is within an area currently designated by the U.S. Environmental Protection Agency (EPA) as in non-attainment of the National Ambient Air Quality Standards (NAAQS) for ozone (O₃; 8-hour standard) and fine particulates (PM_{2.5}). Therefore, under Section 176(c) of the Clean Air Act (CAA), the U.S. Army must demonstrate that its actions within the region conform to EPA's and the Commonwealth of Virginia's plans to attain these NAAQS.

EPA promulgated two sets of conformity rules to implement Section 176(c) of the CAA—Transportation Conformity Rules and General Conformity Rules. The Transportation Conformity Rules establish the criteria and procedures for determining that transportation plans, programs, and projects funded under Title 23 of the United States Code (U.S.C.) or the Federal Transit Act conform to State Implementation Plans (SIPs). Because the Proposed Action and Alternatives are not transportation projects, the transportation conformity rules do not apply.

The General Conformity Rules (GCR) are applicable to federal actions that are not encompassed by the Transportation Conformity Rules and are within non-attainment areas. The GCR are not applicable to certain federal actions, such as those which would result in total emission levels below applicable thresholds, those that would result in no emissions increase or an increase that is de minimis (of minimal importance), or actions for which the emissions are not reasonably foreseeable. In addition, general conformity determinations are not required for portions of actions that include major new or modified stationary sources that require a permit under the New Source Review (NSR) program (USEPA and FAA 2002).

Currently, the region has no applicable SIP for the 8-hour O₃ or PM_{2.5} NAAQS. The SIP revisions to address non-attainment conditions with respect to the new 8-hour O₃ and PM_{2.5} NAAQS are being developed and are expected to be approved by EPA by 2008 and 2009, respectively. In the interim, EPA has published some guidance to help address compliance with the CAA with respect to the new NAAQS. The applicable SIP revision in the Northern Virginia Area is for the 1-hour O₃ NAAQS. Although EPA recently revoked the 1-hour O₃ NAAQS, the GCR dictate the use of the in-place "applicable" SIP for determining the conformance of the proposed federal action. The 1-hour attainment demonstration O₃ SIP was developed and submitted by the Virginia Department of Environmental Quality (VDEQ) and approved by EPA on May 13, 2005 (70 FR 25688).

This purpose of this Draft General Conformity Determination (GCD) is to demonstrate that the emissions associated with two proposals at Fort Belvoir—implementation of base realignment and the update of the land use plan—conform to the purpose and intent of the applicable SIP.

On September 8, 2005, the BRAC Commission recommended numerous realignment and closure actions for domestic military installations. President Bush concurred with the 2005 BRAC Commission's report and sent it to Congress on September 15, 2005. Therefore, the BRAC actions at Fort Belvoir must be initiated by no later than September 15, 2007, and completed by no later than September 15, 2011. On November 9, 2005, the recommendations became law, and now they must be implemented as provided for in the Defense Base Closure and Realignment Act of 1990 (Public Law 101-510), as amended. The BRAC Commission's recommendations will generate a net increase of approximately 22,000 people in the workforce on Fort Belvoir. The

vast majority of these people, however, are already located within the National Capital Region (NCR). Fort Belvoir established its RPMP in 1993. In light of substantial changes at the post due to base realignment, the land use plan needs to be updated.

Fort Belvoir is approximately 15 miles south of Washington, D.C., in northern Virginia (Figure ES-1). The post is the host for one major command headquarters (Army Material Command), two Direct Reporting Unit headquarters (U.S. Army Intelligence and Security Command and U.S. Army Criminal Investigation Command), and more than 100 other elements of the Army and Department of Defense (DoD), including the Defense Logistics Agency headquarters, Army Management Staff College, Defense Acquisition University, and the National Geospatial-Intelligence Agency College.

The following paragraphs summarize the methodologies used to evaluate the applicability of the GCR to the Army's proposed action and alternatives, the methodologies used to evaluate total direct and indirect project-related emissions of volatile organic compounds (VOCs), nitrogen oxides (NO_x), PM_{2.5}, and sulfur dioxide (SO₂) from the sources subject to the GCR, and the results of the conformity evaluation.

Applicability. To determine whether the GCR are applicable, net (project-related) emission levels of VOC, NO_x, PM_{2.5}, and SO₂ were compared to applicability threshold levels. The applicability threshold levels for the 8-hour O₃ and PM_{2.5} NAAQS were used (50 tons of VOCs or 100 tons of NO_x, PM_{2.5}, and SO₂). On the basis of the results of the comparison, it was determined that the GCR apply to the proposed realignment activities at Fort Belvoir with respect to both NO_x and VOCs.

Construction Activity. The construction emission budgets in the currently approved SIP do not identify specific or individual projects with respect to emissions resulting from regional construction activity. Therefore, the BRAC-related emission estimates were compared to SIP-based projected emissions for the region for this type of activity to determine whether the emissions could reasonably be accounted for in the regional (nonroad and area) totals. The results of the comparison indicate that the greatest level of construction-related VOC and NO_x emissions would represent approximately 0.7 and 1.9 percent of VDEQ's regional emissions, respectively (Table ES-1). Because the project-related construction emissions would represent a relatively small percentage of the regional projections, the U.S. Army, in consultation with VDEQ, determined that it is reasonable to assume that the construction emissions can be accounted for in the inventories for the 1-hour O₃ SIP for the Proposed Actions and Alternatives (VDEQ 2007).

Motor Vehicles. The realignment of Fort Belvoir would decrease both the number of vehicles and the total vehicle miles traveled within the region. In turn, motor vehicle emissions would decrease. This decrease would be primarily due to a net reduction of approximately 1,700 personnel from the region and a slight overall decrease in vehicle miles traveled by the people remaining. These BRAC-related reductions in emissions would constitute an ongoing net benefit to the region's air quality. Therefore, although there is a SIP-based regional budget for on-road vehicles, it was unnecessary to perform a direct comparison.

The GCR state that notwithstanding the other requirements of the rules, a proposed action may not be determined to conform unless the total of direct and indirect emissions from the action is in compliance or consistent with all relevant requirements and milestones in the applicable SIP

Table ES-1
Comparison of 2010 Project-related Emissions to SIP-based Inventories:
Construction Activities

Approved 1-hour SIP			
Pollutant	SIP regional emission inventory (tons/summer weekday)	Project-related non-road emissions (tons/summer weekday)	Percent of regional emissions
Nitrogen oxides (NO _x)	82.8 ^a	1.58	1.9%
Volatile organic compounds (VOCs)	147.3 ^b	0.98	0.7%
Draft 8-hour SIP			
Nitrogen oxides (NO _x)	76.9 ^c	1.58	2.1%
Volatile organic compounds (VOCs)	191.8 ^d	0.98	0.5%

Source: MWCOG, 2004a

^a Reflects 2005 nonroad controlled NO_x emissions inventory

^b Reflect 2005 area controlled VOC emissions inventory

^c Reflects 2009 nonroad controlled NO_x emissions inventory

^d Reflect 2009 area controlled VOC emissions inventory

(Title 40 of the Code of Federal Regulations [CFR] Section 93.158(c)). This requirement includes but is not limited to such issues as reasonable further progress schedules, assumptions specified in the attainment or maintenance demonstration, prohibitions, numerical emission limits, and work practice standards.

EPA and VDEQ have already promulgated, and will continue to promulgate, numerous requirements to support the goals of the CAA with respect to the NAAQS. Typically, these requirements take the form of rules regulating emissions from significant new sources, including emission standards for major stationary point sources and classes of mobile sources, as well as permitting requirements for new stationary point sources. Because states have the primary responsibility for implementing and enforcing requirements under the CAA and can impose stricter limitations than EPA, the EPA requirements often serve as guidance to the states in formulating their air quality management strategies.

In operating Fort Belvoir, the U.S. Army observes, and will continue to act in accordance with, a myriad of rules and regulations implemented and enforced by federal, state, regional, and local agencies to protect and enhance ambient air quality in the Metropolitan Washington Region. The U.S. Army will continue to act in accordance with all existing applicable air quality regulatory requirements for activities over which it has direct control and will meet in a timely manner all regulatory requirements that become applicable in the future. Likewise, the U.S. Army actively encourages all tenants and users of its facilities to comply with applicable air quality requirements.

In accordance with Section 176 of the CAA, the U.S. Army has assessed whether pollutant and pollutant precursor emissions that would result from its actions with respect to the proposed realignment at Fort Belvoir would conform to the Virginia SIP. Emission estimates for the GCD were prepared:



LEGEND

- Installation Boundary
- HEC Boundary
- County Boundary
- N Interstate Highway
- N US Highway

Source: Fort Belvoir GIS, 2006.

Installation Location

Fort Belvoir, Virginia

Figure ES-1

- Using the latest planning assumptions
- Using the latest and most accurate emission estimation techniques
- Based on the applicable air quality models, databases, and other requirements specified in the most recent version of EPA's *Guideline on Air Quality Models*, including supplements

On the basis of the results of the evaluation, the total direct and indirect project-related emissions of NO_x, VOCs, PM_{2.5}, and SO₂ were determined to be below the applicability threshold levels, accounted for in the emission projections incorporated into the 1-hour O₃ attainment demonstration SIP (the applicable SIP), or reasonably accounted for in established emission totals and/or excess regional emission estimates.

For these reasons, the U.S. Army has determined that the emissions associated with the Proposed Action and Alternatives conform to the CAA and, by definition, will not significantly impede the timely attainment of the NAAQS in the region.

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SECTION 1.0 INTRODUCTION

Within areas designated non-attainment or maintenance for any of the National Ambient Air Quality Standards (NAAQS), the Clean Air Act (CAA) requires that federal agencies ensure that their actions conform to the State Implementation Plan (SIPs). The requirements for determining conformity to SIPs are detailed in Title 40, Chapter I, Subchapter C, Part 51 of the Code of Federal Regulations (40 CFR Part 51).

In accordance with Section 176 of the CAA, in consultation with VDEQ, the U.S. Army has assessed whether pollutant and pollutant precursor emissions that would result from the update of the installation's land use plan and the Base Realignment and Closure (BRAC)-related activities at Fort Belvoir conform to the Virginia SIP. This document provides the supporting material, analytical methods, and conclusions relied on by the U.S. Army in performing the applicability analysis described in 40 CFR Part 51 and making a General Conformity Determination (GCD).

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SECTION 2.0

PROPOSED ACTION

The U.S. Army proposes to update Fort Belvoir's land use plan and to implement the BRAC Commission's recommendations. The BRAC realignment actions would involve constructing and renovating facilities and, consistent with the BRAC law, relocating units, agencies, and activities to the post by September 2011.

2.1 LAND USE PLAN UPDATE

Fort Belvoir's mission is to provide a secure, safe operating environment for numerous missions and functions, including the following:

- Administrative, logistics, and operations support for regional and worldwide military missions
- A creative learning environment for Army and DoD school students
- Military support for a variety of National Capital Region (NCR) contingency missions
- Regional housing for active duty military families
- Quality of life support for the military community, that includes health and recreation
- Environmental stewardship in concert with adequate land and facilities.

Land Use Plan Update Long-range Component. To support the foregoing, the Army proposes to adopt and implement a land use plan update to respond to changing conditions at the post to comply with AR 210-20, *Real Property Master Planning for Army Installations*, which mandates updates of existing plans as circumstances require. This GCD pertains to the initial step of the land use plan update process, the revision of the land use plan, which is necessary to siting of facilities for BRAC implementation. The update to the RPMP centers on the land use analysis and plan portion of the long-range component (LRC). This portion of the LRC shows the current and future relationships and use of installation land by generalized areas, including such facilities as family housing, troop housing, administration, and range and training areas.

Planning Principles. The following principles embody the aspirations for the future evolution of Fort Belvoir. These principles, compiled by Belvoir New Vision Planners and Fort Belvoir, provide guidance in deciding the future direction of facilities, space needs and meeting the goals of the installation, the Army, and the community. Adherence to these principles can provide the most efficient use of land, maximum use of previously disturbed areas, the least environmental impact and, ultimately, a world-class installation.

- *Transform Fort Belvoir:* Create a world-class installation.
- *Achieve a diversity of use and activities:* Enrich the program—a 24/7 environment.
- *Achieve environmental brilliance:* A sustainable approach in everything that is done.

- *Strengthen the natural habitat:* Protect and enhance the creeks, wetlands, and wildlife corridors.
- *View the installation as arboretum.*
- *Build compact neighborhoods:* Strengthen the sense of community and place.
- *Improve connectivity:* Consider strategies that allow people to *park once*.
- *Emphasize the public realm:* Create walkable neighborhoods.
- *Respect Fort Belvoir history:* Continue the legacy for future generations.
- *Community benefits:* Strengthen existing Army and surrounding neighborhoods.

Land use planning is a continual, collaborative, and integrated process, primarily performed at the installation level. While land use planning reflects local mission requirements, it is strongly influenced by the plans, guidance, and initiatives of higher headquarters. An installation RPMP is, therefore, the principal real property management tool in support of overall installation real property operation, management, development, privatization, realignment, cleanup, and disposal.

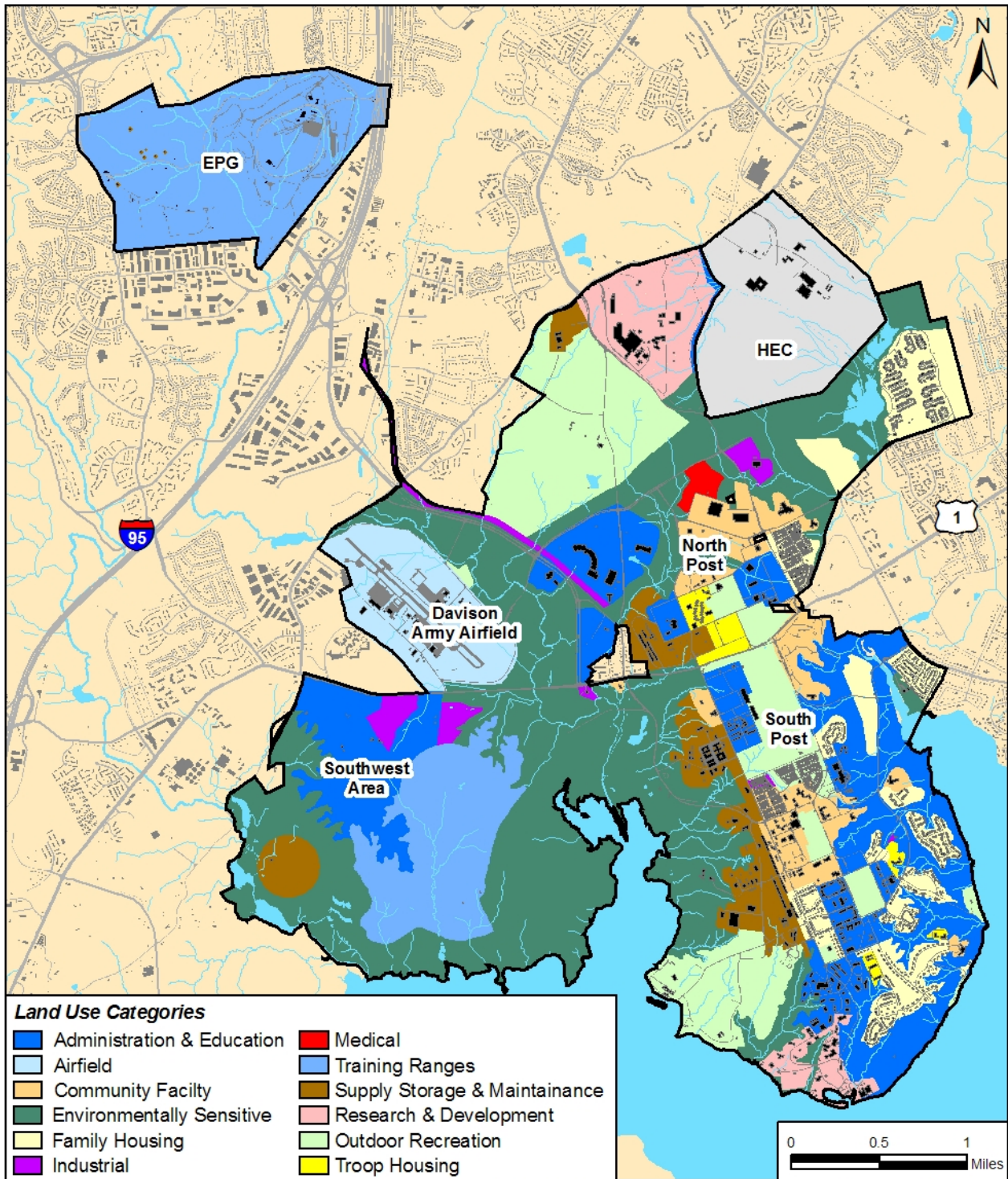
2.1.1 Fort Belvoir's Existing Land Use Plan

The land use plan that is the subject of this GCD is the 1993 land use plan and a 2002 update of the Fort Belvoir RPMP. The 1993 master plan consisted of four elements: *Real Property Master Plan Long-Range Component—1993; Real Property Master Plan Short-Range Component—1993–2000; a Capital Investment Strategy; and a Mobilization Mission Planning Component*. Figure 2-1 illustrates the 1993 land use plan.

Fort Belvoir created its current master plan in 1993 to reflect the post's transition from primarily a troop support and training mission to that of an administrative center providing support to multiple organizations within the NCR. Specifically, the U.S. Army Engineer School moved to Fort Leonard Wood, Missouri, in 1988, and BRAC directives realigned the Belvoir Research and Development Engineering Center (BRDEC). BRAC directives also resulted in relocating administrative functions to Fort Belvoir.

The 1993 long-range component identified Fort Belvoir's role as the "major administrative and logistics center for the Northern Virginia portion" of the Military District of Washington (MDW). As such, and recognizing that Fort Belvoir would continue to attract military tenants, the plan attempted to determine total build out (TBO—defined as the total daily employment when all land uses have been fully developed under the constraints and limitations of the plan). The plan recognized that TBO might never be reached and that "Progress toward TBO is mission-driven but infrastructure-constrained." The plan articulated goals, objectives, and assumptions that focused on the amount and type of development anticipated and attempted to limit impacts on the natural and man-made environments. The EPG was not included in the 1993 plan.

The 1993 land use plan shown in Figure 2-1 identified 3,287 acres on Main Post as developable. The TBO that could be supported was estimated to be 74,230 people housed in 30.5 million square feet of space. By comparison, in 2005 about 24,000 personnel work at Fort Belvoir daily; they are housed in about 10.8 million square feet of space.



1993 Land Use Designations

Fort Belvoir, Virginia

Sources: Fort Belvoir GIS, 2006; Fairfax County GIS, 2006.

Figure 2-1

The 1993 *Real Property Master Plan* was revised in 2002 upon the adoption of a Regional Community Support Center Subarea Development Plan. The plan revision addressed a desire to locate additional related activities in the portion of the Lower North Post area designated in 1993 as the Regional Community Support Center. In particular, the 2002 Subarea Plan recommended that DeWitt Hospital (now on South Post) be relocated to the Regional Community Support Center area, that the post exchange (PX) be expanded, and a chapel be developed. The amendment also decreased the amount of land classified for community facilities, designated land for medical use, and increased the amount of land classified as environmentally sensitive.

2.1.2 Proposed Land Use Plan Revision

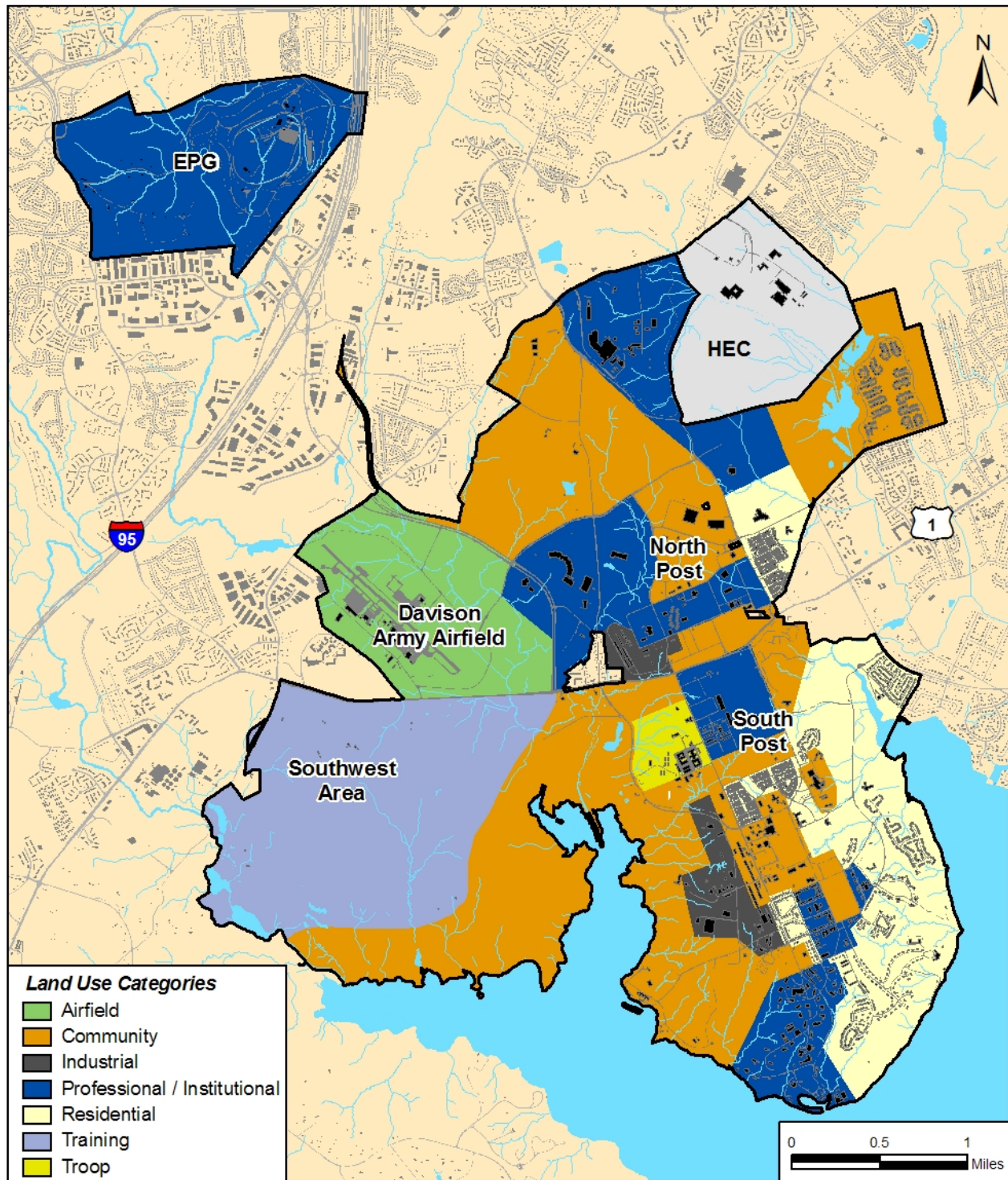
The proposed land use plan is shown in Figure 2-2. It differs from the 1993 land use plan in several important respects in that it:

- Includes the EPG in planning for future development.
- Uses fewer—but broader—land use designations that encompass compatible land uses. For example, the 1993 land use plan provided for Administration and Education and Research and Development categories; these are now included in the category of Professional/Institutional. These new categories allow for more flexible groupings of compatible types of facilities.
- Identifies additional areas for present and future Professional/Institutional and Residential uses.
- Relocates the Troop area from North Post to South Post.
- Changes land use designations for a number of areas on the basis of revised assessment of their suitability for particular uses, projection of future needs, and the desire to make land uses broader and more encompassing.

Table 2-1 provides a comparison of the land use areas in the 1993 master plan, as amended in 2002, to those proposed in the long-range component of the RPMP revision.

The difference between the total number of acres for the 1993 land use plan as amended in 2002 (7,687) and the total for the proposed land use plan (8,508) is the result of including the EPG and several land areas being added or recognized as belonging to Fort Belvoir since 1993. These include 4 acres of islands in Accotink Bay and Gunston Cove; 16 acres west of Colchester Road that became part of Fort Belvoir following realignment of Colchester Road; a net increase of 16 acres resulting from the swap of the McNaughton ballfields; and an area of Humphreys Engineering Center (HEC) west of the proposed Connector Road shown as Residential and designated for potential acquisition on the proposed land use plan.

The proposed land use plan aggregates land uses into larger, more flexible areas than did the 1993 plan (compare Figure 2-1 and Figure 2-2). Reflecting the evolution in Fort Belvoir's mission, the land use categories gaining land are those that support its regional mission as an administrative, logistics, and operations center; military support center; classroom center; housing center; military community support center; and a leader in environmental stewardship. The Airfield land use gained land because it consumed areas formerly designated as Environmentally Sensitive around the airfield. Land use categories losing land—particularly Training Range and Supply,



Proposed Land Use Plan

Fort Belvoir, Virginia

Sources: Fort Belvoir GIS, 2006; Fairfax County GIS, 2006.

Figure 2-2

**Table 2-1
Comparison of 1993 and 2011 Land Use Allocations**

1993 master plan		Proposed land use plan	
Land use	Acres	Land use	Acres ^a
Administration & Education	724	Airfield	697
Airfield	391	Community	2,950
Community Facilities	452	Industrial	213
Family Housing	576	Professional/Institutional	2,132
Industrial	126	Residential	1,116
Medical	97	Training	1,287
Outdoor Recreation	1,006	Troop	101
Research & Development	340		
Supply, Storage, & Maintenance	378		
Training Range	462		
Troop Housing	72		
Environmentally Sensitive	3,063		
Total	7,687		8,508

^a All proposed land use designation acreages were calculated in GIS, and the totals may differ from the official acreages for the installation.

Storage & Maintenance—reflect Fort Belvoir’s earlier missions that require fewer resources and less land today.

Principal features and elements of the proposed land use plan include the following:

- *Professional/Institutional.* The Administration & Education and Research & Development land use categories used in the 1993 land use plan would change to Professional/Institutional. The proposed land use plan increases the amount of land designated for Professional/Institutional use. A substantial part of the increase is due to the inclusion of EPG as well as medical facilities in the Professional/ Institutional category.
- *Residential.* The proposed land use plan would increase the land area dedicated to family housing on both the North and South Posts. Fort Belvoir Residential Communities, the program through which family housing has been privatized, is in the process of building and rehabilitating 2,070 family housing units. A portion of the land designated for Residential would be reserved for future development related to long-term growth on the installation.
- *Open Space.* Much of the area designated as Environmentally Sensitive in the 1993 land use plan would be redesignated as Community. This category includes safety clearances, security areas, water areas, wetlands, conservation areas, resource protection areas (RPAs), forest stands, and former training areas. These lands could be used for recreation, conservation, outdoor training, and general uses not involving the construction of facilities. Environmentally constrained land areas would continue to have all regulatory protections in place.
- *McNaughton Ballfields Land Swap.* The three McNaughton ballfields along Pole Road on the southern border of Woodlawn Village are pending exchange for the *Berman Tract* immediately east of Woodlawn Village, which will result in a net increase of 16 acres for Fort Belvoir. This area would be designated as Community land use.

- *South Post Golf Course.* The proposed land use plan would change the land use designation of most of the South Post golf course from Outdoor Recreation to Professional/Institutional.
- *Supply, Storage, and Maintenance Facilities.* The proposed land use plan would enable demolition of outdated and inefficient warehouses; relocation of most of the Supply, Storage, and Maintenance Operations in the 1400 Area to the 700/1100 Areas; and redevelopment of the eastern portion of the 1400 Area east of Gunston Road for Professional/Institutional uses.
- *Unaccompanied Personnel Housing.* The proposed land use plan would change the land use designation from Troop Housing to Troop and convert North Post areas designated for Troop uses to Professional/Institutional. A new Troop land use area would be provided on South Post, west of Gunston Road.
- *DeWitt Army Community Hospital.* In the 2002 master plan amendment, Fort Belvoir planned to site a new DeWitt Army Community Hospital on a parcel of land south of Kingman Road on North Post. The proposed land use plan now enables the new hospital to be sited on the South Post Golf Course in the southwest quadrant of the intersection of Route 1 and Belvoir Road. The present DeWitt hospital site would be designated for Community use.

In the revised land use plan, a new Troop Area would be established on South Post on approximately 75 acres west of Gunston Road in the western portion of the 1400 Area. Industrial uses in that area would relocate to other designated Industrial sites on post. The present Troop Area in the 2100 Area and consisting of approximately 50 acres generally bounded by Gunston, Abbot, Beauregard, and Goethals Roads on North Post, would become available for Professional/Institutional uses upon relocation of Soldier billeting and activities to the new Troop Area. Notwithstanding the proposed changes in land use classifications of these two areas, current land uses would continue until such time as the Army constructs and occupies necessary troop facilities at the new location on South Post.

In several cases the change in land use designations from the 1993 plan would allow Fort Belvoir to prepare for potential changes to its mission in the future even though, except to accommodate BRAC realignment actions, no specific uses for the sites are currently under consideration. For example, this is the case with the area that would be designated for Community at the site now occupied by Woodlawn Village.

The proposed land use plan has been structured so that only the best development sites are identified for growth. The best sites are those that have the fewest environmental, operational, cultural resource, and constructability constraints.

Force Protection Standards. The proposed land use plan has been developed to achieve compliance with force protection requirements for military facilities as set forth in DoD Unified Facilities Criteria 4-010-01, *Antiterrorism Standards for Buildings* (2003). The effect of the standards on the master plan is to require that buffer zones around buildings and roads be reserved as force protection standoff areas. The buffer zones affect the amount of land needed for any one facility as well as dictate its relationship to other facilities. Future military construction projects will be required to adhere to force protection setbacks. Buildings already built are exempt; however, it is strongly recommended that these requirements be implemented to the fullest extent possible. Any major investment requiring renovations or modifications where costs

exceed 50 percent of the replacement cost of the building require the entire building to be in compliance with the standards.

Buildings that are affected by the standoff requirements include those routinely occupied by 50 or more personnel (designated as a primary gathering structure) or buildings inhabited by 11 or more personnel and with a population density of greater than one person per 430 gross square feet (GSF). The standoff buffer for inhabited structures is 33 feet minimum; for primary gathering structures, it is 82 feet minimum, and some facilities require much greater distances than the minimum. Standoff distances from uncontrolled roads (such as U.S. Route 1) are to be 148 feet minimum, and for controlled roads, 82 feet minimum.

The standards recommend that a vulnerability assessment be conducted for existing buildings and that changes be made as necessary to improve building security. These changes can take varying form, from procedures and planning to physical changes to the buildings, such as replacing glass windows with reinforced glass in key areas.

2.2 BASE REALIGNMENT

2.2.1 Introduction

In July 2006 the U.S. Army considered three conceptual development strategies to address the question of where facilities could be sited to accommodate an increase of 22,000 additional personnel being assigned to Fort Belvoir from their existing locations in the NCR. That review process resulted in identifying a preferred land use strategy that reflected the best aspects of each of the three conceptual development strategies. The preferred land use strategy was then used as the basis for the proposed amendment to Fort Belvoir's land use plan.

BRAC realignment would result in a net increase of approximately 22,000 personnel at Fort Belvoir. The increase in personnel and facilities requires an updated land use plan. Siting of new facilities for the base realignment action would then comport with the updated land use plan. The land use planning, facilities construction, and personnel assignment functions are closely interrelated.

Most BRAC realignment actions for the U.S. Army conform to existing, sufficient master plans that are flexible and recognize future needs. BRAC realignment at Fort Belvoir involves two important considerations. First, the post's current master plan does not encompass the EPG because of past intentions to dispose of that 800-acre area for other development. The EPG must be incorporated into a new master plan. Second, the proposed increase of 22,000 personnel represents the largest relocation of personnel in the BRAC 2005 round. Approximately 7 million square feet of new and renovated facilities and approximately 7 million square feet of parking must be ready for use before September 15, 2011.

The following are the specific federal actions under this provision that are associated with the proposed realignment of Fort Belvoir.

- **Realign the National Geospatial-Intelligence Agency (NGA)**, with various U.S. Army entities moving from leased space in the NCR (Army Lease) to Fort Belvoir, Virginia.
- **Realign the Washington Headquarters Services (WHS)**, consisting of WHS and elements of the Office of the Secretary of Defense and defense agencies to Fort Belvoir, Virginia.

- **Realign U.S. Army Medical Command (MEDCOM)** to Fort Belvoir, Virginia.
- **Realign Program Executive Office, Enterprise Information Systems (PEO EIS)** to Fort Belvoir, Virginia.
- **Realign Missile Defense Agency Headquarters Command Center (MDA HQCC)** to Fort Belvoir, Virginia.
- **Realign Fort Belvoir, Virginia**, by relocating U.S. Army Prime Power School to Fort Leonard Wood, Missouri.
- **Realign Fort Belvoir, Virginia**, by relocating and consolidating Sensors, Electronics, and Electronic Warfare Research, Development and Acquisition activities to Aberdeen Proving Ground, Maryland.
- **Realign Fort Belvoir, Virginia**, by relocating the U.S. Army Criminal Investigation Command (CID) to Marine Corp Base Quantico, Virginia.
- **Realign Fort Belvoir, Virginia**, by relocating *Soldier* magazine to Fort Meade, Maryland.
- **Realign Fort Belvoir, Virginia**, by relocating U.S. Army Materiel Command (AMC) and the Security Assistance Command (USASAC, an AMC major subordinate command) to Redstone Arsenal, Alabama.
- **Realign Fort Belvoir, Virginia**, by relocating the Chemical Biological Defense Research component of the Defense Threat Reduction Agency to Edgewood Chemical Biological Center, Aberdeen Proving Ground, Maryland.
- **Realign Fort Belvoir, Virginia**, by relocating the U.S. Army Research Office to the National Naval Medical Center, Bethesda, Maryland. Realign the Defense Threat Reduction Agency Telegraph Road facility, Alexandria, Virginia, by relocating the Extramural Research Program Management function (except conventional armaments and chemical biological defense research) to the National Naval Medical Center, Bethesda, Maryland.
- **Realign Fort Belvoir, Virginia**, by relocating Defense Threat Reduction Agency National Command Region conventional armament research to Eglin Air Force Base, Florida.

Accommodation of personnel being realigned must take into account the needs of six major groups slated for realignment by the BRAC Commission: Washington Headquarters Services (WHS), consisting of WHS and elements of the Office of the Secretary of Defense and defense agencies; National Geospatial-Intelligence Agency (NGA); various U.S. Army entities moving from leased space in the NCR (*Army Lease*); U.S. Army Medical Command (MedCom); Program Executive Office, Enterprise Information Systems (PEO EIS); and Missile Defense Agency Headquarters Command Center (MDA HQCC). The numbers of personnel associated with each of these groups are shown in Table 2-2. Details of the BRAC Commission's recommendation can be found at <http://www.brac.gov>.

**Table 2-2
Personnel Realigning to Fort Belvoir**

Agency	Staff	Contractors	Total
Washington Headquarters Services	7,759	1,504	9,263
National Geospatial-Intelligence Agency	4,400	4,100	8,500
Army Lease	2,720	0	2,720
U.S. Medical Command	2,069	0	2,069
Program Executive Office, Enterprise Info Systems	480	0	480
Missile Defense Agency (HQ Command Center)	137	155	292
Total	17,565	5,759	23,324

Note: Personnel being realigned from Fort Belvoir to other installations result in a net increase at Fort Belvoir of approximately 22,000 personnel. Realignments from Fort Belvoir include the relocation of Army Materiel Command Headquarters and U.S. Army Security Assistance Command to Redstone Arsenal, Alabama; Prime Power School to Fort Leonard Wood, Missouri; U.S. Army Criminal Investigation Division Headquarters to Marine Corps Base, Quantico, Virginia; *Soldiers* magazine to Fort Meade, Maryland; Biomedical Science and Technology programs of the Defense Threat Reduction Agency to Aberdeen Proving Ground, Maryland; Defense Threat Reduction Agency conventional armaments research to Eglin Air Force Base, Florida; and Information Systems, Research, Development and Acquisition to Aberdeen Proving Ground, Maryland. Evaluation of environmental impacts associated with these realignments will be performed by the receiving locations.

2.2.2 Allocation of Facilities and Personnel

The July 2006 preferred land use strategy translates to an amended siting plan. Accommodations of BRAC requirements would involve the following siting of facilities:

- NGA and WHS would be on the eastern portion of EPG.
- Army lease units, agencies, and activities would be on South Post at sites on Gunston Road and Belvoir Road.
- The Dewitt Army Community Hospital would be on the South Post Golf Course.
- PEO EIS and MDA HQCC would be on South Post at sites on Gunston Road and Belvoir Road.

2.2.3 Construction and Renovation

Construction and renovation of facilities to support additional personnel at Fort Belvoir would result in more than 7 million square feet of additional built space and about 7 million square feet of parking structures.

Fort Belvoir would require essentially two types of construction projects. First, Fort Belvoir must construct or renovate facilities to create working space or other types of special use space for the proposed additional workforce. Second, Fort Belvoir must expand its general support capabilities to meet the needs of a larger on-post population. Table 2-3 identifies these projects, and Figure 2-3 shows where they would be sited under the preferred alternative.

**Table 2-3
Proposed Construction and Renovation Projects**

Map number	Project number	Project title	Fiscal year	Building size (ft²)	Estimated impervious acreage
1	65416	NGA Administrative Facility	2007–2011	2,419,000	20.3
2	64234	WHS Administrative Facility	2008–2010	2,219,000	22.8
3	MDA 580	MDA Facility	2008–2009	107,000	1.3
4	64238	Hospital	2008	868,800	7.5
4	65676	Hospital	2009	-	-
4	65677	Hospital	2010	-	-
5	64241	Dental Clinic	2010–2011	16,000	0.2
6	65871	NARMC ^a Headquarters Building	2009	50,000	1.0
7	n/a	Corps of Engineers Project Integration Offices	2008	58,600	n/a
8	64097	Infrastructure	2008	n/a	n/a
8	67487	Infrastructure	2009	n/a	n/a
8	67959	Infrastructure	2010	25,000	0.6
9	64076	Emergency Services Center (EPG)	2008	14,700	3.4
10	65448	Network Operations Center (part of PEO EIS)	2010	21,525	0.3
11	65447	USANCA ^b Support Facility	2008	20,000	n/a
12	55661	Child Development Center (NGA)	2011	19,590	0.5
13	55662	Child Development Center	2011	24,036	0.6
14	65450	Administrative Facility (Bldgs 211, 214, 215, 220)	2011	133,000	0.0
15	63571	Access Road/Control Point	2009	280	8.2
16	66228	AMC ^c Relocatables	2007	230,000	0.0
17	65592/67231	PEO EIS Administrative Facility	2008	290,000	2.2
17	67231	PEO EIS Administrative Facility	2008	157,400	1.2
18	54347	Structured Parking Facility, 200 Area	2011	n/a	1.0
19	62892	Modernize Barracks	2011	171,000	n/a
20	54898	MWR ^d Family Travel Camp	2007–2010	1658	1.5

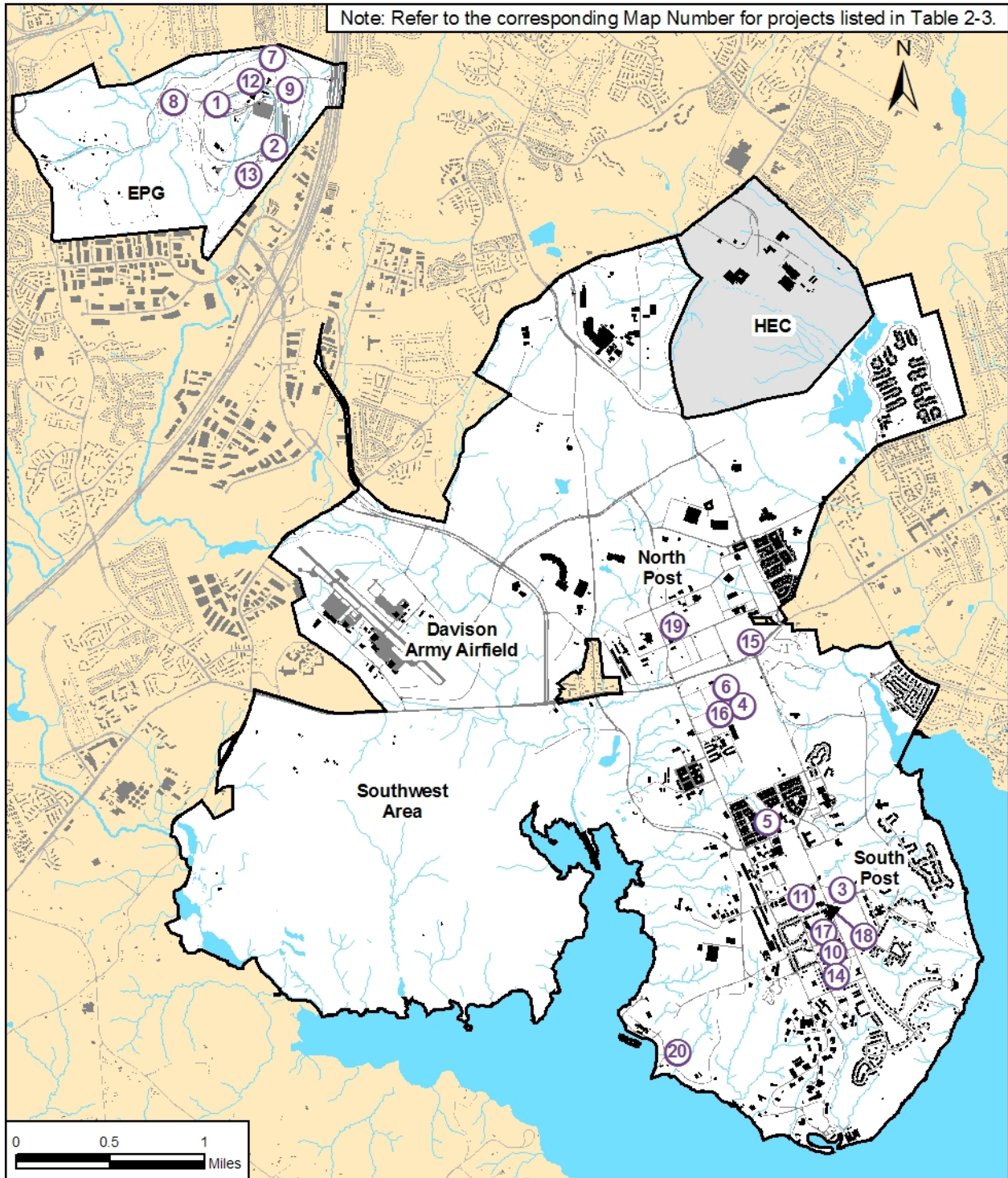
Notes: Project number is the construction project number assigned by the Army. Estimated impervious footprint acreage column was calculated based on the estimated number of building floors and adjacent parking spaces for each project. Parking garages were assumed for the larger projects.

^aNorth Atlantic Regional Medical Center

^bU.S. Army Nuclear and Chemical Agency

^cArmy Materiel Command

^dMorale, Welfare, and Recreation



LEGEND

- Installation Property
- ⑧ Map Number

Construction Project Locations

Fort Belvoir, Virginia

Sources: Fort Belvoir GIS, 2006; Fairfax County GIS, 2006.

Figure 2-3

The following paragraphs provide details on facility construction and renovation projects listed in Table 2-3 that are proposed to occur through fiscal year 2011.

- *NGA Administrative Facility* (Project number 65416, FY 2007-2011, Map number [MN] 1 in Figure 2-6). This project would provide a 2,419,000-square-foot Sensitive Compartmented Information Facility (SCIF) for use by the NGA. This project is required to implement the BRAC 2005 recommendation to consolidate NGA intelligence and training operations; provide a secure facility to enhance command and control; promote acquisition, assimilation, and analysis of real-time intelligence; and enhance organizational productivity and intra-agency connectivity and operability. NGA elements are currently housed in numerous government-owned and leased facilities in and around the NCR. Their physical separation negatively affects their intelligence mission. There are no existing facilities at Fort Belvoir sufficient to support consolidation of all NGA intelligence operations, administrative functions, and training programs.
- *WHS Administrative Facility* (64234, FY 2008–2010, MN 2). This project would provide 2,219,000 square feet of secure administrative space for various units, agencies, and activities relocating to Fort Belvoir from leased facilities in the NCR. The project would include uninterruptible power supply and standby power generation. It would provide facilities on a secure installation, thereby improving force protection. This project would consolidate a number of similar activities with a resultant improvement in coordination, information exchange, and productivity. Various DoD offices are in leased facilities, primarily in Arlington and Alexandria, Virginia. Most of these facilities do not meet minimal DoD antiterrorism/force protection (AT/FP) construction standards for setbacks, progressive collapse, laminated windows, and so on. The facilities are dispersed throughout the NCR, negatively affecting direct coordination.
- *MDA Facility* (MDA 580, FY 2008–2009, MN 3). This project would provide a 107,000 square-foot administrative facility to serve as the MDA Headquarters Command Center for approximately 292 personnel. The project would consist of a multistory reinforced concrete or structural steel building on concrete footings. Functional areas that would be provided include administrative space, command suite, security operations center, sensitive compartmentalized information facilities, special access areas, and meeting rooms. AT/FP measures would include building standoff distances, structural preventive collapse, laminated glass, lighting, bollards, and control gates.
- *Hospital* (64238, 65676, and 65677, FY 2008–2010, MN 4). This project would provide a new hospital. Primary facilities would include the hospital (868,800 square feet), special foundations, central energy plant, helipad, ambulance shelter (2,200 square feet), vehicle parking garage, and building information systems. This project is required to provide a hospital to support BRAC 2005 restationing actions within the NCR affecting Walter Reed Army Medical Center (WRAMC) in Washington, D.C.; National Naval Medical Center (NNMC) at Bethesda; Malcolm Grow Medical Center (MGMC) at Andrews Air Force Base; and Dewitt Army Community Hospital at Fort Belvoir. This project is required for integrating WRAMC and NNMC and for establishing the new Walter Reed National Military Medical Center at Bethesda and a large Army community hospital at Fort Belvoir. The NCR medical service market supports care for more than 439,000 beneficiaries. A robust Army community hospital is required to support the relocation of nontertiary patient care functions consequent to the BRAC 2005 restationing actions, which include the closure of WRAMC and closure of inpatient care at MGMC. The restationing actions result in a growth of the NCR South Submarket (supported by a new Army community hospital) of more than 76,000 eligible beneficiaries to a total of

220,803 beneficiaries; a tripling of inpatient workload to more than 9,500 annual admissions; and a doubling of outpatient care, most of which is specialty care. The existing DeWitt Army Community Hospital at Fort Belvoir was constructed in 1957 as a 250-bed inpatient facility and still has the original heating, ventilating, and air conditioning system; plumbing system; medical gas system; and electrical distribution system. The building structure remains intact and usable, but the facility and its major utility systems fall far short of meeting the requirements of a modern medical treatment facility. Outpatient care must be performed in areas designed for inpatient care, resulting in personnel and space inefficiency and patient inconvenience. There are asbestos-containing materials in the existing pipe insulation, floor tile, and mastic at various locations, which significantly delays and escalates the cost of projects to upgrade and improve the facility.

- *Dental Clinic* (64241, FY 2010-2011, MN 5). This project would provide renovation of, and construction to add to, Building 1099 for a 16,000-square-foot dental clinic. The project is required to provide a quality dental clinic to support BRAC 2005 restationing actions of assigned troops working and living on or near Fort Belvoir. The existing facility, Building 1099, is not large enough to provide 40 dental treatment rooms, the necessary number to serve the larger population at Fort Belvoir. There is no available capacity elsewhere to support the increase in dental workload generated by the projected increase at Fort Belvoir of 4,200 active duty Soldiers as directed by the BRAC 2005 restationing actions.
- *NARMC HQ Building* (65871, FY 2009, MN 6). This project would construct a 50,000-square-foot general administration building for the North Atlantic Regional Medical Command (NARMC), as well as other Office of the Secretary of Defense Supporting Units and regional support offices, such as the North Atlantic Regional Dental Command, North Atlantic Regional Veterinary Command, and the North Atlantic Regional Contracting Office. The project is required to provide administrative and operational space for activities to be relocated to Fort Belvoir in accordance with the recommendations of BRAC 2005. Related medical administrative activities are currently located at the WRAMC, Washington, D.C. Currently, there is no adequate, permanent administrative space available at Fort Belvoir to accommodate proposed relocations of medical activities. This project would accommodate such activities by constructing a new, permanent multi-story administrative facility at Fort Belvoir within the proposed hospital campus.
- *Corps of Engineers Project Integration Offices (Temporary)* (FY 2007, MN 7). This project would place temporary facilities for personnel of the Baltimore District Corps of Engineers Integration Office, which would provide integration of BRAC construction management for facilities being developed to accommodate realigned units, agencies, and activities. There would be approximately 22,500 square feet of temporary facilities (relocatable buildings) on EPG, north of Cissna Road and northwest of Building 5073. There would be another 36,100 square feet of temporary facilities on the northwest portion of the South Post golf course. These facilities would be in use for the duration of facilities construction in support of BRAC requirements.
- *Infrastructure* (64097, 67487, and 67959, FY 2008–2010, MN 8). These three projects would provide a 25,000-square-foot communications center, access control facilities, one 10,000-square-foot heating plant building, one 10,000-square foot refrigeration and air conditioning unit, and water, sewer, and electrical services for the EPG. The projects include demolishing 57,000 square feet of existing space. They are required to provide necessary infrastructure for units, agencies, and activities relocating to EPG and to

maintain adequate levels of infrastructure support at Main Post. Current infrastructure at EPG is minimal. There is no access control, and heating and air conditioning is provided through self-contained systems adequate to support only past or current use requirements. Communications are virtually nonexistent. The road network consists of a two-lane road in poor condition. The Bailey Bridge over Accotink Creek is structurally compromised and is closed to vehicular traffic. The projects would provide replacement of the present bridge over Accotink Creek, as well as an additional bridge over Accotink and replacement of the bridge over Dogue Creek (South Post). Water, sanitary sewer, and electrical support are sized to the one occupied building. The perimeter fencing is in such poor condition that it affords little impediment to unauthorized access. Table 2-4 identifies the principal elements of infrastructure included in these projects, as well as infrastructure that would be constructed or installed in support of Main Post requirements.

- *Emergency Services Center* (64076, FY 2008, MN 9). This project would provide 14,700 square feet of space and 15,000 square yards of maintenance apron for emergency services functions at EPG. The project is required to provide military police, Enhanced 911, hazardous materials response, and fire prevention and protection services at EPG in support of the facilities proposed to be constructed to implement BRAC 2005. The project would provide a combined police and fire station to provide traffic control and law enforcement in support of the agencies and activities on EPG and to provide rapid response to structural fires and medical emergencies. Currently, there is no police or fire station at EPG. There are three fire stations at Fort Belvoir—Building 191 constructed in 1934 and in poor condition, Building 2119 constructed in 1993, and Building 3242 constructed in 2003 at Davison Army Airfield. The military police station, Building 2124, was constructed in 2002. Because of their physical separation, none of these facilities is adequate to support EPG with emergency services. The fire stations are too far away to meet minimum response times. The police station is capable of supporting EPG with patrols but is too distant to effectively deliver any other law enforcement services.
- *Network Operations Center* (part of PEO EIS) (65448, FY 2010, MN 10). This project would provide a 6,525-square-foot operations center, a 10,000-square-foot storage area, and a 14,000-square-yard satellite yard. The project is required to provide satellite test facilities in support of the BRAC 2005 recommendation to station Project Manager Defense Communications and Army Transmission Systems (PM DCATS) at Fort Belvoir. There are no facilities at Fort Belvoir to support satellite testing and stationing of PM DCATS.
- *USANCA Support Facility* (65447, FY 2008, MN 11). This project, which would approximately 20,000 square feet of renovated spaced in Building 238 required to support additional U.S. Army Nuclear and Chemical Agency (USANCA) personnel as part of BRAC 2005. The project would provide replacement facilities for the USANCA facilities on EPG, thereby allowing construction of multimillion-square-foot campuses for units, agencies, and activities relocating to EPG. USANCA is the unit charged with providing the Army's core critical nuclear and chemical expertise. Primary USANCA missions include enhanced force survivability in nuclear, biological, and chemical (NBC) environments; communication of the impact of nuclear and other weapons of mass destruction on military operations; enhanced interoperability of forces in NBC environments; planning Army employment of and assessing vulnerability to nuclear weapons; safe and secure storage and demilitarization of the DoD chemical weapons stockpile; and safe and secure operation and maintenance of Army nuclear reactors,

active or deactivated. USANCA now occupies Building 5073, a 13,618-square-foot facility constructed in 1954 at the EPG. Building 5073 is in the center of the most developable portion of EPG. Its location and associated access and force-protection issues significantly reduce possible development in support of BRAC 2005.

- *Child Development Center (NGA)* (55661, FY 2011, MN 12). This project would provide a child development center with 19,590 square feet of space and a 24,430 square-foot outdoor area for 244 children. The project is required to provide a safe, healthy, and affordable developmental environment for dependent children of eligible personnel assigned to EPG. This project would improve morale and performance by providing affordable, on-site developmental services, thereby improving employees' peace of mind and reducing the time of daily commutes. There are currently three child development centers at Fort Belvoir. They are in Buildings 1028, 1745, and 2468, which were constructed in 1988, 1992, and 1997, respectively. Though in relatively good condition, the facilities are at or near capacity, with waiting lists for some categories of services.
- *Child Development Center* (55662, FY 2011, MN 13). This project would provide a child development center with 24,000 square feet of space and a 40,300-square-foot outdoor area for 303 children. See the description for the similar project MN 12 above.
- *Administrative Facility* (Buildings 211, 214, 215, and 220) (65450, FY 2011, MN 14). This project is required to implement BRAC 2005 by modernizing existing facilities to provide 133,000 square feet of general and secure administrative space and structured parking for various units, agencies, and activities relocating to Fort Belvoir from leased facilities in the NCR. This project would provide facilities on a secure installation, thereby improving force protection. It would consolidate a number of similar activities, improving coordination, information exchange, and productivity. Currently, the following are in leased facilities, primarily in Arlington and Alexandria, Virginia: administrative assistants to the Secretary of the Army (SA); Office of the Assistant SA Financial Management and Comptroller; Office of the Chief of Chaplains; Communication and Electronics Command; Defense Finance and Accounting Service; Defense Human Resource Activities; Defense Technology Security Administration; Department of Defense Education Activity; Deputy Under SA—Operations Research; DoD Inspector General; MDA HQCC; Office of the Secretary of Defense; PM Acquisition, Logistics, and Technology Enterprise Systems and Services; Senior Executive Public Affairs Training; U.S. Army Audit Agency; U.S. Army Environmental Policy Institute; U.S. Army G1/Army Research Institute; U.S. Army G1/Civilian Personnel Office; U.S. Army G3/Army Simulation; U.S. Army G6; U.S. Army G8/Force Development; U.S. Army Network Enterprise Technology Command; U.S. Army Office of Environmental Technology; U.S. Army Office of the Chief of Army Reserve; U.S. Army Safety Office; U.S. G1/Personnel Transformation; and U.S. Army Legal Services Agency. The majority of these facilities do not meet minimal DoD AT/FP construction standards for setbacks, progressive collapse, laminated windows and the like. The facilities are dispersed throughout the NCR, negatively affecting direct coordination.
- *Access Road/Control Point* (63571, FY 2009, MN 15). This project would construct an access control point (ACP) with vehicle inspection station; access control building (280 square feet); booth, and canopy, vehicle turnarounds; security lighting; backup generator; two-lane access road (306,000 square feet) with sidewalks/bike path; street lighting; drainage; traffic signal; and Richmond Highway (U.S. Route 1) left and right turns. The ACP, directly across Richmond Highway from Pence Gate, is required to provide safe force protection-compliant controlled access from Richmond Highway onto Fort Belvoir North Post. It would provide an ACP meeting DoD AT/FP construction standards with

sufficient marshalling area and an adequate vehicle inspection station. This project is required to provide a second access onto North Post reducing congestion on Gunston Road and providing alternate access during periods of force protection conditions Charlie and Delta. The only access point from U.S. Route 1 onto North Post is Woodlawn Gate (Route 618). Woodlawn Gate is currently closed. The existing ACP is inadequate. Constructed after the September 11, 2001, terrorist attack, the ACP meets minimal DoD criteria for an ACP; however, the staging area is inadequate, the vehicle inspection station is temporary, the guard post is not hardened, and there is no overhead cover. The configuration of the ACP places the guard force at risk of being hit by vehicles while performing their force protection duties. If this project is not provided, the level of service on U.S. Route 1 would be such that there would be a breakdown in traffic flow resulting in extreme congestion during peak periods. AT/FP would not be provided in accordance with DoD standards. Traffic flow would be degraded, control and inspection of vehicles and personnel entering the installation would be inadequate, and military and contract law enforcement personnel would continue to be at risk from inadequate separation from vehicles and inadequate protective facilities.

- *AMC Relocatables* (66228, FY 2007, MN 16). This project would purchase the facilities at Fort Belvoir that were leased to house the headquarters function of the U.S. Army Materiel Command (AMC). The facilities consist of two modular, two-story office buildings having a total of 230,000 square feet of space. The buildings include open and closed office space, along with special-purpose areas like an Emergency Operations Center (EOC), SCIF, auditorium, secure and nonsecure conference rooms, video teleconference center, technical library, data process center, and office support space. The facilities, located along Gunston Road, will be vacated upon the tenant's relocation to Redstone Arsenal, Alabama, as required by BRAC 2005. Several Fort Belvoir tenants occupy buildings that do not meet minimum requirements. Inadequate office space negatively affects individual job performance, as does lack of special use space such as training and conference rooms, on-site storage, video conferencing, and so on. In addition, one-tenth of the general-purpose administrative space inventory is inadequate and exacerbates space deficit impacts. Fort Belvoir anticipates that its working population increase will place a further strain on the capacity of the general-purpose administrative space inventory. The two two-story, contractor-owned buildings are available for purchase.
- *PEO EIS Administrative Facility* (65592 and 67231, FY 2007, MN 17). Project Number 65592 would provide 290,000 square feet of general administrative space and a parking garage, and Project Number 67321 would provide an additional 157,400 square feet of secure administrative space. The projects are required to accommodate elements of PEO EIS relocating to Fort Belvoir as a consequence of BRAC 2005 and to consolidate operations to enhance operational efficiencies and to reduce total square footage requirements. Approximately 370 personnel assigned to PEO EIS are at the post in Building 1445 (a converted barracks and dining facility constructed in 1969) and Buildings 322 and 323 (World War II facilities originally constructed as vehicle maintenance shops). Another 454 personnel are at Fort Monmouth, and 802 personnel are in leased space in the NCR. Overall mission performance is degraded by the physical separation of activities, and the lack of adequate space negatively affects mission readiness.
- *Structured Parking Facility, 200 Area* (54347, FY 2011, MN 18). This project would construct a parking structure with a capacity of 400 parking spaces in the 200 Area of Fort Belvoir. The structure would be constructed of reinforced concrete with structural

steel framing, and it would have parking decks and a sloped interior ramp system. Fort Belvoir is required to provide parking for both its military personnel and civilian workforce. Based on 60 percent of the working population in this area, 1,730 parking spaces are required to accommodate vehicle parking. The 200 Area is extensively used by Defense Systems Management College and numerous administrative activities. Parking in this area is extremely inadequate. All land suitable for parking is being used, and there is no room for expansion. The only means of accommodating the shortfall of parking spaces is to construct a parking structure on the existing area. If the project is not provided, the lack of adequate parking will continue to adversely affect the morale and efficiency of personnel who work or conduct business the 200 Area.

- *Modernize Barracks* (62892, FY 2011, MN 19). This project would provide renovations to 171,000 square feet of space in six barracks buildings in the McRee Barracks Complex. Renovation work would extend to living modules, hallways, stairwells, utilities, fire alarms and suppression systems, and building information systems. The existing barracks do not meet current standards for privacy, space, or amenities. The barracks are severely deteriorated. Inadequate heating, air conditioning, and ventilation systems contribute to mold growth and unhealthy living conditions.
- *MWR Family Travel Camp* (54898, FY 2007–2010, MN 20). This project would provide a Family Travel Camp with 52 recreational vehicle (RV) campsites, a camp support facility, 15 cabins, and 12 tent sites in four phases, each of which would be usable upon completion. The camp support facility would include a laundry section, camper's lounge space, restrooms and showers, and vending machine space. The project would also include relocating the existing Johnson Road to provide better camp circulation and space, landscaping, site lighting, sewage lift stations, and utility upgrades. Provisions for persons with disabilities would be provided. This project is required to provide adequate outdoor camping opportunities for the Belvoir/NCR customers. The project would provide for the high demand for RV camp sites, and for those looking for cabin camping opportunities. This project would enhance the morale and quality of life of Soldiers, family members, retirees, and DoD civilians. Currently, there are no family travel campgrounds on-post for customers assigned to or supported by Fort Belvoir, or for those visiting the area. Customers are forced to seek service from commercially operated facilities that are overcrowded in the peak travel times, have higher cost, and are an average of 45 minutes from Washington, D.C.

2.2.2.4 Schedule

Implementation of the various aspects of the proposed actions would occur until approximately the end of fiscal year 2011. Actions with respect to the land use plan revision would begin upon issuance of the EIS ROD and continue until further revision of the master plan. Construction and renovation of facilities in support of base realignment and other requirements of Fort Belvoir would begin in fiscal year 2007 and continue through fiscal year 2011.

2.3 DESCRIPTION OF ALTERNATIVES RETAINED FOR DETAILED CONSIDERATION

In June and July 2006, the Army considered three conceptual development strategies for accommodating the increase in units, agencies, and activities associated with base realignment at Fort Belvoir. The strategies, named in a manner suggesting the principal concept of each, were identified as *Town Center*, *City Center*, and *Satellite Campuses*. Each strategy had two alternative plans for allocating land to specific functions (e.g., NGA, Army Lease) being

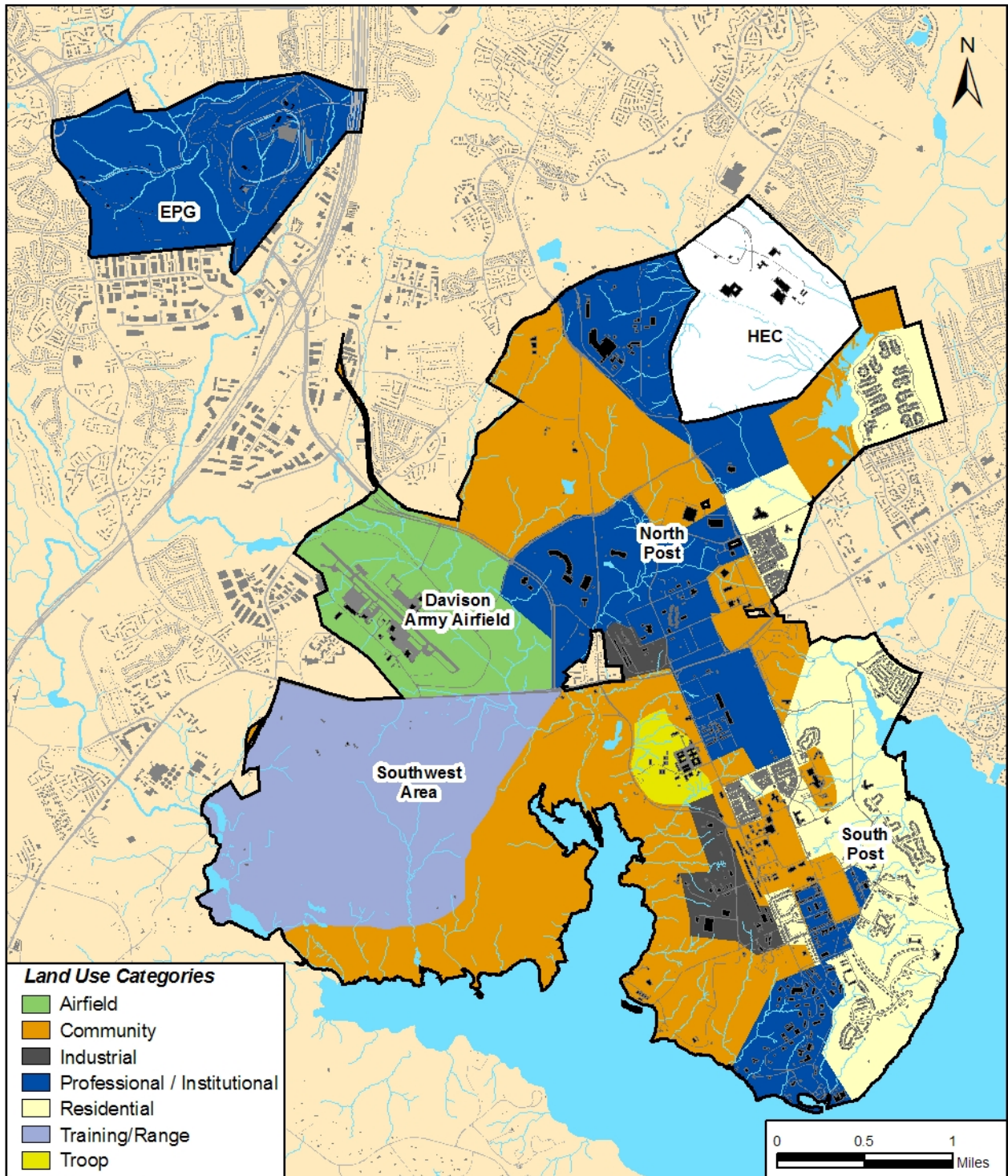
realigned to Fort Belvoir; thus, the Army considered six different ways to meet base realignment requirements.

The following sections present alternatives related to each of the strategies. Also presented is the preferred alternative which emerged as a hybrid of the three conceptual development strategies.

2.3.1 Town Center

Under the Town Center alternative, the majority of new facilities to accommodate base realignment would be sited between J.J. Kingman Road on North Post and 12th Street on South Post. Developed areas bounded by 16th and 21st Streets and Gunston Road and Belvoir Road would be available for future redevelopment. The EPG, Davison Army Airfield, and the North Post golf course would remain available for future growth after 2011. Figure 2-4 shows the Town Center alternative. For land use planning, several land parcels affected by the Town Center strategy would be redesignated for Professional/Institutional or Community uses. Accommodation of BRAC realignments under this alternative would result in the following major sitings:

- NGA and associated parking structures would be sited in the area bounded by Route 1, Belvoir Road, 9th Street, and Gunston Road. This would be facilitated by changing the South Post golf course land use designation from Community to Professional/Institutional.



LEGEND
 □ Installation Property

Town Center Conceptual Development

Fort Belvoir, Virginia

Sources: Fort Belvoir GIS, 2006; Fairfax County GIS, 2006.

Figure 2-4

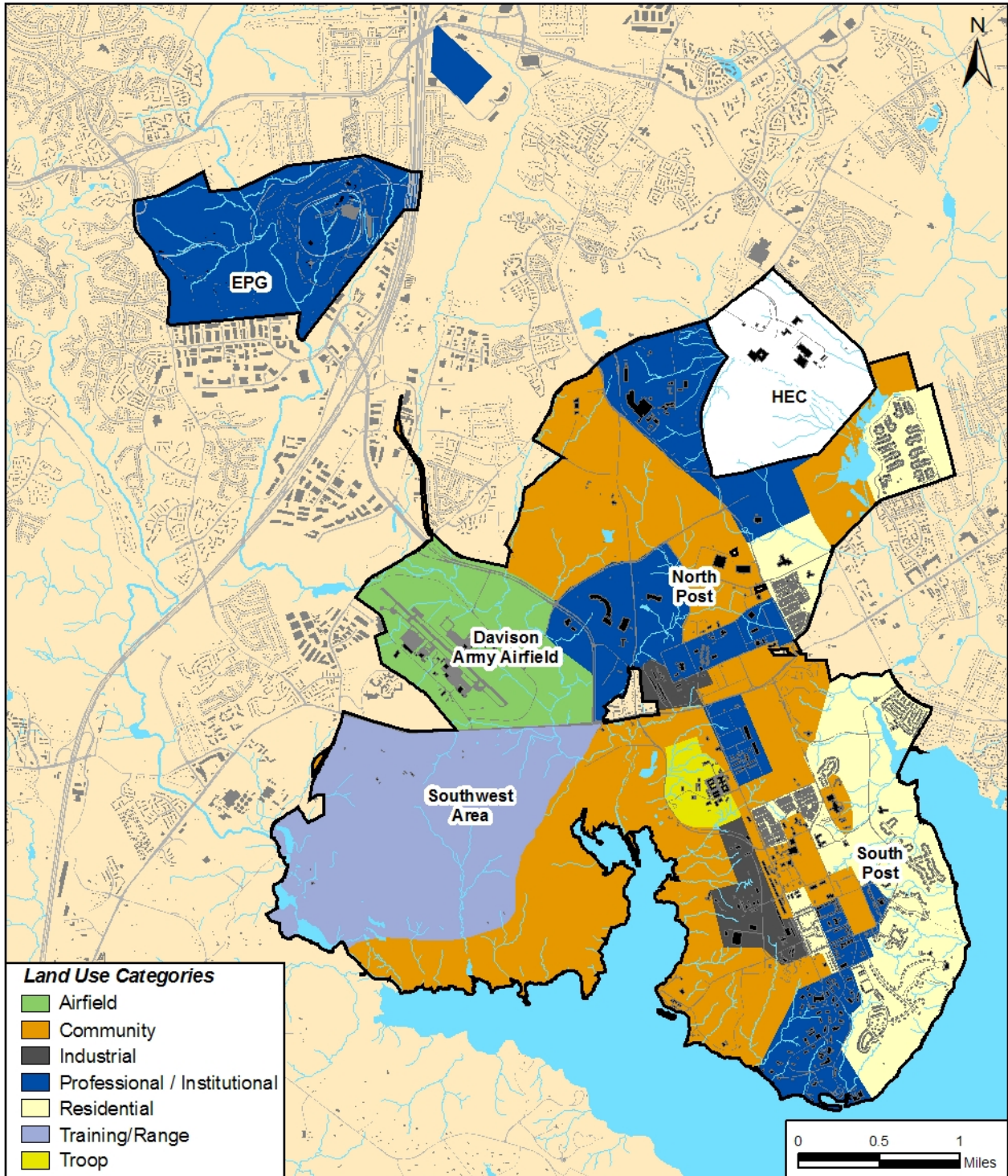
- WHS and associated parking structures would be sited in the area bounded by Route 1, Belvoir Road, 9th Street, and Gunston Road and in the adjacent area north of Route 1 that is bounded by Constitution Drive, Route 1, and Gunston, Abbot, and Beauregard Roads. This would be facilitated by changing the South Post golf course land use designation from Community to Professional/Institutional and by changing the land use designations north of Route 1 from Community and Troop to Professional/Institution.
- Army Lease and associated parking structures would be sited on North Post, in the southern half of the area bounded by Woodlawn, Abbott, Gunston, and J.J. Kingman Roads. This would be facilitated by changing the present land use designations from Community to Professional/Institutional. Army Lease would also be located in the 200 area, in the northwest quadrant of the intersection of Belvoir Road and 21st Street.
- Medical Command and MDA and associated parking structures would be sited in the area that is bounded by Constitution Drive, Route 1, and Gunston, Abbot, and Beauregard Roads. This would be facilitated by changing the land use designations north of Route 1 from Community and Troop to Professional/Institution.
- PEO EIS and associated parking structures would be sited on North Post, in the southern half of the area bounded by Woodlawn, Abbott, Gunston, and J.J. Kingman Roads. This would be facilitated by changing the present land use designations from Community to Professional/Institutional.

Since EPG would not be developed in order to accomplish BRAC realignment actions, the proposed emergency services center project and much of the infrastructure project would not be required and would not proceed at EPG. Under this alternative, areas of EPG west of Accotink Creek would be designated for Community use, and areas east of the creek would be designated for Professional/Institutional use to support future development.

2.3.2 City Center

Under the City Center alternative, all new facilities to accommodate base realignment would be sited on EPG and a nearby 65-acre parcel currently occupied by the General Services Administration (GSA). North and South Posts at Fort Belvoir would remain available for future growth after 2011. Figure 2-5 shows the City Center alternative. For land use planning, parcels affected by the City Center alternative would be redesignated for Professional/Institutional use. Accommodation of BRAC realignments under this alternative would result in the following major sitings:

- NGA, Army Lease, Medical Command, PEO EIS, and MDA and associated parking structures would be sited at EPG.
- Portions of Army Lease would be sited in existing facilities along the east side of Gunston Road between Route 1 and 9th Street, and in the northwest quadrant of the intersection of Belvoir Road and 21st Street. Units, agencies, and activities that could not be assigned to the existing facilities would occupy EPG.
- WHS would be sited at the GSA parcel on Loisdale Road.



LEGEND
 □ Installation Property

City Center Conceptual Development

Fort Belvoir, Virginia

Sources: Fort Belvoir GIS, 2006; Fairfax County GIS, 2006.

Figure 2-5

Army adoption of the City Center alternative would require measures not inherent in other alternatives. The Army would expect GSA to vacate its facilities, relocate GSA functions to other facilities at a location other than Fort Belvoir,¹ demolish all existing structures, conduct any cleanup required under hazardous waste laws, and transfer administrative control of the property to the Army. These actions would have to occur within a timeframe that would provide the Army sufficient time to construct facilities for WHS use.

2.3.3 Satellite Campuses

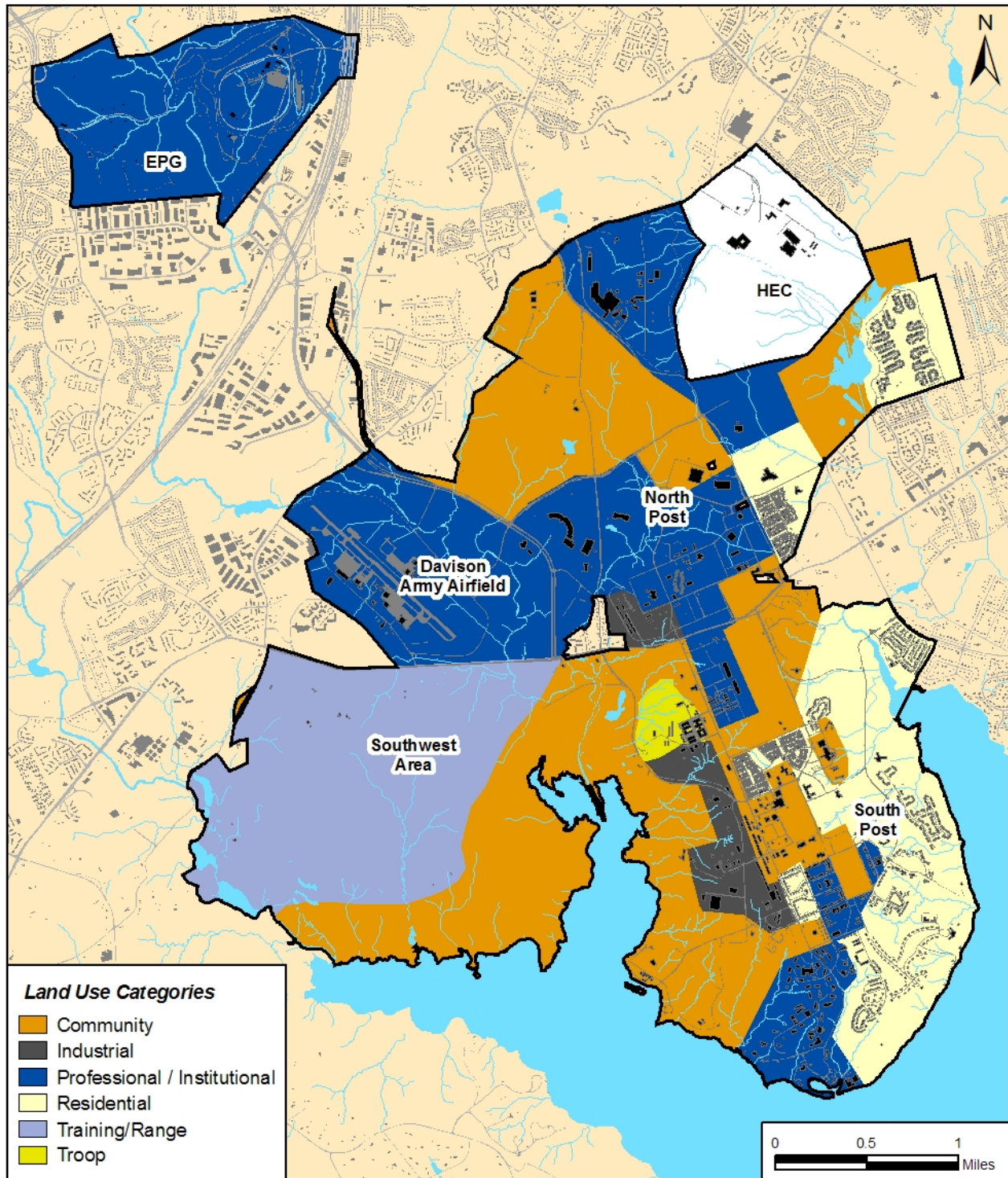
Under the Satellite Campuses alternative, new facilities to accommodate base realignment would be sited on Davison Army Airfield, North Post golf course, and North Post and South Post (from Kingman Road to 12th Street). Figure 2-6 shows the Satellite Campuses alternative. For land use planning, land parcels affected by the Satellite Campuses strategy would be redesignated for Professional/Institutional or Community uses. Accommodation of BRAC realignments under this alternative would result in the following major sitings:

- NGA and associated parking structures would be sited at Davidson Army Airfield. This would be facilitated by changing the present land use designations from Airfield to Professional/Institutional.
- WHS and MDA and associated parking structures would be sited in the North Post area that is bounded by Constitution Drive, Route 1, and Gunston, Abbott, and Beauregard Roads. This would be facilitated by changing the land use designations north of Route 1 from Community and Troop to Professional/Institution.
- Army Lease would be sited in existing facilities along the east side of Gunston Road between Route 1 and 9th Street, and in the northwest quadrant of the intersection of Belvoir Road and 21st Street in renovated facilities.
- Medical Command and associated parking structures would be sited on the southern portion of the North Post golf course. This would be facilitated by changing the land use designation from Recreation to Community.
- PEO EIS and associated parking structures would be sited on North Post, in the southern half of the area bounded by Woodlawn, Abbot, Gunston, and J.J. Kingman Roads. This would be facilitated by changing the present land use designations from Community to Professional/Institutional.

2.3.4 Preferred Alternative

Consideration of the Town Center, City Center, and Satellite Campuses conceptual development strategies resulted in a determination that any single strategy was insufficient to meet Fort Belvoir's base realignment needs. The Army reached this determination based on giving high priority to traffic-related issues and development density; specifically, use of EPG for all base realignment units, agencies, and activities would have resulted in development densities that

¹The Army estimates that relocation of GSA warehouse functions would require a site of 40 to 60 acres. In areas classified for industrial use, no such site is available at Fort Belvoir.



LEGEND
□ Installation Property

Satellite Campuses Conceptual Development

Fort Belvoir, Virginia

Figure 2-6

Sources: Fort Belvoir GIS, 2006; Fairfax County GIS, 2006.

might not be supportable due to traffic congestion. In light of these circumstances, the Army identified the Preferred Land Use Strategy.

The Preferred Land Use Plan contains two sub-alternatives with respect to the present and proposed Troop Area. The proposed plan would change the Troop Area on North Post to Professional/Institutional uses and create a new Troop Area on South Post in an Industrial area (the western portion of the 1400 area) along Gunston Road. Availability of funding, however, might cause current uses in the present and proposed Troop Areas to continue for an indeterminate period.

2.4 ALTERNATIVES FOR BRAC IMPLEMENTATION

The Defense Base Closure and Realignment Act requires implementation of base realignment actions by not later than September 15, 2011, 6 years following the President's sending the BRAC Commission's recommendation to Congress. Because those recommendations became law effective November 9, 2005, the Army is required to implement them in accordance with their terms. Consideration of alternatives such as not relocating personnel or relocating them to other installations is not legally permissible.

The implementation of base realignment at Fort Belvoir essentially centers on what facilities must be provided, where those facilities would be sited, and which personnel would be assigned to new or renovated facilities. The determinations on these matters are, in large part, guided by the post's land use plan, which identifies areas appropriate for Professional/Institutional purposes. This GCD examines four land use plan alternatives that serve as the surrogate for alternative means of accommodating the units, agencies, and activities being relocated. No other alternatives to BRAC implementation are evaluated in this GCD.

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SECTION 3.0 GENERAL CONFORMITY

In November 1993 EPA promulgated two sets of conformity rules to implement Section 176(c) of the CAA—Transportation Conformity Rules (58 FR 62188) and General Conformity Rules (58 FR 63214). The Transportation Conformity Rules are applicable to highways and mass transit projects within non-attainment areas and establish the criteria and procedures for determining that transportation plans, programs, and projects that are funded under Title 23 of the U.S.C., or the Federal Transit Act, conform to SIPs. Projects adopted, accepted, approved, or funded by the Federal Highway Administration (FHWA) or the Federal Transit Authority (FTA) must be included in a conforming transportation improvement plan (TIP). Because the Proposed Action and Alternatives are not transportation projects and not adopted, accepted, approved, or funded by the FHWA or FTA, the Transportation Conformity Rules do not apply.

The General Conformity Rules (GCR) are applicable to all federal actions within non-attainment areas that are not covered by the Transportation Conformity Rules. Because the proposed Fort Belvoir BRAC action is a non-transportation project supported by a federal agency, compliance with the GCR must be assessed. Notably, some actions are exempt from the GCR. In addition to exempt actions, some other action-related emissions are also not subject to conformity. These include emissions from sources subject to New Source Review; those covered by the Comprehensive Environmental Response, Compensation, and Liability Act or by other environmental laws; actions that are not reasonable foreseeable; and those for which federal agencies would have no continuing program responsibility.

Fort Belvoir is within Fairfax County, Virginia. Fairfax County is included in an area that EPA has designated as in moderate non-attainment for the 8-hour O₃ NAAQS and in non-attainment for the PM_{2.5} NAAQS.

EPA had designated Fairfax County as within a severe non-attainment area for the 1-hour O₃ NAAQS (56 FR 56694). In April 2004, EPA published the final rules that are guiding the implementation of a new 8-hour O₃ NAAQS (69 FR 23951). These rules specified that the 1-hour NAAQS would be revoked on June 15, 2005 (69 FR 23954 and 69 FR 23858). The mandated date by which the area is to attain the 8-hour NAAQS is June 15, 2010. Areas are not obligated to continue to demonstrate conformity to the 1-hour O₃ NAAQS as of the effective date of the revocation of the 1-hour NAAQS (June 15, 2005). At that time, conformity to the 8-hour O₃ NAAQS became required. Until such time that states are required to submit SIPs that will address the 8-hour O₃ NAAQS (2007), the SIP that addresses the 1-hour O₃ NAAQS is the “applicable” SIP. In addition, in December of 2006 a federal appellate court partially invalidated EPA’s implementation of the 8-hour ozone standard (United States Court of Appeals 2006). As of this time, no changes in effective regulations or guidances have been issued based on this court decision.

On December 17, 2004, EPA designated areas of the United States with respect to the NAAQS for PM_{2.5} (70 FR 944). The CAA mandates areas designated non-attainment for fine particulate matter to attain the NAAQS for this pollutant by no later than the year 2010.

Finally, there are areas within the NCR designated as maintenance areas for carbon monoxide. These areas include Washington, D.C.; Arlington County; Alexandria; and parts of Montgomery and Prince George counties (MWCOG 2004). None of these areas encompasses (partially or wholly) Fort Belvoir.

Fairfax County (and, therefore, Fort Belvoir) is designated in attainment for all other criteria air pollutants. Table 3-1 summarizes the air quality status of Fairfax County with respect to the NAAQS.

**Table 3-1
Attainment status of Fairfax County and Fort Belvoir**

Pollutant	Designation	Mandated Attainment Year
Carbon monoxide	Attainment	NA
Nitrogen dioxide	Attainment	NA
O ₃	Non-attainment (moderate)	2010
PM ₁₀	Attainment	NA
PM _{2.5}	Non-attainment	2010
Sulfur dioxide	Attainment	NA
Lead	Attainment	NA

Notes: NA = not applicable.

PM₁₀ = particulate matter 10 microns or less in size.

PM_{2.5} = particulate matter 2.5 microns or less in size.

Source: 40 CFR Part 81, Air Quality Designations and Classifications.

For the purpose of the Fort Belvoir BRAC GCD, the following discussion of conformity is limited to the air pollutants and criteria that are applicable to the National Capital Interstate Air Quality Control Region and, specifically, Fort Belvoir. The criteria for determining whether the GCR apply or the action conforms to the applicable SIP are as follows:

- Total project-related direct and indirect emissions are below applicability threshold levels *or*
- Total project-related direct and indirect emissions are specifically identified and accounted for in the SIP *or*
- The total project-related emissions from the action(s) are fully offset within the same non-attainment or maintenance area through a revision to the SIP, or similarly enforceable measure, that effects emission reductions so that there is no net increase in emissions of that pollutant *or*
- VDEQ determines that the level of emissions, which together with all other emissions in the non-attainment (or maintenance) area, would not exceed the emission targets specified in the SIP, *or*
- VDEQ commits to include the project-related emissions in the upcoming SIP and to accommodate the increased emissions by achieving reductions from other sources *or*
- Any combination of the above.

Emissions associated with BRAC-related programs are not typically identified or accounted for in SIPs. Therefore, guidance issued by EPA states that if emissions are not readily identifiable in a SIP inventory, the federal agency should coordinate with the state to determine what portion of a category, if any, could or would be allocated to any given project. The determination of whether

a project/action is specifically identified in a SIP is made case by case in consultation with the state/local air quality agency and the EPA regional office (USEPA and FAA 2002). The EPA guidance also states that if total emissions for the project/action are below the levels identified or accounted for in the SIP, it has been demonstrated that the project/action conforms to the applicable SIP.

3.1 EMISSIONS ESTIMATIONS AND METHODOLOGY

The GCR require the federal agency to consider 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 that the federal agency can practicably control. For the evaluation of the RPMP update and the Fort Belvoir realignment, direct emissions subject to the GCR are considered emissions from construction activities, motor vehicles, and point sources that are not large enough to be subject to the Major New Source Review permitting process (USEPA and FAA 2002). More specifically, project-related direct emissions would result from the following:

- *Demolition and construction activities:* the use of nonroad equipment (e.g., bulldozers, backhoes), worker vehicles, the use of VOC paints, paving off-gasses, and fugitive particles from surface disturbances
- *Operational activities:* Emergency generators and small heating boilers not subject to major new source review, and the use of private motor vehicles

No direct or indirect emissions are associated with the planning activities associated with the federal action; all direct and indirect emissions would be associated with the BRAC activities. Regardless of the alternative, all activities associated with the BRAC action that would generate direct and indirect emissions would be identical in magnitude and occur within the region. Slight variation in the siting of the new facilities on Fort Belvoir would not change the emission estimations, the applicability of the GCR, or the determination of conformity. Therefore, the Proposed Action and Alternatives were carried forward under a single analysis regardless of planning alternative.

The emissions from major new or modified stationary sources subject to the Major New Source Review will undergo analysis as part of the review required by those programs, and it is not necessary to include them in the general conformity review. The GCR specifically exempt those emissions (40 CFR 93.153(d)(1)).

Permits for minor stationary and area sources under VDEQ's new minor source review program are not specifically exempt from analysis under the regulations. To issue such a permit, however, VDEQ must determine that the emissions are in conformity with the SIP (40 CFR 51.160(a) and 9 VAC 5-160-160(5)(A)(1)). The permits, once issued, will demonstrate emissions from the minor permitted sources were determined and documented by the state agency primarily responsible for the applicable SIP to result in a level of emissions which, together with all other emissions in the nonattainment (or maintenance) area, would not exceed the emissions budgets specified in the applicable SIP. Therefore, the U.S. Army presumes that all stationary sources of emission subject to the permitting process will conform, and the U.S. Army will use the permit as evidence in documentation that the emissions are included in the SIP (40 CFR 3.158(a)(5)(i)(A)) (USEPA and FAA 2002) (VDEQ 2007). The only stationary units of air emissions carried

forward for detailed analysis are those small enough not to be subject to VDEQ's permitting procedures.

3.1.1 Demolition and Construction 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 tabulated in Table 3-2 for all the years of construction.

**Table 3-2
Estimated Construction Emissions**

Year	Construction Emissions (tons/yr)			
	NO _x	VOC	PM _{2.5}	SO ₂
2007	129	76	10	19
2008	323	188	21	48
2009	329	216	21	52
2010	374	238	26	63
2011	130	69	13	24

2007 Annual Construction Emissions				
Construction Activity	NO _x	VOC	PM _{2.5}	SO ₂
Heavy equipment emissions	128	12	8	19
Worker trip emissions	2	1	0	0
Architectural coating emissions	0	63	0	0
Paving off-gas emissions	0	0	0	0
Fugitive dust emissions	0	0	1	0
Total	129	76	10	19

2008 Annual Construction Emissions				
Construction Activity	NO _x	VOC	PM _{2.5}	SO ₂
Heavy equipment emissions	318	29	20	48
Worker trip emissions	5	4	0	0
Architectural coating emissions	0	155	0	0
Paving off-gas emissions	0	0	0	0
Fugitive dust emissions	0	0	1	0
Total	323	188	21	48

2009 Annual Construction Emissions				
Construction Activity	NO _x	VOC	PM _{2.5}	SO ₂
Heavy equipment emissions	323	29	20	52
Worker trip emissions	6	5	0	0
Architectural coating emissions	0	181	0	0
Paving off-gas emissions	0	0	0	0
Fugitive dust emissions	0	0	0	0
Total	329	216	21	52

Table 3-2
Estimated Construction Emissions (continued)

Year	Construction Emissions (tons/yr)			
	NO _x	VOC	PM _{2.5}	SO ₂
2010 Annual Construction Emissions Construction Activity				
Heavy equipment emissions	368	33	24	63
Worker trip emissions	6	6	0	0
Architectural coating emissions	0	200	0	0
Paving off-gas emissions	0	0	0	0
Fugitive dust emissions	0	0	1	0
Total	374	238	26	63
2011 Annual Construction Emissions Construction Activity				
Heavy equipment emissions	128	11	12	24
Worker trip emissions	2	2	0	0
Architectural coating emissions	0	56	0	0
Paving off-gas emissions	0	0	0	0
Fugitive dust emissions	0	0	1	0
Total	130	69	13	24

Note: Rounded to the nearest whole number.

This section also outlines all the calculations and assumptions made to derive these construction emission estimations.

3.1.1.1 Heavy Construction Equipment

Pollutant emissions resulting from activities associated with constructing the new 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, asphalt paving, and landscaping.

Demolition and construction would involve the use of various nonroad 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 EPA's *NONROAD2005 Emissions Model* (USEPA 2004). This model, which is the current EPA standard for nonroad vehicle emission, calculated emission factors based on information in the following documents:

- *Exhaust and Crankcase Emission Factors for Nonroad Engine Modeling—Compression-Ignition* (USEPA 2004a);
- *Exhaust Emission Factors for Nonroad Engine Modeling—Spark-Ignition* (USEPA 2004b);
- *Median Life, Annual Activity, and Load Factor Values for Nonroad Engine Emissions Modeling* (USEPA 2004c)
- *Nonroad Engine Population Estimates* (USEPA 2004d)

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, these total grams of pollutant were converted to tons of pollutant. The following formula was used to calculate hourly emissions from nonroad 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); and

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 3-3. In addition, estimated emissions from the potential demolition and construction are presented in Attachment 1.

Table 3-3
Estimated Annual Emissions from Construction and Demolition Equipment

Annual Emissions (tons/yr)				
Year	NO _x	VOC	PM _{2.5}	SO ₂
2007	127.6	11.7	8.1	18.5
2008	318.5	28.5	19.7	48.3
2009	323.4	29.4	20.4	51.9
2010	367.9	32.6	24.1	62.9
2011	127.8	11.2	11.5	23.5

Sources: USEPA *NONROAD2005*; SQAQMD 1993.

3.1.1.2 Construction Worker Vehicle Operations

The emissions due to construction worker vehicle use were included in the analysis. Emission factors for motor vehicles were conservatively calculated using the EPA *MOBILE6.2* mobile source emission factor model associated with input parameters provided by Metropolitan Washington Council of Government (MWCOCG 2004). 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 on post at an average speed of 35 miles per hour. The total annual emissions levels are summarized in Table 3-4.

**Table 3-4
Estimated Annual Emissions from Construction Worker Vehicles**

Annual Emissions (tons/yr)				
Year	NO _x	VOC	PM _{2.5}	SO ₂
2007	1.6	1.4	0.1	0.1
2008	4.8	4.5	0.2	0.1
2009	5.6	5.1	0.2	0.2
2010	6.2	5.7	0.2	0.2
2011	1.9	1.8	0.1	0.1

Sources: USEPA 2002, MOBILE6.2, SQAQMD 1993.

In addition, estimated emissions from the potential demolition and construction are presented in Attachment 1.

3.1.1.3 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. 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 three mils. 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 1,000 ft² for a dry film thickness of 1 mil;

G = total area to be coated (heated area x 2); and

H = dry film thickness (3 mils).

A sample calculation for an architectural coating VOC emissions during construction of example facility is provided below:

Heated area	= 100,000 ft ²	
Dry film thickness	= 3 mils	
Standard water-based paint	= 18.5 lb of VOCs per 1000 ft ² per for a dry film thickness of 1 mil	

$$E = [(18.5 \text{ [lb/1000 ft}^2\text{/mil]} \times (100,000 \text{ [ft}^2\text{]} \times 2) / 1000] \times 3 \text{ mils}] / 2,000 \text{ [lb/ton]} \\ = 2.77 \text{ tons}$$

The total annual emissions levels are summarized in Table 3-5. In addition, estimated emissions from the potential demolition and construction are presented in Attachment 1.

**Table 3-5
 Annual VOC Emissions from
 Architectural Coatings**

Year	Annual VOC Emissions (tons/yr)
2007	62.9
2008	155.2
2009	181.3
2010	200.0
2011	55.5

Source: SQAQMD 1993.

3.1.1.4 Asphalt Curing Emissions

Asphalt paving would generate emissions from (1) asphalt curing, (2) operation of on-site 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 on-site 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 anticipated for the on-site parking lot and new roadways. The following assumptions were used in VOC emission calculations for asphalt curing (SQAQMD 1993):

$$E = \text{area paved} \times 2.62 \text{ lb VOC/ac}$$

A sample calculation is provided below:

$$\text{Paved area} = 100 \text{ ac}$$

$$E = 100 \text{ ac} \times 2.62 \text{ lb VOC/ac} / 2000 \text{ lb/ton} \\ = 0.131 \text{ ton}$$

The total annual emissions levels are summarized in Table 3-6. In addition, estimated emissions from the potential demolition and construction are presented in Attachment 1.

**Table 3-6
 Annual VOC Emissions from Asphalt Curing**

Year	Annual VOC Emissions (tons/yr)
2007	0.00
2008	0.02
2009	0.03
2010	0.06
2011	0.06

Source: SQAQMD 1993.

3.1.1.5 Surface Disturbance

The quantity of dust emissions from construction operations is proportional to the area of land being worked and to the level of construction activity. The following assumptions were used in PM_{2.5} emission calculations for fugitive dust emissions (AP-42 Section 13.2.3; USEPA 2005c).

$$E = \text{open area} \times EF \times \text{PM}_{10}/\text{TSP} \times \text{PM}_{2.5}/\text{PM}_{10} \times \text{capture fraction}$$

where

- Open area = number of acres open
- EF = 80 lb TSP/acre
- PM₁₀/TSP = 0.45 lb PM₁₀/lb TSP
- PM_{2.5}/PM₁₀ = 0.15 lb PM_{2.5}/lb PM₁₀
- Capture fraction = 0.5

A sample calculation is provided below:

$$\text{Paved area} = 100 \text{ acres}$$

$$E = 100 \text{ ac} \times 80 \text{ lb TSP/ac} \times 0.45 \text{ lb PM}_{10}/\text{lb TSP} \times 0.15 \text{ lb PM}_{2.5}/\text{lb PM}_{10} \times 2000 \text{ lb/ton} \\ = 1.35 \text{ tons}$$

The total annual emissions levels are summarized in Table 3-7. In addition, estimated emissions from the potential demolition and construction are presented in Attachment 1.

Table 3-7
Annual PM_{2.5} Emissions from Surface Disturbance

Year	Annual PM _{2.5} Emissions (tons/yr)
2007	1.36
2008	0.81
2009	0.02
2010	1.11
2011	1.43

Sources: AP-42 Section 13.2.3, USEPA 2005c.

3.1.3 Operational Activities

Operational emissions occur as a result of the operation of the new facilities associated with the Proposed Action and Alternatives. As previously stated, some action-related emissions are not subject to the GCR. These include emissions from sources subject to major New Source Review. Major *New Source Review* is a term used to describe EPA's preconstruction permitting program. In addition, the minor new source review permitting procedures ensure that air quality conditions are not significantly degraded as a result of the addition of new and modified factories, industrial boilers, and power plants above a certain size. In non-attainment areas, this program ensures that

new emissions do not slow progress toward cleaner air. With respect to the Fort Belvoir BRAC action, emissions associated with the heating/cooling plant, standby generators, and large boilers are subject to permitting. Therefore, emissions, although considered, have not been carried forward for detailed analysis in the conformity evaluation. The remaining direct and indirect emissions due to small heating boilers and commuter vehicles constitute a small net decrease in emissions when compared to the no-action (no-build) scenario. The total annual operational emissions levels are summarized in Table 3-8. Notably, the operating emissions are less than the no-build alternative; this is primarily due to the decrease in commuting distance and the net decrease in commuters.

**Table 3-8
Estimated Net Operating Emissions Subject to
the General Conformity Rule**

Operating Emissions (tons/yr)				
Roll-up (Total Operating Emissions)	NO _x	VOC	PM _{2.5}	SO ₂
2008	-4.4	-4.5	-0.2	-0.1
2009	-8.1	-9.1	-0.3	-0.3
2010	-9.6	-13.7	-0.2	-0.4
2011	-10.2	-14.8	-0.2	-0.4
2012	-11.6	-16.2	-0.3	-0.5

2008 Additional Operating Emissions	NO _x	VOC	PM _{2.5}	SO ₂
Heating and cooling emissions	0	0	0	0
Employee commuting emissions	-4.4	-4.5	-0.2	-0.1
Total	-4.4	-4.5	-0.2	-0.1

2009 Additional Operating Emissions	NO _x	VOC	PM _{2.5}	SO ₂
Heating and cooling emissions	0.9	0	0.1	0
Employee commuting emissions	-4.5	-4.6	-0.2	-0.1
Total	-3.6	-4.5	-0.1	-0.1

2010 Additional Operating Emissions	NO _x	VOC	PM _{2.5}	SO ₂
Heating and cooling emissions	3.2	0.2	0.2	0
Employee commuting emissions	-4.7	-4.8	-0.2	-0.1
Total	-1.5	-4.6	0.1	-0.1

2011 Additional Operating Emissions	NO _x	VOC	PM _{2.5}	SO ₂
Heating and cooling emissions	0.4	0	0	0
Employee commuting emissions	-1.1	-1.1	0	0
Total	-0.6	-1.1	0	0

2012 Additional Operating Emissions	NO _x	VOC	PM _{2.5}	SO ₂
Heating and cooling emissions	0	0	0	0
Employee commuting emissions	-1.4	-1.4	-0.1	0
Total	-1.4	-1.4	-0.1	0

3.1.3.1 Heating Boiler Emissions

According to Virginia's air pollution control regulations (9 VAC 5 Chapter 40), any fuel-burning equipment using a liquid and gaseous fuel with a maximum heat input of less than 10 million British thermal units (BTU) per hour is exempt from the air permitting process and is normally considered an insignificant emission source with minimal air quality impacts. Based on the size of the buildings that would be constructed as the action is implemented, many of the new heating boilers to be installed would likely have a heating capacity of less than 10 million BTU per hour. Emissions from these boilers would not be regulated under Virginia's New Source Review air-permitting regulations, and therefore the emissions are subject to the GCR.

The action also includes several large-scale facilities, such as NGA, WHS, Dewitt Hospital, and Army leased space. These facilities would likely be equipped with heating boilers that are regulated under Virginia's air permitting regulations or connected to the proposed heating plant. When these projects reach the design phase, the developer will need to determine the actual size of the boilers and the amount of new emissions associated with each building to allow VDEQ to determine whether a stationary source air permit is required and establish whether significant stationary source impacts would occur. Those boilers are not subject to the GCR and therefore are not considered in this analysis.

Each building is assumed to be adequately heated, with heating values based on the U.S. Department of Energy's *Consumption and Gross Energy Intensity by Census Region for Sum of Major Fuels, Commercial Buildings Energy Consumption Survey* (DOE 1999). The heating area used is the net change of heating space, calculated by subtracting the known existing building spaces to be demolished, when applicable. In the case of a new facility where the demolition area would be greater than the area to be constructed, no net increase in boiler emissions was considered. An example calculation of heating gas requirements for an individual project is presented below:

Total building size	=	26,000 GSF
Natural gas energy intensity	=	31.4 ft ³ /GSF
Total natural gas	=	26,000 GSF x 31.4 cubic feet/GSF
	=	816,400 ft ³

Emission estimates were calculated based on the EPA-provided AP-42 emission factors for a natural-gas boiler. An example calculation for the annual emission rate for VOCs from building boiler operations for a sample project is presented below:

AP-42 emission factor	=	5.5 lb/10 ⁶ ft ³
Annual emission level	=	816,400 ft ³ /year x 5.5 lb/10 ⁶ ft ³
	=	4.5 lb/year
	=	0.0022 tons/yr

It is expected that building boiler emissions from each building would occur immediately after the completion of the project. The total annual emissions levels are summarized in Table 3-9. In addition, estimated emissions from the potential demolition and construction are presented in Attachment 1.

**Table 3-9
Annual Emissions from New Small Heating and Cooling Sources**

Annual Emissions (tons/yr)				
Year	NO _x	VOC	PM _{2.5}	SO ₂
2009	0.85	0.05	0.06	0.01
2010	3.17	0.17	0.24	0.02
2011	0.45	0.02	0.03	0

Sources: AP-42 Section 1.4, DOE 1999.

3.1.3.2 Employee Commuting Vehicular Emissions

Emission factors for motor vehicles were conservatively calculated for the year 2010 for commuter vehicles (modeled as light-duty gasoline vehicles and light-duty gasoline trucks such as SUVs) using the EPA *MOBILE6.2* mobile source emission factor model. Metropolitan Washington Council of Government (MWCOG 2004) provided the most current input parameters containing the current planning assumptions for the region. A sample calculation for the annual emission rate for NO_x from new employee vehicles from a sample project is presented below:

Additional employees	= 150
Number of trips per day	= 2
Number of days per year	= 250
Average vehicle commute distance	= 20 miles
<i>MOBILE6.2</i> emission factor	= 0.3 grams/mile

Annual emission level = 150 x 2 x 250 x 20 x 0.3/907,185 grams/ton
= 0.49 ton/yr

The estimated net annual vehicular emissions for applicable projects are calculated in detail in Table 3-10 and presented in Attachment 1.

**Table 3-10
Annual Emissions from New Employees' Vehicles (Net Decrease)**

Annual Emissions (tons/yr)				
Year	NO _x	VOC	PM _{2.5}	SO ₂
2008	-4.44	-4.55	-0.16	-0.14
2009	-4.47	-4.58	-0.16	-0.14
2010	-4.71	-4.82	-0.17	-0.15
2011	-1.05	-1.08	-0.04	-0.03
2012	-1.38	-1.42	-0.05	-0.04

Sources: USEPA 2002; *MOBILE6.2*.

3.1.4 Total Annual Emission

Table 3-11 provides the total annual estimated action-related emissions of VOC, NO_x, PM_{2.5}, and SO₂ respectively. The annual estimates are provided for the proposed construction schedule and for conditions estimated to occur under all the alternatives except the No Action Alternative. Notably, the construction-related activities would be the predominate source of emissions.

**Table 3-11
Total Annual Emissions from the 2005 Realignment of Fort Belvoir**

Year	Annual Emissions (tons/yr)			
	NO _x	VOC	PM _{2.5}	SO ₂
2007	129.2	76.0	9.5	18.5
2008	318.9	183.6	20.5	48.3
2009	320.9	206.7	20.4	51.7
2010	364.5	224.7	25.3	62.7
2011	119.5	53.8	12.8	23.2
2012+	-11.6	-16.2	-0.3	-0.5

Sources: USEPA NONROAD2004; SQAQMD 1993; USEPA 2002; MOBILE6.2; USEPA AP-42; USEPA 2005; DOE 1999.

3.2 APPLICABILITY ANALYSIS

The GCR apply to federal actions in non-attainment areas. EPA established applicability threshold levels to exclude federal actions from the requirements to provide a GCD. It is understood that emissions below these levels would not impede an area's ability to attain the NAAQS. If the total direct and indirect action-related emissions are below the applicability threshold levels, and the action-related emissions are determined not to be regionally significant, it is assumed that the emission level conforms to a state's plans to attain or maintain the NAAQS. Project/action-related emissions are determined to be regionally significant if the emission level represents 10 percent or more of the regional total of emissions for which the area is in non-attainment. The applicability threshold levels for O₃ and PM_{2.5} within the NCR are provided in Table 3-12.

With respect to the proposed Fort Belvoir BRAC action, project-related emissions are those emissions that would occur with the action when compared to the emissions that would occur without the action (the net change in emission level). Table 3-12 presents the estimated increase in emissions with the proposed Fort Belvoir BRAC action (the project-related emissions).

Because the total of direct and indirect emissions of NO_x and VOC exceed the respective general conformity applicability thresholds, the general conformity requirements apply to these pollutants. Consequently, a formal conformity determination is required and these pollutants will be carried forward for detailed analysis. Notably, because the project-related emissions of these pollutants exceed the applicability threshold, performing the regional significance applicability test would be redundant.

Table 3-12
Applicability Thresholds for the National Capital Interstate
Air Quality Control Region

Criteria pollutants	Greatest Annual Project- Related Emissions	Applicability Threshold Levels (tons/yr)	Exceeds Applicability Threshold (yes/no)
O₃ (NO_x or VOCs)			
Marginal and moderate NAAs inside an O₃ transport region			
VOC	225	50	Yes
NO _x	365	100	Yes
PM_{2.5} (PM_{2.5}, NO_x, SO₂)			
PM _{2.5}	25	100	No
NO _x	365	100	Yes
SO ₂	63	100	No

Sources: 40 CFR 93.153; USEPA 2006.

Note:

NAA = non-attainment area.

The total of direct and indirect emissions of PM_{2.5} and of SO₂ is less than the applicability thresholds. Pending the full implementation of the PM_{2.5} NAAQS, there is no current regional emission budget for PM_{2.5} or SO₂. However, due to the limited size and scope of the Proposed Action and Alternatives when compared to the overall regional activity, it is not anticipated that emissions of PM_{2.5} or SO₂ would be regionally significant. Therefore, the general conformity requirements do not apply to these pollutants, and there will be no further evaluation of these pollutants herein.

3.3 CONFORMITY EVALUATION

This section evaluates the ability of the Proposed Action and Alternatives to conform to the SIP with respect to the pollutants NO_x and VOC, as outlined under the GCR.

3.3.1 Evaluation Cases

The GCR require that the analysis of project-related emissions reflect the scenarios expected to occur under each of the following cases:

- The CAA-mandated attainment year or, if applicable, the farthest year for which emissions are projected in the maintenance plan
- Any year for which the applicable SIP specifies an emission budget
- The year during which the total of direct and indirect emissions from the action is expected to be the greatest on an annual basis

The following paragraphs discuss each of the above cases as each relates to the proposed Fort Belvoir BRAC action.

CAA-Mandated Attainment Year. The CAA-mandated attainment year for both the 8-hour O₃ and the PM_{2.5} NAAQS is 2010, and therefore, project-related emissions in 2010 are subjected to

the conformity evaluation. There are currently no maintenance plans in place for Fairfax County. Therefore, the GCR requirement to evaluate the farthest year for which emissions are projected in the maintenance plan is not applicable.

Regional Emission Budgets. The 1-hour O₃ attainment demonstration SIP also includes Rate of Progress-based regional emission target levels for the years 2002 and 2005. The earliest that the proposed action or alternatives would affect local or regional air quality conditions is the year 2007 (assuming that the U.S. Army issues a Record of Decision for the proposed improvements in 2007 and construction begins). Therefore, project-related emission estimates for the year 2005 were not subjected to the conformity evaluation.

The draft 8-hour O₃ attainment demonstration SIP also includes Rate of Progress-based regional emission target levels for the years 2008 and 2009. The proposed action or alternatives would included emissions during these years. Therefore, project-related emission estimates for the year 2008 and 2009 were carried forward for informational purposes.

Greatest Annual Project-Related Emissions. As shown, the greatest total direct and indirect project-related emissions would occur in the year 2010. Coincidentally, this is the CAA-mandated attainment year for both the 8-hour O₃ and PM_{2.5} NAAQS.

Table 3-13 summarizes the years and levels of project-related emissions meeting the requirements of the GCR. It should be noted that the project alternatives vary by scenario and by pollutant precursor. These combinations of years and emissions reflect the levels of project-related emissions that would occur in (1) the CAA-mandated attainment years for the 1-hour and 8-hour O₃ NAAQS, (2) the year in which the SIP contains an emissions budget and the project would affect local and/or regional air quality conditions, and (3) the years in which the greatest *project-related* emissions of VOC and NO_x are estimated to occur with the realignment of Fort Belvoir. The greatest annual project-related emissions of VOCs and NO_x (409.7 and 264.3 tons, respectively) would occur in the year 2010. These levels of emissions are the greatest total project-related direct and indirect emissions estimated to occur over the planning horizon, regardless of year or alternative.

**Table 3-13
Annual Project-related Emission Levels Subject to Conformity Determination**

Annual Emissions (tons per year)			
	Year	Nitrogen Oxides (NO _x)	Volatile Organic Compounds (VOCs)
Act-mandated attainment year (O₃ and PM_{2.5})	2010	364	224
Regional emission budgets	2008	347	203
	2009	321	207
Greatest annual project-related emissions	2010	364	224

The current SIP emission estimates are expressed in tons of VOC and NO_x emitted on a *summer weekday*. States use summer weekday emissions to assess regional emissions of VOCs and NO_x,

precursor emissions to the air pollutant O₃, because the O₃ NAAQS are generally exceeded during O₃ season weekdays when the precursor emissions are greatest and meteorological conditions are more conducive to O₃ formation. For comparing the Fort Belvoir-related emission estimates to the MWCOG-prepared regional inventories, the source emissions were converted from tons per year to tons per summer weekday. They are shown in Table 3-14.

**Table 3-14
Daily Project-related Emission Levels Subject to Conformity Determination**

Annual Emissions (tons per day]			
	Year	Nitrogen Oxides (NO _x)	Volatile Organic Compounds (VOC)
Act-mandated attainment year (O₃ and PM_{2.5})	2010	1.58	0.98
Regional emission budgets	2008	1.39	0.80
	2009	1.40	0.90
Greatest annual project-related emissions	2010	1.58	0.98

3.3.2 Comparison Project-Related Emissions to SIP-Based Inventories

This section outlines a comparison of the project-related emissions with the regional emissions of like pollutants. As previously stated, the GCR state that when projects are within O₃ non-attainment areas and project-related emissions of VOCs and NO_x exceed the applicability thresholds, one of the criteria for determining conformity is that the emissions from the project/action are specifically identified and accounted for in the SIP. As also stated, EPA recognizes that emissions associated with BRAC programs are not specifically identified or accounted for in SIPs (USEPA and FAA 2002).

3.3.2.1 The State Implementation Plan

The CAA, as amended in 1990, mandates that state agencies adopt SIPs that target the elimination or reduction of the severity and number of violations of the NAAQS. SIPs set forth policies to expeditiously achieve and maintain attainment of the NAAQS. Currently, the region has no applicable SIP for the 8-hour O₃ or the PM_{2.5} NAAQS. The SIP revisions to address non-attainment conditions with respect to the new 8-hour O₃ and PM_{2.5} NAAQS are being developed and are expected to be approved by EPA by 2008 and 2009, respectively.

Because monitored levels of O₃ in the Washington, D.C., Metropolitan Area exceeded the 1-hour NAAQS, the Commonwealth of Virginia, State of Maryland, and Washington, D.C., were required to develop SIPs that outline the actions that would be taken to achieve the 1-hour NAAQS before 2007. The current SIP presents the regional air quality plan for attaining the federal 1-hour NAAQS for ground-level O₃ developed by the Metropolitan Washington Air Quality Committee (MWAQC) for the Washington, D.C., multi-jurisdictional non-attainment area. MWAQC was established in accordance with Section 174 of the CAA by the governors of Maryland and Virginia and the mayor of the District of Columbia to prepare a regionally coordinated air quality plan to comply with these requirements. On June 13, 2005, EPA approved the *State Implementation Plan—Plan to Improve Air Quality in the Washington, DC-MD-VA*

Region (MWCOG 2004). The plan predicted that the 1-hour O₃ NAAQS would be attained by 2005. In addition, a draft SIP for the 8-hour ozone standard was recently developed (MWAQC 2006). Although not finalized or approved by the region or EPA, information developed for the draft SIP was carried forward for informational purposes.

Following requirements of the CAA, the MWCOG and VDEQ prepared a 1990 base year emissions inventory for the Washington non-attainment area. The inventory serves as the base year by which attainment plans were prepared for the 1-hour O₃ NAAQS. The base year 1990 emissions inventory was also used by the VDEQ, along with growth and control factors, to project year 2005 emission estimates. The general categories of sources included in the MWCOG's inventory are point, area, nonroad, and on-road. General descriptions of these categories are outlined below, and the regional emission inventories for the categories are shown on Table 3-15 and 3-16.

- **Point Sources.** Point sources are stationary, commercial, or industrial operations that emit more than 10 tons per year (tons/yr) of VOCs, or 100 tons/yr or more of NO_x or carbon monoxide. The point source inventory within the SIP consists of actual emissions sources within the geographical area of the Washington DC-MD-VA non-attainment area.
- **Area Sources.** Area sources are sources of emissions that are too small to be inventoried individually and collectively contribute significant emissions. Area sources include smaller stationary point sources not included in the states' point source inventories, such

**Table 3-15
Regional NO_x Emission Inventory**

Source Category	Controlled Emissions (tons/d)		
	1-Hour Attainment Year (2005)	8-Hour Rate-of-progress Year (2008)	8-Hour Attainment Year (2009)
Point	109	229	123
Area	60	27	27
Nonroad	82	77	75
On-road	234	160	147
Total	487	493	372

Source: MWCOG 2004, MWAQC 2006.

**Table 3-16
Regional VOC Emission Inventory**

Source Category	Controlled Emissions (tons/d)		
	1-Hour Attainment Year (2005)	8-Hour Rate-of-progress Year (2008)	8-Hour Attainment Year (2009)
Point	16	14	14
Area	147	192	192
Nonroad	68	92	88
On-road	97	71	67
Total	325	369	362

Source: MWCOG 2004, MWAQC 2006.

as printing establishments, dry cleaners, and auto refinishing companies, as well as non-stationary sources.

- **Nonroad Vehicle and Engine Sources.** Nonroad sources include a wide variety of categories, including industrial, lawn and garden, construction, recreational, and farm equipment. Within the SIP, emissions from this category were obtained from a 1991 EPA contractor's report titled "Non-Road Engine and Vehicle Emission Inventories for Carbon Monoxide and O₃ Non-attainment Boundaries, Washington, D.C. MSA." This group of sources is of primary interest because heavy construction vehicles are the primary source of emissions due to the Proposed Action and Alternatives.
- **On-road Mobile Sources.** In the SIP, emissions from on-road mobile sources were derived from the use of the MWCOG travel demand forecasting procedure, which simulates vehicle travel across the region's transportation system. Travel was simulated on all highways in the region, including both volume and speed of travel for each hour of the day. Input for this simulation included locally specific information such as age distribution of registered vehicles, evaporation characteristics of motor fuel, and temperature data.

3.3.2.2 Milestone Budget Years

The year 2005 was the last milestone year with an emission budget with respect to attaining the 1-hour O₃ NAAQS. In 2005 there were no project-related emissions. The earliest that the proposed action or alternatives would affect local or regional air quality conditions is the year 2007 (assuming that the U.S. Army issues a Record of Decision for the proposed improvements in 2007 and construction begins). Therefore, project-related activities are not subjected to the conformity evaluation for the year 2005 milestone budget year.

The draft 8-hour O₃ attainment demonstration SIP also includes Rate of Progress-based regional emission target levels for the years 2008 and 2009. The proposed action or alternatives would include emissions during these years. Therefore, project-related emission estimates for the year 2008 and 2009 were evaluated.

To evaluate whether the level of year 2008 and 2009 project-related construction emissions could be considered included within the regional estimates for this type of activity, the project-related construction emissions were compared with the total emissions for the non-attainment area (Table 3-17). As shown, when comparing the project-related construction emissions of VOC and NO_x with the 2008 and 2009 draft emissions for the non-attainment area, project-related emissions would represent a small percentage of the like regional emissions, respectively. Notably, the regional inventory for nonroad sources was used for the NO_x comparison because of the overwhelming contribution of these sources to the project-related NO_x emissions. In addition, the regional inventory for area sources was used for the VOC comparison because of the overwhelming contribution of architectural coatings and paving off-gasses to the project-related emissions of VOCs.

Because the project-related construction emission estimates represent a relatively small percentage of the regional projection, it is reasonable to assume that the project-related construction emissions can be accounted for in the inventories for the draft 8-hour O₃ attainment demonstration SIP (40 CFR 93.158(a)(5); USEPA and FAA 2002; VDEQ 2007).

Table 3-17
Comparison of 2008 and 2009 Project-related Emissions to SIP-based Inventories

Pollutant	SIP regional emission inventory (tons/summer weekday)	Project-related non-road emissions (tons/summer weekday)	Percent of regional emissions
<i>Draft 8-hour SIP (2008)</i>			
Nitrogen oxides (NO _x)	75.0 ^a	1.39	1.9%
Volatile organic compounds (VOCs)	192.5 ^b	0.80	0.4%
<i>Draft 8-hour SIP (2009)</i>			
Nitrogen oxides (NO _x)	76.9 ^c	1.40	1.8%
Volatile organic compounds (VOCs)	191.8 ^d	0.90	0.4%

Source: MWCOG, 2006

^a Reflects 2008 nonroad controlled NO_x emissions inventory

^b Reflect 2008 area controlled VOC emissions inventory

^c Reflects 2009 nonroad controlled NO_x emissions inventory

^d Reflect 2009 area controlled VOC emissions inventory

3.3.2.3 Act-mandated Attainment Year and Greatest Annual Project-related Emissions (2010)

This section of the documentation discusses the evaluation of project-related emissions that would occur in the act-mandated attainment year for both the 8-hour O₃ and PM_{2.5} NAAQS, and the year when the greatest annual project-related emissions are expected (2010). Project-related emissions from construction activities and from the operation of motor vehicles within the defined study area were evaluated.

The draft 8-hour SIP does not contain a regional emission projection for the 2010 attainment year. Consequently, it is not possible to compare project-related year 2010 emission estimates with regional estimates for the same years. To be conservative and to provide an indication of the magnitude of project-related emissions beyond the attainment year with respect to emission levels in the 1-hour O₃ and the draft 8-hour attainment demonstration SIP, the 2010 project-related emissions were compared with the regional projections previously presented for the year 2005 and 2009 respectively.

Construction. At the time that EPA prepared VDEQ's 1990 estimates of emissions from construction-related activities for the non-attainment area, VDEQ or MWCOG would not have had an estimate of construction-related equipment emissions for the 2005 BRAC action at Fort Belvoir. Furthermore, because of the methodology used by MWAQC to calculate the regional emissions from this type of source, it can be said that no individual projects were considered. Therefore, the inventories prepared in support of the attainment demonstration for the 1-hour O₃ or the 8-hour NAAQS do not specifically identify construction-related emissions for any of the alternatives under consideration.

To evaluate whether the level of year 2010 project-related construction emissions could be considered included within the regional estimates for this type of activity, the project-related construction emissions were compared with the total emissions for the non-attainment area (Table 3-18). As shown, when comparing the project-related construction emissions of VOC and NO_x with the emissions inventories for the non-attainment area, project-related emissions would represent a small percentage of the like regional emissions. Notably, the regional inventory for nonroad sources was used for the NO_x comparison because of the overwhelming contribution of these sources to the project-related NO_x emissions. In addition, the regional inventory for area sources was used for the VOC comparison because of the overwhelming contribution of architectural coatings and paving off-gasses to the project-related emissions of VOCs.

Table 3-18
Comparison of 2010 Project-related Emissions to SIP-based Inventories

Pollutant	SIP regional emission inventory (tons/summer weekday)	Project-related non-road emissions (tons/summer weekday)	Percent of regional emissions
<i>Approved 1-hour SIP (2005)</i>			
Nitrogen oxides (NO _x)	82.8 ^a	1.58	1.9%
Volatile organic compounds (VOCs)	147.3 ^b	0.98	0.7%
<i>Draft 8-hour SIP (2009)</i>			
Nitrogen oxides (NO _x)	76.9 ^c	1.58	2.1%
Volatile organic compounds (VOCs)	191.8 ^d	0.98	0.5%

Source: MWCOG 2004a and MWAQC 2006

^a Reflects 2005 nonroad controlled NO_x emissions inventory

^b Reflect 2005 area controlled VOC emissions inventory

^c Reflects 2009 nonroad controlled NO_x emissions inventory

^d Reflect 2009 area controlled VOC emissions inventory

Because the project-related construction emission estimates represent a relatively small percentage of the regional projection, it is reasonable to assume that the project-related construction emissions can be accounted for in the inventories for the 1-hour O₃ attainment demonstration SIP (40 CFR 93.158(a)(5); USEPA and FAA 2002; VDEQ 2007).

On-road Vehicle Emissions. The realignment of Fort Belvoir would decrease both the number of vehicles and subsequently the total vehicle miles traveled within the region. In turn, regional motor vehicle emissions would decrease. This decrease would be primarily because of a net reduction of approximately 1,700 personnel leaving Fort Belvoir to locations outside the region. Although overall additional personnel at Fort Belvoir is expected to increase, the new personnel and the miles they currently commute are already within the NCR. In addition, many of the new personnel are expected to either be relocated to or be replaced by individuals living in areas outside, primarily south of, the region. These BRAC-related reductions in emissions would constitute an ongoing net benefit to the region's air quality. Therefore, although there is an SIP-based regional budget for motor vehicles, it was unnecessary to perform a direct comparison.

3.3.3 Consistency with Requirements and Milestones in Applicable SIP

The GCR state that notwithstanding the other requirements of the rules, a proposed action or alternatives may not be determined to conform unless the total of direct and indirect emissions from the action is in compliance or consistent with all relevant requirements and milestones in the applicable SIP (40 CFR 93.158(c) and 9 VAC 5-160-160(c)). This requirement includes but is not limited to such issues as reasonable further progress schedules, assumptions specified in the attainment or maintenance demonstration, prohibitions, numerical emission limits, and work practice standards. This section briefly addresses how the Proposed Action and Alternatives were assessed for SIP consistency for this evaluation.

EPA and VDEQ have already promulgated, and will continue to promulgate, numerous requirements to support the goals of the CAA with respect to the NAAQS. Typically, these requirements take the form of rules regulating emissions from significant new sources, including emission standards for major stationary point sources and classes of mobile sources as well as permitting requirements for new major stationary point sources. Because states have the primary responsibility for implementing and enforcing requirements under the CAA and can impose stricter limitations than EPA, the EPA requirements often serve as guidance to the states in formulating their air quality management strategies.

In operating Fort Belvoir, the U.S. Army already observes, and will continue to act in accordance with a myriad of rules and regulations implemented and enforced by federal, state, regional, and local agencies to protect and enhance ambient air quality in the Metropolitan Washington Region. The U.S. Army will continue to act in accordance with all existing applicable air quality regulatory requirements for activities over which it has direct control and will meet in a timely manner all regulatory requirements that become applicable in the future. Likewise, the U.S. Army actively encourages all tenants and users of its facilities to comply with applicable air quality requirements.

3.4 SUMMARY

Within areas designed non-attainment or maintenance for any of the NAAQS, the CAA requires that federal agencies ensure that their actions conform to SIPs. The requirements for determining conformity to SIPs are detailed in Title 40, Chapter I, Subchapter C, Part 51 of the Code of Federal Regulations (40 CFR Part 51).

In accordance with Section 176 of the CAA, in consultation with VDEQ, the U.S. Army has assessed whether the pollutant and pollutant precursor emissions that would result from the U.S. Army's actions with respect to the proposed realignment at Fort Belvoir are in conformance with the Virginia SIP.

The emission estimates for the GCD were prepared

- Using the latest planning assumptions
- Using the latest and most accurate emission estimation techniques
- Based on the applicable air quality models, databases, and other requirements specified in the most recent version of EPA's *Guideline on Air Quality Models*, including supplements.

On the basis of the results of the evaluation, the total direct and indirect project-related emissions of NO_x, VOCs, PM_{2.5}, and SO₂ and were determined to be

- Below the applicability thresholds *or*
- Accounted for in the emission projections incorporated into the 1-hour O₃ attainment demonstration SIP (the applicable SIP) *or*
- Reasonably accounted for in established emission totals and/or excess regional emission estimates

For these reasons, the U.S. Army has determined that the emissions associated with the Proposed Action and Alternatives conform to the CAA.

3.5 REPORTING REQUIREMENTS/FREQUENCY OF DETERMINATIONS

Following the requirements of the GCR, federal agencies must make public their draft and final conformity determinations by placing a notice in a daily newspaper of general circulation in the area affected by the action and by providing 30 days to obtain any written public comments prior to taking any formal action on the determinations. Also required are responses to all comments received on the Draft GCD. The federal agency must make these responses available within 30 days of the agency's final conformity determination.

It is the intent of the U.S. Army to publish a notice of the availability of this Draft GCD and the Final GCD in the *Washington Post*, *Springfield Times*, *Mt. Vernon Gazette*, *Mt. Vernon Voice*, and *Belvoir Eagle*.

This Draft GCD is being published as an appendix to the DEIS. The DEIS provides a detailed evaluation of the affect of the realignment at Fort Belvoir on air quality. The U.S. Army intends to publish the Final GCD as an appendix to the Final EIS.

The conformity status of a federal action automatically lapses after a period of 5 years (from the date a final conformity determination is reported) unless the federal action has been completed or a continuous program has been commenced to implement the federal action within a reasonable time. Furthermore, if, after the final conformity determination is made, the federal action is changed so that there is an increase in the total direct and indirect emissions from the action, above the applicability threshold levels, a new conformity determination is required.

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ACRONYMS AND ABBREVIATIONS

AAFES	Army and Air Force Exchange Service
ACP	access control point
AKO	Army Knowledge Online
AMC	Army Materiel Command
AR	Army Regulation
AT/FP	Antiterrorism/ Force Protection
BRAC	Base Realignment and Closure
BRDEC	Belvoir Research and Development Engineering Center
CAA	Clean Air Act
CFR	Code of Federal Regulations
CID	Criminal Investigations Command
DEIS	Draft Environmental Impact Statement
DGCD	Draft General Conformity Determination
DOE	Department of Energy
EPA	U.S. Environmental Protection Agency
EPG	Engineer Proving Ground
FTA	Federal Transit Authority
FWHA	Federal Highway Administration
FY	fiscal year
GCR	General Conformity Rules
GSA	General Services Administration
GSF	gross square feet
HEC	Humphreys Engineering Center
HVAC	heating, ventilation, and air conditioning
LRC	long-range component
MDA HQCC	Missile Defense Agency Headquarters Command Center
MDW	Military District of Washington
MedCom	U.S. Army Medical Command
MGMC	Malcolm Grow Medical Center
MN	map number
MWAQC	Metropolitan Washington Air Quality Committee
MWCOG	Metropolitan Washington Council of Governments
MWR	Army and Air Force Morale, Welfare, and Recreation
NAAQS	National Ambient Air Quality Standards
NBC	nuclear, biological, and chemical
NCR	National Capital Region
NGA	National Geospatial-Intelligence Agency
NNMC	National Naval Medical Center
NO _x	nitrogen oxides
NPS	National Park Service
NSF	net square feet
NSR	New Source Review
O ₃	ozone
PCS	Permanent Change of Station
PDA	Physical Disability Agency
PEO EIS	Program Executive Office Enterprise Information Systems
PM DCATS	Project Manager Defense Communications and Army Transmission Systems
PM ₁₀	particulate matter less than 10 microns in diameter

PM _{2.5}	particulate matter less than 2.5 microns in diameter
PX	post exchange
RFI	request for information
ROD	Record of Decision
RPA	Resource Protection Area
RPMP	real property master plan
RV	recreational vehicle
SA	Secretary of the Army
SCIF	sensitive compartmented information facility
SIP	State Implementation Plan
SO ₂	sulfur dioxide
TBO	total build- out
TIP	Transportation Improvement Plan
U.S.C.	United States Code
USASAC	Secretary Assistance Command
USEPA	U.S. Environmental Protection Agency
VAC	Virginia Administrative Code
VDEQ	Virginia Department of Environmental Quality
VOC	volatile organic compounds
WHS	Washington Headquarters Services
WRAMC	Walter Reed Army Medical Center
WWII	World War II

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15 Years of Experience

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**Attachment 1
Emission Calculations**

**Table A1-1
Nonroad Heavy Equipment Emissions**

Project	NO_x (tons)	VOC (tons)	PM_{2.5} (tons)	SO₂ (tons)
Family Travel Camp, Clearing and Grading	0.99	0.09	0.07	0.15
MDA (2007), Building Construction	3.85	0.36	0.23	0.55
MDA, Clearing and Grading	0.15	0.01	0.01	0.02
NGA Admin (EPG), Clearing and Grading	14.79	1.27	1.05	2.24
PEO EIS Administrative Facility - Parking Garage, Building Construction	37.27	3.50	2.25	5.30
PEO EIS Administrative Facility, Building Construction	37.27	3.50	2.25	5.30
PEO EIS Administrative Facility, Clearing and Grading	1.77	0.15	0.13	0.27
Secure Admin Facility (EPG) (WHS), Clearing and Grading	16.76	1.44	1.19	2.54
EPG Infrastructure (EPG) (2008), Building Construction	0.98	0.09	0.06	0.15
EPG Infrastructure (EPG), Clearing and Grading	5.60	0.36	0.37	0.89
Family Travel Camp, Building Construction	1.77	0.16	0.11	0.27
Gunston Road Improvements, Clearing and Grading	3.41	0.22	0.22	0.54
Gunston Road Improvements, Paving	5.07	0.33	0.34	0.80
Hospital (2008), Building Construction	30.74	2.82	1.89	4.64
Hospital, Clearing and Grading	10.92	0.71	0.72	1.74
MDA (2008), Building Construction	5.52	0.51	0.34	0.83
Network Enterprise Communications Facility (AKO), Building Construction	4.49	0.41	0.28	0.68
Network Enterprise Communications Facility (AKO), Clearing and Grading	0.73	0.05	0.05	0.12
Network Enterprise Communications Facility (AKO), Demolition	0.17	0.01	0.01	0.03
NGA Admin (EPG), Building Construction	64.20	5.89	3.95	9.68
NGA Admin (EPG), Building Construction	64.20	5.89	3.95	9.68
PEO EIS Administrative Facility, Landscaping	0.25	0.03	0.01	0.04
PEO EIS Administrative Facility, Paving	0.20	0.01	0.01	0.03
Secure Admin Facility (EPG) (WHS) (2008), Building Construction	117.78	10.81	7.25	17.76
Structured Parking Facility, 200 Area, Clearing and Grading	0.91	0.06	0.06	0.15
Structured Parking Facility, 200 Area, Demolition	0.04	0.00	0.00	0.01

Table A1-1
Nonroad Heavy Equipment Emissions (continued)

Project	NO_x (tons)	VOC (tons)	PM_{2.5} (tons)	SO₂ (tons)
USANCA Support Facility, Building Construction	1.05	0.10	0.06	0.16
USANCA Support Facility, Clearing and Grading	0.10	0.01	0.01	0.02
Access Road/Control Point, Clearing and Grading	0.07	0.00	0.00	0.01
Access Road/Control Point, Paving	0.09	0.01	0.01	0.01
Emergency Services Center (EPG), Building Construction	1.29	0.12	0.08	0.21
Emergency Services Center (EPG), Clearing and Grading	0.04	0.00	0.00	0.01
EPG Infrastructure (EPG) , Paving	1.08	0.07	0.07	0.18
Family Travel Camp, Paving	0.16	0.01	0.01	0.03
Gunston Road Improvements, Landscaping	0.37	0.04	0.02	0.06
Hospital (2009), Building Construction	28.92	2.63	1.83	4.64
MDA, Landscaping	0.03	0.00	0.00	0.00
MDA, Paving	0.06	0.00	0.00	0.01
NARMC HQ Building, Building Construction	0.66	0.06	0.04	0.11
NARMC HQ Building, Clearing and Grading	0.06	0.00	0.00	0.01
NARMC HQ Building, Landscaping	0.01	0.00	0.00	0.00
NARMC HQ Building, Paving	0.02	0.00	0.00	0.00
Network Enterprise Communications Facility (AKO), Landscaping	0.02	0.00	0.00	0.00
Network Enterprise Communications Facility (AKO), Paving	0.28	0.02	0.02	0.05
Network Operations Center (part of PEO EIS), Building Construction	0.29	0.03	0.02	0.05
Network Operations Center (part of PEO EIS), Clearing and Grading	0.09	0.01	0.01	0.02
NGA Admin (EPG), Building Construction	60.39	5.50	3.82	9.68
Secure Admin Facility (EPG) (WHS) (2009 Parking Garage), Building Construction	99.85	9.10	6.31	16.01
Secure Admin Facility (EPG) (WHS) (2009), Building Construction	110.79	10.09	7.00	17.77
Structured Parking Facility, 200 Area (2009), Building Construction	12.78	1.16	0.81	2.05
USANCA Support Facility, Landscaping	0.01	0.00	0.00	0.00
USANCA Support Facility, Paving	0.06	0.00	0.00	0.01
Admin Bldg, MEDCOM, Building Construction	0.56	0.05	0.04	0.09
Admin Bldg, MEDCOM, Clearing and Grading	0.04	0.00	0.00	0.01

Table A1-1
Nonroad Heavy Equipment Emissions *(continued)*

Project	NO_x (tons)	VOC (tons)	PM_{2.5} (tons)	SO₂ (tons)
Administrative Facility (Bldgs 211, 215, 219, 220), Clearing and Grading	0.31	0.02	0.02	0.06
Administrative Facility (Bldgs 211, 215, 219, 220), Demolition	0.02	0.00	0.00	0.00
Administrative Facility (Bldgs 211, 215, 219, 220), Parking Garage	8.24	0.75	0.54	1.40
Child Dev Center – 244 (EPG), Building Construction	0.91	0.08	0.06	0.15
Child Dev Center – 244 (EPG), Clearing and Grading	0.32	0.02	0.02	0.06
Child Development Center (EPG), Building Construction	1.68	0.15	0.11	0.28
Child Development Center (EPG), Clearing and Grading	0.40	0.03	0.03	0.07
Dental Clinic, Building Construction	1.40	0.13	0.09	0.24
Dental Clinic, Clearing and Grading	0.08	0.00	0.01	0.01
Emergency Services Center (EPG), Paving	0.01	0.00	0.00	0.00
Family Travel Camp, Landscaping	0.08	0.01	0.00	0.01
Hospital (2010), Building Construction	27.29	2.48	1.78	4.64
Infrastructure Upgrades - Fort Belvoir, Building Construction	1.74	0.16	0.11	0.30
Infrastructure Upgrades - Fort Belvoir, Clearing and Grading	25.22	1.63	1.77	4.56
Infrastructure Upgrades - Fort Belvoir, Paving	9.56	0.61	0.67	1.71
Network Operations Center (part of PEO EIS), Landscaping	0.01	0.00	0.00	0.00
Network Operations Center (part of PEO EIS), Paving	0.03	0.00	0.00	0.01
NGA Admin (EPG) , Landscaping	0.68	0.08	0.04	0.12
NGA Admin (EPG) , Paving	0.18	0.01	0.01	0.03
NGA Admin (EPG), Building Construction	57.00	5.19	3.71	9.68
NGA Admin (EPG), Parking Structure, Building Construction	227.99	20.76	14.83	38.74
Secure Admin Facility (EPG) (WHS), Landscaping	0.81	0.10	0.05	0.14
Secure Admin Facility (EPG) (WHS), Paving	0.30	0.02	0.02	0.05
Structured Parking Facility, 200 Area (2010), Building Construction	2.97	0.27	0.19	0.51
Structured Parking Facility, 200 Area, Landscaping	0.03	0.00	0.00	0.01
Admin Bldg, MEDCOM, Landscaping	0.01	0.00	0.00	0.00
Admin Bldg, MEDCOM, Paving	0.01	0.00	0.00	0.00
Administrative Facility (Bldgs 211, 215, 219, 220), Landscaping	0.03	0.00	0.00	0.01

Table A1-1
Nonroad Heavy Equipment Emissions *(continued)*

Project	NO _x (tons)	VOC (tons)	PM _{2.5} (tons)	SO ₂ (tons)
Administrative Facility (Bldgs 211, 215, 219, 220), Paving	0.05	0.00	0.01	0.01
Child Dev Center – 244 (EPG), Landscaping	0.02	0.00	0.00	0.00
Child Dev Center – 244 (EPG), Paving	0.09	0.01	0.01	0.02
Child Development Center (EPG), Landscaping	0.02	0.00	0.00	0.00
Child Development Center (EPG), Paving	0.06	0.00	0.01	0.01
Dental Clinic , Landscaping	0.01	0.00	0.00	0.00
Dental Clinic , Paving	0.03	0.00	0.00	0.01
Hospital (2011 Parking Garage), Building Construction	85.77	8.27	7.57	15.47
Hospital , Landscaping	0.42	0.06	0.04	0.08
Hospital , Paving	0.27	0.02	0.03	0.05
Infrastructure Upgrades - Fort Belvoir, Clearing and Grading	30.99	2.09	2.89	5.97
Infrastructure Upgrades - Fort Belvoir, Landscaping	1.30	0.17	0.12	0.24
Infrastructure Upgrades - Fort Belvoir, Paving	8.71	0.58	0.81	1.65

Source: USEPA NONROAD2004; SQAQMD 1993.

**Table A1-2
Worker Vehicle Emissions**

Project	Trips Per Day	Duration (days)	VMT	EFNO_x (g/mile)	NO_x (tons)	EFVOC (g/mile)	VOC (tons)	EF PM_{2.5} (g/mile)	PM_{2.5} (tons)	EF SO₂ (g/mile)	SO₂ (tons)
Family Travel Camp, Clearing and Grading	2	170	10605	0.32	0.00	0.29	0.00	0.01	0.00	0.01	0.00
MDA (2007), Building Construction	37	151	169865	0.32	0.06	0.29	0.05	0.01	0.00	0.01	0.00
MDA, Clearing and Grading	3	19	1560	0.32	0.00	0.29	0.00	0.01	0.00	0.01	0.00
NGA Admin (EPG), Clearing and Grading	46	113	157765	0.32	0.05	0.29	0.05	0.01	0.00	0.01	0.00
PEO EIS Administrative Facility - Parking Garage, Building Construction	322	170	1644177	0.32	0.57	0.29	0.53	0.01	0.02	0.01	0.02
PEO EIS Administrative Facility, Building Construction	322	170	1644177	0.32	0.57	0.29	0.53	0.01	0.02	0.01	0.02
PEO EIS Administrative Facility, Clearing and Grading	17	38	18860	0.32	0.01	0.29	0.01	0.01	0.00	0.01	0.00
Secure Admin Facility (EPG) (WHS), Clearing and Grading	53	113	178771	0.32	0.06	0.29	0.06	0.01	0.00	0.01	0.00
EPG Infrastructure (EPG) (2008), Building Construction	18	85	45937	0.32	0.02	0.29	0.01	0.01	0.00	0.01	0.00
EPG Infrastructure (EPG), Clearing and Grading	23	85	57780	0.32	0.02	0.29	0.02	0.01	0.00	0.01	0.00

Table A1-2
Worker Vehicle Emissions (continued)

Project	Trips Per Day	Duration (days)	VMT	EFNO _x (g/mile)	NO _x (tons)	EFVOC (g/mile)	VOC (tons)	EF PM _{2.5} (g/mile)	PM _{2.5} (tons)	EF SO ₂ (g/mile)	SO ₂ (tons)
Family Travel Camp, Building Construction	12	230	82757	0.32	0.03	0.29	0.03	0.01	0.00	0.01	0.00
Gunston Road Improvements, Clearing and Grading	21	57	35157	0.32	0.01	0.29	0.01	0.01	0.00	0.01	0.00
Gunston Road Improvements, Paving	16	170	79902	0.32	0.03	0.29	0.03	0.01	0.00	0.01	0.00
Hospital (2008), Building Construction	209	230	1438733	0.32	0.50	0.29	0.46	0.01	0.02	0.01	0.01
Hospital, Clearing and Grading	33	113	112727	0.32	0.04	0.29	0.04	0.01	0.00	0.01	0.00
MDA (2008), Building Construction	37	230	258336	0.32	0.09	0.29	0.08	0.01	0.00	0.01	0.00
Network Enterprise Communications Facility (AKO), Building Construction	53	132	210085	0.32	0.07	0.29	0.07	0.01	0.00	0.01	0.00
Network Enterprise Communications Facility (AKO), Clearing and Grading	7	38	7538	0.32	0.00	0.29	0.00	0.01	0.00	0.01	0.00
Network Enterprise Communications Facility (AKO), Demolition	1	57	1702	0.32	0.00	0.29	0.00	0.01	0.00	0.01	0.00
NGA Admin (EPG), Building Construction	435	230	3004398	0.32	1.04	0.29	0.96	0.01	0.04	0.01	0.03
NGA Admin (EPG), Building Construction	435	230	3004398	0.32	1.04	0.29	0.96	0.01	0.04	0.01	0.03
PEO EIS Administrative Facility, Landscaping	5	28	4377	0.32	0.00	0.29	0.00	0.01	0.00	0.01	0.00
PEO EIS Administrative Facility, Paving	4	28	3203	0.32	0.00	0.29	0.00	0.01	0.00	0.01	0.00
Secure Admin Facility (EPG) (WHS) (2008), Building Construction	799	230	5511996	0.32	1.92	0.29	1.76	0.01	0.07	0.01	0.06

Table A1-2
Worker Vehicle Emissions *(continued)*

Project	Trips Per Day	Duration (days)	VMT	EFNO_x (g/mile)	NO_x (tons)	EFVOC (g/mile)	VOC (tons)	EF PM_{2.5} (g/mile)	PM_{2.5} (tons)	EF SO₂ (g/mile)	SO₂ (tons)
Structured Parking Facility, 200 Area, Clearing and Grading	3	113	9392	0.32	0.00	0.29	0.00	0.01	0.00	0.01	0.00
Structured Parking Facility, 200 Area, Demolition	0	38	423	0.32	0.00	0.29	0.00	0.01	0.00	0.01	0.00
USANCA Support Facility, Building Construction	14	113	48999	0.32	0.02	0.29	0.02	0.01	0.00	0.01	0.00
USANCA Support Facility, Clearing and Grading	2	19	1038	0.32	0.00	0.29	0.00	0.01	0.00	0.01	0.00
Access Road/Control Point, Building Construction	0	38	229	0.32	0.00	0.29	0.00	0.01	0.00	0.01	0.00
Access Road/Control Point, Clearing and Grading	1	19	721	0.32	0.00	0.29	0.00	0.01	0.00	0.01	0.00
Access Road/Control Point, Paving	1	38	1423	0.32	0.00	0.29	0.00	0.01	0.00	0.01	0.00
Emergency Services Center (EPG), Building Construction	14	151	64353	0.32	0.02	0.29	0.02	0.01	0.00	0.01	0.00
Emergency Services Center (EPG), Clearing and Grading	1	19	456	0.32	0.00	0.29	0.00	0.01	0.00	0.01	0.00
EPG Infrastructure (EPG), Paving	21	28	18037	0.32	0.01	0.29	0.01	0.01	0.00	0.01	0.00
Family Travel Camp, Paving	1	170	2664	0.32	0.00	0.29	0.00	0.01	0.00	0.01	0.00
Gunston Road Improvements, Landscaping	4	57	6818	0.32	0.00	0.29	0.00	0.01	0.00	0.01	0.00
Hospital (2009), Building Construction	209	230	1438733	0.32	0.50	0.29	0.46	0.01	0.02	0.01	0.01
MDA, Landscaping	1	28	509	0.32	0.00	0.29	0.00	0.01	0.00	0.01	0.00
MDA, Paving	1	28	1068	0.32	0.00	0.29	0.00	0.01	0.00	0.01	0.00

Table A1-2
Worker Vehicle Emissions *(continued)*

Project	Trips Per Day	Duration (days)	VMT	EFNO_x (g/mile)	NO_x (tons)	EFVOC (g/mile)	VOC (tons)	EF PM_{2.5} (g/mile)	PM_{2.5} (tons)	EF SO₂ (g/mile)	SO₂ (tons)
NARMC HQ Building, Building Construction	6	170	33075	0.32	0.01	0.29	0.01	0.01	0.00	0.01	0.00
NARMC HQ Building, Clearing and Grading	1	19	649	0.32	0.00	0.29	0.00	0.01	0.00	0.01	0.00
NARMC HQ Building, Landscaping	0	19	117	0.32	0.00	0.29	0.00	0.01	0.00	0.01	0.00
NARMC HQ Building, Paving	1	19	356	0.32	0.00	0.29	0.00	0.01	0.00	0.01	0.00
Network Enterprise Communications Facility (AKO), Landscaping	0	28	360	0.32	0.00	0.29	0.00	0.01	0.00	0.01	0.00
Network Enterprise Communications Facility (AKO), Paving	6	28	4754	0.32	0.00	0.29	0.00	0.01	0.00	0.01	0.00
Network Operations Center (part of PEO EIS), Building Construction	4	132	14292	0.32	0.00	0.29	0.00	0.01	0.00	0.01	0.00
Network Operations Center (part of PEO EIS), Clearing and Grading	1	38	1038	0.32	0.00	0.29	0.00	0.01	0.00	0.01	0.00
NGA Admin (EPG), Building Construction	435	230	3004398	0.32	1.04	0.29	0.96	0.01	0.04	0.01	0.03
Secure Admin Facility (EPG) (WHS) (2009) Parking Garage, Building Construction	720	230	4968000	0.32	1.73	0.29	1.59	0.01	0.06	0.01	0.05
Secure Admin Facility (EPG) (WHS) (2009), Building Construction	799	230	5511996	0.32	1.92	0.29	1.76	0.01	0.07	0.01	0.06
Structured Parking Facility, 200 Area (2009), Building Construction	92	230	635904	0.32	0.22	0.29	0.20	0.01	0.01	0.01	0.01

Table A1-2
Worker Vehicle Emissions (continued)

Project	Trips Per Day	Duration (days)	VMT	EFNO_x (g/mile)	NO_x (tons)	EFVOC (g/mile)	VOC (tons)	EF PM_{2.5} (g/mile)	PM_{2.5} (tons)	EF SO₂ (g/mile)	SO₂ (tons)
USANCA Support Facility, Landscaping	0	28	196	0.32	0.00	0.29	0.00	0.01	0.00	0.01	0.00
USANCA Support Facility, Paving	1	28	1068	0.32	0.00	0.29	0.00	0.01	0.00	0.01	0.00
Admin Bldg, MEDCOM, Building Construction	6	151	29400	0.32	0.01	0.29	0.01	0.01	0.00	0.01	0.00
Admin Bldg, MEDCOM, Clearing and Grading	1	19	440	0.32	0.00	0.29	0.00	0.01	0.00	0.01	0.00
Administrative Facility (Bldgs 211, 215, 219, 220), Clearing and Grading	3	38	3592	0.32	0.00	0.29	0.00	0.01	0.00	0.01	0.00
Administrative Facility (Bldgs 211, 215, 219, 220), Demolition	0	19	221	0.32	0.00	0.29	0.00	0.01	0.00	0.01	0.00
Administrative Facility (Bldgs 211, 215, 219, 220), Parking Garage	96	151	434462	0.32	0.15	0.29	0.14	0.01	0.01	0.01	0.00
Child Dev Center – 244 (EPG), Building Construction	14	113	47995	0.32	0.02	0.29	0.02	0.01	0.00	0.01	0.00
Child Dev Center – 244 (EPG), Clearing and Grading	3	38	3717	0.32	0.00	0.29	0.00	0.01	0.00	0.01	0.00
Child Development Center (EPG), Building Construction	17	170	88331	0.32	0.03	0.29	0.03	0.01	0.00	0.01	0.00
Child Development Center (EPG), Clearing and Grading	3	57	4710	0.32	0.00	0.29	0.00	0.01	0.00	0.01	0.00
Dental Clinic, Building Construction	12	214	74044	0.32	0.03	0.29	0.02	0.01	0.00	0.01	0.00
Dental Clinic, Clearing and Grading	2	19	878	0.32	0.00	0.29	0.00	0.01	0.00	0.01	0.00
Emergency Services Center (EPG), Paving	0	19	135	0.32	0.00	0.29	0.00	0.01	0.00	0.01	0.00
Family Travel Camp, Landscaping	1	57	1466	0.32	0.00	0.29	0.00	0.01	0.00	0.01	0.00

Table A1-2
Worker Vehicle Emissions *(continued)*

Project	Trips Per Day	Duration (days)	VMT	EFNO_x (g/mile)	NO_x (tons)	EFVOC (g/mile)	VOC (tons)	EF PM_{2.5} (g/mile)	PM_{2.5} (tons)	EF SO₂ (g/mile)	SO₂ (tons)
Hospital (2010), Building Construction	209	230	1438733	0.32	0.50	0.29	0.46	0.01	0.02	0.01	0.01
Infrastructure Upgrades - Fort Belvoir, Building Construction	18	170	91874	0.32	0.03	0.29	0.03	0.01	0.00	0.01	0.00
Infrastructure Upgrades - Fort Belvoir, Clearing and Grading	58	170	294734	0.32	0.10	0.29	0.09	0.01	0.00	0.01	0.00
Infrastructure Upgrades - Fort Belvoir, Paving	50	113	169488	0.32	0.06	0.29	0.05	0.01	0.00	0.01	0.00
Network Operations Center (part of PEO EIS), Landscaping	0	28	98	0.32	0.00	0.29	0.00	0.01	0.00	0.01	0.00
Network Operations Center (part of PEO EIS), Paving	1	28	534	0.32	0.00	0.29	0.00	0.01	0.00	0.01	0.00
NGA Admin (EPG), Landscaping	16	28	13214	0.32	0.00	0.29	0.00	0.01	0.00	0.01	0.00
NGA Admin (EPG), Paving	4	28	3203	0.32	0.00	0.29	0.00	0.01	0.00	0.01	0.00
NGA Admin (EPG), Building Construction	435	230	3004398	0.32	1.04	0.29	0.96	0.01	0.04	0.01	0.03
NGA Admin (EPG), Parking Structure, Building Construction	1742	230	12017592	0.32	4.18	0.29	3.84	0.01	0.15	0.01	0.12
Secure Admin Facility (EPG) (WHS), Landscaping	19	28	15746	0.32	0.01	0.29	0.01	0.01	0.00	0.01	0.00

Table A1-2
Worker Vehicle Emissions *(continued)*

Project	Trips Per Day	Duration (days)	VMT	EFNO _x (g/mile)	NO _x (tons)	EFVOC (g/mile)	VOC (tons)	EF PM _{2.5} (g/mile)	PM _{2.5} (tons)	EF SO ₂ (g/mile)	SO ₂ (tons)
Secure Admin Facility (EPG) (WHS), Paving	6	28	5329	0.32	0.00	0.29	0.00	0.01	0.00	0.01	0.00
Structured Parking Facility, 200 Area (2010), Building Construction	46	113	156798	0.32	0.05	0.29	0.05	0.01	0.00	0.01	0.00
Structured Parking Facility, 200 Area, Landscaping	1	19	626	0.32	0.00	0.29	0.00	0.01	0.00	0.01	0.00
Admin Bldg, MEDCOM, Landscaping	0	19	117	0.32	0.00	0.29	0.00	0.01	0.00	0.01	0.00
Admin Bldg, MEDCOM, Paving	0	19	147	0.32	0.00	0.29	0.00	0.01	0.00	0.01	0.00
Administrative Facility (Bldgs 211, 215, 219, 220), Landscaping	1	28	651	0.32	0.00	0.29	0.00	0.01	0.00	0.01	0.00
Administrative Facility (Bldgs 211, 215, 219, 220), Paving	1	28	1068	0.32	0.00	0.29	0.00	0.01	0.00	0.01	0.00
Child Dev Center – 244 (EPG), Landscaping	0	28	383	0.32	0.00	0.29	0.00	0.01	0.00	0.01	0.00
Child Dev Center – 244 (EPG), Paving	2	28	1830	0.32	0.00	0.29	0.00	0.01	0.00	0.01	0.00
Child Development Center (EPG), Landscaping	1	28	470	0.32	0.00	0.29	0.00	0.01	0.00	0.01	0.00
Child Development Center (EPG), Paving	1	28	1179	0.32	0.00	0.29	0.00	0.01	0.00	0.01	0.00
Dental Clinic , Landscaping	0	28	313	0.32	0.00	0.29	0.00	0.01	0.00	0.01	0.00
Dental Clinic , Paving	1	28	534	0.32	0.00	0.29	0.00	0.01	0.00	0.01	0.00
Hospital (2011 Parking Garage), Building Construction	720	230	4968000	0.32	1.73	0.29	1.59	0.01	0.06	0.01	0.05
Hospital , Landscaping	11	28	9141	0.32	0.00	0.29	0.00	0.01	0.00	0.01	0.00

Table A1-2
Worker Vehicle Emissions *(continued)*

Project	Trips Per Day	Duration (days)	VMT	EFNO_x (g/mile)	NO_x (tons)	EFVOC (g/mile)	VOC (tons)	EF PM_{2.5} (g/mile)	PM_{2.5} (tons)	EF SO₂ (g/mile)	SO₂ (tons)
Hospital , Paving	6	28	5329	0.32	0.00	0.29	0.00	0.01	0.00	0.01	0.00
Infrastructure Upgrades - Fort Belvoir, Clearing and Grading	58	230	398436	0.32	0.14	0.29	0.13	0.01	0.00	0.01	0.00
Infrastructure Upgrades - Fort Belvoir, Landscaping	12	76	28149	0.32	0.01	0.29	0.01	0.01	0.00	0.01	0.00
Infrastructure Upgrades - Fort Belvoir, Paving	50	113	169488	0.32	0.06	0.29	0.05	0.01	0.00	0.01	0.00

Sources: USEPA and FAA 2002; *MOBILE* 6.2; SQAQMD 1993.

**Table A1-3
Architectural Coating Emissions**

Project	Heated Area	Wall Surface	VOC (tons)
Expand and Renovate PX and Commissary, Building Construction	186300	372600	10.3
MDA (2007), Building Construction	52000	104000	2.9
PEO EIS Administrative Facility - Parking Garage, Building Construction	447400	894800	24.8
PEO EIS Administrative Facility, Building Construction	447400	894800	24.8
EPG Infrastructure (EPG) (2008), Building Construction	25000	50000	1.4
Family Travel Camp, Building Construction	16658	33316	0.9
Hospital (2008), Building Construction	289600	579200	16.1
MDA (2008), Building Construction	52000	104000	2.9
Network Enterprise Communications Facility (AKO), Building Construction	73500	147000	4.1
NGA Admin (EPG), Building Construction	604750	1209500	33.6
NGA Admin (EPG), Building Construction	604750	1209500	33.6
Secure Admin Facility (EPG) (WHS) (2008), Building Construction	1109500	2219000	61.6
USANCA Support Facility, Building Construction	20000	40000	1.1
Access Road/Control Point, Building Construction	280	560	0.0
Emergency Services Center (EPG), Building Construction	19700	39400	1.1
Hospital (2009), Building Construction	289600	579200	16.1
NARMC HQ Building, Building Construction	9000	18000	0.5
Network Operations Center (part of PEO EIS), Building Construction	5000	10000	0.3
NGA Admin (EPG), Building Construction	604750	1209500	33.6
Secure Admin Facility (EPG) (WHS) (2009 Parking Garage), Building Construction	1000000	2000000	55.5
Secure Admin Facility (EPG) (WHS) (2009), Building Construction	1109500	2219000	61.6
Structured Parking Facility, 200 Area (2009), Building Construction	128000	256000	7.1
Admin Bldg, MEDCOM, Building Construction	9000	18000	0.5
Administrative Facility (Bldgs 211, 215, 219, 220), Parking Garage	133000	266000	7.4
Child Dev Center – 244 (EPG), Building Construction	19590	39180	1.1
Child Development Center (EPG), Building Construction	24036	48072	1.3
Dental Clinic, Building Construction	16000	32000	0.9
Hospital (2010), Building Construction	289600	579200	16.1

Table A1-3
Architectural Coating Emissions *(continued)*

Project	Heated Area	Wall Surface	VOC (tons)
Infrastructure Upgrades - Fort Belvoir, Building Construction	25000	50000	1.4
NGA Admin (EPG), Building Construction	604750	1209500	33.6
NGA Admin (EPG), Parking Structure, Building Construction	2419000	4838000	134.3
Structured Parking Facility, 200 Area (2010), Building Construction	64000	128000	3.6
Hospital (2011 Parking Garage), Building Construction	1000000	2000000	55.5

Source: SQAQMD 1993.

Table A1-4
Paving Off-gas Emissions

Project	Paved Area (Acres)	EFVOC (lbs/acre)	VOC (tons)
Gunston Road Improvements, Paving	12.52	2.62	0.016
PEO EIS Administrative Facility, Paving	3.01	2.62	0.004
Access Road/Control Point, Paving	1	2.62	0.001
EPG Infrastructure (EPG), Paving	16.96	2.62	0.022
Family Travel Camp, Paving	0.42	2.62	0.001
MDA, Paving	1	2.62	0.001
NARMC HQ Building, Paving	0.5	2.62	0.001
Network Enterprise Communications Facility (AKO), Paving	4.47	2.62	0.006
USANCA Support Facility, Paving	1	2.62	0.001
Emergency Services Center (EPG), Paving	0.19	2.62	0.000
Infrastructure Upgrades - Fort Belvoir, Paving	39.85	2.62	0.052
Network Operations Center (part of PEO EIS), Paving	0.5	2.62	0.001
NGA Admin (EPG), Paving	3.01	2.62	0.004
Secure Admin Facility (EPG) (WHS), Paving	5.01	2.62	0.007
Admin Bldg, MEDCOM, Paving	0.21	2.62	0.000
Administrative Facility (Bldgs 211, 215, 219, 220), Paving	1	2.62	0.001
Child Dev Center – 244 (EPG), Paving	1.72	2.62	0.002
Child Development Center (EPG), Paving	1.11	2.62	0.002
Dental Clinic, Paving	0.5	2.62	0.001
Hospital, Paving	5.01	2.62	0.007
Infrastructure Upgrades - Fort Belvoir, Paving	39.85	2.62	0.052

Source: SQAQMD 1993.

**Table A1-5
Fugitive Particle Emissions**

Project	PM10/TSP	PM_{2.5}/ PM₁₀	EF TSP (lb/ac/d)	Capture Fraction	Duration of Grading (days)	Cleared Area (acres)	PM_{2.5} (tons)
Family Travel Camp, Clearing and Grading	0.45	0.15	80	0.5	170.14	1.66	0.04
MDA, Clearing and Grading	0.45	0.15	80	0.5	18.9	2.2	0.01
NGA Admin (EPG), Clearing and Grading	0.45	0.15	80	0.5	113.42	37.09	0.57
PEO EIS Administrative Facility, Clearing and Grading	0.45	0.15	80	0.5	37.81	13.3	0.07
Secure Admin Facility (EPG) (WHS), Clearing and Grading	0.45	0.15	80	0.5	113.42	42.03	0.64
EPG Infrastructure (EPG), Clearing and Grading	0.45	0.15	80	0.5	85.07	18.11	0.21
Gunston Road Improvements, Clearing and Grading	0.45	0.15	80	0.5	56.71	16.53	0.13
Hospital, Clearing and Grading	0.45	0.15	80	0.5	113.42	26.5	0.41
Network Enterprise Communications Facility (AKO), Clearing and Grading	0.45	0.15	80	0.5	37.81	5.32	0.03
Network Enterprise Communications Facility (AKO), Demolition	0.45	0.15	80	0.5	56.71	0.8	0.01
Structured Parking Facility, 200 Area, Clearing and Grading	0.45	0.15	80	0.5	113.42	2.21	0.03
Structured Parking Facility, 200 Area, Demolition	0.45	0.15	80	0.5	37.81	0.3	0.00
USANCA Support Facility, Clearing and Grading	0.45	0.15	80	0.5	18.9	1.46	0.00
Access Road/Control Point, Clearing and Grading	0.45	0.15	80	0.5	18.9	1.02	0.00
Emergency Services Center (EPG), Clearing and Grading	0.45	0.15	80	0.5	18.9	0.64	0.00
NARMC HQ Building, Clearing and Grading	0.45	0.15	80	0.5	18.9	0.92	0.00

Table A1-5
Fugitive Particle Emissions (continued)

Project	PM10/TSP	PM _{2.5} /PM ₁₀	EF TSP (lb/ac/d)	Capture Fraction	Duration of Grading (days)	Cleared Area (acres)	PM _{2.5} (tons)
Network Operations Center (part of PEO EIS), Clearing and Grading	0.45	0.15	80	0.5	37.81	0.73	0.00
Admin Bldg, MEDCOM, Clearing and Grading	0.45	0.15	80	0.5	18.9	0.62	0.00
Administrative Facility (Bldgs 211, 215, 219, 220), Clearing and Grading	0.45	0.15	80	0.5	37.81	2.53	0.01
Administrative Facility (Bldgs 211, 215, 219, 220), Demolition	0.45	0.15	80	0.5	18.9	0.31	0.00
Child Dev Center – 244 (EPG), Clearing and Grading	0.45	0.15	80	0.5	37.81	2.62	0.01
Child Development Center (EPG), Clearing and Grading	0.45	0.15	80	0.5	56.71	2.21	0.02
Dental Clinic, Clearing and Grading	0.45	0.15	80	0.5	18.9	1.24	0.00
Infrastructure Upgrades - Fort Belvoir, Clearing and Grading	0.45	0.15	80	0.5	170.14	46.2	1.06
Infrastructure Upgrades - Fort Belvoir, Clearing and Grading	0.45	0.15	80	0.5	230	46.2	1.43
Total Fugitive Dust Emissions							4.86

Sources: AP-42 Section 13.2.3; USEPA 2005c.

Table A1-6
Emissions from Small Heating and Cooling Activities

Project Name	Heated Area	Fuel Used (cubic feet)	NO _x	VOC	PM _{2.5}	SO ₂
Access Road/Control Point, Operations	280	26796	0.0013	0.0001	0.0001	0
EPG Infrastructure (EPG) (2008), Operations	25000	2392500	0.1196	0.0066	0.0091	0.0007
MDA (2007), Operations	104000	3036800	0.1518	0.0084	0.0115	0.0009
NARMC HQ Building, Operations	9000	861300	0.0431	0.0024	0.0033	0.0003
NARMC HQ Building, Operations	39825	3811252.5	0.1906	0.0105	0.0145	0.0011
Network Enterprise Communications Facility (AKO), Operations	73500	2528400	0.1264	0.007	0.0096	0.0008
Network Enterprise Communications Facility (AKO), Operations	73500	2528400	0.1264	0.007	0.0096	0.0008
USANCA Support Facility, Operations	20000	1914000	0.0957	0.0053	0.0073	0.0006
Dental Clinic, Operations	16000	1531200	0.0766	0.0042	0.0058	0.0005

Table A1-6
Emissions from Small Heating and Cooling Activities *(continued)*

Project Name	Heated Area	Fuel Used (cubic feet)	NOx	VOC	PM2.5	SO2
Family Travel Camp, Operations	16658	1594170.5	0.0797	0.0044	0.0061	0.0005
Network Operations Center (part of PEO EIS), Operations	5000	478500	0.0239	0.0013	0.0018	0.0001
Admin Bldg, MEDCOM, Operation	9000	861300	0.0431	0.0024	0.0033	0.0003
Administrative Facility (Bldgs 211, 215, 219, 220), Operations	133600	3901120	0.1951	0.0107	0.0148	0.0012
Child Dev Center – 244 (EPG), Operations	19590	1874763	0.0937	0.0052	0.0071	0.0006
Child Development Center (EPG), Operations	24036	2300245.25	0.115	0.0063	0.0087	0.0007

Sources: AP-42 Section 1.4; DOE 1999.

Table A1-7
Employee Vehicle Emissions

Project Name	Number of Employees	Average Commute ^a	EFNO _x (tons)	NO _x (tons)	EFVOC (tons)	VOC (tons)	EF PM _{2.5} (tons)	PM _{2.5} (tons)	EF SO ₂ (tons)	SO ₂ (tons)
PEO EIS, Commuters	480	-3	0.31	-0.24	0.31	-0.25	0.01	-0.01	0.01	-0.01
Realigned Away From Belvoir, Commuters	-1769	14	0.31	-4.2	0.31	-4.3	0.01	-0.15	0.01	-0.13
NGA , Commuters	8500	-3	0.31	-4.32	0.31	-4.43	0.01	-0.16	0.01	-0.14
MDA, Commuters	292	-3	0.31	-0.15	0.31	-0.15	0.01	-0.01	0.01	0
WHS , Commuters	9263	-3	0.31	-4.71	0.31	-4.82	0.01	-0.17	0.01	-0.15
MEDCOM , Commuters	2069	-3	0.31	-1.05	0.31	-1.08	0.01	-0.04	0.01	-0.03
Army Lease , Commuters	2720	-3	0.31	-1.38	0.31	-1.42	0.01	-0.05	0.01	-0.04

Sources: USEPA and FAA 2002, *MOBILE6.2*.

^a Represents the net change in commuting distance due to the action.

**APPENDIX E.2
VEHICLE MICROSCALE
CO CONCENTRATION MODELING**

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The CO microscale air quality analysis is based on procedures outlined in the following documents:

- Guideline for Modeling CO From Roadway Intersections (USEPA 1992); and
- Mobile 6.2 User's Guide (USEPA 2003).

Carbon monoxide concentrations are determined in two steps: 1) vehicle exhaust emission factors are calculated using the USEPA Mobile 6.2 computer model; and 2) these emission factors are subsequently used as input for the USEPA CAL3QHC dispersion model. The models used are described as follows:

- Mobile 6.2 generates vehicular emission factors based on locality-specific vehicle fleet characteristics including vehicle age, operating mode of vehicles (hot/cold starts), and percentage of oxygenated fuel used. Input files containing the latest planning assumptions for Fairfax County were provided by the Metropolitan Washington Council of Governments (MWCOG) (MWCOG 2005).
- CAL3QHC predicts the level of CO or other pollutant concentrations from motor vehicles traveling near roadway intersections. The model incorporates inputs such as roadway geometry, traffic volumes, vehicular emission rates, and meteorological conditions.

The intersection location determinations and CO estimations were made through the following process:

1. Traffic, operating conditions, roadway configurations and geometry information was gathered for roadways and intersections of interest.
2. Potential worst-case roadways were identified based on the level of service and traffic flow.
3. Worst-case receptor locations were identified as the location of maximum CO concentration.
4. Mobile 6.2 and CAL3QHC were used to calculate CO concentrations due to vehicle traffic at identified "worst-case" roadway and receptor locations. Assumptions outlined in the 1985 Caltrans Report, Development of Worst Case Meteorology Criteria (Nokes and Benson 1985) were used for the analysis.
5. Persistence factor of 0.7 was used to estimate the 8-Hour concentration from the 1-Hour concentration.
6. Background concentrations at the intersection were determined using local monitoring data obtained from the VDEQ and added to modeled concentrations.

Data Inputs and results tabulated below (Table E.2-1).

**Table E.2-1
Peak hour CO levels for all alternative and intersections analyzed**

Intersection Location		1-hour [CO]	8-hour [CO]
Fairfax County Parkway./ John J Kingman Rd.	Existing	6.6	4.6
Fairfax County Parkway./ John J Kingman Rd.	No-Action	6.7	4.7
Fairfax County Parkway./ John J Kingman Rd.	Preferred	6.8	4.8
Fairfax County Parkway./ John J Kingman Rd.	Town Center	7.0	4.9
Fairfax County Parkway./ John J Kingman Rd.	City Center	6.7	4.7
Fairfax County Parkway./ John J Kingman Rd.	Satellite	7.0	4.9
Franconia Springfield Parkway EB Ramp./ Backlick Rd.	Existing	7.6	5.3
Franconia Springfield Parkway EB Ramp./ Backlick Rd.	No-Action	7.6	5.3
Franconia Springfield Parkway EB Ramp./ Backlick Rd.	Preferred	7.6	5.3
Franconia Springfield Parkway EB Ramp./ Backlick Rd.	City Center	7.6	5.3
Franconia Springfield Parkway./ Beulah St.	Existing	6.7	4.7
Franconia Springfield Parkway./ Beulah St.	No-Action	7.0	4.9
Franconia Springfield Parkway./ Beulah St.	Preferred	6.8	4.8
Franconia Springfield Parkway./ Beulah St.	Town Center	6.8	4.8
Franconia Springfield Parkway./ Beulah St.	City Center	6.8	4.8
Franconia Springfield Parkway./ Beulah St.	Satellite	6.8	4.8
Franconia Springfield Parkway/ Spring Village Dr.	Existing	6.2	4.3
Franconia Springfield Parkway/ Spring Village Dr.	No-Action	6.7	4.7
Franconia Springfield Parkway/ Spring Village Dr.	Preferred	7.3	5.1
Franconia Springfield Parkway/ Spring Village Dr.	City Center	7.3	5.1
Route 1./ Backlick Rd. - Pohick Rd.	Existing	5.2	3.6
Route 1/ Backlick Rd. - Pohick Rd.	No-Action	5.6	3.9
Route 1/ Backlick Rd. - Pohick Rd.	Preferred	6.0	4.2
Route 1/ Backlick Rd. - Pohick Rd.	Town Center	6.3	4.4
Route 1/ Backlick Rd. - Pohick Rd.	City Center	5.7	4.0
Route 1/ Backlick Rd. - Pohick Rd.	Satellite	6.1	4.3
Route 1./ Belvoir Rd.	Existing	5.0	3.5
Route 1./ Belvoir Rd.	No-Action	5.0	3.5
Route 1./ Belvoir Rd.	Preferred	5.7	4.0
Route 1./ Belvoir Rd.	Town Center	5.4	3.8
Route 1/Fairfax County Parkway.	Existing	5.8	4.1
Route 1/ Fairfax County Parkway.	No Action	5.9	4.1
Route 1/ Fairfax County Parkway.	Preferred	6.2	4.3
Route ./ Fairfax County Parkway.	Town Center	6.6	4.6
Route 1/ Fairfax County Parkway.	City Center	6.1	4.3
Route 1/ Fairfax County Parkway.	Satellite	6.4	4.5
Route 1./ Telegraph Rd. - Old Colchester Rd.	Existing	6.2	4.3
Route 1./ Telegraph Rd. - Old Colchester Rd.	No-Action	6.6	4.6
Route 1./ Telegraph Rd. - Old Colchester Rd.	Preferred	6.9	4.8
Route 1./ Telegraph Rd. - Old Colchester Rd.	Town Center	6.8	4.8
Route 1./ Telegraph Rd. - Old Colchester Rd.	City Center	6.8	4.8
Route 1./ Telegraph Rd. - Old Colchester Rd.	Satellite	6.8	4.8

INTERSECTION DESCRIPTION - Fairfax County Parkway./ John J Kingman Rd.

IDLE EMISSION FACTOR [GRAMS/HOUR]	53.715
MOVING EMISSION FACTOR	4.972
LANE WIDTH (FEET)	12
SOURCE HEIGHT (FEET)	0
SIGNAL LENGTH (S)	208
CLEARANCE LOST TIME (S)	2

Existing Conditions

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
START X1 (FEET)	-96	-96		108	108	108	18	36	54	-24	-48	-66
START Y1 (FEET)	-6	-18		6	18	30	-72	-72	-60	84	84	-60
END X2 (FEET)	-500	-500		500	500	500	18	36	54	-24	-48	-66
END Y2 (FEET)	-6	-18		6	18	108	-500	-500	-500	500	500	500
TRAFFIC VOLUME [VPH]	15	60	20	20	20	130	30	940	395	1095	910	60
EMISSION FACTOR	53.715	53.715		53.715	53.715	53.715	53.715	53.715	53.715	53.715	53.715	53.715
SOURCE HEIGHT	0	0		0	0	0	0	0	0	0	0	0
MIXING ZONE WIDTH	12	12		12	12	12	12	24	12	24	24	12
NUMBER OF LANES IN QUEUE	1	1		1	1	1	1	2	1	2	2	1
TOTAL SIGNAL LENGTH	208	208		208	208	208	208	208	208	208	208	208
AVERAGE RED	176	176		161	161	84	186	156	156	131	101	101
CLEARANCE LOST TIME	2	2		2	2	2	2	2	2	2	2	2
SATURATION FLOW RATE (per lane)	1770	1792		1681	1770	1583	1770	1769.5	1583	1716.5	1769.5	1583
AVERAGE GREEN	32	32		47	47	124	22	52	52	77	107	107
SATURATION FLOW RATE	1770	1792		1681	1770	1583	1770	3539	1583	3433	3539	1583
	EBA	EBD		WBA	WBD		NBA	NBD		SBA	SBD	
START X1 (FEET)	0	0		0	0		36	36		-48	-48	
START Y1 (FEET)	-18	-18		18	18		0	0		0	0	
END X2 (FEET)	-500	500		500	-500		36	36		-48	-48	
END Y2 (FEET)	-18	-18		18	18		-500	500		500	-500	
TRAFFIC VOLUME [VPH]	95	1550		170	110		2430	1085		2065	950	
EMISSION FACTOR	4.972	4.972		4.972	4.972		4.972	4.972		4.972	4.972	
SOURCE HEIGHT	0	0		0	0		0	0		0	0	
MIXING ZONE WIDTH	34	34		46	22		46	34		70	34	
NUMBER OF LANES IN QUEUE	2	2		3	1		3	2		5	2	

No-Action Alternative

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
TRAFFIC VOLUME [VPH]	50	30	70	490	20	1130	40	970	60	200	820	10
TOTAL SIGNAL LENGTH	208	208		208	208	208	208	208	208	208	208	208
AVERAGE RED	196	196		87	87	73	196	149	149	194	147	147
AVERAGE GREEN	12	12		121	121	135	12	59	59	14	61	61
	EBA	EBD		WBA	WBD		NBA	NBD		SBA	SBD	
TRAFFIC VOLUME [VPH]	150	290		1640	70		1230	2150		1030	1380	

Preferred Alternative

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
TRAFFIC VOLUME [VPH]	50	40	60	450	20	1140	40	1280	70	250	1080	20
TOTAL SIGNAL LENGTH	208	208		208	208	208	208	208	208	208	208	208
AVERAGE RED	196	196		101	101	85	196	137	137	192	133	133
AVERAGE GREEN	12	12		107	107	123	12	71	71	16	75	75
	EBA	EBD		WBA	WBD		NBA	NBD		SBA	SBD	
TRAFFIC VOLUME [VPH]	150	360		1610	80		1600	2470		1350	1590	

Town Center Alternative

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
TRAFFIC VOLUME [VPH]	20	90	20	70	20	340	40	1930	900	1810	1840	50
TOTAL SIGNAL LENGTH	208	208		208	208	208	208	208	208	208	208	208
AVERAGE RED	194	194		196	196	111	195	111	111	123	39	39
AVERAGE GREEN	14	14		12	12	97	13	97	97	85	169	169
	EBA	EBD		WBA	WBD		NBA	NBD		SBA	SBD	
TRAFFIC VOLUME [VPH]	130	2800		430	110		4640	2290		3700	1930	

City Center Alternative

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
TRAFFIC VOLUME [VPH]	50	30	70	560	20	1080	40	1230	80	240	1090	10
TOTAL SIGNAL LENGTH	208	208		208	208	208	208	208	208	208	208	208
AVERAGE RED	196	196		102	102	85	196	137	137	191	132	132
AVERAGE GREEN	12	12		106	106	123	12	71	71	17	76	76
	EBA	EBD		WBA	WBD		NBA	NBD		SBA	SBD	
TRAFFIC VOLUME [VPH]	150	350		1660	70		1550	2360		1340	1720	

Satellite Campus Alternative

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
TRAFFIC VOLUME [VPH]	430	30	230	690	20	1360	60	1400	150	340	1020	20
TOTAL SIGNAL LENGTH	208	208		208	208	208	208	208	208	208	208	208
AVERAGE RED	174	174		121	121	103	196	141	141	190	135	135
AVERAGE GREEN	34	34	34	87	87	105	12	67	67	18	73	73
	EBA	EBD		WBA	WBD		NBA	NBD		SBA	SBD	
TRAFFIC VOLUME [VPH]	690	520		2070	100		1890	3190		1380	1940	

INTERSECTION DESCRIPTION - FSP and Backlick

IDLE EMISSION FACTOR [GRAMS/HOUR]	53.715
MOVING EMISSION FACTOR	4.972
LANE WIDTH (FEET)	12
SOURCE HEIGHT (FEET)	0
SIGNAL LENGTH (S)	150
CLEARANCE LOST TIME (S)	2

Existing Conditions

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR		
START X1 (FEET)	-48		-48				6	60			-6	-18		
START Y1 (FEET)	-12		-30				-48	-48			48	48		
END X2 (FEET)	-500		500				6	24			-6	-18		
END Y2 (FEET)	-12		-30				-500	-500			500	500		
TRAFFIC VOLUME [VPH]	1375		250				170	1380			565	85		
EMISSION FACTOR	53.715		53.715				53.715	53.715			53.715	53.715		
SOURCE HEIGHT	0		0				0	0			0	0		
MIXING ZONE WIDTH	12		12				12	24			24	12		
NUMBER OF LANES IN QUEUE	1		1				1	2			2	1		
TOTAL SIGNAL LENGTH	150		150				150	150			150	150		
AVERAGE RED	101		59				101	101			131			
CLEARANCE LOST TIME	2		2				2	2			2	2		
SATURATION FLOW RATE (per lane)	1681		1583				1770	1769.5			1769.5	1583		
AVERAGE GREEN	49		91				49	49			19	19		
SATURATION FLOW RATE	1681		1583				1770	3539			3539	1583		
	EBA			WBD			NBA	NBD		SBA	SBD	FSP WB	FSP EB	I95
START X1 (FEET)	0			0			60	60		-6	-6	144	144	264
START Y1 (FEET)	-18			24			0	0		0	0	0	-120	1000
END X2 (FEET)	-500			-500			60	60		-6	-6	0	0	264
END Y2 (FEET)	-18			24			-500	500		500	-500	-114	-222	-1000
TRAFFIC VOLUME [VPH]	1625			255			1380	2755		650	815	1270	2120	2280
EMISSION FACTOR	4.972			4.972			4.972	4.972		4.972	4.972	4.972	4.972	4.972
SOURCE HEIGHT	0			0			0	0		0	0	0	0	0
MIXING ZONE WIDTH	46			34			46	34		46	34	46	82	178
NUMBER OF LANES IN QUEUE	3			2			3	2		3	2	3	6	14

No-Action Alternative

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR		
TRAFFIC VOLUME [VPH]	1500	10	220	10	10	10	170	1410	10	10	620	110		
TOTAL SIGNAL LENGTH	150		150				150	150			150	150		
AVERAGE RED	81		51				51	81			111	111		
AVERAGE GREEN	69		99				99	69			39	39		
	EBA			WBA	WBD		NBA	NBD		SBA	SBD			
TRAFFIC VOLUME [VPH]	1730			30	290		1430	2920		740	850			

Preferred Alternative

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR		
TRAFFIC VOLUME [VPH]	1510	0	140	10	10	10	140	1420	10	10	780	190		
TOTAL SIGNAL LENGTH	150		150				150	150			150	150		
AVERAGE RED	81		51				51	81			111	111		
AVERAGE GREEN	69		99				99	69			39	39		
	EBA			WBA	WBD		NBA	NBD		SBA	SBD			
TRAFFIC VOLUME [VPH]	1650			30	340		1440	2940		980	930			

City Center Alternative

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR		
TRAFFIC VOLUME [VPH]	1510	0	140	10	10	10	140	1420	10	10	780	190		
TOTAL SIGNAL LENGTH	150		150				150	150			150	150		
AVERAGE RED	81		51				51	81			111	111		
AVERAGE GREEN	69		99				99	69			39	39		
	EBA			WBA	WBD		NBA	NBD		SBA	SBD			
TRAFFIC VOLUME [VPH]	1650			30	340		1440	2940		980	930			

INTERSECTION DESCRIPTION - Franconia Springfield Parkway./ Beulah St. 13

IDLE EMISSION FACTOR [GRAMS/HOUR]	53.715
MOVING EMISSION FACTOR	4.972
LANE WIDTH (FEET)	12
SOURCE HEIGHT (FEET)	0
SIGNAL LENGTH (S)	180
CLEARANCE LOST TIME (S)	2

Existing Conditions

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
START X1 (FEET)	-60	-60		60	60		0	24		-6	-24	
START Y1 (FEET)	-6	-24		-6	12		-60	-60		48	48	
END X2 (FEET)	-500	-500		500	500		0	24		-6	-24	
END Y2 (FEET)	-6	-24		-6	12		-500	-500		500	500	
TRAFFIC VOLUME [VPH]	410	2120	860	205	1270	165	780	515	235	220	445	365
EMISSION FACTOR	53.715	53.715		53.715	53.715	53.715	53.715	53.715		53.715	53.715	
SOURCE HEIGHT	0	0		0	0		0	0		0	0	
MIXING ZONE WIDTH	12	24		12	24		24	24		12	24	
NUMBER OF LANES IN QUEUE	1	2		1	2		2	2		1	2	
TOTAL SIGNAL LENGTH	180	180		180	180		180	180		180	180	
AVERAGE RED	91	91		80	106		146	146		149	149	
CLEARANCE LOST TIME	2	2		2	2		2	2		2	2	
SATURATION FLOW RATE (per lane)	1641	1769.5		1770	1769.5		1716.5	1769.5		1770	1769.5	
AVERAGE GREEN	89	89		100	74		34	34		31	31	
SATURATION FLOW RATE	1641	3539		1770	3539		3433	3539		1770	3539	
	EBA	EBD		WBA	WBD		NBA	NBD		SBA	SBD	
START X1 (FEET)	0	0		0	0		24	24		-24	-24	
START Y1 (FEET)	-24	-24		12	12		0	0		0	0	
END X2 (FEET)	-500	500		500	-500		24	24		-24	-24	
END Y2 (FEET)	-24	-24		12	12		-500	500		500	-500	
TRAFFIC VOLUME [VPH]	3390	2575		1640	2415		970	1090		1030	1510	
EMISSION FACTOR	4.972	4.972		4.972	4.972		4.972	4.972		4.972	4.972	
SOURCE HEIGHT	0	0		0	0		0	0		0	0	
MIXING ZONE WIDTH	58	46		58	46		58	46		58	46	
NUMBER OF LANES IN QUEUE	4	3		4	3		4	3		4	3	

No-Action Alternative

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
TRAFFIC VOLUME [VPH]	480	2260	810	230	1400	220	760	680	260	290	570	430
TOTAL SIGNAL LENGTH	180	180		180	180		180	180		180	180	
AVERAGE RED	44	84		88	106		145	140		154	149	
AVERAGE GREEN	136	96		92	74		35	40		26	31	
	EBA	EBD		WBA	WBD		NBA	NBD		SBA	SBD	
TRAFFIC VOLUME [VPH]	3550	2810		1850	2590		1230	1380		1290	1610	

Preferred Alternative

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
TRAFFIC VOLUME [VPH]	540	2320	860	220	1340	230	720	680	240	290	580	440
TOTAL SIGNAL	180	180		180	180		180	180		180	180	

LENGTH												
AVERAGE RED	36	80		90	107		148	143		154	149	
AVERAGE GREEN	144	100		90	73		32	37		26	31	
	EBA	EBD		WBA	WBD		NBA	NBD		SBA	SBD	
TRAFFIC VOLUME [VPH]	3720	2850		1790	2500		1210	1450		1310	1660	

Town Center Alternative

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
TRAFFIC VOLUME [VPH]	540	2320	860	220	1340	230	720	680	240	290	580	440
TOTAL SIGNAL LENGTH	180	180		180	180		180	180		180	180	
AVERAGE RED	36	80		90	107		148	143		154	149	
AVERAGE GREEN	144	100		90	73		32	37		26	31	
	EBA	EBD		WBA	WBD		NBA	NBD		SBA	SBD	
TRAFFIC VOLUME [VPH]	3720	2850		1790	2500		1210	1450		1310	1660	

City Center Alternative

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
TRAFFIC VOLUME [VPH]	510	2300	870	230	1320	230	730	670	250	290	590	420
TOTAL SIGNAL LENGTH	180	180		180	180		180	180		180	180	
AVERAGE RED	41	83		89	107		147	141		154	148	
AVERAGE GREEN	139	97		91	73		33	39		26	32	
	EBA	EBD		WBA	WBD		NBA	NBD		SBA	SBD	
TRAFFIC VOLUME [VPH]	3680	2840		1780	2470		1210	1410		1300	1690	

Satellite Campus Alternative

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
TRAFFIC VOLUME [VPH]	420	2330	790	220	1410	200	840	740	290	280	580	410
TOTAL SIGNAL LENGTH	180	180		180	180		180	180		180	180	
AVERAGE RED	51	84		83	100		144	138		155	149	
AVERAGE GREEN	129	96		97	80		36	42		25	31	
	EBA	EBD		WBA	WBD		NBA	NBD		SBA	SBD	
TRAFFIC VOLUME [VPH]	3540	2900		1830	2660		1310	1360		1270	1590	

INTERSECTION DESCRIPTION - Franconia Springfield Parkway/ Spring Village Dr.

IDLE EMISSION FACTOR [GRAMS/HOUR]	53.715
MOVING EMISSION FACTOR	4.972
LANE WIDTH (FEET)	12
SOURCE HEIGHT (FEET)	0
SIGNAL LENGTH (S)	180
CLEARANCE LOST TIME (S)	2

Existing Conditions

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
START X1 (FEET)	-48	-48	-48	48	48	48	-6	6	18	6	-6	-18
START Y1 (FEET)	-6	-30	-42	-6	18	42	-72	-72	-72	72	72	72
END X2 (FEET)	-500	-500	-500	500	500	500	-6	6	18	6	-6	-18
END Y2 (FEET)	-6	-30	-42	-6	18	42	-500	-500	-500	500	500	500
TRAFFIC VOLUME [VPH]	70	1905	95	250	4130	100	45	5	150	90	10	50
EMISSION FACTOR	53.715	53.715	53.715	53.715	53.715	53.715	53.715	53.715	53.715	53.715	53.715	53.715
SOURCE HEIGHT	0	0	0	0	0	0	0	0	0	0	0	0
MIXING ZONE WIDTH	12	36	12	12	36	12	12	12	12	12	12	12
NUMBER OF LANES IN QUEUE	1	3	1	1	3	1	1	1	1	1	1	1
TOTAL SIGNAL LENGTH	180	180	180	180	180	180	180	180	180	180	180	180
AVERAGE RED	53	53	53	45	45	45	152	152	152	152	152	152
CLEARANCE LOST TIME	2	2	2	2	2	2	2	2	2	2	2	2
SATURATION FLOW RATE (per lane)	60	1695	1583	1770	1695	1583	1770	1863	1583	1711	1863	1583
SATURATION FLOW RATE	60	5085	1583	1770	5085	1583	1770	1863	1583	1711	1863	1583
	EBA	EBD		WBA	WBD		NBA	NBD		SBA	SBD	
START X1 (FEET)	0	0		0	0		6	6		-6	-6	
START Y1 (FEET)	-30	-30		18	18		0	0		0	0	
END X2 (FEET)	-500	500		500	-500		6	6		-6	-6	
END Y2 (FEET)	-30	-30		18	18		-500	500		500	-500	
TRAFFIC VOLUME [VPH]	2070	2145		4480	4225		245	175		150	355	
EMISSION FACTOR	4.972	4.972		4.972	4.972		4.972	4.972		4.972	4.972	
SOURCE HEIGHT	0	0		0	0		0	0		0	0	
MIXING ZONE WIDTH	46	46		46	46		34	34		34	34	
NUMBER OF LANES IN QUEUE	3	3		3	3		2	2		2	2	

No-Action Alternative

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
TRAFFIC VOLUME [VPH]	100	1900	110	270	4130	130	50	10	160	110	20	70
TOTAL SIGNAL LENGTH	180	180	180	180	180	180	180	180	180	180	180	180
AVERAGE RED	76	88	88	16	58	58	134	134	134	134	134	134
AVERAGE GREEN	104	92	92	164	122	122	46	46	46	46	46	46
	EBA	EBD		WBA	WBD		NBA	NBD		SBA	SBD	
TRAFFIC VOLUME [VPH]	2110	2170		4530	4250		280	240		200	400	

Preferred Alternative

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
TRAFFIC VOLUME [VPH]	60	3820	250	670	1570	80	170	20	470	60	60	30
TOTAL SIGNAL LENGTH	276	276	276	276	276	276	276	276	276	276	276	276
AVERAGE RED	108	120	120	58	58	58	230	230	230	230	230	230
AVERAGE GREEN	168	156	156	218	218	218	46	46	46	46	46	46
	EBA	EBD		WBA	WBD		NBA	NBD		SBA	SBD	
TRAFFIC VOLUME [VPH]	4130	4350		2320	1770		550	160		150	980	

City Center Alternative

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
TRAFFIC VOLUME [VPH]	60	3800	270	680	1600	80	180	30	480	60	60	30
TOTAL SIGNAL LENGTH	276	276	276	276	276	276	276	276	276	276	276	276
AVERAGE RED	108	120	120	58	58	58	230	230	230	230	230	230
AVERAGE GREEN	168	156	156	218	218	218	46	46	46	46	46	46
	EBA	EBD		WBA	WBD		NBA	NBD		SBA	SBD	
TRAFFIC VOLUME [VPH]	4130	4340		2360	1810		570	170		150	1010	

INTERSECTION DESCRIPTION - Route 1/ Backlick Rd. - Pohick Rd.

IDLE EMISSION FACTOR [GRAMS/HOUR]	53.715
MOVING EMISSION FACTOR	4.972
LANE WIDTH (FEET)	12
SOURCE HEIGHT (FEET)	0
SIGNAL LENGTH (S)	180
CLEARANCE LOST TIME (S)	2

Existing Conditions

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
START X1 (FEET)	-60	-60	-60	48	48		-6	6		-30	-18	-6
START Y1 (FEET)	6	-12	-30	-6	12		-60	-60		60	60	-72
END X2 (FEET)	-500	-500	500	500	500		-6	6		-30	-18	-6
END Y2 (FEET)	6	-12	-30	-6	12		-500	-500		500	500	500
TRAFFIC VOLUME [VPH]	5	1220	140	10	1430	90	110	70	25	185	15	10
EMISSION FACTOR	53.715	53.715	53.715	53.715	53.715		53.715	53.715		53.715	53.715	53.715
SOURCE HEIGHT	0	0	0	0	0		0	0		0	0	0
MIXING ZONE WIDTH	12	24	12	12	24		12	12		12	12	12
NUMBER OF LANES IN QUEUE	1	2	1	1	2		1	1		1	1	1
TOTAL SIGNAL LENGTH	180	180	180	180	180		180	180		180	180	180
AVERAGE RED	74	90.5	90.5	74	90.5		130	130		156	156	156
CLEARANCE LOST TIME	2	2	2	2	2		2	2		2	2	2
SATURATION FLOW RATE (per lane)	1770	1769.5	1583	1770	1753.5		1681	1689		1593	1676	1478
AVERAGE GREEN	106	89.5	89.5	106	89.5		50	50		24	24	24
SATURATION FLOW RATE	1770	3539	1583	1770	3507		1681	1689		1593	1676	1478

	EBA	EBD		WBA	WBD		NBA	NBD		SBA	SBD
START X1 (FEET)	0	0		0	0		6	6		-18	-18
START Y1 (FEET)	-12	-12		12	12		0	0		0	0
END X2 (FEET)	-500	500		500	-500		6	6		-18	-18
END Y2 (FEET)	-12	-12		12	12		-500	500		500	-500
TRAFFIC VOLUME [VPH]	1365	1430		1530	1550		280	165		210	165
EMISSION FACTOR	4.972	4.972		4.972	4.972		4.972	4.972		4.972	4.972
SOURCE HEIGHT	0	0		0	0		0	0		0	0
MIXING ZONE WIDTH	58	34		58	34		34	22		46	22
NUMBER OF LANES IN QUEUE	4	2		4	2		2	1		3	1

No-Action Alternative

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
TRAFFIC VOLUME [VPH]	10	1280	140	20	1490	60	1180	110	40	190	20	10
TOTAL SIGNAL LENGTH	180	180	180	180	180		180	180		180	180	180
AVERAGE RED	96	107.5	107.5	96	107.5		121	121		143	143	143
AVERAGE GREEN	84	72.5	72.5	84	72.5		59	59		37	37	37
	EBA	EBD		WBA	WBD		NBA	NBD		SBA	SBD	
TRAFFIC VOLUME [VPH]	1430	1510		1570	2680		340	180		220	180	

Preferred Alternative

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
TRAFFIC VOLUME [VPH]	10	1680	180	80	1850	110	890	350	110	170	90	10
TOTAL SIGNAL LENGTH	180	180	180	180	180		180	180		180	180	180
AVERAGE RED	89	100.5	100.5	89	100.5		128	128		143	143	143
AVERAGE GREEN	91	79.5	79.5	91	79.5		52	52		37	37	37
	EBA	EBD		WBA	WBD		NBA	NBD		SBA	SBD	
TRAFFIC VOLUME [VPH]	1870	1960		2040	2750		630	470		270	350	

Town Center Alternative

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
TRAFFIC VOLUME [VPH]	10	1500	270	120	1670	100	1210	430	150	150	110	10
TOTAL SIGNAL LENGTH	180	180	180	180	180		180	180		180	180	180
AVERAGE RED	98	109.5	109.5	98	109.5		119	119		143	143	143
AVERAGE GREEN	82	70.5	70.5	82	70.5		61	61		37	37	37
	EBA	EBD		WBA	WBD		NBA	NBD		SBA	SBD	
TRAFFIC VOLUME [VPH]	1780	1800		1890	2890		730	540		270	500	

City Center Alternative

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
TRAFFIC VOLUME [VPH]	10	1530	200	10	1570	90	1060	200	70	210	50	10
TOTAL SIGNAL LENGTH	180	180	180	180	180		180	180		180	180	180
AVERAGE RED	94	105.5	105.5	94	105.5		123	123		123	123	123
AVERAGE GREEN	86	74.5	74.5	86	74.5		57	57		57	57	57
	EBA	EBD		WBA	WBD		NBA	NBD		SBA	SBD	
TRAFFIC VOLUME [VPH]	1740	1810		1670	2640		480	300		270	260	

Satellite Campus Alternative

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
TRAFFIC VOLUME [VPH]	10	1570	260	80	1640	80	110	390	100	140	120	10
TOTAL SIGNAL LENGTH	180	180	180	180	180		180	180		180	180	180
AVERAGE RED	96	107.5	107.5	96	107.5		121	121		143	143	143
AVERAGE GREEN	84	72.5	72.5	84	72.5		59	59		37	37	37
	EBA	EBD		WBA	WBD		NBA	NBD		SBA	SBD	
TRAFFIC VOLUME [VPH]	1840	1810		1800	1760		630	480		270	460	

INTERSECTION DESCRIPTION - Route 1/ Belvoir

IDLE EMISSION FACTOR [GRAMS/HOUR]	53.715
MOVING EMISSION FACTOR	4.972
LANE WIDTH (FEET)	12
SOURCE HEIGHT (FEET)	0
SIGNAL LENGTH (S)	180
CLEARANCE LOST TIME (S)	2

Existing Conditions

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
START X1 (FEET)		-36	-36	36	36		6		18			
START Y1 (FEET)		-12	-18	6	24		-48		-48			
END X2 (FEET)		-500	500	500	500		6		18			
END Y2 (FEET)		-12	-18	6	24		-500		-500			
TRAFFIC VOLUME [VPH]		1720	295	270	1590		155		85			
EMISSION FACTOR		53.715	53.715	53.715	53.715		53.715		53.715			
SOURCE HEIGHT		0	0	0	0		0		0			
MIXING ZONE WIDTH		24	12	12	24		12		12			
NUMBER OF LANES IN QUEUE		2	1	1	2		1		1			
TOTAL SIGNAL LENGTH		180	180	180	180		180		180			
AVERAGE RED		65	65	138.5	23.5		156.5		156.5			
CLEARANCE LOST TIME		2	2	2	2		2		2			
SATURATION FLOW RATE (per lane)		1769.5	1583	1770	1769.5		1770		1583			
AVERAGE GREEN		115	115	41.5	156.5		23.5		23.5			
SATURATION FLOW RATE		3539	1583	1770	3539		1770		1583			
	EBA	EBD		WBA	WBD		NBA				SBD	
START X1 (FEET)	0	0		0	0		0				0	
START Y1 (FEET)	-12	-12		24	24		0				0	
END X2 (FEET)	-500	500		500	-500		0				0	
END Y2 (FEET)	-12	-12		24	24		-500				0	
TRAFFIC VOLUME [VPH]	2015	1805		1860	1745		85				565	
EMISSION FACTOR	4.972	4.972		4.972	4.972		4.972				4.972	
SOURCE HEIGHT	0	0		0	0		0				0	
MIXING ZONE WIDTH	34	34		46	34		34				34	
NUMBER OF LANES IN QUEUE	2	2		3	2		2				2	

No-Action Alternative

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
TRAFFIC VOLUME [VPH]		1760	210	310	1590		120		110			
TOTAL SIGNAL LENGTH		180	180	180	180		180		180			
AVERAGE RED		66	66	23	23		137		157			
AVERAGE GREEN		114	114	157	157		43		23			
	EBA	EBD		WBA	WBD		NBA				SBD	
TRAFFIC VOLUME [VPH]	1970	1870		1900	1710		110				520	

Preferred Alternative

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
TRAFFIC VOLUME [VPH]		2050	320	410	1600		430		390			
TOTAL SIGNAL LENGTH		180	180	180	180		180		180			
AVERAGE RED		80	80	143	43		137		137			
AVERAGE GREEN		100	100	37	137		43		43			
	EBA	EBD		WBA	WBD		NBA				SBD	
TRAFFIC VOLUME [VPH]	2370	2440		2010	2030		390				730	

Town Center Alternative

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
TRAFFIC VOLUME [VPH]		1780	130	650	1790		220		630			
TOTAL SIGNAL LENGTH		180	180	180	180		180		180			
AVERAGE RED		92	92	32	32		148		148			
AVERAGE GREEN		88	88	148	148		32		32			
	EBA	EBD		WBA	WBD		NBA				SBD	
TRAFFIC VOLUME [VPH]	1910	2410		2440	2010		630				780	

INTERSECTION DESCRIPTION - Route 1/ Fairfax County Parkway

IDLE EMISSION FACTOR [GRAMS/HOUR]	53.715
MOVING EMISSION FACTOR	4.972
LANE WIDTH (FEET)	12
SOURCE HEIGHT (FEET)	0
SIGNAL LENGTH (S)	180
CLEARANCE LOST TIME (S)	2

Existing Conditions

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
START X1 (FEET)	-60	-60			60					-24		-42
START Y1 (FEET)	-12	-36			12					60		48
END X2 (FEET)	-500	-500			500					-24		-42
END Y2 (FEET)	-12	-36			12					500		500
TRAFFIC VOLUME [VPH]	340	2085			650	920				840		20
EMISSION FACTOR	53.715	53.715			53.715					53.715		53.715
SOURCE HEIGHT	0	0			0					0		0
MIXING ZONE WIDTH	24	24			24					24		12
NUMBER OF LANES IN QUEUE	2	2			2					2		1
TOTAL SIGNAL LENGTH	180	180			180					180		180
AVERAGE RED	150	57.5			87.5					122.5		150
CLEARANCE LOST TIME	2	2			2					2		2
SATURATION FLOW RATE (per lane)	1716.5	1769.5			1769.5					1716.5		1583
AVERAGE GREEN	30	122.5			92.5					57.5		30
SATURATION FLOW RATE	3433	3539			3539					3433		1583
	EBA	EBD		WBA	WBD		NBA	NBD		SBA		
START X1 (FEET)	0	0		0	0		0	0		0		
START Y1 (FEET)	-36	-36		12	12		0	0		0		
END X2 (FEET)	-500	500		500	-500		0	0		0		
END Y2 (FEET)	-36	-36		12	12		-500	500		500		
TRAFFIC VOLUME [VPH]	2425	2925		1570	670		840	1260		860		
EMISSION FACTOR	4.972	4.972		4.972	4.972		4.972	4.972		4.972		
SOURCE HEIGHT	0	0		0	0		0	0		0		
MIXING ZONE WIDTH	58	34		46	34		46	34		46		
NUMBER OF LANES IN QUEUE	4	2		3	2		3	2		3		

No-Action Alternative

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
TRAFFIC VOLUME [VPH]	390	2050			660	1000				930		30
TOTAL SIGNAL LENGTH	180	180			180					180		180
AVERAGE RED	147	59			92					121		88
AVERAGE GREEN	33	121			88					59		92
	EBA	EBD		WBA	WBD		NBA	NBD		SBA	SBD	
TRAFFIC VOLUME [VPH]	2440	2980		1660	690		930	1390		960	0	

Preferred Alternative

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
TRAFFIC VOLUME [VPH]	710	1860			1070	1240				1260		90
TOTAL SIGNAL LENGTH	180	180			180					180		180
AVERAGE RED	150	57.5			87.5					122.5		92.5
AVERAGE GREEN	30	122.5			92.5					57.5		87.5
	EBA	EBD		WBA	WBD		NBA	NBD		SBA	SBD	
TRAFFIC VOLUME [VPH]	2570	3120		2310	1160		1260	1950		1350	0	

Town Center Alternative

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
TRAFFIC VOLUME [VPH]	1090	1730			1070	1420				1560		160
TOTAL SIGNAL LENGTH	180	180			180					180		180
AVERAGE RED	128	74			126					106		54
AVERAGE GREEN	52	106			54					74		126
	EBA	EBD		WBA	WBD		NBA	NBD		SBA	SBD	
TRAFFIC VOLUME [VPH]	2820	3290		2490	1230		1560	2510		1720	0	

City Center Alternative

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
TRAFFIC VOLUME [VPH]	580	1910			980	1090				1120		70
TOTAL SIGNAL LENGTH	180	180			180					180		180
AVERAGE RED	150	57.5			87.5					122.5		92.5
AVERAGE GREEN	30	122.5			92.5					57.5		87.5
	EBA	EBD		WBA	WBD		NBA	NBD		SBA	SBD	
TRAFFIC VOLUME [VPH]	2490	3030		2070	1050		1120	1670		1190	0	

Satellite Campus Alternative

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
TRAFFIC VOLUME [VPH]	940	1620			980	1420				1550		140
TOTAL SIGNAL LENGTH	180	180			180					180		180
AVERAGE RED	131	78			127					102		53
AVERAGE GREEN	49	102			53					78		127
	EBA	EBD		WBA	WBD		NBA	NBD		SBA	SBD	
TRAFFIC VOLUME [VPH]	2560	3170		2400	1120		1550	2360		1690	0	

INTERSECTION DESCRIPTION - Route 1/ Telegraph

IDLE EMISSION FACTOR [GRAMS/HOUR]	53.715
MOVING EMISSION FACTOR	4.972
LANE WIDTH (FEET)	12
SOURCE HEIGHT (FEET)	0
SIGNAL LENGTH (S)	180
CLEARANCE LOST TIME (S)	2

Existing Conditions

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
START X1 (FEET)	-72	-72		84	84	84	-6	6	18	0	-18	-42
START Y1 (FEET)	-12	-42		-6	12	42	-84	-84	-84	60	60	60
END X2 (FEET)	-500	-500		-500	500	-500	-6	6	18	0	-18	-42
END Y2 (FEET)	-12	-42		-6	12	42	500	500	500	500	500	500
TRAFFIC VOLUME [VPH]	220	715	55	150	1960	35	5	25	30	70	175	800
EMISSION FACTOR	53.715	53.715		53.715	53.715	53.715	53.715	53.715	53.715	53.715	53.715	53.715
SOURCE HEIGHT	0	0		0	0	0	0	0	0	0	0	0
MIXING ZONE WIDTH	24	36		12	48	12	12	12	12	24	12	36
NUMBER OF LANES IN QUEUE	2	3		1	4	1	1	1	1	2	1	3
TOTAL SIGNAL LENGTH	180	180		180	180	180	180	180	180	180	180	180
AVERAGE RED	154.5	84		162.5	92	92	158	158	158	135.5	135.5	135.5
CLEARANCE LOST TIME	2	2		2	2	2	2	2	2	2	2	2
SATURATION FLOW RATE (per lane)	1716.5	1695		1770	1602	1583	1770	1863	1583	1716.5	1860	1203.33
AVERAGE GREEN	25.5	96		17.5	88	88	22	22	22	44.5	44.5	44.5
SATURATION FLOW RATE	3433	5085		1770	6408	1583	1770	1863	1583	3433	1860	3610
	EBA	EBD		WBA	WBD		NBA	NBD		SBA	SBD	
START X1 (FEET)	0	0		0	0		-84	-84		60	60	
START Y1 (FEET)	-42	-42		12	12		0	0		0	0	
END X2 (FEET)	-500	500		500	-500		-84	-84		60	60	
END Y2 (FEET)	-42	-42		12	12		-500	500		500	-500	
TRAFFIC VOLUME [VPH]	990	815		2145	2765		125	280		1045	380	
EMISSION FACTOR	4.972	4.972		4.972	4.972		4.972	4.972		4.972	4.972	
SOURCE HEIGHT	0	0		0	0		0	0		0	0	
MIXING ZONE WIDTH	70	46		82	58		46	34		82	22	
NUMBER OF LANES IN QUEUE	5	3		6	4		3	2		6	1	

No-Action Alternative

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
TRAFFIC VOLUME [VPH]	280	700	50	150	1990	60	10	30	30	100	190	950
TOTAL SIGNAL LENGTH	180	180	180	180	180	180	180	180	180	180	180	180
AVERAGE RED	158	129		158	122	122	130	130	130	130	130	130
AVERAGE GREEN	22	51		22	58	58	50	50	50	50	50	50
	EBA	EBD		WBA	WBD		NBA	NBD		SBA	SBD	
TRAFFIC VOLUME [VPH]	1030	830		2200	2950		160	370		1240	390	

Preferred Alternative

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
TRAFFIC VOLUME [VPH]	260	1040	40	210	2000	80	10	30	40	200	140	860
TOTAL SIGNAL LENGTH	180	180	180	180	180	180	180	180	180	180	180	180
AVERAGE RED	158	128		149	119	72	130	130	130	133	133	133
AVERAGE GREEN	22	52		31	61	108	50	50	50	47	47	47
	EBA	EBD		WBA	WBD		NBA	NBD		SBA	SBD	
TRAFFIC VOLUME [VPH]	1340	1280		2290	2870		270	370		1200	390	

Town Center Alternative

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
TRAFFIC VOLUME [VPH]	240	910	40	200	2340	90	10	30	40	190	150	840
TOTAL SIGNAL LENGTH	180	180	180	180	180	180	180	180	180	180	180	180
AVERAGE RED	158	127		144	113	72	130	130	130	139	139	139
AVERAGE GREEN	22	53		36	67	108	50	50	50	41	41	41
	EBA	EBD		WBA	WBD		NBA	NBD		SBA	SBD	
TRAFFIC VOLUME [VPH]	1190	1140		2630	3190		260	360		1180	390	

City Center Alternative

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
TRAFFIC VOLUME [VPH]	270	980	50	180	2030	130	10	30	40	170	170	870
TOTAL SIGNAL LENGTH	180	180	180	180	180	180	180	180	180	180	180	180
AVERAGE RED	158	124		153	119	130	130	130	130	133	133	133
AVERAGE GREEN	22	56		27	61	50	50	50	50	47	47	47
	EBA	EBD		WBA	WBD		NBA	NBD		SBA	SBD	
TRAFFIC VOLUME [VPH]	1300	1190		2340	2910		240	430		1210	400	

Satellite Campus Alternative

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
TRAFFIC VOLUME [VPH]	230	930	30	160	2170	90	10	30	40	240	200	990
TOTAL SIGNAL LENGTH	180	180	180	180	180	180	180	180	180	180	180	180
AVERAGE RED	158	127		149	118	72	130	130	130	134	134	134
AVERAGE GREEN	22	53		31	62	108	50	50	50	46	46	46
	EBA	EBD		WBA	WBD		NBA	NBD		SBA	SBD	
TRAFFIC VOLUME [VPH]	1190	1210		2420	3170		310	350		1430	390	

APPENDIX E.3
CRITERIA AIR POLLUTANTS—SOURCES AND IMPACTS

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Criteria Pollutants—Sources and Impacts

Pollutants and Their Sources	Health and Environmental Impacts
<p>Ozone (O₃): a gas composed of three oxygen atoms. It is not usually emitted directly into the air, but at ground level is created by a chemical reaction between oxides of NO_x and VOC in the presence of heat and sunlight. Ozone has the same chemical structure whether it occurs miles above the earth or at ground level and can be "good" or "bad," depending on its location in the atmosphere. "Good" ozone occurs naturally in the stratosphere approximately 10 to 30 miles above the earth's surface and forms a layer that protects life on earth from the sun's harmful rays. In the earth's lower atmosphere, ground-level ozone is considered "bad."</p> <p style="text-align: center;">a) VOC + NO_x + Heat + Sunlight = Ozone</p> <p>Motor vehicle exhaust and industrial emissions, gasoline vapors, and chemical solvents are some of the major sources of NO_x and VOC, that help to form ozone. Sunlight and hot weather cause ground-level ozone to form in harmful concentrations in the air. As a result, it is known as a summertime air pollutant. Many urban areas tend to have high levels of "bad" ozone, but even rural areas are also subject to increased ozone levels because wind carries ozone and pollutants that form it hundreds of miles away from their original sources.</p>	<p>Health Problems:</p> <p>Ozone can irritate lung airways and cause inflammation much like a sunburn. Other symptoms include wheezing, coughing, pain when taking a deep breath, and breathing difficulties during exercise or outdoor activities. People with respiratory problems are most vulnerable, but even healthy people that are active outdoors can be affected when ozone levels are high. Repeated exposure to ozone pollution for several months may cause permanent lung damage. Anyone who spends time outdoors in the summer is at risk, particularly children, and other people who are active outdoors. Even at very low levels, ground-level ozone triggers a variety of health problems including aggravated asthma, reduced lung capacity, and increased susceptibility to respiratory illnesses like pneumonia and bronchitis.</p> <p>Plant and Ecosystem Damage:</p> <p>Ground-level ozone interferes with the ability of plants to produce and store food, which makes them more susceptible to disease, insects, other pollutants, and harsh weather. Ozone damages the leaves of trees and other plants, ruining the appearance of cities, national parks, and recreation areas. Ozone reduces crop and forest yields and increases plant vulnerability to disease, pests, and harsh weather.</p>
<p>Carbon Monoxide (CO): a colorless, odorless gas that is formed when carbon in fuel is not burned completely. It is a component of motor vehicle exhaust, which contributes about 56 percent of all CO emissions nationwide. Other non-road engines and vehicles (such as construction equipment and boats) contribute about 22 percent of all CO emissions nationwide. Higher levels of CO generally occur in areas with heavy traffic congestion. In cities, 85 to 95 percent of all CO emissions may come from motor vehicle exhaust. Other sources of CO emissions include industrial processes (such as metals processing and chemical manufacturing), residential wood burning, and natural sources such as forest fires. Woodstoves, gas stoves, cigarette smoke, and unvented gas and kerosene space heaters are sources of CO indoors. The highest levels of CO in the outside air typically occur during the colder months of the year when inversion conditions are more frequent. The air pollution becomes trapped near the ground beneath a layer of warm air.</p>	<p>Health Problems</p> <p>CO can cause harmful health effects by reducing oxygen delivery to the body's organs (like the heart and brain) and tissues.</p> <p>Cardiovascular Effects. The health threat from lower levels of CO is most serious for those who suffer from heart disease, like angina, clogged arteries, or congestive heart failure. For a person with heart disease, a single exposure to CO at low levels may cause chest pain and reduce that person's ability to exercise; repeated exposures may contribute to other cardiovascular effects.</p> <p>Central Nervous System Effects. Even healthy people can be affected by high levels of CO. People who breathe high levels of CO can develop vision problems, reduced ability to work or learn, reduced manual dexterity, and difficulty performing complex tasks. At extremely high levels, CO is poisonous and can cause death.</p> <p>Smog. CO contributes to the formation of smog and ground level O₃, which can trigger serious respiratory problems.</p>
<p>Sulfur Dioxide (SO₂): SO₂ belongs to the family of sulfur oxide gases (SO_x). Sulfur is prevalent in all raw materials, including crude oil, coal, and ore that contains common metals like aluminum, copper, zinc, lead, and iron. SO_x gases are formed when fuel containing sulfur, such as coal and oil, is burned, and when gasoline is extracted from oil, or metals are extracted from ore. SO₂ dissolves in water vapor to form acid, and interacts with other gases and particles in the air to form sulfates and other products that can be harmful to people and their environment.</p>	<p>SO₂ causes a wide variety of health and environmental impacts because of the way it reacts with other substances in the air. Particularly sensitive groups include people with asthma who are active outdoors and children, the elderly, and people with heart or lung disease.</p> <p>Health Problems:</p> <p>Respiratory Effects from Gaseous SO₂</p> <p>Peak levels of SO₂ in the air can cause temporary breathing difficulty for people with asthma who are active outdoors. Longer-term exposures to high levels of SO₂ gas and particles cause respiratory illness and aggravate existing heart disease.</p>

<p>Over 65% of SO₂ released to the air, or more than 13 million tons per year, comes from electric utilities, especially those that burn coal. Other sources of SO₂ are industrial facilities that derive their products from raw materials like metallic ore, coal, and crude oil, or that burn coal or oil to produce process heat. Examples are petroleum refineries, cement manufacturing, and metal processing facilities. Also, locomotives, large ships, and some non-road diesel equipment currently burn high sulfur fuel and release SO₂ emissions to the air in large quantities.</p>	<p>Respiratory Effects from Sulfate Particles</p> <p>SO₂ reacts with other chemicals in the air to form tiny sulfate particles. When these are breathed, they gather in the lungs and are associated with increased respiratory symptoms and disease, difficulty in breathing, and premature death.</p> <p>Visibility Impairment</p> <p>Haze occurs when light is scattered or absorbed by particles and gases in the air. Sulfate particles are the major cause of reduced visibility in many parts of the U.S., including our national parks.</p> <p>Plant and Ecosystem Damage:</p> <p>Acid Rain</p> <p>SO₂ and nitrogen oxides react with other substances in the air to form acids, which fall to earth as rain, fog, snow, or dry particles. Some may be carried by the wind for hundreds of miles.</p> <p>Plant and Water Damage</p> <p>Acid rain damages forests and crops, changes the makeup of soil, and makes lakes and streams acidic and unsuitable for fish. Continued exposure over a long time changes the natural variety of plants and animals in an ecosystem.</p> <p>Aesthetic Damage</p> <p>SO₂ accelerates the decay of building materials and paints, including irreplaceable monuments, statues, and sculptures that are part of our nation's cultural heritage.</p>
<p>Nitrogen Dioxide (NO₂): the generic term for a group of highly reactive gases, all of which contain nitrogen and oxygen in varying amounts. Many of the nitrogen oxides are colorless and odorless. However, one common pollutant, NO₂, along with particles in the air can often be seen as a reddish-brown layer over many urban areas.</p> <p>Nitrogen oxides form when fuel is burned at high temperatures, as in a combustion process. The primary sources of NO_x are motor vehicles, electric utilities, and other industrial, commercial, and residential sources that burn fuels.</p>	<p>NO_x causes a wide variety of health and environmental impacts because of various compounds and derivatives in the family of nitrogen oxides, including nitrogen dioxide, nitric acid, nitrous oxide, nitrates, and nitric oxide.</p> <p>Health Problems:</p> <p>Ground-level ozone (smog) is formed when NO_x and volatile organic compounds (VOCs) react in the presence of heat and sunlight. Children, people with lung diseases such as asthma, and people who work or exercise outside are susceptible to adverse effects such as damage to lung tissue and reduction in lung function. Ozone can be transported by wind currents and cause health impacts far from original sources. Millions of Americans live in areas that do not meet the health standards for ozone.</p> <p>Particles</p> <p>NO_x reacts with ammonia, moisture, and other compounds to form nitric acid and related particles. Human health concerns include effects on breathing and the respiratory system, damage to lung tissue, and premature death. Small particles penetrate deeply into sensitive parts of the lungs and can cause or worsen respiratory disease such as emphysema and bronchitis, and aggravate existing heart disease.</p> <p>Toxic Chemicals</p> <p>In the air, NO_x reacts readily with common organic chemicals and even ozone, to form a wide variety of toxic products, some of which may cause biological mutations. Examples of these chemicals include the nitrate radical, nitroarenes, and nitrosamines.</p>

	<p><u>Visibility Impairment</u></p> <p>Nitrate particles and nitrogen dioxide can block the transmission of light, reducing visibility in urban areas and on a regional scale in our national parks.</p> <p><u>Plant and Ecosystem Damage:</u></p> <p>Direct impacts from ozone include damaged vegetation and reduced crop yields.</p> <p>Acid Rain</p> <p>NOx and sulfur dioxide react with other substances in the air to form acids, which fall to earth as rain, fog, snow, or dry particles. Some may be carried by wind for hundreds of miles. Acid rain damages; causes deterioration of cars, buildings and historical monuments; and causes lakes and streams to become acidic and unsuitable for many fish.</p> <p>Water Quality Deterioration</p> <p>Increased nitrogen loading in water bodies, particularly coastal estuaries, upsets the chemical balance of nutrients used by aquatic plants and animals. Additional nitrogen accelerates "eutrophication," which leads to oxygen depletion and reduces fish and shellfish populations. NOx emissions in the air are one of the largest sources of nitrogen pollution in the Chesapeake Bay.</p> <p>Global Warming</p> <p>One member of the NOx family, nitrous oxide, is a greenhouse gas. It accumulates in the atmosphere with other greenhouse gasses causing a gradual rise in the earth's temperature. This will lead to increased risks to human health, a rise in the sea level, and other adverse changes to plant and animal habitat.</p>
<p><u>Particulates (PM₁₀ and PM_{2.5}):</u> Particulate matter (PM) is the term for particles found in the air, including dust, dirt, soot, smoke, and liquid droplets. Particles can be suspended in the air for long periods of time. Some particles are large or dark enough to be seen as soot or smoke. Others are so small that individually they can only be detected with an electron microscope.</p> <p>Some particles are directly emitted into the air. They come from a variety of sources such as cars, trucks, buses, factories, construction sites, tilled fields, unpaved roads, stone crushing, and burning of wood.</p> <p>Other particles may be formed in the air from the chemical change of gases. They are indirectly formed when gases from burning fuels react with sunlight and water vapor. These can result from fuel combustion in motor vehicles, at power plants, and in other industrial processes.</p>	<p><u>Health Problems:</u></p> <p>Many scientific studies have linked breathing PM to a series of health problems, including:</p> <ul style="list-style-type: none"> • aggravated asthma • increases in respiratory symptoms like coughing and difficult or painful breathing • chronic bronchitis • decreased lung function • premature death <p><u>Visibility Impairment</u></p> <p>PM is the major cause of reduced visibility (haze) in parts of the United States, including many of our national parks.</p> <p><u>Plant and Ecosystem Damage:</u></p> <p>Atmospheric deposition</p> <p>Particles can be carried over long distances by wind and then settle on ground or water. The effects of this settling include:</p> <ul style="list-style-type: none"> • making lakes and streams acidic • changing the nutrient balance in coastal waters and

	<p>large river basins</p> <ul style="list-style-type: none"> • depleting the nutrients in soil • damaging sensitive forests and farm crops • affecting the diversity of ecosystems <p>Aesthetic damage</p> <p>Soot, a type of PM, stains and damages stone and other materials, including culturally important objects such as monuments and statues.</p>
<p>Lead (Pb): a metal found naturally in the environment as well as in manufactured products. The major sources of lead emissions have historically been motor vehicles (such as cars and trucks) and industrial sources. Due to the phase out of leaded gasoline, metals processing is the major source of lead emissions to the air today. The highest levels of lead in air are generally found near lead smelters. Other stationary sources are waste incinerators, utilities, and lead-acid battery manufacturers.</p>	<p>People, animals, and fish are mainly exposed to lead by breathing and ingesting it in food, water, soil, or dust. Lead accumulates in the blood, bones, muscles, and fat. Infants and young children are especially sensitive to even low levels of lead.</p> <p>Health Problems:</p> <p>Damages organs - Lead causes damage to the kidneys, liver, brain and nerves, and other organs. Exposure to lead may also lead to osteoporosis (brittle bone disease) and reproductive disorders.</p> <p>Affects the brain and nerves - Excessive exposure to lead causes seizures, mental retardation, behavioral disorders, memory problems, and mood changes. Low levels of lead damage the brain and nerves in fetuses and young children, resulting in learning deficits and lowered IQ.</p> <p>Affects the heart and blood - Lead exposure causes high blood pressure and increases heart disease, especially in men. Lead exposure may also lead to anemia, or weak blood.</p> <p>Plant and Ecosystem Damage:</p> <p>Affects animals and plants - Wild and domestic animals can ingest lead while grazing. They experience the same kind of effects as people who are exposed to lead. Low concentrations of lead can slow down vegetation growth near industrial facilities.</p> <p>Lead can enter water systems through runoff and from sewage and industrial waste streams. Elevated levels of lead in the water can cause reproductive damage in some aquatic life and cause blood and neurological changes in fish and other animals that live there.</p>

Source: (USEPA 2006a)

**APPENDIX E.4
PERMITTED SOURCES OF AIR EMISSIONS—
POTENTIAL-TO-EMIT CALCULATIONS**

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**ARMY CORP OF ENGINEERS - PROPOSED NGA OPERATIONS AT FORT BELVIOR
POTENTIAL EMISSION ESTIMATES FOR FACILITY BOILERS**

ANNUAL EMISSIONS CALCULATIONS BASED UPON AP-42 EMISSION FACTORS AND EXPECTED PERFORMANCE LEVELS

FUEL USAGE	Natural Gas Fired	365 days/year	8,760 hr/yr, or
	No. 2 Fuel Oil Fired	365 days/year	8,760 hr/yr
NATURAL GAS	Heat Input =	24.49 mmBtu/hr	214.6 mmCF/yr (max. one boiler)
	Firing Rate =	0.024 mmCF/hr or	858.3 mmCF/yr (max. four boilers)
	Heat Capacity =	1,000 Btu/CF	
NO. 2 FUEL OIL	Heat Input =	24.49 mmBtu/hr	1511.0 mgal/yr (max. one boiler)
	Firing Rate =	0.172 mgal/hr or	6,044.2 mgal/yr (max. four boilers)
	Heat Capacity =	142,000 Btu/gal	
	Sulfur In Fuel Oil =	0.2 % by weight	

Pollutant Emissions	Emission Factors (lb/mmCF or lb/mgal)		Ind. Boiler Emission Rates (lb/hr)		Facility Boilers Potential Emissions (tons/year)
	Natural Gas	2FO	Natural Gas	2FO	
VOC	5.5	0.34	0.13	0.06	2.4
NO _x	35	36	0.86	6.12	107.3
CO	84	27	2.06	4.58	80.2
SO ₂	0.6	28.4	0.01	4.90	85.8
PM/PM ₁₀	10	6.36	0.24	1.10	19.2
Lead	0.0005	0.00034	0.10	0.53	1.0E-03

Notes:

- *1 Emission factors for natural gas and fuel oil combustion (except those specified in *2 below) based upon values presented in the USEPA reference document AP-42 Section 1.4 and 1.3, respectively.
- *2 Emissions factors for NO_x, CO for fuel oil firing and PM from natural gas firing based upon manufacturer's expected performance levels.
- *3 Maximum annual fuel usage presented above is based upon maximum usage of a particular fuel for the entire year.
- *4 Emissions rates calculated based upon the following equation:

Emission Rate (lb/hr) = Emission factor (lb/mmCF or lb/mgal) * Fuel Input (mmCF/hr or mgal/hr)
- *5 Potential emissions for both facility boilers based upon worst-case operating scenario (i.e. natural gas or fuel oil) based upon the following equations:

For VOC:
Annual Emissions (TPY) = [Gas Usage (mmCF/yr for four boilers) * Emission Factor (lb/mmCF)]* 1 Ton/2,000 lb

For NO_x, CO, SO₂, PM/PM₁₀, and Pb:
Annual Emissions (TPY)=[(Oil Usage (mgal/yr for four boilers)*Emission Factor (lb/mgal)]*1Ton/2,000 lb

**ARMY CORP OF ENGINEERS - PROPOSED WHS OPERATIONS AT FORT BELVIOR
POTENTIAL EMISSION ESTIMATES FOR FACILITY BOILERS**

ANNUAL EMISSIONS CALCULATIONS BASED UPON AP-42 EMISSION FACTORS AND EXPECTED PERFORMANCE LEVELS

FUEL USAGE	Natural Gas Fired	365 days/year	8,760 hr/yr, or
	No. 2 Fuel Oil Fired	365 days/year	8,760 hr/yr
NATURAL GAS	Heat Input =	28.58 mmBtu/hr	250.3 mmCF/yr (max. one boiler)
	Firing Rate =	0.029 mmCF/hr or	751.0 mmCF/yr (max. three boilers)
	Heat Capacity =	1,000 Btu/CF	
NO. 2 FUEL OIL	Heat Input =	28.98 mmBtu/hr	1787.9 mgal/yr (max. one boiler)
	Firing Rate =	0.204 mgal/hr or	5,363.7 mgal/yr (max.three boilers)
	Heat Capacity =	142,000 Btu/gal	
	Sulfur In Fuel Oil =	0.2 % by weight	

Pollutant Emissions	Emission Factors (lb/mmCF or lb/mgal)		Ind. Boiler Emission Rates (lb/hr)		Facility Boilers Potential Emissions (tons/year)
	Natural Gas	2FO	Natural Gas	2FO	
VOC	5.5	0.34	0.16	0.07	2.1
NO _x	35	36	1.00	7.25	95.2
CO	84	27	2.40	5.42	71.2
SO ₂	0.6	28.4	0.02	5.80	76.2
PM/PM ₁₀	10	6.36	0.29	1.30	17.1
Lead	0.0005	0.00034	0.10	0.53	9.1E-04

Notes:

- *1 Emission factors for natural gas and fuel oil combustion (except those specified in *2 below) based upon values presented in the USEPA reference document AP-42 Section 1.4 and 1.3, respectively.
- *2 Emissions factors for NO_x, CO for fuel oil firing and PM from natural gas firing based upon manufacturer's expected performance levels.
- *3 Maximum annual fuel usage presented above is based upon maximum usage of a particular fuel for the entire year.
- *4 Emissions rates calculated based upon the following equation:

Emission Rate (lb/hr) = Emission factor (lb/mmCF or lb/mgal) * Fuel Input (mmCF/hr or mgal/hr)
- *5 Potential emissions for both facility boilers based upon worst-case operating scenario (i.e. natural gas or fuel oil) based upon the following equations:

For VOC:
Annual Emissions (TPY) = [Gas Usage (mmCF/yr for four boilers) * Emission Factor (lb/mmCF)]* 1 Ton/2,000 lb

For NO_x, CO, SO₂, PM/PM₁₀ and Pb:
Annual Emissions (TPY)=[(Oil Usage (mgal/yr for four boilers)*Emission Factor (lb/mgal)]*1Ton/2,000 lb

**ARMY CORP OF ENGINEERS - PROPOSED NGA OPERATIONS AT FORT BELVIOR
ANTICIPATED ACTUAL EMISSION ESTIMATES FOR FACILITY BOILERS**

ANNUAL EMISSIONS CALCULATIONS BASED UPON AP-42 EMISSION FACTORS AND EXPECTED PERFORMANCE LEVELS

BOILER DISPATCH		66% of maximum capacity of each boiler 1000 hours per year each boiler on oil	
NATURAL GAS	Heat Input =	24.49 mmBtu/hr	566.5 mmCF/yr (both boilers no oil)
	Firing Rate =	0.024 mmCF/hr or	468.5 mmCF/yr (four boilers w/ oil)
	Heat Capacity =	1,000 Btu/CF	
NO. 2 FUEL OIL	Heat Input =	24.49 mmBtu/hr	690.0 mgal/yr (four boilers)
	Firing Rate =	172.5 gal/hr or	
	Heat Capacity =	142,000 Btu/gal	
	Sulfur In Fuel Oil =	0.2 % by weight	

Pollutant Emissions	Emission Factors (lb/mmCF or lb/mgal)		Ind. Boiler Emission Rates (lb/hr)		Facility Boilers Actual Emissions (tons/year)
	Natural Gas	2FO	Natural Gas	2FO	
VOC	5.5	0.34	0.13	0.06	1.56
NO _x	35	36	0.86	6.12	8.20
CO	84	27	2.06	4.58	19.68
SO ₂	0.6	28.4	0.01	4.90	0.14
PM/PM ₁₀	10.0	6.36	0.24	1.10	2.34
Lead	0.0005	0.00034	1.2E-05	5.8E-05	1.2E-04

Notes:

- *1 Emission factors for natural gas and fuel oil combustion (except those specified in *2 below) based upon values presented in the USEPA reference document AP-42 Section 1.4 and 1.3, respectively.
- *2 Emissions factors for NO_x, CO for fuel oil firing and PM from natural gas firing based upon manufacturer's expected performance levels.
- *3 Emissions rates calculated based upon the following equation:
Emission Rate (lb/hr) = Emission factor (lb/mmCF or lb/mgal) * Fuel Input (mmCF/hr or mgal/hr)
- *4 Actual emissions for both facility boilers based upon worst-case actual operating scenario (i.e. natural gas or fuel oil) for anticipated actual boiler utilization using the following equations:
For VOC and CO:
Annual Emissions (TPY) = [Gas Usage (mmCF/yr) * Emission Factor (lb/mmCF)] * 1 Ton/2,000 lb
For NO_x, SO₂, PM/PM₁₀ and Pb:
Annual Emissions (TPY) = [(Gas Usage (mmCF/yr)*Emission Factor (lb/mmCF))+(Oil Usage (mgal/yr)*Emission Factor (lb/mgal))]

**ARMY CORP OF ENGINEERS - PROPOSED WHS OPERATIONS AT FORT BELVIOR
ANTICIPATED ACTUAL EMISSION ESTIMATES FOR FACILITY BOILERS**

ANNUAL EMISSIONS CALCULATIONS BASED UPON AP-42 EMISSION FACTORS AND EXPECTED PERFORMANCE LEVELS

BOILER DISPATCH		66% of maximum capacity of each boiler 1000 hours per year each boiler on oil	
NATURAL GAS	Heat Input =	28.58 mmBtu/hr	495.6 mmCF/yr (three boilers no oil)
	Firing Rate =	0.029 mmCF/hr or	409.9 mmCF/yr (three boilers w/ oil)
	Heat Capacity =	1,000 Btu/CF	
NO. 2 FUEL OIL	Heat Input =	28.98 mmBtu/hr	0.6 mgal/yr (three boilers)
	Firing Rate =	0.204 gal/hr or	
	Heat Capacity =	142,000 Btu/gal	
	Sulfur In Fuel Oil =	0.2 % by weight	

Pollutant Emissions	Emission Factors (lb/mmCF or lb/mgal)		Ind. Boiler Emission Rates (lb/hr)		Facility Boilers Actual Emissions (tons/year)
	Natural Gas	2FO	Natural Gas	2FO	
VOC	5.5	0.34	0.16	0.00	1.36
NO _x	35	36	1.00	0.01	7.17
CO	84	27	2.40	0.01	17.22
SO ₂	0.6	28.4	0.02	0.01	0.12
PM/PM ₁₀	10.0	6.36	0.29	0.00	2.05
Lead	0.0005	0.00034	1.4E-05	6.9E-08	1.0E-04

Notes:

- *1 Emission factors for natural gas and fuel oil combustion (except those specified in *2 below) based upon values presented in the USEPA reference document AP-42 Section 1.4 and 1.3, respectively.
- *2 Emissions factors for NO_x, CO for fuel oil firing and PM from natural gas firing based upon manufacturer's expected performance levels.
- *3 Emissions rates calculated based upon the following equation:
Emission Rate (lb/hr) = Emission factor (lb/mmCF or lb/mgal) * Fuel Input (mmCF/hr or mgal/hr)
- *4 Actual emissions for both facility boilers based upon worst-case actual operating scenario (i.e. natural gas or fuel oil) for anticipated actual boiler utilization using the following equations:
For VOC and CO:
Annual Emissions (TPY) = [Gas Usage (mmCF/yr) * Emission Factor (lb/mmCF)] * 1 Ton/2,000 lb
For NO_x, SO₂, PM/PM₁₀ and Pb:
Annual Emissions (TPY) = [(Gas Usage (mmCF/yr)*Emission Factor (lb/mmCF))+(Oil Usage (mgal/yr)*Emission Factor (lb/mgal))]

**ARMY CORP OF ENGINEERS - PROPOSED NGA OPERATIONS AT FORT BELVIOR
POTENTIAL EMISSION ESTIMATES FOR 20 MW EMERGENCY GENERATORS**

ANNUAL EMISSIONS CALCULATIONS BASED UPON AP-42 EMISSION FACTORS

FUEL USAGE	No. 2 Fuel Oil Fired	500 hr/yr	
	Heat Input =	24.61 mmBtu/hr	3515.514286 hp-hr
	Firing Rate =	0.173 mgal/hr or	12,304 mmBtu/yr
	Heat Capacity =	142,000 Btu/CF	86.7 mgal/yr
	Fuel Oil Sulfur Content =	0.2 % by weight	

Pollutant Emissions	Emission Factors		Emission Rates (lb/hr)	Potential Emissions (tons/year)
	(lb/mmBtu)	(g/hp-hr)		
VOC		0.1	0.78	1.6
NO _x		5.05	39.14	78.3
CO		0.41	3.18	6.4
SO ₂	0.29		7.14	14.3
PM/PM ₁₀	0.31		7.63	15.3

Notes:

- *1 VOC, NO_x and CO emission factors for diesel fired emergency generators are based upon values provided by the engine vendor.
- *2 SO₂ and PM/PM₁₀ emission factors for diesel fired emergency generators are based upon values presented in the USEPA reference document AP-42 Section 3.4.
- *3 Emissions rates calculated based upon the following equation:
Emission Rate (lb/hr) = Emission factor (lb/mmBtu) * Fuel Input (mmBtu/hr)
- *4 Annual emissions based upon the following equation.
Annual Emissions (TPY) = Fuel Input (mmBtu/hr)*Emission Factor (lb/mmBtu)*500 hr/yr*1Ton/2,000 lb

**ARMY CORP OF ENGINEERS - PROPOSED WHS OPERATIONS AT FORT BELVIOR
POTENTIAL EMISSION ESTIMATES FOR EMERGENCY GENERATORS**

ANNUAL EMISSIONS CALCULATIONS BASED UPON AP-42 EMISSION FACTORS

FUEL USAGE	No. 2 Fuel Oil Fired	500 hr/yr	
	Heat Input =	17.71 mmBtu/hr	2639 hp-hr
	Firing Rate =	0.125 mgal/hr or	8,854 mmBtu/yr
	Heat Capacity =	142,000 Btu/CF	62.4 mgal/yr
	Fuel Oil Sulfur Content =	0.05 % by weight	

Pollutant Emissions	Emission Factors		Emission Rates (lb/hr)	Potential Emissions (tons/year)
	(lb/mmBtu)	(g/hp-hr)		
VOC		0.1	0.58	0.7
NO _x		5.05	29.38	36.7
CO		0.41	2.39	3.0
SO ₂	0.29		5.14	6.4
PM/PM ₁₀	0.31		5.49	6.9

Notes:

- *1 VOC, NO_x and CO emission factors for diesel fired emergency generators are based upon values provided by the engine vendor.
- *2 SO₂ and PM/PM₁₀ emission factors for diesel fired emergency generators are based upon values presented in the USEPA reference document AP-42 Section 3.4.
- *3 Emissions rates calculated based upon the following equation:
Emission Rate (lb/hr) = Emission factor (lb/mmBtu) * Fuel Input (mmBtu/hr)
- *4 Annual emissions based upon the following equation.
Annual Emissions (TPY) = Fuel Input (mmBtu/hr)*Emission Factor (lb/mmBtu)*500 hr/yr*1Ton/2,000 lb

**ARMY CORP OF ENGINEERS - PROPOSED NGA OPERATIONS AT FORT BELVIOR
ANTICIPATED ACTUAL EMISSION ESTIMATES FOR 20 MW EMERGENCY GENERATORS**

ANNUAL EMISSIONS CALCULATIONS BASED UPON AP-42 EMISSION FACTORS

FUEL USAGE No. 2 Fuel Oil Fired 250 hr/yr

 Heat Input = 24.61 mmBtu/hr 3515.5 hp-hr

 Firing Rate = 0.173 mgal/hr or 6,152 mmBtu/yr

 Heat Capacity = 142,000 Btu/CF 43.3 mgal/yr

 Fuel Oil Sulfur Content = 0.2 % by weight

Pollutant Emissions	Emission Factors		Emission Rates (lb/hr)	Actual Emissions (tons/year)
	(lb/mmBtu)	(g/hp-hr)		
VOC		0.1	0.78	0.8
NO _x		5.05	39.14	39.1
CO		0.41	3.18	3.2
SO ₂	0.29		7.14	7.1
PM/PM ₁₀	0.31		7.63	7.6

Notes:

- *1 VOC, NO_x and CO emission factors for diesel fired emergency generators are based upon values provided by the engine vendor.
- *2 SO₂ and PM/PM₁₀ emission factors for diesel fired emergency generators are based upon values presented in the USEPA reference document AP-42 Section 3.4.
- *3 Emissions rates calculated based upon the following equation:
Emission Rate (lb/hr) = Emission factor (lb/mmBtu) * Fuel Input (mmBtu/hr)
- *4 Annual emissions based upon the following equation.
Annual Emissions (TPY) = Fuel Input (mmBtu/hr)*Emission Factor (lb/mmBtu)*250 hr/yr*1Ton/2,000 lb

**ARMY CORP OF ENGINEERS - PROPOSED WHS OPERATIONS AT FORT BELVIOR
ANTICIPATED ACTUAL EMISSION ESTIMATES FOR 20 MW EMERGENCY GENERATORS**

ANNUAL EMISSIONS CALCULATIONS BASED UPON AP-42 EMISSION FACTORS

FUEL USAGE	No. 2 Fuel Oil Fired	250 hr/yr		
	Heat Input =	17.71 mmBtu/hr		2639 hp-hr
	Firing Rate =	0.125 mgal/hr or		4,427 mmBtu/yr
	Heat Capacity =	142,000 Btu/CF		31.2 mgal/yr
	Fuel Oil Sulfur Content =	0.2 % by weight		

Pollutant Emissions	Emission Factors		Emission Rates (lb/hr)	Actual Emissions (tons/year)
	(lb/mmBtu)	(g/hp-hr)		
VOC		0.1	0.58	0.4
NO _x		5.05	29.38	18.4
CO		0.41	2.39	1.5
SO ₂	0.29		5.14	3.2
PM/PM ₁₀	0.31		5.49	3.4

Notes:

- *1 VOC, NO_x and CO emission factors for diesel fired emergency generators are based upon values provided by the engine vendor.
- *2 SO₂ and PM/PM₁₀ emission factors for diesel fired emergency generators are based upon values presented in the USEPA reference document AP-42 Section 3.4.
- *3 Emissions rates calculated based upon the following equation:
Emission Rate (lb/hr) = Emission factor (lb/mmBtu) * Fuel Input (mmBtu/hr)
- *4 Annual emissions based upon the following equation.
Annual Emissions (TPY) = Fuel Input (mmBtu/hr)*Emission Factor (lb/mmBtu)*250 hr/yr*1Ton/2,000 lb

**ARMY CORP OF ENGINEERS - PROPOSED NGA AND WHS OPERATIONS AT FORT BELVIOR
SUMMARY OF ANTICIPATED WORST-CASE ACTUAL EMISSIONS FOR 20MW GENERATOR SCENARIO**

CONTAMINANT	NGA		WHS		Facility Total Emissions	Major Source Threshold
	Boilers	20 MW Emergency Generators	Boilers	Emergency Generators		
VOC	1.56	0.78	1.36	0.36	4.1	50
NO _x	8.20	39.14	7.17	18.36	72.9	100
CO	19.68	3.18	17.22	1.49	41.6	100
SO ₂	0.14	7.14	0.12	3.21	10.6	100
PM/PM ₁₀	2.34	7.63	2.05	3.43	15.5	100
HAPs						25
Lead	1.17E-04		1.02E-04		2.2E-04	10

NOTES:

*1 - Please refer to individual spreadsheets for detailed emissions calculations for each unit

*2 - Worst-Case Anticipated Actual Emissions calculated based upon assumptions presented for each unit.

*3 - PSD threshold based upon the definition of "major stationary source" presented in Section 808 of the Virginia DEQ regulations for facility with boilers with a total heat input of greater than 250 mmBtu/hr.

*4 - NA-NSR threshold based upon status of Fairfax County as Ozone Transport Region.

Preferred Alternative– Stationary Source Emissions

Project Name	Heated Area	CO [tons]	NOx [tons]	PM [tons]	SO₂ [tons]	VOC [tons]
EPG Infrastructure (EPG) (2008), Operations	25000	0.10	0.12	0.01	0.00	0.01
Child Dev Center – 244 (EPG), Operations	19590	0.08	0.09	0.01	0.00	0.01
Child Development Center (EPG), Operations	24036	0.10	0.12	0.01	0.00	0.01
Emergency Services Center (EPG), Operations	14700	0.06	0.07	0.01	0.00	0.00
Secure Admin Facility (EPG) (WHS) (2008), Operations	2219000	17.22	7.17	2.05	0.12	1.36
NGA Admin (EPG), Operations	2419000	16.98	8.2	2.34	0.14	1.56
EPG Total	4721326	34.53	15.77	4.42	0.26	2.94

Project Name	Number of Generators	Size of Generators	Hours of Operation	CO [tons]	NOx [tons]	PM [tons]	SO₂ [tons]	VOC [tons]
Secure Admin Facility (EPG) (WHS) (2008), Operations	5	2000	250	1.49	18.36	3.43	3.21	0.36
NGA Admin (EPG), Operations	8	2500	250	3.18	39.14	7.63	7.14	0.78
			EPG Total	4.67	57.5	11.06	10.35	1.14

Project Name	Heated Area	CO [tons]	NOx [tons]	PM [tons]	SO₂ [tons]	VOC [tons]
Access Road/Control Point, Operations	280	0.00	0.00	0.00	0.00	0.0001
MDA (2007), Operations	104000	0.13	0.15	0.01	0.00	0.0084
NARMC HQ Building, Operations	9000	0.04	0.04	0.00	0.00	0.0024
NARMC HQ Building, Operations	39825	0.16	0.19	0.01	0.00	0.0105
Network Enterprise Communications Facility (AKO), Operations	73500	0.11	0.13	0.01	0.00	0.007
Network Enterprise Communications Facility (AKO), Operations	73500	0.11	0.13	0.01	0.00	0.007
Dental Clinic, Operations	16000	0.06	0.08	0.01	0.00	0.0042
Family Travel Camp, Operations	16658	0.07	0.08	0.01	0.00	0.0044
Medical Guest House, Operations	100000	0.12	0.15	0.01	0.00	0.008
Admin Bldg, MEDCOM, Operation	9000	0.04	0.04	0.00	0.00	0.0024
Administrative Facility (Bldgs 211, 215, 219, 220), Operations	133600	0.16	0.20	0.01	0.00	0.0107
Hospital (2008), Operations	868800	1.17	1.39	0.11	0.01	0.0767
USANCA Support Facility, Operations	20000	0.08	0.10	0.01	0.00	0.0053

Preferred Alternative– Stationary Source Emissions

Network Operations Center (part of PEO EIS), Operations	5000	0.02	0.02	0.00	0.00	0.0013
Main Post Total	1469163	2.26	2.69	0.20	0.02	0.1484

Sources: AP-42 Section 1.4 and DOE 1999

Project Name	Number of Generators	Size of Generators	Hours of Operation	CO [tons]	NOx [tons]	PM [tons]	SO₂ [tons]	VOC [tons]
Hospital (2008), Operations	6	1500	500	0.00	33.21	0.20	0.66	1.53
USANCA Support Facility, Operations	1	125	500	0.28	1.29	0.09	0.09	0.29
Emergency Services Center (EPG), Operations	1	45	500	0.10	0.46	0.03	0.03	0.1
Network Operations Center (part of PEO EIS), Operations	1	30	500	0.07	0.31	0.02	0.02	0.07
Total			Main Post Total	0.45	35.27	0.34	0.80	1.99

Sources: AP-42 and Manufacturers Specification

Roll-up	CO [tons]	NOx [tons]	PM [tons]	SO₂ [tons]	VOC [tons]
Main Post	3	38	1	1	2
EPG	39	73	15	11	4

Town Center and Satellite Campuses Alternative– Stationary Source Emissions

Project Name	Heated Area	CO [tons]	NOx [tons]	PM [tons]	SO₂ [tons]	VOC [tons]
Access Road/Control Point, Operations	280	0.00	0.00	0.00	0.00	0.00
EPG Infrastructure (EPG) (2008), Operations	25000	0.10	0.12	0.01	0.00	0.01
MDA (2007), Operations	104000	0.13	0.15	0.01	0.00	0.01
NARMC HQ Building, Operations	9000	0.04	0.04	0.00	0.00	0.00
NARMC HQ Building, Operations	39825	0.16	0.19	0.01	0.00	0.01
Network Enterprise Communications Facility (AKO), Operations	73500	0.11	0.13	0.01	0.00	0.01
Network Enterprise Communications Facility (AKO), Operations	73500	0.11	0.13	0.01	0.00	0.01
Dental Clinic, Operations	16000	0.06	0.08	0.01	0.00	0.00
Family Travel Camp, Operations	16658	0.07	0.08	0.01	0.00	0.00
Medical Guest House, Operations	100000	0.12	0.15	0.01	0.00	0.01
Admin Bldg, MEDCOM, Operation	9000	0.04	0.04	0.00	0.00	0.00
Administrative Facility (Bldgs 211, 215, 219, 220), Operations	133600	0.16	0.20	0.01	0.00	0.01
Child Dev Center – 244 (EPG), Operations	19590	0.08	0.09	0.01	0.00	0.01
Child Development Center (EPG), Operations	24036	0.10	0.12	0.01	0.00	0.01
Hospital (2008), Operations	868800	1.17	1.39	0.11	0.01	0.08
USANCA Support Facility, Operations	20000	0.08	0.10	0.01	0.00	0.01
Emergency Services Center (EPG), Operations	14700	0.06	0.07	0.01	0.00	0.00
Network Operations Center (part of PEO EIS), Operations	5000	0.02	0.02	0.00	0.00	0.00
Secure Admin Facility (EPG) (WHS) (2008), Operations	2219000	17.22	7.17	2.05	0.12	1.36
NGA Admin (EPG), Operations	2419000	16.98	8.20	2.34	0.14	1.56
Main Post Total	6495489	36.80	18.46	4.63	0.28	3.09

Sources: AP-42 Section 1.4 and DOE 1999

Town Center and Satellite Campuses Alternative– Stationary Source Emissions

Project Name	Number of Generators	Size of Generators	Hours of Operation	CO [tons]	NOx [tons]	PM [tons]	SO₂ [tons]	VOC [tons]
Hospital (2008), Operations	6	1500	500	0.00	33.21	0.20	0.66	1.53
USANCA Support Facility, Operations	1	125	500	0.28	1.29	0.09	0.09	0.29
Emergency Services Center (EPG), Operations	1	45	500	0.10	0.46	0.03	0.03	0.10
Network Operations Center (part of PEO EIS), Operations	1	30	500	0.07	0.31	0.02	0.02	0.07
Secure Admin Facility (EPG) (WHS) (2008), Operations	5	2000	250	2.98	18.36	3.43	3.21	0.36
NGA Admin (EPG), Operations	8	2500	250	3.18	39.14	7.63	7.14	0.78
Main Post Total				6.61	92.77	11.40	11.15	3.13

Source: AP-42 and manufacturer specifications

Roll-up	CO [tons]	NOx [tons]	PM [tons]	SO₂ [tons]	VOC [tons]
Main Post	43	111	16	11	6
EPG	0	0	0	0	0

City Center Alternative – Stationary Source Emissions

Project Name (EPG)	Heated Area	CO [tons]	NOx [tons]	PM [tons]	SO₂ [tons]	VOC [tons]
EPG Infrastructure (EPG) (2008), Operations	25000	0.10	0.12	0.01	0.00	0.01
MDA (2007), Operations	104000	0.13	0.15	0.01	0.00	0.01
NARMC HQ Building, Operations	9000	0.04	0.04	0.00	0.00	0.00
NARMC HQ Building, Operations	39825	0.16	0.19	0.01	0.00	0.01
Network Enterprise Communications Facility (AKO), Operations	73500	0.11	0.13	0.01	0.00	0.01
Family Travel Camp, Operations	16658	0.07	0.08	0.01	0.00	0.00
Medical Guest House, Operations	100000	0.12	0.15	0.01	0.00	0.01
Child Dev Center – 244 (EPG), Operations	19590	0.08	0.09	0.01	0.00	0.01
Child Development Center (EPG), Operations	24036	0.10	0.12	0.01	0.00	0.01
Hospital (2008), Operations	868800	1.17	1.39	0.11	0.01	0.08
Emergency Services Center (EPG), Operations	14700	0.06	0.07	0.01	0.00	0.00
Network Operations Center (part of PEO EIS), Operations	5000	0.02	0.02	0.00	0.00	0.00
Secure Admin Facility (EPG) (WHS) (2008), Operations	2219000	17.22	7.17	2.05	0.12	1.36
NGA Admin (EPG), Operations	2419000	16.98	8.20	2.34	0.14	1.56
EPG Total		36.35	17.92	4.58	0.28	3.06

Project Name (EPG)	Number of Generators	Size of Generators	Hours of Operation	CO [tons]	NOx [tons]	PM [tons]	SO₂ [tons]	VOC [tons]
Hospital (2008), Operations	6	1500	500	0.00	33.21	0.20	0.66	1.53
Emergency Services Center (EPG), Operations	1	45	500	0.10	0.46	0.03	0.03	0.1
Network Operations Center (part of PEO EIS), Operations	1	30	500	0.07	0.31	0.02	0.02	0.07
Secure Admin Facility (EPG) (WHS) (2008), Operations	5	2000	500	2.98	18.36	3.43	3.21	0.36
NGA Admin (EPG), Operations	8	2500	500	3.18	39.14	7.63	7.14	0.78
EPG Total				6.33	91.48	11.31	11.06	2.84

City Center Alternative – Stationary Source Emissions

Project Name (Main Post)	Heated Area	CO [tons]	NOx [tons]	PM [tons]	SO ₂ [tons]	VOC [tons]
Access Road/Control Point, Operations	280	0.00	0.00	0.00	0.00	0.00
Network Enterprise Communications Facility (AKO), Operations	73500	0.11	0.13	0.01	0.00	0.01
Dental Clinic, Operations	16000	0.06	0.08	0.01	0.00	0.00
Admin Bldg, MEDCOM, Operation	9000	0.04	0.04	0.00	0.00	0.00
Administrative Facility (Bldgs 211, 215, 219, 220), Operations	133600	0.16	0.20	0.01	0.00	0.01
USANCA Support Facility, Operations	20000	0.08	0.10	0.01	0.00	0.01
Main Post Total	6495489	0.45	0.54	0.04	0.00	0.03

Project Name(Main Post)	Number of Generators	Size of Generators	Hours of Operation	CO [tons]	NOx [tons]	PM [tons]	SO ₂ [tons]	VOC [tons]
USANCA Support Facility, Operations	1	125	500	0.28	1.29	0.09	0.09	0.29
Main Post Total				0.28	1.29	0.09	0.09	0.29
Roll-up	CO [tons]	NOx [tons]	PM [tons]	SO ₂ [tons]	VOC [tons]			
Main Post	1	2	0	0	0			
EPG	43	109	16	11	6			

Notes: Only actual equipment for the NGA and WHS facilities has been chosen at this time. Detailed methodologies for emissions calculations for boilers can be located in the Appendix E.1. Potential to emit estimation for emergency generators were based on a 250 hours of operations federally enforceable permit limitation for NGA and WHS facilities, and 500 hours for all the other facilities.

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Appendix F
Storm Water and Watershed Modeling Methodology

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Storm Water Runoff Modeling

To estimate baseline storm water runoff and peak flow volumes and the potential impacts of each of the proposed development scenarios on Fort Belvoir, affected streams were modeled using Technical Release 55 (TR-55), *Urban Hydrology for Small Watersheds* (NRCS, 1986). TR-55 includes simplified procedures for estimating storm-event runoff and peak discharges in small watersheds.

An assessment of land cover and hydrologic factors that characterize the current flow conditions of streams located within proposed development areas was made to determine the potential environmental consequences that would result from the adoption of each of the BRAC proposed alternatives. The assessment included analysis of the existing distribution of land uses and soil types, characterization of surface elevations, subwatersheds, and stream networks. TR-55 model input data were developed based on the proposed development footprint coverage for each of the alternatives and current GIS data layers for land cover, streams, soils, topography, and other watershed attributes.

Hydrologic conditions on Fort Belvoir are characterized based on storm water management units. The delineation of these subwatersheds was provided by the Fort Belvoir GIS Center (US Army Garrison Fort Belvoir DPW GIS Center, 2005). Hydrologic soil types and areas were characterized using the State Soil Geographic (STATSGO) coverage for Virginia, developed by the Natural Resources Conservation Service (NRCS). Land cover, surface elevations, and stream networks were derived from the 2001 National Land Cover Dataset (NLCD), 30-meter Digital Elevation Model (DEM), and National Hydrography Dataset (NHD), developed by the United States Geological Survey (USGS). The assessment of current conditions was used as a baseline from which potential impacts on storm water runoff volumes and stream flow velocity were estimated for each of the proposed alternatives. Note that BMPs required by state and federal regulations have various percent efficiencies depending on their design and site characteristics; therefore, BMP implementation was not considered in the storm water modeling scenarios.

Model Background

TR-55 model scenarios for each subwatershed were run using local precipitation data for the 1, 2, 5, 10, 25, 50, and 100-year design storm events over a 24-hour period. 24-hour rainfall distributions for the Washington, DC, metropolitan region were packaged with the TR-55 model and were used to simulate precipitation and runoff conditions for each of the subwatersheds modeled. These data were derived from NOAA isoline precipitation maps for the eastern United States. Precipitation data were used to estimate runoff volumes by assigning a weighted curve number to the land area of each modeled subwatershed based on the distribution of land cover and hydrologic soil types. Peak stream flow was then estimated based on flow routing procedures that calculate runoff travel time, also known as time of concentration, through the subwatershed. Runoff travel time between two locations was used as a measure of flow velocity. For each TR-55 model scenario, travel time was assumed to be implicitly dependent on stream flow length. Other important model parameters are discussed below.

The runoff curve number determines the fraction of total precipitation that either infiltrates into ground water storage or enters surface water as over-land runoff. Curve numbers are calculated based on the distribution of land use/cover and hydrologic soil types within each subwatershed. Area weighted curve numbers for Fort Belvoir subwatersheds were calculated using available land cover (2001 NLCD) and soils (STATSGO) GIS data layers.

To estimate stream flow velocity, TR-55 divides surface flow into three distinct types—sheet flow, shallow concentrated flow, and open channel flow—that together form a continuous flow route from the most hydrologically distant point to the farthest downstream point within a watershed. The algorithm to

calculate flow velocity varies for each type, but all consider slope and surface roughness. Calculated velocities for sheet flow and concentrated shallow flow are impacted primarily by land use and slope, while channel flow also considers channel geometry.

Sheet flow usually occurs at the headwaters of a stream and is characterized by the volume of water that flows over land surfaces. Sheet flow is restricted in the model to a maximum length of 300 feet. This maximum was assumed for all subwatersheds due to the lack of site-specific information. The flow velocity associated with sheet flow is a function of Manning's roughness coefficient for overland flow and slope of the hydrologic grade line. Manning's roughness coefficients were derived from land cover data (NLCD), and hydraulic grade lines (land slope) were calculated using 30-meter DEM data.

Sheet flow is usually conveyed into shallow concentrated flow once the maximum length of 300 feet is reached. The velocity of shallow concentrated flow is a function of slope and land cover. Land cover types were simplified and classified as either pervious or impervious surfaces. Shallow concentrated flow was assumed to occur at the end of sheet flow and beginning of stream channel flow, based on the location of streams depicted in the NHD streams coverage (USGS).

Average channel flow velocity was calculated using Manning's roughness coefficient for open channel flow, channel slope, and channel geometry. It was assumed that no natural channels would be converted to artificial materials (concrete, metal, or polyethylene). Stream channel geometries were estimated using regional curves that depict the relationship between bankfull and drainage area for the Eastern United States hydro-physiographic province (Dunn and Leopold, 1978).

For each of the BRAC proposed alternatives (Preferred, Town Center, City Center, and Satellite Campuses), the current land use grid (2001 NLCD) was edited to reflect the locations of the proposed development projects. Estimated footprints for planned facilities and associated developed areas within each subwatershed were added to the land cover grid as either high or medium intensity development areas. These changes in land cover were used to update the weighted curve number and time of concentration values for each subwatershed and estimate potential changes in peak flow discharge that may result from each of the proposed alternatives.

Table F-1 presents the peak flow modeling results for all subwatersheds under each of the proposed alternatives. The percent change in peak flow discharge for the 1, 2, 5, 10, 25, 50, and 100-year storm event scenarios are shown in this table. The results for the 1-year and 10-year storm events are summarized in Section 4.7.

**Table F-1
TR-55 Runoff modeling results (percent change from baseline to future condition)**

Sub-watershed	Preferred Alternative							Town Center Alternative							City Center Alternative							Satellite Campuses Alternative						
	Peak discharge % change							Peak discharge % change							Peak discharge % change							Peak discharge % change						
	Storm Frequency (years)							Storm Frequency (years)							Storm Frequency (years)							Storm Frequency (years)						
	1	2	5	10	25	50	100	1	2	5	10	25	50	100	1	2	5	10	25	50	100	1	2	5	10	25	50	100
1	100	83	70	63	61	56	51	131	106	86	75	71	65	59	10	6	5	4	4	4	3	54	41	30	25	24	20	16
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	12	7	6	5	5	4	4	22	15	12	10	9	8	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	9	7	6	5	4	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	36	23	19	16	14	12	10	36	23	19	16	14	12	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	25	19	15	13	12	11	11	0	0	0	0	0	0	0	25	19	15	13	12	11	11
30	0	0	0	0	0	0	0	24	16	12	10	9	8	7	0	0	0	0	0	0	0	25	16	12	10	9	8	7
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table F-1
TR-55 Runoff modeling results (percent change from baseline to future condition) (continued)

Sub-watershed	Preferred Alternative								Town Center Alternative								City Center Alternative								Satellite Campuses Alternative							
	Peak discharge % change								Peak discharge % change								Peak discharge % change								Peak discharge % change							
	Storm Frequency (years)								Storm Frequency (years)								Storm Frequency (years)								Storm Frequency (years)							
	1	2	5	10	25	50	100	1	2	5	10	25	50	100	1	2	5	10	25	50	100	1	2	5	10	25	50	100				
32	0	0	0	0	0	0	0	15	11	7	6	5	5	4	0	0	0	0	0	0	0	15	11	7	5	5	4	4				
33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	44	29	20	16	14	13	11				
39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	14	10	9	8	7	6				
43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	91	72	53	42	38	33	28				
44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
53	77	46	27	22	20	18	16	0	0	0	0	0	0	0	77	46	27	22	20	18	16	0	0	0	0	0	0	0				
54	29	20	13	10	10	9	8	0	0	0	0	0	0	0	14	13	6	4	5	4	4	0	0	0	0	0	0	0				
55	56	35	21	17	15	13	12	0	0	0	0	0	0	0	53	33	20	17	15	13	12	0	0	0	0	0	0	0				
56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
57	93	58	40	33	29	26	23	0	0	0	0	0	0	0	93	58	40	32	29	25	22	0	0	0	0	0	0	0				
58	70	51	38	31	28	25	21	0	0	0	0	0	0	0	70	51	38	31	28	25	21	0	0	0	0	0	0	0				
59	82	59	42	34	31	27	22	0	0	0	0	0	0	0	82	60	42	34	31	27	22	0	0	0	0	0	0	0				
60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				

Watershed Modeling (Nutrient Analysis and Cumulative Impacts Analysis)

The Generalized Watershed Loading Functions (GWLF) model was used to estimate current (baseline) conditions and potential changes in flow volume and pollutant loads. Separate watershed models were developed for Accotink Creek, Pohick Creek, and Dogue Creek. A fourth watershed model was developed to incorporate direct drainage areas (watershed areas that flow directly into Gunston Cove, Accotink Bay, Pohick Bay, and the Potomac River). Average annual flow volume and nutrient loads (total nitrogen (TN) and total phosphorus (TP)) were calculated in order to assess potential cumulative impacts on water quality that may result from the Preferred Alternative and anticipated future development within each watershed. In addition, loading coefficients were calculated for TN and TP based on the Accotink Creek watershed model results in order to estimate the percent change in nutrient loads for the modeled subwatersheds under each BRAC development alternative. Table F-2 presents the subwatershed nutrient loading results. Subwatersheds with greater than a ten percent change in nitrogen and phosphorus loads are summarized in Section 4.7. Watershed results for the cumulative impacts analysis are presented in Section 5.7.

The 2001 NLCD GIS coverage was modified to account for future development in each watershed as a result of the BRAC Preferred Alternative and planned development within these watersheds based on information provided by the Fairfax County Department of Planning and Zoning (2006). The NLCD grid was modified as discussed in the storm water modeling section above. Future development locations within the vicinity of Fort Belvoir were represented in a GIS point coverage provided by the Fairfax County Planning Department. The planned development area associated with each location was reclassified as high intensity development. BRAC and other future on- and off-post development projects located within each watershed that drains part of Fort Belvoir are shown in Table F-3. Fairfax County development projects located in other watersheds are shown in Table F-4. Note that BMPs required by state and federal regulations have various percent efficiencies depending on their design and site characteristics; therefore, BMP implementation was not considered in the watershed modeling scenarios.

Model Background

The watershed models for Accotink Creek, Pohick Creek, Dogue Creek, and Direct Drainage watersheds were developed using GWLF and the BasinSim 1.0 interface. The GWLF model, which was originally developed by Cornell University (Haith et al., 1992), provides the ability to simulate runoff and pollutant loadings from watersheds given variable-size source areas (e.g., agricultural, forested, and developed land). GWLF is a continuous simulation model that uses daily time steps for weather data and water balance calculations. Monthly calculations are made for pollutant loads based on daily water balance totals that are summed to give monthly values. The BasinSim 1.0 watershed simulation program is a Windows based modeling system that facilitates the development of model input data and provides additional functionality for simulating daily flows and flow and pollutant routing (Dai et al., 2000)

GWLF is an aggregate distributed/lumped parameter watershed model. For surface loading, it is distributed in the sense that it allows multiple land use/cover scenarios. Each area is assumed to be homogeneous with respect to various attributes considered by the model. In addition, the model does not spatially distribute the source areas, but aggregates the loads from each area into a watershed total. In other words, there is no spatial routing. For subsurface loading, the model acts as a lumped parameter model using a water balance approach. No distinctly separate areas are considered for subsurface flow contributions. Daily water balances are computed for an unsaturated zone as well as for a saturated subsurface zone, where infiltration is computed as the difference between precipitation and snowmelt minus surface runoff plus evapotranspiration.

GWLF models surface runoff using the Natural Resources Conservation Service Curve Number (NRCS-CN) approach with daily weather inputs of temperature and precipitation. Erosion and sediment yield are estimated using monthly erosion calculations based on the Universal Soil Loss Equation (USLE) algorithm (with monthly rainfall-runoff coefficients) and a monthly composite of KLSCP values for each source area (e.g., land cover/soil type combination). The KLSCP factors are variables used in the calculations to depict changes in soil loss/erosion (K), the length/slope factor (LS), the vegetation cover factor (C), and the conservation practices factor (P). A sediment delivery ratio, based on watershed size, and a transport capacity, based on average daily runoff, are applied to the calculated erosion to determine pollutant yield for each source area.

Surface nutrient losses are determined by applying dissolved nitrogen and phosphorus coefficients to surface runoff and applying a sediment coefficient to the yield portion for each agricultural source area. Urban nutrient inputs are all assumed to be solid phase, and the model uses an exponential accumulation and washoff function for these loadings. Subsurface losses are calculated using dissolved nitrogen and phosphorus coefficients for shallow groundwater contributions to stream nutrient loads, and the subsurface submodel considers only a single, lumped-parameter contributing area. Evapotranspiration is determined using daily weather data and a cover factor dependent on land use/cover type. Finally, a water balance is performed daily using supplied or computed precipitation, snowmelt, initial unsaturated zone storage, maximum available zone storage, and evapotranspiration values. All the equations used by the model can be found in the original GWLF paper (Haith and Shoemaker, 1987) and GWLF User's Manual (Haith et al., 1992).

Nonpoint source pollution is driven by rainfall, and therefore precipitation data are necessary to drive the watershed model. Local rainfall and temperature data were used to simulate flow conditions in modeled watersheds. Daily precipitation and temperature data were obtained from local National Climatic Data Center (NCDC) weather stations. There was one station in close proximity to the modeled watersheds—Reagan National Airport. Temperature and precipitation data recorded at this station from April 1995 through December 2004 were used in the simulations.

Table F-2
GWLF nutrient loading results (percent change from baseline to future condition)

Sub-watershed	Preferred		Town Center		City Center		Satellite Campuses	
	TP	TN	TP	TN	TP	TN	TP	TN
1	-3	-4	9	15	4	6	-9	-10
2	0	0	0	0	0	0	0	0
3	-1	-4	-1	-4	2	3	0	-1
4	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0
11	-1	-1	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0

Table F-2
GWLF nutrient loading results (percent change from
baseline to future condition) (continued)

Sub-watershed	Preferred		Town Center		City Center		Satellite Campuses	
	TP	TN	TP	TN	TP	TN	TP	TN
14	1	2	1	1	1	1	1	1
15	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0
25	-2	-6	5	3	0	0	0	0
26	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0
29	2	3	5	6	2	3	12	13
30	3	4	-3	-3	3	4	2	2
31	0	0	0	0	0	0	0	0
32	0	0	3	3	0	0	3	3
33	0	0	0	0	0	0	0	0
34	0	0	0	0	0	0	0	0
35	0	0	0	0	0	0	0	0
36	0	0	0	0	0	0	0	0
37	0	0	0	0	0	0	0	0
38	0	0	0	0	0	0	0	-2
39	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0
41	0	0	0	0	0	0	0	0
42	0	0	0	0	0	0	0	2
43	0	0	0	0	0	0	-6	2
44	0	0	0	0	0	0	0	-1
45	0	0	0	0	0	0	0	0
46	0	0	0	0	0	0	0	0
47	0	0	0	0	0	0	0	0
48	0	0	0	0	0	0	0	0
49	0	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0	0
51	0	0	0	0	0	0	0	0
52	0	0	0	0	0	0	0	0
53	51	68	0	0	61	83	0	0

Table F-2
GWLF nutrient loading results (percent change from
baseline to future condition) (continued)

Sub-watershed	Preferred		Town Center		City Center		Satellite Campuses	
	TP	TN	TP	TN	TP	TN	TP	TN
54	8	17	0	0	7	14	0	0
55	26	39	0	0	26	39	0	0
56	0	0	0	0	0	0	0	0
57	19	31	1	1	11	19	1	1
58	22	33	0	0	13	19	0	0
59	2	-3	0	0	5	0	0	0
60	0	0	0	0	0	-1	0	0

Table F-3
Projects located in modeled watersheds (Fort Belvoir drainage area)

Watershed name	Map number	Project number	Project description
Accotink Creek			BRAC PROJECTS
	8	67959/ 67487/ 64097	INFRASTRUCTURE (INCLUDES GUNSTON ROAD IMPROVEMENTS)
	4	64238	HOSPITAL
	5	64241	DENTAL CLINIC
	16	66228	PURCHASE AMC RELOCATABLES
	15	63571	ACCESS ROAD/CONTROL POINT
	2	64234	WHS
	1	65416	NGA
	12	55661	CHILD DEV CENTER – 244 (NGA)
	13	55662	CHILD DEV CENTER – 303 (EPG)
	7	N/A	CORPS OF ENGINEERS INTERGRATION OFFICE
	6	65871	NARMC HEADQUARTERS BLDG
	19	62892	MODERNIZE BARRACKS
	9	64076	EMERGENCY SVCS CENTER (EPG)
			OTHER ON-POST PROJECTS
	26a	58466	MUSEUM OF THE US ARMY ALTERNATIVE LOCATION AT NORTH POST
	17	65317	GOLF CLUBHOUSE/CART STORAGE
	31	n/a	INFO DOMINANCE CENTER
	2	61458	RELIGIOUS EDUCATION CENTER
	20	57495	SOLDIER SUPPORT CENTER
	3	64231	PHYSICAL FITNESS CENTER (TROOP CANTONMENT AREA)
	18	63206	ADDITION TO MP STATION

Table F-3
Projects located in modeled watersheds (Fort Belvoir drainage area) (continued)

Watershed name	Map number	Project number	Project description
	15	n/a	DCNG RESOURCES TRAINING CENTER
	14	65139	EXPAND ARTS/CRAFT/AUTO
	19	55523/ 52694	POTOMAC HERITAGE NATIONAL SCENIC TRAIL
	29	n/a	OPERATIONS SECURITY EVALUATION GROUP TRAINING FACILITY
	16	62134	DLA RECEIVING AND SCREENING FACILITY
	30	n/a	FAIRFAX COUNTY PARKWAY EXTENSION
	28	n/a	FLIGHT CONTROL TOWER
	25	64230	PHYSICAL FITNESS CENTER (EPG)
	24	64742	CONSTRUCT SHOPPETTE
	30	64531	PX EXPANSION
			OFF-POST PROJECTS
	84	002463-Sp -002-2	OLD KEENE MILL PROFESSIONAL OFFICES
	1	002981-SP-004-2	WEST SPRINGFIELD BUSINESS CENTRE SITE 5 PARKING ADDN
	30	003330-SP -007-2	TELEGRAPH ROAD WAREHOUSE
	31	006839-SP-006-2	THE FAIRFAX BUILDING ADDITION
	25	006384-SD-001-3	MAZZELLO COVE
	55	000187-SP-002-1	UPS IN NEWINGTON
	128	000503-SP-001-3	U-HAUL RETAIL CENTER 8207 TERMINAL ROAD
	130	004198-SP-009-2	M AND S HOLDINGS LLC (FORM MILLERS OFFICE PRODUCTS)
	129	009730-SP-001-2	CROWN CENTER
	125	000497-SP-002-2	HUNTER PLAZA PHASE 2
	124	000497-SP-001-2	HUNTER PLAZA, PHASE ONE
	16	008082-SP-001-3	HOOES ROAD PARK
	106	005833-SP-002-2	ECHO INC
	3	005219-PI-001-2	ACCOTINK STREAM VALLEY TRAIL (REVIT AREA) (BR/SP)
	4	006945-SP-001-2	ACCOTINK PARK
	131	003189-SP -004-2	8501 BACKLICK ROAD (FORMERLY 8521)
	126	000230-SP-001-2	TAVARES/ALLEN PROPERTY
	127	001130-SP-001-2	ISLAND CREEK ELEMENTARY SCHOOL
	15	004998-PI-001-2	MOHTARAM MOZAFARI RESIDENCE
	107	007207-SP-002-2	VW SPRINGFIELD
	14	005694-SP-001-2	VA TIRE AND AUTO REPAIR
	87	006754-SD-005-3	TALBERT SUBDIVISION
	70	009990-SP -003-2	SPRINGFIELD METRO CENTER II ROAD IMPROVEMENTS

Table F-3
Projects located in modeled watersheds (Fort Belvoir drainage area) (continued)

Watershed name	Map number	Project number	Project description
	99	006561-SP-001-2	6715 COMMERCE STREET
	64	004072-SP-003-1	BOB EVANS RESTAURANT (SP) OLD KEENE MILL ROAD
	40	001988-SP-002-1	RESIDENCE INN SPRINGFIELD
	60	024588-SP-001-1	HOA NGHIEM PAGODA
	44	013408-SD-001-1	KENDRICK
	17	006836-SP-009-2	METRO PARK PHASE SEVEN
	112	009639-SP-008-2	SILVER LAKE IHOP RESTAURANT
	110	006836-SP-010-2	METRO PARK PHASE SIX
	108	001414-SP-001-2	2ND PARK STRUCTURE AT FRANC-SPRINGFIELD METRO STATION
	73	000438-SP-002-3	LOYAL ORDER OF THE MOOSE FRANCONIA LODGE 646 INC
	109	000677-SP-003-2	CALVARY ROAD BAPTIST CHURCH EXPANSION
	118	004099-SD-001-2	CHAPEL BRIDGE ESTATES
	2	002981-SP-005-2	WEST SPRINGFIELD BUSINESS CENTRE SITE 6
	178	009754-SP-005-2	GUNSTON COMMERCE CENTER LAND BAY B
	24	001343-SP-003-2	CIFUENTES PROPERTY PCLS 15 AND 15A
	181	RZ-2005-LE-025	Mid-Town Springfield Development (mixed use)
	182	PA-506-IV-SI	Springfield Mall Expansion
	183	05-IV-2MV	Mixed Use (Office, Hotel, Retail)
	184	05-IV-4MV	Mixed Use (Residential, Office, Retail, Hotel)
	185	05-IV-10S	Mixed Use (Residential, Office, Recreation/Open Space, Retail)
	186	05-IV-6S	Mixed Use (Office, Industrial)
	187	05-IV-1LP	Mixed Use (Office, Retail)
Direct Drainage			BRAC PROJECTS
	4	64238	HOSPITAL
	5	64241	DENTAL CLINIC
	16	66228	PURCHASE AMC RELOCATABLES
	17	65592/ 67321	PEO EIS ADMIN FACILITY
	8	64097/ 67487/ 67959	INFRASTRUCTURE (INCLUDES GUNSTON ROAD IMPROVEMENTS)
	6	66877	NARMC HQ BLDG
	15	63571	ACCESS ROAD/ CONTROL POINT
	18	54347	STRUCTURED PARKING FACILITY, 200 AREA
	14	65450	ADMINISTRATIVE BLDG (211, 214, 215, 220)
	3	MDA 580	MDA
	11	65447	USANCA REPLACEMENT
	10	65448	NETWORK OPS – PEO EIS

Table F-3
Projects located in modeled watersheds (Fort Belvoir drainage area) (continued)

Watershed name	Map number	Project number	Project description
			OTHER ON-POST PROJECTS
	10	58697	MUSEUM SUPPORT CENTER
	26c	58466	MUSEUM OF THE US ARMY ALTERNATIVE LOCATIONS AT PENCE GATE
	4	54897	MARINA MODERNIZATION AND DOGUE CREEK DREDGING
	23	61453	REPLACE SOUTH POST FIRE STATION
	5	65218	EXPAND MAIN POST LIBRARY
	12	59554	BATTALION HEADQUARTERS FOR 249 ENGINEER BATTALION
	13	63035	SHOPETTE WITH GAS, BURGER KING, CAR WASH (SOUTH POST)
	21	65141	EXPAND BOWLING CENTER
	22	57837/ 51326	SOUTH POST FITNESS FACILITY & MULTIPURPOSE FIELDS
	6	65314	EXPAND RECREATION CENTER
	11	50356	INSTALLATION INDUSTRIAL SUPPORT CENTER
	9	62539	VET CLINIC ADDITION
	8	56184	JPRA RENOVATION/ADDITION (BLDG) 358
	7	63815	ADMINISTRATIVE BUILDING PEO SOLDIER
			OFF POST PROJECTS
	161	003642-SD-007-2	LORTON TOWN CENTER LANDBAY G
	34	008461-SP-001-2	ST JAMES EPISCOPAL CHURCH
Dogue Creek			OTHER ON-POST PROJECTS
	27	n/a	DCEETA Remote Delivery Facility
	29	n/a	Operations Security Evaluation Group Training Facility

Table F-3
Projects located in modeled watersheds (Fort Belvoir drainage area) (continued)

Watershed name	Map number	Project number	Project description
			OFF- POST PROJECTS
	133	001881-SD-001-2	ASHBY HEIGHTS
	132	001497-SD-001-2	PINEY GLEN
	74	003365-SP-006-1	HILLTOP RECLAMATION PROJECT (3365-LF-01, FOR BOND ONLY)
	111	007818-SD-002-2	GAYFIELDS ROAD
	90	006105-SP-002-1	FIRST BAPTIST CHURCH OF KINGSTOWNE
	19	004388-SD-001-2	WINDSOR KNOLL
	88	005318-SP-007-2	BB+T BANK DRIVE THRU ADDN- MANCHESTER LAKES SC
	6	006790-SP-001-2	SAINT JOHN'S LUTHERAN CHURCH
	8	000623-SP-002-4	NORTHAMPTON (FORMERLY OVERBROOK)
	43	006105-SP-023-1	APPLE FEDERAL CREDIT UNION
	89	009405-SP-001-2	WALMART STORE #2194 KINGSTOWNE CENTRE
	18	006105-SP-082-2	KINGSTOWNE SECTION 36A
	91	004838-SP-001-2	HAYFIELD ANIMAL HOSPITAL
	136	004124-SP-001-3	EVERGREEN FARM
	32	001938-SP-001-2	JETT MECHANICAL 8753 RICHMOND HIGHWAY
	161	003642-SD-007-2	LORTON TOWN CENTER LANDBAY G
	33	009465-SP-002-2	MOUNT VERNON COUNTRY CLUB GOLF COURSE IMPROVEMENTS
	34	008461-SP-001-2	ST JAMES EPISCOPAL CHURCH
	96	001900-SP-001-2	EPIPHANY LUTHERAN CHURCH
	81	024570-SD-001-2	HALLEY FARM SUBDIVISION
	27	006090-SP-001-2	HOPKINS HOUSE
	137	004989-SD-001-2	CECIL CASE ESTATES
	57	005223-SP-002-2	MASTER ROOFING AND SIDING INC (MV) 8463 RICHMOND HY
	67	008375-SD-001-2	ROSE HILL RESERVE
	10	000542-SP-001-2	COX COMMUNICATIONS SOUTHEAST HUB SITE
	76	002697-SD-001-2	LOFTY OAKS PLACE LOTS 41A 41B 41C
	45	022564-SP-001-1	GROVETON HEIGHTS
	134	005127-SP-003-2	FEDERAL REALTY INVESTMENT/SOUTH VALLEY SHOP CTR
	173	004687-SP-004-2	MT VERNON ORIENTATION CNTR EDUCATION CENTER AND MUSEUM
Pohick Creek			OFF-POST PROJECTS
	72	006454-SD-023-2	SILVERBROOK FARMS LOT 7
	12	005466-SD-002-2	LAKWOOD HILLS SECTION 10 PHASE 2

Table F-3
Projects located in modeled watersheds (Fort Belvoir drainage area) (continued)

Watershed name	Map number	Project number	Project description
	104	005466-SD-001-2	LAKWOOD HILLS SECT 10 PHASE I
	97	001687-SP-001-2	THEMEADOWBROOK DRIVE PROPERTY
	122	001697-SD-001-2	MONACAN ESTATES
	54	004698-PI-003-1	8404 HELLER ROAD SANITARY SEWER SERVICE
	51	008043-SD-003-2	COVINGTON WOODS ADDITION
	50	000258-SD-002-1	7706 GAMBRILL ROAD (MV)
	119	001225-SP-001-2	ST RAYMOND PENAFORT CHURCH
	105	003303-SP-002-2	FAIRFAX PARK
	175	002144-SD-001-2	EVANS PROPERTY
	61	005787-SD-001-1	FERRY LANDING PRESERVE
	169	003642-SP-008-2	LORTON STATION SCHOOL
	79	006441-SP-006-1	AAA VEHICLE MAINTENANCE FACILITY
	176	005395-SP-007-3	GUNSTON SQUARE SECTION 2 PARCEL D
	167	004865-SP-010-2	LORTON STATION SOUTH SECTION 6
	168	006909-SD-001-2	BARNES PROPERTY
	80	005430-SP-003-2	COMMONWEALTH CONSTRUCTION MANAGEMENT INC
	158	003642-SP-010-2	LORTON TOWN CENTER LANDBAY D/F
	159	003864-SD-002-2	MEEKER PROPERTY
	160	001276-SP-001-2	LAUREL RIDGE CROSSING (FORMERLY PULTE PLASKETT LANE)
	162	003642-SD-008-2	GRACE BIBLE CHURCH
	157	001565-SP-001-2	POHICK ROAD SELF STORAGE FACILITY
	123	001859-SD-001-2	ROLLING OAKS
	52	000122-SP-006-2	GIANT #149 SARATOGA SHOPPING CENTER
	121	008043-SD-002-2	COVINGTON WOODS
	53	005638-SD-001-1	SABINA ESTATES
	120	005638-SP-002-2	HARVESTER PRESBYTERIAN CHURCH
	172	006839-SP-004-2	COOK INLET RESIDENTIAL SECTION THREE
	13	007732-SD-001-2	STREAM VALLEY ESTATES
	83	015444-SD-001-2	CARDINAL ESTATES
	94	006441-SP-005-2	BEST FOODS INC 9525 GUNSTON COVE ROAD
	95	004478-SD-001-2	ADKINS PROPERTY
	154	001183-SP-009-2	LAUREL HILL ELEMENTARY SCHOOL
	164	003642-SP-009-2	LORTON TOWN CENTER LANDBAY "B-2"
	163	003642-SP-011-2	LORTON TOWN CENTER LANDBAY C

Table F-4
Off-post projects located outside modeled watersheds

Watershed name	Map number	Project number	Project description
Occoquan			
	78	001183-SP-014-1	LORTON WORK HOUSE
	145	001657-SD-001-2	OCCOQUAN PARK
	153	001183-SP-006-2	SOUTH COUNTY HIGH SCHOOL
	144	001811-SD-001-2	OCCOQUAN OVERLOOK
	142	001222-SD-001-2	DAVISON WOODS
	46	001653-SP-002-1	GROVETON PHASE II
	156	001183-SP-010-2	LAUREL HILL RECREATION CENTER
	147	001183-SD-002-2	LAUREL HILL SOUTH SEC 1 LANDBAY C
	148	001183-SD-003-2	LAUREL HILL NORTH
	149	001183-SD-005-2	LAUREL HILL SOUTH LANDBAY D SECTION 1
	151	001183-SP-004-2	LAUREL HILL SOUTH LANDBAYS E AND F, SECTION 1
	152	001183-SP-005-2	LAUREL HILL SOUTH LANDBAY E AND F SECTION 2
Mill Branch			
	143	001100-SD-001-2	NIRVANA PALACE
	29	001183-SP-011-2	LAUREL HILL GOLF COURSE MAINTENANCE FACILITY
	28	001733-SD-001-2	MALCOLM AT OX ROAD
	93	008036-SP-002-2	NEW HOPE CHURCH
	150	001183-SD-007-2	LAUREL HILL SOUTH LANDBAY D SECTION 2
	58	004204-SD-001-1	LAUREL OVERLOOK (FORMERLY HOOES ROAD-BLACKSTONE)
	141	000848-SD-001-2	COOKE PROPERTY
	140	008733-SD-001-2	REMINGTON PLACE FORMERLY COOKE PROPERTY
	69	006510-SP-002-1	SOUTH RUN RECREATIONAL CENTER FITNESS CENTER ADDN
	37	009754-SP-004-2	GUNSTON COMMERCE CENTER BUILDING 1
	180	001001-SP-001-2	GUNSTON CENTER
	35	003800-SP-001-3	FURNACE ROAD RECYCLING FACILITY
	82	001883-SP-001-1	LORTON DEBRIS LAND FILL
	166	009101-SP-002-2	GUNSTON COMMONS TOWNHOUSES
	165	001126-SP-004-2	LORTON VALLEY RECREATION CENTER
	155	001183-SP-009-2	SPRING HILL SENIOR CAMPUS SENIOR HOUSING BUILDING
	170	007713-SP-015-1	GUNSTON CORNER RESTAURANT
	174	007334-SP-002-4	GUNSTON COVE BUSINESS CENTER
	62	001664-SD-001-1	CRANFORD AT GUNSTON COVE
	36	006103-SP-003-5	ROCK STONE AND SAND YARD INC
	171	004865-SP-011-2	LORTON STATION SOUTH SECTION 7
	63	009754-SP-009-2	GUNSTON COMMERCE CENTER LAND BAY D
	155	001183-SP-012-2	SPRING HILL SENIOR CAMPUS
	177	009754-SP-006-2	GUNSTON COMMERCE CENTER LAND BAY C
Little Hunting Creek			
	113	001653-SP-001-2	GROVETON WOODS
	114	002174-SP-001-2	HOLLY ACRES
	146	001183-SD-001-2	LAUREL HILL LAND BAY A SECTION 1
	20	000871-SP-002-2	PROVIDENT BANK
	47	001860-SP-001-2	K AND M SHOPPING CENTER
	116	000871-SP-001-2	MOUNT VERNON SQUARE SHOPPING CENTER

Table F-4
Off-post projects located outside modeled watersheds (continued)

Watershed name	Map number	Project number	Project description
	115	009644-SP-002-2	SHURGARD MOUNT VERNON
	135	000106-SD-001-2	THE WOODLANDS
	138	015459-SD-001-2	GALLAHAN PROPERTY
	56	008972-SP-002-1	MOUNT VERNON GATEWAY
	139	004097-SP-001-2	VERNON HEIGHTS
	75	001850-SP-001-3	8214 AND 8218 RICHMOND HIGHWAY
	179	009754-SP-002-2	GUNSTON COMMERCE CENTER BUILDING 2 LB A
	92	007175-PI -001-1	SHERWOOD HALL LIBRARY
	77	009083-SP-004-1	INOVA MOUNT VERNON
	71	007473-SP-011-1	BEACON MALL FAMOUS DAVES
	48	007473-SP-010-1	BEACON MALL SILVER DINNER
	23	003484-SP-002-2	COMMERCE BANK BEACON HILL GROVETON
	21	007473-SP-008-2	BEACON MALL PROP DRIVE-THRU BANK AND FAST FOOD
	26	006468-SP-005-2	ROXBURY MEWS
Cameron Run			
	38	001381-SP-023-1	LOT 16 SHELL OIL PARK
	39	006367-SP-005-3	BREN MAR IV
	98	003195-SP-002-2	BACKLICK PLAZA
	42	006989-SP-002-2	VERIZON ADDITION TO FRANCONIA CENTRAL OFFICE
	102	009163-SD-009-2	DEVERS PROPERTY
	41	005307-SD-001-1	WOODLAND CREST
	86	002725-SP-002-3	RICKS CARPET AND FLOORS
	100	009163-SD-006-2	HIGHGROVE ESTATES SECTION 5
	101	004178-SP-001-2	JEFFERSON AT SULLIVAN PLACE
	5	017901-SP-001-2	PBS
	103	000623-SP-001-2	LDS CHURCH FRANCONIA WARD
	7	000220-SD-002-2	ANNE LY ESTATE 2
	9	001656-SD-001-2	CROWN ROYAL GATE
	65	000220-SD-003-1	WHEELER PROPERTY
	67	008375-SD-001-2	ROSE HILL RESERVE
	11	001260-SD-001-3	HIGHLANDS ESTATES
	66	000542-SP-002-1	SPICER CENTER
	85	007364-SP-004-1	PARCEL 8A SHELL OIL PARK
Belle Haven			
	49	016842-SP-001-1	MOUNT CALVARY BAPTIST CHURCH
	22	000180-SP-003-2	DEL RAY GLASS
	117	007950-SP-001-2	CHILIS BEACON HILL, 6601 RICHMOND HIGHWAY

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Appendix G

Economic Impact Forecast System (EIFS) Analysis and Population Estimations

G.1 – EIFS Model Analysis for Fort Belvoir, Virginia

G.2 – Population Estimate Calculations

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APPENDIX G.1

ECONOMIC IMPACT FORECAST SYSTEM (EIFS) MODEL ANALYSIS FOR FORT BELVOIR, VIRGINIA

Socioeconomic Impact Assessment

Socioeconomic impacts are linked through cause-and-effect relationships. Military payrolls and local procurement contribute to the economic base for the ROI. In this regard, base realignment at Fort Belvoir would have a multiplier effect on the local and regional economy. With the proposed action, local expenditures would increase, generating new business sales, employment, and income. This spending generally creates secondary jobs, increases business volume, and increases revenues for schools and other social services.

The EIFS Model

The U.S. Army, with the assistance of academic and professional economists and regional scientists, developed EIFS to address the economic impacts of NEPA-requiring actions and to measure their significance. As a result of its designed applicability, and in the interest of uniformity, EIFS should be used in NEPA assessments for BRAC. The entire system is designed for the scrutiny of a populace affected by the actions being studied. The algorithms in EIFS are simple and easy to understand but still have firm, defensible bases in regional economic theory.

EIFS was developed under a joint project of the U.S. Army Corps of Engineers, the U.S. Army Environmental Policy Institute, and the Computer and Information Science Department of Clark Atlanta University. EIFS is implemented as an online system supported by the U.S. Army Corps of Engineers, Mobile District. The system is available to anyone with an approved user-ID and password. U.S. Army Corps of Engineers staff are available to assist with the use of EIFS.

The databases in EIFS are national in scope and cover the approximately 3,700 counties, parishes, and independent cities that are recognized as reporting units by federal agencies. EIFS allows the user to define an economic ROI by identifying the counties, parishes, or cities to be analyzed. Once the ROI is defined, the system aggregates the data, calculates multipliers and other variables used in the various models in EIFS, and prompts the user for forecast input data.

The basis of the EIFS analytical capabilities is the calculation of multipliers that are used to estimate the impacts resulting from Army-related changes in local expenditures or employment. In calculating the multipliers, EIFS uses the economic base model approach, which relies on the ratio of total economic activity to basic economic activity. Basic, in this context, is defined as the production or employment engaged to supply goods and services outside the ROI or by federal activities (such as military installations and their employees). According to economic base theory, the ratio of total income to basic income is measurable (as the multiplier) and sufficiently stable so that future changes in economic activity can be forecast. This technique is especially appropriate for estimating aggregate impacts and makes the economic base model ideal for the EA and EIS process.

The multiplier is interpreted as the total impact on the economy of the region resulting from a unit change in its base sector; for example, a dollar increase in local expenditures due to an expansion of its military installation. EIFS estimates its multipliers using a location quotient approach on the

basis of the concentration of industries within the region relative to the industrial concentrations for the nation.

The user inputs into the EIFS model the data elements that describe the Army action: definition of the ROI; the change in local expenditures; number of affected (moving) civilian personnel and their salaries; number of affected (moving) military employees and their salaries; and the percent of affected military living on-post.

Although there would be a net gain of about 22,000 jobs (military and civilian) to Fort Belvoir, the installation would also lose some jobs due the proposed realignment. Per the *2005 Defense BRAC Commission Report to the President, Volumes I and 2*, almost 1,800 jobs would be realigned from Fort Belvoir to several other DoD installations in the continental U.S. (Defense Base Closure and Realignment Commission 2005). It is assumed these jobs would be transferred in 2011, the year when BRAC actions must be completed. Because the jobs would be transferred outside the ROI, they were entered in to the EIFS model as the change in military and civilian employment. Average annual income for the military personnel was estimated at \$30,000, and average annual income for civilian personnel was about \$45,000 (Webster 2005). It was assumed that 100 percent of the military personnel would relocate to their new assignment, and it was estimated that 50 percent of the civilian personnel would relocate.

Implementation of the proposed realignment action also would require renovation of existing facilities and construction of new facilities to accommodate the increase in personnel and functions assigned to Fort Belvoir. The installation would construct about 6.2 million square feet of new built space and renovate about 320,000 square feet of existing space (see Table 2-3). These facilities would be new work space for the incoming personnel and general support facilities to meet the needs of the larger working population. Construction would begin about 2007 and be completed by 2011 (5 years). The EIFS model output assumes that changes occur at one time, when in fact the effects of the preferred alternative's changes in construction expenditures and employment would be spread out over the 5-year development period. Therefore, the multiyear activity was modeled using EIFS by determining the changes in amount of construction spending and employment in each year of the project cycle (2007 through 2011), and a separate EIFS model run was completed for each year. Fort Belvoir's expected construction expenditures for the BRAC action and associated other facility projects were input into the model as the change in local expenditures. The realignment of almost 1,800 jobs from Fort Belvoir to other DoD installations in 2011 was entered as the change in employment. Table G.1-1 lists the EIFS model input parameters for each year.

Once the input variables are entered into the EIFS model, the model is run and it projects changes to the local economy's business sales volume, income, employment, and population. These four indicator variables are used to measure and evaluate socioeconomic impacts. Sales volume is the direct and indirect change in local business activity and sales (total retail and wholesale trade sales, total selected service receipts, and value-added by manufacturing). Employment is the total change in local employment due to the proposed action, including the direct and secondary changes in local employment. Income is the total change in local wages and salaries due to the proposed action, which includes the sum of the direct and indirect wages and salaries, plus the income of the civilian and military personnel affected by the proposed action. Population is the increase or decrease in the local population as a result of the proposed action.

Table G.1-1
EIFS Model Input Parameters for the Proposed BRAC Action at Fort Belvoir

Input Parameter	2007	2008	2009	2010	2011
Construction Expenditures ^a	\$161,337,500	\$2,134,221,000	\$655,818,800	\$578,870,800	\$254,050,000
Change in Civilian Employment ^b	0	0	0	0	-1,560
Average Income of Affected Civilian ^c	\$45,000	\$45,000	\$45,000	\$45,000	\$45,000
Percent Civilian Expected to Relocate	0	0	0	0	50%
Change in Military Employment ^b	0	0	0	0	-210
Average Income of Affected Military ^c	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000
Percent of Military Living On-Post	0	0	0	0	0

Sources:

^aFort Belvoir Detailed Facilities Project List, November 6, 2006 (updated February 15, 2007)^bDefense Base Closure and Realignment Commission 2005^cWebster 2005

The Significance of Socioeconomic Impacts

Once model projections are obtained, the RTV profile allows the user to evaluate the significance of the impacts. This analytical tool reviews the historical trends for the defined region and develops measures of local historical fluctuations in sales volume, income, employment, and population. These evaluations identify the positive and negative changes within which a project can affect the local economy without creating a significant impact. The greatest historical changes define the boundaries that provide a basis for comparing an action's impact on the historical fluctuation in an area. Specifically, EIFS sets the boundaries by multiplying the maximum historical deviation of the following variables:

		Increase	Decrease
Sales volume	X	100%	75%
Income	X	100%	67%
Employment	X	100%	67%
Population	X	100%	50%

These boundaries determine the amount of change that will affect an area. The percentage allowances are arbitrary, but sensible. The maximum positive historical fluctuation is allowed with expansion because economic growth is beneficial. While cases of damaging economic growth have been cited, and although the zero-growth concept is being accepted by many local planning groups, military base reductions and closures generally are more injurious to local economics than are expansion.

The major strengths of the RTV are its specificity to the region under analysis and its basis on actual historical data for the region. The EIFS impact model, in combination with the RTV, has proven successful in addressing perceived socioeconomic impacts. The EIFS model and the RTV

technique for measuring the intensity of impacts have been reviewed by economic experts and have been deemed theoretically sound.

The following are the EIFS inputs and output data and the RTV values for the ROI. These data form the basis for the socioeconomic impact analysis presented in Section 4.10.2.1.2.

EIFS REPORT**PROJECT NAME: Fort Belvoir BRAC EIS****STUDY AREA**

11001	District of Columbia
24009	Calvert County, MD
24017	Charles County, MD
24021	Frederick County, MD
24031	Montgomery County, MD
24033	Prince George's County, MD
51013	Arlington County, VA
51059	Fairfax County, VA
51107	Loudoun County, VA
51153	Prince William County, VA
51179	Stafford County, VA
51510	Alexandria City, VA
51600	Fairfax City, VA
51610	Falls Church City, VA
51683	Manassas City, VA
51685	Manassas Park City, VA

2007 FORECAST INPUT

Change In Local Expenditures	\$161,337,500
Change In Civilian Employment	0
Average Income of Affected Civilian	\$0
Percent Expected to Relocate	0
Change In Military Employment	0
Average Income of Affected Military	\$0
Percent of Military Living On-post	0

2007 FORECAST OUTPUT

Employment Multiplier	2.76	
Income Multiplier	2.76	
Sales Volume – Direct	\$161,337,500	
Sales Volume – Induced	\$283,954,000	
Sales Volume – Total	\$445,291,500	0.21%
Income – Direct	\$34,259,020	
Income - Induced	\$60,295,860	
Income – Total (place of work)	\$94,554,870	0.06%
Employment – Direct	702	
Employment – Induced	1,235	
Employment – Total	1,937	0.06%
Local Population	0	
Local Off-base Population	0	0.00%

2008 FORECAST INPUT

Change In Local Expenditures	\$2,134,221,000
Change In Civilian Employment	0
Average Income of Affected Civilian	\$0
Percent Expected to Relocate	0
Change In Military Employment	0
Average Income of Affected Military	\$0
Percent of Military Living On-post	0

2008 FORECAST OUTPUT

Employment Multiplier	2.76	
Income Multiplier	2.76	
Sales Volume – Direct	\$2,134,221,000	
Sales Volume – Induced	\$3,756,228,000	
Sales Volume – Total	\$5,890,449,000	2.82%
Income – Direct	\$453,188,500	
Income - Induced	\$797,611,700	
Income – Total (place of work)	\$1,250,800,000	0.84%
Employment – Direct	9,286	
Employment – Induced	16,343	
Employment – Total	25,628	0.85%
Local Population	0	
Local Off-base Population	0	0.00%

2009 FORECAST INPUT

Change In Local Expenditures	\$655,818,800
Change In Civilian Employment	0
Average Income of Affected Civilian	\$0
Percent Expected to Relocate	0
Change In Military Employment	0
Average Income of Affected Military	\$0
Percent of Military Living On-post	0

2009 FORECAST OUTPUT

Employment Multiplier	2.76	
Income Multiplier	2.76	
Sales Volume – Direct	\$655,818,800	
Sales Volume – Induced	\$1,154,241,000	
Sales Volume – Total	\$1,810,060,000	0.87%
Income – Direct	\$139,259,000	
Income - Induced	\$245,095,900	
Income – Total (place of work)	\$384,354,900	0.26%
Employment – Direct	2,853	
Employment – Induced	5,022	
Employment – Total	7,875	0.26%
Local Population	0	
Local Off-base Population	0	0.00%

2010 FORECAST INPUT

Change In Local Expenditures	\$578,870,800
Change In Civilian Employment	0
Average Income of Affected Civilian	\$0
Percent Expected to Relocate	0
Change In Military Employment	0
Average Income of Affected Military	\$0
Percent of Military Living On-post	0

2010 FORECAST OUTPUT

Employment Multiplier	2.76	
Income Multiplier	2.76	
Sales Volume – Direct	\$578,870,800	
Sales Volume – Induced	\$1,018,813,000	
Sales Volume – Total	\$1,597,683,000	0.77%
Income – Direct	\$122,919,600	
Income - Induced	\$216,338,500	
Income – Total (place of work)	\$339,258,100	0.23%
Employment – Direct	2,519	
Employment – Induced	4,433	
Employment – Total	6,951	0.23%
Local Population	0	
Local Off-base Population	0	0.00%

2011 FORECAST INPUT

Change In Local Expenditures	\$254,050,000
Change In Civilian Employment	-1,560
Average Income of Affected Civilian	\$45,000
Percent Expected to Relocate	50
Change In Military Employment	-210
Average Income of Affected Military	\$30,000
Percent of Military Living On-post	0

2011 FORECAST OUTPUT

Employment Multiplier	2.76	
Income Multiplier	2.76	
Sales Volume – Direct	\$194,528,500	
Sales Volume – Induced	\$342,370,200	
Sales Volume – Total	\$536,898,700	0.26%
Income – Direct	-\$22,554,060	
Income - Induced	\$72,700,180	
Income – Total (place of work)	\$50,146,120	0.03%
Employment – Direct	-924	
Employment – Induced	1,490	
Employment – Total	566	0.02%
Local Population	-2,465	
Local Off-base Population	-2,465	-0.06%

RTV SUMMARY

	Sales Volume	Income	Employment	Population
Positive RTV	12.03%	11.56%	3.44%	1.15%
Negative RTV	-4.46%	-3.85%	-2.92%	-0.75%

RTV DETAILED**SALES VOLUME**

Year	Value	Adj_Value	Change	Deviation	%Deviation
1969	12487987	54572502	0	0	0
1970	13822532	57087059	2514557	-464206	-0.81
1971	15319874	60666702	3579643	600880	0.99
1972	16879944	64650184	3983483	1004720	1.55
1973	18540008	66929427	2279243	-699520	-1.05
1974	20302148	65981981	-947446	-3926209	-5.95
1975	22302194	66460539	478558	-2500205	-3.76
1976	24627620	69449887	2989348	10585	0.02
1977	27185027	71768474	2318587	-660176	-0.92
1978	30016402	73840350	2071876	-906887	-1.23
1979	33336113	73672811	-167539	-3146302	-4.27
1980	37300698	72363356	-1309455	-4288218	-5.93
1981	41309891	72705408	342052	-2636711	-3.63
1982	44564161	73976506	1271098	-1707665	-2.31
1983	48491783	78071771	4095266	1116503	1.43
1984	54481740	83901878	5830106	2851343	3.4
1985	60194608	89689966	5788089	2809326	3.13
1986	65885847	96193339	6503373	3524610	3.66
1987	72734574	112738586	16545247	13566484	12.03
1988	80522543	109510660	-3227927	-6206690	-5.67
1989	86932341	112142717	2632057	-346706	-0.31
1990	91886260	113020102	877385	-2101378	-1.86
1991	94796472	111859832	-1160270	-4139033	-3.7
1992	100451351	114514539	2654707	-324056	-0.28
1993	105432219	117029765	2515226	-463537	-0.4
1994	109805076	118589487	1559722	-1419041	-1.2
1995	113723153	119409305	819818	-2158945	-1.81
1996	118472471	120841918	1432613	-1546150	-1.28
1997	125654346	125654346	4812428	1833665	1.46
1998	135111444	132409218	6754872	3776109	2.85
1999	146647589	140781682	8372465	5393702	3.83
2000	161175166	149892906	9111223	6132460	4.09

INCOME

Year	Value	Adj_Value	Change	Deviation	%Deviation
1969	14319990	62578355	0	0	0
1970	16042780	66256683	3678329	195972	0.3
1971	17719588	70169569	3912886	430529	0.61
1972	19433040	74428542	4258973	776616	1.04
1973	21318070	76958230	2529689	-952668	-1.24
1974	23463564	76256583	-701647	-4184004	-5.49
1975	25725858	76663057	406474	-3075883	-4.01
1976	28261512	79697462	3034405	-447952	-0.56
1977	31032678	81926273	2228811	-1253546	-1.53
1978	34216866	84173492	2247218	-1235139	-1.47
1979	38043291	84075675	-97817	-3580174	-4.26
1980	42908340	83242182	-833493	-4315850	-5.18
1981	48269158	84953718	1711536	-1770821	-2.08
1982	52670305	87432705	2478987	-1003370	-1.15
1983	57174793	92051418	4618713	1136356	1.23
1984	64363606	99119951	7068533	3586176	3.62
1985	70729098	105386357	6266406	2784049	2.64
1986	76800017	112128028	6741671	3259314	2.91
1987	84333410	130716781	18588754	15106397	11.56
1988	93310155	126901812	-3814969	-7297326	-5.75
1989	101616400	131085152	4183340	700983	0.53
1990	107884900	132698429	1613277	-1869080	-1.41
1991	112366744	132592752	-105677	-3588034	-2.71
1992	118331091	134897442	2304690	-1177667	-0.87
1993	124570964	138273772	3376330	-106027	-0.08
1994	130517765	140959192	2685420	-796937	-0.57
1995	135260856	142023892	1064701	-2417656	-1.7
1996	141360695	144187906	2164014	-1318343	-0.91
1997	149327565	149327565	5139659	1657302	1.11
1998	161042530	157821682	8494117	5011760	3.18
1999	172078384	165195245	7373562	3891205	2.36
2000	187111593	174013783	8818538	5336181	3.07

EMPLOYMENT

Year	Value	Change	Deviation	%Deviation
1969	1546829	0	0	0
1970	1579734	32905	-22196	-1.41
1971	1618189	38455	-16646	-1.03
1972	1667964	49775	-5326	-0.32
1973	1722489	54525	-576	-0.03
1974	1755495	33006	-22095	-1.26
1975	1775487	19992	-35109	-1.98
1976	1803567	28080	-27021	-1.5
1977	1852213	48646	-6455	-0.35
1978	1927282	75069	19968	1.04
1979	1989586	62304	7203	0.36
1980	2027170	37584	-17517	-0.86
1981	2052751	25581	-29520	-1.44
1982	2056252	3501	-51600	-2.51
1983	2120560	64308	9207	0.43
1984	2253186	132626	77525	3.44
1985	2382829	129643	74542	3.13
1986	2509977	127148	72047	2.87
1987	2642149	132172	77071	2.92
1988	2749641	107492	52391	1.91
1989	2824890	75249	20148	0.71
1990	2858498	33608	-21493	-0.75
1991	2791759	-66739	-121840	-4.36
1992	2781002	-10757	-65858	-2.37
1993	2827096	46094	-9007	-0.32
1994	2860240	33144	-21957	-0.77
1995	2913551	53311	-1790	-0.06
1996	2952105	38554	-16547	-0.56
1997	3015129	63024	7923	0.26
1998	3078562	63433	8332	0.27
1999	3175123	96561	41460	1.31
2000	3310059	134936	79835	2.41

POPULATION

Year	Value	Change	Deviation	%Deviation
1969	2983912	0	0	0
1970	3048875	64963	15489	0.51
1971	3098045	49170	-304	-0.01
1972	3163102	65057	15583	0.49
1973	3178494	15392	-34082	-1.07
1974	3183067	4573	-44901	-1.41
1975	3204590	21523	-27951	-0.87
1976	3219203	14613	-34861	-1.08
1977	3220039	836	-48638	-1.51
1978	3242642	22603	-26871	-0.83
1979	3245124	2482	-46992	-1.45
1980	3266262	21138	-28336	-0.87
1981	3321358	55096	5622	0.17
1982	3361545	40187	-9287	-0.28
1983	3411617	50072	598	0.02
1984	3484327	72710	23236	0.67
1985	3559580	75253	25779	0.72
1986	3646331	86751	37277	1.02
1987	3738922	92591	43117	1.15
1988	3828498	89576	40102	1.05
1989	3895185	66687	17213	0.44
1990	3936904	41719	-7755	-0.2
1991	3994176	57272	7798	0.2
1992	4053539	59363	9889	0.24
1993	4109779	56240	6766	0.16
1994	4164663	54884	5410	0.13
1995	4212186	47523	-1951	-0.05
1996	4267192	55006	5532	0.13
1997	4326258	59066	9592	0.22
1998	4392813	66555	17081	0.39
1999	4477130	84317	34843	0.78
2000	4567091	89961	40487	0.89

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Appendix G.2

Population Estimate Calculations

The following tables list the data and calculations for the population estimates presented in Section 4.10.2.1.2. The number and percentage of Fort Belvoir employees by location, as well as the number of Arlington (WHS and DoD) and NGA employees by location, was derived by VHB (2006). The transportation model assumed that 50 percent of the current Arlington employees and 50 percent of the current NGA employees would be redistributed as the current Fort Belvoir employees are distributed. It was assumed that one employee represents one household. The percentage of households that are family households (65 percent) and nonfamily households (35 percent) is from the U.S. Census Bureau Washington Metropolitan Statistical Area (MSA) Demographic Characteristics for 2005 (U.S. Census Bureau, 2006c). The average family size (3.27 persons) also is from the U.S. Census Bureau Washington MSA Demographic Characteristics for 2005 (U.S. Census Bureau, 2006c). The number of children per family (1.8) is from the 2000 Census, Average Number of Children Per Family for Maryland, Virginia, and Washington, D.C. (U.S. Census Bureau, 2000).

Table G.2-1
Home zip code of existing Fort Belvoir employees

District	Location	Derived number of employees	Fort Belvoir % of employees by location
A	Arlington/Alexandria	986	4%
B	Northern Fairfax Co./Loudoun Co.	1,601	7%
C	Southern Fairfax Co.	8,607	38%
D	Prince William Co.	5,116	23%
E	Near South (Fredericksburg/Stafford Co)	2,069	9%
F	Remainder of Virginia	1,613	7%
G	District of Columbia	266	1%
H	Prince Georges Co.	1,045	5%
I	Montgomery Co.	240	1%
J	Remainder of Maryland	949	4%
	Total	22,492	100%

Source: VHB 2006

**Table G.2-2
Calculations for Arlington (WHS and DoD) employees**

District	Location	Home zip code of existing Arlington (WHS & DOD) employees	Assume 50% would move by 2011	Percent distribution of current Fort Belvoir employees by location	Arlington redistribution based on current Fort Belvoir distribution	Percentage that would be family households	Number that would be family households	Percentage that would be nonfamily households	Number that would be nonfamily households
A	Arlington/Alexandria	1,302	651	4%	203	0.65	132	0.35	71
B	Northern Fairfax Co./Loudoun Co.	1,349	675	7%	329	0.65	214	0.35	115
C	Southern Fairfax Co.	1,638	819	38%	1,769	0.65	1,150	0.35	619
D	Prince William Co.	1,230	615	23%	1,051	0.65	683	0.35	368
E	Near South (Fredericksburg/Stafford Co)	557	279	9%	425	0.65	276	0.35	149
F	Remainder of Virginia	358	179	7%	331	0.65	215	0.35	116
G	District of Columbia	437	219	1%	55	0.65	36	0.35	19
H	Prince Georges Co.	1,149	575	5%	215	0.65	140	0.35	75
I	Montgomery Co.	336	168	1%	49	0.65	32	0.35	17
J	Remainder of Maryland	889	445	4%	195	0.65	127	0.35	68
	Total	9,245	4,623	100%	4,623		3,005		1,618

**Table G.2-3
Calculations for NGA Employees**

District	Location	Derived number of employees	Assume 50% would move by 2011	Percent distribution of current Fort Belvoir employees by location	NGA redistribution based on current Fort Belvoir distribution	Percentage that would be family households	Number that would be family households	Percentage that would be nonfamily households	Number that would be nonfamily households
A	Arlington/Alexandria	574	287	4%	167	0.65	109	0.35	59
B	Northern Fairfax Co./Loudoun Co.	2,313	1,157	7%	293	0.65	191	0.35	103
C	Southern Fairfax Co.	649	325	38%	1,591	0.65	1,034	0.35	557
D	Prince William Co.	645	323	23%	963	0.65	626	0.35	337
E	Near South (Fredericksburg/Stafford Co)	95	48	9%	377	0.65	245	0.35	132
F	Remainder of Virginia	306	153	7%	293	0.65	191	0.35	103
G	District of Columbia	399	200	1%	42	0.65	27	0.35	15
H	Prince Georges Co.	791	396	5%	209	0.65	136	0.35	73
I	Montgomery Co.	1,218	609	1%	42	0.65	27	0.35	15
J	Remainder of Maryland	1,384	692	4%	167	0.65	109	0.35	59
	Total		4,187	99%	4,145		2,694		1,451

Table G.2-4
Estimated redistribution of population due to Fort Belvoir BRAC action

District	Location	Number of employees (i.e., households) that would be redistributed (Arlington + NGA)	Number redistributed that would be family households	Average Family Size	Family Pop	Average number of children per family	Total number of children (18 and under) in family households	Total number of adults in family households	Number redistributed that would be non-family households	Total number of adults in non-family households	Total population that would be redistributed
A	Arlington/Alexandria	370	229	3.27	749	1.80	411	338	123	461	872
B	Northern Fairfax Co./Loudoun Co.	622	401	3.27	1,311	1.80	720	591	216	806	1,527
C	Southern Fairfax Co.	3,360	2176	3.27	7,115	1.80	3,909	3,206	1,172	4,378	8,287
D	Prince William Co.	2,014	1317	3.27	4,307	1.80	2,366	1,941	709	2,650	5,016
E	Near South (Fredericksburg/Stafford Co)	805	515	3.27	1,685	1.80	926	759	277	1,037	1,963
F	Remainder of Virginia	625	401	3.27	1,311	1.80	720	591	216	806	1,527
G	District of Columbia	97	57	3.27	187	1.80	103	84	31	115	218
H	Prince Georges Co.	424	286	3.27	936	1.80	514	422	154	576	1,090
I	Montgomery Co.	91	57	3.27	187	1.80	103	84	31	115	218
J	Remainder of Maryland	363	229	3.27	749	1.80	411	338	123	461	872
	Total	8,768	5,669		18,537	1.80	10,184	8,353	3,052	11,406	21,590

Appendix H
Off-Post Cumulative Projects List

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**Table H-1
Proposed off-post development projects**

Map ID	Project name	Total acres
1	West Springfield Business Centre Site 5 Parking Addn.	5.1
2	West Springfield Business Centre Site 5 Parking Addn.	6.3
3	Accotink Stream Valley Trail (Revitalization Area)	9.1
4	Accotink Park	4.8
5	PBS	4.3
6	Saint John's Lutheran Church	3.8
7	Anne Ly Estate 2	2.6
8	Northampton (formerly Overbrook)	18.3
9	Crown Royal Gate	1.3
10	Cox Communications Southeast Hub Site	0.9
11	Highlands Estates	3.9
12	Lakewood Hills Section 10 Phase 2	17.0
13	Stream Valley Estates	7.3
14	VA Tire and Auto Repair	0.4
15	Mohtaram Mozafari Residence	1.6
16	Hoes Road Park	21.4
17	Metro Park Phase Seven	3.5
18	Kingstowne Section 36A	4.5
19	Windsor Knoll	9.0
20	Provident Bank	1.1
21	Beacon Mall Prop Drive-Thru Bank and Fast Food	2.0
22	Del Ray Glass	2.0
23	Commerce Bank Beacon Hill Groveton	1.6
24	Cifuentes Property PCLS 15 and 15A	8.6
25	Mazzello Cove	3.1
26	Roxbury Mews	1.8
27	Hopkins House	1.8
28	Malcolm at Ox Road	20.2
29	Laurel Hill Golf Course Expansion	348.6
30	Telegraph Road Warehouse	5.7
31	The Fairfax Building Addition	5.2
32	Jett Mechanical 8753 Richmond Highway	2.9
33	Mount Vernon Country Club Golf Course Improvements	127.7
34	St. James Episcopal Church	5.1
35	Furnace Road Recycling Facility	9.7
36	Rock Stone and Sand Yard Inc.	1.6

Table H-1
Proposed off-post development projects (continued)

Map ID	Project name	Total acres
37	Gunston Commerce Center Building 1	1.9
38	Lot 16 Shell Oil Park	2.8
39	Bren Mar IV	5.7
40	Residence Inn Springfield	1.3
41	Woodland Crest	2.8
42	Verizon addition to Franconia Central Office	2.0
43	Apple Federal Credit Union	1.0
44	Kendrick	3.0
45	Groveton Heights	4.6
46	Groveton Phase II	11.6
47	K and M Shopping Center	0.7
48	Beacon Mall Silver Dinner	1.1
49	Mount Calvary Baptist Church	1.5
50	7706 Gambrill Road	1.2
51	Covington Woods addition	1.9
52	Giant #149 Saratoga Shopping Center	11.3
53	Sabina Estates	3.6
54	8404 Heller Road Sanitary Sewer Service	0.0
55	UPS in Newington	21.2
56	Mount Vernon Gateway	17.0
57	Master Roofing and Siding Inc. 8463 Richmond HY	1.2
58	Laurel Overlook (Formerly Hoes Road-Blackstone)	10.1
59	Spring Hill Senior Campus Senior Housing Building	46.8
60	Hoa Nghiem Pagoda	1.3
61	Ferry Landing Preserve	5.4
62	Cranford at Gunston Cove	8.0
63	Gunston Commerce Center Land Bay D	23.7
64	Bob Evans Restaurant Old Keene Mill Road	1.6
65	Wheeler Property	0.8
66	Spicer Center	0.9
67	Rose Hill Reserve 1	23.7
68	Rose Hill Reserve 2	23.7
69	South Run Recreational Center Fitness Center Addn.	182.3
70	Springfield Metro Center II Road Improvements	4.9
71	Beacon Mall Famous Daves	1.1

Table H-1
Proposed off-post development projects (continued)

Map ID	Project name	Total acres
72	Silverbrook Farms Lot 7	1.0
73	Loyal Order of The Moose Franconia Lodge 646 Inc.	6.2
74	Hilltop Reclamation Project (3365-LF-01, for bond only)	1.0
75	8214 and 8218 Richmond Highway	1.2
76	Lofty Oaks Place Lots 41A 41B 41C	1.6
77	Inova Mount Vernon	1.7
78	Lorton Work House	52.1
79	AAA Vehicle Maintenance Facility	5.3
80	Commonwealth Construction Management Inc.	2.7
81	Halley Farm Subdivision	3.7
82	Lorton Debris Land Fill (1883-LF-002-2, for bond only)	1.0
83	Cardinal Estates	1.8
84	Old Keene Mill Professional Offices	2.3
85	Parcel 8A Shell Oil Park	6.0
86	Ricks Carpet and Floors	1.2
87	Talbert Subdivision	1.2
88	BB+T Bank Drive Thru Addn- Manchester Lakes SC	1.3
89	Wal-Mart Store #2194 Kingstowne Centre	14.8
90	First Baptist Church of Kingstowne	2.0
91	Hayfield Animal Hospital	1.5
92	Sherwood Hall Library	4.4
93	New Hope Church	8.9
94	Best Foods Inc 9525 Gunston Cove Road	5.6
95	Adkins Property	25.7
96	Epiphany Lutheran Church	3.0
97	Meadowbrook Drive Property	2.2
98	Backlick Plaza	7.8
99	6715 Commerce Street	4.4
100	Highgrove Estates Section 5	26.9
101	Jefferson at Sullivan Place	17.2
102	Devers Property	2.1
103	LDS Church Franconia Ward	7.6
104	Lakewood Hills Sect. 10 Phase I	35.1
105	Fairfax Park	5.3
106	Echo Inc.	0.9

Table H-1
Proposed off-post development projects (continued)

Map ID	Project name	Total acres
107	VW Springfield	6.8
108	2nd Park Structure at Frank-Springfield Metro Station	0.0
109	Calvary Road Baptist Church Expansion	8.1
110	Metro Park Phase Six	11.2
111	Gayfields Road	13.9
112	Silver Lake IHOP Restaurant	1.1
113	Groveton Woods	11.6
114	Holly Acres	8.9
115	Shurgard Mount Vernon	5.3
116	Mount Vernon Square Shopping Center	8.7
117	Chilis Beacon Hill 6601 Richmond Highway	1.9
118	Chapel Bridge Estates	6.6
119	St. Raymond Penafort Church	9.9
120	Harvester Presbyterian Church	3.9
121	Covington Woods	4.7
122	Monacan Estates	3.6
123	Rolling Oaks	8.0
124	Hunter Plaza, Phase One	0.8
125	Hunter Plaza Phase 2	1.3
126	Tavares/Allen Property	11.4
127	Island Creek Elementary School	18.1
128	U-Haul Retail Center 8297 Terminal Road	2.5
129	Crown Center	13.2
130	M and S Holdings LLC (formerly Millers Office Prod.)	11.4
131	8501 Backlick Road (formerly 8521)	4.6
132	Piney Glen	9.3
133	Ashby Heights	6.1
134	Federal Realty Investment/South Valley Shop Ctr.	24.1
135	Woodlands, The	4.0
136	Evergreen Farm	2.5
137	Cecil Case Estates	8.1
138	Gallahan Property	3.4
139	Vernon Heights	7.7
140	Remington Place (formerly Cooke Property)	14.4
141	Cooke Property	10.3

Table H-1
Proposed off-post development projects (continued)

Map ID	Project name	Total acres
142	Davison Woods	5.1
143	Nirvana Palace	30.3
144	Occoquan Overlook	100.6
145	Occoquan Park	15.8
146	Laurel Hill Land Bay A Section 1	24.5
147	Laurel Hill South Sec 1 Landbay C	24.7
148	Laurel Hill North	23.2
149	Laurel Hill South Landbay D Section 1	22.7
150	Laurel Hill South Landbay D Section 2	33.2
151	Laurel Hill South Landbays E and F, Section 1	48.0
152	Laurel Hill South Landbay E and F Section 2	33.1
153	South County High School	69.4
154	Laurel Hill Elementary School	18.5
155	Spring Hill Senior Campus	59.7
156	Laurel Hill Recreation Center	2.5
157	Pohick Road Self Storage Facility	3.9
158	Lorton Town Center Landbay D/F	18.9
159	Meeker Property	5.6
160	Laurel Ridge Crossing (formerly Pulte Plaskett Lane)	4.9
161	Lorton Town Center Landbay G	13.1
162	Grace Bible Church	3.5
163	Lorton Town Center Landbay C	3.0
164	Lorton Town Center Landbay "B-2"	1.7
165	Lorton Valley Recreation Center	0.5
166	Gunston Commons Townhouses	3.1
167	Lorton Station South Section 6	4.7
168	Barnes Property	8.7
169	Lorton Station School	12.8
170	Gunston Corner Restaurant	1.1
171	Lorton Station South Section 7	20.2
172	Cook Inlet Residential Section Three	60.6
173	Mt. Vernon Orientation Cntr. Education Center and Museum	8.4
174	Gunston Cove Business Center	8.8
175	Evans Property	6.2
176	Gunston Square Section 2 Parcel D	0.9

Table H-1
Proposed off-post development projects (continued)

Map ID	Project name	Total acres
177	Gunston Commerce Center Land Bay C	39.9
178	Gunston Commerce Center Land Bay B	11.7
179	Gunston Commerce Center Building 2 LB A	10.2
180	Gunston Center	14.1
181	Mid-Town Springfield Development (mixed use)	9.5
182	Springfield Mall Expansion	82.0
183	Mixed Use (Office, Hotel, Retail)	5.0
184	Mixed Use (Residential, Office, Retail, Hotel)	8.5
185	Mixed Use (Residential, Office, Recreation/Open Space, Retail)	160.5
186	Mixed Use (Office, Industrial)	117.8
187	Mixed Use (Office, Retail)	6.0