FINAL

ARCHITECTURAL SURVEY AND EVALUATION OF BUILDINGS 2705, 2707, 2708, 2709, 2710, AND 2713 AND BOUNDARY ASSESSMENT OF FORT MONMOUTH HISTORIC DISTRICT

FORT MONMOUTH, EATONTOWN, MONMOUTH COUNTY, NEW JERSEY

Prepared for:

THE UNITED STATES ARMY
FORT MONMOUTH, EATONTOWN, NEW JERSEY

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Springfield, VA 22151

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ACRONYMS

ABM	Anti -Ballistic Missile
AMARC	Army Materiel Acquisition Review Committee
ARTADS	Army Tactical Data Systems
BTI	Building Technologies, Inc.
CECOM	U.S. Army Communications-Electronics Command
C-E LCMC	U.S. Army Communications-Electronics Life Cycle Management Command
CORADCOM	Communications Research and Development Command
CRMP	Cultural Resource Management Plan
DARCOM	Development and Readiness Command
DCSOPO	Deputy Chief of Staff for Operations and Plans Office
DOD	Department of Defense
ERADCOM	U.S. Army Electronics Research and Development Command
EWL	Electronic Warfare Laboratory
HABS/HAER	Historic American Building Survey/Historic American Engineering Record
ICRMP	Integrated Cultural Resource Management Plan
LABCOM	U.S. Army Laboratory Command
Mhz	Megahertz
NAGPRA	Native American Graves Protection and Repatriation Act
NATO	North Atlantic Treaty Organization
NHPA	National Historic Preservation Act
NJHPO	New Jersey Historic Preservation Office
NRHP	National Register of Historic Places
NRL	Naval Research Lab
PEOC3T	Program Executive Office, Command, Control, and Communications Tactical
psf	pounds per square foot
R&D	Research and development
rf	radio frequency

SDI	Strategic Defense Initiative, aka, Star Wars
SDIO	Strategic Defense Initiative Organization
SINCGARS	Single Channel Ground and Airborne Radio System
TRCS	Tactical Radio Communication Systems
USACE	U.S. Army Corps of Engineers
USAEC	U.S. Army Environmental Center

EXECUTIVE SUMMARY

This study was conducted as part of the ongoing effort of Fort Monmouth to identify historic resources. This architectural study was conducted for Fort Monmouth under contract with VEETech, P.C. to comply with Section 110 of the National Historic Preservation Act (NHPA) of 1966, as amended and Army Regulation 200-4 (Appendix A).

The first part of this study was to conduct a survey and evaluation of Buildings 2705, 2707, 2708, 2709, 2710, and 2713. These buildings were identified in the 2003 Fort Monmouth Integrated Cultural Resource Management Plan (ICRMP) as having potential significance and possibly meeting Criterion Consideration G for listing on the National Register of Historic Places (NRHP) due to their association with the high tech research and development activities that were part of Fort Monmouth's mission during the late Cold War period. The second part of this study evaluated the potential boundary changes to the Fort Monmouth Historic District that were recommended in the 2003 ICRMP. The Fort Monmouth Historic District was determined eligible by the New Jersey Historic Preservation Office (NJHPO) in 1991.

This study concluded that Buildings 2705, 2707, 2708, 2709, 2710, and 2713 are not eligible for the NRHP. All of these buildings are less than 50 years old and need to meet Criterion Consideration G to be eligible for the NRHP. Although associated with late Cold War era research and development activities at Fort Monmouth, none of the buildings meet exceptional significance standards required for eligibility under Criterion Consideration G. Building 2705, constructed in 1972, served as the Electronics Warfare Laboratory (EWL) and Buildings 2707 2708, 2709, 2710, and 2713, all constructed in 1988, comprised the Pulse Power Center. Although associated with Cold War era research for the military, both complexes were not the sole facilities in their field conducting research and development exercises. There is also no evidence to suggest that the research conducted at these facilities had consequences of exceptional importance tied to the technological advancement of the United States military during the Cold War. Similar research conducted at other facilities was more or at the very least as important as the research conducted within these two facilities at Fort Monmouth.

This study also concluded that the original boundaries of the Fort Monmouth Historic District not be revised to exclude Buildings 209, 283, and 360. Previous cultural resource investigations have recommended that the status of Buildings 209 and Building 283, currently designated as contributing resources within the historic district, be redesignated as non-contributing resources because of alterations to these buildings that were viewed to affect their integrity. Recommendations have been made to revise district boundaries to exclude these buildings. This study has recommended that the boundary revision is not warranted because the alterations to Buildings 209 and 283 do not significantly impact the integrity of these buildings. As such, these buildings still contribute to the district, and therefore district boundaries should not be revised to exclude these buildings.

The NJHPO has reviewed the draft version of this report. Their consultation comments in accordance with 36 CFR 800: Protection of Historic Properties concurred with the findings of this study. The concurrence letter, dated 10 October 2006 is included in Appendix B.

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1.0 INTRODUCTION

1.1 PROJECT DESCRIPTION

This report presents the findings of an architectural survey and evaluation of Buildings 2705, 2707, 2708, 2709, 2710, and 2713 and a boundary revision investigation for the Fort Monmouth Historic District at Fort Monmouth, New Jersey. The survey was conducted by Versar, Inc. under subcontract to VEETech, P.C. for the U. S. Army, Fort Monmouth. The U.S. Army's primary mission at Fort Monmouth is to contribute to the combat readiness of the Army, while providing command supervision, military discipline, training, administrative support, and family support. Other mission support activities at Fort Monmouth are to develop, acquire, field and sustain superior information technologies and integrated systems for America's military. Fort Monmouth provides command, administrative, and logistical support for Headquarters, United States Army, Communications and Electronics Command (CECOM). CECOM is a major subordinate of the United States Army Material Command (USAMC). Activities conducted as part of this mission include the research, development, procurement, and production of electronic material for use by the United States Armed Forces. Other mission activities include the provision of military training and logistical and related support necessary to transition selected reserve component units into the active forces in the event of a national emergency.

This study was conducted for Fort Monmouth to comply with Section 106 and 110 of the National Historic Preservation Act (NHPA) of 1966, as amended and Army Regulation 200-4 (Appendix A). Section 110 of the NRHP requires Federal agencies to assume responsibility for preserving historic properties owned or controlled by the agency in a manner consistent with the mission, including the identification, evaluation and nomination of historic properties for listing in the National Register of Historic Places (NRHP). Section 106 of the NRHP requires the Army to consider the effects of proposed undertakings affecting historic properties (DA PAM 200-4:8). Fort Monmouth is required by AR 200-4 Cultural Resources Management and the NHPA to carry out a program for the management of historic properties on the installation. Section 2-3 of Army Regulation 200-4 specifies compliance procedures for Sections 110 and 106 of the NHPA and states, "The installation commander shall identify, evaluate, and take into account the effects of all undertakings on historic properties according to the procedures set forth in 36 CFR 800", and that "….historic properties that will be altered or destroyed as a result of army actions, must be reviewed in accordance with NHPA Section 106" (Army Regulation 200-4:2).

The goal of this study is to identify resources that are eligible for listing on the NRHP. The 2003 Integrated Cultural Resource Management Plan (ICRMP) identified Buildings 2705, 2707, 2708, 2709, 2710, and 2713 as potentially eligible for the NRHP for exceptional significance because of their role in the research and development mission at Fort Monmouth during the late Cold War period (Klein and Baldwin 2003). The ICRMP also suggested a boundary revision for the Fort Monmouth Historic District. This report assesses whether sufficient change has occurred to warrant a boundary revision.

The report is divided into five chapters. Chapter 2 provides a discussion of the methodology employed in this study. Chapter 3 discusses an historic overview detailing Fort Monmouth's role during the Cold War. Chapter 4 presents the results of the survey and evaluation of Buildings 2705, 2707, 2708, 2709, 2710, and 2713, and the assessment of the boundary revision

for the Fort Monmouth Historic District. Chapter 5 provides a summary and general conclusion for this report.

1.2 SETTING

Fort Monmouth is located in Eatontown, New Jersey, and includes the Main Post and the Charles Wood Area (Figure 1-1). The Main Post is the original site of the Fort and was established in

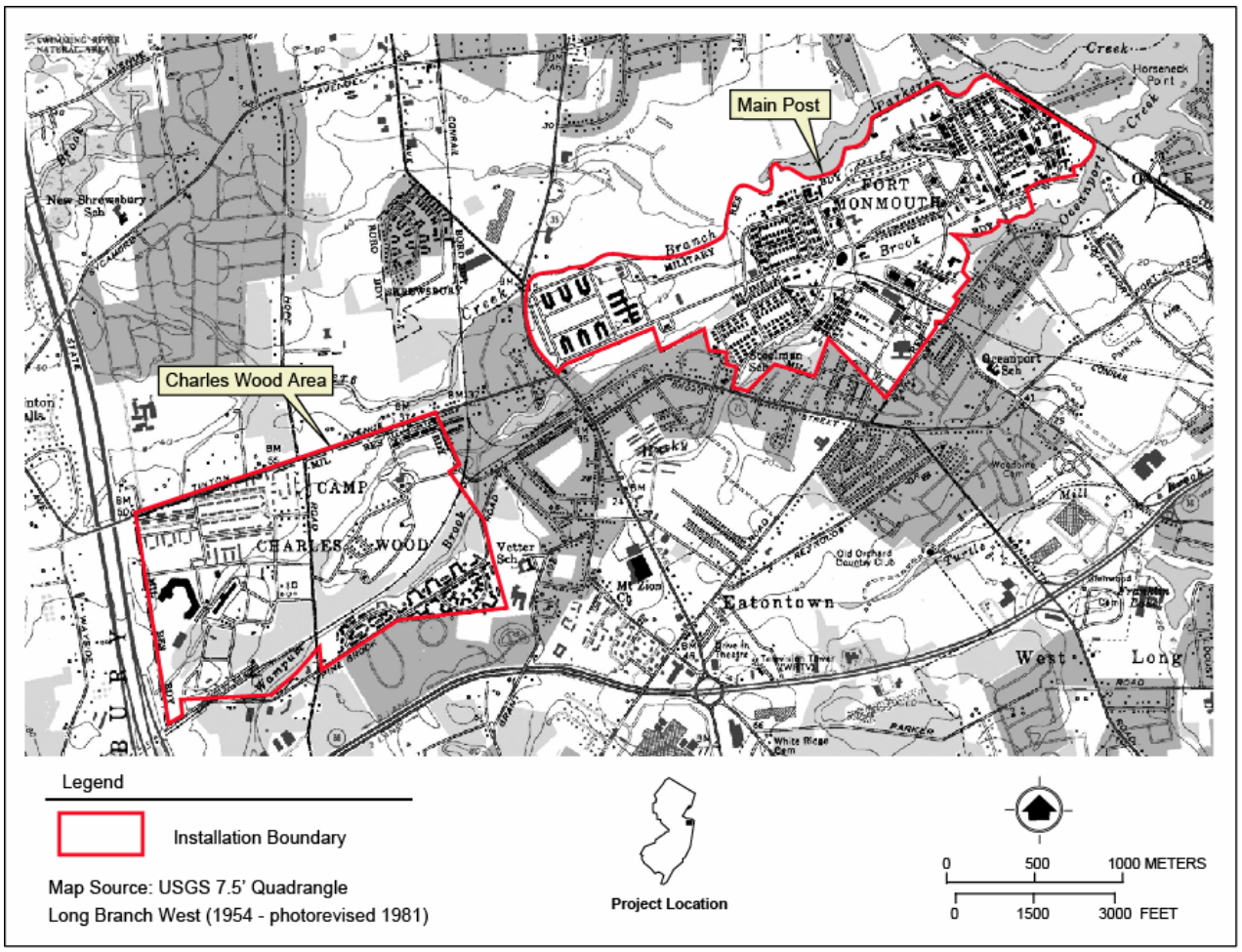

Figure 1-1: Location of Fort Monmouth Main Post and Charles Wood Area

1917. The architecture of the main post contains a collection of diverse property types dating to the early 20th century. The oldest buildings are the brick officer's quarters, most of which reflect Colonial Revival design, located near the eastern half of the Main Post. The west half of the Main Post contains mostly post-1950 buildings.

The Charles Wood Area is located less than two miles west of the Main Post. Camp Charles Wood was established prior to World War II as a sub-installation of Fort Monmouth. Camp Charles Wood was originally the site of a 1920s country club named Sun Eagles, which is still extant today as part of the installation and has been determined eligible for NRHP listing. The

Charles Wood area has supported the research mission at Fort Monmouth since World War II. Most of the buildings within the camp date to after World War II.

1.3 PREVIOUS CULTURAL RESOURCES INVESTIGATIONS

The following sections provide brief discussions of the cultural resources investigations conducted at Fort Monmouth. Table 1-1 summarizes the previous cultural resources studies conducted at Fort Monmouth.

Table 1-1. Previous Cultural Resource Studies Conducted at Fort Monmouth

Citation	Description
Building Technologies, Inc. 1984	Historic Context Overview, Architectural Inventory, Management Recommendations
Klein et al. 1984	Archeological Inventory, Management Plan
Fitch and Glover 1989	Reconnaissance Archeological Survey And Sensitivity Assessment
USACE 1995	NAGPRA Compliance Report
Reed et al. 1996	Architectural Survey of Evans Area And Charles Wood Area
Nichols 1996	Architectural Survey of Main Post And Charles Wood Area
Trierweiler et al. 1996	CRMP
Klein and Baldwin 2003	ICRMP
Baldwin and Heaton 2004	Archaeological Survey of Proposed RCI Area (reported location of Site 28MO138)
Panamerican Consultants Inc.	Architectural Survey, Cold War Material Culture

Architectural Investigations

The first architectural survey of Fort Monmouth was conducted by Building Technologies, Inc. (BTI) in 1984. The survey was part of a historic properties report prepared for the Army Materiel Development and Readiness Command (DARCOM) to bring Fort Monmouth into compliance with the NHPA (BTI 1984). This report evaluated 71 buildings and 33 associated garages according to Historic American Buildings Survey/Historic American Engineering Record (HABS/HAER) standards. As a result, a historic district comprising 1920s-1930s structures associated with the pre-World War II development of the Main Post was proposed. A draft NRHP nomination form was prepared and submitted to the NJHPO in 1983. The NJHPO returned the nomination package to Fort Monmouth requesting additional information and photographs of the subject buildings. The BTI report also included the development of a context for assessing Cold War-era buildings and structures.

In 1996, TRC Mariah completed an intensive architectural survey of historic buildings and structures within Fort Monmouth (Nichols 1996). In total, 341 buildings and structures on the Main Post and Charles Wood Area were inventoried and assessed for NRHP eligibility. As a result, 98 structures were recommended eligible for the NRHP and two historic districts were identified. The boundaries of the Fort Monmouth Historic District, previously identified by BTI in 1983, were modified by Nichols (1996) to reflect the exclusion of altered buildings previously considered as contributing to the historic district. In particular, Squier Hall (Building 283) and Allison Hall (Building 209) were excluded from the district due to the addition of stucco to the

front facade of each building. However, Nichols (1996) did recommend Squier Hall eligible as an individual property under Criterion A for its role in early communications research and development (Trierweiler et al 1996). The second historic district identified by Nichols (1996) contained a 1920s era country club complex located within the Charles Wood Area. The Charles Wood historic district includes Gibbs Hall (Building 2000), a portion of the surrounding golf course, and several contributing properties including a swimming pool, tennis courts, and refreshment stand. In addition to the historic district, the survey recommended the Hexagon Building and three Dymaxion units (DDUs) located at the Main Post and Charles Wood Area eligible under Criterion A and C for architectural uniqueness and historic contributions to military communications (Trierweiler et al 1996).

Also in 1996, Geo-Marine, Inc. conducted architectural evaluations of 39 buildings within the Charles Wood Area as part of a BRAC assessment which included the former Evans Area (Reed et al 1996). Thirty-eight Capehart-Wherry family housing units and a Chapel (Building 2275) were evaluated during these investigations. The report found that the Capehart-Wherry family housing units were not of unique design or construction and had not yet reached 50 years of age and therefore were not recommended eligible for inclusion on the NRHP. The chapel, built in 1942 within a previously demolished World War II cantonment, was also recommended not eligible as it lacked unique architectural design qualities.

As part of the 2003 ICRMP, 39 buildings, structures and objects were reevaluated for both New Jersey Register of Historic Places and NRHP eligibility as they had reached 50 years of age since the development of the 1996 CRMP (Klein and Baldwin 2003). The evaluated structures include the World War II Memorial (Building 115), a chapel (Building 500), the social office (Building 501), the Division Signal Corps Monument, two boiler plants (Buildings 1076 and 1220), Vail Hall (Building 1150) at the Main Post and several post-World War II brick duplex housing units within the Charles Wood Area. The 2003 ICRMP found the World War II Memorial and the post-World War II housing units eligible for inclusion on the NRHP.

Panamerican Consultants, Inc. (PCI) undertook investigations at Fort Monmouth to document and evaluate Cold War material culture at both the Main Post and the Charles Wood areas. PCI's final report from April 2003 identified 274 resources constructed during the Cold War. Of these, only twelve buildings were identified as having important Cold War Associations. However, of these twelve buildings, only two were recommended NRHP eligible for exceptional importance meeting Criterion Consideration G. These two buildings were Building 2701, the Hexagon, and Building 2704, a climatic chamber (Panamerican Consultants, Inc. 2003).

Management Plans/Compliance Documents

Two formal management plans have been developed for Fort Monmouth. A Cultural Resource Management Plan (CRMP) was prepared by TRC Mariah in 1996 and an Integrated Cultural Resource Management Plan (ICRMP) was prepared by John Milner and Associates in 2003 (Trierweiler et al. 1996; Klein and Baldwin 2003). The CRMP included a review of all previous cultural resources investigations, an inventory of previously recorded historic properties, an archaeological sensitivity assessment, and management recommendations.

In 2003, an ICRMP was prepared by John Milner and Associates (Klein and Baldwin 2003). The ICRMP was prepared in compliance with AR 200-4 and DA PAM 200-4 for FY 2003 through FY 2007. The document combined information from all previously conducted architectural and archeological studies, the CRMP, a 1999 Integrated Natural Resources Management Plan (INRMP), and the DPW Installation Plan to allow Fort Monmouth to comply with its Section 106 responsibilities without hindering the military mission.

2.0 METHODOLOGY

2.1 OBJECTIVE

The objective of this study is to conduct an architectural survey and evaluation and to reassess the boundaries of the Fort Monmouth Historic District. The architectural survey and evaluation was conducted for buildings considered part of the late Cold War development at Fort Monmouth that were previously recommended as potentially significant and in need of NRHP evaluation (Klein and Baldwin 2003). The boundaries for the Fort Monmouth Historic District were originally proposed in the NRHP nomination of the district, but suggested revisions of these boundaries were presented in the 2003 ICRMP. Survey was conducted as part of the current study to further investigate the boundary change. Methodology to accomplish the study objectives included both field documentation and archival research.

Field Documentation

Field documentation was conducted between November 15 and 18, 2005. For the survey and evaluation, field documentation included taking 35mm black-and-white and digital photographs of all of the buildings. Detailed notes were taken assessing building type, materials, condition, and integrity. For the district, digital photographs were taken of those buildings and areas located within the original boundaries but not within the revised boundaries recommended in the 2003 ICRMP. Each of these resources was examined to determine if they no longer contribute to the district because of diminished integrity.

Archival Research

Background research was conducted as part of the survey effort at the Fort Monmouth real property office, engineering office, and base historian's archives. The purpose of the research was to obtain historical information on the buildings to determine any association with events or individuals important to history. In addition, property records were reviewed to obtain information concerning alterations to the buildings that would impact their integrity. The site files of the NJHPO also were searched for information concerning previously recorded historic resources.

2.2 EXPECTED RESULTS

All of the buildings evaluated in this study are associated with the late Cold War development at Fort Monmouth. Cold War historic contexts were used to aid in the evaluation of the surveyed resources. To be eligible, the buildings would have to meet Criterion Consideration G, because none are 50 years old. To meet Criterion Consideration G, the buildings would need to demonstrate exceptional national or international historical or architectural importance.

The biggest challenge encountered was the lack of access to information due to security concerns. Classified activities are still being conducted in the buildings documented and evaluated in this study. Access to these buildings was limited, as was information concerning their history. Because the Cold War era is not far removed in time from the present day, much of

the details about building activities during this time remain classified. Therefore, only non-classified, non-sensitive information could be utilized in this report.

The Fort Monmouth Historic District boundaries were designated in the draft NRHP nomination form. Because the Fort Monmouth Historic District has been determined eligible by NJHPO opinion, a redefinition of district boundaries would need to be justified and meet with approval of the NJHPO. Any redefinition of the boundaries would require (1) that contributing resources have been altered to the point that they no longer help the district convey its significance; and (2) that these resources are located near enough to the district boundary that the boundary can be redefined to exclude the non-significant resources while not affecting significant resources.

2.3 EVALUATION GUIDELINES

Specific guidance concerning the evaluation of the surveyed architectural resources for this study is provided in DA PAM 200-4 and the National Register Criteria for Evaluation. All of the buildings evaluated in this survey date to the Cold War period.

DA PAM 200-4

Army regulation AR 200-4 provides specific guidance for the identification and evaluation of Cold War resources. The Army's management of cultural resources is governed under AR 200-4: Cultural Resource Management. DA PAM 200-4 provides guidance for implementing AR 200-4, The Army's assessment of significant Cold War era properties is discussed in Section 3-3 d.(2)(b), which states:

> A Cold War property may have significance under National Register criteria A-D, due to association with major historical events or persons, technological or scientific design achievement, or as a fragile survivor of a class of properties. The significance of Cold War era properties may lie at the national level in association with military themes directly tied to the Cold War, or at the state or local level under other themes.

U.S. National Register Criteria for Evaluation

The National Register Bulletin 15: How to Apply National Register Criteria for Evaluation provides the criteria necessary for a building, structure, site, district, or object to be listed or determined eligible for listing on the NRHP. First, an analysis must be made for each property:

- Being associated with an important context; and
- Retaining integrity of those features necessary to convey its significance.

The NRHP is a collection of significant resources important to American history, architecture, archeology, engineering, and culture that possess integrity of location, design, setting, materials, workmanship, feeling, and association. Eligibility and listing depend upon whether the resources can meet certain individual criteria of significance. These criteria of significance have been listed a-d (United States Department of the Interior, National Park Service 1991) as:

a. Associated with events that have made a significant contribution to the broad patterns of history; or

b. Associated with the lives of persons significant in our past; or

c. Embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

d. Have yielded, or may be likely to yield, information important in prehistory or history.

In 1997, the U. S. Army Environmental Center developed a thematic study aimed to develop guidance for the evaluation of Cold War Army resources using the NRHP criteria. This study entitled *Thematic Study and Guidelines: Identification and Evaluation of U.S. Army Cold War Era Military-Industrial Historic Properties* provided a history of the U.S. Army's role during the Cold War, a thematic assessment of property type relative to Cold War era significance and evaluation guidance. Specifically, the study evaluated the ways in which significant Cold War era resources related to the Army's industrial-military context would meet NRHP criteria, and conversely, how other resources of similar association probably would not meet NRHP criteria. Significant resources from the Army's Cold War military-industrial heritage would have to meet criteria in the following ways (USAEC 1997:118):

Criterion A: Events: The property must be associated with one or more events important in the defined historical context. In this case, the historical context is the Army's military-industrial role in the Cold War. However, Cold War sites are not simply, by virtue of their association with the Cold War, "exceptionally significant." It is not enough that the property be associated with the Cold War---or everything built or developed between 1946 and 1989 would qualify for listing. The property must be associated with a specific Cold War event or have physical features that clearly illustrate an important Cold War theme. Furthermore, both the National Register program and the exceptional importance criteria outlined in Bulletin 22 "require that nominations for such properties demonstrate that sufficient historical perspective and scholarly, comparative analysis exist to justify the claim of the exceptional importance."

Criterion B: People: A property may be eligible if it is associated with the lives of persons significant to the past. The property must illustrate (rather than commemorate) the person's important achievements and their contribution to history, in this case, Army Cold War military-industrial history. In general, the National Register rarely accepts nominations for properties that are associated with living people.

Criterion C: Design: According to the National Register, a property may be eligible for the National Register if it embodies the distinctive characteristics of a type, period, or method of construction; represents the work of a master; or possesses high artistic value. For an Army Cold War property to be considered under this criterion, the design must be directly associated with the Army and the Cold War. It is not enough that the structure may be the work of a nationally known architect (although the building may qualify for listing under criterion C under another context such as being an outstanding example of that person's work). It must be related to one of the Cold War themes. In general, this

criterion will apply within the Cold War military-industrial context this criterion will apply more often to the Army's engineering feats than to its architectural achievements.

Criterion D: Potential to Yield Information: In general, this National Register criterion applies to known archeological sites that have yet to be excavated or studied. It is possible, although unlikely, that there are many Cold War sites that would be evaluated as archeological resources. Criterion D: *Potential to Yield Information*, however, could apply, in the case of the Army, to sites that remain classified for security reasons and, therefore, are difficult to identify, document, and evaluate for National Register consideration at this time. It is important to note, however, that the need for information security does not exempt installations from compliance with the AR 200-4 requirement to identify, evaluate, and nominate the significant properties that fall under this criterion.

Criteria Consideration G: Exceptional Significance within the last 50 years

Because the Cold War period is not far removed from the present day, many resources associated with this era are less than 50 years old. NRHP listing is generally considered for resources that are older than 50 years. However there is an exception to this 50 year rule for properties deemed to have "exceptional importance" (NPS 1991:41). NRHP Criteria Consideration G provides for the listing of resources of exceptional significance but not yet 50 years of age.

The National Register Bulletin 22 *Guidelines for Evaluating and Nominating Properties That Have Achieved Significance in the Last Fifty Years* discusses Criteria Consideration G but does not go into great depth in defining what is of "exceptional importance" especially regarding how the criteria relates to Cold War resources. Fortunately, the USAEC study does provide guidance addressing Criteria Consideration G pertaining to Cold War military-industrial heritage.

It is important to note that not every resource constructed during the Cold War is a significant Cold War era resource or is associated with Cold War military-industrial heritage. First, Cold War properties that are not related to the military-industrial context should be evaluated against other contexts to determine significance. Such properties can include those buildings, structures, sites, districts and objects associated with the everyday general operational support of Army activities and those properties that have recently come into the Army's ownership (such as former naval bases which became Army property during the Cold War). Second, Cold War "exceptionally important" sites must meet at least one of the standard National Register Criteria A-D. Third, the property or resource must have national significance to qualify as "exceptionally important." Local or State significance could qualify for standard NRHP listing under Criteria A-D, but this alone does not merit consideration should a property be determined to be "exceptionally significant." Fourth, recent properties should be evaluated against other properties within the same Cold War theme whenever possible to determine which examples best represent a particular significant property type or theme.

Integrity

In addition to possessing sufficient historical or architectural significance, resources must have sufficient integrity to meet eligibility criteria. Simply stated, integrity allows the property to

convey its significance. Integrity is always considered in relation to the property's character-defining features. More often than not, these are the original features of the property.

The NRHP criteria list seven aspects of integrity:

- Design
- Materials
- Workmanship
- Setting
- Location
- Feeling
- Association

Design can be defined as the combination of elements that create the form and plan of the building. To retain design integrity, a resource must retain its significant design features. Materials are the physical elements that make up the resource. To retain materials integrity, a resource must retain its original materials during the period in which the resource derives its significance. Workmanship is the craft embodied in a resource, usually the evidence or an artisan's labor and skill in construction primarily embodied in buildings and structures. Setting is the relationship between the resource and its physical surroundings. Location is the place where the historic event or activity occurred. Feeling is the aesthetic sense of authenticity in the property's ability to convey its significant time period. Integrity of feeling is derived from physical features associated with the property that convey a sense of historic authenticity. Association is a direct correspondence between the property and the event. Like feeling, integrity of association is an aesthetic quality that requires the property to retain historic features to convey the association. For example, a battlefield that retains earthworks and man-made features dating to the battle retains integrity of association (United States Department of the Interior, National Park Service 1991:44-45).

To retain sufficient integrity, a property should retain most if not all of the seven criteria addressed above. In short, those character defining features and elements that were present at the time of the significant event or period should remain intact for a property to retain integrity.

Assessing integrity for Cold War era resources is in many respects more difficult than other resources in the fact that the present day is not far removed from the end of the Cold War in 1989. The integrity of older properties that have changed over a long period of time can be more easily discernable because much time has lapsed between the event or period and any changes to the property. With regards to Cold War era resources this does not necessarily hold true. The period of significance for Cold War era resources can span the entire Cold War period (1945-1989), or be associated only with the early or late Cold War Period. Properties often are altered over the years to make them more adaptable to the military mission. These alterations do not necessarily diminish integrity provided that (1) the changes occurred during the period of significance and (2) the changes represent technological advancements necessary to achieve a strategic advantage in carrying out the Cold War mission (USAEC 1997:118).

3.0 HISTORIC OVERVIEW

Established in 1917, Fort Monmouth has served as a research and development (R&D) facility for the United States Army throughout much of its history. This mission was the primary focus of activities at Fort Monmouth during the Cold War period. An historic context for the Cold War Period at Fort Monmouth has been developed by Reed et al. (1996:29-43) that contains important background perspective on Cold War material resources (Murphey 1995), the impacts of the Cold War on society and culture (Boyer and Murphey 1995), and a chronology of events and policies (Lewis et, al. 1995). This context has been utilized for other cultural resource studies including the most recent ICRMP prepared by John Milner Associates, Inc. in 2003. The following text related to the early Cold War period is taken directly from the 2003 Fort Monmouth ICRMP (Klein and Baldwin 2003).

There is disagreement between historians as to when the Cold War began; some argue in favor of the "Trinity" atomic test in 1945 and others argue for the "Iron Curtain" speech of Winston Churchill in 1946. For the purposes of Fort Monmouth, the Cold War is considered to be the time between 1946 and the fall of the Berlin Wall in 1989. This era was a time of intense competition between the United States and its allies with the Soviet Union, its allies, and other communist countries. Aspects of the Cold War include but are not limited to: military occupation and economic reconstruction of Europe and Asia following WW II; the Berlin Airlift; communist expansion in Eastern Europe, China, and elsewhere; the Korean War; technologies related to atom and hydrogen bombs and associated delivery systems; efforts to detect, respond to, and survive attack on the U.S. (including protecting the civilian population); military, political, and diplomatic efforts at home and in foreign countries to stop the spread of communism; the Cuban Missile Crisis of 1962; the Vietnam War; and the development of satellite communications and other space technologies (Klein and Baldwin 2003:41).

Boyer and Murphey (1995) divide the Cold War into early and later periods. The early Cold War, up to 1962, was a time when concern about communist expansion, particularly the extension of the power of the Soviet Union, reached its greatest height. Cultural influences of the Cold War were also very intense, and the fear of nuclear confrontation was widespread. The Cuban Missile Crisis and its aftermath, the changes in Soviet leadership, the Sino-Soviet split, and changing domestic political conditions in the United States and its allies led to a shift in policy. Later years of the Cold War were marked by reductions of nuclear threats. Conflicts, such as the Vietnam War, as well as episodes of difficult relations between the superpowers, did occur. Toward the end of the period, the United States instigated a military build up, and defense programs such as the Strategic Defense Initiative (SDI) were proposed. An economically ailing Soviet Union underwent major internal changes and eventually broke apart into constituent republics which largely rejected communism (Klein and Baldwin 2003:41).

3.1 EARLY COLD WAR 1946-1972: ATOMIC AGE TO VIETNAM WAR

With the start of the Cold War, there was an increase in the number of both military and civilian personnel at Fort Monmouth. There were 9,705 personnel in 1947, and this number rose to 17,358 in 1953 (CECOM Historical Office 1985). Housing construction, including single family homes for military personnel, took place, mainly in the Charles Wood Area. Laboratories

established at Fort Monmouth prior to World War II continued in operation at the Main Post and the Charles Wood Area.

During the early years of the Cold War, a major scientific question was addressed by researchers at Fort Monmouth: was the earth's ionosphere a barrier to radio waves? Project Diana was intended to prove otherwise (Reed et al. 1996). In the Evans Area, on January 10, 1946, a group of researchers from Fort Monmouth sent a radio signal to the moon and received the returned signal 2.5 seconds later. This was the first time that there was any contact between the earth and a celestial body. Interestingly enough, the project was authorized by the laboratory commander, Lt. Col. John J. DeWitt, because he did not have enough work for his staff to do in the months after WW II ended (CECOM Historical Office 1994).

Facilities at Fort Monmouth did not radically change during the Korean War, but new technologies were taught and researched. The laboratory in Squier Hall performed quartz crystal research, Coles Signal Laboratory concentrated on radio and television technology, laboratories in the Charles Wood Area studied aviation electronics (avionics), and the Evans Signal Corps Laboratory worked on radar, vacuum tubes, and meteorological devices (Reed et al. 1996:30). The Evans laboratory was also the location for radiation-related research starting in 1951. During the Korean War, the AN/MPQ-10 Mortar Locating Radar was developed at Fort Monmouth (CECOM Historical Office 1994:5).

Satellite technology became a new field for research at Fort Monmouth in the 1950s. Following the launch of Sputnik by the Soviets, intensive work was done by American scientists to catch up. At Fort Monmouth, the following technological advances were produced for the "Space Race": solar electrical power supply to be used in space on the Vanguard I satellite (1958); electronics equipment for the Vanguard II satellite; and a high-capacity communications satellite (1960).

Significant technological trends reflected in the work at Fort Monmouth and by research and development contractors in this period were micro-miniaturization of military communication electronics, and the invention of automatic assembly of integrated circuits for communications equipment (Richard Bingham to Reed, personal communication, 1996). This last development involved the use of photo-etching to mass-produce wire circuitry (Reed et al. 1996:38). Experimental work preliminary to the development of transistors was done at Fort Monmouth, and ways to apply transistor technology were studied here as well. Among the other technological achievements of Fort Monmouth personnel during this period include the development of: weather radar (1948); synthetic quartz (1948); multi-channel laser relay (1965); passive night vision devices (1968); and the passive thermal viewer (1971) (CECOM Historical Office 1994; Building Technologies, Inc. 1984).

Research and development of communications technology continued at Fort Monmouth throughout the Cold War era, but more work was being done off-site by contractors in later years. In the Charles Wood Area a large research facility, known as the Hexagon (Building 2700) (Figure 4-9) and now called the Albert Myer Research and Development Center, was built in 1954.

During the Vietnam War, there were technological advances to which Fort Monmouth made contributions. Transistors and integrated circuits replaced tubes. Communications equipment was smaller, lighter, more dependable, and more versatile. Such equipment reached lower into the ranks and accommodated a much larger volume than ever before, providing more information to more people more of the time (CECOM Historical Office 1994:17). One project, eventually abandoned because of the difficulty in implementation, was a remotely-monitored battlefield sensor system using well-disguised sensors (Reed et al. 1996:42).

3.2 LATE COLD WAR PERIOD 1973-1991: POST VIETNAM TO END OF THE COLD WAR

The fallout of American forces withdrawing from Vietnam in 1973 had immediate repercussions on R&D activities at Fort Monmouth. Overall, non-mission related R&D was not a funding priority during the Vietnam era. Reorganization of Army R&D programs had begun in 1971, before the war had ended, spurred by the need for technology to facilitate the war effort. Generally, the same R&D units were present after the reorganization, although the command structure was different (Reed et al. 1996: 42). During Vietnam there had been a decrease in general R&D, except for applications directly related to the war effort (e.g., battle communications, lithium batteries, jungle warfare, night-vision equipment) (USAEC 1997:42). The war provided real-world observations and feedback on Army materiel that the labs used to continually improve and refine critical equipment. Restructuring after 1973 changed the Army's focus to training and battle doctrine, while acknowledging that materiel modernization and improved equipment were necessary to support more sophisticated, conventional warfare (USAEC 1997:53-54). The Electronic Weapons Lab (EWL) at Fort Monmouth was an important part of that effort; however, Combat Surveillance and Avionic R&D labs were moved to other facilities (DCSOPO 2005:43). Reed et al. (1996:42-43) details the organizational changes that took place at Fort Monmouth at that time.

The Soviet military made technological strides during America's involvement with Vietnam, increasing the size of both their nuclear and conventional military capability. The Soviets were perceived as threatening Europe and the NATO alliance. Consequently, U.S. policy changed its focus from Southeast Asia to Europe and the Army responded by adopting new strategies better suited to conducting warfare on the open plains of Europe than to the jungles of Vietnam (USAEC 1997:55-56). During the Carter presidency, funding for both readiness and materiel modernization, including R&D increased (USAEC 1997:53). Mobility, speed of deployment, and reversing the technological disadvantage that the Soviet buildup had created were critical areas of concern. Fort Monmouth was poised to address the renewed focus on R&D. Research programs already in progress prompted by Vietnam-era needs continued, including refinement of lithium batteries, the defibrillation pacemaker for medical applications, communications lasers, mortar and artillery locating radars, the automated telephone central office, an airborne radar warning system, and the laser mini-rangefinder that could be mounted on a rifle (DCSOPO 2005: 41). These devices, in use by the mid 1970's, contributed to a more mobile, technologically advanced military force.

Improving the security of tactical communications was the subject of one R&D program that resulted in the development of frequency hopping, which lessened the possibility that tactical radios could be jammed. This effort led to the Army's Single Channel Ground and Airborne

Radio System (SINCGARS), for command and control of combat units by the Tactical Radio Communication Systems (TRCS) project. This system, continually improved and modified, has been adopted by all of the U.S. Armed Forces, and continues to be used today (Project Manager TRCS 2005). Development of the FIREFINDER mortar and artillery locating radars system by the Radar Lab began in 1972, and was field tested in 1975 (Firefinder 2003). The initial research began in the Fort Monmouth Radar Lab after World War II, and early versions were used in Korea and Vietnam. A fully omni-directional unit that could process multiple targets and functioned in rain was ready for testing in 1975. The Fort Monmouth Radar Lab and its successors have continued to develop this technology, and newer versions are more accurate, smaller, more mobile, and can track SCUD missiles (Firefinder 2003). The Combat Surveillance and Target Acquisition Laboratory's advances in computer simulation techniques, radar cross-section analysis, and automatic height correction concepts also contributed to the success of the mortar and artillery locating radars systems (CECOM Historical Office 1990).

Defending aircraft, including troop helicopters, from infrared missile threats was the focus of the AN/ALQ-144 project, an on-board infrared jammer to defeat on-coming anti-craft missiles. This countermeasure program was developed by the Electrical Combat Team at Fort Monmouth and was operational in 1975-1976. It continues to be supported by the US Army CECOM Software Engineering Center (SEC), Avionics Intelligence Electronic Warfare Division Electronic Combat Team (Fort Monmouth Firsts 2005). R&D regarding for the countermeasure program was largely done at the EWL.

In 1972, the Army Tactical Data Systems (ARTADS) program at Fort Monmouth was introduced. It focused on developing battlefield automation systems for combat and combat support operations, but was hampered by expectations that were not yet technologically possible (Stanley 1998). Each function required individual stand-alone systems that were often incompatible. The military sought more integrated systems, and as technology caught up, ARTADS changed names several times. By 1981, a real-time communications and tactical command system was needed to support the developing battle doctrine necessitated by the escalating Soviet presence in Europe. The system was not completed before the end of the Soviet era, however, but the lessons learned did spur the development of a pan-armed services inter-operation uniform database platform following Desert Storm (Stanley 1998).

In 1977, the Electronics Technology and Devices Laboratory developed the Very High Speed Integrated Circuit technology. This technology allowed production of a high speed, high density, low power, computer chip operating at 50 Mhz at 10 volts, and had wide military and civilian applications (CECOM Historical Office 1990).

In 1981, Communications-Electronics Command (CECOM) was established from existing R&D units, and headquartered at Fort Monmouth. A subsequent reorganization in 1985 enlarged CECOM by incorporating additional labs from U.S. Army Electronics Research and Development Command (ERADCOM), that were already physically located at Fort Monmouth, including the Night Vision and Electro-Optics Laboratory, Combat Surveillance and Target Acquisition Laboratory, Electronic Warfare Laboratory, Signal Warfare Laboratory, Atmospheric Sciences Laboratory, and the Test Flight Activity (CECOM Historical Office 1990).

The 1980s was a challenging period for the Army. Stability in the Middle East was threatened by Soviet aggression in Afghanistan, and the overthrow of the Shah of Iran by supporters of radical Muslim clerics. Nuclear buildup by the Soviets was matched by a similar buildup of U.S. forces. The escalation raised the possibility that the U.S. could be subject to a nuclear attack. An anti-missile defense had been envisioned in the 1960s (Safeguard), but the U.S. participation in the 1972 Anti-Ballistic Missile (ABM) treaty had limited efforts in this direction. In 1983, in response to Soviet nuclear escalation, a new era in antimissile defense was proposed, the Strategic Defense Initiative (SDI). Popularly known as "Star Wars," SDI was considered a research program, so technically, the U.S. remained in compliance with the ABM treaty requirements (USAEC 1997). The Army's SDI research was coordinated by the Army Strategic Defense Command, Huntsville, Alabama, but several aspects of the research were undertaken at Fort Monmouth, including pulse power and microwave research. This research focused on pulse power conditioning for high power radar systems and directed energy weapons, and was necessary for progress in developing missile defenses.

The Army Pulse Power Research Center

Prior to the SDI, the Army conducted pulse power research in the existing Pulse Power Research Center at the Evans Area of Fort Monmouth. The facility itself predates the Army, and was built by Enrico Marconi in 1914. The Army took over the facility in 1942, and work continued on pulse power, high energy, and microwave studies that contributed to various missile and defense systems. Designs for constructing a new facility for the Pulse Power lab at the Charles Wood Area of Fort Monmouth were approved by Congress in 1984. The cost of the new facility was $20 million dollars. The selection of a building site was limited by the ground stability (ability to support heavy loads), soil type (suitable for low impedance grounding) and distance from residential housing (Levy 1986). By 1987, research in the new, highly secure, Pulse Power Center complex commenced. Because of the high costs to construct the facility, its use was not restricted to Army researchers and it was available to all DOD organizations involved in high average power conditioning research (Levy 1986).

The mission of the new Pulse Power Center was to manage, conduct research and development, test, and evaluate components and sub-systems related to repetition rate pulse power and high power tubes for microwave and millimeter waves for a variety of weapon systems and communication devices (Levy 1986:27). The center provided two electromagnetically shielded, fully grounded, environmentally controlled, self-contained labs for multi-megawatt testing. The labs, support facilities, all personnel, and administrative offices were located together in a secure facility. The complex included a two-story main building for offices, labs, and support, with an attached wing that contained two shielded high bays (large labs), assembly rooms, and a control room. An electrical yard outside the building contained all the required power supplies, transformers, and distribution equipment. Numerous mechanical support, storage, and maintenance buildings were also present. Each bay was rf (radio frequency) shielded, with wide doorways that allowed tractor-trailer access. The bay floors were designed to withstand loading up to 1000 pounds per square foot (psf). A traveling crane was used to offload trailers inside the bays. Machine and fabrication equipment were located in the assembly rooms. The building was wired with fiber optic cables, and an uninterruptible backup power supply provided power for critical systems.

The electrical yard had High Voltage and High Power sections to generate different power loads. Two types of chilling systems were used to disperse the heat generated during testing, a chilled water system, and an outdoor air cooled system. Four types of electrical grounding were used, including facility, enclosure, ac circuit, and an experimental circuit system. The electromagnetic shielding comprised approximately one-fourth the total of the construction costs. The shielding system included continuous welded steel sheathing of the high bays and smaller labs, power cables run through steel conduits, shielded doors, rf filters, electronic honeycomb filter traps, and electrostatic filters. The shielding prevented interference from outside power sources and electronic signals, but also prevented conduction of interference generated by the labs back out into the exterior power grid.

The computer system was a critical system of the center, used to monitoring the power system and safety controls, and for the research process itself, including designing and simulating experiments, and capturing and analyzing the data. The computer network was linked by fiber optic cable. A network of sensors was used to collect the data, which were transmitted via coax or fiber optic cable to the computer network. Software was custom designed by the Pulse Power Technology Branch of LABCOM, the Army software developer, located on Fort Monmouth. Experiments in the high bays were captured through a video monitoring system, using specially shield digital video cameras. Additional video cameras were located in the support labs and offices, allowing video-conferencing within the facility.

The Pulse Power Center was intended to be a state-of-the–art scientific research facility. It was an important part of the Army's contribution to SDI research. However, in 1991, the SDIO (the organization overseeing funding for SDI research) reported that it provided only 31.4% of the DODs funding for pulse power research (Schomisch 1992). Obviously, the DOD had its own needs for pulse power research outside of the SDI program, and funded much of that research itself. Other facilities conducted research into pulse power including the Naval Research Lab (NRL), private corporations (Maxwell Laboratory), and colleges and universities (Auburn University, Texas Tech, University of Texas at Arlington, the Polytechnic Institute of New York, and the State University of New York-at Buffalo. It seems that the academic institutions focused on smaller parts of the research program, except for Texas Tech, which maintained its own pulse power lab facility (Schomisch 1992). Maxwell Lab, now called Maxwell Technologies, also provided the military R&D on pulsed power and capacitor design (Maxwell Technologies 2006). It is currently unclear whether the Army Pulse Power facility was unique in design for this type of research; however, it is apparent that other military and civilian labs conducted research on pulse power and microwaves, and much of this research was not mandated or funded by SDI needs.

Despite the progress in the research endeavors conducted at Fort Monmouth and elsewhere, the demise of the Soviet Union resulted in a reduction in the threat of nuclear attacks, and the SDI program was eventually shut down. It is unclear how the reduction in SDI funding affected the operation of the Pulse Power Center, and much information on the scope of the research remains classified with few details available to the public. Eventually the Pulse Power Center main building (Building 2707) was taken over by the, PEO C3T Special Projects Office (Kozlowski 2004:31; PEOC3T 2005). It is unclear if pulse power research continues in Building 2707.

Other Research Developments at Fort Monmouth

Despite the threat of nuclear war, the U.S. continued to invest in the development of conventional military technology. Advances in electronics communications coupled with improvements and miniaturization of integrated circuits, and improved electronic switches increased the pace of R&D in communications equipment. Research occurred at Fort Monmouth's electronics labs, while the RDE center at Fort Monmouth managed design. Testing of new systems took place at Fort Huachuca, Arizona. The U.S. invasion of the Caribbean island of Granada in 1983 highlighted the lack of inter-service compatibility of communication equipment (USAEC 1997). In 1984, the merging of communications, information technology, computers, and battle command systems prompted formation of the Information Systems Command from the existing Communications Command (USAEC 1997). Research at Fort Monmouth resulted in the development of the Single Channel Ground and Airborne Radio System (SINCGARS), a jam-resistant multiplexer radio, and deployment of the Mobile Subscriber Equipment System (MSE), a battlefield cellular phone system. The CECOM Ceramics Lab developed fiber optic technology that would withstand battlefield operations using nanotechnology. The initial investigations occurred when the lab was part of the Communications Research and Development Command (CORADCOM); these innovations resulted in extremely efficient fiber optic cables, which are widely used for data transmission for civilian uses (CECOM Historical Office 1990).

The Demise of the Soviet Era

The sudden collapse of the Soviet Union is sometimes attributed partly to the Soviet Union's inability to compete with the U.S. in funding military research, specifically the SDI anti-ballistic missile research program. With the Soviet threat removed, some impetus for R&D into military systems decreased. The first Gulf War, 1991, provided a laboratory to observe how military systems functioned in conventional warfare, and R&D has continued to improve these systems and to meet new challenges.

4.0 SURVEY RESULTS

The following section presents the results of the architectural investigations at Fort Monmouth. This section is divided into two parts. The first part details the findings of the survey and evaluation for the potentially significant Cold War era resources, and the second part details the boundary assessment conducted for the Fort Monmouth Historic District. TRC Mariah Associates suggested the boundary revision in its 1996 survey report (Nichols 1996), and this recommendation was incorporated in the 2003 ICRMP. In reviewing that document, the NJHPO requested a justification for this proposed boundary change. The boundary assessment in this report serves as a justification for this action. Completed survey forms for each building surveyed as part of this effort are included in Appendix C.

4.1 SURVEY AND EVALUATION OF BUILDINGS 2705, 2707, 2708, 2709, 2710, AND 2713

As mentioned in Section 3, the 2003 ICRMP recommended Buildings 2705, 2707, 2708, 2709, 2710, and 2713 potentially eligible due to their Cold War association. None of these buildings were previously assessed by cultural resource studies. All of the buildings were constructed to support the research and development mission of Fort Monmouth. Building 2705 was constructed in 1972 as the Electronics Warfare Laboratory and Buildings 2707, 2708, 2709, 2710, and 2713 were constructed for pulse power research during the late 1980s. All of these buildings are located in the Charles Wood Area.

The first step in determining the significance of these resources is to evaluate them based upon existing historic contexts. The appropriate historic context for the buildings under investigation is the Cold War Military-Industrial context.

Cold War Historic Context

The United States Army Environmental Center has developed a Cold War context entitled: *Thematic Study and Guidelines: Identification and Evaluation of U.S. Army Cold War Era Military-Industrial Historic Properties*. This context provides a framework for evaluating significance and integrity of buildings, structures, sites, districts, and objects associated with the Army's Cold War military development from 1946 to 1989. The context defines all of the various property types associated with the U.S. Army during the Cold War and provides and assessment of significant for each property type based upon important thematic associations tied to Cold War material culture and history.

The property types that are directly related to what is termed as the Cold War industrial-military context are defined as those that meet any or all of the following (USAEC 1997:3):

1. Specifically constructed or used prior to 1989 to meet the perceived Soviet/communist military threat; project a force designed to influence Soviet policy; and affect global opinion of the relationship between the superpowers.
2. Through architectural or engineering design, they clearly reflect one of the Cold War themes.

3. Directly related to the United States/Soviet relationship through association with a milestone event of the period.
4. Directly related to a United States/Soviet relationship through association with the life of a person during the Cold War period.

The vast majority of buildings constructed by the Army during this era are support buildings for base operations. Termed as BASOPS, these resources include administration buildings, supply and warehouses, housing units, and motor pools and vehicle maintenance buildings (USAEC 1997:105). Because these buildings would have been constructed as part of the normal evolution of the Army, they are not considered essential in defining the industrial-military context of the Army during the Cold War. As such, these buildings are not considered significant resources under the Army's Cold War military-industrial context and must be studied and evaluated under other contexts.

The resources that are directly associated with the Army's Cold War military-industrial context fall under the following themes (USAEC 1997:65):

1. Basic Scientific Research (laboratories)
2. Material Development (research, development, and engineering centers)
3. Wholesale Logistical Operations (includes weapons production)
4. Air Defense, Ballistic Missile Defense, and Army Missiles
5. Command and Control, Communications, Computers, and Intelligence
6. The Army School System (training resources)
7. Operational Forces
8. Army Medical Activities
9. Miscellaneous (includes nuclear power and aviation resources)

A wide range of property types can be associated with each of these themes. For this study, documented resources fall under the first two themes listed above: Basic Scientific Research and Material Development.

Basic Scientific Research. Throughout the Cold War era, scientific knowledge played a key role in providing the most technologically sophisticated weapons and equipment. Research was the initial phase where ideas and processes were synthesized into working knowledge for the advancement of technology. Research and development has always been part of the Army's mission, but this mission was expanded and intensified because of the technological demands of the Cold War, which were far in advance of past eras. Prior to 1962, there was no distinction between scientific research and material development, which can be defined as transforming technology into specific weapons and equipment. Basic research is conducted with multiple applications in design, while material development concentrates in applying technology to a specific design (USAEC 1997:65).

When the Army Material Command (AMC) was created in 1962, the distinction between basic research and material development was institutionalized. Material development research was assigned to the AMC commodity command, while basic scientific research began to be

conducted in separate laboratories. These laboratories were established throughout the Army command and were located at facilities throughout the country. By the end of the Cold War, seven main basic laboratories remained. These seven were (USAEC 1997:66):

1. The Atmospheric Sciences Laboratory at White Sands, New Mexico
2. The Ballistics Research Laboratory at Aberdeen Proving Grounds, Maryland
3. Harry Diamond Laboratories in Adelphi, Maryland
4. The Electronics Technology and Devices Laboratory at Fort Monmouth, New Jersey
5. The Human Engineering Laboratory at Aberdeen Proving Grounds, Maryland
6. The Materials Technology Laboratory in Watertown, Massachusetts
7. The Vulnerability Assessment Laboratory in White Sands, New Mexico

The sole property type associated with the Basic Scientific Research theme is the laboratory, a building whose primary mission is that of scientific research. Typical laboratory buildings contain administrative offices, storage, and rooms for other support functions in addition to the actual laboratory space where experiments and testing occur (USAEC 1997:66). Laboratories varied in terms of the type of research facility. Specific types of laboratories included the following:

- Electronic Laboratory – used for research into communications, electronics, radar, and related fields.
- Metallurgy Laboratory
- Ballistics Laboratory
- Computer rooms – generally constructed to house computers when computer technology was in its infancy
- Wind Tunnels
- Observation Rooms
- Electronic Pulse Power Simulators

Material Development. As previously stated, material development is the process or processes of transforming technology into products, which for the military translates into specific military equipment and weapons. During the Cold War, a large part of the U.S. military mission was to achieve technological superiority of military hardware. Material development operations during the Cold War involved both in-house and contractual research done by private industry. The AMC developed material development centers at testing sites and proving grounds at various installations during the Cold War. Typical property types associated with Material Development include (USAEC 1997:94-96):

- Administration Buildings
- Climatic Chambers
- Simulation Facilities
- Computer Simulation Devices

- Anechoic Chambers
- Weapons Laboratories
- Engine Test Facilities
- Electronics Laboratories
- Static Test Stands for Rockets and Missiles
- Biological Warfare Research Facilities
- Calibrated Firing Ranges
- Chemical Weapons Testing Facilities
- Electronics Testing Facilities
- Outdoor Testing Environments

Many material development resources are only significant because of the equipment housed inside the buildings. The buildings themselves were not noteworthy examples of architecture. The more significant architectural examples were buildings that incorporated significant architectural features and designs that accommodated necessary experiments conducted in these buildings. For example, the Natick Research and Development Center has a rain tower used to simulate rainfall in an outdoor setting (USACE 1997:94).

Support facilities such as administration buildings and utility buildings would not be significant as individual resources under the material development theme that were not the primary place where the event occurred. These resources could only be significant as part of districts associated with a specific or multiple material development activities.

Electronic Warfare Laboratory (Building 2705)

Description. The Electronic Warfare Laboratory (EWL) is located in the Charles Wood area, which is approximately 500 meters west of the Main Post at Fort Monmouth (Figure 1-1). The building is located near the western boundary of the Charles Wood Area and is just east of Pearl Harbor Avenue (Figure 4-1). The building is located on a level site with a parking lot to the northwest. The south, north, and east portions of the building are surrounded by a chain-link fence.

The EWL was established at Fort Monmouth during World War II as part of the Signal Corps Engineering Laboratory. Known as the Countermeasures Division during the 1950s, the laboratory research mission was responsible for advancing the Army's technology for radio direction finding and missile interception. In 1965, the Countermeasures Division merged with the Missile Electronic Warfare Division (MEWD) and the Intelligence Material Development and Support Office (IMDSO) to form the Electronics Warfare Laboratory (Anonymous, n.d(a).:1).

Building 2705 was constructed in 1972 to house the EWL headquarters at Fort Monmouth. The building was designed by the Ballenger Company, a Philadelphia architectural firm (Panamerican Consultants, Inc. 2003:3-34). The Ballenger Company was formed from Ballinger & Parrot when Walter F. Ballenger purchased the interests of his partner Emile Perrot in 1920.

The firm designed a varied type of buildings ranging including industrial designs that utilized the engineering expertise of the firm and commercial and residential buildings (www.philadelphiabuildings.org/pab/app/ar_display.cfm/22293).

In 1974, the EWL was designated the headquarters for electronics warfare research for the U.S. Army, and in 1978 it became a part of the newly designated U. S. Army Electronics Research and Development Command (ERADCOM). Research at the EWL contributed to the development of electronics technology related to missile detection, targeting by radio-location, radiation exploration, ultraviolet instrumentation, and long wave laser warning (Anonymous, n.d.:2) One of the most significant accomplishments of the EWL has been its research and development in the field of electronic warfare protection equipment for Army aircraft. The EWL pioneered such research efforts during the 1960s as part of the Countermeasures Division, where it developed warning, jamming and decoying equipment for Army aircraft. During the Vietnam

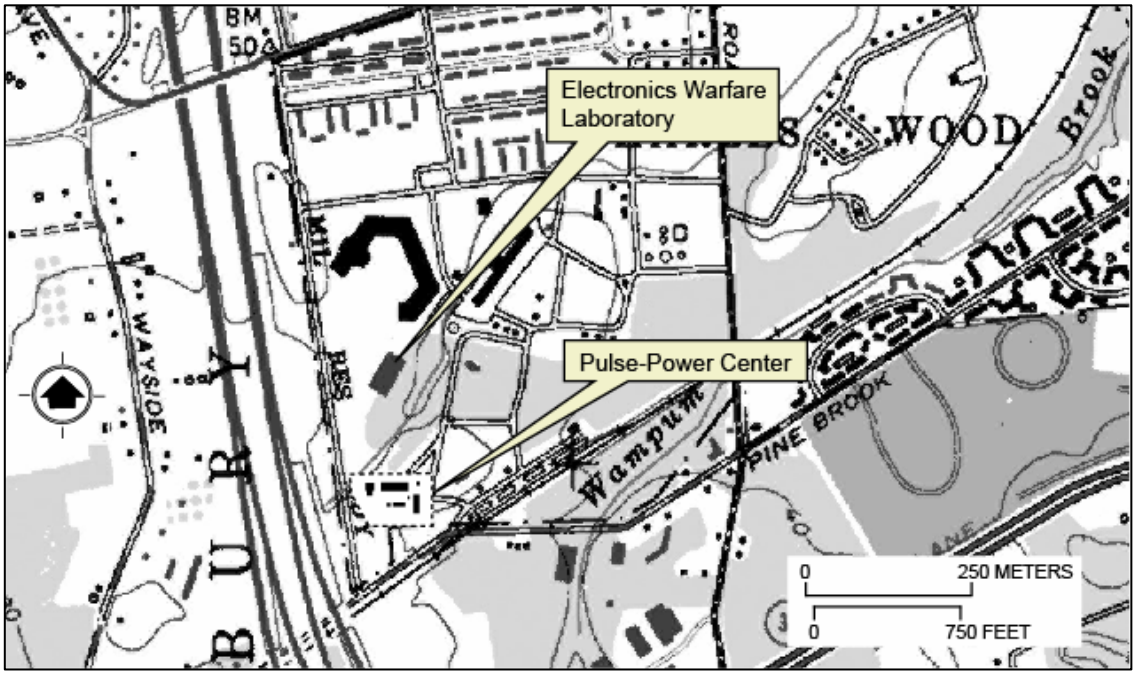

Figure 4-1: Location of Electronics Warfare Laboratory (Building 2705) and the Pulse Power Center (Buildings 2707, 2708, 2709, 2710, and 2713)

War, the EWL was responsible for the research and development of all the electronic systems for the Project Manager – Air Survivability Equipment (PM-ASE). During the 1980s, the EWL continued to provide research and development for countermeasure systems, radar warning systems, and radar jamming equipment (EWL Memo 1984).

The EWL is a one-story rectangular building set on a concrete foundation (Figure 4-2). The building has a flat roof and is clad with insulated metal panels. The building's rectangular main block contains no windows and has a one-story entry pavilion located on the west (front) elevation that has a recessed opening containing double-leaf aluminum frame doors with tempered tinted glass (Figure 4-3). A two-story rectangular projecting bay extends from the south end of the building. It is clad with insulated metal panels and has a flat roof and two-light

and three-light metal framed hopper windows (Figure 4-4). A double leaf metal door pierces the west elevation of the two story projecting bay, and the south elevation is pierced by single leaf metal doors on the first and second stories. The second story entrance is accessible by a metal staircase also located on the south side of the projecting bay.

Alterations to the building have included primarily fenestration changes. The main block of the building currently has no openings on the north elevation, but originally it featured a window and a door. These both have been covered by the metal panels. The two-story rectangular projecting bay originally featured an overhead garage door on its west elevation, which was replaced with a double-leaf metal door. Two additional entrances added to the south elevation consist of single leaf metal doors on both the first and second stories. The metal staircase was constructed to provide access to the second story entrance. The windows also were later additions to this part of the building.

Evaluation. The EWL is associated with the Basic Scientific Research and Material Development themes identified as part of the Cold War Military Industrial context. Constructed in 1972, the EWL would need to qualify for NRHP listing under Criterion Consideration G for "exceptional importance" because the building is not yet 50 years old. Building 2705 was not the first electronic warfare laboratory constructed at Fort Monmouth, as other laboratories performing identical or similar research were in operation before Building 2705 was constructed. Building 2705 was also not the only electronics warfare laboratory in operation at Fort Monmouth after 1970. Electronic warfare experiments were also conducted at Building 1 in the Evan area. Specific information about research information remains classified. Therefore, it is uncertain as to the extent and location where experimentation of electronic systems occurred. As a headquarters, Building 2705 was probably more administrative in function rather than a research laboratory. Therefore, it is likely that much of the electronic warfare research was conducted at other facilities.

From the available information, Building 2705 does not appear to meet Criterion Consideration G. As stated in Section 3, eligible resources meeting Criterion Consideration G must (1) be directly related to Cold War military industrial activities, (2) meet one of the four standard criteria for NRHP significance, (3) have national importance, and (4) retain a standing of importance in comparison to other existing examples of the property type. While Building 2705 is associated with the Army's Cold War era defense research that has potential to meet Criterion A, it does not have exceptional importance with that regard to meet Criterion Consideration G. There is information to suggest that the building was not the only electronic warfare laboratory at Fort Monmouth. It is uncertain to the extent to which Building 2705 was utilized as a research facility, because as the EWL headquarters, the building was probably more administrative in nature. Because the building was not the sole facility where electronic warfare research occurred and there is no evidence to suggest that any activities at the EWL is associated with some strategic military development or ideological association with the history of the Cold War, the building lacks exceptional importance under Criterion Consideration G for Cold War associations.

Building 2705 does not meet Criterion Consideration G because of architectural significance. The building represents utilitarian architecture that lacks architectural distinction. The building

is not an important work of a master architect. The Ballenger Company who designed the building is a Philadelphia based regional firm that does not have a national reputation. The firm has no known significant association with trends significant to the history of regional architecture or military architecture.

Building 2705 also retains good overall integrity. Fenestration changes have been the only observable alterations to the building and these changes have occurred to only one small section of the building. As such, integrity of design has been slightly diminished, but the building still retains integrity of location, setting, feeling, association, materials, and workmanship.

Figure 4-2: EWL (Building 2705), West Elevation, Looking Northeast

Figure 4-3: Main Entrance to EWL, Looking East

Figure 4-4: South end of EWL Showing 2-Story Rectangular Projecting Bay, Looking Northeast

Pulse Power Center (Buildings 2707, 2708, 2709, 2710, and 2713)

Description. The Pulse Power complex was constructed in the Charles Wood area in the late 1980s. The complex was designed by BE&C Engineers of Tukwila Washington (Panamerican Consultants Inc. 2003:3-35). The complex operated under the Electronics and Power Sources Directorate that was part of the Army Research Laboratory at Fort Monmouth. The Pulse Power Center was constructed to perform pulse power/modulator research involving pulse power conditioning, micro-electronics, millimeter/microwave devices, and high speed integrated circuitry. This technology was important to the continual development of electronic guns, the all-electric tank, ultra wide-band electronic warfare, high powered radar, and directed energy weapons.

Research at the Pulse Power Center supported the development of the Strategic Defense Initiative (SDI). It must be noted that Fort Monmouth was one of many installations working on the SDI program before it was abandoned in 1994. The Air Force, Navy, and private companies also contributed to the SDI program. As already noted the Fort Monmouth facility received only 31.4% of all funding for pulse power research. Precise information on the nature of the Army's research conducted for SDI at Fort Monmouth remains classified.

Today the complex supports the Special Project's Office (SPO) C3T unit. The facility is a high security, restricted access facility. The C3T unit supports activities including the development of various high tech systems, products, and capabilities designed to meet the Army's needs in the field. This encompasses everything from tactical satellite communications and intelligence gathering systems to devices used by the combat soldier in the field. The exact nature of the C3T's activities at Fort Monmouth is classified, but it is known that the unit's mission supports the global war on terrorism (http://peoc3t.monmouth.army.mil/SPO/Facilities.html).

The Pulse Power Center originally included Buildings 2707, 2708, 2709, 2710, 2711, 2712, and 2713 (Figure 4-5). Buildings 2711 and 2712 have been demolished, but the other buildings are extant, clustered together in the southwest corner of the Charles Wood Area, located just east of Pearl Harbor Avenue (Figure 4-1). The buildings were constructed on level ground clear of heavy tree cover, and are surrounded by a chain-link security fence. A paved parking lot is located north and east of Building 2707. A detailed inspection of the interior of Building 2707 and the other buildings part of the complex could not be conducted at the time of the survey. Classified activities continue to be conducted in this complex as part of the military mission of Fort Monmouth.

***Building 2707*.** Building 2707 was constructed in 1988 at a cost of $11,626,280 to serve as the main laboratory for Pulse Power research (Fort Monmouth Real Property Records). When completed, Building 2707 featured two high bay laboratories capable of housing a tank or helicopter for experimentation. The facility was powered by 30 megawatts of installed power. The building currently houses offices for the SPO C3T unit. It is unknown whether the SPO unit continues to use the facility for research. An interior inspection could not be conducted because it remains a classified facility.

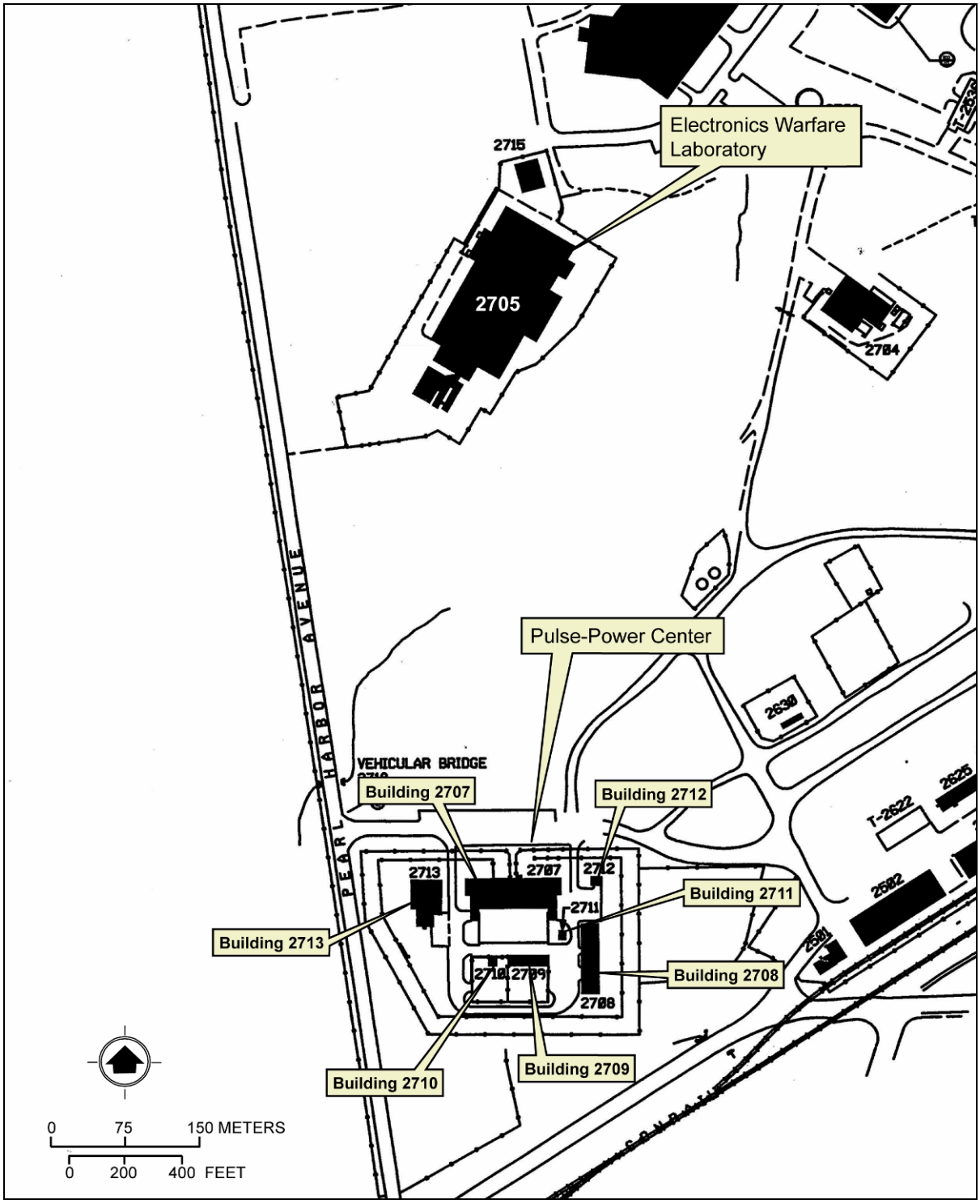

Figure 4-5: Pulse Power Center Buildings 2707, 2708, 2709, 2710, and 2713.

Building 2707 is a two story multiple-bay building that sits on a concrete foundation (Figure 4-6). The building consists of a number of multiple flat roofed, box-shaped bays that measure 165 x 107 feet in dimension. The majority of the building is clad with continuous corrugated steel panels. The main block faces north. The north or front elevation has recessed bays clad with steel siding and contains ribbon bands of one-light metal windows on the first and second stories (Figure 4-7). The east elevation contains two-light metal windows and double leaf steel doors. A shorter rectangular block extends from the rear or south end of the main block. It contains an inset loading bay on its east side and a large opening covered by a metal overhead door (Figure 4-8). A high bay rectangular block extends from the rear or south end of the building (Figure 4-9). Metal piping for a utility connection extends from an underground conduit into the west side of the high bay. Exposed metal piping also extends between Buildings 2707 and 2709.

Figure 4-6: Building 2707, North Elevation, Looking Southeast.

Figure 4-7: Building 2707, North Elevation Detail, Looking South.

Figure 4-8: Building 2707, East Elevation, Looking Southwest

Figure 4-9: Building 2707, South Elevation, Looking Northeast

Building 2708. Building 2708 was constructed in 1988 at a cost of $225,000 (Fort Monmouth Real Property Records). The building was constructed to serve the Pulse Power Center as mechanical and general storage. At the time of the survey, the building was occupied by part of the Special Project's Office (SPO), which has conducted activities to support the global war on terrorism.

Building 2708 is a one story, 120 x 30 foot, rectangular building with a low pitched gabled roof clad with metal (Figure 4-10). The building is clad with corrugated steel siding. The west (front) elevation features three single leaf steel doors and two garage bays with overhead steel doors. .

Building 2709. Building 2709 was constructed as an electrical equipment building in 1988 at a cost of $65,000 (Fort Monmouth Real Property Records). The building is located south of Building 2707. Building 2709 is a one-story, rectangular, utilitarian structure measuring 64 x 24 feet (Figure 4-11). It is constructed on a concrete foundation and has continuous corrugated metal siding and a flat roof. The building has no windows and the only openings in the façade are single leaf and double leaf metal doors on the south elevation. Metal piping that probably serves as an encased electrical conduit extends from the north side of the building and is connected to the south end of Building 2707. Building 2709 is in good condition. Its current use is unidentified.

Building 2710. Building 2710 was constructed as an electrical equipment building in 1988 at a cost of $30,000 (Fort Monmouth Real Property Records). The building is located south of

Building 2707 and west of Building 2709. It is a one-story, rectangular, utilitarian structure measuring 15 x 15 feet (Figure 4-12). The building sits on a concrete foundation and has corrugated metal siding and a flat roof. Double-leaf metal doors pierce the north elevation. The building is in good condition. Its current use is unidentified.

Building 2713. Building 2713 was constructed in 1988 to serve as a utilitarian support building for the Pulse Power Center. The building is located west of Building 2707. Non-classified real property records detailing the exact activities of this building could not be located. The building is a one-story, irregularly shaped structure that sits on a concrete foundation and has a flat roof (Figure 4-13). The building is clad with corrugated metal siding. The building's main block is pierced by a double-leaf metal door, which is sheltered by a roof overhang on the south elevation. A one-story projecting bay extends from the south end of the building's main block. The projecting bay is pierced by a double-leaf metal door on its south elevation, and an overhang extends over its east elevation. The building is in good condition. The current use of the building is unidentified.

Figure 4-10: Building 2708, North and West Elevations, Looking Southeast

Figure 4-11: Building 2709, North and East Elevations, Looking Southwest

Figure 4-12: Building 2710, North and West Elevations, Looking Southeast

Figure 4-13: Building 2713, South and East Elevations, Looking Northwest

Evaluation. The Pulse Power Center is associated with the Basic Scientific Research theme identified as part of the Cold War Military Industrial context. Constructed in 1988, the Pulse Power Center at Fort Monmouth would need to qualify for NRHP listing under Criterion Consideration G for "exceptional importance" because the building is not yet 50 years old. Unclassified information revealed that the Pulse Power Center was originally constructed to perform research for pulse power conditioning, micro-electronics, millimeter/microwave devices, and high speed circuitry. Research conducted at the Pulse Power center is known to have contributed to the development of SDI. However, the extent of this research is not clear because this information remains classified.

From the available information, the Pulse Power Center does not appear to meet Criterion Consideration G as a historic district eligible for listing on the NRHP. As stated in Section 3, eligible resources meeting Criterion Consideration G must (1) be directly related to Cold War military industrial activities, (2) meet one of the four standard criteria for NRHP significance, (3) have national importance, and (4) retain a standing of importance in comparison to other existing examples of the property type. With limited information related to the complex's activities available, it is difficult to evaluate its significance under (3) and (4), above. However, the fact that the Pulse Power Center at Fort Monmouth accounted for only 31.4% of pulse power research funding for the Department of Defense illustrates that the facility was not of exceptional importance with regards to pulse power research. Other comparable facilities were seemingly more at the forefront of this research. In addition to the Department of Defense facilities, private academic research also accounted to knowledge of pulse power. During the 1970s, a pulse power research center was developed at Texas Tech University. The research conducted at

Texas Tech contributed to a better understanding of the physical phenomena associated with pulse power technology (Anonymous n.d.(b)). The Texas Tech pulse power research is just one example of pioneering research in the field during the Cold War era that predated the establishment of the Pulse Power Center at Fort Monmouth.

The Pulse Power Center does not meet Criterion Consideration G because of architectural significance. All of the pulse power building represents utilitarian architecture that lacks architectural distinction. The building is not an important work of a master architect. The BE&C Engineers of Tukwila Washington designed the complex. BE&C Engineers is a subsidiary of the Boeing Company. The firm has no known significant association with trends significant to the history of regional architecture or military architecture.

The Pulse Power Center lacks overall integrity. Two of the buildings that were originally part of the complex (Buildings 2711 and 2712) have been demolished. The remaining buildings merely represent intact shells. The interior equipment housed inside the Building 2707 has been removed, as has been the electrical specifications for the center. Today, Building 2707 is office and storage space and the remaining buildings are used only as storage space. Because the significance of the site is tied to the research and development activities conducted with the interior equipment at the center, the removal of this equipment significantly diminishes the building's integrity of association.

4.2 FORT MONMOUTH HISTORIC DISTRICT

Description

The Fort Monmouth Historic District was identified in the architectural survey conducted by Building Technologies, Inc. during the mid 1980s. Building Technologies, Inc. also prepared a draft NRHP nomination form, which the Army submitted to the NJHPO in 1988. The NJHPO requested additional documentation and photographs of the district and structures. However, the amended information has not yet been submitted and nominations have not been finalized. Nevertheless, in 1991 the NJHPO determined the district as eligible for the NRHP under Criterion A and C.

The Fort Monmouth Historic District contains buildings constructed as part of a ten year program of permanent construction between 1927 and 1937. This program was the first permanent construction program of its kind at Fort Monmouth and was part of a ten year national program to improve military facilities built between World War I and World War II (Orelup 1988:8-1). The Quartermaster Corp, which was in charge of construction at the time, used regional architectural styles as part of the program design. For the Army's eastern complex, the Colonial Revival style was the preferred construction alternative. Most of the contributing resources to the Fort Monmouth district were constructed in the Colonial Revival style. These buildings were generally characterized by their brick exterior, gabled or hipped roof, multi-sash double-hung windows, and classical entry surrounds. The district also is significant as the main training and research center of the U.S. Army Signal Corps during this time as well (Orelup 1988:8-2 to 8-4).

The draft nomination listed 97 contributing resources (Table 4-1). Thirty three of these buildings were garages. Most of the remaining buildings were officers housing, but also included a hospital, post theatre, fire station, and a laboratory. District boundaries were drawn to include the parade ground, Squier Laboratory (Squier Hall, Building 283), Hospital (Building 209), Russel Hall (Building 286), and officers quarters (Figure 4-14).

Table 4-1: Contributing Buildings within the Fort Monmouth Historic District

Bldg Name/Type	Bldg No.	Date	No. of Bldgs	Garages
Barracks	205-208	1927	4	-
Hospital	209	1928	1	-
Noncommissioned Officers' Two-Family Quarters	233-258	1927-34	25	6
Field & Company Officers' Quarters	211-216, 218-228	1927-35	18	18
Commanding Officers' Quarters	230	1936	1	-
Four-Family Apartments	262-269	1929-32	9	7
Bachelor Officers' Quarters	270-271	1929-31	2	2
Post Theatre	275	1933	1	-
Fire Station & Guard House	282	1935	1	-
Squier Laboratory	283	1935	1	-
Russel Hall	286	1936	1	-
Total			**64**	**33**

In addition to the contributing resources, a total of seven non-contributing resources are part of the Fort Monmouth Historic District. These buildings are shown on Table 4-2.

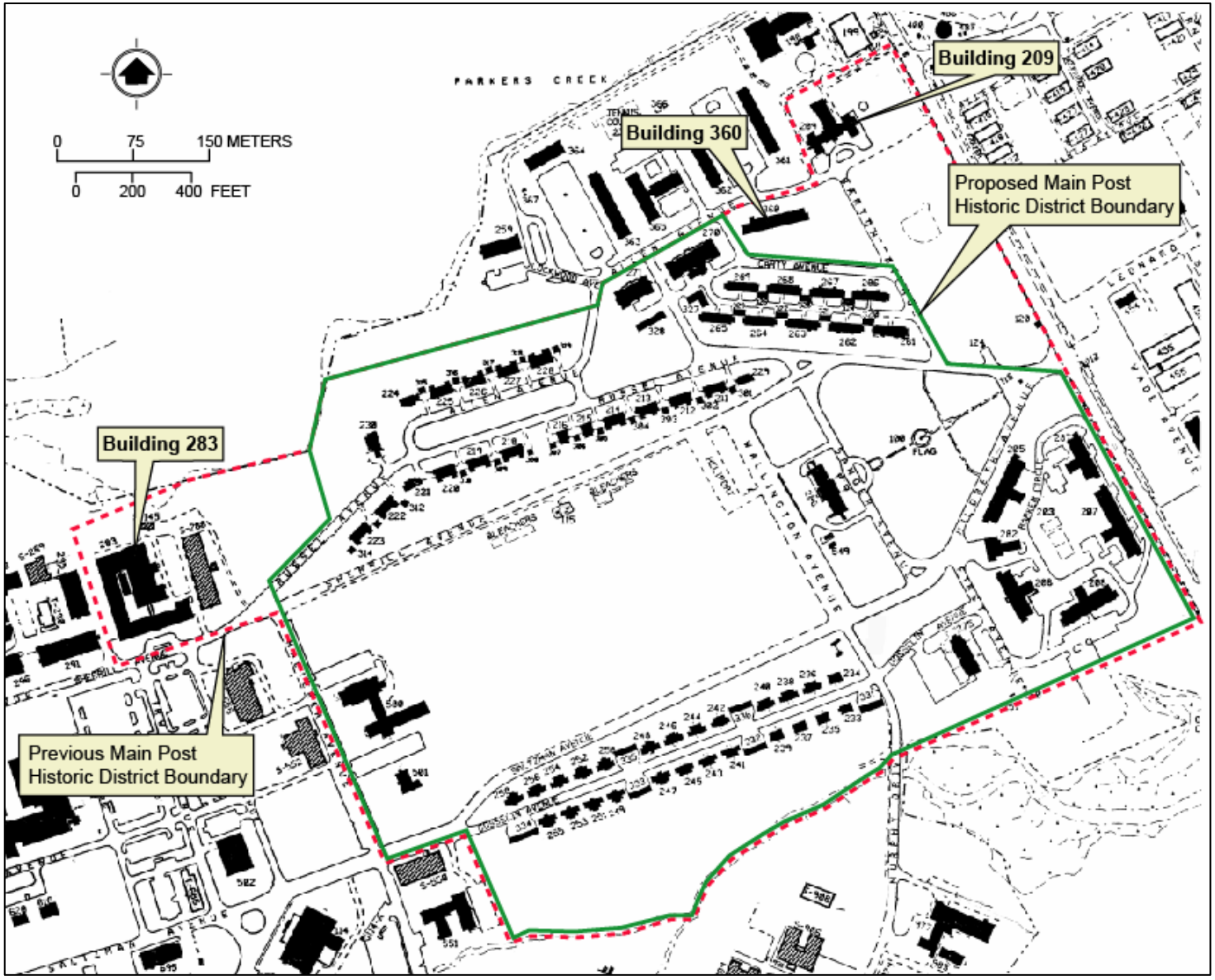

Figure 4-14: Original and Proposed Revised Boundaries for the Fort Monmouth Historic District.

Table 4-2: Non-Contributing Buildings within the Fort Monmouth Historic District			
Bldg Name/Type	**Bldg No.**	**Date**	**No. of Bldgs**
Barracks	287	1940	1
General Instruction Building	288	1941	1
Bachelor Officers' Quarters	360	1956	1
Post Chapel	500	1962	1
Health Care Building	501	1969	1
World War II Memorial	115	1952	1
Sentry Station	118	1954	1
Total			**7**

In 1996, the boundaries for the historic district were reassessed as part of cultural resource investigations by TRC Mariah (Nichols 1996). This study suggested that changes had compromised the integrity of a few contributing resources to the district. Because these buildings were located just inside the original boundaries of the historic district, TRC Mariah suggested that the boundaries of the district be revised to exclude these buildings. The proposed boundary revisions are shown on Figure 4-14. The redefined boundaries exclude Squier Laboratory (Building 283) located along Sherrill Avenue and the hospital (Building 209) located along Allan Avenue. The area north of Barton Avenue and southeast of Building 209 was also recommended for exclusion because all of the buildings at this location had been demolished. The proposed new boundary was drawn to also exclude Building 360, located southwest of Building 209, which had already been determined a non contributing resource.

Recommendation

Changes to Buildings 209 and 283 have not diminished their integrity as concluded in the TRC Mariah study (Nichols 1996). The nomination document states that the Fort Monmouth Historic District's significance derives from the fact that the contributing resources were all part of the first permanent construction program at the installation representing the Army's efforts to upgrade its installations in the period between World War I and World War II. The Quartermaster Corps, which oversaw all design and construction within the Army at this time, utilized the Colonial Revival style in most, of the construction for the Army's eastern facilities. The majority of the contributing resources within the Fort Monmouth Historic District were designed in the Colonial Revival style.

The TRC Mariah study concluded that Buildings 283 and 209 have been altered to the extent that they can no longer contribute to the district's significance. This recommendation was based the fact that stucco has been applied to portions of the exterior facades of both buildings. While the stucco is non-historic material, the material application itself does not sufficiently diminish integrity of both buildings to the extent of excluding them as contributing resources to the Fort Monmouth Historic District. Building 209 (Allison Hall) was originally designed in the Colonial Revival styles and still retains much of its original features including fenestration design and the Colonial Revival entry portico. Unlike Building 209, Building 283 (Squier Hall) is not Colonial Revival inspired, but was constructed as an Art Moderne inspired design in 1935. The building still retains much of its original features including its fenestration pattern, entry pavilion, and flat roof.

Revising the district boundaries according to TRC Mariah's suggestion will exclude Building 209 and 283, as well as Building 360, which has been determined a non-contributing resource, and an area between Barton and Oceanport Avenue that once contained buildings that have been demolished and is the site of a parking lot for Building 209 (Figure 4-17). Because Buildings 283 and 209 still retain much of their original design features, these buildings can not be reclassified as non-contributing resources to the Fort Monmouth Historic District. This also means that a boundary revision to the original district boundaries to exclude these buildings is not warranted.

Figure 4-15: Squier Hall (Building 283), Front or South Elevation, Looking Northwest

Figure 4-16: Squier Hall (Building 283), Detail of Front or South Elevation, Looking Northwest

Figure 4-17: Parking Lot between Oceanport and Barton Avenues

5.0 SUMMARY AND CONCLUSIONS

This report documents the findings of an architectural survey and evaluation of Buildings 2705, 2707, 2708, 2709, 2710, and 2713 and a reassessment of the boundaries of the Fort Monmouth Historic District. The Fort Monmouth Historic District is located on the main post, while the individual buildings are located in the Charles Wood Area. This architectural study was conducted for Fort Monmouth to comply with Section 110 of the National Historic Preservation Act (NHPA) of 1966, as amended and Army Regulation 200-4 (Appendix A).

The NRHP evaluation survey of Buildings 2705, 2707, 2708, 2709, 2710, and 2713 was conducted based on a recommendation in the 2003 ICRMP that these buildings were potentially eligibility for the NRHP and required survey and evaluation to formally determine NRHP eligibility. All buildings surveyed were associated with the late Cold War mission at Fort Monmouth. Building 2705, the Electronics Warfare Laboratory (EWL), was constructed in 1972. This building was the lead laboratory for electronic warfare research after 1974. The EWL housed R&D efforts for electronic warfare research. Probably the most important technologies advanced at the EWL were that involving protection equipment for aircraft and early warning systems.

This study concluded that the EWL is not eligible for NRHP listing under Criterion Consideration G because the building does not appear to meet the "exceptional significance" criteria. The EWL was not the only building at Fort Monmouth where electronic warfare research occurred. Because the EWL was a headquarters building, it is also more likely that the building performed more administrative functions than research. There is no evidence to suggest that activities in the field of electronics warfare research that occurred at Building 2705 resulted in any technological developments of exceptional importance with regards army weapons and equipment during the late Cold War era. Building 2705 also retains good overall integrity.

Buildings, 2707, 2708, 2709, 2710, and 2713 were all part of the Pulse Power Center during the late 1980s and 1990s. This complex of buildings that at one time also included Buildings 2711, and 2712 (no longer extant) was constructed as a laboratory for the Army's pulse power research which had applications in modulator research involving pulse power conditioning, micro-electronics, millimeter/microwave devices, and high speed integrated circuitry. This technology was important to the development of high tech weaponry including electronic guns, the all-electric tank, ultra wide-band electronic warfare, high powered radar, and directed energy weapons. Research at the Pulse Power Center also contributed to the Space Defense Initiative (SDI).

Fort Monmouth's Pulse Power Center does not appear to possess exceptional significance to meet Criterion Consideration G because the research in this field appears to have been more developed at other facilities, many of which also pre-date the Fort Monmouth facility. However, it is documented that the Pulse Power Center received only 31.4% of the DoD funding for pulse power research. This suggests that there were other similar facilities more heavily vested in the same research. It is known that non-military research facilities also conducted ground breaking research in the field. For instance, Texas Tech University had a pulse power laboratory that pre-dates Fort Monmouth's Pulse Power Center. Much of the research that discovered the physical

attributes ascribed to pulse power technology was initially discovered from experiments performed at Texas Tech. The Pulse Power Center also lacks integrity as buildings related to the facility have been demolished and much of the equipment related to the pulse power experiments conducted at the facility has been removed.

A survey was conducted as part of this project to investigate proposed boundary changes to the NRHP-eligible Fort Monmouth Historic District. This study disagrees with previous studies to recommend that alterations to the Hospital (Building 209) and Squier Hall (Building 283) have not significantly diminished these buildings' design integrity. This study concluded that these buildings still contribute to the Fort Monmouth Historic District and the original district boundaries should not be amended to exclude these buildings.

The New Jersey Historic Preservation Office (NJHPO), which reviewed the draft version of this report in accordance with 36 CFR 800: Protection of Historic Properties concurred with the findings of this study. The NJHPO concurrence letter, dated 10 October 2006 is included in Appendix B.

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APPENDIX A
ARMY REGULATIONS 200-4

Army Regulation 200–4

Environmental Quality

Cultural Resources Management

Headquarters
Department of the Army
Washington, DC
1 October 1998

UNCLASSIFIED

SUMMARY of CHANGE

AR 200–4
Cultural Resources Management

This new Army regulation--

- Reflects the transfer of responsibilities previously assigned to the Assistant Chief of Engineers to the Assistant Chief of Staff for Installation Management (para 1-5).

- Provides installation commanders greater authority for compliance with cultural resources legal requirements (para 1-9).

- Reflects new emphasis on Native American affairs (paras 2-4, 2-5, and 2-8).

- Establishes new policy for preparation of and staffing procedures for cultural resources compliance agreements (paras 3-1 and 3-3).

- Establishes new policy for Integrated Cultural Resources Management Plans (para 4-1).

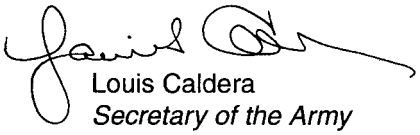
Headquarters
Department of the Army
Washington, DC
1 October 1998

*Army Regulation 200–4

Effective 1 November 1998

Environmental Quality

Cultural Resources Management



Louis Caldera
Secretary of the Army

History. This new regulation replaces AR 420-40, printed 15 April 1984.

Summary. This regulation updates the Army's policy for managing cultural resources to meet legal compliance requirements and to support the military mission. Cultural resources are: historic properties as defined in the National Historic Preservation Act, cultural items as defined in the Native American Graves Protection and Repatriation Act, archeological resources as defined in the Archeological Resources Protection Act, sacred sites as defined in Executive Order 13007 to which access is provided under the American Indian Religious Freedom Act, and collections as defined in 36 CFR 79, Curation of Federally-Owned and -Administered Collections. Requirements set forth in the National Environmental Policy Act of 1969 as amended, National Historic Preservation Act, Archeological Resources Protection Act, Native American Graves Protection and Repatriation, American Indian Religious Freedom Act, 36 CFR 79, Executive Order 13007, Executive Order 11593, and Presidential Memorandum on Government-to-Government Relations with Native American Tribal Governments, define the basis of the Army's compliance responsibilities for management of cultural resources. Regulations applicable to the Army's management of cultural resources include those promulgated by the Advisory Council on Historic Preservation and the National Park Service.

Applicability.

a. This regulation applies to the Active Army, the Army National Guard of the United States, the U.S. Army Reserve and to all installations and activities under control of the Department of the Army by ownership, lease, license, public land withdrawal, or any similar instrument. Specifically it applies to—

(1) Army installations and activities.

(2) Army National Guard Federal installations, activities, and sites supported with Federally appropriated funds or subject to Federal approval.

(3) Installations and activities, or portions thereof, that are in full-time or intermittent use by the U.S. Army Reserve or Reserve Officer Training Corps.

(4) Real property of other Federal, State, and local agencies and private parties used by the U.S. Army, U.S. Army Reserve, or Reserve Officers' Training Corps under license, permit, lease, or other land and or facility use agreement.

(5) Military functions of the U.S. Army Corps of Engineers.

(6) Tenants, such as other Federal agencies, contractor activities, lessees, and all others performing activities in direct support of the Army located on real property under Department of the Army jurisdiction.

(7) Contracts at Government-owned, contractor-operated facilities which will reference this regulation and or will designate by specific citation applicable provisions of this regulation.

b. All of the above will be referred to in this regulation as the Army, unless otherwise noted.

c. This regulation does not apply to the Civil Works functions of the U.S. Army Corps of Engineers, except when the U.S. Army Corps of Engineers is operating on or using funds of military installations and activities.

d. Nothing in this regulation changes any rights granted by treaty or otherwise to any Indian tribe, Native Hawaiian organization, or to its members.

e. This regulation applies to installations and activities within any state of the United States, the District of Columbia, and territories of the United States (United States).

f. Commanders outside of the United States will comply with—

(1) Substantive cultural resources requirements of general applicability included in host nation law and regulation to the extent practicable or, when adopted, those requirements identified in Final Governing Standards adopted by the DoD Executive Agent.

(2) International Treaties and Status of Forces Agreements.

(3) National Historic Preservation Act Amendments of 1980, Section 402 (16 USC 470a-2).

Proponent and exception authority. The proponent of this regulation is the Assistant Chief of Staff for Installation Management. The proponent has the authority to approve exceptions to this regulation that are consistent with controlling Federal law and regulation. Proponents may delegate the approval authority, in writing, to a division chief within the proponent agency in the grade of colonel or the civilian equivalent.

Army management control process. This regulation is subject to the requirements of AR 11-2. It contains management control provisions but does not contain checklists for conducting environmental management reviews.

Supplementation. Supplementation to this regulation and establishment of command and local forms is prohibited without the prior approval of the Director of Environmental Programs, DAIM-ED, 600 ARMY PENTAGON, WASH, DC 20310-0600. The requirements of such supplements must be consistent with and no less stringent than the requirements of this regulation.

Suggested Improvements. Users are invited to send comments and suggested improvements on DA Form 2028 (Recommended Changes to Publications and Blank Forms) directly to HQDA, DAIM-EDN, 600 ARMY PENTAGON, WASH, DC 20310-0600.

Distribution. Distribution of this publication is made in accordance with the initial distribution number (IDN) 095561, intended for command levels C, D, and E for Active Army, Army National Guard of the United States, and U.S. Army Reserve.

*This regulation supersedes AR 420-40, 15 April 1984.

UNCLASSIFIED

Contents (Listed by paragraph and page number)

Chapter 1
Introduction

Section I
General

1–1. Purpose
This regulation prescribes Army policies, procedures, and responsibilities for meeting cultural resources compliance and management requirements. The scope of this regulation includes the National Historic Preservation Act (NHPA); American Indian Religious Freedom Act (AIRFA) and Executive Order (EO) 13007; Native American Graves Protection and Repatriation Act (NAGPRA); Archeological Resources Protection Act (ARPA), 36 CFR 79; and other requirements and policies affecting cultural resources management. These policies are designed to ensure that Army installations make informed decisions regarding the cultural resources under their control in compliance with public laws, in support of the military mission, and consistent with sound principles of cultural resource management.

1–2. References
Required and related publications and prescribed and referenced forms are listed in appendix A.

1–3. Explanation of abbreviations and terms
Abbreviations and special terms used in this regulation are explained in the glossary.

Section II
Responsibilities

1–4. Deputy Assistant Secretary of the Army (Environment, Safety and Occupational Health) (DASA(ESOH))
The DASA(ESOH) is the Army's Federal Preservation Officer (FPO) pursuant to designation by the Assistant Secretary of the Army (Installations, Logistics, and Environment) on behalf of the Secretary of the Army. As the FPO, the DASA(ESOH) is responsible for oversight and coordination of the Army's activities under the NHPA, including approval and signature on Army National Register of Historic Places nominations for Federally-owned and -controlled historic properties. DASA(ESOH) FPO signature authority for National Register nominations may be delegated to the ACSIM.

1–5. The Assistant Chief of Staff for Installation Management (ACSIM)
ACSIM is the Army Staff proponent for the military Cultural Resources Management Program. ACSIM functional responsibilities in this program area are implemented as follows:

a. The Director of Environmental Programs (DEP) carries out the ACSIM Army Staff function for the military Cultural Resources Management Program through the following responsibilities:

(1) Promulgates cultural resources policy and guidance.

(2) Identifies, supports, and defends cultural resources requirements.

(3) Directs and coordinates Army Staff cultural resources management program requirements.

b. The Commander, U.S. Army Environmental Center (AEC), under the direction of the DEP, is responsible for a broad range of technical support and oversight services for execution of the military cultural resources management program worldwide including:

(1) Support for HQDA, MACOM, and installation cultural resources compliance activities and programs.

(2) HQDA technical oversight and review of the Army Cultural Resources Management Program including NHPA Section 106 Programmatic Agreements (PAs) and Memoranda of Agreement (MOA), NAGPRA Comprehensive Agreements (CAs) and Plans of Action, other cultural resources agreements and actions, and National Register of Historic Places nominations .

(3) Identification of Army-wide cultural resources requirements and shortfalls through analysis of Army programming data, emerging statutory and regulatory requirements, and the Army Environmental Strategic Action Plan (AESAP). Development, execution and management of programs and initiatives to address shortfalls and requirements.

1–6. The Judge Advocate General (TJAG)
TJAG provides legal advice to the Army on military cultural resources legal matters. The Chief, Environmental Law Division (ELD), will exercise those authorities on behalf of TJAG and will—

a. Serve as legal advisor to the ACSIM and DEP with regard to the Army Cultural Resources Management Program.

b. Review draft cultural resources compliance agreements IAW the procedures and time frames of this regulation.

c. Serve as agency counsel for the Army in appropriate administrative cases, hearings, and enforcement actions.

1–7. Director, Army National Guard Bureau (ARNGB)
The Director, Army National Guard Bureau will—

a. Approve, oversee, and coordinate all cultural resources compliance activities on ARNG Federally-owned or controlled installations and sites, or for actions that are supported with Federal funds or subject to Federal approval.

b. Provide directions to the Assistant Deputy Director, Army National Guard Bureau (NGB-ILE) in all matters relating to cultural resources management.

c. Act as the official channel of communication between the State and Territory Adjutants General and HQDA.

1–8. MACOM Commanders; Commander, U.S. Army Reserve Command; and Director of Environmental Programs, National Guard Bureau (MACOM commanders)
MACOM commanders will direct and assist their installations in the conduct of installation cultural resources programs consistent with this regulation. Each MACOM commander and the Director of Environmental Programs, National Guard Bureau will—

a. Ensure that cultural resources responsibilities are implemented across all installations.

b. Monitor installation cultural resources management programs.

c. Review ICRMPs, NHPA MOAs and PAs, National Register determinations of eligibility and nominations, NAGPRA CAs and Plans of Action. Forward NHPA PAs and MOAs, NAGPRA CAs and Plans of Action, and National Register nominations to HQDA (AEC) for HQDA review. MACOM commanders may also elect to sign NHPA PAs and MOAs, and NAGPRA CAs and Plans of Action.

d. Implement HQDA cultural resources management policy and guidelines in this regulation and in DA Pamphlet 200-4 at their respective installations.

e. Provide MACOM cultural resources reporting information to HQDA to include, the Installation Status Report (ISR), the Environmental Quality Report (EQR), and the Environmental Program Requirements (EPR).

f. Assist installation commanders in establishing reasonable funding priorities and meeting appropriate milestones in program development and implementation IAW this regulation.

g. Ensure that installation cultural resources programs are accurately evaluated when conducting environmental compliance assessments pursuant to AR 200-1.

h. MACOM commanders may delegate any of these responsibilities to commanders of their major subordinate commands.

1–9. Installation Commanders; Commanders, of US Army Reserve Regional Support Commands; and the Adjutants General (Installation commanders)
Installation commanders will—

a. Establish an Installation Cultural Resources Management Program by implementation of this regulation and DA Pamphlet 200-4.

b. Designate NLT 1 June 1999, an installation Cultural Resource Manager (CRM) to coordinate the installation's cultural resources management program. The installation commander will ensure that

the CRM has appropriate knowledge, skills, and professional training and education to carry out installation cultural resources management responsibilities. The installation commander will also ensure that all cultural resources technical work (including but not limited to identification, evaluation, and treatment of historic properties, and preparation and implementation of an ICRMP), is conducted by individuals who meet the applicable professional qualifications standards established by the National Park Service in 36 CFR 61, Appendix A.

c. The installation commander will establish a government-to-government relationship with Federally-recognized Indian tribes, as needed. If there are significant Native American issues, the installation commander will also designate an installation "Coordinator for Native American Affairs" to facilitate the government-to-government relationship. The installation commander will ensure that the Coordinator for Native American Affairs has appropriate knowledge, skills, and professional training and education to conduct installation consultation responsibilities with Indian tribes.

d. Establish a process that requires early coordination between the CRM and other installation staff elements, tenants, and others early in the planning of projects and activities that may affect cultural resources.

e. Prepare and implement, if appropriate, an installation wide NHPA Section 106 PA, and a NAGPRA CA where required to address and streamline NHPA and NAGPRA compliance procedures for ongoing mission and operations. If an installation-wide NHPA Section 106 PA and NAGPRA CA is not prepared, the commander must ensure that individual undertakings and activities follow NHPA Section 106 (36 CFR 800) and NAGPRA (43 CFR 10) compliance procedures.

f. Ensure that cultural resources management is integrated with installation training and testing activities, master planning (AR 210-20), environmental impact analysis (AR 200-2), natural resources and endangered species management planning and programming to include Integrated Natural Resources Management Plans (AR 200-3), and the Integrated Training Area Management (ITAM) program. Ensure that the installation cultural resources management program is developed and implemented IAW the policies and guidelines set forth in this regulation and in DA Pam 200-4.

g. Establish funding priorities and program funds for cultural resources compliance and management activities into the Environmental Program Requirements report.

h. Conduct a comprehensive evaluation of the installation's cultural resources management program as part of the environmental compliance assessment required by AR 200-1.

i. Develop ICRMPs, cultural resources inventory plans and schedules, NHPA PAs and MOAs, NAGPRA CAs and Plans of Action, and other documents as appropriate, and coordinate such documents with the MACOM and HQDA IAW this regulation.

j. Serve as the Agency Official as defined in 36 CFR 800 with responsibility for installation compliance with the NHPA.

k. Serve as the Federal Agency Official as defined in 43 CFR 10 with responsibility for installation compliance with NAGPRA.

l. Serve as the Federal land manager as defined in 32 CFR 229 with responsibility for installation compliance with ARPA. ARPA permits are issued by the supporting USACE District Real Estate office upon approval of the installation commander IAW ER 405-1-12 and AR 405-80. Installation commander approval is provided through the issuance of the Report of Availability to the supporting USACE District Real Estate office.

m. Serve as the Federal Agency Official as defined in 36 CFR 79 with management authority over archeological collections and associated records.

n. Sign NHPA PAs and MOAs, and NAGPRA CAs and Plans of Action and other installation cultural resources agreements after MACOM and HQDA comments have been addressed.

Chapter 2
Cultural Resources Compliance Requirements

2–1. Cultural Resources Management Program

a. This chapter identifies the basic compliance requirements associated with the major Federal cultural resources laws and regulations applicable to Army activities. Installation commanders must comply with applicable cultural resources statutes, regulations, Executive Orders, and Presidential Memoranda listed in appendix B.

b. DA personnel, at all levels, must ensure that mission requirements are carried out in harmony with such statutory and regulatory requirements. Failure to fulfill these requirements could result in halting or delaying ongoing or proposed mission essential projects, training and testing actions, and could deplete limited financial and staff resources. Proponents of Army actions should coordinate with the CRM early in the planning stage of projects and activities to identify potential cultural resources compliance requirements.

c. The key to the successful balance of mission requirements and cultural resources compliance and management responsibilities is early planning, and coordination to prevent conflicts between the mission and the resources. Integrated Cultural Resources Management Plans, as identified in chapter 4, are the installation commander's primary tool for planning and integration of cultural resources compliance and management activities into the military mission.

d. In fulfilling its cultural resources responsibilities, the installation will work closely with the appropriate authorities designated in applicable Federal statute and regulation.

2–2. National Environmental Policy Act of 1969 as amended (NEPA)

a. NEPA requires installation commanders and other Army decision makers to consider the environmental effects of their proposed programs, projects, and actions prior to initiation. Pursuant to the National Environmental Policy Act of 1969 (NEPA) and the Council on Environmental Quality regulations 40 CFR 1500-1508, the proponents of Army actions will ensure that cultural resources are fully considered when preparing NEPA documents. Army policy for compliance with NEPA is found in AR 200-2.

b. NEPA documents will include a comprehensive assessment of the impacts of proposed Army actions or activities on cultural resources. However, compliance with NEPA for a specific action does not relieve the Army of the independent compliance procedures associated with applicable cultural resources requirements in appendix A. Information and findings obtained through compliance with cultural resources statutes, regulations, Executive Orders, and Presidential Memoranda should be integrated into the concurrent NEPA compliance process and documents.

c. Impact assessments under NEPA must consider the effects of proposed Federal actions on cultural resources and the effects on Indian tribes, Native Hawaiian Organizations, Native Alaskans, and other ethnic and social communities to whom the cultural resources may have importance. The information needed to make such impact assessments may be acquired from information developed as a result of compliance with cultural resources statutes, regulations and Executive Orders.

2–3. National Historic Preservation Act of 1966 as amended (NHPA)

a. The National Historic Preservation Act (NHPA) establishes the Federal government's policy to provide leadership in the preservation of historic properties and to administer Federally-owned or -controlled historic properties in a spirit of stewardship. The installation commander shall administer, manage and treat historic properties in accordance with the NHPA. The installation commander shall also identify, evaluate, and nominate historic properties for listing in the National Register of Historic Places consistent with the policies and guidelines in this regulation and DA Pam 200-4.

b. Section 106 of the NHPA:

(1) The installation commander shall identify, evaluate and take into account the effects of all undertakings on historic properties IAW the procedures set forth in 36 CFR 800 and this regulation.

The ACHP is responsible for providing comments on undertakings that affect historic properties. The State Historic Preservation Officer (SHPO) is a significant participant in the Section 106 compliance process by providing comments on efforts to identify, evaluate and treat any effects on historic properties. If an undertaking on Army lands may affect properties having historic value to a Federally-recognized Indian tribe, such tribe shall be afforded the opportunity to participate as interested persons during the consultation process defined at 36 CFR 800. Traditional cultural leaders and other Native Americans and Native Hawaiians are considered to be interested persons with respect to undertakings that may affect historic properties of significance to such persons. If an undertaking may involve excavation of NAGPRA cultural items, the requirements of NAGPRA and 43 CFR 10 must also be met prior to implementation of the undertaking.

(2) Failure to take the effects of an undertaking on historic properties into account IAW NHPA Section 106 and 36 CFR 800 can result in formal notification from the ACHP to the Secretary of the Army of foreclosure of the ACHP's opportunity to comment on the undertaking pursuant to the NHPA. A notice of foreclosure can be used by litigants against the Army in a manner that can halt or delay critical mission activities.

(3) The installation commander will ensure that the efforts to identify, evaluate, and treat historic properties follow the Secretary of the Interior's Standards and Guidelines For Archeology And Historic Preservation and are conducted under the supervision of personnel who meet the applicable professional qualifications standards set forth in 36 CFR 61 appendix A. Disagreements between the installation commander and the SHPO regarding the eligibility of a property for listing in the National Register shall be resolved through the procedures at 36 CFR 63.2(d).

(4) PAs and MOAs executed pursuant to NHPA Section 106 and 36 CFR 800 are compliance agreements that set forth how the Army will satisfy the responsibilities of Section 106 of the NHPA in the context of an Army undertaking that will affect an historic property. Section 106 PAs that address and define ongoing installation-wide undertakings associated with mission activities and their effects on historic properties over a 5-year programming and budgeting cycle are encouraged because they can streamline the NHPA compliance process and serve as a program management tool. Any management procedures and determinations provided in PAs and MOAs should be integrated into the installation's ICRMP. However, NHPA PAs and MOAs shall not refer to or implement an ICRMP. An ICRMP is intended to integrate all of the installation's responsibilities for managing all cultural resources as defined by this regulation. Implementing such a document with an NHPA PA or MOA would vest review authority in the ACHP and SHPO over the installation's compliance with statutes and regulations that are clearly outside the statutory authority of the ACHP and SHPO. ACHP and SHPO statutory authority is limited to consultation with Federal agencies under the NHPA and 36 CFR 800.

c. Section 110 of the NHPA imposes specific responsibilities upon the installation commander regarding historic preservation. In accordance with Section 110(a)(1), the affirmative preservation responsibilities in Section 110 must be undertaken in a manner consistent with the installation's mission. Such responsibilities include but are not limited to the following:

(1) Establishing a historic preservation program to include the identification, evaluation and nomination of historic properties to the National Register of Historic Places in consultation with the ACHP, SHPO, local governments, Indian tribes, Native Hawaiian organizations, and the interested public as appropriate. This responsibility is fulfilled by implementation of this regulation at all levels within the Army.

(2) Prior to acquiring, constructing, or leasing buildings, installation commanders must use available historic properties to the maximum extent feasible.

(3) The installation commander must document historic properties that will be altered or destroyed as a result of Army action. Such actions must be reviewed in accordance with NHPA Section 106.

(4) In transferring Army historic properties, the installation commander must ensure that the significant historic values of the property are appropriately preserved.

(5) The Secretary of the Army must document decisions to proceed with Army undertakings that adversely affect historic properties when the installation commander has been unable to reach agreement through execution of a MOA or PA with the ACHP and SHPO. Procedures for installation commanders to follow when such a situation arises in the context of an NHPA undertaking are at section 3-1d of this regulation.

d. Section 304 of the NHPA requires that information about the location, character, or ownership of a historic property be withheld from public disclosure when the installation commander determines that disclosure may cause a significant invasion of privacy, risk harm to the historic property, or impede the use of a traditional religious site by practitioners. After determining that information should be withheld, the installation commander will provide such a determination through command channels to HQDA (DEP).

e. Section 101(d)(2) of the NHPA provides for the assumption by Federally-recognized Indian tribes of all or any part of the functions of a SHPO with respect to tribal lands (for example, all lands within the exterior boundaries of any Indian reservation and all dependent Indian communities). Section 101(d)(6) requires installations, in carrying out their Section 106 responsibilities, to consult with Federally recognized Indian tribes and Native Hawaiian Organizations that attach religious or cultural significance to an historic property. Installation commanders will consult with Federally-recognized Indian tribes and Native Hawaiian Organizations in the Section 106 process to identify, evaluate, and treat historic properties that have religious or cultural importance to those groups.

f. Section 111 of the NHPA requires installation commanders, to the extent practicable, to establish and implement alternatives for historic properties, including adaptive use, that are not needed for current or projected installation mission requirements.

g. Section 112 of the NHPA requires that installation commanders who are responsible for protection of historic properties pursuant to NHPA ensure that all actions taken by employees or contractor meet professional historic preservation standards established by the Secretary of the Interior.

2–4. American Indian Religious Freedom Act of 1978 (AIRFA) and EO 13007, Indian Sacred Sites

a. Installation commanders will develop and implement procedures to protect and preserve the American Indian, Eskimo, Aleut, and Native Hawaiians' right of freedom to believe, express, and exercise their traditional religions, including but not limited to access to sacred sites, use and possession of sacred objects, and freedom to worship through ceremonies and traditional rites. Installation commanders shall also establish procedures to facilitate consultation with Federally-recognized Indian tribes and Native Hawaiian organizations, as appropriate.

b. Installation commanders shall consult with Indian tribes and Native Hawaiians to identify sacred sites that are necessary to the exercise of traditional religions and shall provide access to Army installations for Indian tribes and Native Hawaiian practice of traditional religions, rights and ceremonies. The installation commander shall maintain the confidentiality of sacred site locations. Installation commanders may impose reasonable terms, conditions and restrictions upon access to such sites when the commander deems it necessary for the protection of personal health and safety, or to avoid interference with the military mission, or for other reasons of national security. The installation commander shall maintain the confidentiality of sacred site locations.

c. Installation commanders will avoid adversely affecting the physical integrity of sacred sites and shall establish procedures to ensure reasonable notice is provided to Federally-recognized Indian tribes and Native Hawaiian organizations when proposed actions or land management policies and practices may restrict future access to, ceremonial use of, or adversely affect the physical integrity of

sacred sites. Such procedures should be set forth in an installation ICRMP. If a sacred site may be affected by installation land management policies or practices, the installation commander shall also ensure that the compliance requirements of the NHPA are met if the sacred site meets the NHPA definition of an historic property.

2–5. Native American Graves Protection and Repatriation Act of 1990 (NAGPRA)

a. The intent of NAGPRA is to identify proper ownership and to ensure the rightful disposition of cultural items (defined in Section 2 of NAGPRA) that are currently in Federal possession or control. NAGPRA mandates that installation commanders summarize, inventory, and repatriate cultural items in the possession or control of the installation to lineal descendants or to culturally affiliated Federally-recognized Indian tribes or Native Hawaiian organizations. NAGPRA also requires that certain procedures be followed when there is an intentional excavation of or an inadvertent discovery of cultural items. The installation commander will ensure compliance with NAGPRA (23 USC 3002) and its implementing regulation (43 CFR 10).

b. The installation commander may enter into CAs with Federally-recognized Indian tribes and Native Hawaiian organizations for the purposes of compliance with NAGPRA and 43 CFR 10. CAs should establish responsibilities and address all installation land management activities that could result in the intentional excavation or inadvertent discovery of cultural items, establish standard consultation procedures, and provide for the determination of custody, treatment, and disposition of cultural items. Such CA procedures and determinations should be incorporated by reference into any ICRMP prepared by the installation. However, CAs must be prepared independent of ICRMPs and such CAs shall not refer to or implement an ICRMP.

c. Absent a CA, the installation commander shall take reasonable steps to determine whether a planned activity may result in the intentional excavation or inadvertent discovery of cultural items from Federally-owned or -controlled Army lands. When it is determined that cultural items may be encountered and, prior to issuing approval to proceed with the activity, the commander shall carry out the consultation procedures and planning requirements of 43 CFR 10.3 and 10.5. Following consultation per 43 CFR 10.5 as part of the intentional excavation or inadvertent discovery of cultural items, a written Plan of Action must be prepared IAW the 43 CFR 10.5(e). Such procedures and actions should be coordinated with the requirements of the NHPA and ARPA when such excavations or discoveries may involve historic properties and or archeological resources.

d. If an inadvertent discovery of cultural items occurs in connection with an ongoing activity on the installation and there is no CA in effect that sets forth agreed upon procedures for such instances, then the installation commander must comply with 43 CFR 10.4 (a-d). Such compliance measures include but are not limited to notifications, cessation of the activity for 30 days in the area of the discovery, protection of the discovery, consultation with Indian tribes or Native Hawaiian organizations affiliated with the discovery IAW 43 CFR 10.5 and preparation of a written Plan of Action. The installation commander must ensure that all authorizations to carry out activities on Federally-owned or-controlled installation lands, including leases and permits, include a requirement for the holder of the authorization to notify the commander immediately upon the inadvertent discovery of cultural items and to protect such discoveries until applicable compliance procedures are satisfied.

e. Installation commanders must ensure that intentional excavation and response to any inadvertent discovery of NAGPRA cultural items are carried out in compliance with all applicable statutory and regulatory requirements of NAGPRA, ARPA and NHPA. Each statute mandates compliance with independent requirements. Compliance with one statutory requirement therefore, may not satisfy other applicable requirements.

f. Summary, inventory and repatriation of cultural items that are in existing collections under Army possession or control shall occur IAW NAGPRA Sections 5, 6, and 7 and 43 CFR 10. In instances where there is a dispute as to the ownership of cultural items, the installation shall safeguard the cultural items until the dispute is resolved IAW NAGPRA Section 7(e). The installation commander shall notify the MACOM and HQDA (AEC) in the event of a dispute as to ownership of cultural items.

g. All activities carried out to comply with NAGPRA and 43 CFR 10 shall only occur with Federally-recognized Indian tribes, Native Hawaiian organizations, and lineal descendants as defined and provided for by NAGPRA.

2–6. Antiquities Act of 1906 and Archeological Resources Protection Act of 1979 (ARPA) and Archeological and Historic Preservation Act of 1974 (AHPA)

a. The Antiquities Act of 1906 and ARPA prohibit the excavation, collection, removal, and disturbance of archeological resources (as defined by ARPA) and objects of antiquity (as referenced in the Antiquities Act) on Federally-owned Army property without a permit issued by the USACE District Real Estate Office on the approval of the installation commander. Violation of either statute may result in the assessment of civil or criminal penalties, and forfeiture of vehicles and equipment that were used in connection with the violation.

b. Paleontological Resources. Paleontological remains and deposits are considered to be objects of antiquity pursuant to the Antiquities Act. Management of important paleontological remains or deposits should be integrated into ICRMPs prepared pursuant to this regulation. Paleontological resources are scientifically significant fossilized remains, specimens, deposits and other such data from prehistoric, non-human life. The AHPA specifically provides for the survey and recovery of scientifically significant data which may be irreparably lost as a result of any alteration of the terrain from any federal construction projects, or Federally licensed project, activity, or program. Any installation paleontological resource management requirements will be integrated in ICRMPs and will establish and include installation policy for limitation of collection and removal of paleontological resources. Known paleontological resources will also be addressed in any NEPA documentation prepared for actions that may impact or cause irreparable loss or destruction of such resources.

(1) When an installation finds, or is notified in writing by an appropriate authority that its activities may cause irreparable loss or destruction of scientifically significant paleontological resources, the installation commander will notify the Secretary of the Interior in writing and will provide information concerning the activity IAW AHPA. Such notification may be incorporated as part of the NEPA public review and comment process for the subject activity.

(2) Upon notification by the installation that scientific data may be irrevocably lost or destroyed by a proposed activity, the Secretary of the Interior shall, if he or she determines that such data are significant and after reasonable notice to the installation responsible for the activity, conduct or cause to be conducted a survey and other investigation of the affected area and recover and preserve such data. APHA provides installation commanders the authority to assist the Secretary of the Interior with funds for surveys or other activities to recover significant scientific data, but such financial assistance is not required. Likewise, installation commanders may choose to undertake such professional survey and recovery activities themselves with funds appropriated for the project, program, or activity. Such project requirements shall be programmed in the Environmental Program Requirements Report.

c. The use of metal detectors to locate archeological resources is prohibited on Army installations except when used by Army personnel, contractors, or permittees in association with official cultural resource management activities or pursuant to a permit issued under ARPA.

d. ARPA permits for archeological investigations that may result in the excavation or removal of Native American human remains and other cultural items, as defined in NAGPRA, or in the excavation of archeological resources that are of religious or cultural importance to Federally-recognized Indian tribes, will be issued IAW AR 405-80 and this regulation. An installation's supporting USACE

District Real Estate Office will issue the permit after the installation commander conducts consultation IAW 43 CFR 10.5 and 32 CFR 229.7 with the culturally affiliated Indian tribes or Native Hawaiian organizations. The installation commander provides the USACE District with approval to issue the permit by means of a Report of Availability prepared after necessary consultation and compliance actions have been met. ARPA permits shall provide for the disposition of NAGPRA cultural items in accordance with NAGPRA subsections 3(a) and (b) and 43 CFR 10. The installation commander will ensure that documentation of consultation with culturally affiliated Indian tribes or Native Hawaiian organizations is prepared and maintained as part of the record of each such permit.

e. The installation will ensure that ARPA permits—

(1) Comply with the requirements of 32 CFR 229, 43 CFR 10,

(2) Require that any interests which Federally-recognized Indian tribes or Native Hawaiian organizations may have in the permitted activity are addressed in a manner consistent with the requirements of NHPA and NAGPRA, prior to issuance of the permit,

(3) Require permitted activities be performed according to applicable professional standards of the Secretary of Interior, and

(4) Require that the excavated archeological artifact collection and associated records are permanently curated in a curation facility which meets the requirements of 36 CFR 79.

f. Archeological resources, objects of antiquity, and scientific data from Federal installations belong to the installation, except where NAGPRA requires repatriation to a lineal descendant, Indian tribe or Native Hawaiian organization. Archeological resources and objects of antiquity from non-Federal land belong to the State, Territory, or land owner. Such resources from lands used by the Army but for which fee title is held by another agency are the property of the agency designated as the land manager in the land use instrument (for example, Public Land Order, Special Use Permit, etc.). Installation commanders should ensure that land use instruments allowing for military use are reviewed to determine proper roles and responsibilities.

g. Army staff or contractors carrying out official duties associated with the management of archeological resources who meet the professional qualifications and whose investigations meet the requirements of 32 CFR 229.8 are not required to obtain a permit under ARPA or the Antiquities Act for the investigation of archeological resources on a Federally-owned or-controlled installation, including situations where cultural items as defined by NAGPRA may be excavated. However, in situations where NAGPRA cultural items or NHPA historic properties may be encountered during intentional excavation of archeological resources, the requirements of NAGPRA and 43 CFR 10, and NHPA and 36 CFR 800 must be met prior to such archeological excavations.

h. For the purposes of Army compliance with ARPA, the installation commander is considered the Federal land manager as defined in 32 CFR 229.3(c). As the Federal land manager, the installation commander may determine that certain archeological resources in specified areas under his or her jurisdiction, and under specific circumstances, are not or are no longer of archeological interest and are not considered archeological resources for the purposes of ARPA (IAW 32 CFR 229.3(a)(5)). All such determinations shall be justified and documented by memorandum and shall be formally staffed for review through the MACOM to HQDA (AEC) prior to final determination.

i. The installation commander will ensure that military police, installation legal staff, the installation Public Affairs Office (PAO), and the fish, game, and recreation management staff are familiar with the requirements and applicable civil and criminal penalties under ARPA. Also, IAW ARPA Section 9, the installation commander may withhold information concerning the nature and location of archeological resources from the public under subchapter II of chapter 5 of title 5 of the United States Code or under any other provision of law.

2–7. 36 CFR 79, Curation of Federally-Owned and - Administered Archeological Collections

a. The installation commander will ensure that all "collections," as defined in 36 CFR 79.4(a) are processed, maintained and curated in accordance with the requirements of 36 CFR 79. However, NAGPRA cultural items in the installation's possession and control shall be disposed of in a manner consistent with the requirements of NAGPRA and 43 CFR 10.

b. Installation archeological collections may be processed, maintained, and curated on and by the installation, by another Federal agency, State agency, or other outside institution or non-Governmental organization, in cooperative repositories maintained by or on behalf of multiple agencies, or in other facilities, under contract, cooperative agreement or other formal funding and administrative arrangement provided the standards of 36 CFR 79 are met. Generally, installations should not establish archeological curation facilities on the installation due to the permanent recurring costs and personnel requirements to maintain such repositories to the minimum standards in 36 CFR 79 in perpetuity. Prior to the installation commander's approval of the establishment of an on-post archeological curation facility, a cost analysis shall be conducted and included as a primary factor in the decision. The cost analysis will include factors such as professional curatorial personnel costs for the installation; initial installation infrastructure start-up costs to establish the facility; and installation costs for annual operation, materials, maintenance, and repair. These installation cost factors should be compared with similar costs associated with curating the materials in a outside facility such as at a State museum, other federal or state agency, or with a non-Governmental organization. If a certified Army museum exists on the installation (pursuant to AR 870-20), use of that facility for archeological curation should be investigated prior to any other action to establish or contract out for curation services.

c. Installation commanders shall establish procedures in the installation ICMRP to minimize the amount of archeological "material remains" (as defined in 36 CFR 79.4(a)(1), that are collected during archeological inventory and site excavation and permanently curated. Such procedures will be integrated into any SOPs and contracts or cooperative agreements for such activities and will serve to reduce the long term costs associated with archeological materials curation requirements. Such procedures shall recognize that not all archeological material remains recovered from field work need be accessioned into the installation collection and permanently curated. Archeological material remains recovered during field inventory and site identification efforts should be analyzed and recorded, but generally should not be accessioned into the permanent installation archeological collection. For artifacts recovered from more extensive excavations (mitigation), some classes of material remains may be analyzed and recorded but not permanently accessioned into the installation collection. Permanent curation should be reserved for diagnostic artifacts and other significant and environmentally sensitive material that will add important information to site interpretation.

2–8. Presidential Memorandum for Heads of Executive Departments and Agencies dated April 29, 1994: Government-to-Government Relations with Native American Tribal Governments.

This memorandum requires that—

a. Consultation between the Army and Federally-recognized Indian tribes occur on a government-to-government basis, and in an open and candid manner.

b. Consultation with Federally-recognized Indian tribes on a government-to-government basis occurs formally and directly between installation commanders and heads of Federally-recognized tribal governments. Installation commanders establish government-to-government relations with Federally recognized Indian tribes by means of formal, written letters to the heads of tribal governments. Such letters should designate an installation Coordinator for Native American Affairs who is authorized to conduct follow-on consultations with designated representatives of the tribal government. Any final

decisions on installation plans, projects, programs or activities that have been subject of government-to-government consultation will be formally transmitted from the installation commander to the head of the tribal government.

c. Installations assess the impact of their plans, projects, programs, and activities on tribal trust resources and assure that tribal government rights and concerns are considered during the development of such plans, projects, programs, and activities.

Chapter 3
NHPA Section 106 PAs,and MOAs, National Register of Historic Places, NAGPRA CAs and Plans of Action, Cooperative Agreements and Funding

3–1. NHPA Section 106 PAs and MOAs

a. When an installation commander requires a NHPA Section 106 PA or MOA, the following principles and procedures shall be followed:

(1) PAs and MOAs should contain a compliance schedule with deadlines set to meet the needs of particular undertakings, and procedures for schedule and task modification, dispute resolution, and amendment and termination of the agreement. All agreements will clearly identify the Army undertakings, the affected historic properties, and will address only NHPA compliance responsibilities. PAs shall identify specific installation undertakings over a 5-year planning cycle to the greatest extent possible. Installation undertakings shall be identified through an analysis of such documents including but not limited to the Master Plan, military construction plans, troop training and range operation plans, Integrated Natural Resources Management Plans, and historic property rehabilitation or demolition plans.

(2) PAs and MOAs shall not provide the SHPO, ACHP or other consulting party with authority to review, consult, or comment on activities associated with the management of cultural resources other than historic properties. Such comments may be obtained as non-binding technical review comments outside of the Section 106 regulatory process.

(3) PAs and MOAs shall not provide the SHPO, ACHP or other consulting party with any approval authorities over any Army undertakings or work products associated with execution of an NHPA undertaking. Such authorities are beyond those provided to the SHPO, ACHP or consulting parties under NHPA, and rest with the installation commander. This provision equally applies to any and all conditions associated with no adverse effect determinations made IAW 36 CFR 800. It is recognized however, that the National Park Service has approval authority regarding: acceptance of HABS/HAER documentation into the Library of Congress, acceptance of nominations for formal listing of historic properties in the National Register of Historic Places, and has the final decision in determinations of National Register eligibility.

(4) All actions requiring expenditure of funds in future fiscal years shall be identified in PAs or MOAs as being subject to availability of funds for purposes of compliance with the Anti-Deficiency Act. PAs and MOAs shall stipulate that if sufficient funds are not made available to fully execute the agreement, the installation commander shall consult with the other signatories to either terminate or amend the PA or MOA IAW the termination and amendment procedures set forth in the agreement.

(5) The initial Draft PAs or MOAs prepared by the installation shall be staffed for review through the MACOM to HQDA (AEC). If the SHPO or another consulting party prepares the PA or MOA, the initial draft shall be likewise forwarded from the installation commander for MACOM and HQDA review. The MACOM will provide a technical and legal review as appropriate. HQDA (AEC) will provide HQDA technical review and will coordinate with TJAG (ELD) to obtain HQDA legal review. HQDA (AEC) will provide the MACOM and installation commander with the HQDA technical and legal reviews. When forwarded for MACOM and HQDA reviews, draft PAs and MOAs shall be accompanied by a "For Official Use Only" (FOUO) document prepared by the installation that contains—

(a) Cost estimates by fiscal year and a funding plan ensuring that the compliance schedule set in the PA or MOA can be met and that costs for out year actions will be programmed into the Environmental Program Requirements Report and the installation Command Budget Estimate, and

(b) Confirmation that relevant installation level activities and offices, including but not limited to the installation Office of the Staff Judge Advocate have reviewed and concur with the draft agreement.

b. Within 15 days from HQDA (AEC) receipt of the draft agreement and supporting documentation, HQDA (AEC) will notify the MACOM and installation commander that—

(1) The agreement is IAW HQDA policy, and follows appropriate technical and legal practices and procedures. In such instances, the installation shall proceed with execution of the agreement, or

(2) The agreement requires revision and that HQDA review comments will be forwarded within the following 15 days, or

(3) The draft PA or MOA addresses an issue or property type with Army-wide applicability, or that it is a precedent setting action, or that it has major financial implications. In such instances, AEC will advise the DEP and TJAG (ELD). The DEP may elect to be a participant in and an Army signatory to such agreement.

c. Signature authority and procedures for finalizing NHPA PAs and MOAs is as follows:

(1) The installation commander has signature authority for NHPA PAs, MOAs, pertaining to Army owned and controlled Federal properties, or actions subject to Army Federal approval, that fall within the installation commanders area of responsibility. The DEP has signature authority for PAs and MOAs having Army-wide implications.

(2) In preparing final PAs and MOAs, the installation commander will work cooperatively to address all MACOM and HQDA comments on the draft agreements. Following integration of MACOM and HQDA comments, the installation commander will sign the agreement, obtain SHPO, MACOM (as appropriate), and any consulting party signature, and forward the document to the ACHP for signature. The ACHP will return the signed agreement to the installation commander.

(3) In instances where the DEP elects to be a signatory to an agreement, HQDA (AEC) shall act on behalf of the DEP and, as needed, in coordination with MACOMs, installations, SHPO and ACHP in development of the compliance agreement. The DEP shall sign the final agreement. HQDA(AEC) will then staff the agreement to the SHPO, any consulting parties, and the ACH for their signature.

(4) A copy of the fully executed PA or MOA will be provided to the MACOM and HQDA (AEC) by the installation.

d. The following procedures shall be complied with when Section 106 consultation is terminated IAW 36 CFR 800.5(e)(6), and the installation intends to proceed with an undertaking that will have an adverse effect on an historic property absent a PA or MOA.

(1) In such instances, the installation commander shall request ACHP comments IAW the procedures in 36 CFR 800.6(b), and this regulation. The ACHP provides their comments in this circumstance directly to the Secretary of the Army. The Secretary of the Army, IAW NHPA Section 110(1), must document all decisions to proceed with an undertaking that will have an adverse effect on an historic property absent an agreement, and may not delegate this documentation responsibility. Such documentation is provided through a response directly for the Secretariat to the ACHP. Once the Secretary of the Army has provided such documentation in response to the ACHP's comments, the installation commander may proceed with the undertaking IAW the Secretary of the Army's documentation.

(2) To provide advance notice of termination actions to the Secretariat, the installation commander shall provide notification through the MACOM to HQDA (AEC) will provide the DEP and TJAG (ELD) with an analysis of the termination action. The DEP will advise the Army FPO of such actions in preparation for the

required Secretariat response to ACHP comments. Installation commanders should be prepared to provide HQDA any and all other requested information regarding the termination of consultation.

e. Installation commanders may seek a 1-year variance from HQDA review of all NHPA MOAs and PAs. To justify a 1-year variance from HQDA MOA review, the installation commander must have available both technical and legal personnel who have prior experience in developing and implementing NHPA Section 106 compliance agreements. Requests for variance shall be made as follows:

(1) Installation requests for the 1-year variance from HQDA MOA and PA review requirements are made by memorandum through the MACOM to HQDA (AEC). The request for variance shall include information on the installation staff personnel meeting the above requirement and any anticipated MOAs and PAs that may be developed. The request must include the installation commander's guarantee that HQDA policies and principles established by chapter 3-1.a (1-4) of this regulation shall be followed in preparation and execution of MOAs and PAs that when said policies and procedures cannot be met, the standard staffing procedures at chapter 3-1.a (5) of this regulation will be followed.

(2) HQDA (AEC) will review and will forward the request for variance with an analysis and recommendation to the DEP and TJAG (ELD). Variance from HQDA review of MOAs and PAs are provided by the DEP for the specified one-year period. Installation commanders may request an annual renewal of the 1-year variance through the procedures in section 3-1e(1).

f. In instances where an installation is identified and included in the Base Realignment and Closure (BRAC) program, MACOM commanders will function as the installation commander for the purposes of NHPA compliance and PA and MOA staffing. Staffing procedures established by the Army Base Closure Office (DAIM-BO) for BRAC NHPA PAs and MOAs shall be followed for BRAC agreements.

3–2. National Register of Historic Places Determinations of Eligibility, Nominations, and Delisting

a. Determinations of Eligibility. MACOM commanders shall establish a process for review of the installation determinations of National Register eligibility of properties that are made IAW 36 CFR 800.4(c). The MACOM process will provide for review of such determinations prior to their transmittal to the SHPO, and shall be integrated with installation undertakings in a manner that does not impact project schedules or costs.

b. Disagreement regarding National Register Eligibility. When a disagreement regarding an historic property's eligibility for the National Register occurs between the installation and the SHPO in the context of a NHPA Section 106 undertaking and compliance with 36 CFR 800.4(c), the installation shall request a determination of eligibility from the Keeper of the National Register IAW 36 CFR 63 and provide a description of the property, statement of significance or lack thereof, photographs, and the written opinion of the SHPO regarding the eligibility of the property. A draft copy of such requests may be provided through the MACOM to HQDA (AEC) for technical review and comment prior to the installation's submittal to the Keeper of the National Register.

c. Nominations for formal listing of historic properties in the National Register of Historic Places. In such instances, following information and staffing procedures shall be followed:

(1) Financial and personnel resources shall be primarily devoted to the operation of the internal cultural resources program for identification, evaluation to determine National Register eligibility, and management of historic properties. Formal nomination of historic properties to the Keeper of the National Register of Historic Places in not a high program priority. Formal nomination for listing in the National Register makes no difference in the way historic properties are managed, and diverts scarce resources away from other cultural resources management activities. The Army will formally nominate only those properties that it intends to interpret, commemorate, or otherwise actively manage as sites of popular interest that are normally open to the general public.

(2) Installations will coordinate their intention to formally nominate a property for listing on the National Register through the MACOM to HQDA (AEC) for review and comment prior to the commitment of funds or personnel resources for preparation of National Register nomination packages. When the above policy threshold for formal nomination of a historic property to the National Register is met, all materials required to nominate historic properties for listing in the National Register prepared by the installation are forwarded to the SHPO for review and for SHPO signature. The SHPO shall be requested to return the signed nomination to the installation commander.

(3) The installation commander will forward the nomination with the SHPO's signature through the MACOM to HQDA(AEC). HQDA (AEC) will review the nomination and MACOM comments and will provide a recommendation to the DEP. Upon DEP concurrence, he or she will provide the DASA (ESOH) with the nomination and a request for signature. The DASA (ESOH), as the Army FPO, has the Army signature authority for all nominations and forwards nominations to the Keeper of the National Register for formal listing in the National Register of Historic Places.

d. Removal of Historic Properties from the National Register. Installation commanders may request that historic properties be removed from the National Register IAW 36 CFR 60.15. In such instances, following information and staffing procedures shall be followed:

(1) The installation commander will prepare documentation detailing the grounds for removal of the historic property from the National Register as specified in 36 CFR 60.15.

(2) The installation commander will notify and obtain the comments of the SHPO and forward those comments with the documentation detailing the grounds for removal through the MACOM to HQDA (AEC). HQDA (AEC) will review the documentation and provide a recommendation to the DEP. Upon DEP concurrence, he or she will provide the DASA (ESOH) with the documentation and a request that a petition for removal of the historic property from the National Register be made to the Keeper of the National Register. The DASA (ESOH) will forward such petitions to the Keeper of the National Register.

3–3. NAGPRA CAs and Plans of Action

a. When the installation commander requires a CA or Plan of Action, the following principles and procedures shall be followed:

(1) NAGPRA CAs and Plans of Action should contain a compliance schedule with deadlines, procedures for schedule and task modification, dispute resolution and termination, standard consultation procedures for land management activities that could result in intentional or inadvertent discovery of cultural items, and determination of custody for cultural items. Pursuant to NAGPRA and 43 CFR 10, the consulting parties are to be provided review and consultation regarding the land management activities that are the subject of the agreement. CAs and Plans of Action will not provide the consulting parties with any approval authorities over any Army land management activities or work products associated with execution of the land management activities. Such approval authority is beyond the authority provided to consulting parties under NAGPRA and rests with the installation commander. Plans of Action shall contain all documentation requirements specified in 43 CFR 10.5e.(1-9).

(2) All actions requiring expenditure of funds in future fiscal years will be identified in the agreement as being "subject to availability of funds" (SAF) for purposes of compliance with the Anti-Deficiency Act.

(3) Initial draft CAs and Plans of Action will be staffed through the MACOM to HQDA (AEC) for review. The installation shall ensure that the initial draft CA or Plan of Action that is coordinated with the MACOM and HQDA (AEC) embodies and reflects the prior NAGPRA consultations between the installation commander and the head of the Federally-recognized Indian tribal government

or Native Hawaiian organization. AEC will provide HQDA technical review and will coordinate with TJAG (ELD) for HQDA legal review. HQDA (AEC) will provide the HQDA technical and legal review comments to the MACOM and installation commander. When forwarded for MACOM and HQDA (AEC) review, such draft agreements shall be accompanied by a "For Official Use Only" (FOUO) document prepared by the installation that contains—

(a) Cost estimates by fiscal year and a funding plan ensuring that the compliance schedule set in the CA or Plan of Action can be met and that costs for out year actions will be programmed into the Environmental Program Requirements Report (formerly the RCS 1383 report) and the installation Command Budget Estimate.

(b) Confirmation that relevant installation level activities and offices, including but not limited to the installation Office of the Staff Judge Advocate have reviewed and concur with the agreement.

b. Within 15 days from HQDA (AEC) receipt of the draft agreement and supporting memorandum, HQDA (AEC) will notify the MACOM and installation that—

(1) The agreement is IAW HQDA policy, and follows appropriate technical and legal practices and procedures. In such instances, the installation should proceed with execution of the agreement, or

(2) The agreement requires revision and that HQDA review comments will be forwarded within the following 15 days, or

(3) The draft CA or Plan of Action addresses an issue with Army-wide applicability, or that it is a precedent setting action, or that it has major financial implications. In such instances, AEC will advise the DEP and TJAG (ELD), and the DEP may elect to be a participant in and an Army signatory to the agreement.

c. Signature authority and procedures for finalizing CAs and Plans of Action are as follows:

(1) The installation commander has signature authority for CAs and Plans of Action pertaining to Army owned and controlled Federal properties, or actions subject to Army Federal approval that fall within the installation commanders area of responsibility. The DEP has signature authority for CAs and Plans of Action having Army-wide implications.

(2) In preparing final CAs and Plans of Action the installation commander will address all MACOM and HQDA comments on the draft agreements. Following integration of MACOM and HQDA comments, the installation commander will sign the agreement and forward the document to the MACOM (as appropriate), and Federally-recognized Indian tribe or Native Hawaiian organization for their signature. A signed copy will be requested and returned to the installation commander.

(3) In instances where the DEP elects to be a signatory to an agreement, HQDA (AEC) shall act on behalf of the DEP and in coordination with the installations, MACOMs, and Indian Tribe or Native Hawaiian organization in development of the agreement. HQDA (AEC) will staff such agreements to the Federally-recognized Indian tribes or Native Hawaiian organizations for signature.

d. Installation commanders may seek a 1-year variance from HQDA review of all NAGPRA Plans of Action and CAs. To justify a 1-year variance from HQDA review, the installation commander must have technical and legal personnel on staff who have significant experience in NAGPRA compliance activities or in consultation with Indian tribes or Native Hawaiian organizations.

(1) Requests for variance from HQDA Plan of Action review requirements are made by memorandum through the MACOM to HQDA (AEC). The request for variance shall include information on the staff personnel meeting the above requirement and any anticipated Plans of Action that may be developed. The request must include the installation commander's guarantee that HQDA policies and principles established by paragraph 3-3*a*(1-2) of this regulation shall be followed in preparation and execution of Plans of Action and CAs and that when said policies and procedures cannot be met, the standard staffing procedures at paragraph 3-1*a*(3) of this regulation will be followed.

(2) HQDA (AEC) will forward the request for 1-year variance with an analysis and recommendation to the DEP and TJAG (ELD). Variance from HQDA review of Plans of Action and CA's are provided by the DEP for the specified 1-year period only. Installation commanders may request an annual renewal of the 1-year variance through the procedures at section 3-3*d*(1).

e. In instances where an installation is identified and included in the Base Realignment and Closure (BRAC) program, MACOM commanders will function as the installation commander for the purposes of NAGPRA compliance and CA and Plan of Action staffing. Additional HQDA staff review of BRAC NAGPRA CAs and Plans of Action may be required beyond those identified in this regulation.

3–4. Cooperative Agreements and Interagency Agreements

a. As a general rule, Federal agencies, including the Army, must engage in full and open competition IAW the Federal Acquisition Regulation (FAR) to obtain goods and services. Congress, however, has created exceptions to that rule through enactment of independent statutory authority, empowering Federal agencies to procure goods and services from other Federal agencies, states, local governments and private nonprofit organizations through interagency or cooperative agreements. Installations are hereby authorized to develop and implement interagency agreements and or cooperative agreements, relevant to cultural resources management, with said entities on the basis of the following statutory authorities:

(1) Economy Act, 3l USC 1535, authorizes the Army to issue orders to other Federal agencies to provide goods or services, so long as the order is in the best interests of the Government, is cheaper or more convenient than procurement under contract, and does not conflict with another agency's authority.

(2) Title 10 USC 2684 authorizes the Army to enter cooperative agreement with States, local governments, or other entities for the preservation, maintenance, and improvement of cultural resources on military installations and for the conduct of research regarding cultural resources on installations. (National Defense Authorization Act for Fiscal Year 1997, Public Law No 104-210, 110 Stat. 2422, Section 2862 (1996), adding section 2684 to Chapter 159 of title 10 of the United States Code.)

b. Agreements (for example, Interagency Agreements, Memoranda of Understanding, and Cooperative Agreements) have been established between the DOD, other Federal agencies and nonprofit organizations which provide arrangements for DOD components to enter into implementing agreements with such agencies and organizations for the attainment of mutual conservation objectives. Installation commanders and commanders of other Army activities, utilizing relevant and appropriate statutory authority, as set forth above, may develop and sign implementing Interagency Agreements (IAG), Memoranda of Understanding, or Cooperative Agreements with said entities. All IAGs and Cooperative Agreements entered into IAW the provisions of this section must receive technical and legal review prior to the installation commander's signature.

3–5. Funding Cultural Resources Activities

a. HQDA policy for use of environmental funds for cultural resources activities is established in "Policy and Guidelines for identifying U.S. Army Environmental Program Requirements(EPR Report)". Part 1, item l of the EPR policy specifies projects and activities that are not eligible for environmental funding.

(1) Projects and activities that are not eligible for environmental funding include routine grounds maintenance such as grass mowing, tree pruning, and landscaping, and includes those activities when they occur in historic cemeteries.

(2) Repair, maintenance, and rehabilitation of historic properties (including National Register eligible and listed buildings, structures, sites, objects, landscapes, districts, and cemeteries) are not eligible for environmental funding. In cases where repair, maintenance, and rehabilitation activities are stipulated and required in NHPA Section 106 PAs or ICRMPs, such activities remain ineligible for environmental funds. Appropriate funding sources for these activities include the Real Property Maintenance Account (RPMA).

b. Plans and studies for historic property identification; evaluation; maintenance; stabilization; repair; rehabilitation; conditions assessments; and reports, are eligible for environmental funds when such documents are developed IAW professional historic preservation standards and guidelines established by the Secretary of the Interior.

Chapter 4
Integrated Cultural Resources Management Plans (ICRMPs)

4–1. Scope and Purpose of ICRMPs

a. An ICRMP is a 5-year plan for compliance with the requirements outlined in chapter 3 of this regulation. As a component of the installation master plan, the ICRMP is the installation commander's decision document for cultural resources management actions and specific compliance procedures. ICRMPs are internal Army compliance and management plans that integrate the entirety of the installation cultural resources program with ongoing mission activities, allow for ready identification of potential conflicts between the installation's mission and cultural resources, and identify compliance actions necessary to maintain the availability of mission essential properties and acreage. While ICRMPs are not required by any statute or regulation other than this regulation, ICRMPs should address the applicable cultural resources legal requirements as defined by this regulation. ICRMPs are subject to NEPA analysis and documentation requirements. It is recommended that an Environmental Assessment be prepared to implement ICRMPs. ICRMPs shall supersede and replace Historic Preservation Plans (HPP) prepared under AR 420-40. ICRMPs shall be prepared IAW the guidelines in DA Pam 200-4.

b. ICRMPs shall not be the subject of, implemented by reference to, or included in NHPA PAs or MOAs, or NAGPRA CAs or Plans of Action. The scope of an ICRMP includes statutes and regulations that are beyond the statutory authority of the ACHP and SHPO, or Indian tribes and Native Hawaiian organizations. The section of the ICRMP that pertains to NHPA compliance may be extracted from the ICRMP and those actions may be integrated by reference into a NHPA PA or MOA. Similarly, the section of the ICRMP that pertains to NAGPRA compliance may be extracted from the ICRMP, modified, and may be integrated by reference into a NAGPRA CA or Plan of Action. The installation's internal operating procedures required to implement such agreements should be found in the ICRMP. Installations my request the SHPO, Indian tribe, or any other interested party for a nonbinding technical review of ICRMPs outside of any statutory or regulatory requirement to take advantage of outside expertise. Such comments should also be obtained throughout the ICRMP NEPA review process.

c. ICRMPs shall be prepared and implemented by all Federally-owned or -controlled Army installations having statutory and regulatory cultural resource management responsibilities. Installations with an existing plan (Cultural Resources Management Plan and or a Historic Preservation Plan developed IAW AR 420-40) that was prepared less than 3 years prior to the effective date of this regulation need not prepare an ICRMP IAW this regulation until the 3-year point is reached.

d. Installation commanders may seek a HQDA variance from ICRMP preparation requirements. The conditions for a variance include situations such as where the installation has conducted comprehensive efforts to locate and identify cultural resources following the appropriate statutory and regulatory procedures, and the installation commander has determined that there is minimal added value that would result from preparation of an ICRMP because there are very limited or no cultural resources within the area of the installation commander's responsibility. Such situations are expected to be rare. Requests for variance with a justification statement shall be staffed from the installation commander through the MACOM to HQDA (AEC) for review. HQDA (AEC) will forward the request for variance with an analysis and recommendation to the DEP and TJAG (ELD). Variance from ICRMP requirements are provided by the DEP.

e. Installations that have received a HQDA variance from ICRMP preparation requirements IAW this regulation shall reevaluate the need to prepare a ICRMP in conjunction with each environmental audit conducted in accordance with AR 200-1.

f. Draft ICRMPs prepared by the installation commander will be formally staffed to the MACOM for review. The installation commander will consider MACOM and other comments and finalize the ICRMP.

g. Installations scheduled for closure within 5 years pursuant to base realignment and closure law are exempt form the ICRMP preparation requirements of this regulation.

4–2. Content of ICRMPs

a. ICRMPs will be prepared IAW DA Pam 200-4 and will include but not be limited to—

(1) Identification of all applicable legal requirements and procedures for integrating compliance between the various independent cultural resources legal requirements.

(2) Identification to the extent possible, of specific actions, projects and undertakings projected over a 5-year period that may require cultural resources legal compliance actions.

(3) Development and implementation, as appropriate, of a cultural landscape approach to installation cultural resources management and planning as described in DA Pam 200-4.

(4) A planning level survey that includes existing information on cultural resources, development of or reference to existing historic contexts, an archeological sensitivity assessment or archeological predictive model, and a listing of any Federally-recognized Indian tribes or Native Hawaiian organizations associated with the installation.

(5) A plan for the actual field inventory and evaluation of cultural resources that is prioritized according to the inventory and evaluation requirements associated with specific installation compliance requirements, such as NHPA Section 106 undertakings, that could affect cultural resources. Any electronic spatial data produced by inventories shall conform with the Federal Information Processing Standards and spatial data standards for DOD to ensure that the spatial data is useable in various spatial data systems.

(6) Internal procedures for consultation, survey, inventory, evaluation, treatment, recordation, monitoring, emergency or inadvertent discovery, reporting, etc., tailored for the particular conditions and specific requirements at the installation. Interface requirements between the cultural resources management program and other program areas (including but not limited to natural resources management, ITAM, master planning, facilities and housing and mission related training and testing activities) should be identified. The coordination processes within the installation and between the installation, MACOM, HQDA, regulatory agencies, and the interested public should also be defined.

(7) Provisions for curation of collections and records (IAW 36 CFR 79) that are, associated with NHPA undertakings, and procedures to reduce the amount of materials that are accessioned and permanently curated by the installation.

(8) Provisions for limiting the availability of cultural resource locational information for the purposes of protecting resources from damage.

(9) Provisions and procedures for the conduct of an economic analysis and alternative use analysis on historic properties that are being considered for demolition and replacement.

(10) Procedures to ensure Indian tribes and Native Hawaiian organizations are provided access to sacred sites and are consulted when future access may be restricted or when adverse effects to the physical integrity of the sacred site may occur.

(11) Development of standard treatment measures for cultural resources.

(12) An estimate of resources required to execute the plan. Such estimates must have restricted access and be "For Official Use Only" due to protection of Government cost estimates.

Appendix A
References

Section I
Required Publications

AR 200–1
Environmental Protection and Enhancement. (Cited in paras 1-1-8*g*, 1-9*h*, and 4-1*e*.)

AR 200–2
Environmental Effects of Army Actions. (Cited in paras 1-9*f*, and 2-2*a*.)

AR 200–3
Natural Resources, Land, Forest, and Wildlife Management. (Cited in para 1-9*f*.)

DA Pamphlet 200–4
Cultral Resources Management. (Cited in para 1-9*f*.)

AR 405–80
Granting Use of Real Estate (Cited in para 1-9*l* and 2-6*d*.)

Section II
Related Publications

A related publication is merely a source of additional information. The user does not have to read it to understand this regulation.

AR 15–13
Military Construction Army (MCA) Disposal of Structures.

AR 190–31
Crime Prevention Program, Department of the Army.

AR 210–20
Master Planning for Army Installations.

AR 405–10
Acquisition of Real Property and Interests Therein.

AR 405–90
Disposal of Real Estate.

AR 415–15
Military Construction, Army (MCA) Program Development).

AR 415–35
Minor Construction.

AR 420–10
Facilities Engineering: General Provisions, Organizations,Functions, and Personnel.

AR 420–17
Real Property and Resource Management.

AR 420–22
Preventative Maintenance and Self-Help.

AR 870–20
Historical Properties and Museums.

DODI 4715.3
Environmental Conservation Program.

EPR Report
Policy and Guidance for Identifying U.S. Army Environmental Program Requirements, ODEP

Section III
Prescribed Forms

This section contains no entries.

Section IV
Referenced Forms

This section contains no entries.

Appendix B
Federal Statutes, Regulations, Executive Orders and Presidential Memorandum

Statutes

Abandoned Shipwreck Act of 1987 43 USC 2101-2106.
American Indian Religious Freedom Act of 1978, as amended 42 USC 1996-1996a.
Antiquities Act of 1906 16 USC 431-433; 34 Stat. 225.
Archeological and Historic Data Preservation Act of 1974 16 USC 469-469c.
Archeological Resources Protection Act of 1979 16 USC 470aa-470ll.
Historic Sites Act of 1935 16 USC 461-467.
National Environmental Policy Act 42 USC 4321-4370c.
National Historic Preservation Act of 1966, as amended 16 USC 470-470w.
Native American Graves Protection and Repatriation Act of 1990 25 USC 3001-3013.

Federal Regulations

Advisory Council on Historic Preservation, Protection of Historic and Cultural Properties, 36 CFR 800.
Council on Environmental Quality, Regulations Implementing the National Environmental Policy Act, 40 CFR 1500-1508.
Department of Defense, Protection of Archeological Resources, 32 CFR 229.
Department of the Interior, Native American Graves Protection and Repatriation Act, 43 CFR 10.
Department of the Interior, Curation of Federally-owned and Administered Archeological Collections, 36 CFR 79.
Department of the Interior, Determinations of Eligibility for Inclusion in the National Register of Historic Places, 36 CFR 63.
Department of the Interior, National Historic Landmark Program, 36 CFR 65.
Department of the Interior, National Register of Historic Places, 36 CFR 60.
Department of the Interior, Preservation of American Antiquities, 43 CFR 3.
Department of the Interior, Supplemental Regulations (per ARPA), 43 CFR 7.2.
Department of the Interior, Waiver of Federal Agency Responsibility under Section 110 of the National Historic Preservation Act, 36 CFR 78.

Executive Orders

EO 11593—Protection and Enhancement of the Cultural Environment.
EO 13007—Indian Sacred Sites

Presidential Memoranda

Memorandum for the Heads of Executive Departments and Agencies, dated April 29,1994: Government-to-Government Relations with Native American Tribal Governments.

Glossary

Section I
Abbreviations

ACHP
Advisory Council on Historic Preservation

ACSIM
Assistant Chief of Staff for Installation Management

AEC
Army Environmental Center

AHPA
Archeological and Historical Preservation Act

AIRFA
American Indian Religious Freedom Act

ARNG
Army National Guard

ARPA
Archeological Resources Protection Act

CA
Comprehensive Agreement (per 43 CFR 10)

CFR
Code of Federal Regulations

CRM
Cultural Resources Manager

DASA(ESOH)
Deputy Assistant Secretary of the Army (Environment, Safetyand Occupational Health)

DEP
Director of Environmental Programs

FOUO
For Official Use Only

FPO
Federal Preservation Officer

HPP
Historic Preservation Plan

HQDA
Headquarters, Department of the Army

IAW
In accordance with

ICRMP
Integrated Cultural Resources Management Plan

ITAM
Integrated Training Area Management (program)

MACOM
major Army command

MCA
Military Construction Army

MOA
Memorandum of Agreement (per 36 CFR 800)

NAGPRA
Native American Graves Protection and Repatriation Act

NEPA
National Environmental Policy Act of 1969, as amended

NGB-ARE
National Guard Bureau, Environmental Programs

NHPA
National Historic Preservation Act of 1966, as amended

NPS
National Park Service

PA
Programmatic Agreement (per 36 CFR 800)

SHPO
State Historic Preservation Officer

TJAG (ELD)
The Judge Advocate General (Environmental Law Division)

USACE
U.S. Army Corps of Engineers

Section II
Terms

Cultural Resources
Historic properties as defined by the NHPA, cultural items as defined by NAGPRA, archeological resources as defined by ARPA, sacred sites as defined in EO 13007 to which access is afforded under AIRFA, and collections and associated records as defined in 36 CFR 79.

Integrated Cultural Resources Management Plan (ICRMP)
A 5-year plan developed and implemented by an installation commander to provide for the management of cultural resources in a way that maximizes beneficial effects on such resources and minimizes adverse effects and impacts without impeding the mission.

Cultural Resources Management Program
Activities carried out under the authority of this regulation to comply with Federal statutes and regulations pertaining to cultural resources.

Indian Tribe
Any tribe, band, nation, or other organized Indian group or community of Indians, including any Alaska Native village or corporation as defined in or established by the Alaska Native Claims Settlement Act (43 USC 1601 et seq.) which is recognized as eligible for special programs and services provided by the United States to Indians because of their status as Indians. Such acknowledged or "Federally-recognized" Indian tribes exist as unique political entities in a government-to-government relationship with the United States.

National Register of Historic Places (National Register)
The nation's inventory of known historic properties that have been formally listed by the NPS. The National Register of Historic Places is administered by the NPS on the behalf of the Secretary of the Interior. National Register listings include districts, landscapes, sites, buildings, structures, and objects that meet the set of criteria found in 36 CFR 60.4.

Native Hawaiian Organization
Any organization that serves and represents the interests of, has a primary stated purpose to provide services to, and has expertise in Native Hawaiians and Native Hawaiian affairs. Such organizations must include the Office of Hawaiian Affairs and Hui Malama I Na Kupuna 'O Hawai'i Nei.

Undertaking
Any project, activity, or program that can result in changes in the character or use of historic properties as defined by the NHPA. The project, activity or program must be under the direct or indirect jurisdiction of the installation commander. Undertakings include new and continuing projects, activities, or programs and any of their elements not previously considered under Section 106 of the NHPA.

Section III
Special Abbreviations and Terms
This section contains no entries.

Index

This index is organized alphabetically by topic and subtopic. Topics and subtopics are identified by paragraph number.

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APPENDIX B
NEW JERSEY HISTORIC PRESERVATION OFFICE CORRESPONDENCE

State of New Jersey
DEPARTMENT OF ENVIRONMENTAL PROTECTION

JON S. CORZINE
Governor

Natural and Historic Resources, Historic Preservation Office
PO Box 404, Trenton, NJ 08625
TEL: (609) 292-2023 FAX: (609) 984-0578
www.state.nj.us/dep/hpo

LISA P. JACKSON
Commissioner

October 10, 2006
06-2401-1
HPO-J2006-40 PROD

Mr. James Ott
Director of Public Works
Department of the Army
Headquarters, U.S. Army Garrison Fort Monmouth
Fort Monmouth, New Jersey 07703-5000

Dear Mr. Ott:

In accordance with 36 CFR Part 800: Protection of Historic Properties, as published with amendments in the *Federal Register* on 6 July 2004 (69 FR 40544-40555), I am providing **Consultation Comments** for the following proposed undertaking:

Monmouth County, Eatontown Borough
Fort Monmouth
Boundary Assessment
United States Army

800.4 Identifying Properties

The Historic Preservation Office concurs with the *Architectural Survey and Evaluation of Buildings 2705, 2707, 2708, 2709, 2710 and 2713*, that these buildings are not eligible for the National Register of Historic Places and do not contribute to the Fort Monmouth Historic District. Furthermore, this office concurs that Buildings 209, 283 and 360 contribute to the Historic District, therefore the original boundary should not be revised to exclude these buildings.

Additional Comments

Thank you for the opportunity to comment on this project. I look forward to consulting with you on projects in the future. Should there be any questions, please contact Nick Kraus or Dan Saunders of my staff at (609) 633-2397.

Sincerely,

Dorothy P. Guzzo
Deputy State Historic
Preservation Officer

DPG/ds/nk: 06-2401-1

Verso Fax #
703-642-
6810

APPENDIX C
NEW JERSEY HISTORIC PROPERTY FORMS

BASE FORM

Historic Sites #:

Property Name: Electronic Warfare Laboratory (Building 2705), Fort Monmouth

Street Address: *Street #:* _____ (Low) _____ (High) *Apartment #:* _____ (Low) _____ (High)

Prefix: _____ *Street Name:* Pearl Harbor Avenue *Suffix:* _____ *Type:* _____

County(s): Monmouth **Zip Code:** 07703

Municipality(s): Eatontown **Block(s):** _____

Local Place Name(s): Eatontown **Lot(s):** _____

Ownership:: Fort Monmouth **USGS Quad(s)** Long Branch

Description: Building 2705 is a one-story rectangular building set on a concrete foundation. The building has a flat roof and is clad with insulated metal panels. The building's rectangular main block contains no windows and has a one-story entry pavilion located on the north (front) elevation. The entry pavilion has a recessed opening containing double-leaf aluminum frame doors with tempered tinted glass. A two-story rectangular projecting bay extends from the south end of the building. It is clad with insulated metal panels and has a flat roof and two-light and three-light metal framed hopper windows. A double leaf metal door pierces the west elevation of the two-story projecting bay, and the south elevation is pierced by single leaf metal doors on the first and second stories. (See Continuation Sheet).

Registration and Status Dates:

National Historic Landmark: _____ SHPO Opinion: _____

National Register: _____ Local Designation: _____

New Jersey Register: _____ Other Designation: _____

Determination of Eligibility: _____ Other Designation Date: _____

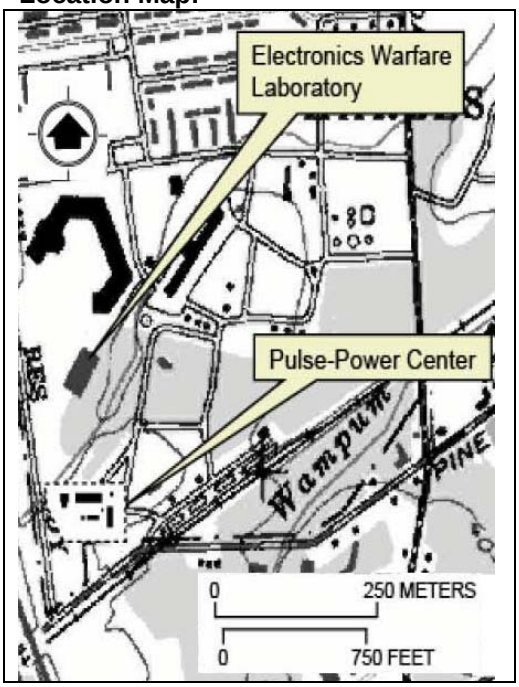
Photograph:

5" x 3.5" – Please mount photos as indicated.
For portrait oriented photos,

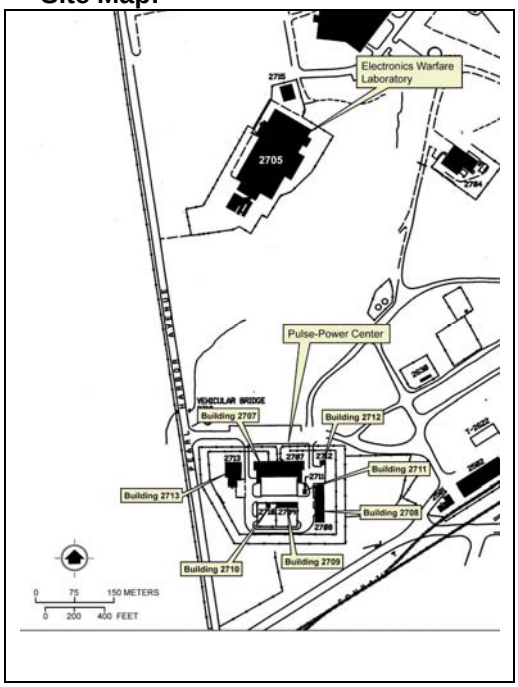
BASE FORM

Historic Sites #:

Location Map:



Site Map:



Bibliography/Sources: Fort Monmouth Real Property Records.

Additional Information:

More Research Needed? ☐ Yes ☒ No

INTENSIVE LEVEL USE ONLY

Attachments Included: ☒ Building ☐ Structure ☐ Object ☐ Bridge ☐ Landscape ☐ Industry

Within Historic District? ☐ Yes ☒ No

Status: ☐ Key-Contributing ☒ Contributing ☐ Non-Contributing

Associated Archaeological Site/Deposit? ☐ Yes
(Known or potential Sites – if yes, please describe briefly)

Survey Name: **Fort Monmouth Architectural Survey of Buildings 2705 and 2707-2713** Date: November 2005

Surveyor: **Eric Griffitts**

Organization: **Versar, Inc.**

INDUSTRIAL BUILDING ATTACHMENT

Historic Sites #:

Common Name: Electronic Warfare Laboratory (Building 2705)
Historic Name: Electronic Warfare Laboratory
Present Use: Instrument Manufacture
Historic Industry: Instrument Manufacture **Building ID:** 2705
Construction Date: 1972 **Source:** Real Property Record
Alteration Date(s): 1977, 1981, 1989 **Source:** Real Property Record
Designer: The Ballenger Company **Physical Condition:** Good
Builder: Unknown **Remaining Historic Fabric:** Medium
Style: None
Length: 293'-11" **Stories:** 1
Width: 161'-11" **Bays:**
Exterior Finish Materials Corrugated Steel
Foundation Materials: Concrete
Structural System: Steel Frame **Roof System:** Steel Frame & Deck
Roof Finish Materials: Built-up Roll Roofing with Gravel
Equipment/Machinery:
Transportation Links: None

Exterior Description: Building 2705 is a one-story rectangular building set on a concrete foundation. The building has a flat roof and is clad with insulated metal panels. The building's rectangular main block contains no windows and has a one-story entry pavilion located on the west (front) elevation that has a recessed opening containing double-leaf aluminum frame doors with tempered tinted glass. A two-story rectangular projecting bay extends from the south end of the building. It is clad with insulated metal panels and has a flat roof and two-light and three-light metal framed hopper windows. A double leaf metal door pierces the west elevation of the two story projecting bay, and the south elevation is pierced by single leaf metal doors on the first and second stories. The second story entrance is accessible by a metal staircase also located on the south side of the tower. (See Continuation Sheet).

Interior Description: An interior inspection could not be conducted because Building 2705 remains a classified facility.

Setting: Building 2705 is located in the Charles Wood area, which is approximately 500 feet west of the Main Post at Fort Monmouth. The building is located near the western boundary of the Charles Wood Area and is just off Pearl Harbor Avenue. The building is located on a level site with a parking lot northwest of the building.

ELIGIBILITY WORKSHEET

Historic Sites #:

History: The Environmental Warfare Laboratory (EWL), Building 2705, was constructed in 1972. In 1974, the EWL was designated the lead headquarters for electronics warfare research for the U.S. Army, and in 1978 it became a part of the newly designated U. S. Army Electronics Research and Development Command (ERADCOM). Electronic Warfare research at Fort Monmouth contributed to the development of electronics technology related to missile detection, targeting by radio-location, radiation exploration, ultraviolet instrumentation, and long wave laser warning (Anonymous, n.d.:2) One of the most significant accomplishments of the EWL has been research and development in the field of electronic warfare protection equipment for Army aircraft. The EWL pioneered such research efforts during the 1960s as part of the Countermeasures Division, where it developed warning, jamming and decoying equipment for Army aircraft.

Significance: The EWL is associated with the Basic Scientific Research and Material Development themes identified as part of the Cold War Military Industrial context (USAEC 1997). The building is significant for its association with R&D activities that contributed to advancing Cold War technology in a number of weapon systems. Research conducted at the EWL made significant contributions to the development of countermeasure protection equipment for Army aircraft and radar warning and jamming systems.

Eligibility for New Jersey and National Registers: ☐ Yes ☒ No **National Register Criteria:** ☐ A ☐ B ☐ C ☐ D

Level of Significance ☐ Local ☐ State ☐ National

Justification of Eligibility/Ineligibility: The EWL does not meets Criterion Consideration G for achiveing exeptional significance within the last 50 years. The building is associated with R&D efforts at Fort Monmouth during the late Cold War period. The EWL is associated with the Basic Scientific Research and Material Development themes identified in the U.S. Army Military-Industrial Cold War Context (USAEC 1997). However, the EWL was not the only research laboratory at Fort Monmouth devoted to electronics warefare research. Electronics warefare research was conducted ath Building 1 in the Evans area and there were other EWL that predate Building 2705. (See Continuation Sheet)

For Historic Districts Only:

Property Count: Key Contributing: _____ Contributing: _____ Non Contributing: _____

For Individual Properties Only:

List the completed attachments related to the property's significance:

Base Survey Form
Industrial Building Attachment

Narrative Boundary Description:

Survey Name: Fort Monmouth Architectural Survey of Buildings 2705 and 2707-2713 Date: November 2005
Surveyor: Eric Griffitts
Organization: Versar, Inc.

CONTINUATION SHEET

Historic Sites #:

BUILDING 2705, BASE FORM

The second story entrance is accessible by a metal staircase also located on the south side of the tower. Alterations to the building have included primarily fenestration changes. The main block's north elevation currently has no openings, but originally featured a window and a door. These both have been covered by the metal panels. The two-story rectangular projecting bay originally featured an overhead garage door on its west elevation, which was replaced with a double-leaf metal door. Two additional entrances have been added to the south elevation. These consist of single leaf metal doors on both the first and second stories. The metal staircase was constructed to provide access to the second story entrance. The windows were also later additions to this part of the building as well.

BUILDING 2705, INDUSTRIAL BUILDING ATTACHMENT FORM:

Alterations to the building have included primarily fenestration changes. The main block's north elevation currently has no openings, but originally featured a window and a door. These both have been covered by the metal panels. The two-story rectangular projecting bay originally featured an overhead garage door on its west elevation, which was replaced with a double-leaf metal door. Two additional entrances have been added to the south elevation. These consist of single leaf metal doors on both the first and second stories. The metal staircase was constructed to provide access to the second story entrance. The windows were also later additions to this part of the building as well.

BUILDING 2705, ELIGIBLITY WORKSHEET

There is no evidence to suggest that any research conducted at Building 2705 was more significant to the development of weapon systems than that of other buildings where comparable research occurred. There is no evidence that identifies research or administrative activities at Building 2705 as having had an exceptionally significant impact upon the United States military capabilities during the Cold War.

CONTINUATION SHEET

Historic Sites #:

Building 2705, Main Entrance, SE View

Building 2705, West and North Elevations, SE View

CONTINUATION SHEET

Historic Sites #:

Building 2705, South Elevation with 2-Story End Block, NE View

BASE FORM

Historic Sites #:

Property Name: Pulse Power Center, Fort Monmouth

Street Address: *Street #:* 2707 (Low) 2713 (High) *Apartment #:* (Low) (High)

Prefix: *Street Name:* Pearl Harbor Avenue *Suffix:* *Type:*

County(s): Monmouth **Zip Code:** 07703

Municipality(s): Eatontown **Block(s):**

Local Place Name(s): Eatontown **Lot(s):**

Ownership:: Fort Monmouth **USGS Quad(s)** Long Branch

Description: The Pulse Power Center included Buildings 2707, 2708, 2709, 2710, 2711, 2712, and 2713. Buildings 2711 and 2712 have been demolished, but the other buildings are extant, clustered together in the southwest corner of the Charles Wood Area, located just west of Pearl Harbor Avenue. The buildings have been constructed on level ground that is clear of heavy tree cover. The buildings are surrounded by a chain-link security fence. A paved parking lot is located north and east of Building 2707.

Registration and Status Dates:

National Historic Landmark: SHPO Opinion:

National Register: Local Designation:

New Jersey Register: Other Designation:

Determination of Eligibility: Other Designation Date:

Photograph:

5" x 3.5" – Please mount photos as indicated.
For portrait
oriente

Survey Name: **Fort Monmouth Architectural Survey of Buildings 2705 and 2707-2713** Date: November 2005

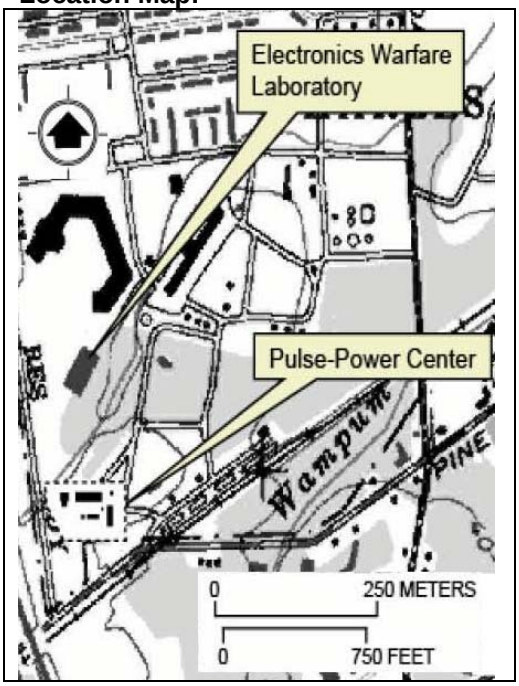
Surveyor: **Eric Griffitts**

Organization: **Versar, Inc.**

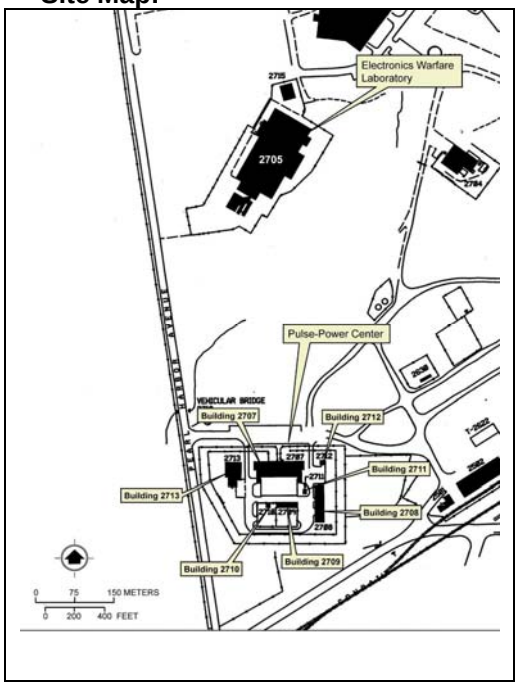
BASE FORM

Historic Sites #:

Location Map:



Site Map:



Bibliography/Sources: Fort Monmouth Real Property Records.

Additional Information:

More Research Needed? ☐ Yes ☐ No

INTENSIVE LEVEL USE ONLY

Attachments Included: ☒ Building ☐ Structure ☐ Object ☐ Bridge ☐ Landscape ☐ Industry

Within Historic District? ☐ Yes ☐ No

Status: ☐ Key-Contributing ☒ Contributing ☐ Non-Contributing

Associated Archaeological Site/Deposit? ☐ Yes
(Known or potential Sites – if yes, please describe briefly)

Survey Name: **Fort Monmouth Architectural Survey of Buildings 2705 and 2707-2713** Date: November 2005

Surveyor: **Eric Griffitts**

Organization: **Versar, Inc.**

HISTORIC DISTRICT FORM

Historic Sites #:

District Name: Pulse Power Center, Fort Monmouth

County(s): Monmouth **District Type:** Other

Municipality(s): Eatontown **USGS Quad(s):** Long Branch

Local Place Name(s): Eatontown

Development Period 1988 To 1992 **Source:**

Physical Condition: Good

Remaining Historic Fabric: High

Registration and Status Dates:

National Historic Landmark:

SHPO Opinion:

National Register:

Local Designation:

New Jersey Register:

Other Designation:

Determination of Eligibility:

Other Designation Date:

Description: The Pulse Power Center consists of five buildings located in the Charles Wood area of Fort Monmouth. The Pulse Power Center originally contained seven buildings, but buildings 2711 and 2712 were demolished. The extant buildings are all designed similarly. All are either one or two story buildings clad with steel siding with flat roofs. A chain-link fence surounds most of the complex. An Industrial Attachment form was prepared for each building. See associated forms for more inforrmation on the individual buildings.

Setting: The Pulse Power complex included buildings 2707, 2708, 2709, 2710, 2711, 2712, and 2713. Buildings 2711 and 2712 have been demolished, but the other buildings are extant, clustered together in the southwest corner of the Charles Wood Area, located just west of Pearl Harbor Avenue. The buildings have been constructed on level ground that is clear of heavy tree cover. The buildings are surrounded by a chain-link security fence. A paved parking lot is located north and east of building 2707.

INDUSTRIAL BUILDING ATTACHMENT

Historic Sites #:

Common Name: Building 2707, Pulse Power Center, Hex Mech Building

Historic Name: Building 2707, Pulse Power Center, Hex Mech Building

Present Use: Government Services

Historic Industry: Instrument Manufacture **Building ID:** 2707

Construction Date: 1988 **Source:** Real Property Record

Alteration Date(s): **Source:**

Designer: BE&C Engineers **Physical Condition:** Good

Builder: Unknown **Remaining Historic Fabric:** High

Style: None

Length: 165' **Stories:** 2

Width: 107' **Bays:**

Exterior Finish Materials Corrugated Steel

Foundation Materials: Concrete

Structural System: Metal Frame **Roof System:** Built Up

Roof Finish Materials: Corrugated Steel; Asphalt & Gravel

Equipment/Machinery:

Transportation Links:

Exterior Description: Building 2707 is a two story multiple-bay building that sits on a concrete foundation. The building consists of a number of multiple flat roofed, box-shaped bays that measure 165 x 107 feet in dimension. The majority of the building is clad with continuous corrugated steel panels. The main block faces north. The north or front elevation has recessed bays clad with steel siding and contains ribbon bands of one-light metal windows on the first and second stories. The east elevation contains two-light metal windows and double leaf steel doors. A shorter rectangular block extends from the rear or south end of the main block. It contains an inset loading bay on its east side and a large opening covered by a metal overhead door. A high bay rectangular block extends from the rear or south end of the building.

Interior Description: An interior inspection could not be conducted because Building 2707 remains a classified facility.

Setting: The Pulse Power complex included buildings 2707, 2708, 2709, 2710, 2711, 2712, and 2713. Buildings 2711 and 2712 have been demolished, but the other buildings are extant, clustered together in the southwest corner of the Charles Wood Area, located just west of Pearl Harbor Avenue. The buildings have been constructed on level ground that is clear of heavy tree cover. The buildings are surrounded by a chain-link security fence. A paved parking lot is located north and east of building 2707.

INDUSTRIAL BUILDING ATTACHMENT

Historic Sites #:

Common Name: Building 2708, Pulse Power Center, Heating Plant
Historic Name: Building 2708, Pulse Power Center, Heating Plant
Present Use: Government Services
Historic Industry: Instrument Manufacture **Building ID:** 2708
Construction Date: 1988 **Source:** Real Property Record
Alteration Date(s): **Source:**
Designer: BE&C Engineers **Physical Condition:** Good
Builder: Unknown **Remaining Historic Fabric:** High
Style: None
Length: 120' **Stories:** 1
Width: 30' **Bays:**
Exterior Finish Materials Corrugated Steel
Foundation Materials: Concrete
Structural System: Metal Frame **Roof System:** Steel Deck
Roof Finish Materials: Corrugated Steel
Equipment/Machinery:
Transportation Links:

Exterior Description: Building 2708 is a one story, 120 x 30 foot, rectangular building with a low pitched gabled roof clad with metal. The building is clad with corrugated steel siding. The west (front) elevation features three single leaf steel doors and two garage bays with overhead steel doors. The building is in good condition.

Interior Description: An interior inspection could not be conducted because Building 2708 remains a classified facility.

Setting: The Pulse Power complex included buildings 2707, 2708, 2709, 2710, 2711, 2712, and 2713. Buildings 2711 and 2712 have been demolished, but the other buildings are extant, clustered together in the southwest corner of the Charles Wood Area, located just west of Pearl Harbor Avenue. The buildings have been constructed on level ground that is clear of heavy tree cover. The buildings are surrounded by a chain-link security fence. A paved parking lot is located north and east of building 2707.

INDUSTRIAL BUILDING ATTACHMENT

Historic Sites #:

Common Name: Building 2709, Pulse Power Center, Electrical Equipment Building
Historic Name: Building 2709, Pulse Power Center
Present Use: Government Services
Historic Industry: Instrument Manufacture **Building ID:** 2709
Construction Date: 1988 **Source:** Real Property Record
Alteration Date(s): **Source:**
Designer: BE&C Engineers **Physical Condition:** Good
Builder: Unknown **Remaining Historic Fabric:** High
Style: None
Length: 64' **Stories:** 1
Width: 24' **Bays:**
Exterior Finish Materials Corrugated Steel
Foundation Materials: Concrete
Structural System: Metal Frame **Roof System:** Built Up
Roof Finish Materials: Corrugated Steel
Equipment/Machinery:
Transportation Links:

Exterior Description: Building 2709 is a one-story, rectangular, utilitarian structure measuring 64 x 24 feet. It is constructed on a concrete foundation and has continuous corrugated metal siding and a flat roof. The building has no windows and the only openings in the façade are single leaf and double leaf metal doors on the south elevation. Metal piping that probably serves as an encased electric conduit extends from the north side of the building and is connected to the south end of Building 2707. Building 2709 is in good condition.

Interior Description: An interior inspection could not be conducted because Building 2709 remains a classified facility.

Setting: Building 2709 is located south of Building 2707. The Pulse Power complex included buildings 2707, 2708, 2709, 2710, 2711, 2712, and 2713. Buildings 2711 and 2712 have been demolished, but the other buildings are extant, clustered together in the southwest corner of the Charles Wood Area, located just west of Pear; Harbor Avenue. The buildings have been constructed on level ground that is clear of heavy tree cover. The buildings are surrounded by a chain-link security fence. A paved parking lot is located north and east of building 2707.

INDUSTRIAL BUILDING ATTACHMENT

Historic Sites #:

Common Name: Building 2710, Pulse Power Center, Electrical Equipment Building
Historic Name: Building 2710, Pulse Power Center
Present Use: Government Services
Historic Industry: Instrument Manufacture **Building ID:** 2710
Construction Date: 1988 **Source:** Real Property Record
Alteration Date(s): **Source:**
Designer: BE&C Engineers **Physical Condition:** Good
Builder: Unknown **Remaining Historic Fabric:** High
Style: None
Length: 15' **Stories:** 1
Width: 15' **Bays:**
Exterior Finish Materials Corrugated Steel
Foundation Materials: Concrete
Structural System: Metal Frame **Roof System:** Built Up
Roof Finish Materials: Corrugated Steel
Equipment/Machinery:
Transportation Links:

Exterior Description: Building 2710 is a one-story, rectangular, utilitarian structure measuring 15 x 15 feet. The building sits on a concrete foundation and has corrugated metal siding and a flat roof. Double-leaf metal doors pierce the north elevation. The building is in good condition.

Interior Description: An interior inspection could not be conducted because Building 2710 remains a classified facility.

Setting: Building 2710 is located south of Building 2707 and west of Building 2709. The Pulse Power complex included buildings 2707, 2708, 2709, 2710, 2711, 2712, and 2713. Buildings 2711 and 2712 have been demolished, but the other buildings are extant, clustered together in the southwest corner of the Charles Wood Area, located just west of Pearl Harbor Avenue. The buildings have been constructed on level ground that is clear of heavy tree cover. The buildings are surrounded by a chain-link security fence. A paved parking lot is located north and east of building 2707.

INDUSTRIAL BUILDING ATTACHMENT

Historic Sites #:

Common Name: Building 2713, Pulse Power Center, Utilitarian Support Building
Historic Name: Building 2713, Pulse Power Center
Present Use: Government Services
Historic Industry: Instrument Manufacture **Building ID:** 2713
Construction Date: 1988 **Source:** Real Property Record
Alteration Date(s): **Source:**
Designer: BE&C Engineers **Physical Condition:** Good
Builder: Unknown **Remaining Historic Fabric:** High
Style: None
Length: **Stories:** 1
Width: **Bays:** 1
Exterior Finish Materials Corrugated Steel
Foundation Materials: Concrete
Structural System: Metal Frame **Roof System:** Built Up
Roof Finish Materials: Corrugated Steel
Equipment/Machinery:
Transportation Links:

Exterior Description: Building 2713 is a one-story, irregular shaped structure that sits on a concrete foundation and has a flat roof. The building is clad with corrugated metal siding. The building's main block is pierced by a double-leaf metal door, which is sheltered by an overhang of the roof on the south elevation. A one-story projecting bay extends from the south end of the building's main block. The projecting bay is pierced by a double-leaf metal door on its south elevation, and an overhang of the roof extends over its east elevation. The building is in good condition.

Interior Description: An interior inspection could not be conducted because Building 2713 remains a classified facility.

Setting: Building 2713 is located west of Building 2707. The Pulse Power complex included buildings 2707, 2708, 2709, 2710, 2711, 2712, and 2713. Buildings 2711 and 2712 have been demolished, but the other buildings are extant, clustered together in the southwest corner of the Charles Wood Area, located just west of Pearl Harbor Avenue. The buildings have been constructed on level ground that is clear of heavy tree cover. The buildings are surrounded by a chain-link security fence. A paved parking lot is located north and east of building 2707.

ELIGIBILITY WORKSHEET

Historic Sites #:

History: The Pulse Power complex was constructed in the Charles Wood area of Fort Monmouth in 1988. The Pulse Power Center was constructed to perform pulse power/modulator research involving pulse power conditioning, micro-electronics, millimeter/microwave devices, and high speed integrated circuitry. This technology was important to the continual development of electronic guns, the all-electric tank, ultrawide-band electronic warfare, high powered radar, and directed energy weapons. Today the complex supports the Special Project's Office (SPO) C3T unit. The facility is a high security, restricted access facility. The C3T unit supports activities including the development of various high tech systems, products, and capabilities designed to meet the Army's needs in the field. This encompasses everything from tactical satellite communications and intelligence gathering systems to devices used by the combat soldier in the field.

Significance: The Pulse Power complex is associated with the Basic Scientific Research theme identified as part of the U.S. Army Military-Industrial Cold War Context (USAEC 1997). Unclassified information has revealed that the Pulse Power Center was originally constructed to perform research for pulse power conditioning, micro-electronics, millimeter/microwave devices, and high speed circuitry. Research conducted at the Pulse Power Center is known to have contributed to the development of the Strategic Defense Initiative (SDI). However, it should be noted that the Pulse Center at Fort Monmouth received only 31.4% of all government funding for Pulse Power research.

Eligibility for New Jersey and National Registers: ☐ Yes ☒ No **National Register Criteria:** ☐ A ☐ B ☐ C ☐ D

Level of Significance ☐ Local ☐ State ☐ National

Justification of Eligibility/Ineligibility: The Pulse Power Center does not meet Criterion Consideration G for achieving significance within the last 50 years. The Pulse Power Center is associated with R&D efforts at Fort Monmouth during the late Cold War period. The Pulse Power Center holds associations with the Basic Scientific Research theme identified in the U.S. Army Military-Industrial Cold War Context (USAEC 1997). However, there is no evidence to suggest that research at the Pulse Power Center has exceptionally significant associations with any event or development associated with the U.S. military during the Cold War or post Cold War era. The most important association the complex has is its role in SDI, but as previously noted, the complex received only 31.4% of all SDI funding. This indicates that there was more significant research facilities associated with SDI.

For Historic Districts Only:

Property Count: Key Contributing: 1 Contributing: 4 Non Contributing: 0

For Individual Properties Only:

List the completed attachments related to the property's significance:

Base Survey Form
Historic District Form
Industrial Building Attachment

Narrative Boundary Description:

Survey Name: Fort Monmouth Architectural Survey of Buildings 2705 and 2707-2713. Date: November 2005

Surveyor: Eric Griffitts

Organization: Versar, Inc.

CONTINUATION SHEET

Historic Sites #:

Building 2707, Main (North) Elevation S View

Building 2707, Main Entrance on North Elevation, SE View

CONTINUATION SHEET

Historic Sites #:

Building 2707, East Elevation SW View

Building 2707, South and West Elevations, NW View

CONTINUATION SHEET

Historic Sites #:

Building 2708, North and West Elevations S View

Building 2709, North and East Elevations, SW View

Survey Name:	Fort Monmouth Architectural Survey of Buildings 2705 and 2707-2713	Date:	November 2005
Surveyor:	Eric Griffitts		
Organization:	Versar, Inc.		

CONTINUATION SHEET

Historic Sites #:

Building 2710, North and West Elevations SE View

Building 2713, South and East Elevations, NW View