

STAFF RECOMMENDATION

E. Keller

NCPC File No. 6908



FORT BELVOIR MISSILE DEFENSE AGENCY - HEADQUARTERS COMMAND AND CONTROL CENTER

Fort Belvoir, Fairfax County, Virginia

Submitted by the Department of the Army

January 29, 2009

Abstract

The Army has submitted preliminary and final building foundation plans for construction of the Missile Defense Agency (MDA) main headquarters building at the South Post of Fort Belvoir. The applicant must begin excavation and foundation construction to meet the required date for building occupancy specified in the BRAC 2005 action. Building façade design is presently underway, and will be submitted to the Commission for preliminary and final building approval in April or May of 2009.

Commission Action Requested by Applicant

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

Executive Director's Recommendation

The Commission:

Approves the preliminary and final building foundation plans for the Missile Defense Agency Headquarters Command and Control Center, as shown on NCPC Map File No. 3101.00(38.00)42699

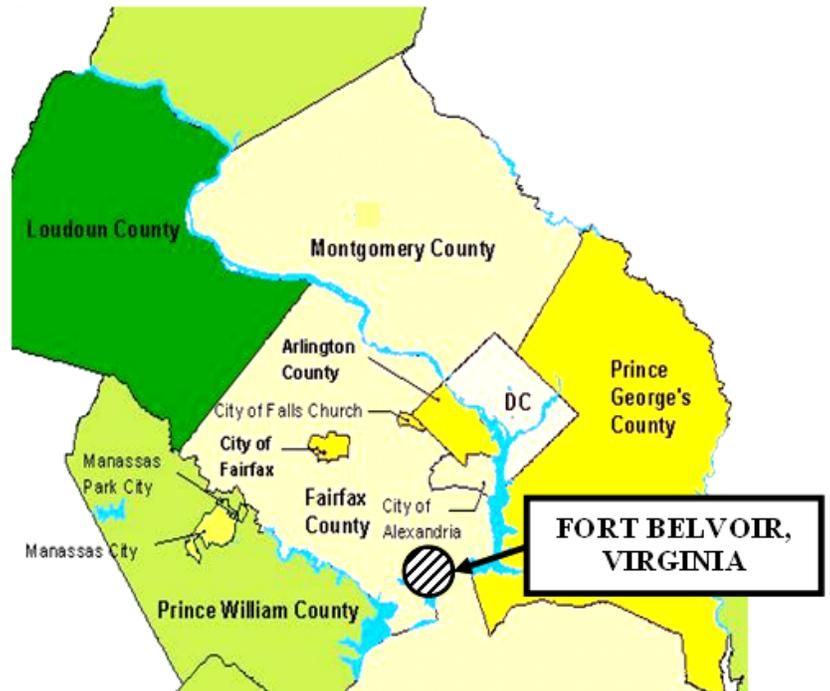
Reminds the Fort Belvoir Command to continue development of a final Fort Belvoir Master Plan for submission to the Commission in 2009.

* * *

PROJECT DESCRIPTION

Site

The project site is located on the north portion of the South Post Parade Ground of Fort Belvoir, adjacent to the South Post Historic District. Nearby buildings include the Wallace Theater, Sosa Community Center, Defense Acquisition University (DAU), Post Communications Building, Post Headquarters, and the Park Village residential area. The MDA building occupies the last available site at the Fort Belvoir Parade Grounds. The building design is established to be sympathetic to the neoclassic colonial buildings surrounding the parade grounds. The 11.5 acre site is currently used for ball fields, but is identified as an administrative use area in the existing master plan.



REGIONAL LOCATION OF FORT BELVOIR, VIRGINIA

Background

Earlier Commission action on this project included concept approval of the building and site design on May 1, 2008, as shown on NCPC Map File No. Map File No. 3101.00(38.00)42522.

Proposal

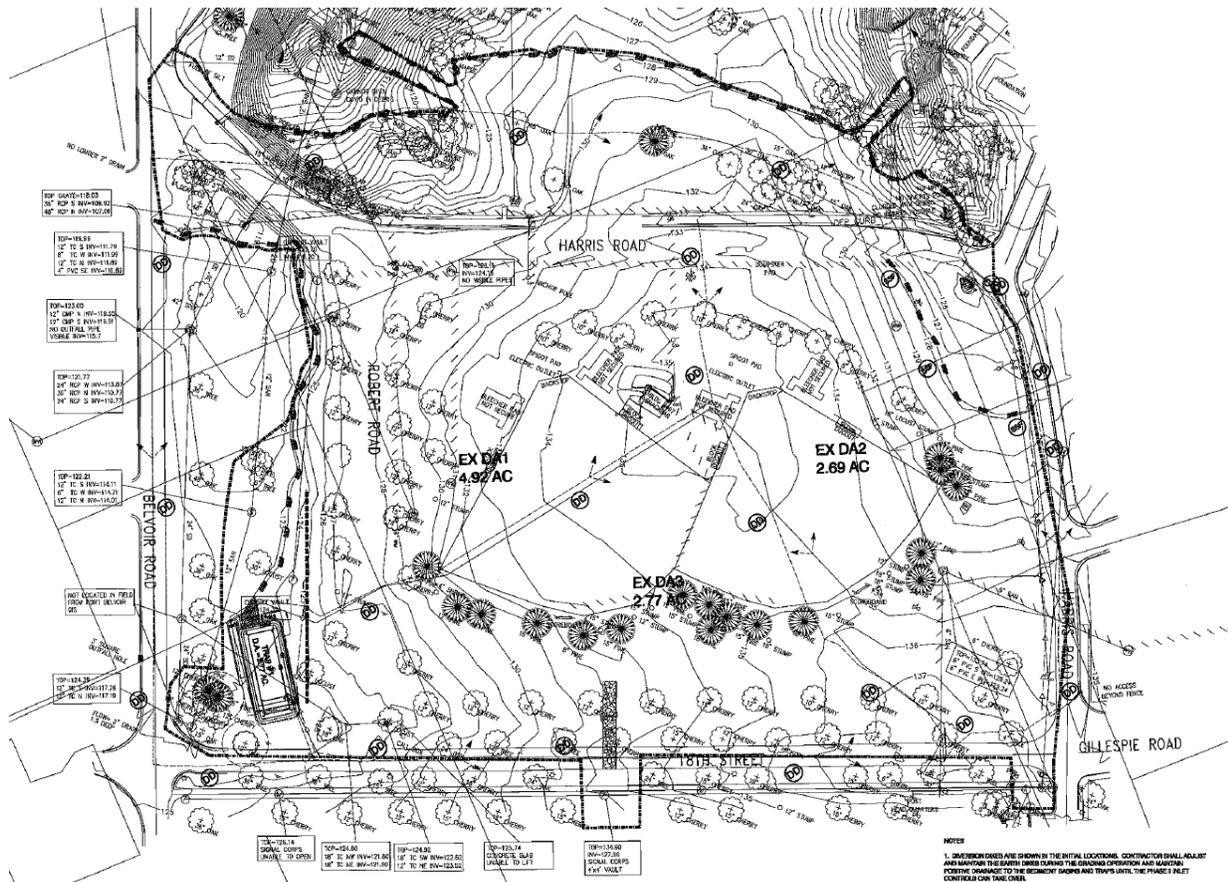
The proposed MDA structure is a three story 99,001 square-foot brick and pre-cast concrete clad building providing space for 292 personnel. The new structure serves as the agency's new headquarters. Two-thirds of the building's lowest floor is approximately 11 feet below grade. This results in elevations that relate directly to the facades of the parade ground buildings and scale of the grounds.

The submission is for review and approval of the building foundation construction only. The project, as further undertaken by the applicant, is a design/build effort with the project scheduling requiring the initial construction of the project foundation as soon as possible to maintain the occupancy schedule for the MDA headquarters of September 2010.

The site and excavation plans demonstrate stormwater management for the project during foundation construction and all temporary surface water management measures. The foundation plans provide the required building foundation design and wall cross-sections. Site utility plans show location for excavation construction, which has received all Fairfax county approvals for connections of sewage utility lines and stormwater drainage.



VICINITY LOCATION OF MDA HEADQUARTERS PROJECT ON FORT BELVOIR SOUTH POST



MDA CONSTRUCTION SITE WITH EROSION CONTROL PLAN

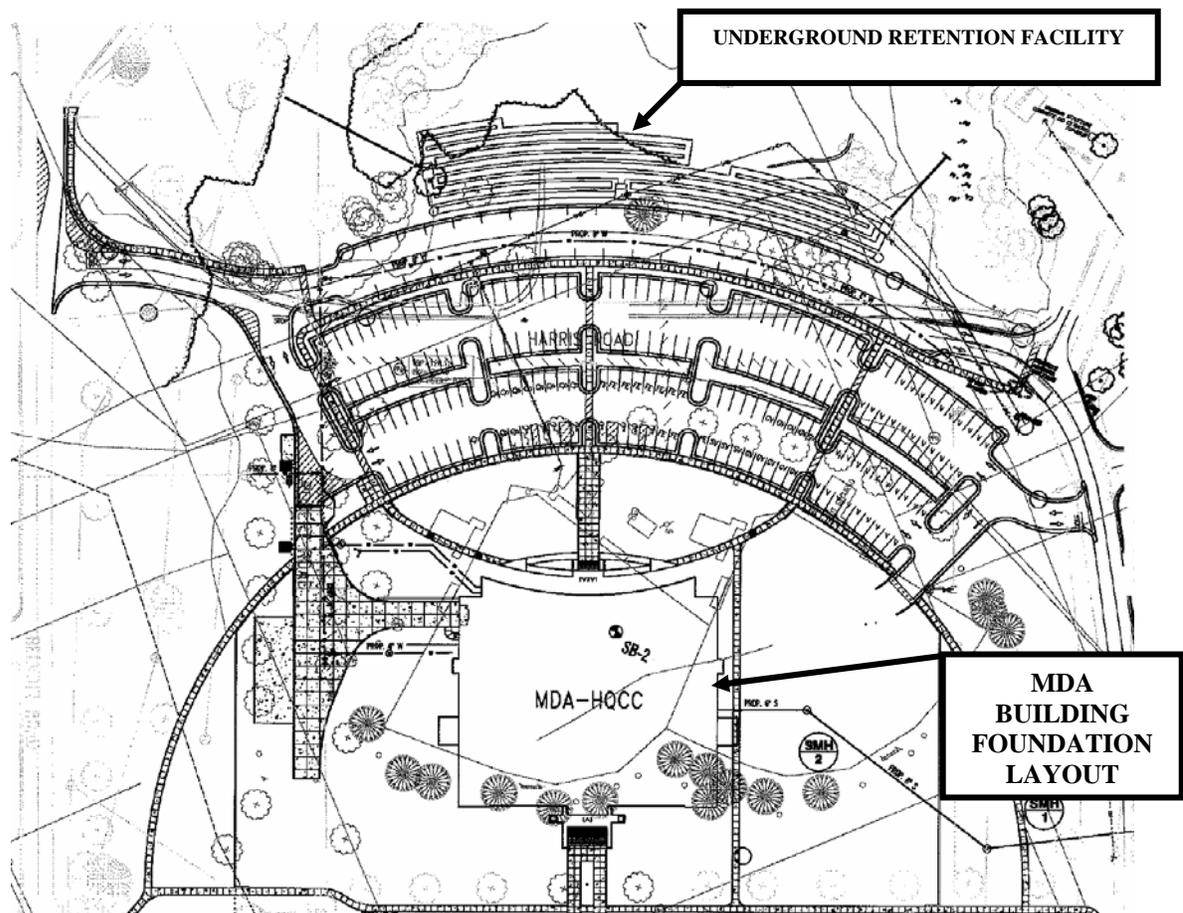
The permanent stormwater facility selected for the project is an underground detention pond constructed with 2,300 L.F. of 60-inch perforated concrete pipe. This stormwater facility follows the Fairfax County Public Facilities Manual (PFM) and the Virginia Stormwater Management Regulations.

Stormwater Quality Control will be in accordance with PFM6-0400 of the State’s regulations. For new development, the project total phosphorus runoff pollution load for the proposed development will be reduced by no less than 40 percent compared to phosphorus loads projected for the development without controls. The BMP to be utilized in this phase of development is bioretention practice in the bottom of the stormwater management pond with 6” of water depth. Bioretention has a phosphorus removal rate of 50 percent based on Virginia guidelines. The phosphorous reduction achieved is 46.8 percent base based on computations specific to the project.

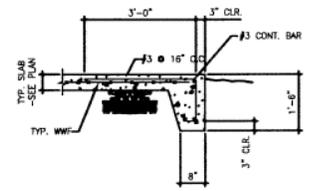
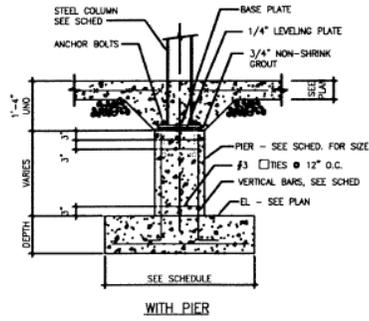
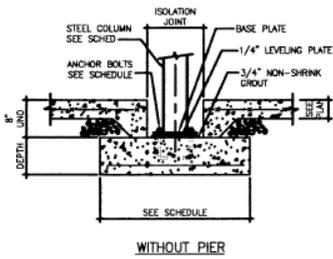
Foundation site surface water quantity control is provided at the discharge point through use of stormwater management pond in accordance with Virginia regulations. The stormwater management facility has been sized to reduce 2 and 10-year (24-hr storms), peak discharges for the proposed conditions to at or below 2 and 10-year (24-hr storms), for pre-developed conditions peak discharges. Based on adequate outfall considerations, the quantity controls are also designed to control the post development peak discharge rates to below the reduced pre-development adequate outfall target rates established by regulation.

The project foundation design conforms to the building concept favorably reviewed by the Commission, and the construction site is graded to allow for a zero balance grading for excavation. No significant amount of excavated dirt is expected to be hauled-in or hauled-off from the site.

The building's foundations are designed as regular shallow spread or strip footings. The foundations are supported on natural soils or on engineered fill. The allowable soil bearing pressure is taken as 4000 pounds per square-foot as recommended by the geotechnical report. Areas of highly plastic soils if encountered are to be excavated and replaced with compacted structural fill material.

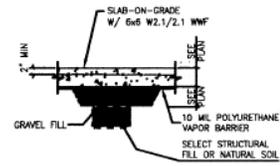
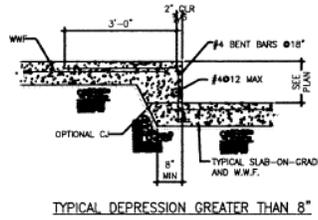
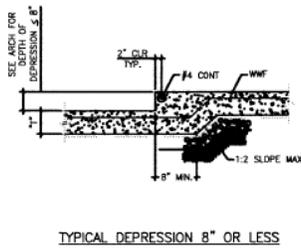


BUILDING AND SITE LAYOUT AND UTILITY LOCATION PLAN FOR EXCAVATION



1
S002 SCALE: NOT TO SCALE

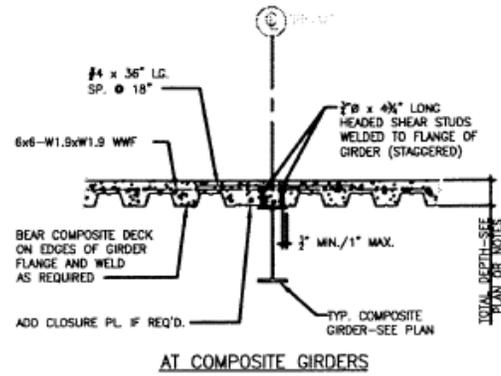
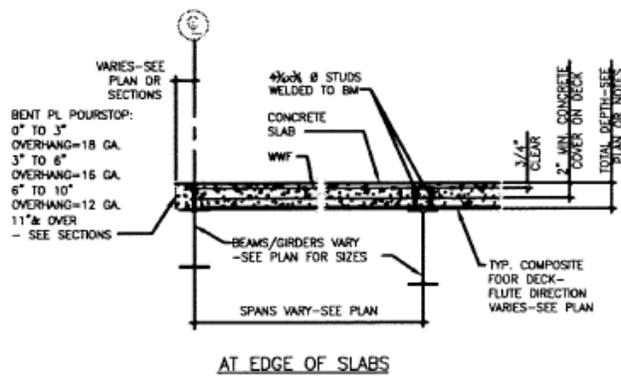
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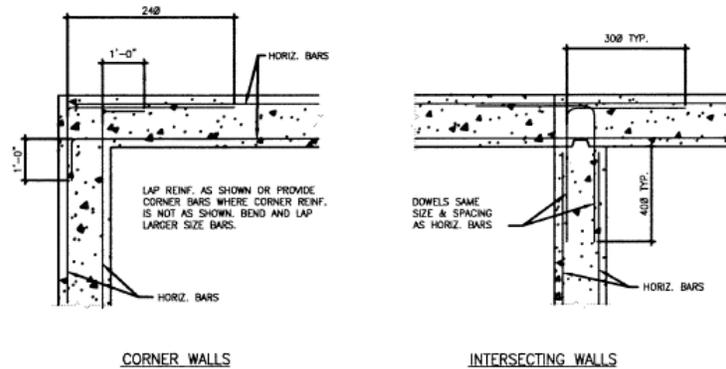
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FOUNDATION WALL SECTIONS AND STEPPED FOUNDATION DETAILS



FOUNDATION FLOOR DETAILS



FOUNDATION WALL DESIGN DETAILS

Development Program

Applicant: Department of the Army, Fort Belvoir

Estimated Cost: Total estimated cost of project is \$26,563,000. The building is to be occupied by late 2010.

Architect: The initial concept design was established by Leo A. Daly of Washington, D.C., with assistance from the United States Army Corps of Engineers - Baltimore District. The project is implemented in preliminary and final design as a design/build initiative by WDG Architecture of Washington, D.C.

PROJECT ANALYSIS

Executive Summary

Staff supports the final building foundation plans for this proposal. The submitted drawings provide the required building foundation design and wall cross-sections required by the Commission's submission guidelines. Site utility plans show excavation for construction, which has received Fairfax county approvals for connections. **Staff recommends the Commission approve the preliminary and final building foundation plans.**

CONFORMANCE

Comprehensive Plan for the National Capital

The proposed MDA concept proposal is consistent with the *Comprehensive Plan for the National Capital: Federal Elements*. The *Comprehensive Plan for the National Capital: Federal Elements* notes that "...federal workplaces that require extensive land and/or have little contact with the public...are primarily located in suburban and rural areas. These include intelligence, research, development, and testing activities. ...Military installations, such as the Department of the Army's Fort Belvoir, have become administrative centers for a variety of government tenants with these types of land uses." (Federal Workplace Element, p. 26)

The MDA continues to work on its TMP that incorporates the Commission's TMP objectives and comments from the Commission's review of May 1, 2008, and that will be submitted as requested by the Commission in the Army's information for final site and building plans.

Federal Capital Improvements Plan

The 2008-2013 Federal Capital Improvements (FCIP) program identified the proposed MDA facilities at Fort Belvoir. The FCIP was adopted by the Commission on September 6, 2007. The project was noted as requiring additional planning coordination, which is being accomplished in the building development process with additional information and Army discussions of the project with local and state agencies.

Relevant Federal Facility Master Plan

The submission adheres to the existing Master Plan established in 1993 and is consistent with the land use designated in that plan. The concept design and land use are in accord with all information of the preliminary updated Master Plan currently being prepared for NCPC review. Ultimately, the Master Plan update will be officially submitted for final review by the Commission later in 2009.

National Environmental Policy Act (NEPA)

In conformance with its NEPA compliance procedures, the U.S. Army completed an Environmental Impact Statement (EIS) for the project, with the final EIS issued July 2007. An Army Record of Decision was signed by the Army on August 7, 2007, completing the Army's NEPA obligations for this project. NCPC staff has reviewed the EIS and Record of Decision and finds the project location, program and building consistent with the Army's NEPA review.

The project is a proposal outside the District of Columbia and consequently the Commission does not have an independent NEPA responsibility in accordance with NCPC Environmental and Historic Preservation Policies and Procedures.

National Historic Preservation Act (NHPA)

The Fort Belvoir South Post BRAC actions are subject to NHPA, Section 106 Process review pursuant to the terms of a Programmatic Agreement (PA) developed in consultation with the Advisory Council on Historic Preservation and the Virginia Department of Historic Resources.

The project Section 106 consultation process began on the project in early 2008 and included a concept review meeting with the Virginia State Historic Preservation (SHPO) office staff in February 2008. The SHPO provided correspondence on the progress of the project design issues of interest to that office, and has approved moving forward to excavation of the site to begin foundation construction. That response is attached to this report (see attachment).

NCPC does not have an independent responsibility for this project under the National Historic Preservation Act and does not have any NHPA additional actions to take in regard to this project since the Army is the responsible federal agency for all NHPA requirements.

Attachment:

VIRGINIA SHPO CORRESPONDENCE ON FOUNDATION CONSTRUCTION

From: Holma, Marc [Marc.Holma@dhr.virginia.gov] Sent: Wed 12/3/2008 8:44 AM
To: Manning, Derek CIV USA IMCOM
Cc:
Subject: RE: Missile Defense Agency Design Review (2006-0820) (UNCLASSIFIED)

Derek,

Beginning preliminary site work is fine since the remaining issues, as discussed in my letter, are those of design details and materials. In addition to the items you listed that I want to see in the next submission I would add landscape plans. Have the material samples would be helpful. At our meeting there was a discussion that the plan was, if possible, to use real slate for the roof. I'd like to know why the decision to use fake slate was made (I suspect for budget reasons). If it was due to the budget, I would like to see a breakdown of the cost of using real slate vs. fake slate. Also, is the plan still to use natural limestone?

Marc