

STAFF RECOMMENDATION



C. Kelly
NCPC File No. 7094

FORT BELVOIR – NORTH POST NATIONAL MUSEUM OF THE UNITED STATES ARMY

Fairfax County Parkway and John J. Kingman Highway
Fairfax County, Virginia

Submitted by the United States Department of Defense, Department of the Army

June 30, 2011

Abstract

The Department of the Army has submitted the preliminary site and building plans for the National Museum of the United States Army on the North Post of Fort Belvoir in Fairfax County, Virginia. The museum building and campus will be constructed in phases and will initially consist of an approximately 184,500 gross square foot facility, landscaping, and parking. Later phases will include additional exhibit space and other exterior features. The museum is expected to attract an average of 740,000 visitors in the first year and 600,000 visitors in a stabilized year. The project will also include the re-design of the North Post Golf Course to accommodate the Museum and maintain 36 holes of golf.

Commission Action Requested by Applicant

Approval of preliminary site and building plans, pursuant to 40 U.S.C. § 8722(b)(1).

Executive Director's Recommendation

The Commission:

Approves the preliminary site and building plans for the National Museum of the United States Army on the North Post of Fort Belvoir, in Fairfax County, Virginia, as shown on NCPC Map File No. 2204.10(38.00)43364.

Recommends that the Army incorporate the following in the final project design:

- Opportunities for restoration, to a natural state, for the portion of Swank Road that is not being used to access the project site;

- An architectural or sculptural element at the end of the entrance drive aisle to provide a focal point;
- Pedestrian amenities, such as seating, along the walkway adjacent to the parade field;
- Additional landscaping to minimize erosion of the hillside;
- Reconfiguring or redesigning the parking lot in order to minimize impervious surfaces.

Recommends that prior to submitting the project for final design, the Army coordinate with Fairfax County and NCPC to address comments received from the County, particularly:

- Determining the effects the project has on the Environmental Quality Corridor;
- Providing information to and coordinating on stormwater management techniques and Total Maximum Daily Loads (TDMLs) in relationship to the project; and
- Identifying opportunities for alternative modes of transportation including bicycle and pedestrian amenities and bus connections.

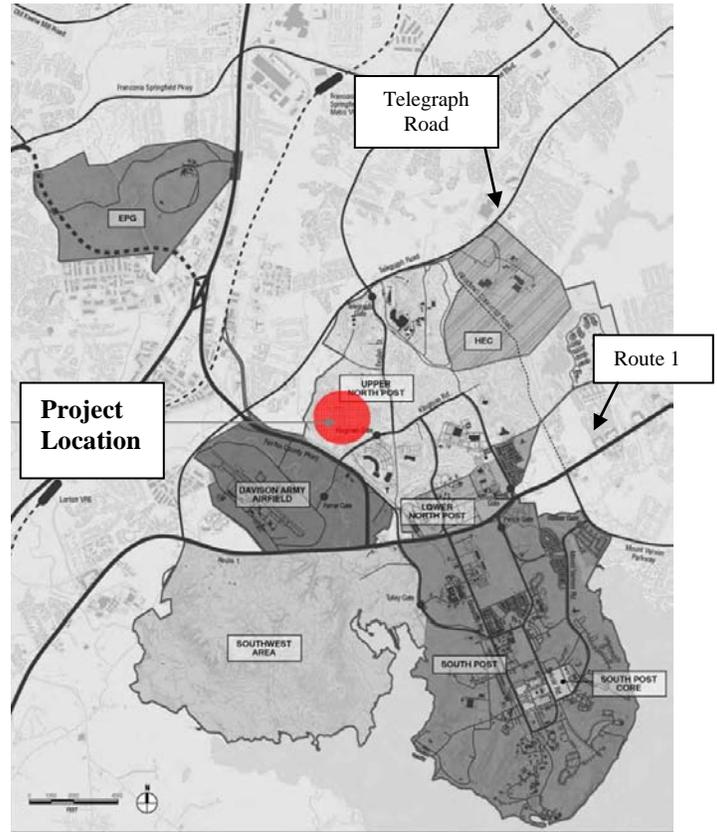
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PROJECT DESCRIPTION

Site

The proposed site for the National Museum of the United States Army is located on the North Post at Fort Belvoir. The Fort is divided into two geographically separate areas; The “North Area” (formerly known as the Engineering Proving Ground) is located on the west-side of I-95, to the northwest of the larger “Main Post” section. The Main Post is located on the east-side of I-95, directly south of Telegraph Road (Route 613). Route 1 divides the Main Post area into “North Post” and “South Post” sections, with North Post bordered by Route 1 on the south and Telegraph Road on the north-west.

The site is bounded by Fairfax County Parkway to the south, John J. Kingman Road to the east, the Fort Belvoir North Post golf course to the north, and Swank Road to the west. The current site condition includes golf links, forested areas, an abandoned access road and wetlands.



National Museum of the United States Army Site Location



Proposal

The Department of the Army (the Army) has submitted the preliminary site and building plans for the National Museum of the United States Army (the Museum) on the North Post of Fort Belvoir. The mission of the Museum is to “honor the service and sacrifice of the soldiers and their families and preserve the Legacy of the U.S. Army’s history, portraying it comprehensively and objectively.”

The Museum building and campus will be constructed in phases and will initially consist of a 184,500 gross square foot facility, landscaping, and parking on an 83-acre site. Later phases will include additional exhibit space and other exterior features. The museum site design elements include: a parade ground, a grandstand, a memorial garden, an amphitheater, and 702 parking spaces for employees, visitors, and RV and bus parking. The Museum building is located in the southern section of the site and will be visible from Fairfax County Parkway. Access to the site is from an at-grade intersection with Fairfax County Parkway.



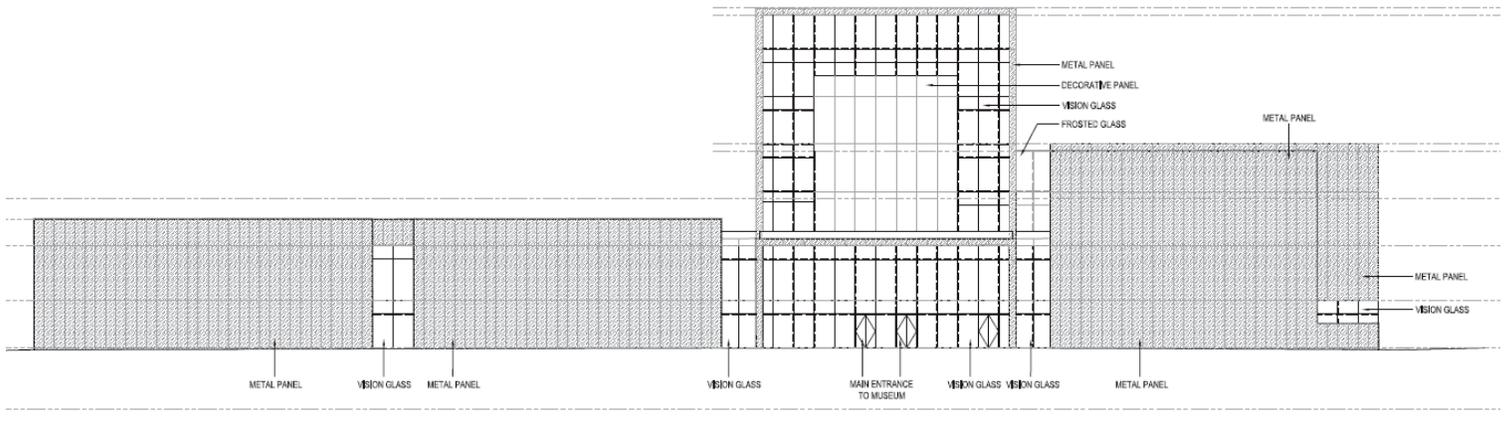
The Memorial Garden will be 14,750 square foot and is adjacent to the building’s entry. Walls and an interpretive station provide separation and way finding to the garden, which is laid out east-west along the north side of the museum exhibition wing. The garden’s primary features include a ‘commemorative’ table of faceted stone tablets whose articulation into several sections creates a sculptural setting for a grove of cherry trees. On the north side of the garden court a long stone-faced retaining wall separates the garden from the parade ground. On this wall there the Army proposes memorial and commemorative plaques, etchings and text, and possibly pieces of architectural masonry from the Pentagon to commemorate the events of September 11, 2001.

Additional exterior elements include multiple sculptural figures that will be incorporated with a signage wall and a water feature near the access road and service drive. The narrative for the project states that the “intent is to present soldiers, representing different epochs of the Army’s history, distributed amongst the site and advancing up the hill toward the museum building.”



The Museum building will be approximately 184,500 gross square foot and the museum program area will be distributed through five floors. The building exterior materials include: insulated metal panel, perforated metal screen, and low-e glass.

Building Entry Elevation

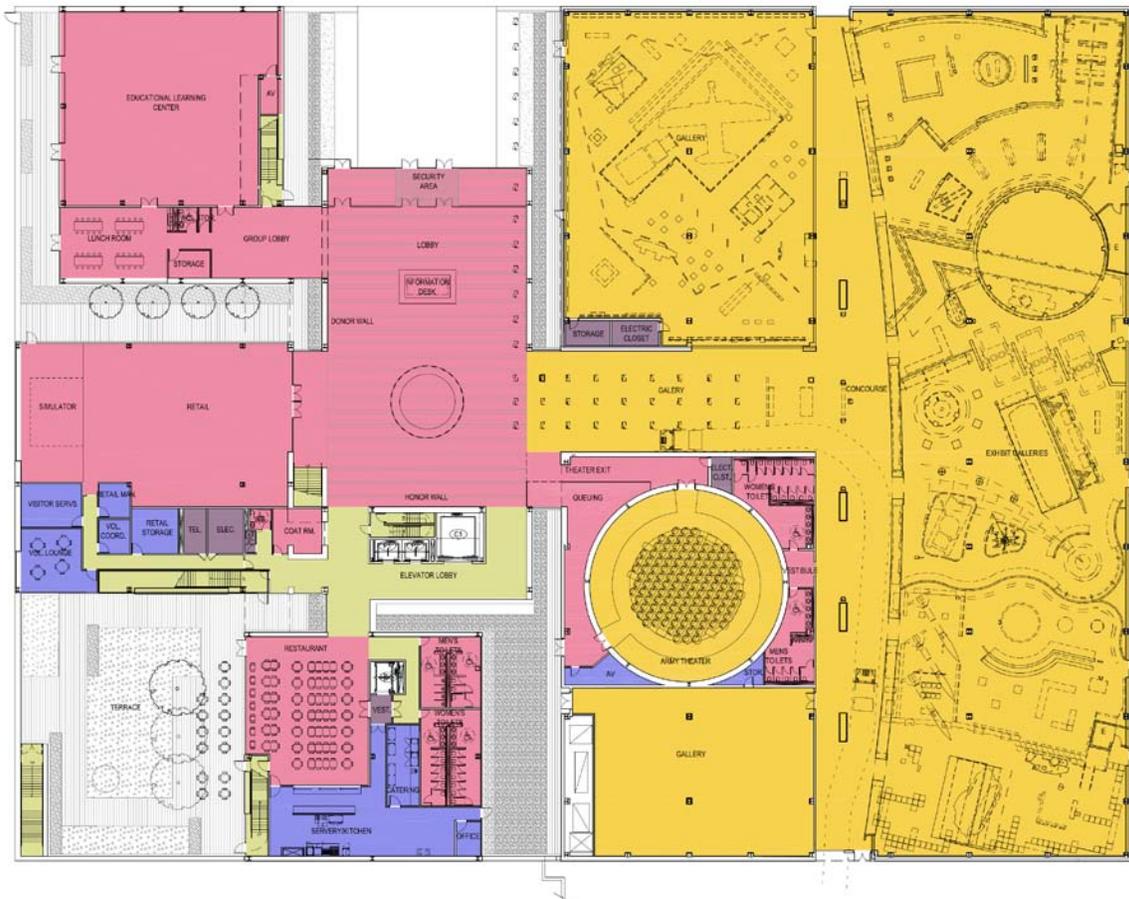


The Army and its design team have continued to refine the Museum design since the Commission saw the concept design in July of 2010. The building has reduced in size and in height from a six level 187,500 gross square foot building to a five level 184,500 gross square foot building. The building footprint has slightly increased due to the reduction in the height, in order to maintain the museum programming size.



The layout of the interior of the museum has also progressed. The main level (level 1) has become larger, from 88,000 gross square feet to 96,205 gross square feet. This level will accommodate the lobby and assembly space, retail, food services, the education center, and the main exhibition space. Level 2 will contain temporary gallery space and administrative offices. Level 3 of building will contain VIP meeting rooms, the Medal of Honor Room, and the Veterans Hall. The remainder of the building will be administrative space and mechanical space. The preliminary design removes the 6th level of the building, which was previously programmed as event space.

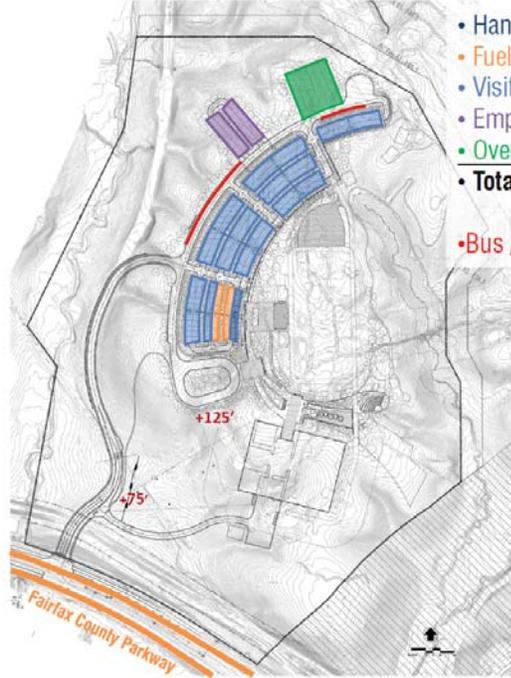
Level 1 Floor Plan



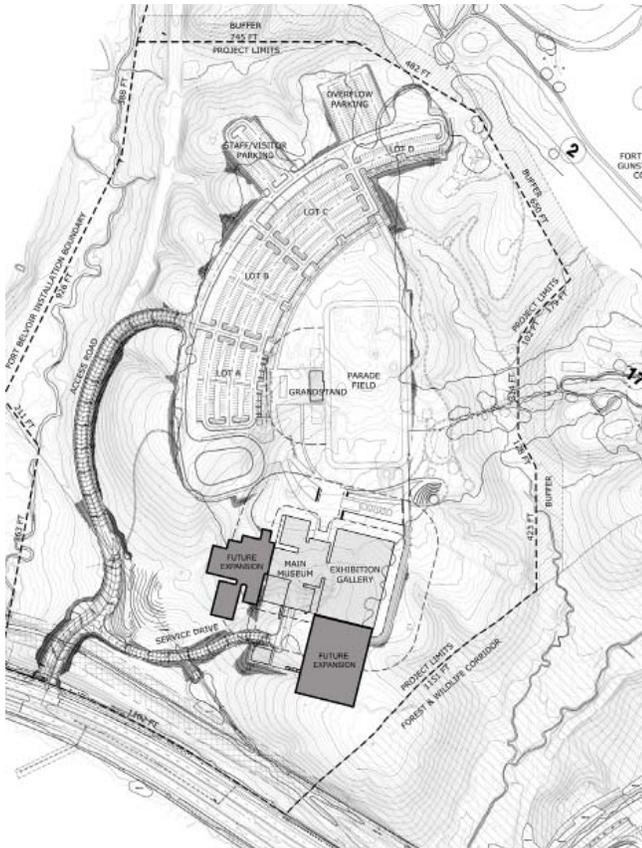
The Army has also refined the design of the parking area, which has been reduced and reconfigured. The current design retains the same number of parking space with a more efficient layout. The Army removed the separate RV/Bus parking area and has provided space along the exterior parking lot drive aisle to handle this parking.

The Army evaluated comments received from the Commission and Fairfax County has modified the design of the proposed access road to the site. At concept design the access road traversed the northern section of the site; the current design has the access road traverse to the middle of the site. This reduces the amount of tree clearing needed in the northern section of the site and reduces the amount of impervious surface in this location.

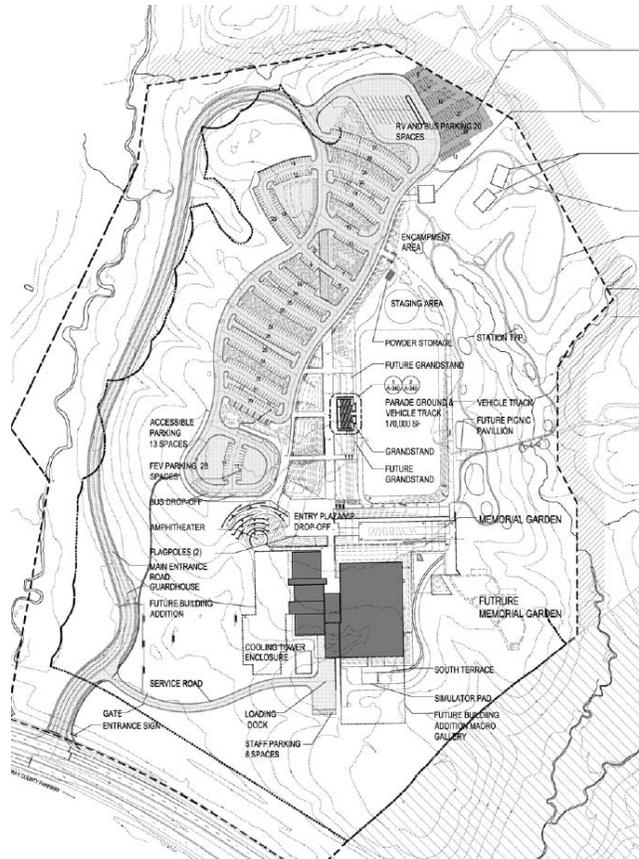
Proposed Parking Layout



• Handicap Accessible:	15
• Fuel Efficient Vehicle:	36
• Visitor:	481
• Employee (add-alt.):	50
• Overflow (turf):	120
• Total:	702
<hr/>	
• Bus / RV:	10



Preliminary Site Layout

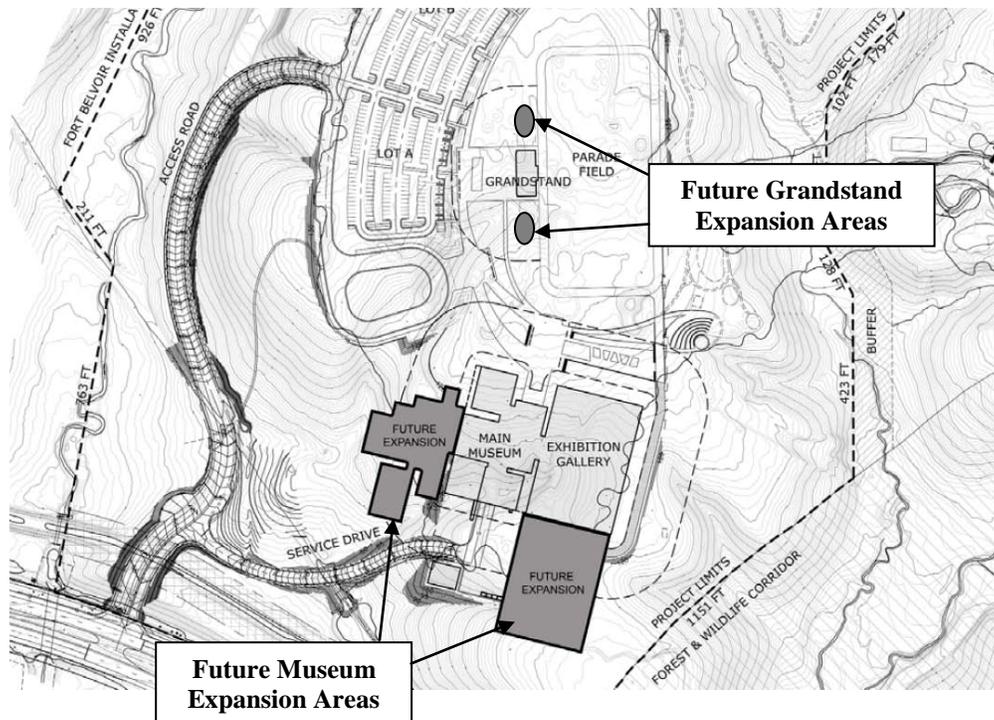


Concept Site Layout

Future submissions

The project will also include re-design of the North Post Golf Course to accommodate the Museum campus and maintain 36 holes of golf. Construction of the Museum will eliminate five of the front nine holes and a portion of a sixth hole. To maintain the North Post Golf Course as a thirty-six hole facility, the Army will replace the five holes as well as reconfigure the remaining golf course to maintain play through of four sets of nine holes. The new holes will be constructed in and around the remaining North Post Golf Course holes. The Army anticipates submitting the golf course re-design for Commission review in early fall 2010. The Army proposes to undertake this work prior to museum construction.

It is anticipated that the museum will expand at a future date beyond the 2015 museum opening. Expansion for the exhibit wing is planned to be an extension of the current exhibit space to the south. This expansion is anticipated to be approximately 56,500 sf. Expansion is also anticipated for the administrative and educational facilities. This expansion is planned to be multiple pavilions to blend in with the current building design and placed on the west side of the current museum building. It is anticipated to be 30,000 SF on the ground floor and 45,000 sf on the basement level. A 6,500 sf Outdoor Education Center will be construction the northern portion of the site along with small supporting structures (4,000 SF total) and an Event Pavilion. As part of future expansion, the Memorial Garden will be enlarged and the grandstand at the parade field will be doubled in size (length), extending seating to the north and south ends of the current planned grandstand.



PROJECT ANALYSIS

Executive Summary

Staff supports locating the National Museum of the United States Army at Fort Belvoir and overall notes the Army's use of sustainable elements and an innovative building design. The Army has evaluated the Commission's concept review comments and has modified the design or has responded to the comments the Commission made.

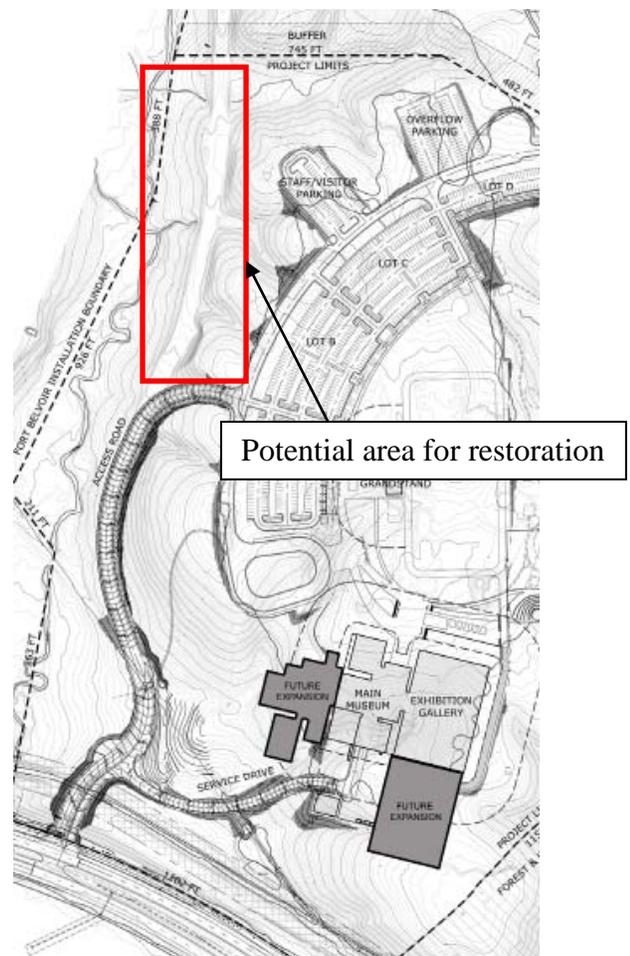
We have reviewed the preliminary plans for the Museum and we have identified the following elements that the applicant should evaluate as they move forward with the final design of the Museum and we recommend that the Commission **recommends that the Army incorporate the following in the final project design:**

- **Opportunities for restoration, to a natural state, for the portion of Swank Road that is not being used to access the project site;**

With the redesign of the access road to a shorter road, the remainder of Swank Road is unused. We encourage the Army evaluate returning Swank Road to a natural state as part of the scope for the Museum project. The removal of the access road in this location provides the opportunity to restore this part of the site back to natural conditions, allowing for increase tree canopy and vegetation.

- **An architectural or sculptural element at the end of the entrance drive aisle to provide a focal point;**

Currently, the access road rounds the corner from the alignment of Swank Road and climbs the hillside to reach the project located on the plateau. Once one rounds the corner, a visitor finds the parking for the Museum. An architectural or sculptural element and the end of the entrance drive will provide the visitor a focal as they round the corner.





- **Pedestrian amenities, such as seating, along the walkway adjacent to the parade field;**

Due to the configuration of the parking, designed to keep all the parking on the plateau and not spill over to the hillside, a visitor may have to park over a quarter mile (1,320 feet) from the Museum building. To accommodate visitors, the Army proposes to construct a walkway adjacent to the parking with intensive vegetation. We recommend that the Army evaluate the use pedestrian amenities, in particularly seating opportunities, for the walkway due to its length.

- **Additional landscaping to minimize erosion of the hillside;**

The Army proposes to selectively clear trees out of a two acre area of the hillside to allow visitors an “iconic” view of the building as they drive on the access road. Tree clearing in this area will also be required for utility construction. Staff is concerned that the selective clearing of trees in this area has the potential to cause erosion of the hillside and we encourage the Army to evaluate different vegetative options for this section of the hillside in an effort to provide additional tree canopy and minimize the potential for erosion.



- **Reconfiguring or redesigning the parking lot in order to minimize impervious surfaces.**

The Army has reduced the amount of impervious surface on site from concept design; however, the surface area dedicated to parking and roadway is approximately 13 acres and given that the current site is a golf course and entirely pervious, we encourage the Army to continue to evaluate reducing the amount of impervious surfaces on site to the maximum extent possible. Staff does commend the Army for the use of bioswales and landscaping in the parking lot design; however, without stormwater calculations we are unable to determine if the proposed stormwater management will meet all stormwater requirements of Energy Independence and Security Act Section 438. We, therefore, recommend the Army evaluate the use of permeable concrete for the parking area and walkways as the Army proposed in the Post Exchange project.

Fairfax County's Comments

Pursuant to the Commission's Procedures for Intergovernmental Cooperation in Federal Planning in the National Capital Region, staff referred museum project to multiple agencies, including Fairfax County, Virginia for review and comment. The County's comments are attached and we encourage the Army to evaluate all the County's comments as they move forward with the project towards final design.

Fairfax County continues to express concern with projects moving forward prior to an updated Fort Belvoir Master Plan. The County believes that the best way to analyze projects for cumulative impacts would be through the updated master plan proposes and the associated Environmental Impact Statement that is currently being undertaken by the Army and finds that "Individual Environmental Assessments do not adequately examine the overall effects of the numerous projects in various stages of development."

The County noted that the Army's Finding of No Significant Impact (FONSI) was signed after it received the referral of the project and therefore, the County may have additional concerns but was unable to express them until they reviewed the FONSI and the Army's responses to the County's comments on the Environmental Assessment (EA). The County expressed that its final review of the project cannot "be considered to be complete until we are able to review the complete NEPA documentation in concert with the development plans."

The Army finalized the EA and signed a FONSI on May 19, 2011, after the project was referred to Fairfax County. As part of the final EA, the Army provided responses to the comments received during the EA public comment period. The County reviewed the responses and as a follow up to the County's June 3, 2011 comments, it submitted additional comments dated June 24, 2011. The County stated that its' comments iterated in the June 3, 2011 letter remain valid.

The remainder of the County's comments pertained to how the method the Army used to delineate the Environmental Quality Corridors (EQC) and the impact on the EQC, details regarding the stormwater management techniques used, and the ability for bicycles and pedestrians to access the site. Consequently, we recommend to the Commission that **recommends that prior to submitting the project for final design, the Army coordinate with Fairfax County and NCPC to address comments received from the County, particularly:**

- **Determining the effects the project has on the Environmental Quality Corridor;**

The EQC policy is a Fairfax County environmental policy to protect the natural environment of the County. The County defines an EQC as:

- All 100 year flood plains;
- All areas of 15 percent or greater slopes adjacent to the flood plain, or if no flood plain is present, 15 percent or greater slopes that begin within 50 feet of the stream channel;
- All wetlands connected to the stream valleys; and
- All the land within a corridor defined by a boundary line which is 50 feet plus four additional feet for each percent slope measured perpendicular to the stream bank. The percent slope used in the calculation will be the average slope measured within 110 feet of a stream channel or, if a flood plain is present, between the flood plain boundary and a

The County expressed its' concern about the project's impact on the EQC during the EA public comment period. In response to the comments, the Army noted that the EQC policy is a voluntary program and that the policy allows exceptions for infrastructure and access disturbances and allows disturbances for access roads when, "there are no viable alternatives to providing access." The Army redesigned the proposed access road to be shorter, almost half the length previously proposed, to reduce impact on the Resource Protection Area and the EQC. The Army also noted that the EQC policy allows for mitigation of unavoidable impacts.

The Army has reached out to the County to have a follow-up meeting regarding the County's EQC comments. The County and the Army were unable to meet prior to the Commission meeting and this remains an outstanding coordination issue that will need to be resolved prior to the project being submitted for final design.

- **Providing information to and coordinating on stormwater management techniques and Total Maximum Daily Loads (TMDLs) in relationship to the project;**

Regarding stormwater management, the County noted that on April 18, 2011 the Environmental Protection Agency issued its Total Maximum Daily Load (TMDL) report for the benthic impairment in the Accotink Creek watershed, the watershed the project falls into. The report recommended a 48.4 percent reduction in stormwater flow as a way to reduce sediment loads in Accotink Creek to acceptable levels. The County requested that the Army share information with its Stormwater Planning Division on how it plans on meeting the stormwater and TMDL requirements at the site. The County also indicated that it can provide information and help to develop innovative ways to meeting these requirements at the Museum.

- **Identifying opportunities for alternative modes of transportation including bicycle and pedestrian amenities and bus connections.**

Regarding bicycle/pedestrian facilities and transit, the County provided multiple suggestions and questions regarding the facilities proposed for the site. The County recommended crosswalks and enhancement of pedestrian facilities on site. The County also noted that it plans on exploring the possibility of a U.S. Route 1 Trolley that would connect sites of interested and that the museum project should take this into account with potential bus services and bus amenities.

Staff encourages the Army to evaluate pedestrian and bicycle amenities on site. Given that the Fairfax County Parkway shared path is adjacent to the site; the Army should include a new path connecting the Museum with the Fairfax County Parkway trail. The Museum design should also take into account bicycle facilities on site. We encourage the Army to work with Fairfax County to identify possible trail connections.

The Army anticipates that 95 percent of the visitors to the Museum will come by automobile. While we understand the limitation of site for transit options, we encourage the Army to evaluate ways to reduce the number of vehicle trips to the site. We encourage the Army to evaluate multiple transportation options for visitors to get to and from the site.

Commission's previous action regarding the Fort Belvoir Master Plan

At its April 7, 2011 meeting, the Commission noted that the Fort Belvoir Master Plan was last approved in 1993 and that the Commission has issued multiple unfulfilled requests for an updated master plan that reflects the current and future growth at Fort Belvoir; and therefore, due to a lack of sufficient information necessary to properly analyze projects the Commission may find it difficult to approve any future proposals until such time as an updated master plan is submitted.

The Fort Belvoir Master Plan, approved by the Commission in 1993, designates that land the museum is located as community. The museum is consistent with the Army's definition what is allowed in a community land use. However, the 1993 Master Plan designated this area mainly for golf course use and did not anticipate a project of this type in this location. Therefore, particular attention has been made on the Army's part to coordinate the project with NCPC and the County.

The Army submitted the concept design of the Museum in April 2010 and NCPC referred the project to interested parties in accordance with the Commission's Intergovernmental Cooperation for review and comments; at that time Fairfax County provided comments. The Commission provided comments on the concept design at its July 2010 meeting.

Also, the Army has conducted analysis on the project in two separate Environmental Assessments. The first Environmental Assessment (EA) analyzed two different sites and the Army decided to move forward with the site proposed for the museum. The second EA analyzed the museum and the proposed redesign of the golf course. Both EAs provided public comment opportunities.

After the Commission's review of the concept design, the Army evaluated the Commission's comments and moved forward with the Museum's design. In January 2011, the Army conducted a meeting with Fairfax County and staff to discuss the changes in the design since concept review. In April 2011, the Army submitted the preliminary design for Commission review. The design was again referred to interested parties for review and comment.

Staff finds that although the 1993 Master Plan does not address the use of the museum on this site, the project has been adequately coordinated with interested parties. Additional coordination with Fairfax County regarding the effects on the EQCs and the stormwater management is still recommended. We see this further coordination as a way to further improve the project.

CONFORMANCE

Comprehensive Plan for the National Capital

The Comprehensive Plan for the National Capital provides goals and policies that guide the Commission in evaluating and acting on plans and projects in the National Capital. A more detailed description of each Element follows:

Visitor Element

The major goal of the Visitor Element is to accommodate visitors in a way that ensures an enjoyable and educational experience, showcase the institutions of American culture and democracy, and supports federal and regional planning goals.

1. Support accessible federal visitor attractions on federal property throughout the region
2. Encourage increased use of bicycles to access attractions in the region, and provide bicycle racks, information about rental locations, and maps identifying designated bike path locations

Transportation Element

The Transportation Element provides policies that address parking at federal facilities, impacts to the local and regional traffic/transit networks, and transportation management. The preliminary design submission conforms to the limitations on employee parking of the Comprehensive Plan ratio of 1:1.5, and provisions for other incentives to reduce the use of single occupancy vehicles. The project is consistent with the following Comprehensive Plan policies:

1. Outside of the Historic District of Columbia boundaries, the parking ratio should not exceed one space for every 1.5 employees;
2. Encourage ridesharing, biking, walking, and other non-single-occupant vehicle modes of transportation for federal commuters;
3. Provide secure and sheltered bicycle parking spaces or bicycle lockers in close proximity to building entrances at federal buildings and on federal campuses.

Federal Environment Element

The Federal Environment Element promotes the federal government as an environmental steward and identifies the Commission's planning policies related to the maintenance, protection, and enhancement of the region's natural environment. The project identifies preliminary measures for stormwater management techniques to reduce or eliminate runoff; and the building incorporates local materials and other sustainable materials, and methods to achieve at least a LEED Silver certification. The project is consistent with the following Comprehensive Plan policies:

1. Promote water conservation programs and the use of new water-saving technologies that conserve and monitor water consumption in all federal facilities;
2. Encourage the natural recharge of groundwater and aquifers by limiting the creation of impervious surfaces, avoiding disturbance to wetlands and floodplains, and designing stormwater swales and collection basins on federal installations.

Federal Capital Improvements Plan

The National Museum of the U.S. Army included in the Federal Capital Improvements Plan (FCIP) for the fiscal years 2011-2016 and first appeared in the 2010-2015 FCIP. The project was categorized as a project requiring additional planning coordination. The estimated cost in the FCIP is \$388,175,000. The FCIP describes the museum as: "This project will construct a

155,977 gross square foot facility to house the National Museum of the US Army at Fort Belvoir. This complex will consist of indoor and outdoor exhibit space, HVAC, lighting and information systems. Supporting facilities include electrical service, water distribution and wastewater collections lines, site improvements, relocation of golf course facilities, and realignment of the golf course. AT/FP measures will be included and access for the handicapped will be provided. A total of 550 vehicle and 40 recreational vehicle parking spaces will be provided through surface parking. The project is proposed to meet LEED Silver standards. Access gate improvements will be included.

Relevant Federal Facility Master Plan

The land use designation for the site as outlined in the 1993 Fort Belvoir Master Plan is community. However, the master plan indicated this area would continue to be used for the golf course. Therefore, particular attention has been made on the Army's part to coordinate the project with NCPC and the County.

The project is consistent with the land use of the area as designated by the Master Plan update currently being undertaken by the Army. The draft Long Range Component of the Fort Belvoir Master Plan proposes land use in this area would continue to be designated as community. The Army defines community uses as "land use that encourages a mix of uses. Facilities allowed include religious, family support, personnel services, professional services, medical, community, housing, commercial and recreational services. Users live both on- and off-post and may include soldiers, dependents, retirees, and other civilian personnel." Staff has reviewed the draft Long Range Component of the Fort Belvoir Master Plan and provided comments to the Army on the master plan. The Army anticipates starting an Environmental Impact Statement to analyze the environmental impacts of the master plan, in accordance with the National Environmental Policy Act, in the summer of 2011.

National Environmental Policy Act (NEPA)

In accordance with the National Environmental Policy Act (NEPA), the Army has prepared an Environmental Assessment (EA) for the Museum project and the related reconfiguration of the golf course. On May 19, 2011, the Army signed a Finding of No Significant Impact (FONSI) to conclude the EA. Due to the project's location in the environs, NCPC does not have independent NEPA responsibility.

National Historic Preservation Act (NHPA)

Pursuant to Section 106 of the National Historic Preservation Act, the Army initiated consultation with the Virginia State Historic Preservation Officer (SHPO) and other consulting parties on September 23, 2009. The consultation process resulted in the identification of one historic property, the Fort Belvoir Military Railroad track bed, within the Area of Potential Effect. The Army has determined that the project will have an adverse effect on this historic property and is currently finalizing a Memorandum of Agreement with the VA SHPO for proposed mitigation. Finalization of the MOA is not required for Commission preliminary review of the project. Due to the project's location in the environs, NCPC does not have independent Section 106 responsibility.

CONSULTATION

Referral to relevant local planning agencies

In accordance with the Commission's Procedures for Intergovernmental Cooperation in Federal Planning in the National Capital Region, the proposed project was referred to the Virginia Department of Transportation (VDOT), the Virginia Department of Environmental Quality (DEQ), the Washington Metropolitan Council of Governments (WashCOG), the Northern Virginia Regional Commission (NVRC), and Fairfax County on April 13, 2011. The comments received from VDOT and Fairfax County are attached. No comments were received from DEQ, NVRC or WashCOG.

Virginia Department of Transportation (VDOT)

VDOT provided information on the proposed break in the limited access designation of the Fairfax County Parkway to access the museum. VDOT indicated that the Commonwealth Transportation Board (CTB) passed a resolution, in February 2009, indicating its intent to grant the break. The CTB's resolution is attached. VDOT noted that final approval from the CTB is not expected until July 14, 2011 at the earliest. At the CRB meeting the Board will evaluate a Memorandum of Agreement between the Army and VDOT regarding the break and future easements for the proposed Fairfax County Parkway/Kingman Road interchange; the MOA is currently in negotiations.

VDOT also indicated that it is awaiting an updated traffic study in order to verify that the proposed project will not have an adverse impact on the operation of the Fairfax County Parkway. The EA and FONSI, concluded after the project was referred to VDOT, determined that the project will have minor long-term impacts on traffic. The FONSI indicated that the MOA, signed by the Army and VDOT, will include transportation solutions for the museum site and provide mitigation to the impacts.

Fairfax County, Virginia

Fairfax County provided comments on the museum project in a letter dated June 3, 2011. The County's comments are discussed in the staff analysis section of the report. After the County received the FONSI and the final EA from the Army, it provided additional comments, dated June 24, 2011.

Attachment 1: VDOT Comments**COMMONWEALTH of VIRGINIA****DEPARTMENT OF TRANSPORTATION**4975 Alliance Drive
Fairfax, VA 22030

May 5, 2011

GREGORY A. WHIRLEY
COMMISSIONER

Mr. David W. Levy
Director, Urban Design and Plan Review
National Capital Planning Commission
401 9th St., N.W.
North Lobby, Suite 500
Washington, D.C. 20004

RE: Fort Belvoir U.S. 1 Fence Project and Museum

Dear Mr. Levy:

Thank you for your April 13, 2011 letter requesting comments on the Fort Belvoir U.S. 1 Fence Project and Museum of the United States Army. Please accept the following comments for consideration:

U.S. 1 Fence Project

- 1) The recently approved Department of Defense appropriations budget includes \$300 million for transportation improvements that serve new military hospitals. Virginia expects that at least \$150 million will be provided for the widening of U.S. 1 from Mount Vernon Highway to Telegraph Road.
- 2) In 2010, the Virginia Department of Transportation (VDOT) and Fort Belvoir entered into a Memorandum of Agreement (attached) that requires Ft. Belvoir to grant a 148' easement for the widening of U.S. 1 through Army owned property.
- 3) While the narrative from Fort Belvoir mentions coordination with the U.S. 1 designers, the current fence plans do not reflect the agreed 148' easement referenced in the MOA right of way.
- 4) Based upon VDOT's review, it appears that the fence location, particularly near Belvoir Road, is located within the proposed 148' easement. If constructed in this location, the fence would require a costly relocation at DoD expense just a few years after installation.

Mr. David Levy
May 3, 2011
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Museum of the United States Army

- 1) The Museum project proposes to break the limited access designation of the Fairfax County Parkway in order to access the facility. The Commonwealth Transportation Board (CTB) previously passed a resolution signifying its intent to grant the change in limited access. However, Fort Belvoir is required to seek formal CTB approval. This request is not expected to be presented to the CTB until July 14, 2011 at the earliest.
- 2) Fort Belvoir and VDOT are currently negotiating a Memorandum of Agreement (MOA) concerning the proposed break in limited access and future easements for the proposed Fairfax County Parkway/Kingman Road interchange. The CTB will consider the MOA on July 14, 2011 or later.
- 3) VDOT is currently awaiting an updated Fort Belvoir traffic study in order to verify that the proposed museum access road intersection on the Fairfax County Parkway will not adversely impact the operation of the Parkway.

Again, thank you for allowing the Virginia Department of Transportation to review the above referenced projects. If you should need any further information or updated information, please feel free to contact me at (703) 259-2381 or, via email at tom.fahrney@vdot.virginia.gov

Sincerely,



Tom Fahrney
VDOT Commonwealth BRAC Coordinator

Attachment 2: Commonwealth Transportation Board Resolution



COMMONWEALTH of VIRGINIA

Commonwealth Transportation Board

Pierce R. Homer
Chairman

1401 East Broad Street - Policy Division - CTB Section - #1106
Richmond, Virginia 23219

(804) 786-1830
Fax: (804) 225-4700

Agenda item # 6

**RESOLUTION
OF THE
COMMONWEALTH TRANSPORTATION BOARD**

February 5, 2009

MOTION

Made By: Mr. Koelemay Seconded By: Dr. Davis

Action: Motion Carried, Unanimously

Title: Limited Access Control Changes
Springfield Bypass renamed to Fairfax County Parkway (Route 7100) between
Telegraph Road and Kingman Road
Fairfax County

WHEREAS, the Springfield Bypass, between Route 7 (near Dranesville) and Route 1 (near Fort Belvoir), in Fairfax County, was designated as a Limited Access Highway by the Commonwealth Transportation Board (CTB), on July 16, 1987; and

WHEREAS, the Springfield Bypass was renamed as the Fairfax County Parkway and designated as Route 7100; and

WHEREAS, in connection with a section of Route 7100, State Highway Project R000-029-F49, RW-223, which is located between the aforesaid locations, the Commonwealth acquired certain lands, easements in perpetuity and limited access control easements from various landowners; and

WHEREAS, the land on the north side of the north proposed right of way and limited access line of said Route 7100 between Telegraph Road and Kingman Road, as shown on the plans for State Highway Project R000-029-F49, RW-223, has been identified by the Department of the Army, North Atlantic Division, Corps of Engineers (USA), as a possible final site (Gunston Site) for the National Museum of the United States Army at Fort Belvoir (NMUSA); and

Resolution of the Board
Limited Access Control Changes – Springfield Bypass renamed to Fairfax County
Parkway (Route 7100) between Telegraph Road and Kingman Road
Fairfax County
February 5, 2008
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WHEREAS, the USA has identified and is preparing to formally request a limited access control change (LACC) of approximately 100 feet, more or less, along the Route 7100 north proposed right of way and limited access line (approximately 50 feet, more or less, on either side of approximate Station 1899+75) for construction of a proposed signalized intersection with turn, taper, acceleration, deceleration and through lanes, and median break, as required, as the proposed entrance to the proposed NMUSA site; and

WHEREAS, to the to facilitate the final site selection and engineering for the NMUSA, the USA, by letter dated January 14, 2009, has requested the CTB to consider and indicate an intent to approve the proposed LACC; and

WHEREAS, the said request for indicating the intent to approve the LACC is not in compliance with Title 24, Section 30, Chapter 401 of the Virginia Administrative Code; and

WHEREAS, an indication by the CTB of its intent to approve the LACC for the NMUSA site (Gunston Site) will facilitate the USA and VDOT to enter into a Memorandum of Agreement (MOA) for the said proposed intersection pending formal request by the USA and subsequent approval of the proposed LACC by the CTB; and

WHEREAS, the proposed LACC request shall be in compliance with Title 24, Section 30, Chapter 401 of the Virginia Administrative Code when formally requested by USA; and

WHEREAS, support for the LACC has been requested from the County; and

WHEREAS, VDOT has determined that the LACC of approximately 100 feet, more or less, along the north side of the Route 7100 north proposed right of way and limited access line (approximately 50 feet, more or less, on either side of approximate Station 1899+75), for construction of a the proposed signalized intersection with turn taper, acceleration, deceleration and through lanes and median break, as required, as the entrance to the proposed NMUSA site is appropriate from a conceptual design standpoint subject to further reviews and approval; and

WHEREAS, USA is in the process of conducting traffic and safety studies in relation to the said LACC and proposed intersection for submission to VDOT for review and approval; and

WHEREAS, all right of way, engineering, construction, and necessary safety improvements shall meet all VDOT standards and requirements; and

Resolution of the Board
Limited Access Changes – Springfield Bypass renamed to Fairfax County Parkway
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WHEREAS, the USA has drafted a National Environmental Protection Act document for submission to VDOT for review; and

WHEREAS, all costs of engineering and construction, including all necessary safety improvements, will be borne by the USA; and

WHEREAS, a public notice shall be posted and closed in accordance with Title 24, Section 30, Chapter 401 of the Virginia Administrative Code requirements and VDOT policy and procedure; and

WHEREAS, upon CTB approval of the forthcoming request, and completion and acceptance of the proposed intersection and changes by VDOT, all work, roadway construction, improvements and equipment within the Route 7100 right of way will become the property of the Commonwealth.

NOW, THEREFORE, BE IT RESOLVED, in accordance with the provisions of Section 33.1-58 of the *Code of Virginia* (1950), as amended, the CTB hereby indicates the intent to approve the said LACC for public street purposes as set forth, subject to any VDOT reviews, and conditions or requirements as appropriate. The Commonwealth Transportation Commissioner is hereby authorized to execute any and all documents needed to comply with this resolution.

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Attachment 3: Fairfax County's June 3, 2011 Comments

County of Fairfax, Virginia

To protect and enrich the quality of life for the people, neighborhoods and diverse communities of Fairfax County

June 3, 2011

David W. Levy
 Director, Urban Design and Plan Review
 National Capital Planning Commission
 401 9th Street, NW
 North Lobby, Suite 500
 Washington, DC 20004

Dear Mr. Levy:

In collaboration with the Department of Public Works and Environmental Services (DPWES) and Fairfax County Department of Transportation, the Department of Planning and Zoning has reviewed preliminary project plans for the National Museum of the United States Army (NCPC File Number 7094). Our comments are attached. Please note that these comments reflect the views of county staff and have not been reviewed by the Fairfax County Board of Supervisors.

Fairfax County staff continues to have concerns that projects are proposed at Fort Belvoir in the absence of a fully updated and approved Real Property Master Plan (RPMP). We believe that the cumulative impacts associated with this and other projects would best be examined in the context of the update of the RPMP, and associated Environmental Impact Statement, that is currently underway. This process would provide a much better opportunity for the Army, Fairfax County, NCPC, and the community to evaluate the full impacts of all proposed growth and development at Fort Belvoir. It is imperative that the cumulative impacts of current and future development be fully understood and addressed before additional development moves forward. Individual Environmental Assessments do not adequately examine the overall effects of the numerous projects in various stages of development.

The review package has been presented as the preliminary submission. We do have substantial concerns about the Army Museum project and feel that the required NEPA documentation has not been sufficiently completed. NCPC's "Environmental and Historic Preservation Policies and Procedures" states:

"In requesting preliminary plan approval, the submitting agency shall submit an environmental document as specified at Sections 8, 9, or 10 of these procedures [an Environmental Assessment, Environmental Impact Statement or a Categorical Exclusion determination]. In a submission requiring either an Environmental Assessment or an Environmental Impact statement, the final determination resulting from the document *must* be completed and signed by the responsible federal lead agency *prior* to the submission of the proposal to the Commission for review."

Excellence * Innovation * Stewardship
 Integrity * Teamwork * Public Service

Department of Planning and Zoning
 Director's Office
 12055 Government Center Parkway, Suite 755
 Fairfax, Virginia 22035-5509
 Phone 703-324-1380
 Fax 703-324-3056
www.fairfaxcounty.gov/dpz/



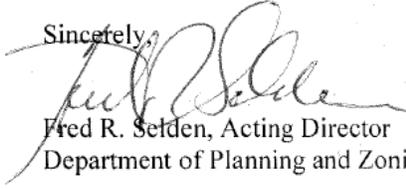
David W. Levy
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At the time of submittal, the Finding of No Significant Impact (FONSI) had not been signed for the Environmental Assessment for the Army Museum. We are told that the FONSI was later signed on May 19, 2011, however the final documents were not made available in time for this review. Some of our comments and questions may be answered within that document, and we may have further comments and questions once we are able to review it. We wish to stress that our final review of this project cannot be considered to be complete until we are able to review the complete NEPA documentation in concert with the development plans.

Beyond the lack of an updated RPMP and finalized NEPA documentation, our concerns with the Army Museum project mostly relate to the method used to delineate Environmental Quality Corridors on the site and details regarding the stormwater management techniques to be used. The preliminary plans also raise concerns about adverse impacts to the natural environment within the EQC, the potential for significant erosion and downstream stream instability, and the ability for bicycles and pedestrians to access the museum. Further details of the issues identified are provided within the attached set of comments.

If you have questions about comments, please contact Noel Kaplan at Noel.Kaplan@fairfaxcounty.gov or at 703-324-1369.

Sincerely,



Fred R. Setden, Acting Director
Department of Planning and Zoning

**National Museum of the United States Army (NMUSA)
NCPC Preliminary Submission-April 8, 2011
Fairfax County Comments, June 2, 2011**

Environmental Quality Corridor

Item H of the “Additional Information” addresses Fairfax County’s Environmental Quality Corridor policy. While recognition of this policy is appreciated, the EQC delineation criteria have not, in our view, been applied appropriately, and the result is that the extent of the EQC on the property has been greatly understated. We had noted, in our November 2010 comments on the Environmental Assessment for the project, the following:

“Of particular concern is the EQC associated with Kernan Run, which includes the stream, the associated 100-year floodplain and wetlands, and steeply sloping areas (15% or greater slope gradients) adjacent to these features. Much, if not all, of the area to the west of the proposed museum and parking areas would be located within this EQC, and . . . we have concerns regarding the impacts that the entrance road would cause to this EQC. The EA fails to recognize this critical impact and therefore does not adequately assess the environmental impacts of the proposal.”

The EQC delineation criteria, as set forth in the Environment section of the Policy Plan volume of Fairfax County’s Comprehensive Plan (2011 Edition) are as follows:

“The core of the EQC system will be the County’s stream valleys. Additions to the stream valleys should be selected to augment the habitats and buffers provided by the stream valleys, and to add representative elements of the landscapes that are not represented within stream valleys. The stream valley component of the EQC system shall include the following elements . . . :

- *All 100 year flood plains as defined by the Zoning Ordinance;*
- *All areas of 15% or greater slopes adjacent to the flood plain, or if no flood plain is present, 15% or greater slopes that begin within 50 feet of the stream channel;*
- *All wetlands connected to the stream valleys; and*
- *All the land within a corridor defined by a boundary line which is 50 feet plus 4 additional feet for each % slope measured perpendicular to the stream bank. The % slope used in the calculation will be the average slope measured within 110 feet of a stream channel or, if a flood plain is present, between the flood plain boundary and a point fifty feet up slope from the flood plain. This measurement should be taken at fifty foot intervals beginning at the downstream boundary of any stream valley on or adjacent to a property under evaluation.”*

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Item H of the "Additional Information" in the submission package states that there is no floodplain on the site. This is incorrect, as Fairfax County's Zoning Ordinance defines "floodplain" to include "those land areas in and adjacent to streams and watercourses subject to continuous or periodic inundation from flood events with a one (1) percent chance of occurrence in any given year (i.e., the 100-year flood frequency event also known as the base flood) and having a drainage area greater than seventy (70) acres." The drainage area of Kernan Run exceeds 70 acres; therefore, there is a floodplain on the site.

Further, the discussion in Item H focuses exclusively on the minimum buffer formula of the EQC policy (the fourth item listed above) and does not consider the extensive area of steeply sloping land that defines this stream valley. These steeply sloping areas should all be included in the EQC delineation, and previous topographic modifications in this area (e.g., the construction of the now-abandoned Swank Road near Kernan Run) should be considered to have occurred within the EQC and should not be viewed as creating enough of a break in the slopes to exclude these slopes from the EQC delineation.

While the documentation inappropriately excludes steep slopes in the stream valley from the EQC designation, it is recognized that project designers have, with two notable exceptions, been sensitive to the need to protect wooded, steeply sloping areas from disturbance. The project designers should be commended for this sensitivity, even if the EQC designation is not accurate. There are, however, two areas of considerable concern relating to disturbances within the EQC: (1) the proposed access road, which would be constructed parallel to Kernan Run through the EQC; and (2) the area within which both selective clearing for an "iconic view" would be pursued and within which much of the post-2015 museum expansion would occur. These concerns are detailed below.

Access to the museum

The Army is proposing to provide access to the site through an at-grade intersection with the Fairfax County Parkway. The access road would cross an abandoned railroad alignment and follow an abandoned road alignment (Swank Road) that cuts through a steeply sloping area adjacent to Kernan Run, the perennial stream that flows along the western property boundary. The road would follow this alignment for several hundred feet and would then diverge away from the Swank Road alignment and climb a relatively steeply sloping area to the plateau area on which the museum and associated facilities would be located.

The proposed access road would have significant adverse impacts to an Environmental Quality Corridor (with boundaries, as noted above, defined by the extent of 15% + slopes) and would also encroach into a Resource Protection Area. The impacts would not be confined to a small portion of this EQC; rather, the road would be oriented near and parallel to the stream for a distance of several hundred feet. The old road bed along

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which this access road would be constructed is narrow and has closed forest canopy over it. Redeveloping this road for an entrance road would have direct impacts on the stream and adjacent wetlands, would cause significant deforestation on steep slopes and in the RPA over a considerable length, would significantly compromise the ecological functions of this EQC, and would place significant impervious surfaces adjacent to Kernan Run with little or no opportunity of capturing, treating and detaining that runoff before it would enter the stream. Such runoff would likely also cause significant impacts to the wetlands adjacent to the old road bed.

While the proposed onsite remediation (stream buffer mitigation/reforestation) may offset remaining impacts to some degree, there would be a high potential for significant erosion both upslope (particularly if trees are removed to provide an "iconic view") and downslope of the access road during storm events without careful planning, grading and landscaping. Disturbance of steep slopes results in accelerated erosion processes from stormwater runoff and the subsequent sedimentation of water bodies with the associated degradation of water quality and loss of aquatic life. Related effects include soil loss, changes in natural topography and drainage patterns, and increased flooding potential. Every effort should be made to reduce surface runoff and sheet flow from the access road and to stabilize the slopes. The Army should reconsider the use of permeable asphalt or other pervious paving for the access road (as well as for the main parking lot). Disturbance in areas with a 20% or greater slope should be avoided.

While it is recognized that the area in question has already been disturbed by the abandoned road alignment, the use of this alignment for the entrance road would perpetuate and exacerbate the conflict with the EQC policy and add impervious cover within the RPA. Further, we question if the limits of clearing and grading can be kept to what is presented in Item I of the "Additional Information" section of the submission package, particularly in the area where the access road would diverge away from the Swank Road alignment and climb the steeply sloping area. Even if these limits could be honored, Item I indicates that a relatively large forested area near the Parkway entrance would need to be cleared. In our view, this area is located within the EQC.

One alternative access approach would be to provide access from Kingman Road. While we do not feel that there is enough information about this alternative to identify it as a preferred approach, we do feel that there is a need for a rigorous evaluation of this alternative as it relates to the impacts that would occur through the approach that is being pursued. Item J in the "Additional Information" section recognizes this alternative and notes that it has been removed from consideration, primarily because of concerns about potential impacts to the Forest and Wildlife Corridor. It is also noted that the Kingman Road access would generate concerns about impacts to the North Post golf course and to security operations (given Kingman Road's connection with facilities in the North Post area).

With respect to potential impacts to the Forest and Wildlife Corridor, a 2008 Environmental Assessment suggested that a study was needed to detail the significance of

these impacts. Rather than conduct this study, however, Fort Belvoir “determined that the impacts of this alternative on the functionality of the FWC would have been too great when compared with access from the Fairfax County Parkway.” We agree that the Parkway access alternative would have lesser effects on the corridor than would the Kingman Road alternative, simply because it would not be located within the corridor. However, we feel that the more salient question is whether the adverse impacts to the Kernan Run EQC that would result from the Parkway access option would be preferable to the impacts to the corridor that would result from the Kingman Road option. Without the study suggested in the 2008 Environmental Assessment, we do not think that sufficient information is available to answer this question. In light of the considerable concerns that would be generated by direct access from the Fairfax County Parkway, we feel that the Kingman Road access concept should not be eliminated from consideration and that it should be evaluated as an alternative as suggested in the 2008 Environmental Assessment. It should once again be noted that a portion of the corridor has already been cleared in the area where a Kingman Road access would probably originate (across from the Defense Logistics Agency entrance at Kingman Road), and the topography in the area is such that a bridge crossing of the stream in this area could be designed such that it would create only a narrow disturbance footprint with a wide, tall opening that would readily accommodate faunal movement, hydrologic functions and genetic exchange. It is not clear to us, therefore, that the adverse impacts associated with a Kingman Road access would necessarily be great. While the impacts associated with a Kingman Road access may ultimately be determined to eliminate this option from consideration, we feel that this conclusion cannot be reached from the documentation that has been provided. Either better documentation should be provided or the Kingman Road option should, at this point, be retained for analysis as a possible alternative.

Consideration could also be given to the provision of a grade-separated access. While such an approach would be considerably more expensive than an at-grade Parkway intersection, it would be beneficial from both an environmental perspective and a Parkway operations perspective.

If an alternative access strategy is pursued, the old Swank Road alignment could be restored, through planting of native species and/or natural succession, based on the recommendation of a professional arborist. Another option would be to retain the use of this alignment as a pedestrian and bicycling route.

Clearing and Grading with respect to the EQC

As noted above, it is our view that the EQC associated with Kernan Run should include most, if not all, of the steeply sloping area to the west of the proposed museum and parking areas. In light of the distance between the steeply sloping area to the south of the proposed museum and Kernan Run, we feel that flexibility in this area would be appropriate to support development within the existing golf course area and, if the Parkway access approach is pursued, the proposed service drive that would connect this

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access road with the rear of the museum building. However, the Limits of Clearing and Grading Plan (Item I of the "Additional Information") identifies a broad swath of clearing to the north of the proposed service drive as well as a selective tree clearing area that would provide for an "iconic view" of the museum to drivers entering the site. The extensive clearing appears to be associated with topographic modifications that would be pursued to provide for the entrance road and/or service road. Is this extent of clearing and grading necessary, or might there be alternative approaches that would result in a lesser amount of disturbance to this area?

With respect to the provision of an "iconic view," we feel that even selective removal of trees within an EQC would be inconsistent with the intent of the policy and therefore do not support the proposal to selectively remove trees within the view cone.

The site plan for the future expansion of the museum identifies two expansion areas—one to the west of the main museum one to the south of the exhibition gallery. While it is not clear from this graphic the extent to which the southern expansion area may affect steeply sloping areas, it appears that most, if not all, of this expansion area would be located on the plateau area. The Army should be encouraged to design this expansion area such that clearing on steep slopes would not be needed.

The western expansion area is more problematic from the standpoint of the EQC policy, in that it would extend down a steeply sloping area within the EQC. An expansion concept should be pursued that would avoid any clearing within the steeply sloping area to the west of the main museum.

Stormwater management

The submission document includes a brief narrative on "managing stormwater" that states: "The storm water management goals for the project are to achieve regulatory compliance and LEED Silver certification through sustainable design practices chiefly by emulating the naturally occurring drainage patterns and the hydrologic regime existing on the site." The narrative lays out, qualitatively, the intent to manage stormwater through the use of the following strategies:

- Use of "infiltration galleries" near areas of significant impervious cover.
- Pretreatment of runoff to remove sediment and debris prior to its conveyance to the infiltration galleries--conveyance of parking lot drainage through bioswales with check dams and sediment sumps and floatable hoods in inlet structures.
- Conveyance of roof runoff and "selected piped flows" through "vortex separators."
- Permeable concrete pavers in "selected pedestrian areas."
- Grass pavement systems in overflow parking areas.
- Open-grid concrete paving for the fire access road and possibly in the employee parking lot.

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- Soil amendment with compost in order to increase infiltration capacity.

No quantitative guidance is offered beyond an appendix outlining the design storage required to meet guidelines within the County's Public Facilities Manual for the 2 and 10 year storm events. Item E in the "additional information" (LEED strategy) does, however, express an intent for the project to meet both the stormwater design-quantity control and stormwater design-quality control LEED credits. The narrative also notes the need for compliance with Section 438 of the Energy Independence and Security Act, which provides the following two options: (1) On-site retention of the runoff from the 95th percentile storm event; and (2) Detailed modeling to demonstrate that the predeveloped hydrology will be maintained. The narrative indicates that the second option will be pursued, but no additional detail is provided (Item G of the "Additional Information" is referenced, but that item deals with other aspects of EISA and not with stormwater).

While the narrative and supporting materials seem to establish that an aggressive and comprehensive approach to stormwater management will be pursued, design details and computations have not been provided, and therefore it is not possible to assess the extent to which this approach will succeed in replicating the predevelopment hydrology. We encourage the project team to share details regarding stormwater facility designs and stormwater volume control computations with the Stormwater Planning Division of the county's Department of Public Works and Environmental Services and to allow the Stormwater Planning Division to provide a courtesy review and recommendations.

On April 18, 2011, the Environmental Protection Agency issued its Total Maximum Daily Load report for the benthic impairments in the Accotink Creek watershed. The project site is located within this watershed, in the area that is subject to the TMDL. This TMDL is particularly noteworthy in that it identifies stormwater flow as a surrogate for sediment. A 48.4% reduction in stormwater flow (specifically, the magnitude of the one-year, 24-hour stormwater flow rate) is recommended as the mechanism through which sediment loads in Accotink Creek would be reduced to acceptable levels. The TMDL report states: "To meet the overall TMDL goal of a 48.4 percent reduction in the 1-year, 24-hour flow rate across the watershed, future permits authorizing new or expanded stormwater discharges within the Accotink Creek watershed must be consistent with the requirements and assumptions used to develop the [wasteload allocations] in this TMDL." While it is not entirely clear at this point how this requirement will translate to project-specific stormwater flow reduction requirements, it can be assumed that redevelopment projects will need to meet a substantial stormwater flow reduction target while new development projects (i.e., projects on vacant land) will need, at a minimum, to ensure that there will be no increases in stormwater flows from predevelopment conditions. This project should, therefore, be designed to ensure that, at a minimum, the peak flow rate of any discharges from the site from the one-year, 24 hour storm will be no greater than existing conditions. Measures to provide for peak flow rate reductions beyond the existing conditions should be considered strongly. Further, because the intent behind the TMDL appears to be based on a desire to reduce overall stormwater runoff

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volumes (and not just peak flows), efforts should be made to retain enough stormwater runoff volume on the site to ensure that there will be no increases in total stormwater runoff volumes in comparison to existing conditions. The submission document expresses the intent to do this (through the 2nd option for compliance with the EISA stormwater requirement), and several stormwater volume reduction strategies are noted, but no computations are provided that demonstrate that this level of control will actually be achieved. We again encourage the project team to share this information with the county's Stormwater Planning Division when it becomes available.

In Item E of the "Additional Information" (the LEED strategy), the submission document indicates that a water-cooled centrifugal chiller will generate chilled water for the exhibit area; a cooling tower will also be provided to supplement the proposed geothermal hybrid system for building heating and cooling. An HVAC cooling coil condensate capture and reuse system will be applied; Item G indicates that this water will be reused for an irrigation system. It is not clear if stormwater reuse efforts have been considered—is it possible that stormwater could be used as part of the heating/cooling system and for some water uses within the museum (e.g., toilet and urinal water)? It is also not clear if additional potable water would be needed for irrigation, either for the site itself or for the nearby golf course. The project team should be encouraged to consider such reuse options both as a means of reducing stormwater runoff volumes and as a means of reducing potable water use.

The Site Landscape Plan shows parking lot runoff being channeled to storm drains between the overflow and employee parking lots and to either side of the proposed access road that open onto steep ravines that slope downward to Kernan Run. This elicits concerns about the potential for erosion within the outfall channel and/or within Kernan Run. The narrative text states that "additional filters and check dams will be provided *as necessary* to prevent erosion of these channels." It is the county's position that these controls will be necessary for all outfalls located on the western edge of the site.

If it appears that there will be difficulty in achieving a replication of predevelopment hydrologic conditions, or if there will be a potential for any erosion as a result of discharge of stormwater runoff from the plateau area of the site, a reduction in the impervious cover footprint of the project should be considered through the replacement of at least some of the surface parking area with structured parking. The Environmental Assessment for the project noted: "If the Army opts for a structured parking arrangement, the footprint of the parking lot(s) would be reduced by approximately 2 to 3 acres." We continue to favor structured parking to reduce environmental impacts and encourage consideration of structured parking if/where needed as noted above. The provision of structured parking may also allow for a more sensitive location of the museum expansion area entirely on the plateau area (as opposed to on the wooded slope).

Consideration should be given to the educational opportunities that an exemplary and innovative stormwater management system would provide. Fort Belvoir has been an effective steward of its natural resources, and the environmental stewardship aspect of the

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Army's mission could be highlighted through such efforts. As outdoor education will be part of the museum's program, an exemplary and innovative stormwater management system could become part of this program. An exhibit highlighting the full suite of sustainability efforts should also be considered.

While it is recognized that a goal of the project design will be to replicate predevelopment hydrology, the proposed intensity of development on the upland area of the site, along with the significant elevation differences on the site, evoke concerns about the potential for the discharge of relatively large volumes and flows of stormwater runoff and the potential for erosion at outfalls and within downstream areas in the event that the predevelopment hydrology cannot be replicated. Unless all rainfall would be retained on the site, there would be a need to design stormwater outfalls carefully--outfalls should be non-erosive and stream stabilization work in receiving streams should be performed as necessary to ensure a stable receiving stream condition.

We encourage Fort Belvoir to coordinate the development of a stormwater management control system on the site with the Fairfax County Department of Public Works and Environmental Services. The Stormwater Planning Division of DPWES should also be consulted in regard to the culvert removal, stream restoration and stream improvement work that are referenced within the Environmental Assessment. Although the proposed stormwater controls are better described than in the draft EA, more specific, quantitative details are needed. In light of the EPA's flow-based approach to the Accotink Creek TMDL, the county would appreciate an opportunity to review detailed stormwater management plans in order to be able to fully evaluate the efficacy of stormwater controls, particularly regarding reductions of stormwater flow volumes.

Finally, a Watershed Management Plan has been adopted by the Fairfax County Board of Supervisors for Accotink Creek; the proposed project falls within Watershed Management Area 8. This area was modeled and assessed as the current golf course and open space land use. The results show that this area is one of the remaining areas in the Accotink Creek watershed that falls below the "Very High" mark for Total Nitrogen, Total Phosphorous and Total Suspended Solids. It also scored very high for Subwatershed Ranking. Every effort should be made to preserve the low level of nutrients and suspended solids in this subwatershed. For information on the Accotink Creek Watershed Management Plan, visit the Accotink Creek watershed website at <http://www.fairfaxcounty.gov/dpwes/watersheds/accotinkcreek.htm>. For additional information, contact Danielle Wynne at danielle.wynne@fairfaxcounty.gov or 703-324-5616.

Additional comments

- The project report and Items E and G in the "Additional Information" section state that the Museum is pursuing LEED Silver certification with the U.S. Green Building Council, that "the designed building systems with the Geothermal Hybrid System

would reduce energy consumption by 52.2%," that "the plumbing fixture selections will reduce the project's potable water consumption by at least 40 percent" and that landscape irrigation water consumption will be reduced by at least 50 percent in comparison to what would occur without a high efficiency irrigation system and HVAC cooling coil condensate capture and reuse. We commend Fort Belvoir for its commitment to green building design and construction and encourage the Museum to highlight to visitors these and other sustainability efforts.

- The project report states: "Tree replacement will be conducted according to the Fort Belvoir Tree Replacement Policy." Other Fort Belvoir-related documents that we have reviewed recently have noted that tree replacement is limited to those trees with a diameter at breast height of four inches or more. While any tree replacement efforts should be supported and commended, we have recommended in the past that replacement efforts focus on the replacement of lost canopy and not just the larger trees. We encourage Fort Belvoir to consider canopy replacement and not just replacement of larger trees.
- The section of the narrative addressing the mitigation of environmental impacts states that an off-site stream restoration project, in the Forest and Wildlife Corridor adjacent to the museum site, would be pursued as part of the mitigation package. In general, we support the pursuit of mitigation efforts close to the areas of impact and commend the Army for this approach. Details of this restoration project should, however, be shared with county staff (particularly staff within the Stormwater Planning Division of the Department of Public Works and Environmental Services and with staff from the Fairfax County Park Authority).
- The submission package also notes: "The small isolated wetlands (0.14 acres) that are to be impacted will be mitigated by purchasing credits at the wetlands bank." While we recognize that these wetland impacts will be minor, we question why the purchase of credits in a wetlands bank (which would probably not even be located in Fairfax County) would be the preferred mitigation approach. Consideration should be given to pursuing additional restoration efforts nearby if such opportunities would be available. The Stormwater Planning Division of the Department of Public Works and Environmental Services (703-324-5500) may have suggestions for nearby restoration projects.
- On page 14 of the submission package, the following statement is made: "Seeps and springs have been identified and impacts from these areas will be diverted from disturbed areas." This statement is unclear. Is the intent that disturbed areas would be located far enough away from seeps and springs that these seeps and springs would not be affected by the project?
- The project report does not address noise considerations, although noise issues have been discussed within the Environmental Assessment. The EA states that there are no residential or other noise-sensitive receptors within 1,000 feet of the proposed site.

However, this does not necessarily mean that there will not be any adverse noise impacts. The draft EA (September 2010) notes that there will occasionally be noise impacts associated with military bands, re-enactment activities, parades, discharges of dummy ordnance and amplification of voices and music to reach a large crowd. Page 80 of the draft EA indicates that gunpowder for cannons may be stored on the site, but no indications are given regarding how frequently cannons may be fired. Ideally, noise from these activities would not be audible at any noise-sensitive location. We recognize that this may not be possible (particularly in regard to noise associated with the firing of dummy ordnance), and we previously recommended that noise levels not exceed thresholds for stationary noise sources that have been established in Fairfax County's Noise Ordinance. On page 88 of the EA, it is stated that Fort Belvoir intends to comply with this Ordinance, which prohibits the operation of any stationary noise source that will generate noise in excess of 55 dBA when measured anywhere on a residentially-zoned property. We commend Fort Belvoir for this commitment and encourage Fort Belvoir to provide further guidance regarding how this commitment will be enforced. All noise-generating activities associated with museum operation (including special events) should be viewed as stationary noise sources and should comply with the 55 dBA limit. Efforts should be made to establish clear lines of communication with neighborhoods to the west of the site, including the provision of contacts for the filing of noise complaints and an effective response process.

- The project report does not address air quality considerations, although such issues have been discussed within the Environmental Assessment. The EA notes that construction-related emissions of ozone precursors, fine particles and sulfur dioxide will be well below applicability thresholds associated with Environmental Protection Agency and Virginia Department of Environmental Quality requirements. Operational emissions will also be well below these thresholds. The EA therefore concludes that no mitigation measures will be needed. However, as we noted in our comments on an Environmental Assessment from 2008, air quality mitigation measures were identified for the Base Realignment and Closure projects at Fort Belvoir, including limitations on construction on Code Orange, Red and Purple ozone days, anti-idling restrictions, use of ultra low sulfur diesel fuel and other restrictions. In light of the proximity of the museum project to the BRAC projects, we continue to feel that it would be appropriate to apply the construction-related limitations applicable to the BRAC projects to the museum project as well. There should also be a consideration of longer-term measures that could be taken on Code Orange, Red and Purple ozone days to reduce emissions of ozone precursors (e.g., deferral of maintenance activities involving the use of gas-powered equipment or surface coatings that may emit volatile organic compounds).
- The Environmental Assessment states that the Environmental and Natural Resources Division of Fort Belvoir would be notified in the event of any fuel spills. Any releases of petroleum products or hazardous materials should also be reported to the Fairfax County Fire and Rescue Department.

Transportation Issues

Access –

- Ideally, there would be more than one access to the facility. Whether for use by the public or just military, there had been much discussion about a potential access to/from John Kingman Road. The Army has ruled this out because the access would cross a forest and wildlife corridor.
- Taper for southbound left turn lane from FCP into the site conflicts with the median crossover for Ehlers Road. This should be coordinated with VDOT. Crossover improvements may be required.
- Has the Fort Belvoir Fire Marshal reviewed this plan? Access for emergency responders to points around the site is not obvious on this plan. Access locations and surface treatments should be worked out early in the process, particularly in light of the proposal to use permeable pavements on fire access lanes.

Grade –

- The access road from Fairfax County Parkway traverses some significant grade changes on its way to the parking lot. The access road is not all that wide. Recommend the design include a shoulder wide enough for a vehicle. Safety features (such as guard rail) should also be included.

Bicycle/Pedestrian Facilities–

- The pedestrian path leading to the NMUSA also crosses steep grade changes. This will likely be a deterrent to attendees/visitors traveling by bike or on foot. It also raises questions about ADA access and compliance. Is there a way to allow bicycle/pedestrian visitors (or at least those with disabilities) to access the NMUSA via an alternative entrance along the service drive at the back of the facility? There currently are no pedestrian facilities shown along the service drive. We recommend ADA compliant pedestrian facilities be added to the plan and limits of disturbance be modified as necessary to identify additional impacts early in the process.
- There currently are no crosswalks shown at the main access roadway where it intersects the Fairfax County Parkway. There should also be a crosswalk at the service drive where it intersects the main access roadway.
- The distance between the drop-off loop road and the building appears to be lengthy. There appears to be some grade change, as well. While this is likely due to security, this, too, raises ADA questions.
- There seems to be a general lack of pedestrian facilities in the parking areas to allow visitors to walk towards the facility. If they have a plan to funnel the visitors/pedestrians towards the NMUSA, they should show more clearly. It appears the design would have people walk to the east, towards the parade field, and use the walkway along the east side of the parking lots, but it seems that most people would be more inclined to walk south via the travel lanes and medians directly toward the museum. Recommend alternative walkways be considered.

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- Whether public transportation or charter buses, will the access road be wide enough on the steep slope for a bus to pass another vehicle going in the opposite direction? Will it be wide enough to safely pass another bus?
- To save route time and to avoid buses traversing the steep slope, would it be possible to drop bus passengers at an alternative entrance along the service road at the back of the facility? A loop/turnaround would be required. This could be for buses and service vehicles only. This too is impacted by security and the need for visitors to be screened.
- Fairfax County will be exploring the possibility of a Route 1 Trolley that would connect historic sites and other sites, such as the NMUSA. Bus access should be made as convenient as possible.

Parking –

- This is a design issue with the site, I believe, but the parking extends out from the facility in such a way that some visitors will walk a significant distance (from Lot D and overflow). Structured parking would be one means to reduce this. Perhaps benches and other amenities could be provided along the main walkway (if site re-design is not an option, or not feasible)?

Drainage –

- A significant portion of the access road (from the security checkpoint to the parking lot) appears to have no proposed SWM. How is this area handled?
- Report states that soils appear to be favorable for infiltration and that filtration devices will be installed upstream of infiltration to trap sediments and prevent failure of the system. Has the Army agreed to the maintenance schedule and costs for the infiltration system? Most military installations have challenges keeping up with maintenance, particularly of improvements that lack visibility (like underground infiltration). If the system is not maintained and it fails, it will impact not only the stormwater management goals, but also the parking areas and travelways.

Attachment 4: Fairfax County's June 24, 2011 Comments**County of Fairfax, Virginia**

To protect and enrich the quality of life for the people, neighborhoods and diverse communities of Fairfax County

June 24, 2011

Mr. David W. Levy
Director, Urban Design and Plan Review
National Capital Planning Commission
401 9th Street, NW
North Lobby, Suite 500
Washington, DC 20004

Dear Mr. Levy:

On June 3, 2011, Fairfax County submitted comments on the preliminary design of the National Museum of the U.S. Army at Fort Belvoir. At that time we had not had an opportunity to review the Finding of No Significant Impact (FONSI) and final Environmental Assessment (EA) for the project. Having now reviewed the FONSI and EA, we offer the attached notes as a supplement to the June 3rd comments. Overall these documents have not provided any information that would change our comments, and the issues raised previously remain valid.

Thank you for the opportunity to comment. If you have any questions about our comments, feel free to contact Noel Kaplan in the Planning Division at 703-324-1369.

Sincerely,

Marianne Gardner

Marianne Gardner
Branch Chief, Policy & Plan Development
Department of Planning and Zoning

MG/LMB

cc:

Chris Landgraff, GIS Branch Chief, US Army Garrison Fort Belvoir
Laura Miller, Fairfax County BRAC Coordinator, FCDOT
Mark G. Canale, Chief, BRAC/Dulles Rail Division, FCDOT
Cheryl L. Kelly, Urban Planner, National Capital Planning Commission

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**Notes regarding the revised Environmental Assessment (EA) for
The National Museum of the United States Army (NMUSA)—June 2011
Noel Kaplan**

- In general, the responses to our comments on the September 2010 Environmental Assessment validate our June 3, 2011 comments as they relate to environmental issues. While the comments below clarify the status of some of these comments, I don't see the need for any changes based on the new information.
- The EA still identifies a September 2010 date, and it does not appear that the document has been updated to address the revised project plans that have been submitted to NCPC--the graphics presented as Figures 2-1 and 2-2, for example, continue to reflect the previously-proposed entrance road alignment rather than the revised alignment shown on the newer project plans. The NCPC submission package appears to present the most current information; again, since our June 3 letter addressed that information, the comments remain current.
- With respect to the road alignment, the newer alignment shown on the plans submitted for the NCPC review would have less of an adverse impact to the Kernan Run EQC than the alignment shown in the EA; the more recent plans would turn the alignment out of the EQC and onto the plateau area closer to the Fairfax County Parkway entrance. Would I be correct in assuming that the newer alignment would also be pursued for the Structured Parking alternative? If so, would it also be correct to assume that Figure 2-2 of the revised EA, which displays the Structured Parking alternative, is out of date? Response #75 on pages 29 and 30 of Appendix H ("Comment Responses from the 2010 Draft EA) suggests that this is the case, in that the response indicates that the Structured Parking alternative would not be pursued during Phase 1 of the museum; this is in conflict with Figure 2-2, which identifies structured parking for Phase 1 and Phase 2. However, response #75 also references Figure 2-2, suggesting that this figure is current. Clarification is needed.
- Response #9 on pages 6 and 7 of Appendix H responds to our concerns about the lack of recognition in the EA of the Environmental Quality Corridor policy. The response states that the EQC "appears to be confined to the area west of the proposed access road . . ." and that "the 100-year floodplain does not encroach on the site." As highlighted in our June 3 comments, I disagree with both of these statements. I do concur with the statement noting that the EQC policy provides for the provision of access roads through EQCs where there are no viable alternatives, but it is my view that the documentation provided to date does not persuasively demonstrate that a Kingman Road access would not be viable. The shorter access road is certainly appreciated, but the question remains as to whether there should be any access through this area at all.
- Response #12 on pages 7 and 8 of Appendix H states that there are no locations on the Installation that are conducive for wetland mitigation and that any required wetland mitigation efforts will be addressed through a purchase at a local wetland mitigation bank. The Stormwater Planning Division of the Department of Public Works and Environmental

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Services may have suggestions for nearby restoration projects; that office should be contacted by the project team.

- Response #14 on pages 9 and 10 of Appendix H notes that the Total Maximum Daily Load for the benthic impairment along Accotink Creek has been issued but indicates that changes to stormwater management efforts will not be implemented until new requirements are incorporated into county and state stormwater management regulations. Our June 3 comment addressing this issue remains valid.
- The response to comment #17 (pages 11 and 12 of Appendix H) states that “the intent of these [stormwater control] measures is to maintain the predevelopment hydrology of the site after construction to the maximum extent technically feasible.” This approach should be supported and commended, and the project team should be encouraged to coordinate with the Stormwater Planning Division as details are developed.
- The response to comment #20 (page 14 of Appendix H) states that the area within which there would be selective clearing for an iconic view of the NMUSA from the access road “does not appear to be in the EQC area since the slopes are not directly adjacent to Kernan Run.” It is my view that this area is located within the EQC.
- The response to comment #24 (page 15 of Appendix H) states that the concept of tree canopy replacement as opposed to a mitigation approach focusing solely on the replacement of larger trees “certainly has its merits” and notes that this approach “will be used on other Belvoir projects.” However, both the EA and Finding of No Significant Impact indicate that the tree replacement efforts for this project will continue to focus on the replacement of trees with diameters of four inches or greater. Is there a reason why a canopy replacement approach would be less desirable for this project?
- We had recommended that “all noise-generating activities associated with museum operation (including special events) should be viewed as stationary noise sources and should comply with the 55 dBA limit” [of the county’s Noise Ordinance]. We also recommended that efforts be made to establish clear lines of communications with nearby neighborhoods in regard to the filing of noise complaints and responses to such complaints. The response to this comment (#25) on page 15 of Appendix H states: “Under normal operations the Museum will not generate appreciable levels of noise.” However, the EA notes that “military bands, re-enactment activities, parades, and educational activities (camping, occasional discharge of dummy ordnance, amplification of voices and music to reach a large crowd) would occur.” The EA notes that Fort Belvoir will comply with its noise ordinance, as adopted from Fairfax County. Our concern and recommendations regarding noise were intended to clarify how the noise limits would be defined and enforced and to ensure that an avenue for communication of, and response to, possible community complaints would be established. Our comment, as carried forward in our June 3 letter, remains valid.
- Response #35 on page 20 of Appendix H responds to a comment we have made regarding the proposal to access the site through the Kernan Run EQC (along the old Swank Road

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alignment) as opposed to an access road originating at Kingman Road. The response states that the Kingman Road alternative was eliminated from consideration because of conflicts with a 1993 Record of Decision relating to an earlier round of BRAC. The significance of this ROD and its applicability to the Army Museum project are not made clear, and I don't recall if this rationale was cited in the earlier environmental documentation, which recommended a study of impacts to the Forest and Wildlife Corridor to better detail the significance of the impacts of the Kingman Road alignment to the corridor.

- Other concerns are also raised on page 20 of Appendix H in regard to the Kingman Road option (complications relating to the access control point and ability to retain the viability of the 36-hole golf course), but it is difficult to place these in context absent a comprehensive assessment of the benefits and drawbacks of each access alternative and further elaboration of the concerns identified on page 20. For example, what golf course redesign would be needed if the Kingman Road access was to be pursued? Would the Kingman Road access preclude a viable 36-hole course, or would a redesign alternative be available to retain a 36-hole course? In what ways would the functionality of the Forest and Wildlife Corridor be compromised? While it should be recognized that the access control and golf course issues are important factors in the decision-making process, it would still be appropriate to consider these issues along with the environmental benefits and drawbacks of each option. We have not argued that the Kingman Road option is a preferred one; we've only suggested that a more complete analysis of environmental benefits and drawbacks of each approach should be considered. That analysis could present details regarding the golf course and access control impacts as well as impacts to Forest and Wildlife Corridor and EQC areas (to include the Kernan Run stream valley, including all associated steeply sloping areas) associated with each access alternative. Such an analysis may very well lead to a conclusion supporting the proposed approach to access; however, it is my view that the rationale supporting the proposed approach still has not been presented clearly or persuasively.
- The clarification in response #36 regarding the differing design needs for the service drive and a direct access to the plateau area is appreciated. The project team has clearly established that the slope in this area is too steep to support a more direct access to the plateau.