

SUBMISSION TO THE NATIONAL CAPITAL PLANNING COMMISSION
Preliminary and Final

North Post Access Control Point (NP ACP)

Fort Belvoir, Virginia

Submission for March 7, 2013 Commission Meeting

Agency: Fort Belvoir Directorate of Public Works

9430 Jackson Loop

Fort Belvoir, Virginia 22060

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1. Project Report

1.1 Agency Point of Contact

Mr. Bill Sanders
Director, Public Works
Fort Belvoir, Virginia
703-806-3017

1.2 Total Area of Site

- Approximately 21.8 Acres

1.3 Total Area of Buildings/Site Coverage

- Access Control Point/Area of Buildings and Site Coverage: 7.3 acres
- Stormwater Management: 0.89 acres
- Open Space/Slopes – 13.6 acres

1.4 Projected Employment

- It is anticipated that between five to ten personnel will be needed to staff the Gatehouse, Search Building and Overwatch area.

1.5 Relationship to the Master Plan

- Replaces Woodlawn Gate and Lieber Gate with a new access control point for the North Post that meets AT/FP requirements.
- The site is located within the Post's designated Urban Core and the area along US 1 is considered as a "public interface" area;
- Fremont Field is designated as open space for recreation. While the site plan will provide direction for the layout of the soccer fields, the construction will NOT be included in this project. However, any areas on the field disturbed by construction activities will be restored as appropriate.
- The landscape along US 1 between the intersection at Belvoir Road and the Gunston Road Bridge over US 1 is envisioned as a buffer zone that will include clustered arrangements of a variety of native species spaced randomly to create a naturalized landscape. However, within the ACP, an adequate line of sight between the guardhouse and over-watch must be maintained to ensure adequate reaction time to potential threats.
- A pedestrian connection is illustrated between north and south post as part of Master Plan and is incorporated into the design.

1.6 Status of Coordination with Affected Local and State Governments:

- Even though The North Post ACP is funded through MILCON, it was included as one of FB's BRAC-related projects in the BRAC Environmental Impact Statement (EIS) for FB as Project # 15. As such, coordination with local and state governments, including the State of Virginia and the County of Fairfax, has been regular and ongoing.
- In addition to the coordination completed as part of the EIS, additional coordination with representatives from the Phase 1 and Phase 2 Infrastructure projects, the US 1 Widening Project, the Woodlawn Friends Meeting House, and Fairfax County.

1.7 Schedule of Contraction and Occupancy

- Construction is expected to begin in October 2013. Occupancy is anticipated in October 2014

1.1 Project Cost and Funding

- The estimated cost of the NP ACP is \$15.5 Million, which is programmed in Fort Belvoir's MILCON budget.

2. Narrative

The North Post Access Control Point (NP ACP) project consists of the 100% design, specifications, and estimates for the construction of a new access road and a compliant access control point (ACP) for the North Post at Fort Belvoir (FB). The design will include the following elements:

- ID Check Canopy
- Guard Boots
- Gatehouse
- Vehicle Inspection Canopy
- Search Building
- Search Area Shelter
- Overwatch Station
- Truck Inspection Canopy
- Landscape treatment for the ACP

The operational hours of the new gate will follow the other secondary gate entrances and only be open from 0500 to 2100 (5 AM to 9 PM) daily. While it will provide truck inspection capabilities, major truck inspections will continue at Tulley Gate, with this location being a backup should Tulley Gate have to close for maintenance or other issues.

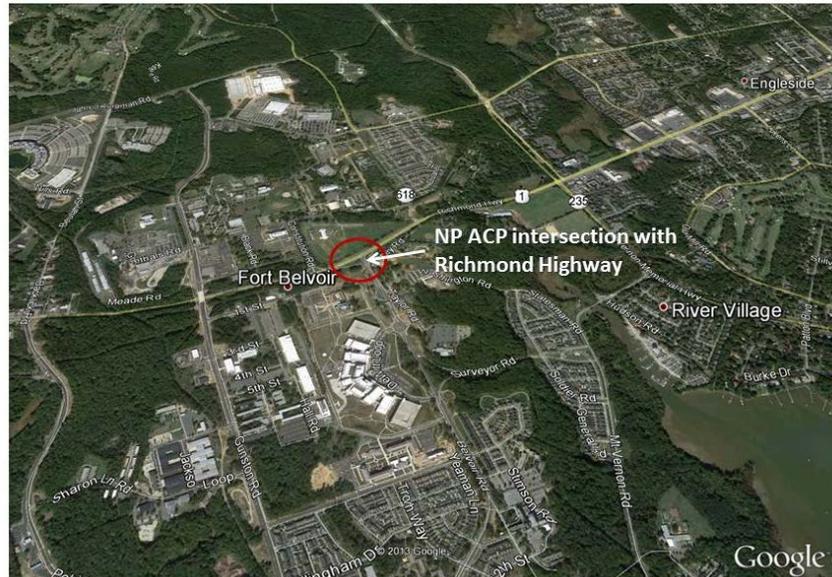
A sidewalk and bike access is included in the access route between Route 1 and Gunston Road. Pedestrian walk signals will be included across Route 1 and at the entry point. Access to the new OCAR facility will also be provided via a sidewalk/bike connection. Bus Rapid Transit (BRT) will be provided for at all major intersections, including at Tulley Gate and at the new Pence Gate and NP ACP intersection.

The Route 1 Widening Project is being completed by the Federal Highway Administration through the Eastern Federal Lands Program and is expected to be accomplished through a Design-Build contract. The contract Request for Proposal (RFP) is being developed in coordination with the NP ACP project to ensure road connection points are coordinated to avoid overlapping construction activities and incurring additional costs between the two projects. The Environmental Assessment for the Route 1 project closed for comments in June 2012. Currently, the Route 1 Design-Build project is out for bid with a contractor selection proposed for early spring of 2013.

Landscaping will be provided to (1) ensure screening of the project from the Friends Meeting House and (2) to meet security level requirements in maintaining visual oversight of the access road throughout its length. Lighting along the ACP route will be included in the design and will meet Fairfax County standards for down lighting. The lighting will be limited to the operational hours of the ACP.

Project Location: The new ACP will be located on Fort Belvoir's North Post and will intersect Richmond Highway (US 1) directly across from Belvoir Road in Fairfax County, VA as shown in **Figure 1**.

Figure 1 – Project Location

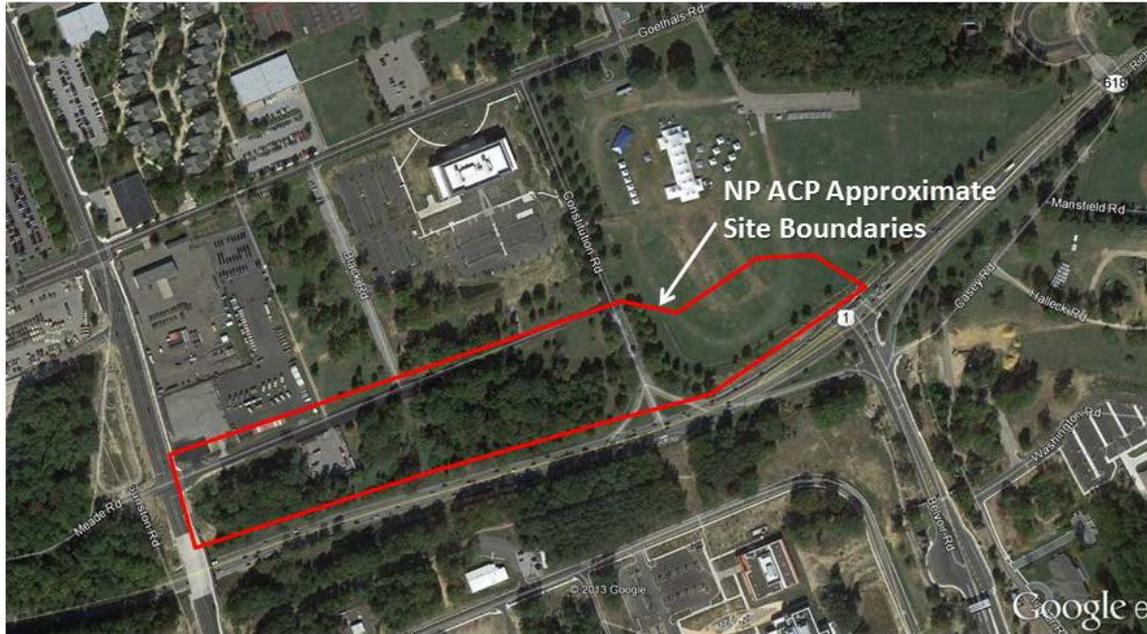


Project Site: Figure 2 illustrates the project site, which is bounded by US 1 to the south, Gunston Road to the west, the new OCAR building and the Motor Pool to the north, and Fremont Field, which is primarily used for regional soccer matches, other athletic activities and community events throughout the year, to the east/northeast. The ACP will cross through the southwest quadrant of Fremont Field. The guard house, gates and movable barriers of the old Lieber Gate, currently remain along Constitution Avenue, which divides the site in two.

The site of the new ACP for the North Post is generally consistent with that shown in the Fort Belvoir Master Plan. The primary difference is that the new site provides a better connection to existing roads on the North Post and minimizes the impact to Fremont Field and the Friends Meeting House view shed.

The ACP layout and design standards provide for three separate areas—an initial queuing area for vehicles, followed by an inspection/rejection area, followed by a security element that provides a response time of at least 9-seconds (activate barriers) to stop a vehicle from breaching the control point. It should be noted that access control for Army projects requires a longer response time for setting physical barriers than the Department of Defense. As a result, the physical length of an Army ACP is longer. Omaha District Corps of Engineers is the Army's Center of Standardization and the Point of Contact for approval of all Army Access Control Points. The current design has been vetted by Omaha to ensure the design meets current standards. There are no acceptable waivers to this requirement for the installation or IMCOM, Belvoir's major command.

Figure 2 – North Post ACP Project Site



The topography of the site generally slopes from north to south. There is a gradual rise of four to five feet as the site moves from the edge of Fremont Field towards Gunston Road. There are a number of utilities that traverse the site including, water, sewer, electric, lighting and communications lines. There is a single wetland on the site, as well as several specimen trees. An area of mixed vegetation is found along US 1.

The site is within view of the Woodlawn Friends Meeting House, a property recently approved as eligible for the National Register of Historic Places. This property is one of several sites that contribute to the Woodlawn Historic District, the western boundary of which is shared with Fort Belvoir. Other historic properties in close proximity to the project include the Woodlawn Plantation, Grand View House, and the Woodlawn Baptist Church Property and Cemetery.

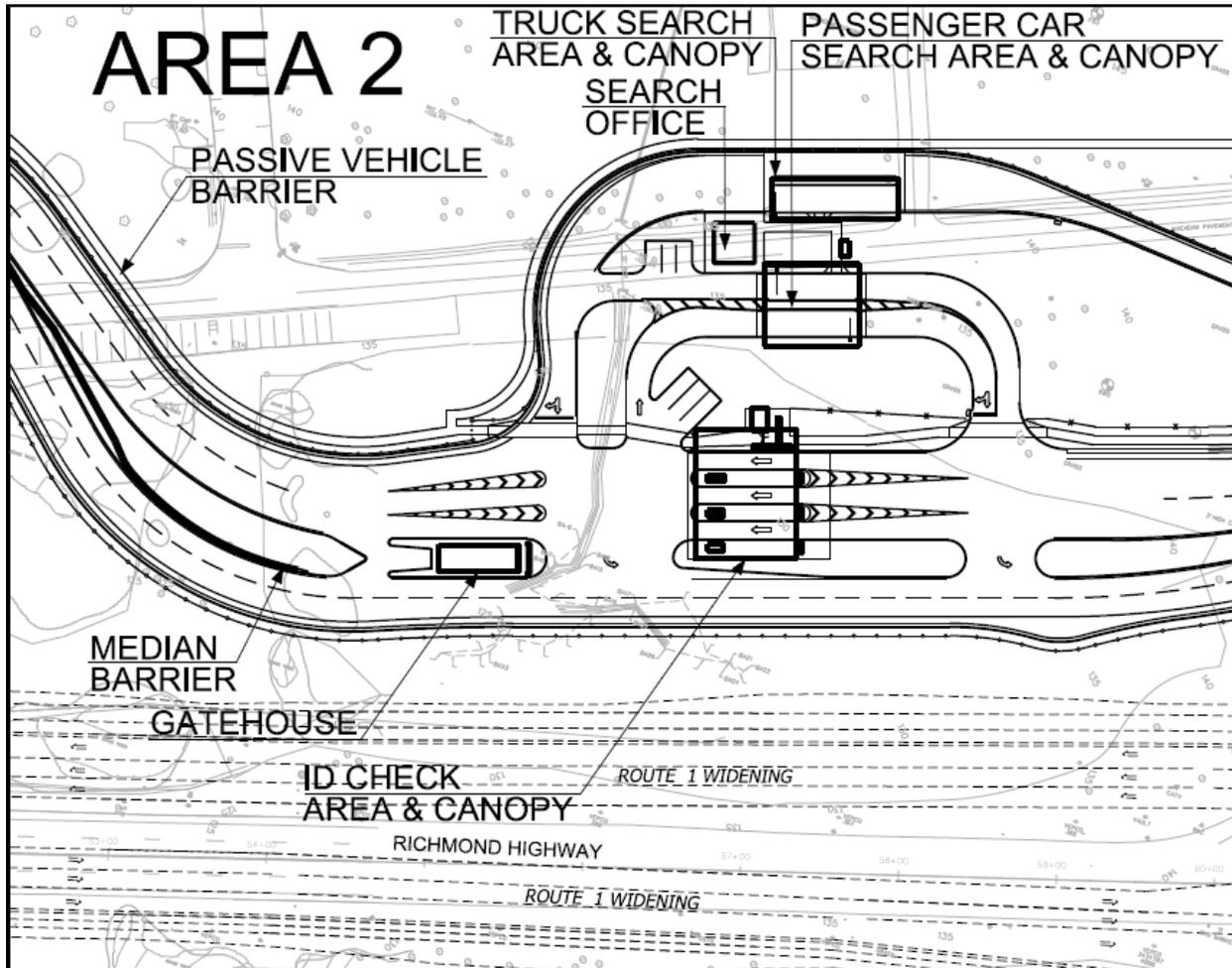
Abandonment of some water and sewerage pipelines, manholes, fire hydrants, and communication lines will be necessary to accommodate the proposed construction. The new Gatehouse and Search buildings will have water and sewer services, as well as electric to power equipment and communications. AIE infrastructure, including underground conduits, will be installed as part of this project but the actual cable installation will be completed at a future date.

The typical section of the access road into and out of the check point will generally be a closed section roadway with two twelve foot lanes in each direction, one foot inside and six foot outside shoulders, and a concrete median. There will be a barrier in the median after the gatehouse. The lane configuration at the intersection with the ACP and Richmond Highway will be two outbound and two inbound lanes. The lane configuration at the intersection with the ACP and Gunston Road will also have two inbound and two outbound lanes.

2.1 Functional and Technical Requirements

Functional Objective - The functional objective of this project is to provide a new Access Control Point that provides access to the developing North Post at Fort Belvoir, meets Department of Defense safety and security requirements, and supports the Fort Belvoir Master Plan. The new ACP is expected to reduce traffic congestion at existing Tully Gate, as well as on Richmond Highway and has been designed to accommodate the projected peak hour traffic volume in 203, which is estimated to be 576 vehicles per hour. Visitors are not expected at this entrance.

Figure 3 – NP ACP Functional Areas



ID Check Area: The ACP will have an ID Check Area within the Access Control Zone where guards or automated means perform vehicle and passenger ID checks, grant vehicles authorization to enter the installation, or direct vehicles to other areas of the ACP. A pedestrian turnstile will be located in this area.

Passenger Vehicle Search Area: The ACP will also have a Passenger Vehicle Search Area that will be covered with a canopy, easily assessable from the ID Check Area, shielded from casual observation from the ID Check Area, and sized to accommodate the search of a minimum of 2-passenger vehicles.

Truck Search Area: The ACP will have a Truck Search Area that will be separate from the Passenger Vehicle Search Area, covered with a canopy, obscured from casual observation, and sized to accommodate the search of one WB-62 tractor-trailer.

The buildings for the ACP have been sited based on standard Army criteria and meet the objectives of the mission. ADA requirements for the buildings and sidewalks have also been satisfied. Grading, drainage, and managing stormwater runoff are being designed to maximize efficiencies and costs. Erosion and stormwater management BMPs have been designed to meet the necessary requirements of Fairfax County's Public Facilities Guidelines in order to obtain the necessary permits prior to construction.

Utilities: Water and sewer service to the two proposed buildings will be provided by the existing installation water and wastewater systems. Fire protection will be provided for the buildings by on-site fire hydrants. A section of the existing 6" water main along Meade Road will need to be relocated around the proposed vehicle inspection area, and will be located at least ten feet from the toe of slope or 15 feet from the perimeter fence. Domestic and fire protection service will be extended from this pipeline to the site. A section of the existing 10" water main in Constitution Road will be lowered to accommodate the proposed grading.

Storm Drain System: The storm drain system is being designed based on the criteria established in the Fairfax County Public Facilities Manual. Inlet design assumes that the conditions be compatible with Table 9-1 criteria matching minor arterial/collector/local roads that uses a rainfall intensity factor (i) of 4 in/hr. This would allow a spread of the shoulder width plus 3'; however, we will utilize a more conservative approach and design it to stay within a maximum of 8 feet. Inlets have been located at all sumps with flanking structures on either side. Due to the curvilinear nature of this roadway design, there are several inlets that have been placed where the cross-slope is 1% prior to reversing over to the full super elevation. Between the sump and the inlets in the super elevated sections, additional inlets have been placed to meet spread and capacity criteria. The hydraulic grade line has been computed based on the 10-year design storm to confirm that there is no structure surcharge.

The storm drain systems and outfalls have been designed to create the best conditions to meet stormwater management requirements. In order to provide the stormwater management in accordance with the local regulations, there are five main outfall locations. The first 2 locations are in 2 separate infiltration SWM facilities along US 1 between the proposed entrance and the existing entrance at Constitution Drive. The third outfall is at a proposed extended detention facility within the radial curve near the existing construction storage area. The fourth location drains to the existing roadside drainage adjacent to US 1. The remaining site drainage will be received by the Phase 2 design along Gunston Road.

Stormwater Management: The project at Fort Belvoir will comply with the Virginia Stormwater Regulations and the design has been prepared following the procedures presented in the Fairfax County Public Facilities Manual (PFM) and the Northern Virginia BMP Handbook. The design also complies with technical guidance from Section 438 of EISA.

The proposed construction will disturb a total area of 21.8 acres. The new facilities will be managed to control the water quality and quantity of the stormwater runoff. Stormwater management will be provided by the ACP project, as well as the adjacent Gunston Road project. Stormwater management facilities constructed by the ACP project include two infiltration basins and one dry detention facility. The adjacent project will provide an extended detention dry pond facility.

Sediment and Erosion Control Measures: Functional and technical requirements have been taken from the *Virginia Soil Erosion and Sediment Control Handbook*, 1992 to complete the design. The plans include an initial phase layout which includes perimeter controls to divert clean offsite water around or through the project site while diverting sediment laden water to facilities such as sediment traps, basins, silt fence and check dams. The proposed SWM facilities will be temporarily used as traps and basins as well. For the final phase, the initial controls will continue to function until their contributing drainage

areas are completely stabilized. Once all upstream disturbances are stabilized and temporary excavated facilities have been filled in to final grade, the SWM facilities will be converted to their final configuration.

Summary of Basic Design Concept: The basic design of the North Post ACP is driven by the Anti-Terrorism/Force Protection security requirements of the US Army as outlined in *Army Access Control Points Standard Design/Criteria September, 2008*. In addition, there are elements of the design concept, including the landscape treatment, roof lines and colors for the required canopies, and lighting elements, which have been designed in order to mitigate potential visual impacts on the Woodlawn Friends Meeting House. The site has been designed to retain as many of the existing mature trees as possible while still maintaining adequate sight lines to ensure the required force protection.

Transportation Impacts: FB completed a Base-wide Traffic Study to assess the requirements for the ACP roadway, as well as the intersection configuration. The current design reflects the necessary improvements, including left turn lanes from northbound Richmond Highway, to accommodate projected traffic volumes through 2030. Coordination continues with the Route 1 Project Team.

3. Documentation

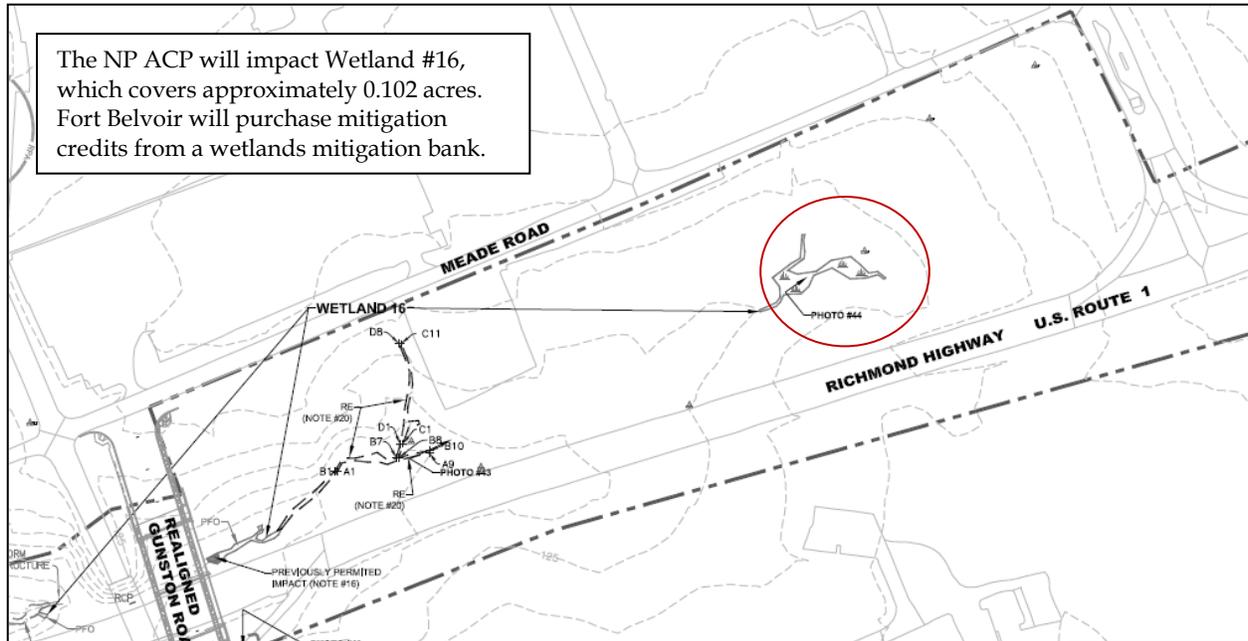
3.1 Environmental (NEPA) Documentation

The original design of the NP ACP was included in the Final Environmental Impact Statement for Implementation of 2005 Base Realignment and Closure (BRAC) Recommendations and Related Army Actions at Fort Belvoir, Virginia; June 2007. It was listed as Project #15 – Access Road/Control Point (PN63571) and is one of twenty separate facilities projects needed to support the BRAC activities included under the Preferred Alternative. The Record of Decision in favor of the Preferred Alternative was signed on August 7, 2007.

The new design will still connect to Richmond Highway across from Belvoir Road; however, in order to mitigate impacts to Freemont Field and potential traffic issues on Goethal's Road, the ACP was realigned and will now connect to Gunston Road. This shift resulted in an impact to a small wetland between Richmond Highway and Meade Road as identified in the *Route 1-Fort Belvoir Waters of the U.S. (Including Wetlands) Delineation* (December 18, 2012). Wetland Studies and Solutions, Inc. completed the study for the Federal Highway Administration, Eastern Federal Lands Highway Division for between Telegraph Road (Route 611) and Mount Vernon Highway (Route 235).

In addition to the wetland impact, approximately 270 trees in excess of four inches diameter at breast height (dbh) will be cleared to make way for the new ACP. The majority of the trees are between existing Meade Road and Richmond Highway. Replacement will be at a 2:1 ratio as required by Fort Belvoir. Since not all of the trees can be relocated on site as part of the project to mitigate the loss, the balance will be calculated as a dollar figure to be used at other locations on the installation as appropriate.

Figure 4 – Wetland #16



3.2 SHPO Documentation

The construction of the North Post ACP has the potential to adversely affect the viewshed of sites within the adjacent Woodlawn Historic District. Fort Belvoir has worked closely with the consulting parties, including Woodlawn Friends, Woodlawn Historic District, Fairfax County, and the State Historic Preservation Office (SHPO) to meet the requirements of Section 106 of the National Historic Preservation Act. A determination of No Adverse Effect has been made regarding viewshed impacts of the project. Supporting Documentation is included in Appendix A, and includes correspondence from the SHPO, as well as the information provided to the interested parties.

4. Appendices

4.1 SHPO

4.2 Supporting Drawings/Map (Provided as separate file)

