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# **FINAL ENVIRONMENTAL ASSESSMENT**

## **EXPANSION OF KELLER ARMY COMMUNITY HOSPITAL**

**UNITED STATES ARMY GARRISON  
WEST POINT, ORANGE COUNTY, NEW YORK**



**GSA Contract No.: GS-10F-0421N  
Order Number: W911SD-05-F-0226**

**Prepared for: U.S. Military Academy  
Directorate of Public Works  
Building 667, Ruger Road  
West Point, New York 10996**

**Prepared by: Northern Ecological Associates, Inc.  
Village Square  
33 Church Street  
Fredonia, New York 14063**

**APRIL 2006**

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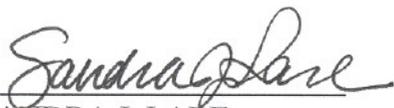
**APRIL 2006**

APPROVAL SHEET

FINAL ENVIRONMENTAL ASSESSMENT  
EXPANSION OF KELLER ARMY COMMUNITY HOSPITAL

DIRECTORATE OF PUBLIC WORKS  
UNITED STATES ARMY GARRISON  
WEST POINT, NEW YORK

APRIL 2006



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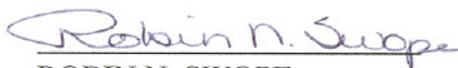
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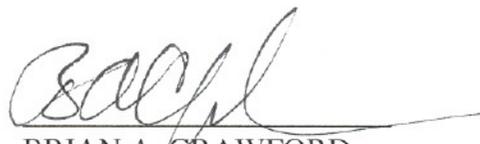
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<b>APPENDIX</b>	<b>TITLE</b>
Appendix A.	Project Specific Visual Assessment Posters
Appendix B.	Copies of Public Comment Letters

## LIST OF ACRONYMS, ABBREVIATIONS, AND DEFINITIONS

ACHP	Advisory Council on Historic Preservation
A.D.	Anno Domini
ADAAG	Americans with Disabilities Act Association Guidelines
AR	Army Regulation
ASL	Above Sea Level
BMPs	Best Management Practices
B.P.	Before Present
ca.	Circa
CCTV	Closed cable television
CFR	Code of Federal Regulations
CMP	Coastal Management Program
Cumulative Impacts	The impact on the environment that results from the incremental impact of an action when it is added to other past, present, and reasonably foreseeable future actions, regardless of what agency or person has undertaken them. This concept includes the recognition that individually minor but collectively significant impacts can take place over a period of time.
dfu	Drainage facility units
DPW	Directorate of Public Works
Direct Impacts	Effects caused by an action that occur at the same time and place as the action.
DoD	United States Department of Defense
EA	Environmental Assessment
ESRI	Environmental Systems Research Institute
FEMA	Federal Emergency Management Agency
FY	Fiscal Year
gpd	Gallons per day
gsf	Gross Square Feet
GIS	Geographic Information System
HABS	Historic American Building Survey
HAER	Historic American Engineering Record
HHSASS	Hudson Highlands Scenic Area of Statewide Significance
HLC	Hollis soils
HPS	High Pressure Steam
HVAC	Heating, Ventilation, and Air Conditioning
ICRMP	Integrated Cultural Resources Management Plan
Indirect Impacts	Reasonably foreseeable impacts that are caused by an action but that occur later or that are removed in distance from the action.
INRMP	Integrated Natural Resources Management Plan
KACH	Keller Army Community Hospital
kV	Kilovolt
kWh	kilowatt hours
LBP	Lead based paint
mgd	Million gallons per day

## LIST OF ACRONYMS, ABBREVIATIONS, AND DEFINITIONS

MEDEVAC	Medical Evacuation
MSDS	Material Safety Data Sheets
NAAQS	National Ambient Air Quality Standards
NCO	Non Commissioned Officers
NEPA	National Environmental Policy Act
NHLD	National Historic Landmark District
NOAA	National Oceanic and Atmospheric Administration
NO <sub>x</sub>	Nitrogen oxides
NRHP	National Register of Historic Places
NWI	National Wetlands Inventory
NYS	New York State
NYSDEC	New York State Department of Environmental Conservation
NYSDOS	New York State Department of State
NYSDOT	New York State Department of Transportation
NYSHPO	New York State Historic Preservation Officer
NYSOPRHP	New York State Office of Parks, Recreation, and Historic Preservation
ODIA	Office of the Directorate of Intercollegiate Sports
OSHA	Occupational Safety and Health Administration
PM	Particulate Matter
psi	Pounds per square inch
RFFA	Reasonably foreseeable future action
SASS	Scenic Area of Statewide Significance
scfm	Standard cubic feet per minute
SCS	Soil Conservation Service
sf	Square Feet
SIP	State Implementation Plan
SOPs	Standard Operating Procedures
SPDES	State Pollutant Discharge Elimination System
SWP3	Stormwater Pollution Prevention Plan
Tricare	U.S. Army Medical Insurance Provider
UFAS/ADAAG	Uniform Federal Accessibility Standards/Americans with Disabilities Act Accessibility Guidelines
U.S.	United States
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USDI	United States Department of the Interior
USEPA	United States Environmental Protection Agency
USFWS	USDI, Fish and Wildlife Service
USGS	United States Department of the Interior, Geological Survey
USMA	United States Military Academy
USMAPS	U.S. Military Academy Preparatory School
UXO	Unexploded ordnance
VOC	Volatile organic compound
West Point	United States Army Garrison West Point

## **1.0 DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES**

### **1.1 INTRODUCTION**

The U.S. Army Garrison, West Point (West Point), through its Directorate of Public Works, is planning to construct and operate a 3-story expansion, approximately 48,000-gross-square-foot (gsf) (approximately 16,000 square feet [sf] on each of three floors) to the Keller Army Community Hospital (KACH) (Project) on the grounds of the United States Military Academy (USMA) West Point, Orange County, New York (**Figure 1**). Some additional parking spaces also will be developed as part of this Project.

This Environmental Assessment (EA) was prepared to assess the potential environmental effects of implementing the proposed Project, and has been prepared in accordance with the requirements of the National Environmental Policy Act (NEPA) of 1969 (42 USC 4321-4347), the Council on Environmental Quality regulations for implementing NEPA (40 Code of Federal Regulations [CFR] 1500-1508), and the regulations governing the U.S. Army's policies and procedures for implementing NEPA (32 CFR Part 651, *Environmental Analysis of Army Actions*).

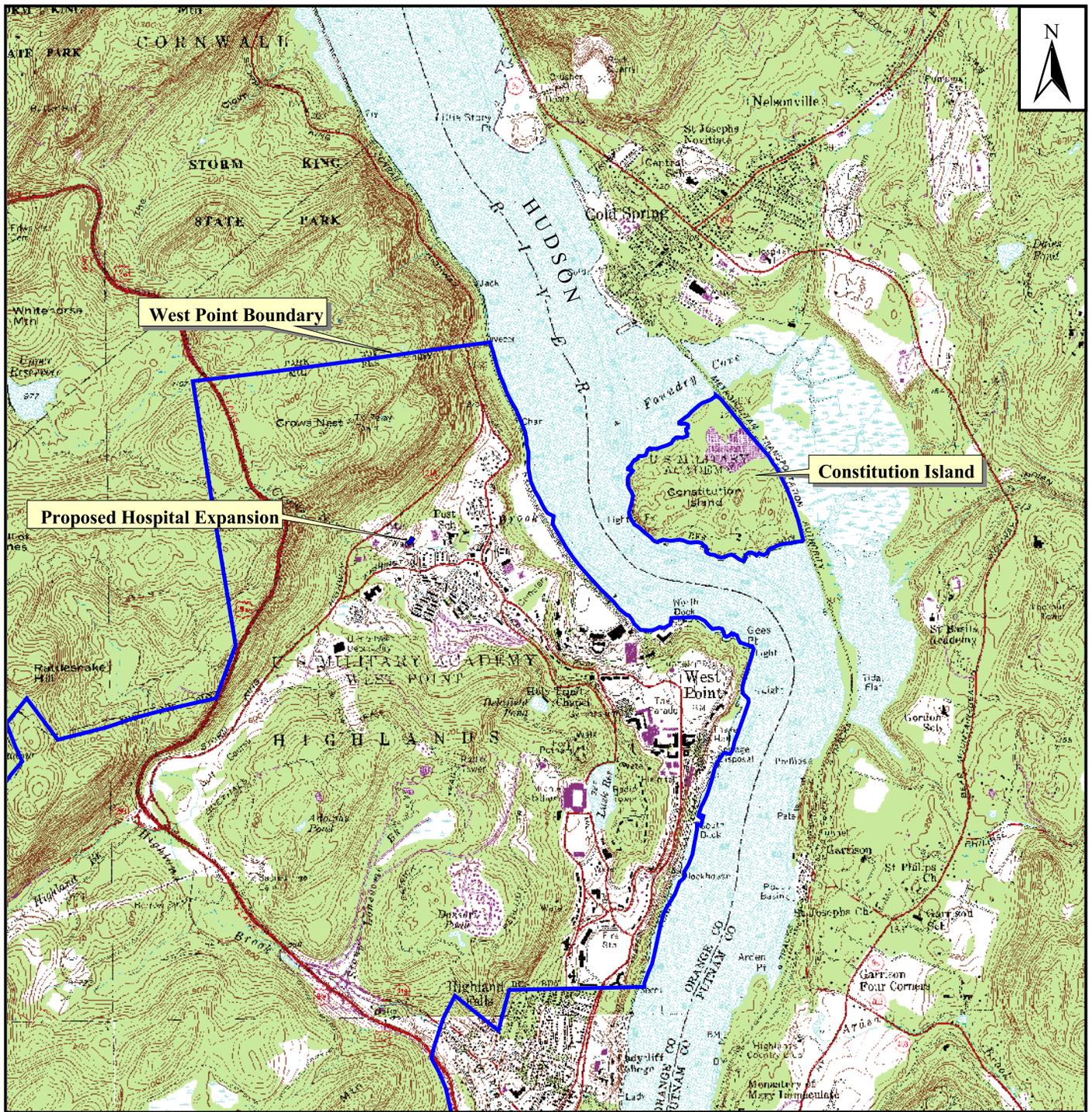
The principal purposes in preparing this EA are to:

- identify and assess potential impact on the natural and human environment that would result from the implementation of the proposed action;
- assess reasonable alternatives to the proposed action that would avoid or minimize adverse effects on the environment; and,
- identify and recommend alternatives and specific mitigation measures as necessary to minimize environmental impact.

### **1.2 BACKGROUND**

The existing KACH (Building 900) was constructed in 1977, and is the latest and most modern of several medical service facilities that have served West Point since 1778. This hospital serves the health care needs of the West Point Community, including active and retired Army personnel and their families. This hospital also provides emergency services for civilian personnel in the event of an accident, injury, or serious illness, although it does not provide routine or recurring medical services to civilian personnel. The KACH's mission is to provide quality healthcare, medical training, and support to the entire West Point community, in order to enhance all levels of medical readiness (KACH 2005). The hospital serves a critical role in providing health care and services while sustaining technical and tactical readiness, in support of the USMA mission.

The KACH provides a full range of comprehensive care services, including: primary care (family/internal medicine) and 24-hour emergency care; specialized services including dermatology, audiology, anesthesia, obstetrics and gynecology, ophthalmology, optometry, orthopedics, physical therapy, podiatry, sports medicine, general surgery, and



**Project Location**

1000 0 1000 2000 Feet



300 0 300 600 Meters



**Figure 1. Project Location Map for the Keller Army Community Hospital Expansion West Point, New York.**

Client:  U.S. Army Garrison at West Point

Prepared By:  NEA

Date: 11/01/05

Source: NYSDEC, Division of Fish, Wildlife, and Marine Resources. Derived from scans of USGS 7.5-minute quadrangle maps (DRG) 2000. DRGs used: West Point and Peekskill, New York (1957, photorevised 1981). GIS data layers provided by USAG West Point, November 2002 & 2005.

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radiology (x-ray) services; and, other services including a pharmacy, a substance abuse program, community mental health services, social work/family advocacy, educational and developmental intervention services, an exceptional family member program, preventive medicine and wellness, occupational health, environmental health, and industrial hygiene. In addition, the hospital is served by emergency medical helicopter services, with a helicopter landing pad situated adjacent to the hospital. The staff at KACH consists of 72 officers, 135 enlisted personnel, and 221 civilian personnel (KACH 2005).

The KACH was designed and built before the shift in medical approach from inpatient to outpatient treatment modalities. Originally built as a 65-bed facility, the hospital currently utilizes its space to provide 35 inpatient beds, where the average length of stay for inpatients is 2.2 days (KACH 2005). With the remainder of the space at KACH, the hospital staff serves a busy outpatient clientele, averaging 10,216 outpatient visits per month (2003 data, KACH 2005).

Currently, the KACH lacks the space and departmental relationships necessary to satisfy the current and future demands of ambulatory services. The major service lines that are affected by the facility deficiencies include primary care, musculoskeletal, and ophthalmology/optometry. These busy service areas suffer from insufficient clinical space and split operations that result in significant staff inefficiencies. For example, the Family Practice Clinic is divided in two by the hospital lobby, resulting in insufficient use of support personnel and service. The Orthopedic and Podiatry Clinic is cramped and distant from the undersized Physical Therapy Clinic. Ophthalmology and Optometry occupy separate floors in Building 606 in the Cadet Area, located more than one mile from the KACH. Not only must equipment and staff be duplicated, but also patients have no access to parking in the Cadet Area. Other important service lines, including obstetrics, emergency medicine, and patient administration, also suffers from operational and functional deficiencies that impede the delivery of care and services to enrollees.

### **1.3 PURPOSE AND NEED**

The purpose of the proposed Project is to fulfill West Point's need to consolidate the KACH's health and medical service functions into one facility, for logistical and practical reasons. The proposed expansion of the KACH will provide the facilities needed, on one site, to:

- Consolidate services whose functional spaces are currently divided (either in different areas of the same building or in different buildings);
- Maximize the use of staff and equipment;
- Provide adequately sized space for services that are currently operating in inadequately sized quarters;
- Improve parking accessibility for patients by moving some services out of the Cadet Area; and,
- Generally improve operational and functional relationships within and among different service areas to improve the delivery of care and services to patients.

## 1.4 DESCRIPTION OF PROPOSED ACTION

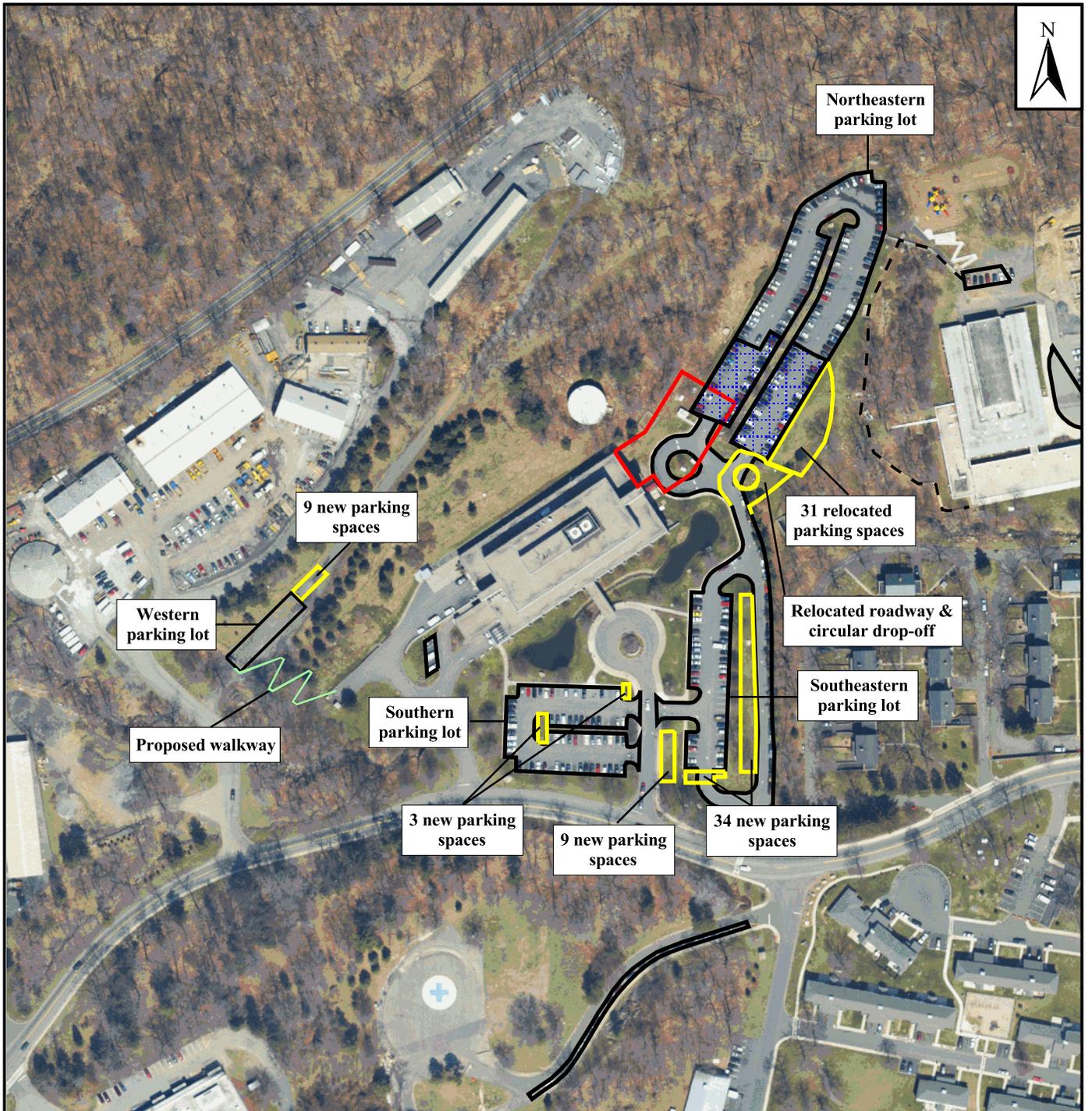
West Point proposes to construct an addition to the KACH and new parking areas, in conjunction with minor alterations to the existing hospital (**Figure 2**). The addition will contain a total of approximately 48,000 gsf of floor space, on three floors (each with approximately 16,000 sf), and will be situated on the east end of the existing hospital building. Some additional parking spaces will also be developed within existing parking areas adjacent to the hospital, and also just north and uphill from the hospital, for an estimated additional 24,400 sf (0.56 acres). Construction of the Proposed Action, or Project, is currently planned to begin in Fiscal Year (FY) 2011, and be completed in FY 2013.

The building expansion will consist of three floors, on a slab-on-grade foundation. The ground floor will consist of outpatient clinic areas designated for Optometry/Ophthalmology, Tricare (Army medical insurance provider) Services, Patient Administration, and shared support staff areas (such as lobby, public toilets, and conference and class rooms). The second floor will be primarily devoted to Primary Care clinics. Slightly more than half of the third floor will be designated for Orthopedics/Podiatry, and the remainder of the space on this floor will be for Physical Therapy. **Table 1** provides a summary of the square footage of the building expansion that will be devoted to different department services.

**Table 1. Net Area of Proposed KACH Expansion Designated by Hospital Service Department**

Department/Operational Name	Square Feet of Floor Space
<b>Hospital Department</b>	
Primary Care Clinic	9,161
Orthopedics/Podiatry	4,778
Optometry/Ophthalmology	4,011
Physical Therapy	2,273
Patient Administration	2,268
Shared Staff Support	2,107
Tricare Service Center	548
<b>Hospital Operations</b>	
Circulation	9,641
Wall and Partition	7,388
Mechanical	4,679
Half Areas <sup>1</sup>	735
Flexibility <sup>1</sup>	288
<b>Total Square Feet</b>	<b>47,877</b>

<sup>1</sup> Half Areas and Flexibility represent unallocated space that may be used for currently undefined or miscellaneous hospital needs.



**LEGEND**

- Proposed Parking Spaces
- Proposed Hospital Expansion
- Eliminated Parking Spaces
- Existing Parking
- ~ Proposed Walkway
- - - West Point Elementary School Nature Trail

Source: NYSDEC, Division of Fish, Wildlife, and Marine Resources. Derived from scans of USGS 7.5-minute quadrangle maps (DRG) 2000. DRGs used: West Point and Peekskill, New York. Approximate Project Location boundary.

90   0   90   180 Feet

30   0   30   60 Meters

**Figure 2. Proposed Hospital and Parking Areas, Keller Army Community Hospital Expansion, West Point, New York.**

Client: U.S. Army Garrison at West Point

Prepared By: NEA  
 Date: 4/10/06

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A portion of the space presently occupied by Ophthalmology and Optometry in Building 606 (in the Cadet Area) will be moved into the new hospital expansion area. The remaining portions of Building 606 space will be expanded for continued use by Cadets.

The architecture of the proposed facility will be compatible with the existing hospital architecture, which is an example of neo-brutalism (**Figure 3**). Although this contemporary building contrasts with the majority of notable building architecture of the West Point Main Post area, it is more reflective of the surrounding rugged, cliff-like terrain. The existing hospital is characterized by a massive, square building with external materials consisting of rough-textured grey concrete that, together with the windows, exhibit a strongly horizontal design.

The new building expansion will be connected to the east side of the existing hospital building and will be strongly similar to the existing hospital building. It will establish architectural and visual relationships with the existing hospital building, while introducing some new elements in response to contemporary issues. The south side of the new building expansion will consist of a stone base and a mostly continuous curtainwall of a concrete, or concrete-like material, with white spandrel glass and fritted glass, similar to the concrete solidness and windows of the existing building (**Figure 3**). Horizontal slit strip windows will be used in the new building to recall the existing building's horizontal cutout windows. At the southwest corner (near the junction with the existing building), a vertical element consisting of metal panels on the exterior with vertical slit windows, is designed to recall the rhythm of the vertical elements on the existing hospital building. Vertical elements also will be placed at the southeast and northeast corners to provide rhythmic continuity with these elements of other areas of the existing and proposed building.

An entrance sidewalk with covered canopy will link the main entrance on the south side of the new building to the new circular drop-off driveway. The exterior wall of the building adjacent along this canopied walkway will display the hospital clinic sign, and also provide benches to greet visitors. Along the east side of the new building expansion, the façade will consist of a combination of stone, curtainwall, and striated metal panel. The stone base materials will be expanded upward to become a wide column, appearing as a thick wall in the most visible part of the east side of the building. This stone façade will project a relationship to the older stone campus, as well as minimize the use of reflective building materials, when seen from distant views along the Hudson River Valley. Where this stone portion ends, a curtainwall with horizontal strip windows (similar to the south side of the building) will be used. At the northeast corner, the stair tower will have an exterior of striated metal panels that connect with the metal panel roof screen, establishing a continuity with the roof screen and pulling it into the eastern façade. The least visible side of the building, the northern side, will be constructed of more cost-effective materials and consist of striated metal panel and punched windows (EwingCole 2005a).

**Figure 3. Perspective View of Proposed Hospital Expansion (South Side Looking North).**



Source: EwingCole 2005a.

The building expansion will be designed in accordance with Military Handbook 1191, Department of Defense (DoD) Minimum Anti-Terrorism/Force Protection Standards for Buildings, which among other things requires that a 25-meter (stand-off) buffer be established surrounding the hospital expansion within which no parking is permitted. In addition, the Project was designed in compliance with the Uniform Federal Accessibility Standards/Americans with Disabilities Act Accessibility Guidelines (UFAS/ADAAG), among many other applicable design requirements and guidance for structural, mechanical, electrical, plumbing, communications, and fire protection and safety aspects.

Utility connections will be provided for the new hospital building expansion. Most of the required utilities will be extended from those serving the existing hospital building. Utilities for the new building expansion include: potable water, sanitary sewer, electricity, and telephone and fiber optic communications. The existing high pressure steam system that provides heat for the existing hospital building will be extended to serve the new hospital expansion; no expansion of West Point's steam plant will be required to accommodate this additional service. In addition, oxygen/medical air/medical vacuum functions will be extended from the existing hospital to the new hospital expansion.. Although a natural gas connection exists at the KACH, it is not currently used for any purpose, and no activation or expansion of West Point's natural gas service will be required to serve the new hospital addition.

New parking areas are proposed to offset the approximate 72 parking spaces that will be eliminated as a result of the new building expansion. A total of 86 new parking spaces are proposed as part of this Project, as listed below and depicted in **Figure 2**:

- 31 new/relocated parking spaces will be provided to the east of the hospital expansion project along the circular driveway that will also be relocated further to the east;

- 34 new parking spaces will be provided in the parking lot located to the southeast of the hospital, consisting of 31 spaces along the eastern access driveway and three spaces on the southern end of the parking lot;
- 3 new parking spaces will be provided in the parking lot located to the south of the hospital;
- 9 new parking spaces will be provided parallel to the hospital central access driveway south of the existing hospital building;
- 9 new parking spaces will be provided by extending an existing 22-vehicle parking area located uphill and north of the hospital approximately 150 feet to the west. Vehicle access to this area is currently provided via Garrard Road, located along Washington Road, approximately 350 feet west of the westernmost hospital (emergency vehicle) access driveway. In addition, a new pedestrian walkway leading from this parking area to the KACH is also proposed, and would consist of an approximately 350-foot-long, 5-foot-wide concrete walkway. This walkway would bridge the steep decline on the hillside between the parking area and the hospital with an alternating “switch-back” pattern consisting of ramps with intermittent series of steps.

The work areas and staging areas for equipment and materials storage during Project construction would be located in the level areas surrounding the proposed building expansion. Approximately 2 acres would be set aside for construction work and staging areas, the majority located within the existing parking area for the hospital. This would temporarily displace approximately 104 parking spaces from the parking lot located northeast of the KACH. To alleviate parking difficulty during the construction period, West Point will implement measures described in Section 3.9 (Traffic and Transportation).

Overall, the Project planning team has attempted to include the following goals in each step of the conceptual development and design process for the proposed hospital expansion:

- Provide outpatient care in a setting that is attractive and not “hospital-like,” adopting patient-focused design practices;
- Create an addition that maintains visual harmony with the existing hospital, yet projects a welcoming and reassuring image to patients and their families;
- Respond to patient population increases, operational changes, workload and staffing forecasts;
- Realign functional department relationships and working practices;
- Create a separate, identifiable entrance for ambulatory care patients;
- Minimize site disruptions and utility relocations during construction, within the constraints of budget, schedule, and program; and,
- Unify the existing building with the addition and function as a single facility (EwingCole 2005a).

## **1.5 ALTERNATIVES**

### **1.5.1 No Action Alternative**

The No Action Alternative consists of not implementing the Proposed Action or any alternative to the Proposed Action. The KACH would remain as is, and would not be upgraded or expanded. Implementation of the No Action Alternative would avoid Project-related environmental impacts, and also avoid the expenditure of additional finances required to plan and construct the Proposed Action.

However, implementing the No Action Alternative would result in the KACH continuing to function at a lower than ideal level of efficiency and operations. The consolidation of those services and departments whose functional spaces are currently divided (either in different areas of the same building or in different buildings) would not be able to occur. Accordingly, duplication of staff and equipment would continue as presently required to operate in these separate spaces. The operational and functional relationships within and among different hospital service areas, as well as the delivery of care and services to patients of the KACH would remain the same, instead of being improved.

The No Action Alternative would not fulfill the requirements imposed on West Point, and would not satisfy the purpose and need for the Project.

### **1.5.2 Alternatives Considered But Not Carried Forward**

Because the existing KACH is already located on its own discrete site that can accommodate additional building and parking lot expansion, alternative site locations (either within or outside of West Point property) did not seem to be a reasonable or cost-effective means of consolidating the KACH facilities and operations. Therefore, no site alternatives were seriously considered for this Project.

However, alternative Project designs within the existing KACH area were considered during initial Project planning efforts.

First, the proposed building expansion in relation to the existing KACH building was considered. Expansion to the north side of the hospital was not preferred because of the steep slope located immediately adjacent to the KACH. Significant earth movement (including possible rock blasting) would be required to construct a building addition on the north side of the hospital. Expansion to the south side of the hospital was not preferred due to the presence of two asphalt-lined ponds, the current “front entryway” to the hospital (including visual aspects), and associated vehicle and pedestrian access ways. These features would have to be disrupted and reconfigured if the building was expanded to the south. Expansion to the west side was not preferred due to the configuration of the hospital floor plan and functional relationships on the west side of the building, which currently support emergency vehicle approach and entry, and the helicopter landing pad. The need to maintain emergency access (ground and air) at all times (including during

construction) was an important requirement that made expansion on the west side of the hospital not the preferred option. The east side of the building was preferred due to the relative absence or ease in overcoming these types of constraints, as well as the opportunity to maximize functional relationships (based, in part, on proximity) between areas in the existing hospital and the new hospital expansion.

Next, at least five alternative footprint configurations were considered in the proposed location on the east side of the existing KACH. These varied slightly in total square footage, but were more varied in the amount of hillside excavation required and parking spaces displaced. A final design that avoided hillside excavation was preferred.

Finally, in addition to consideration of interior floor plans and materials, different exterior forms (including window shapes and vertical elements), materials (including exterior siding materials), roof alignments, and visual screening elements were considered during the course of planning. Based on the comments and contributions of the West Point Architectural Historian, a plan for the exterior materials of the proposed building expansion was developed that was both suitable and compatible with the existing KACH architecture, as well as for near and distant viewsheds of the KACH and West Point.

## **2.0 AFFECTED ENVIRONMENT**

### **2.1 PHYSICAL FEATURES**

#### **2.1.1 Geology**

West Point is located in eastern Orange County, New York, in the New England Upland Section of the New England Physiographic Province (United States Department of the Interior, Geological Survey [USGS] 1995). The general landscape consists of steep, rocky hillsides typically created through the physical and chemical alteration of metamorphic rocks. The bedrock is exposed in many areas at West Point, such as the steep rock faces and cliffs fronting the Hudson River. Portions of the slope bordering the Project are very steep, on the order of 25 to 45 percent (United States Department of Agriculture [USDA], Soil Conservation Service [SCS] 1981).

#### **2.1.2 Topography**

The topography within the proposed hospital building expansion area is generally level to slightly downward sloping from west to east, from an elevation of 293 feet to 280 feet above sea level (ASL). The northern edge of the proposed hospital expansion area is bordered by a very steep, vegetated hillside rising from 302 feet to approximately 400 feet ASL at a 2H:1V slope (e.g., for every two horizontal feet traversed, the slope of the hillside increases one foot higher). The proposed new parking area is situated uphill to the north of the KACH, along a relatively level linear area previously created on the hillside. Crows Nest Brook, a perennial stream, enters the site from the west side, flowing eastward near the south edge of the proposed work area. Another small intermittent stream lies east of the parking lot, outside of the proposed project area.

#### **2.1.3 Soils**

The Project area soil is mapped as sloping Hollis soils (HLC), which are generally shallow, well to excessively well drained, and gently sloped at 3 to 15 percent (USDA SCS 1981). The surface layer is loam, fine sandy loam, or sandy loam that is commonly gravelly, having formed in glacial till deposits of mainly schist, gneiss, or granite (USDA SCS 1981). Permeability is moderate or moderately rapid with medium to rapid runoff. The soil is susceptible to draught with high erosion potential after cultivation (USDA SCS 1981). These soils are usually poor for crops or timber due to poor moisture retention, which also limits suitability for urban uses because of dryness and shallowness over bedrock (USDA SCS 1981).

A geotechnical study completed for the Project revealed that the subsurface material generally consists of four strata (Langan Engineering and Environmental Services 2005). Descending from the surface, these strata consist of 5 to 8 inches of topsoil, 2 to 9 feet of fill, and 21 to 40 feet of glacial till, all overlying gneissic bedrock. The topsoil consists

of brown silt with root material and trace amounts of sand and gravel. In the second stratum, the fill material, consists of sand with varying amounts of silt, gravel, and clay, and some samples also contained amounts of wood and brick. The third stratum, the glacial till, consists of sandy gravel with varying amounts of silt, and represents the native soil for the site. These layers overlay gneissic bedrock that occurs at depths of 21 to 40 feet. Groundwater was encountered in all borings except one boring, at depths ranging from 6 to 13 feet below the surface. Groundwater was highest (closest to the surface) in the sloped northern portion of the site, and decreased in general with the existing surface grade.

Laboratory testing revealed that the native soils at the Project site are considered slightly corrosive to metal piping or conduit (Langan Engineering and Environmental Services 2005).

## **2.2 WATER RESOURCES**

### **2.2.1 Groundwater**

No Federally-designated Sole Source Aquifers exist within or near the Project area (Olcott 1995, United States Environmental Protection Agency [USEPA] 2003a). Additionally, no state-designated Primary or Principal Aquifers exist within the Project area (Stegville 1999).

West Point relies on surface water sources, rather than groundwater, for most of its potable water supply. The only productive alluvial aquifers at West Point are associated with the Hudson River and Popolopen Brook, and these generally are shallow, water table aquifers (United States Military Academy [USMA] 2003). There are no water wells located at the proposed Project area.

A geotechnical investigation of the Project site conducted in 2005 indicated that groundwater depths ranged between 6 feet and 13 feet in the soil boring locations in which groundwater was encountered (Langan Engineering and Environmental Services 2005).

### **2.2.2 Surface Water**

The only naturally occurring surface water in the vicinity of the Project is Crows Nest Brook. Crows Nest Brook is a perennial stream that flows from west to east just south (in front) of the existing hospital. In the vicinity of the hospital, two ponds and a system of buried stormwater lines convey water flow eventually to Crows Nest Brook (**Figure 4**). A portion of the brook that flows through the Project area is confined to a buried culvert from the west side of the hospital's western entrance road to the east side of the hospital's eastern access road. The natural channel of Crows Nest Brook in the vicinity of KACH



**LEGEND**

- Hospital Addition
- NWI Wetlands (PUBHx)
- Streams
- Storm Sewer Line
- Storm Inlet

Source: GIS data layers and aerial provided to Northern Ecological Associates, Inc. by USAG West Point, November, 2002 & 2005. U.S. Fish and Wildlife, National Wetlands Inventory, West Point Quad, 1990.

100 0 100 200 Feet

30 0 30 60 Meters

**Figure 4. Surface Water Drainage in the Vicinity of the Keller Army Community Hospital Expansion West Point, New York.**

Client: U.S. Army Garrison at West Point

Prepared By: NEA  
NORTHERN ECOLOGICAL ASSOCIATES, INC.

Date: 11/01/05

p:/gis/projects/apr/ga-300\_keller\_hospital.apr

is narrow with deep banks, with substrate consisting of cobblestone, boulder and gravel, and a relatively steep gradient. The stream banks are eroding in several areas due to occasional but common high-energy flow conditions, and West Point is planning a series of streambank stabilization projects (unrelated to this Project) for areas along this stream.

Crows Nest Brook originates from several small tributaries that drain Crows Nest Mountain, immediately northwest of the Project area. Crows Nest Mountain is part of the Crows Nest Watershed, which drains the northeastern portion of the West Point Military Reservation. Crows Nest Brook discharges into the Hudson River approximately 2,400 feet (0.45 mile) east of the Project area.

Crows Nest Brook is classified as a Class C stream by the New York State Department of Environmental Conservation (NYSDEC). It is designated as having a level of water quality that is suitable for primary and secondary contact recreation, and fish propagation and survival (NYSDEC 1996). Brown trout are known to spawn in Crows Nest Brook near Target Hill Field, west of the Hudson River confluence and east of Lee Road. Accordingly, under West Point's "good stewardship" program, West Point conducts all activities located in the vicinity of this portion of Crows Nest Brook (located east of Lee Road) with higher sensitivity than the state classification mandates (i.e., as if the stream classification was C(ts) [trout spawning]). However, the Project area is approximately 1,600 feet upstream from this portion of Crows Nest Brook, and to the west of Lee Road.

The two asphalt-lined ponds located in front of the existing hospital receive and serve to detain stormwater from the slope to the northwest of the existing hospital, the hospital buildings, and surrounding parking areas. The westernmost pond/detention area flows into the easternmost pond/detention area, which then discharges water back into Crows Nest Brook via a short buried pipe (**Figure 4**).

### **2.2.3 Wetlands**

Based on an inventory and mapping of West Point wetlands conducted by the United States Army Corps of Engineers (USACE), New York District in 1993 (USMA 2003), National Wetland Inventory (NWI) maps (United States Department of the Interior [USDI], Fish and Wildlife Service [USFWS] 1990), and New York State Freshwater Wetlands maps (NYSDEC 1987), the only state- or Federally-mapped wetlands located within or immediately adjacent to the Project area are the two asphalt-lined ponds immediately south of the hospital (**Figure 4**). These are characterized by the USFWS as palustrine, unconsolidated bottom (PUB) wetlands. Although these features are mapped as NWI Wetlands, they may not be considered regulated or jurisdictional resources, due to their origination, asphalt substrate, and present use.

### **2.2.4 Floodplains**

The Project is located well above and outside of the 100-year floodplain of the Hudson River (Environmental Systems Research Institute [ESRI] and Federal Emergency

Management Agency [FEMA] 2004). The elevations at the proposed Project site are approximately 293 feet to 280 feet ASL, whereas the currently accepted 100-year floodplain base flood elevation is 8 feet (Butkus 2004).

However, flooding has been an occasional problem at the West Point Elementary School, located just east of the KACH. Flooding has been caused by the sheet flow of water from storm events and rapid snow melt, which flows across the existing eastern parking lot of the KACH, and spills over the eastern edge of this parking lot, down slope to the West Point Elementary School property. West Point has recently resolved this flooding problem in the school area through drainage improvements performed during the construction of the new gymnasium and elementary school additions, including the installation of a new drainage channel at the northwest corner of an existing school parking area, widening and deepening of existing drainage channels, and enhancement of stormwater drains and systems in the vicinity of the school. Roadside drainage ditch/gutter systems on Barry Road were also improved. Improved drainage was also performed as a separate project at the KACH parking lots. Further work to manage the water flowing during periods of heavy rainfall from the KACH parking lots to the elementary school vicinity could still be performed. However, these improvements have substantially reduced flooding problems at the elementary school and middle school.

Additionally, the banks of Crows Nest Brook are eroding in several areas due to occasional but common high-energy flow conditions, and West Point is planning a series of streambank stabilization projects (unrelated to this Project) for areas along this stream

## **2.3 VEGETATION AND WILDLIFE**

### **2.3.1 Common Vegetation and Wildlife**

Vegetation in the Project area consists primarily of open, maintained grass or open area located adjacent to the existing hospital, parking areas, and the pathway on the slope to the northeast of the hospital where additional parking is proposed. Although these areas are likely used by Canada geese (*Branta canadensis*) and common bird species such as American robins (*Turdus migratorius*), most of the Project area can be characterized as an open, maintained monoculture that does not provide a significant source of food, cover, or other habitat to wildlife species. No tree clearing is anticipated to be required to construct the Project.

Common wildlife species that are likely to occur in the forested areas adjacent to the Project area include those tolerant of human activity such as the eastern chipmunk (*Tamias striatus*), gray squirrel (*Sciurus carolinensis*), white-footed mouse (*Peromyscus leucopus*), opossum (*Didelphis virginianus*), raccoon (*Procyon lotor*), striped skunk (*Mephitis mephitis*), and white-tailed deer (*Odocoileus virginianus*). In addition, many species of birds commonly use the forested and edge habitats areas that occur around the Project area.

Crows Nest Brook is known to support a variety of aquatic species including the eastern blacknose dace (*Rhinichthys atratulus*), American eel (*Anguilla rostrata*), Appalachian brook crayfish (*Cambarus bartonii*), and northern two-lined salamander (*Eurycea bislineata*) (Beemer 2005).

### **2.3.2 Special Natural Areas**

The Crows Nest Special Natural Area occurs to the northwest of the Project area (USMA 2003). The southeastern boundary of the Crows Nest Special area is approximately 400 feet uphill from the Project area boundary. The Crows Nest Special Natural Area is a rocky summit overlooking the Hudson River and lands to the south and east. It has historic military, rare plant, and visual and aesthetic significance (USMA 2003).

### **2.3.3 Threatened and Endangered Species**

Based on surveys and work described in West Point's INRMP, 128 plant and wildlife species with special protection status (including Federal- or state-listed threatened or endangered species, or state-listed species of special concern) have been documented on the West Point installation property (USMA 2003). These include three (3) mammal species, 19 bird species, six (6) reptile species, four (4) amphibian species, two (2) fish species, one (1) insect species, 14 rare or otherwise noteworthy odonates (dragonflies and damselflies), 14 rare butterflies, two (2) moth species, and 63 rare plants (USMA 2003). Based upon West Point's Geographic Information System (GIS) data layers regarding the current and/or historic occurrence of species with special protection status, none of the listed plant or animal species are known to occur in the vicinity of the Project area.

Although the rare animal GIS data layer does not identify the Project area as occurring within known locations of the state-listed threatened timber rattlesnake (*Crotalus horridus*), West Point does identify the Project area as occurring within potential timber rattlesnake habitat. The timber rattlesnake inhabits heavily wooded terrain and hibernates in dens located on wooded or partially wooded rocky hillsides with southern exposure (Conant and Collins 1991). Due to the lack of these habitat types in the vicinity of the Project area, the Project area would be considered to be located within timber rattlesnake transient habitat, where individuals may be encountered traveling to and from foraging habitats and denning/basking habitats.

## **2.4 CULTURAL RESOURCES**

A wide variety of cultural resources have been identified at West Point, including buildings, structures, districts, objects, and sites. These cultural resources can be divided into three broad, inter-related categories: architectural resources, archaeological sites, and cultural landscapes. Architectural and archaeological resources are discussed below. Cultural landscapes are discussed in Section 2.5 (Visual Resources).

Architectural resources at West Point have undergone extensive investigation, including, but not limited to, the initial nomination of the West Point National Historic Landmark District (NHL) in 1960; a comprehensive Historic American Building Survey (HABS)/Historic American Engineering Record (HAER) architectural inventory and assessment of West Point's built environment in 1984, with subsequent revision and amendments in 1998; and a revised NHL nomination submission in the year 2003 to update the number of properties within the NHL and determine contributing and noncontributing properties to the NHL (Tompkins *et al.* 1984, Nolte and Cinquino 2000, and Prior *et al.* 2000, as cited in Geo-Marine, Inc. 2001).

The boundaries of the NHL are particularly important to understanding the nature of architectural resources within West Point. The NHL boundaries enclose an area of approximately 2,500 acres, including the Project area (Geo-Marine, Inc. 2001). More than 600 buildings or structures are located within the NHL at West Point. Although each of these buildings or structures have not yet undergone conclusive evaluations to determine whether they are individually eligible for listing on the National Register of Historic Places (NRHP), additional investigations (as part of the revised nomination of the NHL at West Point) have indicated that 328 of these 600 buildings and structures may be contributing elements to the NHL (Geo-Marine, Inc. 2001). In addition, 227 buildings or structures were identified as possessing preservation significance and designated Category I or II structures on the basis of the HABS/HAER inventory conducted by the National Park Service (Tompkins *et al.* 1984).

A number of archaeological excavations and surveys have been conducted within the boundaries of West Point, including, but not limited to, early investigations in the 1920s, 1930s, 1960s, and 1970s by both avocational and academic individuals and institutions (Geo-Marine, Inc. 2001). From the 1980s through the present, a series of formal cultural resource investigations were completed at various project-specific locations within West Point, including investigations for the Stony Lonesome II Housing Facility, the Queensboro Ironworks, the West Point Timber Harvesting program, and various other construction projects, as well as predictive model testing at a variety of locations within West Point by the State University of New York at Albany (Geo-Marine, Inc. 2001). As a result of these archeological investigations, 150 archaeological sites have been identified within West Point (Geo-Marine, Inc. 2001). Prehistoric site types span the range of prehistoric time periods from the Archaic (circa [ca.] 9,000 before present [B.P.] to 3,700 B.P.) to the Woodland Period (terminating ca. 1600 Anno Domini [A.D.]). Historic site types include 18<sup>th</sup> and 19<sup>th</sup> century historic residential, military, and industrial sites.

Several cultural resource management plans have been completed for West Point. These include the HABS/HAER inventory (Tompkins *et al.* 1984); a survey of family housing quarters which includes preservation standards and guidelines (Mariani and Associates, Architects 1987); and a historic resources management plan, which includes locations of prehistoric and historic properties, drawings, and preservation and maintenance guidelines for maintaining significant properties, and was completed in association with the Advisory Council of Historic Preservation (ACHP) (USMA 1988). A preservation

plan for Revolutionary War period sites located near the Stony Lonesome II Housing Facility also included preservation plans for maintaining Redoubts 1 and 2 and an historic building survey for the Queensboro Ironworks also included a management plan for maintenance (Benton 1995). A management plan for cultural resources, including prehistoric and historic resources within West Point's boundaries, was completed in 1995 (The Research Foundation at State University of New York-Albany 1995) and included a predictive model identifying areas of high, medium, and low archaeological sensitivity for West Point.

West Point has developed an Integrated Cultural Resources Management Plan (ICRMP) (Geo-Marine, Inc. 2001). The ICRMP establishes an installation-specific cultural resources management program to allow West Point to integrate the management of its cultural resources within mission activities, including processes for the ongoing identification and protection of archaeological and architectural resources and historic landscapes, for external consultation and coordination with non-installation regulatory agencies and other interested parties, and for implementation of standard operating procedures (SOPs) for cultural resource actions (Geo-Marine, Inc. 2001). The ICRMP is also designed for use with West Point's Installation Design Guide, Historic Landscape Management Plan, and zone management system to further protect West Point's cultural resources (Design Collaborative, Inc. *et al.* undated, Geo-Marine, Inc. 2001, Loechl *et al.* 2002).

Based on a review of the available documentation summarizing known architectural and archaeological resources for West Point, the Project area does not contain any previously identified cultural resources. Architecturally, the existing KACH facility is considered a modern facility that is not eligible for listing individually on the NRHP, is a non-contributing element of the West Point NHL, and is included in the HABS/HAER survey of West Point as a Zone 4/Category 4 building (an inventoried building with little or no current historic value) (Tompkins *et al.* 1984, Geo-Marine, Inc. 2001). No previously identified archaeological sites have been recorded for the Project area, or in the immediate vicinity of the existing KACH facility or Washington Road, based on the results of recent archaeological surveys (Hanley *et al.* 2003, Geo-Marine, Inc. 2004, Alexander Archaeological Consultants undated). Furthermore, previous construction of the existing KACH facilities between 1974 and 1977, including the KACH, existing parking lots and access roads, and surrounding grounds that comprise the hospital envelope, would have affected the integrity of any existing archaeological resources, such that the Project is located in an area that now has little or no potential for containing intact previously unidentified cultural resources.

A number of cultural resources are located outside of, but in the general vicinity of the Project. These cultural resources include architectural resources such as: the West Point School complex (Buildings 705 and 705A) and residential buildings (Buildings 421 and 422) along the Bailey Loop that are located southeast of the Project within the North Support and Band Quarters communities, respectively; residential buildings along the Moore Loop that are located south of the Project within the Grey Ghost Community; and, a number of buildings that are located west and north of the Project within the

Washington Gate and North Support communities, respectively. Several of these buildings have been determined individually eligible for listing on the NRHP and/or contributing elements of the West Point NHL, and/or have been included in the HABS/HAER inventory for West Point (see **Table 2**). None of these architectural resources will be physically impacted by the Project; see Section 2.5 (Visual Resources) for a discussion of any potential impacts to viewsheds, aesthetics, or historic landscapes that may be associated with these architectural resources.

Additional cultural resources that are located outside of, but in the general vicinity of, the Project include one archaeological site in the vicinity of Lee Gate, which will not be physically impacted by the Project. See Section 2.5 (Visual Resources) for a discussion of any potential impacts to viewsheds, aesthetics, or historic landscapes that may be associated with these archaeological resources.

## **2.5 VISUAL RESOURCES**

The various visual resources associated with West Point have been identified for their contributions to landscapes of historical, architectural, aesthetic, and natural significance. These visual resources consist of: historic landscapes associated with the NHL at West Point; historic feature landscapes associated with individual historic structures that are either nominated individually for the NRHP or identified as contributing elements to the NHL; aesthetic landscapes associated with a variety of communities within the Main Post/Academic Area of West Point; and, natural landscapes associated with the Hudson Highlands Scenic Area of Statewide Significance (HHSASS).

West Point has developed a number of management plans that identify and protect the visual resources associated with these landscapes, including the *Historic Landscape Management Plan for the U.S. Military Academy at West Point*, the *United States Military Academy Installation Design Guide*, the *Identification and Analysis of the Historic Built Environment and Viewsheds, Cadet Zone*, and the *U.S. Military Academy Perimeter Fence Line Views Analysis, West Point, New York* (Loechl *et al.* 2002, Halin *et al.* 2003, Loechl and Tooker 2003).

### **2.5.1 Visual Resources Within the Project Location**

The Project is located within the aesthetic landscape associated with the North Support Community of West Point, the historic and/or scenic landscapes associated with Washington Gate and the Washington Road transportation corridor, and the natural landscape associated with the Contemporary West Point Military Academy Subunit of the HHSASS (Design Collaborative, Inc. *et al.* undated, NYSDOS 1993). The visual resources associated with these landscapes, which are visible from a wide variety of visually sensitive areas, are discussed in greater detail below.

**Table 2. Architectural Significance of Buildings in the Vicinity of the Project**

<b>Building Number</b>	<b>Building Name</b>	<b>Current Building Use/Purpose</b>	<b>Recommended as NRHP-Eligible</b>	<b>Recommended as a Contributing Element to the West Point NHL</b>	<b>HABS/HAER Inventoried Structure</b>
900	Keller Army Community Hospital	Hospital	No	No	Yes (Category IV)
855	District Transformer	Transformer	No	No	No
775	Elevated Water Storage Tank	Elevated water storage	No	No	Yes (Category IV)
705A	Dependent's Grade School	Elementary School Education	No	No	Yes (Category IV)
705	Dependent's Grade School	Middle School Education	Yes	Yes	Yes (Category IV)
421 & 422	Family Housing-NCO	Family Housing	Yes	Yes	Yes (Category III)
301-316	Family Housing	Family Housing	No	No	No
759	NCO Clubhouse	NCO Club	No	No	No
813	Cadet Supply General Storehouse	Storage	No	No	Yes (Category IV)
845	Fixed Laundry	USMA Laundry	Not evaluated	Yes	Yes (Category IV)
907	General Purpose Warehouse	Storage	No	No	No
917	General Storehouse	Storage	No	No	No
702	General Storehouse	Storage	No	No	Yes (Category IV)
913	General Storehouse	Storage	No	No	Yes (Category IV)
902	Water Tank	Water Tank	No	No	No
901	Facilities Engineers Facility	Facility Engineers Facility	No	No	Yes (Category IV)
905	Facilities Engineers Facility	Facility Engineers Facility	No	No	Yes (Category IV)
851	Flammable Materials Storage	Facility Engineers Storehouse	No	No	Yes (Category IV)
906	General Purpose Warehouse	Storage	No	No	No
733	Facilities Engineers Facility	Facility Engineers Facility	Yes	Yes	Yes (Category IV)
743	Facilities Engineers Storehouse	Storage	No	No	Yes (Category IV)
904	Storage Shed	Storage	No	Unknown	No

Source: Tompkins *et al.* 1984, Geo-Marine, Inc. 2001.

The aesthetic landscape of the North Support Community, one of 22 small, compact communities within the Main Post/Academic Area of West Point, has been established or defined over time based on use, architecture, or topography, resulting in individualized visual characteristics or features that contribute to the unique aesthetic landscapes of each community (Design Collaborative, Inc., *et al.* undated). The North Support Community is located within portions of the Community Support Zone and the Industrial/Field Training/Recreation Zone in the northwestern portion of the West Point NHLD, is highly visible from Washington Road after entering Washington Gate, and contains various support facilities, including the KACH facility and the West Point Elementary School Complex, as well as a number of maintenance and storage buildings and structures. The majority of the buildings within this community are not considered to be historically significant and the community is not considered to create any lasting images of West Point. However, two North Support Community buildings that are in the immediate vicinity of the Project (Building 705 – West Point Middle School and Building 733 – Facilities Engineers Facility), have been identified as individually eligible for listing on the NRHP, contributing elements of the West Point NHLD, and Category IV structures in the HABS/HAER inventory (Design Collaborative, Inc., *et al.* undated, Geo-Marine, Inc. 2001, Northern Ecological Associates, Inc. 2003).

Visual resources associated with the North Support Community vary, with nicely landscaped and well-maintained grounds adjacent to the KACH and the West Point School Complex, but poorly developed landscapes adjacent to maintenance and storage buildings that are disorganized and cluttered with equipment and debris (Design Collaborative, Inc., *et al.* undated). Features that contribute to the visual resources of the North Support Community include appropriate siting and parking lot lighting standards at the hospital, a pedestrian bridge connection to the hospital over streams and water basins, well-designed playgrounds north of the elementary school parking lot, the West Point Elementary School Nature Trail, dramatic topography with rugged hills, flatlands, streams and forest backdrops, and beautiful views and vistas from locations at the higher elevations in front of some supply and storage facilities, and from long paths within the community (Design Collaborative, Inc., *et al.* undated).

**Keller Army Community Hospital  
(Front/South Side)**



**Keller Army Community Hospital  
(Southeast Side)**



**Building 705A – West Point Elementary School**



**North Support Community  
(Coaches Housing)**



**North Support Community  
(Band Housing, Bailey Loop)**



In addition, Washington Gate is a historic property that has undergone only minor alterations since its construction during the World War II era (Geo-Marine, Inc. 2004). Washington Road, which provides the only vehicular access to the KACH, is a critical historic and scenic transportation corridor within West Point.

**Representative Views of Washington Road in Vicinity of the Keller Army Community Hospital**



**Representative Views of Washington Road in Vicinity of the Keller Army Community Hospital**



The Project is also located within the HHSASS, which is included in the state-designated Hudson River Coastal Zone as determined by the New York State Department of State (NYSDOS) Coastal Management Program (CMP) (NYSDOS 1993). The Project is more specifically located within the northern section of the Contemporary West Point Military Academy Subunit, which is one of 28 subunits comprising the HHSASS, which have been determined based on the combined aesthetic values of landscape character, uniqueness, public accessibility, and public recognition (NYSDOS 1993).

The Contemporary West Point Military Academy Subunit of the HHSASS contains contemporary development at West Point that is north of the “historic core” (NYSDOS 1993). An evaluation of the location, scenic components, uniqueness, public accessibility, and public recognition of the landscape associated with this subunit indicated that, in general, the subunit “is not distinctive due to its limited variety of features, common style of buildings, and repetitive ordered landscape” (NYSDOS 1993). However, this subunit makes an important contribution to the HHSASS because it serves as a link between surrounding subunits with distinctive scenic qualities, including the West Point Military Academy Subunit to the southeast and the Storm King Subunit to the north, particularly when viewed from the Cold Springs, Garrison Four Corners, and Constitution Island subunits on the eastern side of the Hudson River (NYSDOS 1993).

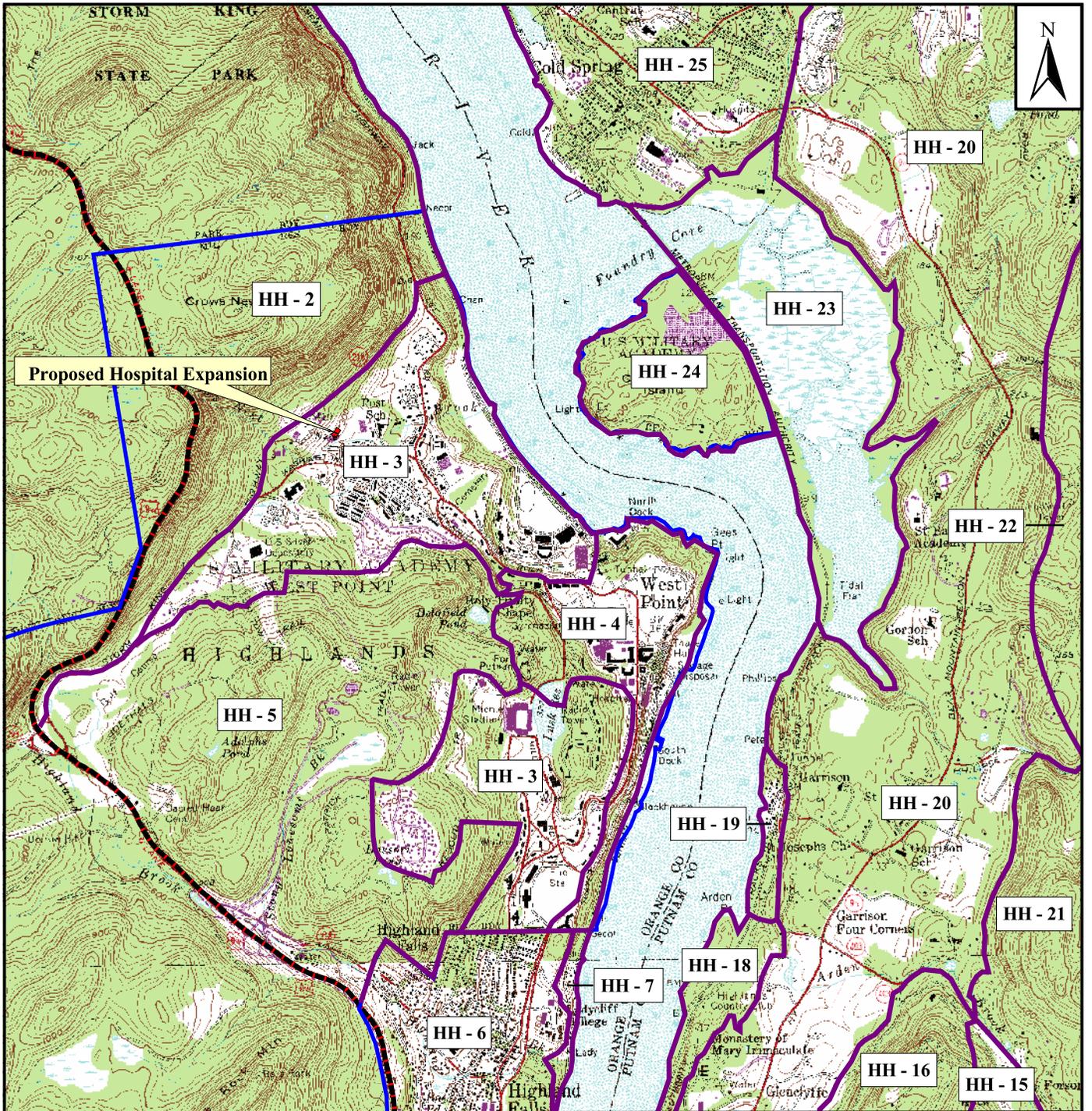
Visual resources in the Contemporary West Point Military Academy Subunit are associated with a cultural landscape that “exhibits a consistent institutional quality”

(NYSDOS 1993). This subunit contains a mix of scenic components, ranging from structures that are “well designed and well sited on tree-lined streets” to structures that are “massive with little articulation, or are sprawling with little visual relevance to, the military complex and its historic structures [that are present] in the adjacent West Point Military Academy Subunit” to the southeast (NYSDOS 1993). Some of these contemporary structures, such as Michie Stadium, provide “visual interest to the subunit” (NYSDOS 1993). Other massive contemporary academy structures are considered “discordant features” in the landscape that “detract from the scenic qualities of the adjacent West Point Military Academy Subunit” (NYSDOS 1993).

### 2.5.2 Visual Resources Within Views of the Project Location

As mentioned above, the Project location is also within the viewsheds of, and potentially visible from, a wide variety of other visually sensitive areas in the vicinity of the Project, including:

- A variety of individual historic structures that are either individually eligible for listing on the NRHP and/or have been identified as contributing elements to the NHLD (see **Table 2** in Section 2.4 [Cultural Resources]) (Tompkins *et al.* 1984, Geo-Marine, Inc. 2001);
- Portions of two historic landscapes associated with the West Point NHLD (the historic road and circulation landscape associated with Washington Road and views from scenic overlooks associated with Crows Nest Mountain and U.S. Route 9W (particularly prominent within the public overlook located on the south side of Crows Nest Mountain), and from the Hudson River) (Loechl *et al.* 2002, Halin *et al.* 2003, Loechl and Tooker 2003, Cubbison 2005);
- Portions of four additional aesthetic communities within West Point: the Band Quarters (which is also a historic family housing neighborhood), Grey Ghost, and Washington Gate Industrial communities and the new Worth Place Coaches Housing Neighborhood (Design Collaborative, Inc., *et al.* undated, Cubbison 2005);
- Portions of six additional subunits of the HHSASS (the Cold Spring, Constitution Island, Garrison Four Corners, West Point Military Academy, Highlands, and Storm King subunits (see **Figure 5**) (NYSDOS 1993); and,
- Vantage points within various recreational areas and along transportation routes, including Black Rock Forest (a public access recreational and hiking facility), Storm King State Park, the Crows Nest Mountain Natural Area, U.S. Route 9W (a designated New York State Scenic Road under the NYS Scenic Byways Program), U.S. Route 9W’s public overlook on the south side of Crows Nest Mountain, and Storm King Highway/NYS Route 218 (a designated NYS Scenic Road under the NYS Scenic Byways Program and a property listed on the NRHP) (USACE 2002, New York State Department of Transportation [NYSDOT] 2005, New York State Office of Parks, Recreation, and Historic Preservation [NYSOPRHP] 2005, Scenic Hudson 2005, Wildernet 2005).



**LEGEND**

-  Hudson Highlands Scenic Area of Statewide Significance
-  Subunit Boundary
-  Coastal Boundary
-  Proposed Hospital Expansion
-  West Point Boundary

2000 0 2000 Feet



300 0 300 600 Meters



**Figure 5. Subunits of the Hudson Highlands Scenic Area of Statewide Significance, West Point, New York.**

Client:  U.S. Army Garrison at West Point

Prepared By:  NEA

Date: 11/01/05

Source: NYSDEC, Division of Fish Wildlife, and Marine Resources. Derived from scans of USGS 7.5-minute quadrangle maps (DRG) 2000. DRGs used: West Point and Peekskill, New York. GIS data layers provided to Northern Ecological Associates by USAG West Point November 2002 & 2005

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In recognition of the wide variety of visual resources associated with the Project area, West Point undertook a visual assessment of the proposed Project (USMA 2005). Because many of the viewsheds are overlapping, the visual assessment included vantage points representative of the visually sensitive areas identified above. Results of this Project-specific visual assessment indicated that the Project would be generally screened from internal and external views of the Project from the south, southwest, and west by steeply sloping topography, natural vegetation, and/or formal landscaping, including views from various vantage points and visually sensitive areas within West Point such as the historic landscape associated with Washington Road, the Grey Ghost Community, and the Highlands Subunit of the HHSASS (USMA 2005).

Additional results of this Project-specific visual assessment identified six representative historic views of West Point that would contain the Project (see the visual assessment posters provided in **Appendix A**). Specifically, the Project would be located within views of West Point from: the west and north as represented by views from the U.S. Route 9W Scenic Overlook; and from the northeast, east, and southeast as represented by views from the Cold Spring Foundry, Constitution Island, the Boscobel Restoration, St. Basils Academy, The Hastings Center, and Trophy Point located from north to south, respectively along the Hudson River corridor (USMA 2005). These six representative historic views are summarized below.

### **2.5.3 Views from West and North of the Project**

Views from west of the Project are represented by the view from the U.S. Route 9W Overlook, which is located approximately 911 meters (0.57 miles) north of the Project location (USMA 2005). This representative vantage point was selected because it is a viewing point that is frequently utilized by members of the local communities and the general public. Similar views of the Project from the west and north would be visible from vantage points within Black Rock Forest, Storm King State Park, and the Crows Nest Mountain Natural Area, as well as from various vantage points traveling along a 5.42-mile portion of U.S. Route 9W, which is designated a New York State (NYS) Scenic Road, under the NYS Scenic Byways Program, and along a 5.83-mile portion of NYS Route 218 (Old Storm King Highway), which is a designated NYS Scenic Road under the NYS Scenic Byways Program and listed on the NRHP (NYSDOT 2005, NYSOPRHP 2005).

Views represented by this vantage point generally contain the northern portion of West Point, which include the Project location, the extant KACH facility, various other buildings, and mature wooded vegetation in the foreground and middle ground, and the Hudson River and Constitution Island in the background.

### **2.5.4 Views from East of the Project**

Views from east of the Project are represented by the views from: the Cold Spring Foundry (approximately 2,757 meters [1.71 miles] to the northeast); Boscobel

Restoration (approximately 3,237 meters [2.01 miles] to the northeast); Constitution Island (approximately 1,494 meters [0.93 miles] to the east), St. Basils Academy, The Hastings Center (approximately 3,328 meters [2.07 miles] to the east), and Trophy Point (approximately 1,500 meters [0.93 miles] to the southeast) (USMA 2005). These representative vantage points were selected because they are viewing points that are frequently utilized by members of the local and/or West Point communities and the general public. Similar views of the Project from the northeast, east, and southeast would be visible from the large number of additional vantage points and visually sensitive areas. Such areas include the Band Quarters Community and the West Point Military Academy Subunit of the HHSASS within the Main Post/Academic Area of West Point. Additionally, the Project is visible from residences along the eastern side of the Hudson River, historic properties on Constitution Island, and historic properties such as the Cold Spring Historic District, numerous structures listed individually on the State and National Registers of Historic Places, the Hudson Highlands Multiple Resource Area, and portions of the Cold Spring, Constitution Island, and Garrison Four Corners subunits of the HHSASS (NYS DOS 1993).

Views represented by these vantage points generally contain the eastern portion of West Point, which include the Hudson River and waterfront areas in the foreground, various buildings and mature wooded vegetation and landscaping in the middle ground, against the backdrop of the western Hudson Highlands. The front (south) and side (east) elevations of the Project would be present within all of these views, but would vary in visual prominence, depending on the angle and elevation of the line of sight from visually sensitive areas to the Project (see **Appendix A**).

## **2.6 UTILITIES**

The types of utilities and utility infrastructure addressed in this section consist of potable water, sanitary sewer, stormwater drainage, electricity, heating and cooling, oxygen/medical air/medical vacuum, and communications systems at West Point. The proposed Project would require service from each of these utility systems.

### **2.6.1 Potable Water**

Potable water for supplying the Main Post/Academic Area of West Point consists of surface water obtained from the Popolopen watershed and through an agreement with the Palisades Interstate Park Commission for additional supply during the high demand period between October 16 and May 31 each year (USMA 2003). The Main Post/Academic Area of West Point has two treatment plants for raw water: the Stony Lonesome Treatment Plant, which supplies the three low pressure districts, and the Lusk Treatment Plant, which supplies the two high pressure water districts. The KACH is located in one of the high pressure water districts. After treatment, water is distributed throughout the Main Post/Academic Area through a network of 4- to 24-inch-diameter buried water mains and lines (USMA 1998). In 1996, the average daily treated water demand in the Main Post/Academic Area was approximately 2.3 million gallons per day

(mgd) (USMA 2003). The existing KACH uses approximately 10,000 gallons per day (gpd) of potable water.

The existing hospital facility is served by two 8-inch combined fire and domestic water services, located at the east and west ends of the existing building. The existing services are each equipped with a 4-inch domestic water meter and a pressure-reducing valve to reduce domestic water pressure from 127-psi to 80-psi, without backflow preventers. Hot water is currently provided by two, 1000-gallon, 20-psi steam heat, hot water generators and a 100-gallon, 45kW electric storage water heater used during times without steam service (EwingCole 2005a).

### **2.6.2 Sanitary Sewer**

Sanitary sewer lines are separate from the storm water drainage system in the Main Post/Academic Area at West Point. The sanitary sewer system consists of buried sewer collection and main lines, pumping stations, and the Target Hill Wastewater Treatment Plant. Secondary treated wastewater is discharged from this 2 mgd-capacity facility to the Hudson River (USMA 2003). The existing KACH generates approximately 9,000 gpd of wastewater.

The sanitary drainage and interior vent piping for the hospital addition will be designed in accordance with the *International Plumbing Code, State of New York Edition*. A new 6-inch building drain in the new addition will connect to the existing sanitary sewer onsite.

### **2.6.3 Stormwater Drainage**

Stormwater drainage for the Main Post/Academic Area is accommodated through open ditches, vegetated swales, paved open channels, and buried stormwater pipes (USMA 2003). Stormwater drainage is generally directed via gravity flow to discharge to the Hudson River.

At the hospital site, stormwater drainage is managed through a system of buried pipes and two asphalt-lined ponds located in front of the existing hospital. This system is tied into Crows Nest Brook, which eventually discharges to the Hudson River approximately 2,400 feet (0.45 miles) east of the Project area.

### **2.6.4 Electricity**

Electricity at the West Point Main Post/Academic Area is supplied by Orange and Rockland Utilities, Inc. (USMA 2003). Electricity is distributed through the Main Post/Academic Area via the Main Power Plant and several substations, primarily through buried lines in most of the Main Post/Academic Area and in the vicinity of the Project area. Two feeder fused switches originating from Substation 'C' serve dual radial 15 kilovolt (kV) feeders (4#4/0 EPR) that comprise a 13.8kV underground campus circuit. This circuit serves the existing hospital, the U.S. Mint building, and community housing.

Emergency backup power for the hospital is provided by two indoor 350kW, 437kVA (stand-by), 480/277V diesel generators, located in the ground floor generator room in the east side of the building. The existing KACH uses an average of approximately 11,000 kilowatt hours (kWh) per day of electricity.

### **2.6.5 Heating and Cooling**

As part of West Point's initiatives to comply with Executive Orders 13123 and 13212 (to reduce the use of petroleum fuel, utilize more efficient sources of energy, and utilize energy more efficiently), West Point has converted most of its fuel oil boilers to natural gas boilers. Consequently, West Point's use of fuel oil for heating and cooling is limited and is being phased out.

Although a natural gas connection exists at the KACH, it is not currently used for any purpose. Heat for the KACH, the Post School, and several surrounding buildings is provided by the natural gas-fired steam plant located at Building 845 (the Post Laundry Building), through an underground, 6-inch high pressure steam main. The high pressure steam (HPS) enters the hospital building on the west side adjacent to the emergency room ambulance bay and runs east through the south mechanical room. The HPS feeds three sets of reducing stations, from which lower pressure steam is sent to other buildings, hospital hot water heat, sterilization equipment, and other hospital steam loads. Steam service personnel report that there is more than enough excess steam capacity available to serve the new building addition (EwingCole 2005a).

There is no centralized cooling system at West Point. KACH utilizes a chilled water plant that consists of two water-cooled chillers, two chilled water pumps, two condenser water pumps and two roof mounted cooling towers. The current configuration is one 243-ton absorption chiller and one 300-ton electric chiller. Heating, Ventilation, and Air Conditioning (HVAC) service personnel report that the electric chiller is adequate to meet the building's peak load, but the absorption chiller cannot, and has never been used since the electric chiller was installed in 2000 (Driver 2005).

### **2.6.6 Oxygen, Medical Air, and Medical Vacuum**

Oxygen is supplied to the existing hospital from a 550-gallon bulk liquid oxygen storage tank. A ¾-inch tube extends from the tank delivering oxygen to the building. Existing dual 51-standard cubic feet per minute (scfm) capacity compressors provide medical air capacity in excess of 100 scfm. Current medical air load is estimated at less than 25 scfm at the existing hospital. Current vacuum pumps have a capacity of 109 scfm, while estimated vacuum load is approximately 30-scfm (EwingCole 2005a).

### **2.6.7 Communications**

Communication services at West Points Keller Army Community Hospital include telephone, fire alarm, security, cable television services, data, as well as public address and private data systems. Communications services for the hospital expansion will be extended from the existing main telecommunications room located on the second floor of the existing hospital building (EwingCole 2005a).

## **2.7 AIR RESOURCES**

West Point is located in the southern portion of the Hudson Valley Air Quality Control Region, in the Lower Orange County Metropolitan Area (USMA 2003). Southern Orange County is currently classified as an attainment area for all National Ambient Air Quality Standards (NAAQS) criteria pollutants (carbon monoxide, nitrogen dioxide, particulate matter, and sulfur dioxide), except ozone (USMA 2003).

There are several major stationary and mobile sources of air pollutant emissions present at West Point. Stationary sources regulated under the Title V air permit include three oil-fired boilers, eight gas-fired boilers (with oil back up), a restricted burn site, and nuclear, biological, and chemical training activities. Mobile sources include vehicular traffic, such as light-duty, gasoline-powered trucks and automobiles, heavy-duty diesel-powered vehicles, and aircraft (USMA 2003). All major stationary and mobile sources of air pollutant emissions are in compliance with air quality standards.

## **2.8 NOISE**

The primary source of noise in the vicinity of the Project is vehicular traffic on local roadways, driveways, and parking lots; institutional noise from operation of the hospital mechanical, heating/cooling equipment (some of which is located in outdoor areas), and an occasional Medical Evacuation (MEDEVAC) Operations helicopter; and noise from the West Point Elementary School and playground areas adjacent to the east of the KACH. Specific noise level measurements have not been obtained in the Project area.

Nearby noise sensitive areas include the West Point Elementary School located immediately east of the KACH, and the Band Housing area located along Washington Road, southeast of the KACH.

## **2.9 TRAFFIC AND TRANSPORTATION**

The KACH is located along Washington Road, the only primary roadway that provides vehicular access through the North Support Community of West Point. Washington Road is one of the main thoroughfares through West Point, and forms one half of the double spine of West Point's traffic circulation pattern, leading from the Cadet Zone northward through many residential areas of West Point to Washington Gate and U.S. Route 9W.

The KACH has three separate vehicular access drives from Washington Road: the western access drive to the west side of the hospital that is used primarily for emergency vehicle access; the center (main entrance) access drive to parking and the circular drop-off lane south of the main entrance of the hospital; and, the eastern access drive to parking on the northeast side of the hospital.

Pedestrian access to the hospital is provided via sidewalk links to Washington Road and a pathway between the hospital and the Elementary School Complex.

A helicopter landing pad is located adjacent to the west side of the hospital and supports the take-off and landing of MEDEVAC Operations helicopter flights destined for the KACH.

A total of 315 existing parking spaces are located in the vicinity of the KACH. Approximately 293 existing parking spaces surround the KACH, located within three parking lots to the south, southeast and northeast of the KACH. The remaining 22 existing parking spaces are located within a small parking lot located west of, and uphill from, the KACH, although these are not routinely used for KACH visitors or staff of the hospital due to the lack of convenient pedestrian access from this parking lot to the hospital facility.

## **2.10 MATERIALS AND WASTES**

Academic, military, and athletic activities at West Point generate ordinary, non-hazardous solid waste in the amount of approximately 26 tons per day. Collected waste is either recycled or brought to the West Point Transfer Station off Route 293, prior to being disposed of at an approved waste disposal site off-site.

West Point also generates approximately 1.8 to 1.9 mgd of wastewater and sewage. The sewage and wastewater is treated at the Target Hill Wastewater Treatment Facility, located approximately 0.6 miles east/southeast of the KACH. Secondary treated wastewater is discharged from this facility to the Hudson River.

West Point is listed as a large quantity generator of hazardous waste (USEPA 2003b). A United States Mint facility located adjacent to West Point also reports hazardous waste handling activities (USEPA 2003b). Various hazardous materials are currently used

and/or present at West Point. Activities and departments that generate hazardous, toxic, and/or infectious wastes include: the KACH, automotive repair shops, pest control activities, the Department of Chemistry, the Photography Laboratory, the West Point Elementary School, and the USMA Band. In addition, radiological wastes are generated in the Nuclear Laboratory in the Department of Physics.

All hazardous substances are handled in accordance with USEPA, NYSDEC, and U.S. Army regulations, stored and handled according to the West Point health and safety plan, and monitored on a regular basis. West Point contracts a waste hauler to dispose of hazardous wastes at state-licensed off-site disposal facilities. Any hazardous material spills that occur on USMA at West Point are reported, contained, and remediated in accordance with U.S. Army regulations and West Point's *Installation Spill Contingency Plan* (USMA 1996).

No National Priorities List sites or other sites currently subject to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) are located at West Point (USEPA 2003c, USEPA 2003d).

However, unexploded ordnance (UXO) is a hazard within an inactive artillery impact area along the northwest boundary of the Main Post/Academic Area, and within areas in the ranges, training areas, and dud zones west of the Main Post/Academic Area. However, the Project is located south of a known UXO area (Area D) on the southeast slope of Crows Nest Mountain, north of NYS Route 218 (Old Storm King Highway) between the Washington and Lee gates (Human Factors Applications, Inc. 1994). It is possible that UXO may be present or buried in the steep slopes adjacent to the north of the proposed hospital expansion area. As a result, excavation or blasting of portions of the rocky hillsides, if required to accommodate the planned hospital addition and/or addition parking areas and the associated walkway located north of the planned hospital addition, has the potential to encounter UXO and thereby presents a potential safety hazard for construction workers.

## **2.11 PUBLIC HEALTH AND SAFETY**

Various public health and safety hazards are currently present at West Point. These hazards range from natural hazards, such as bee stings and tick-borne Lyme Disease, to individual physical injuries sustained during athletic activities, military training exercises, and recreational activities at formal and informal facilities and locations throughout West Point. However, because the Project will be located entirely within the existing previously developed area associated with the KACH, many of the public health and safety hazards at West Point that are associated with the surrounding natural environment or academic and military training exercises and activities will not be present within the Project area. However, the Project is located south of a known UXO area (Area D) on the southeast slope of Crows Nest Mountain, north of NYS Route 218 (Old Storm King Highway) between the Washington and Lee gates (Human Factors Applications, Inc. 1994).

In response to the various public health and safety hazards identified above, West Point operates and maintains complete public health, emergency response, and security services to serve the West Point community. These services include the in-patient and out-patient medical facilities such as the KACH and the Cadet Health clinic, respectively, as well as emergency medical response teams, helicopter medical evacuation service, three fire stations, and military police.

The KACH, located in Building 900 on Washington Road in the North Support Community/Community Support Zone of West Point, is an important component of West Point's public health and safety services, providing both in-patient and out-patient services, including an ambulance service, to all authorized personnel at West Point (Vollmer Associates, LLP 1999). The Cadet Health Clinic, located in Building 606 in the Cadet Center Community/Cadet Zone, provides additional out-patient service to the cadets within easy walking distance of the cadet barracks (Vollmer Associates, LLP 1999). In the event that injured individuals require emergency medical evacuation to another facility, West Point operates and maintains a trained medical evacuation unit and associated emergency helicopter landing zone adjacent to the west of the KACH.

The KACH was constructed between 1974 and 1977, at a time when medical care emphasized in-patient treatment, and consists of a 65-bed facility that houses a surgical unit, an obstetric unit, an intensive-care unit, a helipad, and numerous outpatient clinics. However, the current hospital building's size and design no longer provide sufficient space and/or spatial flexibility to satisfy the current and future demands of hospital functions. Because of spatial constraints, some medical and administrative departments are currently split between floors of the same building, or in separate buildings at extended distances from the KACH. This situation has resulted in increasingly inefficient provision of medical care and services; duplicated staffing, equipment, and services; and, increasingly inconvenient access to medical care and treatment services.

## **2.12 COASTAL ZONE**

West Point is located within a state-designated coastal zone management area that is associated with the Hudson River (NYS DOS 1981). Therefore, development projects must be evaluated for consistency with the 44 New York State Coastal Policies (Ketcham 2003), which are grouped together to address issues related to development, fish and wildlife resources, flooding and erosion hazards, general issues, public access, recreation, historic and scenic resources, agricultural lands, energy and ice management, and water and air resources in state-designated coastal zone areas (NYS DOS 2002). Furthermore, pursuant to 15 CFR Part 930.34(b), West Point must notify the NYSDOS CMP of project consistency with State Coastal Policies at least 90 days prior to project implementation, and would coordinate and consult with the NYSDOS CMP and other agencies to ensure that the proposed project would be consistent with NYSDOS' State Coastal Policies, and would have no undue adverse effects on New York State coastal zone resources.

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## **3.0 ENVIRONMENTAL CONSEQUENCES**

### **3.1 Physical Features**

#### **3.1.1 Geology**

Construction of the building addition, utility extensions, paved parking areas, roadways, walkways and service access is expected to impact primarily areas that have been previously developed, and excavations would not impact bedrock geological formations. The glacial till soils would provide a suitable base for the construction of the proposed hospital expansion and conventional spread and strip footings under the new structure would provide adequate building support (EwingCole 2005b). Seismic design of the building foundation would be considered in accordance with International Building Code 2000, using site class C in accordance with Section 1615.1.1.

Construction of the Project is not likely to involve blasting of subsurface rock because the bedrock at the Project site is deeper than the anticipated excavation depths for construction. If blasting is determined to be necessary during construction, West Point would require its construction contractor to obtain blasting permits, if required, and to comply with all associated blasting safety provisions.

#### **3.1.2 Topography**

Due to relatively level site conditions at the building site location, required grading work will be limited. However, some earth moving and excavation, as well as material storage, would be required to enable construction of the project. Disposal of unusable excavated materials (such as gravel and soil) would be in accordance with the construction contractor's construction and demolition waste management plan, which would be approved by West Point prior to construction.

A difference of grade of approximately 10 feet exists between the north and south sides of the proposed building, resulting in an unbalanced north to south earth condition. The Project architects will minimize the effect of lateral earth pressures through the use of a cantilevered, reinforced concrete retaining wall that will extend along the entire north side of the building. Excavation support may be required for excavation of the northern retaining wall area as an exposed vertical cut of up to 14 feet may be required for installation. The grading must be designed to minimize stormwater impacts and maintain pedestrian and vehicular access.

### 3.1.3 Soils

Approximately 2.6 acres of soils would be disturbed during construction of the Project (EwingCole 2005c). To minimize project-related erosion and sedimentation, West Point would require its construction contractor to prepare a Stormwater Pollution Prevention Plan (SWP3) in compliance with the New York State Department of Environmental Conservation's (NYSDEC's) current stormwater management regulations for construction activities pursuant to the State Pollutant Discharge Elimination System (SPDES).

Short- and long-term soil stabilization, pretreatment of runoff from impervious surfaces (e.g., new parking lot areas), and attenuation of increased runoff, would be accomplished using the New York Standards and Specifications for Erosion and Sediment Control Guidelines, New York State Stormwater Management Design Manual, and DoD Military Specifications. New stormwater facilities are currently being designed, including two new wet stormwater ponds; additional underground detention structures to handle overflow during high precipitation events; catch basin, and buried piping along the northern side of the building expansion; and other associated buried piping. These stormwater management features will enhance the existing stormwater management facilities currently in place at the KACH, and will accommodate the increased stormwater runoff resulting from the Project, prior to release into Crows Nest Brook. As a result, no significant soil erosion or sedimentation would result from implementation of the Project.

Laboratory testing revealed that the native soils at the Project site are considered slightly corrosive to metal piping or conduit (Langan Engineering and Environmental Services 2005). To prevent accelerated corrosion of new buried utility lines that will be installed for the Project, polyethylene sheeting of 60 mil nominal thickness will be installed around any metal piping or electrical conduit to prevent corrosion, and care will be taken during backfilling to prevent damaging the polyethylene.

High and constant subsurface water flows have been noted within 6 feet of the ground surface at the base of steep slopes adjacent to the proposed hospital expansion. Consequently, groundwater may be encountered during excavation, especially in the northern section of the site. Conventional pumping equipment would be used if necessary to de-water the construction work areas during construction. A foundation drainage system will be installed that includes perforated PVC piping surrounded by crushed stone and geotextile fabric. A retaining wall also will be installed at the base of the slope on the north side of the hospital expansion, and will be protected by waterproofing and geotextile drainage board applied to the wall.

## 3.2 WATER RESOURCES

### 3.2.1 Groundwater

Because no wells or primary, principal, or important aquifers occur at, or near, the proposed Project area, there would be no impact on groundwater supply sources.

Groundwater exists as shallow as 6 to 13 feet from the ground surface in some areas of the Project area (Langhan Engineering and Environmental Services 2005). Some of the excavation and construction of the building footings, (slab) foundations, and the retention wall planned for the north side of the proposed building expansion would be expected to reach or encounter groundwater at these depths. In the event groundwater is encountered during construction, the contractor would need to dewater the excavated area to maintain the groundwater levels below the excavation depth, to help ensure the strength of the concrete during the curing process and the stability of other construction. Dewatered groundwater would be discharged to an approved location, such as to a well vegetated upland area for eventual drainage to the wetland adjacent to the east of the construction site. Dewatering the excavation area would only be conducted temporarily, until the construction of associated features is completed. Following completion, pumping and/or well points would cease and/or be dismantled, with no permanent impacts to groundwater expected to result.

### 3.2.2 Surface Water

The only naturally occurring surface water resource in the vicinity of the Project area is Crows Nest Brook. No excavation or construction would take place in this waterbody. The nearest action to the bank of this waterbody would be the expansion of the existing eastern access road to the KACH, which currently traverses Crows Nest Brook, and the relocation/construction of a new parking area to the northwest of the stream. These activities, however, would not directly impact the bed or bank of Crows Nest Brook.

Indirect construction impacts to adjacent waterways would be minimized through the implementation of erosion and sedimentation control Best Management Practices (BMPs) as prescribed in the Project's SWP3. These BMPs are designed specifically to protect adjacent waterways and wetlands from siltation and sedimentation caused by erosion of disturbed areas during construction of the Project. To provide additional protection to adjacent water resources, any hazardous materials required for construction activities would be identified and managed in accordance with the *United States Military Academy Installation Spill Contingency Plan* (USMA 1996). The Project's stormwater management plan, when approved and implemented, would ensure the protection of adjacent waterways during operation of the hospital expansion project.

The Project would result in a net increase in impervious (paved and building-occupied) areas of approximately 14,500 sf (0.33 acre) (EwingCole 2005c). Although the details of the Project stormwater management plan have not yet been finalized, it is anticipated that

the existing stormwater management system in the vicinity of the KACH will be upgraded with two new wet stormwater ponds adjacent to the northeastern side of the proposed building expansion; buried detention areas to handle overflow from these ponds during high precipitation events; catch basin, and buried piping along the northern side of the building expansion; and other associated buried piping. These additional stormwater management structures will eventually discharge to Crows Nest Brook via new and existing buried piping, similar to the system currently in place. In addition to addressing the stormwater quantity management standards in accordance with The New York State Stormwater Management Design Manual, the plan also will address pretreatment of stormwater to meet water quality goals.

Without effective stormwater management facilities, there is potential for stormwater runoff from the proposed hospital building expansion and parking areas to increase the water temperature of Crows Nest Brook and therefore adversely affect the conditions that support downstream trout spawning and survival. However, the presence and effective functioning of the stormwater management system being planned for this Project is expected to attenuate temperature changes before being discharged downstream. In addition, the West Point Integrated Natural Resources Management Plan (INRMP) Waterbody-Specific Management Measures for Crows Nest Brook calls for the placement of a thermograph in the brook once every five years to monitor stream temperatures (USMA 2003).

### **3.2.3 Wetlands**

The only features mapped as wetlands are the two asphalt-lined ponds located immediately south of the existing hospital building. These features are man-made and routinely maintained as aesthetic water features and part of the stormwater management system associated with KACH at West Point. No direct disturbance to these mapped features will result from construction or operation of the Project. Although these features are mapped as NWI Wetlands, they may not be considered regulated or jurisdictional resources, due to their origination, asphalt substrate, and present use. See Section 3.2.2 above for stormwater management measures proposed for the Project.

### **3.2.4 Floodplains**

The Project area is not located in the mapped 100-year floodplain of the Hudson River. Therefore, no adverse impacts on floodplains, floodways, or 100-year flood holding capacity of this river would be anticipated to occur as a result of the Project.

Some areas in the vicinity of the Project have experienced flooding as a result of existing land development and the relatively limited capacity of Crows Nest Brook, and the banks of Crows Nest Brook are eroding and unstable in some areas. Upland runoff volumes have frequently challenged the capacity of Crows Nest Brook on West Point property, primarily during storms or periods of rapid snowmelt. The Project would result in a net increase in impervious (paved and building-occupied) areas of approximately 14,500 sf (0.33 acre) (EwingCole 2005c), which could contribute to flooding of Crows Nest Brook.

West Point is developing a Project-specific Stormwater Management Plan that consists of measures to attenuate Project-related conditions that could contribute to flooding along this brook, including: two new asphalt-lined stormwater ponds adjacent to the eastern side of the proposed building expansion; buried detention areas to handle overflow from these ponds during high precipitation events; a concrete swale, catch basin, and buried piping along the northern side of the building expansion; and other associated buried piping. These additional stormwater management structures will eventually discharge to Crows Nest Brook via new and existing buried piping, similar to the system currently in place.

### **3.3 VEGETATION AND WILDLIFE**

#### **3.3.1 Common Vegetation and Wildlife**

No significant adverse impacts to common vegetation or wildlife are expected to result from construction or operation of the Project. No tree clearing is anticipated to be required to construct the hospital building and associated parking areas because the majority of Project site is already developed and used as open space. Of the Project's 0.92-acre footprint, including the building expansion, roadway relocations, and new parking areas, almost all of this currently consists of open grassy/herbaceous areas that will be lost as a result of the Project. This acreage impact is expected to have a minimal impact on common vegetation and wildlife due to the prevalent nature of such areas throughout West Point's property.

#### **3.3.2 Special Natural Areas**

The Crows Nest Special Natural Area occurs 400 feet upslope to the northwest of the Project area. No direct physical impacts to this area would occur as a result of construction of the Project. However, visual and aesthetic impacts may result from construction of the Project and are discussed in Sections 3.5 and 3.6.

#### **3.3.3 Threatened and Endangered Species**

No significant adverse effects on species with special protection are anticipated to result from construction or operation of the proposed Project. No Federal or state listed plant or animal species are known to occur in the vicinity of the Project. Because the details of the Project plans are still being formalized, West Point has not yet introduced or discussed this Project with the USFWS, National Oceanic and Atmospheric Administration (NOAA) – Fisheries, or the NYSDEC's Endangered Species Unit and Hudson River Fisheries Unit. However, West Point would determine the consultation requirements and consult to obtain these agencies' input, as warranted and required, prior to construction.

Potential timber rattlesnake den or basking/gestation habitat has not been identified as occurring within the Project area, however, potential transient habitat has been identified. As such, transient timber rattlesnakes could be affected if they attempt to traverse active construction areas. To mitigate potential impacts to the timber rattlesnake during construction of the Project, West Point would monitor the proposed Project workspaces for timber rattlesnake activity when construction is scheduled between April and September.

In the event a timber rattlesnake is encountered during construction activities, West Point has a verbal agreement with the NYSDEC to move timber rattlesnakes to a suitable, off-site rookery, den, or foraging habitat (Beemer 2002). This verbal agreement identifies that a Natural Resource Biologist for West Point would be notified in case of an encounter and that this individual would handle and translocate individual timber rattlesnakes.

In addition, based upon the limited amount of vegetated areas that would be affected, impacts to any potential habitats would be minimal and the incidental take of transient individuals would be unlikely.

### **3.4 CULTURAL RESOURCES**

The Project is positioned in the vicinity of a number of structures within the NHLD that have been identified as individually eligible for the NRHP, and/or identified as contributing elements to the West Point NHLD, and/or designated as Category IV structures in the HABS/HAER inventory for West Point (Tompkins *et al.* 1984, Geo-Marine, Inc. 2001). These structures have been designated and/or identified as contributing significantly to the national cultural heritage and serve as major focal points related to the history of West Point.

West Point would continue to evaluate the design plans for the Project in consultation with the New York State Office of Parks, Recreation, and Historic Preservation (NYSOPRHP) as necessary, to ensure the continued compatibility with extant architecture in the immediate vicinity of the Project (e.g. the existing KACH structure) and incorporation of existing architectural cues from the larger NHLD at West Point to the maximum extent practicable. As part of this evaluation process, West Point would perform regular review of the proposed Project, to ensure that the Project would have no adverse effects on NRHP-listed or eligible properties or historic landscapes at West Point.

Archaeologically, the Project is located in an area that has sustained prior disturbance associated with the previous construction of the existing KACH facilities between 1974 and 1977, including the KACH building, existing parking lots and access roads, and surrounding grounds that comprise the hospital envelope. As such, the Project is located in an area that has little or no potential for containing intact previously unidentified cultural resources, and no adverse effects on archaeological resources would be

anticipated as a result of implementation of the Project. Additionally, no previously unidentified prehistoric or historic cultural resources have been identified within, or in the immediate vicinity of, the Project area, based on the results of recent archaeological investigations (Hanley *et al.* 2003, Geo-Marine, Inc. 2004, Alexander Archaeological Consultants undated). However, if the Project increases in size, such that expansion, construction, or ground disturbing activities would occur outside of the hospital envelope, including portions of the slope overlooking the Project area, a Phase I cultural resources investigation would be required in these areas to ensure that the Project would not adversely affect cultural resources.

West Point would continue to coordinate with the New York State Historic Preservation Officer (NYSHPO), including following recommendations offered in a comment letter received on March 28, 2006, as design plans advance and implement pertinent recommendations from the NYSHPO to reduce and/or avoid adverse effects on cultural resources, such that implementation of the Project would result in less than significant impacts on any cultural resources identified within the proposed Project area (see NYSHPO comment letter in Appendix B).

### **3.5 VISUAL RESOURCES**

A visual assessment of the proposed Project has been conducted to formally identify areas of potential effect on visual resources and/or visually sensitive areas (USMA 2005) (**Appendix A**). The results of this visual assessment were used in conjunction with existing viewshed analyses for West Point to determine the impacts of the proposed Project on visual resources (Halin *et al.* 2003, Loechl and Tooker 2003, USMA 2005).

#### **3.5.1 Impacts to Visual Resources Within the Project Location**

Implementation of the Project will result in no new negative impacts to visual resources already present at the Project location. To ensure visual compatibility with the existing KACH facility, the predominant materials for the Project will consist of textured gray concrete or another non-reflective gray material, such as stone or a stone-like material, that is similarly compatible in texture and color with the existing KACH facility. The Project will be appropriately sized so as not to dwarf the existing KACH facility in massing, scale, or proportion. Individual architectural elements of the Project, such as entrances and fenestration, will consist of non-reflective materials and will be designed to be similar in scale and rhythm to the horizontal lines of the existing KACH facility, to remain compatible with the front (south), side (east), and rear (north) elevations of the existing KACH facility. Additionally, all exposed (e.g. exterior) mechanical and/or electrical equipment (including equipment installed along or adjacent to exterior walls or on the roof of the Project) will consist of, or be covered by, non-reflective materials that are not bright, shiny, or metallic.

### **3.5.2 Impacts to Visual Resources Within Views of Project Location**

As indicated above, views from the west and north, as represented by the vantage point from the U.S. Route 9W Overlook, generally contain the northern portion of West Point, which include the Project location, the existing KACH facility, various other buildings, and mature wooded vegetation in the foreground and middle ground, and the Hudson River and Constitution Island in the background. Implementation of the Project will mean that the rear or north elevation and the roof of the Project would be visible from these views. Although implementation of the Project would add mass to the existing KACH facility, the compatible architectural style, elements, colors, and materials for the Project would be consistent with the rear (north) and top (roof) elevations of the existing KACH structure, and would be visually consistent with other extant structures within these views.

Also as indicated above, views from the northeast, east, and southeast, as represented by the views from the Cold Spring Foundry, Boscobel Restoration, Constitution Island, St. Basils Academy, The Hastings Center, and Trophy Point, generally contain the eastern portion of West Point. Implementation of the Project would mean that the front (south) and side (east) elevations of the Project would be present within all of these views. However, the Project is aligned roughly parallel with the steep slope at the base of Crows Nest Mountain so that it will be tucked against the slope, be screened by existing mature wooded vegetation, and be sufficiently distant such that it will not be visible from, or will remain a relatively unobtrusive landscape element within, the representative views from such vantage points as the Village of Cold Spring, the Cold Spring Foundry, and Boscobel Restoration (see **Appendix A**).

The Project, however, will be more visually prominent in views represented by vantage points from St. Basils Academy, The Hastings Center, Constitution Island, and Trophy Point, which are in locations and at elevations that have a relatively unobstructed view of the Project location. The increased visual prominence in these views would be due to the increased mass of the Project. However, the use of compatible architectural style, elements, colors, and materials for the Project would allow the Project to remain visually consistent with the extant KACH structure and other structures within the Washington Gate Industrial Community that are visible within representative views from these vantage points (see **Appendix A**).

### **3.5.3 Measures to Avoid, Reduce, or Mitigate Adverse Effects**

West Point has developed a number of measures to avoid, reduce, or mitigate the effects of the Project on views from visually sensitive areas. To avoid and/or reduce adverse effects of the proposed Project on visual resources within, or within view of, the Project location, the Project would be designed to be architecturally compatible with the existing KACH facility within the Project location, through the utilization of similar or identical materials, designs, colors, and finishes for the Project.

To ensure visual compatibility with the existing KACH facility, the predominant materials for the Project will consist of textured gray concrete or another non-reflective gray material, such as stone or a stone-like material, that is similarly compatible in texture and color with the existing KACH facility. The Project will be appropriately sized to match the existing KACH facility in massing, scale, and proportion. Individual architectural elements of the Project, such as entrances and fenestration, will consist of non-reflective materials and will be designed to be similar in scale and rhythm to the horizontal lines of the existing KACH facility, to remain compatible with the front (south), side (east), and rear (north) elevations of the existing KACH facility. Additionally, all exposed (e.g. exterior) mechanical and/or electrical equipment (including equipment installed along or adjacent to exterior walls or on the roof of the Project) will consist of, or be covered by, non-reflective materials that are not bright, shiny, or metallic.

These design measures would ensure that the Project remains visually compatible with existing architectural elements located within views of the Project location, and would not result in any new discordant landscape features.

To further avoid, or reduce, adverse effects of the Project on visual resources, all construction would remain within the hospital envelope, which is located against the steep slope of Crows Nest Mountain. This would assist with minimizing potential adverse effects on visual resources from surrounding visually sensitive areas by ensuring that the Project remains as far in the background of views that include the Project location as possible.

Miscellaneous features such as installation of exterior lighting and improvements to the existing parking lot north and upslope of the Project location are not expected to result in significant changes to the existing landscape at the Project location. To avoid visual impacts from the installation of exterior lighting on the existing landscape at the Project location, West Point Standard light fixtures will be used for all exterior lighting for parking areas, walkways, and access roads, and bollard lighting will be used along sidewalks immediately adjacent to the new addition to the existing KACH facility. Additionally, all exterior lighting will consist of the minimum necessary lighting required along sidewalks, access roads, and parking areas. Furthermore, West Point would ensure that directional lighting is installed for any additional exterior building lighting needs, such that lighting is directed down into the appropriate areas, and would install full shields on all lighting to reduce off-site illumination and glare (light trespass).

As a result of implementation of measures to avoid and reduce potential impacts to visual resource within, or within view of, the Project, the Project would have no new significant, permanent, adverse effects on visual resources within the North Support Community or the Contemporary West Point Academy Subunit of the HHSASS, or visible from the various visually sensitive areas that contain views of the Project location, including visually sensitive areas within West Point, and from surrounding areas.

## **3.6 UTILITIES**

### **3.6.1 Potable Water**

The proposed hospital expansion will require an additional 1,848 gpd of potable water for its water supply and sewer service. West Point's existing water supplies and service district capacities are anticipated to be able to accommodate this increase. To accommodate the expansion of the hospital building, the existing combined fire and domestic water service at the east side of the existing hospital building will need to be relocated from beneath the proposed clinic addition. This will require the existing hospital to operate on a single service (from the west side of the building) during a substantial portion of the construction. The relocated east side combined service, new fire service, domestic metering, and backflow preventers will be located in a new mechanical room in the new addition. Domestic hot and cold service will be reconnected to the domestic piping in the existing building and extended into the new addition. Two new additional 100-gallon, 45-kw electric water heaters installed next to the current heater are recommended to accommodate times without steam heated water.

### **3.6.2 Sanitary Sewer**

The proposed building expansion would require sanitary sewer service to handle the additional 507 drainage facility units (dfu) of wastewater generated by the Project facilities. West Point's Target Hill Wastewater Treatment Plant is anticipated to have adequate capacity to treat the wastewater generated by the Project.

The sanitary drainage and interior vent piping for the hospital addition will be designed in accordance with the *International Plumbing Code, State of New York Edition*. A new six-inch building drain in the new addition will connect to the existing site sanitary sewer.

### **3.6.3 Stormwater Drainage**

The Project would result in a net increase in impervious (paved and building-occupied) areas of approximately 14,500 sf (0.33 acre) (EwingCole 2005c). Although the details of the Project stormwater management plan have not yet been finalized, it is anticipated that the existing stormwater management system in the vicinity of the KACH will be upgraded with two new asphalt-lined stormwater ponds adjacent to the eastern side of the proposed building expansion; buried detention areas to handle overflow from these ponds during high precipitation events; a concrete swale, catch basin, and buried piping along the northern side of the building expansion; and other associated buried piping. These additional stormwater management structures will eventually discharge to Crows Nest Brook via new and existing buried piping, similar to the system currently in place.

The stormwater management plan/system upgrade for the Project would achieve water quality goals through capture of impervious surface runoff, roof runoff, and upland runoff, prior to outflow release into Crows Nest Brook. All plans and facilities would be

designed, constructed, and maintained in accordance with the New York State Stormwater Design Manual and all applicable stormwater management regulations and permits.

### **3.6.4 Electricity**

The proposed hospital expansion will require an additional 611 kVA of electricity to serve its operational needs. West Point's existing electric supplies and service district capacities are anticipated to be able to accommodate this increase. The two existing 13.8kV underground electrical feeders have sufficient capacity to accommodate the new hospital building service. This will be confirmed, and increased if necessary. These feeders will be tapped in an existing manhole (N-27) located southeast of the existing hospital, and extended via a 4-way concrete-encased duct bank and new manhole. The new power duct bank will be routed to the east, in front of the building, to the pad mounted transformers. A new feeder will be extended below grade from each transformer to a new main tie switchboard in the new, ground floor main electrical room (EwingCole 2005a). This work will require a phased construction with minimal temporary power shutdowns of non-critical/support related areas. All electrical utility shutdowns will be done during off peak hours and require a minimum of 10 working days notice to the hospital staff.

### **3.6.5 Heating and Cooling**

The new building addition will utilize the existing hospital's steam system for heating. Preliminary review has indicated that excess capacity is available. If required to meet demands of the building addition, the steam supply to the hospital can be increased from 100 psig to 120 psig.

A new 300-ton chiller located in the new building addition will be connected to the existing chilled water plant and the existing pumping system will be converted into a primary-secondary type system. Two new 8-inch secondary chilled water supply and return pipes and one new 6-inch primary chilled water return pipe will be routed from the existing chiller room through the existing unexcavated area to the new chiller room. The existing 10-inch condenser water risers are adequately sized to meet the new flow requirements (EwingCole 2005a).

### **3.6.6 Oxygen, Medical Air, and Medical Vacuum**

Oxygen, medical air and medical vacuum will be extended from the existing services within the current hospital building. These systems have adequate excess capacity and no detrimental environmental impacts should result from their extension and installation.

### 3.6.7 Communications

Services for data, telephone, and cable television shall be extended from the existing hospital building into the new hospital addition. No detrimental environmental impacts should result from installation of these and associated communications systems.

## 3.7 AIR RESOURCES

The Clean Air Act Amendments of 1990 (40 CFR 93.158) require that emissions associated with Federal Actions do not interfere with State Implementation Plans (SIPs) for achieving NAAQS of criteria pollutants that currently are in non-attainment. Because the Project would be implemented in the Hudson Valley Air Quality Control Region, which is classified as a severe non-attainment area for ozone, West Point must evaluate direct and indirect emissions associated with any proposed actions and ensure these emissions conform to the SIP.

Direct emissions are defined as those that are directly associated with the Federal Action, and would include both temporary (construction-related) and long-term emissions, such as those generated by any new stationary emission source (such as a new power generating facility or as an existing power facility that increases its operating capacity or delivery volumes to serve new heating/cooling systems in the new Project building). Temporary direct emissions would be generated by Project construction equipment and contractor vehicles, and certain construction activities, including particulate matter (PM) generated by excavation, rock blasting (if required), building demolition, and pavement disturbance; as well as volatile organic compound (VOC) emissions associated with paving, repaving, and/or patching new and existing asphalt parking lots and existing access drives for the Project.

Indirect emissions are defined as those emissions that occur in support of the Federal Action, and would include any new or increased emissions generated by existing stationary emission sources serving the action (such as an existing power facility that increases its operating capacity or delivery volumes to serve new heating/cooling systems in new and upgraded buildings). The heating needs of the proposed building expansion will be provided by the existing steam plant at West Point, located in Building 845/Post Laundry. The increase in long-term NO<sub>x</sub> emissions at the West Point steam plant associated with serving the new building expansion would be less than 1 ton per year, well below the *de minimus* threshold of 25 tons for all sources.

Before construction of the Project, West Point will identify and evaluate all temporary and long-term direct and indirect emissions of VOCs and nitrogen oxides (NO<sub>x</sub>) – which combine in the atmosphere to produce ozone – in accordance with SIP emission thresholds. In addition, West Point will assess the particulate matter (PM) emissions and any other pertinent emissions associated with construction and operation of the Project. The temporary and long-term direct and indirect emissions projected to be generated by the Project would be compared with specific SIP emission thresholds for severe ozone

non-attainment areas, and West Point would determine whether this threshold would be exceeded as a result of implementing the Project.

The identification, evaluation, and assessment processes to determine if priority pollutants, including SIP emission thresholds for VOCs, NO<sub>x</sub>, PM, and any other pertinent emissions, will fall within the statutory limits during and after construction will be included in a general conformity review of the Project. Various construction-related activities and factors will also be examined as part of the Project's conformity review, such as asphalt laying, painting or staining, and the number of construction vehicles. Many of the impacts of these construction-related activities and factors are dependent on the date and duration of a activities such as clearing, stripping, grading, excavation, and backfilling, the amount and type of asphalt to be used during construction, the number of tractors, rollers, backhoes and other construction equipment used for construction activities, and the number of workers commuting to the construction sites.

If thresholds would be exceeded, then West Point would propose and implement air emissions control measures during construction and/or operation of the Project, as necessary, to ensure that implementation of the Project would have no significant adverse impact on air quality. If an air emissions permit is determined to be required pursuant to 6 NYCRR Part 231, then West Point would secure the necessary permit from the NYSDEC.

### **3.8 NOISE**

The Proposed Action would not involve the construction and operation of permanent noise-generating facilities. However, Project construction activities would generate a temporary and localized increase in noise, such as from the use of construction equipment and from general construction and contractor activities.

West Point Elementary School, West Point Middle School and the Band Quarters Housing areas are all located within approximately 400 feet of the planned construction work areas for the Project, and therefore could experience elevated noise levels during construction activities. Heavy equipment that would be used for construction of the Project would be expected to generate an average of 85 to 90 dBA, measured at 50 feet from the source (Federal Highway Administration 2006). Assuming that sound levels are naturally reduced through attenuation in the air by approximately 6 dBA for each doubling of distance from the source (Bjornsen 2006), the increased noise levels would be approximately 84 dBA at 100 feet, 78 dBA at 200 feet, 72 dBA at 400 feet, and so on. Therefore, at the West Point Elementary school, located approximately 400 feet east of the proposed construction area, noise from the use of construction equipment (assuming use of 1 piece of equipment at any one time) would contribute approximately 72 dBAs to sound receptors (people) at the school. Additional noise attenuating features such as a 200-foot wide forested area, school walls and closed windows, and other existing/competing noise would serve to further reduce the effect of construction noise on the school activities. The natural and artificial noise attenuation, in addition to the

temporary (construction phase only) and intermittent (daytime only, and only when specific equipment are being operated) nature of the noise that would be generated by the Project, would serve to limit noise impacts to a level that would not be considered significant.

External or exterior construction noise would be mitigated by limiting construction activities typically to daylight hours (generally, 8:00 AM to 4:30 PM) on weekdays. Because of the length of the construction period (2 years), some construction activities would be conducted when school is not in session and fewer cadets are present on-base (i.e., mid-June to mid-August). Equipment operation noise would be minimized by requiring the construction contractors to use equipment that meets specific noise standards. Additionally, West Point would install an 8-foot high plywood fence between the construction area and the school facilities, both as a safety measure and to reduce elevated noise levels experienced by students and staff at the school.

Overall, implementation of the Project is expected to result in only minor and short-term increases in noise levels, limited to the period of active construction, and no long-term significant impacts on noise levels.

### **3.9 TRAFFIC AND TRANSPORTATION**

Implementation of the Project will result in temporary impacts on circulation patterns from Stony Lonesome Gate heading west along Stony Lonesome Road past Michie Stadium. Continuing then north from Stony Lonesome Road to Washington Road and along the center and eastern access drives into the KACH during the construction period. Implementation of the Project will also result in temporary impacts on parking availability in the vicinity of the KACH for both KACH visitors and staff, and the larger West Point community during the same construction period.

#### **3.9.1 Traffic Circulation**

Temporary and potentially moderate impacts on circulation patterns are expected to result from increased vehicular traffic associated with the episodic movement or transportation of construction equipment (such as backhoes and cranes) and building materials into and out of the Project area, and the more regular movement of construction vehicles (such as dump trucks, cement mixers, and personal vehicles used by construction personnel). West Point is familiar with on-post traffic circulation and vehicle parking constraints during temporary construction activities, as well as during major events such as football games, and has developed a number of measures to avoid, reduce, and/or mitigate for these temporary impacts on traffic circulation patterns along the involved West Point roadways, and on parking availability within the vicinity of the KACH.

Because of restrictions associated with the historic/aesthetic nature of the Washington Gate entrance and the limited vehicle turning radius area available along Washington Road at that gate, West Point will prohibit construction related traffic from using the

Washington Gate to access West Point. Consequently, all construction traffic will be required to use the Stony Lonesome Gate, which is better designed to accommodate large truck and construction traffic. To access the KACH construction site via the Stony Lonesome gate, construction traffic would travel east along Stony Lonesome Road, turn north near Michie Stadium, and then turn northwest onto Washington Road, and finally turn north along the eastern access driveway to the hospital. The potential for significant congestion associated with security screening at the gate will be reduced by scheduling Project construction work hours to begin at 8:00 AM, which will avoid the 6:00–8:00 AM period of peak incoming traffic at West Point. In addition, security screening efficiency will be increased for dedicated construction vehicles by requiring advance registration of construction contractors' vehicles and individual drivers with West Point's security force, thereby allowing some aspects of the security check to be completed ahead of time, reducing the delay of vehicles (and interference with normal flow of traffic) at the entrance gate. Construction traffic exiting the installation at the end of the day is not expected to create a significant congestion problem at Stony Lonesome Gate, even if it occurs during the evening rush hour, because security screening is not required upon exiting the gate.

To further reduce potential morning rush hour traffic congestion at Stony Lonesome Gate, West Point will encourage the local West Point community to use the Washington and Thayer gates as alternative access points into and out of West Point during seasonal and daily peak construction periods. This will be done using advertisements in various West Point circulars, posting daily traffic advisories on West Point's website (under the dedicated "Local Road Conditions" portion of the website), and erecting signage along primary roads throughout West Point.

Following construction, Stony Lonesome Gate and that portion of Stony Lonesome Road and Washington Road between the gate and the Project area would revert to normal use by the local West Point community.

To avoid, reduce, and/or mitigate for temporary impacts on circulation patterns within the Project area, West Point proposes to: pave the proposed new parking spaces along the eastern access driveway before construction of the hospital expansion commences to facilitate two-way construction traffic flow; close much of the 176-space northeastern parking lot for use as a staging area; and, avoid construction vehicle use of any other access road or parking areas associated with the hospital. This will contain construction-related traffic to the east side of the hospital, allowing the main (center) access driveway and adjacent parking to remain available for hospital visitor use. Following construction, traffic circulation within the KACH area would revert to pre-construction patterns, including re-opening the modified northeastern parking lot for parking use; and establishing new parking spaces along the eastern access road.

With the above measures, implementation of the Project will result in temporary impacts to traffic circulation patterns at Stony Lonesome, along Stony Lonesome and Washington roads between Stony Lonesome Gate and the Project area, and within the Project area that would be limited to the construction period.

### 3.9.2 Parking

West Point proposes to implement a number of measures to avoid, reduce, and/or mitigate for the temporary and/or permanent loss of parking in the parking lots surrounding the KACH. A total of 315 existing parking spaces are available in the vicinity of the KACH, associated with three parking lots which are located northeast, southeast and south of the KACH, and one parking lot located west of and uphill from the KACH. Construction of the Project will permanently displace 72 parking spaces and temporarily displace 104 parking spaces, mostly by use of this parking lot as a staging area, in the parking lot located northeast of the KACH (see **Table 3**).

**Table 3. Existing, Temporary, and Permanent New Parking Spaces associated with the Project.**

Existing Parking lots and access driveways	Existing number of parking spaces	Number of parking spaces to be temporarily displaced during construction	Number of parking spaces to be permanently developed prior to construction	Number of alternative parking spaces to be temporarily dedicated prior to construction	Number of parking spaces available during construction	Number of additional parking spaces to be developed and/or replaced after construction	Total Number of parking spaces after construction	Net Gain/Loss of Parking Spaces
Northeastern parking lot	176	176*	0	N/A	0	135	135	-41
Southeastern parking lot	50	0	0	N/A	50	34	84	+34
Central access driveway	0	N/A	9	N/A	9	0	9	+9
Southern parking lot	67	N/A	N/A	N/A	67	3	70	+3
Western parking lot	22	0	9	0	31	0	31	+9
Buffalo Soldier's Field parking lot	N/A	0	N/A	150	150	N/A	N/A	N/A
<b>Total</b>	<b>315</b>	<b>176*</b>	<b>18</b>	<b>150</b>	<b>307</b>	<b>172</b>	<b>329</b>	<b>+14</b>

\*of the 176 parking spaces to be displaced during construction, 72 will be permanently displaced by the proposed Project footprint.

Prior to the start of construction, West Point will develop a total of 18 new permanent parking spaces at various locations in the vicinity of the KACH that could be used for parking by KACH visitors or staff both during and after construction. New permanent parking spaces will include nine new parking spaces along the center access road to the KACH, and an additional nine new permanent parking spaces in an expansion of the 22-space parking lot located west of and uphill from the KACH (see **Figure 2**, see **Table 3**). A new pedestrian walkway will also be constructed prior to implementation of the Project to provide convenient pedestrian access from the expanded parking lot west of and uphill

from the KACH. The new pedestrian walkway would lead from this parking lot downhill to the KACH, and would consist of a 5-foot-wide, concrete walkway bridging the steep decline between the parking lot and the hospital with an alternating “switch-back” pattern consisting of both steps and ramps (see **Figure 2**).

To further reduce the amount of parking that would be needed at the KACH during the temporary construction period, West Point will also designate a minimum of 150 parking spaces in on-post parking areas. Buffalo Soldiers Field near Thayer Gate or the Old Post Exchange parking lot are proposed areas to provide this additional on-post parking for non-emergency KACH staff and visitors, and construction personnel. The on-post parking will be serviced by a dedicated regular shuttle bus service, running on a regular schedule, between the KACH and these designated on-post parking areas, particularly during daily high-volume time periods.

With the existing 139 permanent parking spaces that will not be displaced during construction, the development of 18 new permanent parking spaces in the vicinity of the KACH, as well as the temporary designation of a minimum of 150 parking spaces in alternative on-post parking areas (115 spaces for temporarily displaced parking in the Project area and an additional 35 for temporary construction personnel), a total of 307 parking spaces in various locations would be available for KACH staff and visitors during construction(see **Table 3**).

Following construction, the Project footprint will permanently displace approximately 72 of the original 176 parking spaces in the northeastern parking lot. However, a total of 31 of these displaced parking spaces would be relocated south of their existing locations, as part of the realignment of the existing access drive into the northeastern parking lot and the southern end of the northeastern parking lot, such that the northeastern parking lot will have a new total of 135 parking spaces. In addition, 34 permanent parking spaces will be added to the southeastern parking lot at the end of construction for the Project (**Figure 2**). With the replacement of these displaced parking spaces and the addition of new permanent parking spaces developed before constructing, the hospital building expansion Project will add 14 new parking spaces in the vicinity of the KACH, such that a total of 329 parking spaces will be available for KACH staff and visitors after completion of the Project.

With the above measures, implementation of the Project will result in temporary impacts to parking during the construction period, that will be primarily associated with commuting from off-site parking locations by KACH non-emergency staff and visitors, and construction personnel, including implementation of a dedicated shuttle bus on a regular schedule. Furthermore, following completion of the Project, there will be a net increase of permanent available parking in the vicinity of the KACH for staff and visitors. Specifically, following construction of the Project, permanent parking spaces in the vicinity of the KACH will increase from 315 total available parking spaces before construction to 329 total available parking spaces, for a net increase of 14 new permanent parking spaces available for KACH staff and visitors.

### 3.10 MATERIALS AND WASTES

Construction of the Project would temporarily generate various typical solid construction and demolition debris. The volume of debris generated would be minor compared to the total amount of solid waste generated per year at West Point. Prior to construction, West Point's construction contractor would develop a Construction and Demolition Waste Management Plan for the management and proper disposal of solid waste during construction. Construction would therefore have a minor, temporary impact on the generation and disposal of waste material.

Asbestos and/or lead based paint (LBP) may be present in some of the areas of the hospital building that would be demolished or receive interior upgrades as part of the Project, based on the range of ages and construction materials used in the building. Portions of the building that will be disturbed by the proposed renovation must be inspected by USEPA-certified inspectors to determine whether asbestos is present. If asbestos is present, it must be handled in accordance with USEPA (40 CFR 61.145) and OSHA (29 CFR 1926.1101) regulations. Painted surfaces that will be disturbed by the proposed renovation must be analyzed for LBP. Any activities that will disturb LBP must be conducted in accordance with OSHA (29 CFR 1926.62) and U.S. Army (AR 420-70) regulations. Accumulation and disposal of lead waste must be in accordance with USEPA, NYSDEC, and West Point Regulation 200-3.

Construction also would involve the transport, temporary storage, and use of typical hazardous construction materials, such as solvents, lubricants, sealants, adhesives, petroleum products, and paints. The disposal of hazardous waste generated would be coordinated through the Solid Waste Management Branch of the DPW, in accordance with USMA and Army regulations, which may supersede state or federal regulations. Implementation of construction activities, including the transport, use, and temporary storage of potentially hazardous materials, would comply with proper handling and reporting procedures identified in West Point's *Installation Spill Contingency Plan* (USMA 1996a). A written inventory and Material Safety Data Sheets (MSDS) would accompany all hazardous materials that are transported as part of this Project, as required. Through the implementation of these procedures, the transport, temporary storage, and use of typical hazardous construction materials for this Project would not present a significant increased risk to human health or safety.

Portions of the proposed Project may require excavation or blasting within areas suspected of containing UXO, presenting a safety hazard for construction workers. No UXO was encountered during the performance of the soil borings taken to complete the geotechnical survey for this Project. However, potentially active UXO is possibly present on the steep slopes of the hill to the north of the planned building expansion, near the planned additional parking area and the associated walkway between this parking area and the hospital. In general, subsurface disturbance is prohibited in areas that have the potential for containing UXO. If any activities that involve subsurface disturbance (such as clearing, digging, post-holing, pile-driving, blasting, or grading) would be conducted in areas that have the potential for containing UXO, these areas must be cleared of UXO

presence before the start of such activities. In general, for all excavations required in areas suspected of containing UXO, West Point would contract with a qualified ordnance and explosives waste remediation company to remediate the site prior to construction (Sanborn 2005).

### **3.11 PUBLIC HEALTH AND SAFETY**

Implementation of the Project will result in a variety of potential impacts on public health and safety at West Point. These potential impacts would consist of temporary impacts on public health and safety during construction, as well as permanent impacts following construction.

Temporary impacts on public health and safety during the construction period would be potentially negative, consisting of the creation of an ‘attractive nuisance’ at the construction site, increasing traffic volume along the northern portion of Washington Road, reducing the amount of available parking at the KACH for staff and visitors, intermittently interrupting utility service, and generating increased volumes of construction and demolition debris. However, West Point will implement the following measures to avoid, reduce or mitigate for these potential negative impacts to the maximum extent practicable.

To address the creation of an “attractive nuisance” at the site of construction activities, West Point will erect an 8-foot high plywood fence around the limits of the construction area, particularly in the vicinity of the West Point Elementary School Complex and the Band Quarters (residential) Community. This will serve to reduce the likelihood that children and other West Point residents, who would be attracted by large machinery, construction equipment and materials, and the physical alteration of the Project area, could enter the construction site, particularly before, during, and after school hours. West Point will also schedule the majority of heavy construction activities during periods when the West Point Elementary School is not in session (i.e., mid-June to mid-August), and limit other more routine construction activities to daylight hours (generally 8:00 AM to 4:30 PM) on weekdays, when West Point residents are typically at school or work.

West Point has developed a number of measures to reduce, avoid, or mitigate for increased traffic volume and decreased available parking in the vicinity of the KACH. These measures are discussed in Section 3.9 (Traffic and Transportation). In addition, residents in the Band Quarters Community will be encouraged to avoid the use of Washington Gate to exist and enter West Point during the construction period, particularly during seasonal and daily peak periods.

Critical/support related areas are included in the KACH emergency generator system, and no impacts to these areas will occur during construction of the Project. However, construction of the Project will require electrical utility service work with minimal temporary power shutdowns of non-critical/support related areas. To minimize potential interruptions to electrical and other utility services, West Point will provide a minimum

of ten working days notice to the hospital staff, as well as to surrounding residential communities and the West Point Elementary School Complex as appropriate, and will perform all electrical and other utility shutdowns during off peak hours.

Construction of the Project would temporarily generate various typical solid construction and demolition debris, which could include hazardous materials, such as solvents, lubricants, sealants, adhesives, petroleum products, and paints. Implementation of construction activities, including the transport, use, and temporary storage of potentially hazardous materials, would comply with proper handling and reporting procedures identified in West Point's *Installation Spill Contingency Plan* (USMA 1996). A written inventory and MSDSs would accompany all hazardous materials that are transported as part of this Project, as required. Through the implementation of these procedures, the transport, temporary storage, and use of typical hazardous construction materials for this Project would not present a significant increased risk to human health or safety. Non-hazardous construction and demolition debris will be disposed of according to the construction contractor's construction and demolition waste management plan, which would be approved by West Point prior to construction.

As discussed in Section 2.10 (Materials and Wastes), portions of the Project are in close proximity to a known UXO area (Area D) (Human Factors Applications, Inc. 1994). It is likely that, because of prior disturbance associated with construction of the KACH in the late 1970's, the Project location within the hospital envelope will not contain UXO. However, if any construction activities that involve subsurface disturbance, such as clearing, digging, post-holing, pile-driving, blasting, or grading, would be conducted in areas that have the potential for containing UXO, these areas would be cleared of UXO prior to the start of such activities. In general, for all excavations required in areas suspected of containing UXO, West Point would contract with a qualified ordnance and explosives waste remediation company to remediate the site prior to construction (Sanborn 2005).

Following construction, the Project would result in permanent beneficial impacts on public health and safety, consisting of providing a single location for almost all out-patient care at West Point, and locating almost all health care at West Point within a single location to increase the efficiency of providing medical care and services for the diverse community of West Point. This would improve the ability of the KACH to accomplish its mission of meeting the current and future medical needs of the West Point community.

### 3.12 COASTAL ZONE

To facilitate the coastal zone consistency determination process, West Point has determined that, of the 44 State Coastal Policies, five policies may be applicable to the proposed project, as identified below. Determinations for the consistency of the project with these five policies are also presented below. The State of New York Department of State has provided its concurrence with West Point consistency determination regarding this Project (see State of New York Department of State concurrence letter in Appendix B).

***Policy 7 – Significant coastal fish and wildlife habitats would be protected, preserved, and where practical, restored so as to maintain their viability as habitats.*** Policy 7 encourages the protection of significant coastal fish and wildlife habitats that assure the continued “survival of fish and wildlife populations” (NYSDOS 2002). In an effort to ensure the protection, preservation and/or restoration of these significant habitats, this policy recommends that proposed actions within state-designated coastal zone areas limit activities that may destroy or significantly impair such habitats “beyond the tolerance range of the organisms occupying the habitat,” including activities such as grading land, dredging or excavation, and/or the introduction of pollutants (NYSDOS 2002).

***Determination*** – Based on the preceding analyses in Sections 2.1 (Geology and Soils), 2.2 (Water Resources), and 2.3 (Vegetation and Wildlife), the Project would be consistent with Policy 7. Specifically, with the implementation of soil erosion and sedimentation control BMPs and the *United States Military Academy Installation Spill Contingency Plan* (USMA 1996a) during construction of the Project, there would be no significant adverse effect on coastal fish and wildlife or their habitats in the Hudson River.

As discussed in Section 2.2 (Water Resources), there is potential for stormwater runoff from the constructed hospital building and parking areas to increase the water temperature of Crows Nest Brook and therefore adversely affect the conditions that support downstream trout spawning and survival. However, the presence and effective functioning of the upgraded stormwater management system for the hospital expansion is would attenuate temperature changes before stormwater is discharged downstream. West Point is in the process of developing this Project-specific plan to address the appropriate treatment and discharge of surface water and stormwater runoff from the Project into Crews Nest Brook and the Hudson River, both during and after construction. In addition, the West Point Integrated Natural Resources Management Plan (INRMP) Waterbody-Specific Management Measures for Crows Nest Brook calls for the placement of a thermograph in the brook once every five years to monitor stream temperatures (USMA 2003).

***Policy 23 – Protect, enhance and restore structures, districts, areas or sites that are of significance in the history, architecture, archaeology or culture of the state, its communities or the nation.*** Policy 23 is a policy that provides for the protection of historic and scenic resources that are both within the state-designated coastal zone area, as well as historic and scenic resources that have a coastal relationship (NYSDOS 2002).

Such historic and scenic resources include resources “on, or nominated to be on, or determined eligible to be on the NRHP” (NYS DOS 2002). Consistency of a proposed action with this policy would include measures to “prevent a significant adverse change to such significant structures, districts, areas or sites,” including measures to prevent the implementation of proposed actions “within 500 feet of the perimeter of the property boundary of [a] historic, architectural, cultural, or archaeological resource and all actions within an historic district that would be incompatible with the objective of preserving the quality and integrity of the resource,” particularly in a manner that would make the visual and locational relationship of the proposed action incompatible with the “special character of the historic, cultural, or archaeological resource” (NYS DOS 2002). Measures to ensure consistency with this policy include ensuring the compatibility of the visual and locational relationship of the proposed action with these historic and scenic resources by designing the general appearance of the proposed action to reflect such qualities as the architectural style, design material, scale, proportion, composition, mass, color, setback, landscaping, and lighting of the historic and scenic resources to the maximum extent possible (NYS DOS 2002).

**Determination** – Based on the preceding analyses in Sections 2.4 (Cultural Resources) and 2.5 (Visual Resources), and the results of the Visual Assessment, the proposed project would be consistent with Policy 23, through the implementation of design and siting measures in conjunction with recommendations from the NYSOPRHP and the NYSDOS that would avoid, reduce, or mitigate significant adverse effects on historic and scenic resources within the proposed project location. The Project is located more than 500 feet from Washington Road, a historic and scenic transportation corridor through West Point, and approximately 300 from the Band Quarters, a historic residential community. Specific measures to avoid, reduce, or mitigate significant adverse effects on these historic resources include: performing all Project-related activities within previously developed areas of West Point; coordinating with the NYSOPRHP as design plans advance, implementing pertinent recommendations from the NYSOPRHP to reduce and/or avoid adverse effects on cultural resources, such that implementation of the Project would result in less than significant impacts on any cultural resources identified within the proposed Project area; and/or performing a Phase I Cultural Resource Investigation of any previously undisturbed portions of the Project area. Specific measures to avoid, reduce or mitigate significant adverse effects on scenic resources would be identical to those identified below, for Policy 24.

**Policy 24 – Prevent impairment of scenic resources of statewide significance.** Policy 24 is a policy that addresses the impacts of a proposed action in areas that have been identified as scenic areas of statewide significance within a state-designated coastal zone area. These evaluations consider whether the proposed action would impair a Scenic Area of Statewide Significance (SASS), through activities such as the addition of structures to a scenic area “which because of scale, form or materials, would diminish the scenic quality of an identified resource” (NYS DOS 2002). Consistency of a proposed action with this policy would incorporate guidelines identified in this policy, including “siting structures...back from shorelines, or in other inconspicuous locations to maintain the attractive quality of the shoreline and to retain views to and from the shore,”

“orienting structures to retain views, [and] save open space,” “adding vegetation to...blend structures into the site, and obscure unattractive elements,” “using appropriate materials, in addition to vegetation, to screen unattractive elements,” and “using appropriate scales, forms and materials to ensure that...structures are compatible with...the landscape.”

Consistency of a proposed action with this policy would be particularly important because West Point is located within the HHSASS, a 20-mile stretch of the Hudson River and its associated shoreline that lies within the New York State coastal zone, and that has been designated as a scenic area of special significance because of its “unique, highly scenic landscapes which are accessible to the general public, and recognized for their scenic quality” (NYS DOS 1993). Because West Point and adjacent municipalities have not established a Local Waterfront Revitalization Program for the project area, the NYSDOS’s CMP administers policies for development within the HHSASS (Millington 1998, NYDOS 2002).

The HHSASS is comprised of 28 subunits, which have distinct, but related scenic components that contribute to the larger HHSASS. The proposed project alignment is located within one of the 28 subunits of the HHSASS, the Contemporary West Point Military Academy Subunit. The proposed project alignment may also be visible from locations within six adjacent subunits of the HHSASS (the Cold Spring, Constitution Island, Garrison Four Corners, West Point Military Academy, Highlands, and Storm King subunits) (see **Figure 5**).

**Determination** – Based on the preceding analysis in Section 2.5 (Visual Resources), and the results of the Visual Assessment prepared by West Point, the proposed project would be consistent with Policy 24, through the implementation of design and siting measures that prevent impairment of scenic resources of statewide significance within the proposed project location. Implementation of design measures would avoid impairment by ensuring that the Project will use compatible architectural style, elements, colors, and materials, to remain consistent with the aesthetic qualities of the extant KACH facility, including materials that are non-reflective. Furthermore, the Project will be located at the eastern end of the KACH, against the steep slope of Crows Nest Mountain, so that although the Project will add to the overall mass of the KACH facility, the Project will remain in the background of those views (that contain the Project area) and no new visual impacts will be introduced into viewsheds within the HHSASS. Potentially obtrusive elements of the Project, such as exterior lighting of the building, sidewalks, and parking lots, would be minimized by using the minimum necessary lighting required, will be installed within bollards along sidewalks and standard West Point lighting fixtures along access roads, walkways, and parking areas, and using directional lighting with full shields directed down into the appropriate areas to reduce off-site illumination and glare (light trespass). Additionally, all exposed (e.g. exterior) mechanical and/or electrical equipment (including equipment installed along or adjacent to exterior walls or on the roof of the Project) will consist of, or be covered by, non-reflective materials that are not bright, shiny, or metallic.

***Policy 33 – Best management practices will be used to ensure the control of stormwater runoff and combined sewer overflows draining into coastal waters.*** Policy 33 is a policy that encourages the use of “best management practices” to avoid “pollution [of coastal waters] caused by the discharge of stormwater runoff and combined sewer overflows” (NYSDOS 2002). Consistency with this policy is encouraged through the development of both structural methods, where economically feasible, and non-structural methods to avoid any adverse water quality impacts that may result from a proposed action (NYSDOS 2002).

***Determination*** – Based on the preceding analyses in Sections 2.2 (Water Resources) and 2.6 (Utilities), the proposed project would be consistent with Policy 33. Specifically, West Point maintains existing separate, not combined, stormwater drainage and sanitary sewer systems, with which the proposed Project would be connected.

To address stormwater drainage collection and discharge, West Point would implement soil erosion and sedimentation control BMPs during construction of the Project and a Project-specific stormwater management plan for the appropriate collection, treatment, and/or discharge of stormwater runoff after construction. Furthermore, the Project would avoid the physical alteration of existing streams or drainages within or adjacent to the Project area. All plans and facilities will be designed, constructed, and maintained in accordance with the New York State Stormwater Design Manual and all applicable stormwater management regulations and permits.

To address sanitary sewer systems, it is anticipated that the Project’s wastewater lines will tie into the West Point’s existing sanitary sewer system and undergo secondary treatment at West Point’s Target Hill Wastewater Treatment Plant, before the secondary treated water is discharged to the Hudson River. This wastewater treatment plant will be able to handle the additional capacity required by the Project.

***Policy 37 – Best management practices would be utilized to minimize the non-point discharge or excess nutrients, organics and eroded soils into coastal waters.*** Policy 37 is a water and air resources Policy encouraging the minimization of non-point discharges or excess nutrients, organics, and eroded soils into waters within state-designated coastal zone areas (NYSDOS 2002). Consistency with this Policy is encouraged through the use of BMPs for a proposed action that requires soil erosion control and surface drainage control (NYSDOS 2002).

***Determination*** – Based on the preceding analyses in Sections 2.1 (Geology and Soils), 2.2 (Water Resources), and 2.11 (Utilities), the Project would be consistent with Policy 37. BMPs as discussed above for Policies 7 and 33, would be implemented to reduce potential soil erosion and sedimentation and surface and stormwater runoff to a level that would not have a significant adverse effect on the coastal waters of the Hudson River.

### **3.13 ADDITIONAL ENVIRONMENTAL CONSIDERATIONS**

#### **3.13.1 Environmental Justice**

In accordance with Executive Order 12898 (dated February 11, 1994), Federal agencies are required to identify and address the potential for disproportionately high and adverse environmental and human health effects on minority and low-income populations, resulting from the agencies' programs, policies, and activities.

Only military housing exists within West Point. However, the nearest low-income housing community, Weyant Green, is located south of and adjacent to West Point, off West Point Highway on Webb Lane. Weyant Green, owned by Quaker Hill Housing, consists of six buildings with a total of 51 housing units built in 1983 with funding from the U.S. Department of Housing and Urban Development.

Based on the information presented in Sections 3.1 through 3.13 of this EA, no significant or unacceptable adverse environmental or human health effects are expected to result from implementation of the Project. It is anticipated that implementation of the Project would not negatively affect the Weyant Green community as a result of increased traffic, noise, air pollution, or potential changes to visual quality because of its remote location relative to the Project area. Because implementation of the Project would not negatively impact this community, no disproportionately high and adverse impact to minority or low-income populations would occur.

#### **3.13.2 Protection of Children**

In accordance with Executive Order 13045 (dated April 21, 1997), Federal agencies are required to identify and address the potential for disproportionately high and adverse effects on the environmental health and safety risks on children, resulting from the agencies' programs, policies, and activities.

The Project will be located immediately west of and adjacent to the rear (northwest) corner of the West Point School Complex property. The West Point School Complex consists of elementary and middle school buildings and various support facilities for the education of approximately 700 children. In particular, the school playground and nature trail, which are used regularly by children for outdoor recreational and education activities, are located immediately east of and adjacent to the Project area (see **Figure 2**). There are no physical barriers (such as fencing) separating the school property and the Project area, and in fact, a number of formal and informal trails and access points connect the school property with the Project area.

The Project will also be located immediately west and north of and adjacent to the Band Quarters Community, a residential community providing family housing for the West Point community. Although an existing high stone wall extends along a portion of the western side of the Band Quarters Community, and the Crows Nest Brook channel

extends along the northern side of the Band Quarters Community, there are no significant physical barriers separating the Band Quarters Community and the Project area. Additionally, the Band Quarters Community is also connected to the West Point School Complex property along a formal path, providing indirect access to the Project area through school property.

Based on the information presented in Sections 3.1 through 3.13 of this EA, no significant or unacceptable adverse effects on the environmental health or safety of children are expected to result from implementation of the Project. It is anticipated that appropriate health and safety measures will be implemented for the Project so that the Project would not negatively affect children using the West Point School Complex property or residing within the Band Quarters (residential) Community as a result of increased traffic, noise, air pollution, or potential creation of “attractive nuisances” due to the presence of large construction equipment, machinery, and materials, or alterations to the physical site. Because implementation of the Project would not negatively impact children at West Point, no disproportionately high and adverse impacts on the environmental health and safety of children would occur.

### **3.13.3 Possible Conflicts Between the Proposed Action and Existing Land Use Plans, Policies, and Controls**

In accordance with 32 CFR Part 651, Environmental Analysis of Army Actions, this section of the EA addresses possible conflicts between the Project and Federal, regional, state, and local (including Indian tribe) land and airspace use plans, policies, and controls for the area concerned. No specific conflicts have been identified for the Project to date.

Implementation of the Project would be located entirely within the West Point installation boundary, and therefore primarily would require compliance with West Point land and airspace use plans, policies, and controls. Accordingly, design, implementation, restoration, and monitoring of the Proposed Action would be performed in accordance with all applicable West Point plans, policies, and controls.

Additionally, West Point policy requires compliance with applicable Federal, regional, and state regulations and permit requirements. Accordingly, West Point will obtain and comply with all applicable and required regulatory permits. Therefore, implementation of the Project would not result in conflicts with applicable Federal, regional, state, and local (including Indian tribe) land and airspace use plans, policies, and controls for the area concerned.

### **3.13.4 Irreversible and Irrecoverable Commitments of Resources**

In accordance with 32 CFR Part 651, Environmental Analysis of Army Actions, this section of the EA addresses the irreversible and irretrievable commitment of materials and natural or depletable resources required as a result of implementation of the Proposed Action, and the potential to conserve such resources using various mitigation measures.

Irreversible commitment of resources includes consumption or destruction of nonrenewable resources, resulting in the condition in which the ability to use or enjoy the resource is lost forever. The irreversible commitment of resources associated with the Project includes commitment of raw construction materials and energy resources necessary for construction of the Project, such as fossil fuels (gasoline, petroleum products, and lubricants) and electricity. In addition, the land used for the construction of the hospital expansion is considered an irreversible commitment during the time period that the land is used for the hospital facility. However, if a greater need arises for use of the land or if the hospital is no longer needed, the land can be converted to another use.

Irrecoverable commitment of resources is related to a commitment that, due to decisions to manage a resource for one purpose, opportunities to use or enjoy the resource for another purpose are lost for a period of time. Irrecoverable commitments are often associated with opportunity costs of using resources for the Project, when the same resources could have been allocated for other uses. Labor committed to the project would be an irretrievable commitment of resources. In addition, funds spent on the proposed building expansion and associated utilities/parking areas would be an irretrievable commitment of resources.

The commitment of these resources is based on the concept that West Point and the patients the KACH serves will benefit by the improved quality and efficiency of its medical care system. These benefits will consist of improved efficiency and effectiveness, and greater availability of quality services which are anticipated to outweigh the commitment of these resources.

Consumption of these resources would be minimized or conserved to the extent practicable through efficient planning processes, careful analysis and selection of the most cost effective materials and construction techniques, and efficient construction equipment to the extent practicable, and use of best management practices and site-specific construction techniques to avoid or minimize direct and indirect impacts on natural and cultural resources.

### **3.13.5 Energy Requirements and Conservation Potential of Various Alternatives and Mitigation Measures**

In accordance with 32 CFR Part 651, Environmental Analysis of Army Actions, this section of the EA addresses renewable and nonrenewable energy requirements associated with implementation of the Proposed Action and the potential to conserve energy resources through design and use of alternatives and mitigation measures.

Renewable energy resources would not be consumed to a significant extent during implementation and operation of the Proposed Action. Nonrenewable energy resources would be committed by construction contractors to construct, and West Point to operate, the Proposed Action. Nonrenewable energy resources committed include fossil fuels and electricity consumed by construction equipment, and natural gas and electricity to heat and operate the proposed hospital expansion. Consumption of these nonrenewable energy resources have been minimized or conserved to the extent practicable through careful analysis and selection of appropriate building materials, interior design, and construction procedures, and through the use of best management practices to avoid or minimize use of energy resources wherever practicable.

### **3.13.6 Urban Quality, Historic and Cultural Resources, and the Design of the Built Environment**

In accordance with 32 CFR Part 651, Environmental Analysis of Army Actions, this section of the EA addresses the effects of implementation of the Proposed Action on adjacent neighborhoods and the community at large, and reviews the reuse potential of existing building space and its time-use allocation of the built environment.

Implementation of the Proposed Action would not result in significant permanent adverse impacts to the community surrounding West Point. Potential visual impacts to areas outside of West Point constitute the primary impact of the Project on communities outside of West Point. However, with the implementation of measures to avoid or reduce impacts to visual resources, described within this EA, the proposed Project would have no significant adverse effects on visual resources to these communities.

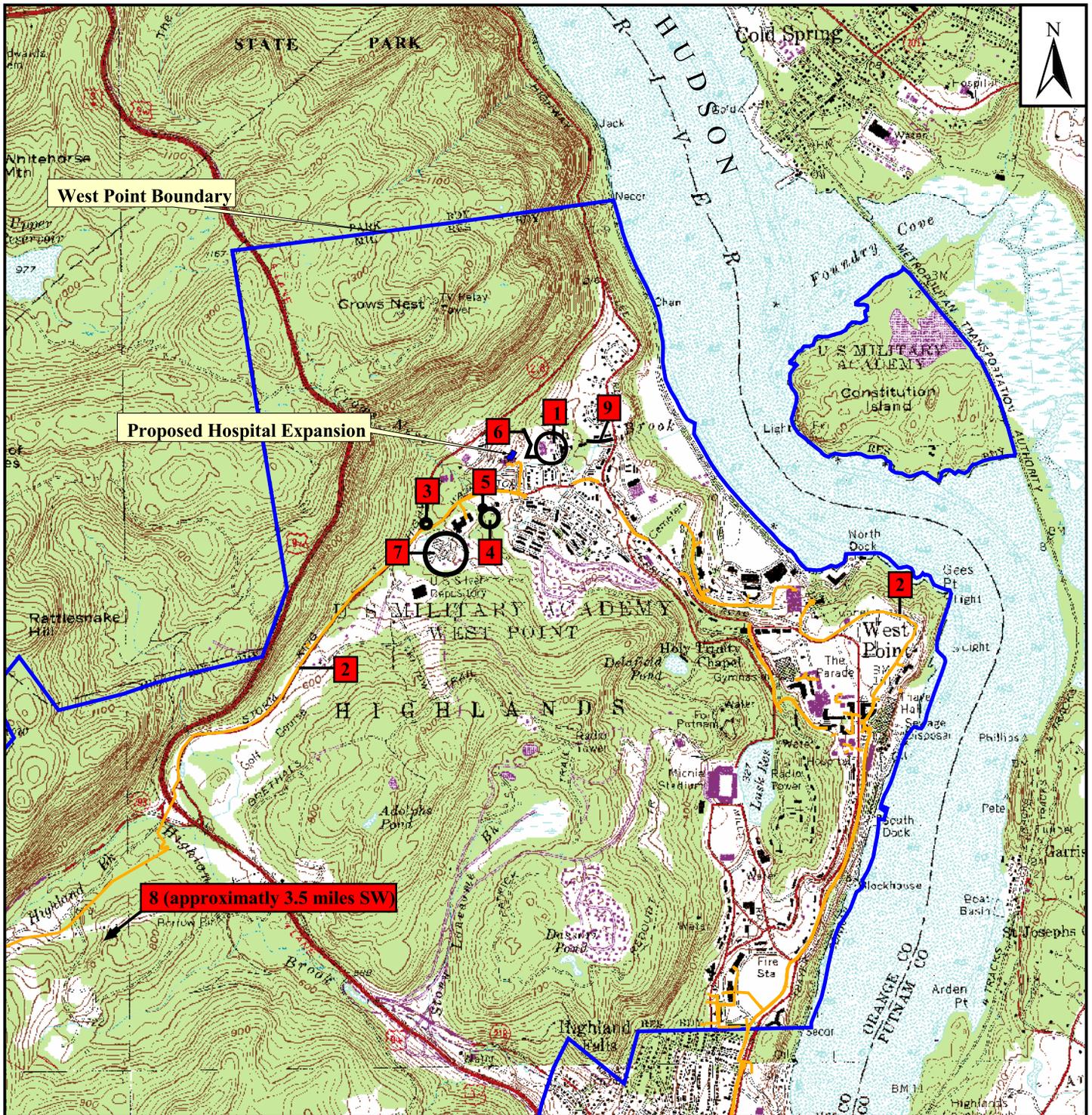
This Project would result in the vacancy of existing building space in Building 606 in the Cadet Area, currently used as an extension of the KACH health care services. Although this Project involves the construction of new building space instead of using existing building space, it improves the efficiency of the KACH system by locating the building expansion at the existing KACH building, as opposed to developing a separate, remote site.

### **3.14 ADDITIONAL ENVIRONMENTAL CONSIDERATIONS**

Cumulative environmental effects are the result of a proposed action being added to effects of other past, present, and reasonably foreseeable future actions (RFFAs), regardless of the agency or person responsible for such actions. This section provides a summary of cumulative effects associated with the Project in relation to other RFFAs and recently completed projects at West Point. This section addresses only those resources subject to cumulative effects, whereas “no effect” issues are not addressed.

#### **3.14.1 Recent Past, Ongoing, and Reasonably Foreseeable Future Actions**

This section describes 10 recent past, present, and RFFAs that relate to the proposed Project. These projects were selected from a large list of West Point’s projects because they relate to the proposed Project in some way, either in terms of construction timeframe, or proximity to the Project, and/or similarity with regard to the nature of project or its principal environmental impacts. The locations of these related projects are shown on **Figure 6**.



**LEGEND**

- |  |   |  |
|--|---|--|
| <b>1</b> West Point Elementary School Upgrades                         | <b>4</b> Intercollegiate Coaches Housing at Worth Place | <b>7</b> U.S. Military Preparation School    |
| <b>2</b> Installation Information Infrastructure Modernization Program | <b>5</b> Temporary/Emergency Helicopter Landing Pad     | <b>8</b> Motor Pool Relocation               |
| <b>3</b> Washington Gate Upgrade                                       | <b>6</b> West Point Elementary School Nature Trail      | <b>9</b> Crows Nest Brook Bank Stabilization |

**Figure 6. Site Location Map for Recent Past, Present, and Reasonably Foreseeable Future Actions, West Point, New York.**

Client:  U.S. Army Garrison at West Point

Prepared By:



Date:

11/01/05



Source: NYSDEC, Division of Fish Wildlife, and Marine Resources. Derived from scans of USGS 7.5-minute quadrangle maps (DRG) 2000. DRGs used: West Point and Peekskill, New York. GIS data layers provided to Northern Ecological Associates by USAG West Point November 2002 & 2005.

***West Point School Upgrades*** – In spring 2005, West Point completed the construction of upgrades to the West Point Elementary School, located adjacent to the east of the KACH (**Figure 6**). This project consisted of the addition of 7,500 sf of classroom space to Building 705A, the construction of a 152-space surface parking lot, new and modified sidewalk crossings on the east side of Barry Road, the creation of a bus staging area, and the removal of two existing temporary modular classrooms located southeast of Building 705A.

***West Point Installation Information Infrastructure Modernization Program*** – West Point recently completed the process of constructing the Installation Information Infrastructure Modernization Program (I3MP), which consisted of the installation of upgraded fiber optic communications cable infrastructure and the installation of telecommunications closets in Taylor Hall (Building 600). Construction of this 2-year project started in 2004 and was completed in January 2006. This project consisted of the installation of a total of approximately 20.6 miles of new single fiber optic cable, primarily within roadways and existing utility rights-of-way; and upgrading telecommunications systems inside a total of 40 buildings throughout West Point (**Figure 6**). One of these buildings was the KACH, where the system upgrade was accomplished using existing building access points and interior routing paths through the cores of the buildings, into an existing telecommunications closet inside the hospital.

***Washington Gate Upgrade*** – In conjunction with plans for other security gate upgrades, West Point is planning to implement security upgrades to the Washington Gate, located at the intersection of Washington Road and NYS Route 218 (**Figure 6**). As of October 2003, the “pre-10% design” concepts under consideration for the Washington Gate included short-term enhanced security measures such as an auto-dome closed cable television (CCTV) camera; the construction of new, wider traffic lanes; a new sentry house; permanent lighting; deployable vehicle barrier systems; canopies to protect soldiers on duty from inclement weather; additional CCTV cameras; and, permanent traffic control measures along Washington Road (including traffic arms and new signage). Additional pre-10% design concepts include the performance of a traffic safety study, and retrofitting the existing gate houses and security boxes so that they are ballistic resistant.

***Coaches Housing at Worth Place*** – West Point recently completed a project consisting of six new houses at Worth Place (located approximately 0.25 mile south of the KACH expansion, **Figure 6**) for use as Head Intercollegiate Coaches Housing in conjunction with the Office of the Directorate of Intercollegiate Athletics (ODIA). The project included a new road “cul de sac” turnaround design and associated utilities (gas, water, storm drainage sewer, telephone, an cable). In addition, West Point is planning on building three more coaches’ houses on the lower portion of Worth Place in 2006, below the cul-de-sac.

***Emergency Helicopter Landing Pad*** – In 2002, West Point constructed a temporary/emergency helipad for MEDEVAC Operations at the top of the cul-de-sac on

Worth Place, at the location of the former (previously demolished) buildings 709 (incinerator building) and 759 (formerly the Non-Commissioned Officers [NCO] Club) (**Figure 6**). The temporary helipad was in-place less than a year, at which time it was moved to its current location, just west of the Emergency Room entrance to the KACH. Presently, the new ODIA Coaches Housing at Worth Place occupies this former helicopter landing pad area.

***West Point Elementary School Nature Trail*** – The West Point Elementary School Nature Trail was constructed in 2001. This 240-foot-long nature trail is located between the KACH and the elementary school, in the undeveloped wetland and upland area located just east of the KACH parking lot (**Figures 2 and 6**). Built as part of the National Environmental Education and Training Foundation’s National Public Lands Day 2001, this trail consists of a boardwalk path that features observation points in three different ecosystems: aquatic (creek/Crows Nest brook), wetlands, and woodlands (West Point Elementary School 2004). The trail includes three large observation decks, a footbridge across the stream, and an “outdoor classroom” area with benches to facilitate outdoor environmental education. As currently designed, the Project, including the realignment of the existing access drive into the eastern parking lot and the southern end of the eastern parking lot following construction, will not physically impact the nature trail, and is not expected to result in any adverse effects on the three different ecosystems that are visible from the nature trail.

***U.S. Military Academy Preparatory School*** – In accordance with recent Base Realignment and Closure (BRAC) 2005 decisions, the U.S. Military Academy Preparatory School (USMAPS) currently located in Fort Monmouth, New Jersey will be relocated to West Point. The USMAPS will serve high school students that will graduate to matriculate into the West Point U.S. Corps of Cadets. The timeframe for the USMAPS relocation is tentatively planned for 2009, and will include the relocation of approximately 240 cadets, 28 military staff members, and 30 civilian workers (Anderson 2005). West Point has set aside approximately 30 acres along Reynolds Road, located approximately 0.5 mile south-southwest of the KACH (**Figure 6**). Of this, approximately 13 acres is currently developed and used for the West Point Motor Pool, 2 acres is an additional existing parking area, and 15 acres is undeveloped forest. The motor pool will be relocated to accommodate the new USMAPS use (see below for more details on the motor pool relocation). In this 30-acre area, West Point plans to demolish existing buildings and construct barracks housing, a dining facility, academic/classroom facility, parking areas, athletic fields, a fitness facility, and other buildings including administrative, conference, supply, and health facilities to support the USMAPS (Anderson 2005).

***West Point Motor Pool Relocation*** – To accommodate the USMAPS relocation to West Point, the West Point Directorate of Logistics Motor Pool will be relocated to Training Area V on the west side of Stillwell Lake, approximately 6.5 miles southwest of the KACH, east of Camp Buckner (**Figure 6**). The Motor Pool functions to provide a centralized government motor pool for West Point. The new Motor Pool area will include administrative office space; government vehicle parking and storage space;

centralized government vehicle gas station; vehicle maintenance, repair, pain, dispatch, and wash facility; and, associated appurtenances (Anderson 2005).

***Crows Nest Brook Stabilization*** – West Point is planning to conduct some in-stream and streambank stabilization measures along a segment of Crows Nest brook from Lee Road upstream (west) approximately 300 feet in the Lee Housing Area (**Figure 6**). Measures include minor realignment and widening of the stream from 22 feet wide to 35 feet wide to reduce erosive forces and increase bank stability. In addition, bank armoring, minor localized changes to streambed gradient, and removal/realigning/replacement of boulders on a boulder-specific basis. This project is located downstream of the proposed KACH expansion, and is planned for the period between March 15 and August 31, 2006, to avoid negative impacts to the wild trout in this stream.

### **3.14.2 Potential Cumulative Environmental Effects**

Potential cumulative environmental effects would result from the combination of the impacts of the proposed Project with West Point's recent past, ongoing, and RFFAs in the vicinity of the proposed Project. These impacts would affect the following resources: storm water runoff and streambed erosion; cultural resources; visual and aesthetic resources; and, traffic circulation and parking.

***Storm Water Runoff and Streambed Erosion*** – The implementation of past, present, and RFFAs in the vicinity of the Project area would involve earth disturbances associated with soil excavation and construction activities in numerous locations at West Point. Minor erosion and sedimentation from each of these projects, as well as the incremental increases in impervious areas (when added together), could result in potentially greater cumulative soil erosion/sedimentation impacts to waterbodies and wetlands, and in particular, Crows Nest Brook. Cumulatively, these effects could adversely impact the wild trout fishery and other aquatic resources in Crows Nest Brook, as well as other users of these waterbodies and wetlands. However, the use of site-specific erosion control measures and BMPs during construction, proper design of stormwater management systems associated with new buildings and parking areas, and the restoration of all areas of disturbed soils immediately following earth disturbances for all projects, would minimize the potential for cumulative effects of erosion and sedimentation to a level that would not be undue or significant.

The use and transportation of hazardous materials used by construction equipment involved in the Project and other past, present, and RFFAs could increase the cumulative potential for inadvertent spills to occur. Hazardous material spills could pollute groundwater or surface waters, and also could adversely affect human health. Cumulatively, however, these potential impacts would be reduced to a level that is not undue or significant by handling all such hazardous materials in accordance with the applicable health and safety plans and West Point's *Installation Spill Contingency Plan* (USMA 1996a).

**Cultural Resources** – The implementation of the Project and RFFAs are not likely to result in adverse impacts on significant cultural resources at West Point. In accordance with West Point’s *Integrated Cultural Resources Management Plan*, before implementing each major project, West Point would complete all applicable aspects, evaluations, and action items prescribed in this plan. By definition, this plan requires the integration of cultural resources assessment and management into the routine activities, processes, and planning of activities at West Point. Therefore, implementation of the *Integrated Cultural Resources Management Plan* would ensure that cultural resources are protected and properly managed for this Project and all RFFAs.

**Visual and Aesthetic Resources** – West Point is committed to maintaining the visual integrity of visual resources associated with historic, cultural, and natural landscapes at West Point. Accordingly, West Point’s *Integrated Cultural Resources Management Plan* and *Historic Landscape Management Plan for the United States Military Academy at West Point, New York*, are integral to evaluating and planning projects and activities that have the potential to adversely affect visual resources at West Point, and would be adhered to for each individual project, as applicable. Therefore, no significant cumulative impacts to visual resources are anticipated to result from implementation of the Project and RFFAs at West Point.

**Traffic Circulation and Parking** – Implementation of the Project and RFFAs has the potential to result in temporary, moderate to severe, adverse effects on traffic circulation at West Point, if certain RFFAs (such as construction of the activities for the USMAPS and security upgrades to Washington Gate) are constructed simultaneously with the Project. The traffic controls and parking measures that are required during construction of the Project and several of the RFFAs would temporarily slow normal traffic flow and displace much-needed parking in the vicinity of the KACH. However, this impact would be mitigated to a level that is not undue or significant through the careful coordination of the Project and RFFA construction locations and times, by West Point’s DPW and other involved USMA departments. In addition, cumulative traffic and parking impacts would be reduced by the implementation of approved traffic control and parking measures similar to those described in Section 3.9.

### **3.15 UNAVOIDABLE ADVERSE ENVIRONMENTAL EFFECTS**

The unavoidable adverse impacts associated with the Project consist of the long-term increase/contribution to ongoing stormwater management challenges in the vicinity of the KACH and Crows Nest Brook, long-term visual impacts from several long-range vantage points that contain the KACH and West Point, short-term temporary traffic congestion along Washington Road at West Point, and short-term displacement of parking spaces at the KACH during construction. Measures to reduce and minimize these unavoidable direct adverse effects are provided in the corresponding sections of this EA and summarized in Section 4.3, Anticipated Environmental Effects and Mitigation Measures.

## **4.0 SUMMARY OF CONCLUSIONS**

This section summarizes the description of the Proposed Action, the alternatives to the Proposed Action that were considered, and the anticipated environmental effects of the Proposed Action and mitigation measures that West Point will implement to minimize adverse effects.

### **4.1 PROPOSED ACTION**

West Point, through its Directorate of Public Works, is planning to construct and maintain a 3-story approximately 48,000-gsf expansion on the east end of the existing KACH, on the grounds of West Point, New York

The size of the building expansion footprint will also be approximately 16,000 sf (0.36 acres). Some additional parking spaces will also be developed just north and uphill from the hospital, for an additional 24,400 sf (0.56 acres). Construction of the Proposed Action, or Project, is currently planned to begin in FY 2011, and be completed in FY 2013.

The work areas and staging areas for equipment and materials storage during Project construction would be located in the level areas surrounding the proposed building expansion. A total of approximately 2 acres would be set aside for construction work and staging areas. The majority of these staging areas would be located within the existing parking area for the hospital, temporarily displacing 176 parking spaces currently used for hospital staff and visitors, for a period of approximately 2 years during Project construction. West Point will make alternative parking available in different locations to make up for this temporary loss of parking during the construction phase.

New permanent parking areas are proposed to offset the 72 parking spaces that will be permanently eliminated as a result of the new building expansion. A total of 86 new parking spaces are proposed as part of this Project

### **4.2 ALTERNATIVES**

The No Action Alternative, considered as an alternative to the Project, would avoid Project-related environmental impacts, as well as the expenditure of additional finances required to plan and construct the Proposed Action. However, because implementing the No Action Alternative would result in the KACH continuing to function at a lower than ideal level of efficiency and operations, the No Action Alternative would not fulfill the requirements imposed on West Point, and would not satisfy the purpose and need for the Project. One small portion of the No Action Alternative would be implemented, as some

medical services for Cadets will remain in Building 606 in the Cadet area where they currently operate.

No alternative sites were seriously considered because the existing KACH is already located on a site that can accommodate additional building and parking lot expansion and no significant insurmountable physical, environmental, cultural, or engineering constraints were present at the Project site. However, alternative Project designs within the existing KACH area were considered during Project planning efforts. The selected plan incorporates the most desirable combination of alternative features considered, given the existing cost, logistical, engineering, environmental, and operational constraints that were part of the decision making process.

### **4.3 ANTICIPATED ENVIRONMENTAL EFFECTS AND MITIGATION MEASURES**

The following section provides a summary of the anticipated environmental effects of construction and operation of the proposed Project, and mitigation measures that would be employed to reduce adverse impacts to a level that is not undue or significant.

#### **Geology –**

- No significant adverse effects.
- If blasting is required, West Point would require its construction contractor to obtain blasting permits, if required, and to comply with all associated blasting safety provisions.

#### **Topography –**

- No significant adverse effects.
- Some earth moving and excavation would be required during construction. Disposal of unusable excavated materials (such as gravel and soil) would be according to the contractor's Construction and Demolition Waste Management Plan.
- The Project architects will minimize the effect of lateral earth pressures from the higher north side and the lower south side of the proposed building expansion through the construction of a cantilevered, reinforced concrete retaining wall that will extend along the entire north side of the building.
- Excavation support may be required for excavation of the northern retaining wall area as an exposed vertical cut of up to 14 feet may be required for installation.
- The grading must be designed to minimize stormwater impacts and maintain pedestrian and vehicular access.

#### **Soils –**

- No significant adverse effects.
- Approximately 2.6 acres of soils would be disturbed during construction of the Project.

- To minimize Project-related erosion and sedimentation, West Point would require its construction contractor to prepare an SWP3 in compliance with the NYSDEC's current stormwater management regulations for construction activities pursuant to the SPDES.
- New stormwater facilities would be designed and constructed to accommodate increased stormwater runoff resulting from the Project, prior to release into Crows Nest Brook.
- To prevent accelerated corrosion of new buried utility lines that will be installed in soils in the Project area that are considered to be slightly corrosive to metal piping, polyethylene sheeting of 60 mil nominal thickness will be installed around any metal piping or electrical conduit to prevent corrosion, and care will be taken during backfilling to prevent damaging the polyethylene.
- A foundation drainage system will be installed that includes perforated PVC piping surrounded by crushed stone and geotextile fabric. A retaining wall also will be installed at the base of the slope on the north side of the hospital expansion, and will be protected by waterproofing and geotextile drainage board applied to the wall.

#### **Groundwater –**

- No impacts on groundwater supply sources.
- Groundwater may be encountered during excavation. In this event, conventional pumping equipment would be used if necessary to de-water the construction work areas during construction. Dewatered groundwater would be discharged to an approved location, such as to a well vegetated upland area for eventual drainage to the wetland adjacent to the east of the construction site. Following completion, pumping and/or well points would cease and/or be dismantled, with no permanent impacts to groundwater expected to result.

#### **Surface Water –**

- No excavation or construction would take place in surface waters.
- Erosion and sedimentation control BMPs would be implemented during construction to protect surface waters.
- Hazardous materials required for construction activities would be identified and managed in accordance with the *United States Military Academy Installation Spill Contingency Plan*.
- The Project would result in an increase in impervious (paved and building-occupied) areas of approximately 14,500 sf (0.33 acre).
- West Point is developing a Project-specific Stormwater Management Plan. The stormwater management system in the vicinity of the KACH will be upgraded with additional aboveground and buried stormwater management structures. In addition to addressing the stormwater quantity management standards in accordance with The New York State Stormwater Management Design Manual, the upgraded/Project stormwater management plan also will address pretreatment of stormwater to meet water quality goals.

**Wetlands –**

- No impacts to wetlands.

**Floodplains –**

- No impacts to FEMA-mapped floodplains.
- The Project will result in an increase in upland impervious areas of approximately 14,500 sf (0.33 acre), which could contribute to flooding of Crows Nest Brook. West Point is developing a Project-specific Stormwater Management Plan. The existing stormwater management system in the vicinity of the KACH will be upgraded with additional aboveground and buried stormwater management structures. In addition to addressing the stormwater quantity management standards in accordance with The New York State Stormwater Management Design Manual, the upgraded/Project stormwater management plan also will address pretreatment of stormwater to meet water quality goals.

**Common Vegetation and Wildlife –**

- No significant adverse impacts.

**Special Natural Areas –**

- No direct physical impacts. However, visual and aesthetic impacts may result and are discussed below.

**Threatened and Endangered Species –**

- No significant adverse effects on species with special protection are anticipated to result from construction or operation of the proposed Project.
- West Point would monitor the proposed Project workspaces for timber rattlesnake activity when construction is scheduled between April and September.

**Cultural Resources –**

- Less than significant impacts on cultural resources.
- West Point would continue to evaluate the design plans for the Project in consultation with the NYSOPRHP as necessary, to ensure the continued compatibility with extant architecture in the immediate vicinity of the Project (e.g. the existing KACH structure) and incorporation of existing architectural cues from the larger NHLD at West Point to the maximum extent practicable.
- West Point would perform regular review of the proposed Project, to ensure that the Project would have no adverse effects on NRHP-listed or eligible properties or historic landscapes at West Point.
- If the Project increases in size, such that expansion, construction, or ground disturbing activities would occur outside of the existing hospital envelope, including portions of the slope overlooking the Project area, a Phase I cultural resources investigation would be performed.

**Visual Resources –**

- No new negative impacts to visual resources already present from views within the Project location.

- The rear or north elevation and the roof of the Project would be visible from various views outside the Project location, and the visual effect would be to add mass to the existing KACH facility. The Project will be visually prominent in views represented by vantage points from St. Basils Academy, Boscobel Restoration, The Hastings Center, Constitution Island, and Trophy Point, which are in locations and at elevations that have a relatively unobstructed view of the Project location. However, through the use of architectural style, elements, colors, and materials, the building expansion would be compatible and consistent with the rear (north) and top (roof) elevations of the existing KACH structure, and would be visually consistent with other extant structures within these views.
- The predominant materials for the Project will consist of textured gray concrete or another non-reflective gray material, such as stone or a stone-like material, that is similarly compatible in texture and color with the existing KACH facility.
- The Project will be appropriately sized so as not to dwarf the existing KACH facility in massing, scale, or proportion.
- Individual architectural elements of the Project, such as entrances and fenestration, will consist of non-reflective materials and will be designed to be similar in scale and rhythm to the horizontal lines of the existing KACH facility, to remain compatible with the front (south), side (east), and rear (north) elevations of the existing KACH facility.
- All exposed (*e.g.* exterior) mechanical and/or electrical equipment (including equipment installed along or adjacent to exterior walls or on the roof of the Project) will consist of, or be covered by, non-reflective materials that are not bright, shiny, or metallic.
- West Point Standard light fixtures will be used for all exterior lighting for parking areas, walkways, and access roads. Bollard lighting will be used along sidewalks immediately adjacent to the new addition to the existing KACH facility.
- All exterior lighting will consist of the minimum necessary lighting required along sidewalks, access roads, and parking areas. Furthermore, West Point would ensure that directional lighting is installed for any additional exterior building lighting needs, such that lighting is directed down into the appropriate areas, and would install full shields on all lighting to reduce off-site illumination and glare (light trespass).

#### **Utilities –**

- Although several utility system extensions or relocations will be required to serve the proposed building expansion, no increases in West Point’s supply capacities will be required to serve the project.
- Some short-term temporary utility service outages will be required in the existing hospital to initiate new utility service connections. These will be scheduled and coordinated for the minimum impact.
- The existing stormwater management system at the KACH will be upgraded for attenuation of increased impervious surface drainage and roof runoff resulting from the Project. The stormwater management plan/system upgrade for the Project would achieve water quality goals through capture of impervious surface

runoff, roof runoff, and upland runoff, prior to outflow release into Crows Nest Brook.

- All plans and facilities would be designed, constructed, and maintained in accordance with the New York State Stormwater Design Manual and all applicable stormwater management regulations and permits.

#### **Air Resources –**

- Before construction of the Project, West Point will identify and evaluate direct and indirect emissions associated with any proposed actions and ensure these emissions conform to the SIP, and complete a general Clean Air Act conformity review of the Project.
- If SIP thresholds would be exceeded, then West Point would propose and implement air emissions control measures during construction and/or operation of the Project, as necessary, to ensure that implementation of the Project would have no significant adverse impact on air quality.
- If an air emissions permit is determined to be required pursuant to 6 NYCRR Part 231, then West Point would secure the necessary permit from the NYSDEC.

#### **Noise –**

- Temporary and localized increase in noise from the use of construction equipment and from general construction and contractor activities.
- No long-term significant impacts on noise levels.
- West Point Elementary School, West Point Middle School and the Band Quarters Housing areas could experience elevated noise levels during construction activities.
- External or exterior construction noise would be mitigated by limiting construction activities typically to daylight hours (generally, 8:00 AM to 4:30 PM) on weekdays. Because of the length of the construction period (2 years), some construction activities would be conducted when school is not in session and fewer cadets are present on-base (i.e., mid-June to mid-August).
- Equipment operation noise would be minimized by requiring the construction contractors to use equipment that meets specific noise standards.
- West Point would install an 8-foot high plywood fence between the construction area and the school facilities, both as a safety measure and to reduce elevated noise levels experienced by students and staff at the school.

#### **Traffic and Parking –**

- Temporary moderate impacts on traffic circulation patterns between Stony Lonesome Gate to the KACH construction site, and on parking availability in the vicinity of the KACH during the construction period.
- Temporary displacement of approximately 176 parking spaces surrounding the KACH during the construction period.
- Project construction work hours would be scheduled to begin at 8:00 AM, which will avoid the 6:00–8:00 AM period of peak incoming traffic at West Point.

- Advance registration of construction contractors' vehicles and individual drivers with West Point's security force would be required, reducing the delay of vehicles (and interference with normal flow of traffic) at Stony Lonesome Gate entrance.
- West Point would encourage the local West Point community to use the Washington and Thayer gates as alternative access points into and out of West Point during seasonal and daily peak construction periods. West Point would communicate these requests through advertisements in various West Point circulars, posting daily traffic advisories on West Point's website, and erecting signage along primary roads throughout West Point.
- To reduce construction related traffic issues within the KACH area access roads, West Point would temporarily: pave the proposed new parking spaces along the eastern access driveway before construction of the hospital expansion commences to facilitate two-way construction traffic flow; close the 176-space northeastern parking lot for use as a staging area; and, avoid construction vehicle use of any other access road or parking areas associated with the hospital. This will contain construction-related traffic to the east side of the hospital, allowing the main (center) access driveway and adjacent parking to remain available for hospital visitor use. Following construction, traffic circulation within the KACH area would revert to pre-construction patterns, including re-opening the modified northeastern parking lot for use; and establishing new parking spaces along the eastern access road. Before the start of construction, West Point will develop a total of 18 new permanent parking spaces at various locations in the vicinity of the KACH that could be used for parking by KACH visitors or staff both during and after construction.
- West Point will also designate a minimum of 150 parking spaces in on-post parking areas, such as at Buffalo Soldiers Field near Thayer Gate, for non-emergency KACH staff and visitors, and construction personnel, and will establish a dedicated regular shuttle bus service, running on a regular schedule, between the KACH and these designated on-post parking areas, particularly during daily high-volume time periods.
- In total, the Project will add 86 new parking spaces in the vicinity of the KACH, such that a total of 329 parking spaces (a net increase of 14 more than existing conditions) will be available for KACH staff and visitors after completion of the Project.

#### **Materials and Wastes –**

- Construction activities would generate a minor increase in generation of solid construction and demolition debris.
- Prior to construction, West Point's construction contractor would develop a Construction and Demolition Waste Management Plan for the management and proper disposal of solid waste during construction.
- Portions of the building that will be disturbed by the proposed renovation will be inspected by USEPA-certified inspectors to determine whether asbestos is present. If asbestos is present, it will be handled in accordance with USEPA (40 CFR 61.145) and OSHA (29 CFR 1926.1101) regulations.

- Painted surfaces that will be disturbed by the proposed renovation will be analyzed for LBP. Any activities that will disturb LBP will be conducted in accordance with OSHA (29 CFR 1926.62) and U.S. Army (AR 420-70) regulations. Accumulation and disposal of lead waste will be in accordance with USEPA, NYSDEC, and West Point Regulation 200-3.
- Implementation of construction activities would comply with proper handling and reporting procedures identified in West Point's *Installation Spill Contingency Plan*.
- A written inventory and Material Safety Data Sheets (MSDS) would accompany all hazardous materials that are transported as part of this Project, as required.
- Potentially active UXO is possibly present on the steep slopes of the hill to the north of the planned building expansion, near the planned additional parking area and the associated walkway between this parking area and the hospital. If any activities that involve subsurface disturbance (such as clearing, digging, post-holing, pile-driving, blasting, or grading) would be conducted in areas that have the potential for containing UXO, West Point would contract with a qualified ordnance and explosives waste remediation company to remediate the site prior to construction.

#### **Public Health and Safety –**

- Temporary negative impacts include creation of an 'attractive nuisance' at the construction site during construction period, increasing traffic volume along the northern portion of Washington Road, reducing the amount of available parking at the KACH for staff and visitors, intermittently interrupting utility service, and generating increased volumes of construction and demolition debris.
- At completion of construction, the Project would result in long-term beneficial impacts on public health and safety.
- To address the creation of an "attractive nuisance" at the site of construction activities, West Point will erect an 8-foot high plywood fence around the limits of the construction area, particularly in the vicinity of the West Point Elementary School Complex and the Band Quarters (residential) Community. This will serve to reduce the likelihood that children and other West Point residents, who would be attracted by large machinery, construction equipment and materials, and the physical alteration of the Project area, could enter the construction site, particularly before, during, and after school hours.
- West Point will schedule the majority of heavy construction activities during periods when the West Point Elementary School is not in session (i.e., mid-June to mid-August), and limit other more routine construction activities to daylight hours on weekdays (generally, 8:00 AM to 4:30 PM), when West Point residents are typically at school or work.
- See mitigation measures for Traffic and Parking impacts (above).
- West Point will perform all electrical and other utility shutdowns needed during construction during off peak hours. West Point will provide a minimum of ten working days notice to the hospital staff prior to temporary intermittent shut-down of utility services, as well as to surrounding residential communities and the West Point Elementary School Complex, as appropriate.

- See mitigation measures for Materials and Wastes (above).

**Coastal Zone –**

- No significant adverse impacts or inconsistencies with established Coastal Zone Management Policies.

**Environmental Justice and Protection of Children –**

- No disproportionately high and adverse impact to minority or low-income populations would occur.
- No significant or unacceptable adverse effects on the environmental health or safety of children would occur.

**Cumulative Impacts –**

- Potential cumulative impacts may result from implementation of the proposed Project and other RFFAs related to stormwater runoff and streambed erosion along Crows Nest Brook, visual resources, traffic circulation, and parking. However, as a result of the mitigation measures proposed for this Project and for the RFFAs, West Point anticipates it will, through proper implementation of these mitigation measures, limit these cumulative impacts to levels that are not significantly adverse.

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## 6.0 LIST OF PREPARERS

### **Trettel, Roger (Project Director) – Principal Review of all EA sections**

M.S., Wetland Ecology, Duke University, Durham, North Carolina, 1989.

B.S., Forest Science, Pennsylvania State University, University Park, Pennsylvania, 1983.

### **Harris, Roger – Geology, Topography, Soils, Utilities, Noise, Materials and Wastes, Public Health and Safety.**

M.S. Candidate, Biology, University of Akron, Akron, Ohio.

B.S., Natural Sciences, University of Akron, Akron, Ohio, 2001.

### **Lare, Sandra (Project Manager) – Introduction, Background, Purpose and Need, Description of Proposed Action, Alternatives, Water Resources, Vegetation and Wildlife, Recreation, Utilities, Additional Environmental Considerations, Summary of Impacts and Mitigation Measures, PM Review of all EA draft sections**

B.S., Environmental Studies, State University of New York (SUNY) at Binghamton, New York, 1990.

### **Laslovich, Jennifer – (GIS Analyst and Graphics Specialist) – GIS Data Analysis, Figure Preparation.**

A.S., Liberal Arts and Sciences: Math/Science, Jamestown Community College, Jamestown, New York.

### **Schaeffer, Brad - Water Resources, Vegetation and Wildlife**

M.S., University of Arkansas, Fayetteville, Arkansas, 2002.

B.S., Biology, State University of New York College of Environmental Science & Forestry, Syracuse, New York, 1993.

### **Snyder, Natasha – Cultural Resources, Visual Resources, Air Resources, Traffic and Transportation, Public Health and Safety, Coastal Zone, Environmental Justice, Protection of Children.**

PhD Candidate, Anthropology, SUNY at Buffalo.

B.A., Environmental Science and Anthropology, SUNY at Buffalo, 1996.

A.A., Liberal Arts, Bucks Community College, Pennsylvania, 1985.

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## 7.0 DISTRIBUTION

A listing of agencies and persons who have received copies of this EA is provided in **Table 4**.

**Table 4. Public and Agency Distribution List For Distribution of EA**

<b>FEDERAL AGENCIES</b>	
<p>Ms. Grace Musumeci, Chief Environmental Review Section Strategic Planning and Multi-Media Programs Branch USEPA-Region II 290 Broadway New York, New York 10007-1866 (212) 637-7343</p>	<p>Ms. Laura Dean Advisory Council on Historic Preservation Eastern Area Old Post Office Building, Suite 803 1100 Pennsylvania Avenue NW Washington, D.C. 20004 (202) 606-8529</p>
<p>Mr. Larry Mango U.S. Army Environmental Center Bldg. E4435 SFIM-AEC-EQ 5179 Hoadley Road Aberdeen Proving Ground, MD 21010</p>	
<b>TRIBAL AGENCIES</b>	
<p>Ms. Sherry White Tribal Historic Preservation Officer Stockbridge Munsee Band of Mohican Indians P.O. Box 70 Bowler, WI 54416 (715) 793-3970</p>	
<b>STATE AGENCIES</b>	
<p>Mr. Kenneth Markunas Office of Parks, Recreation and Historic Preservation New York State Office of Historic Preservation Field Services Bureau Peebles Island P.O. Box 189 Waterford, New York 12188-0189 (518) 237-8643</p>	<p>Ms. Margaret Duke New York State Department of Environmental Conservation, Region III 21 South Putt Corners Road New Paltz, New York 12561 (914) 256-3050</p>

**Table 4. Public and Agency Distribution List For Distribution of EA (continued)**

<b>STATE AGENCIES (continued)</b>	
<p>Ms. Bridget R. Kennedy New York State Department of State Division of Coastal Resources Attn: Consistency Review 41 State Street Albany, New York 12231-0001 (518) 474-6000</p>	<p>Mr. Nicholas B. Conrad Information Services New York Natural Heritage Program 625 Broadway, 5th Floor Albany, NY 12233-4757 (518) 402-8935</p>
<b>LOCAL AGENCIES</b>	
<p>Mr. Edward Diana Orange County Executive Orange County Government Center 255-275 Main Street Goshen, New York 10924 (914) 291-2318</p>	<p>Mr. Robert Bondi Putnam County Executive Putnam County Office Building 40 Gleneida Avenue, 3rd Floor Carmel, New York 10512</p>
<b>INTERESTED PARTIES</b>	
<p>Mr. Ned Sullivan, Director Scenic Hudson, Inc. 1 Civic Center Plaza #200 Poughkeepsie, New York 12601-3157 (845) 473-4440</p>	<p>Hudson River Valley Greenway Communities Council Attn: Barbara Kendall, Executive Director Capitol Building, Room 254 Albany, New York 12224</p>
<p>Mr. Andrew Chmar Executive Director Hudson Highlands Land Trust P.O. Box 226 Garrison, New York 10524</p>	<p>The Nature Conservancy Eastern New York Chapter Conservation Office 200 Broadway, 3<sup>rd</sup> Floor Troy, New York 12180</p>
<p>Hudson River Keeper 25 Wing &amp; Wing Garrison, NY 10524</p>	<p>Town of Philipstown Attn: Mr. William Mazzuca, Supervisor 258 Main Street Cold Spring, New York 10516</p>
<p>Ms. Marilyn Fenollosa National Trust for Historic Preservation Northeast Regional Office 7 Faneuil Hall Marketplace, 4<sup>th</sup> Floor Boston, MA 02109</p>	<p>Putnam County Historical Society and Foundry School Museum Attn: Ms. Martha Waters, Executive Director of the Society 63 Chestnut Street Cold Spring, New York 10516</p>

**Table 4. Public and Agency Distribution List For Distribution of EA (continued)**

<b>INTERESTED PARTIES (continued)</b>	
Ms. Martha Waters Executive Director Putnam County Historical Society 63 Chestnut Street Cold Spring, New York 10516	Ms. Gail Greet Hannah President, Board of Directors Chapel of Our Lady Restoration, Inc. Box 43 Cold Spring-on-Hudson, New York 10524
Ms. Carmella Mantello, Executive Director Hudson River Valley Greenway Communities Council Capitol Building, Capitol Station, Room 254 Albany, New York 12224 (518) 473-3835	Ms. Mary Ann Hasbrouck The Hastings Center 21 Malcolm Gordon Road Garrison, New York 10524-5555
Mr. Daniel Mackey Director of Public Policy Preservation League of New York State 44 Central Avenue Albany, NY 12206	Saint Basil Academy Executive Director 79 Saint Basil's Road Garrison, New York 10524
Ms. Carolin Serino Business Manager Boscobel Restoration, Inc. 1601 Route 9D Garrison, NY 10524	
<b>PUBLIC VENUES</b>	
Town Clerk Town of Highlands 254 Main Street Highland Falls, New York 10928 (845) 446-3398	Village Clerk Village of Highland Falls 303 Main Street Highland Falls, New York 10928 (845) 446-3400
Director Highland Falls Public Library 289 Main Street Highland Falls, New York 10928 (845) 446-3113	Mrs. Suzanne Moskala Community Library Building 622 United States Military Academy West Point, New York 10996 (845) 938-2974
Ms. Mary Saari Village Clerk Village of Cold Spring 85 Main Street Cold Spring, New York 10516	The Alice Curtis Desmond and Hamilton Fish Library PO Box 265 Routes 403 and 9D Garrison, New York 10924 Attn: Carol Donick

**Table 4. Public and Agency Distribution List For Distribution of EA (continued)**

<b>PUBLIC VENUES (continued)</b>	
Julia L. Butterfield Memorial Library Routes 301 & 9D Cold Spring, New York 10516	

# **APPENDIX A**

## **VISUAL ASSESSMENT POSTERS PREPARED BY WEST POINT GIS DEPARTMENT**

**VISUAL ASSESSMENT POSTERS  
PREPARED BY WEST POINT GIS DEPARTMENT**

**NOT INCLUDED – ONLY ISSUED WITH FINAL EA REPORTS TO  
PUBLIC REPOSITORIES**

## **APPENDIX B**

### **COPIES OF PUBLIC COMMENT LETTERS**



STATE OF NEW YORK  
**DEPARTMENT OF STATE**  
41 STATE STREET  
ALBANY, NY 12231-0001

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GEORGE E. PATAKI  
GOVERNOR

March 31, 2006

Alan B. Bjornsen, CEP  
NEPA Coordinator  
U.S. Army Garrison West Point  
Building 667B, Ruger Road  
West Point, NY 10996

Re: F-2006-0146 DA  
U.S. Army Garrison West Point - Construct an Addition  
to Keller Army Community Hospital and Additional  
Parking  
Hudson River, Town of Highlands, Orange County

**Concurrence with Consistency Determination**

Dear Mr. Bjornsen:

The Department of State has completed its review of the U.S. Army's consistency determination regarding the above-referenced proposal and its consistency with the New York Coastal Management Program.

Based upon the information submitted, the Department of State concurs with the U.S. Army's consistency determination regarding this matter.

Sincerely,

A handwritten signature in cursive script, appearing to read "Sally Ball".

Sally Ball  
Deputy Director  
Division of Coastal Resources



New York State Office of Parks, Recreation and Historic Preservation  
Historic Preservation Field Services Bureau  
Peebles Island, PO Box 189, Waterford, New York 12188-0189

518-237-8643

March 28, 2006

Sandra J. Lare  
NEA Project Manager  
Village Square  
33 Church Street  
Fredonia, NY 14063

Re: **ARMY/DOD**  
**Keller Community Hospital**  
**(addition)**  
**Highlands, Orange County**  
**06PR01677**

Dear Ms. Lare:

Thank you for consulting the State Historic Preservation Office (SHPO). We have had an opportunity to initiate our review in accordance with Section 106 of the National Historic Preservation Act of 1966 and relevant implementing regulations.

Before our office can complete our review, we will have to examine to results of 1B archeology testing for the project's Area of Potential Effect. Please have the requested information forwarded to our office for our formal project opinion.

If you have any questions regarding this letter, please feel free to contact Michael Schifferli at Ext. 3281.

Sincerely,

Kenneth Markunas  
Historic Sites  
Restoration Coordinator

Cc: A. Bjornsen, West Point

## FINDING OF NO SIGNIFICANT IMPACT

### Final Environmental Assessment Expansion of Keller Army Community Hospital

#### United States Army Garrison West Point, New York

#### I. NAME OF ACTION

Expansion of Keller Army Community Hospital (KACH) on the grounds of the U.S. Army Garrison, West Point, Town of Highlands, Orange County, New York.

#### II. DESCRIPTION OF ACTION

- a) **Proposed Action:** The Proposed Action consists of construction of an addition to the KACH and new parking areas. The building addition will contain a total of approximately 48,000 gross square feet (gsf) of floor space, on three floors (each with approximately 16,000 square feet [sf]), and will be situated on the east end of the existing hospital building. In addition, a total of 86 new parking spaces are proposed to offset the 72 parking spaces that will be eliminated as a result of the new building expansion location. Construction of the Proposed Action, or Project, is currently planned to begin in Fiscal Year (FY) 2011, and be completed in FY 2013.
- b) **Alternatives:** Alternatives considered included: 1) No Action; 2) various locations on the KACH property; 3) differing footprint configurations at the proposed location on the east side of the existing hospital building; and 4) various exterior forms (including window shapes and vertical elements), materials (including exterior siding materials), roof alignments, and visual screening elements.

Although the No Action Alternative would avoid potential Project-related environmental impacts and financial expenditures associated with the Proposed Action, it would result in the KACH continuing to function at a less than ideal level of efficiency and operations. Therefore, the No Action Alternative was dismissed because it would not fulfill the requirements imposed on West Point, and would not satisfy the purpose and need for the Project.

No other site alternatives were seriously considered because the existing KACH is already located on a site that can accommodate additional building and parking lot expansion; and possesses no significant or insurmountable physical, environmental, cultural, or engineering constraints were present at the Project site. However, alternative Project designs within the existing KACH area were considered during Project planning efforts. The selected plan incorporates the most desirable combination of alternative features considered, given the existing cost, logistical, engineering, environmental, and operational constraints that were part of the decision making process.

Alternative exterior forms, materials, roof alignments, and visual screening elements were considered to maximize the architectural compatibility and minimize adverse visual

impacts of the Project. Based on the comments, contributions, and approval of the West Point Architectural Historian, the Proposed Action incorporates materials and elements that are suitable and compatible with the existing KACH architecture, as well as with near and distant viewsheds of the KACH and West Point.

### **III. ANTICIPATED ENVIRONMENTAL EFFECTS**

Potential environmental impact issues related to the construction and operation of the Proposed Action include: an increase/contribution to ongoing stormwater management challenges in the vicinity of the KACH to Crows Nest Brook, visual impacts from several long-range vantage points that contain the KACH and West Point, temporary traffic congestion along Washington Road at West Point, and temporary displacement of parking spaces at the KACH during construction. Measures to reduce and minimize these unavoidable direct adverse effects are provided in the corresponding sections of the EA and summarized in Section 4.3 of the EA (Anticipated Environmental Effects and Mitigation Measures).

Careful design, the use of good engineering and best management practices, and the implementation of certain operational procedures would mitigate these and other minor potential impacts presented in the EA.

### **IV. MITIGATION MEASURES**

The mitigation measures that would be employed to address the potential impacts resulting from implementation of the Proposed Action, include, *but are not limited to*:

- 1) Develop a Project-specific Stormwater Management Plan. The stormwater management system in the vicinity of the KACH would be upgraded with both additional aboveground and buried stormwater management structures that tie into the existing stormwater management system in the vicinity of the KACH. In addition to addressing the stormwater quantity management standards, in accordance with The New York State Stormwater Management Design Manual, the upgraded/Project stormwater management plan also would address pretreatment of stormwater to meet water quality goals.
- 2) Minimize visual impacts to long (distant) views, particularly on the east side of the Hudson River. The selection and use of architectural style, elements, colors, and materials for the building expansion would be compatible, and consistent, with the rear (north) and top (roof) elevations of the existing KACH structure, and would be visually consistent with other extant structures within these views. Specific details of the architectural style and elements, materials, scale and proportion, exterior mechanical and/or electrical equipment, and exterior lighting that comprise the proposed visual impact mitigation measures are provided in the EA.
- 3) Minimize traffic impacts along Washington Road. Project construction work hours would be scheduled to avoid the AM period of peak incoming traffic at West Point. Advance registration of construction contractors' vehicles and individual drivers with West Point's security force would be required to reduce the delay of vehicles and interference with the normal flow of traffic at the Stony Lonesome Gate entrance. West Point would encourage the local West Point community to use alternative entrance gates during seasonal and daily peak construction periods. To minimize traffic conflicts within the KACH access roads and parking areas during the

construction period, West Point would modify existing traffic patterns on these access roads to conform to a specific plan (as detailed in the EA).

- 4) Alleviate the temporary displacement of parking spaces required for use as staging/construction workspace. Before the start of construction West Point would develop a total of 18 new permanent parking spaces at various locations in the vicinity of the KACH that could be used for parking by KACH visitors or staff both during and after construction. West Point would also designate a minimum of 150 existing parking spaces in other on-post parking areas, such as at Buffalo Soldiers Field near Thayer Gate, for non-emergency KACH staff, visitors, and construction personnel, and establish a dedicated regular shuttle bus service between these designated on-post parking areas and the KACH.

Section 4.3 of the Final EA provides a comprehensive list of impacts and specific, detailed mitigation measures that West Point would employ to avoid, minimize, or mitigate each potential impact that would result from implementing the Proposed Action.

## V. PUBLIC INVOLVEMENT

The Final EA and this Finding of No Significant Impact is being made available for public review at the following locations:

Town Clerk  
Town of Highlands  
254 Main Street  
Highland Falls, New York 10928  
(845) 446-3398

Village Clerk  
Village of Highland Falls  
303 Main Street  
Highland Falls, New York 10928  
(845) 446-3400

Director  
Highland Falls Public Library  
289 Main Street  
Highland Falls, New York 10928  
(845) 446-3113

Community Library  
Building 622  
United States Military Academy  
West Point, New York 10996  
(845) 938-2974

Village Clerk  
Village of Cold Spring  
85 Main Street  
Cold Spring, New York 10516

The Alice Curtis Desmond and Hamilton Fish Library  
PO Box 265  
Routes 403 and 9D  
Garrison, New York 10924

Julia L. Butterfield Memorial Library  
Routes 301 & 9D  
Cold Spring, New York 10516

In addition, a letter summarizing the changes made between the Draft and Final EA and Finding of No Significant Impact is being sent directly to 26 individual Federal, State, and local agencies and interested parties.

The deadline for public comment on this proposed action was March 27, 2006. Two comment letters were received prior to finalization of the EA. One comment letter was from the New York State Historic Preservation Office, which requested additional information on West Point's cultural resources work performed for the Project. This comment did not require any substantive changes in the Final EA. A copy of this

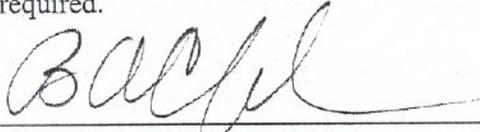
information on West Point's cultural resources work performed for the Project. This comment did not require any substantive changes in the Final EA. A copy of this comment letter is provided in Appendix B of the Final EA. The other comment received was from The State of New York Department of State, which provided its concurrence with West Point consistency determination for the Project under the New York Coastal Management Program. A copy of this comment letter is provided in Appendix B of the Final EA.

Comments and/or requests for individual copies of the Final EA should be directed to the following point of contact at West Point:

U.S. Army Garrison  
Directorate of Public Works  
Alan B. Bjornsen, CEP/IMNE/MIL/PWF/I  
Building 667A Ruger Road  
West Point, NY 10996-1592  
845-938-4129 (or fax 845-938-7046)  
al.bjornsen@usma.edu

## VI. FACTS AND CONCLUSIONS

Implementation of the mitigation measures identified in Section 4.3 of the Final EA would reduce the potential impacts of the Project, resulting in no significant adverse impacts to the environment. An Environmental Impact Statement is, therefore, not required.



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BRIAN A. CRAWFORD  
Colonel, FA  
Garrison Commander