Guidelines for Documenting and Evaluating Historic Military Landscapes: An Integrated Landscape Approach

An AEC Technical Guideline Prepared By
USACERL

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This guideline is for informational purposes only and does not create any new or additional EPR funding requirements.

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PART ONE: OVERVIEW OF MILITARY INSTALLATIONS AND THE MILITARY LANDSCAPE

I. Introduction

Military installations include some of the most historically significant properties in the American cultural landscape. West Point, the Presidio of San Francisco, Cape Canaveral, and Fort Sam Houston, for example, are associated with persons, events, and trends that profoundly influenced the course of our nation's history. As with any landscape, the military landscape reflects the history and cultural traditions within which it has evolved. However, the military context shapes the land in unique ways.

This document provides guidelines for identifying and evaluating historic military landscapes and for preparing the documentation required for nominating sites and districts for the National Register. It is designed for use by Cultural Resource Managers on active Army installations, and preservation professionals contracted by the Army. It should be used in conjunction with Bulletins 15, *How to Apply the National Register Criteria for Evaluation* and 16, *Guidelines for Completing National Register of Historic Places Forms* as well as additional bulletins that address specific property types or issues relevant to the study (see sidebar).

This document describes the unique processes and historical context of military installations and emphasizes the importance of the relationships among the individual buildings, structures, and grounds that contribute to an historic military landscape. By applying a systematic landscape approach to a national military historic context, these guidelines provide a systematic approach to documenting the evolution of a military installation and evaluating the significance of its contributing resources.

Preservationists have long recognized the value of using a holistic, landscape approach to researching historic and cultural resources. National Register Bulletins guide the evaluation and documentation of designed landscapes (Bulletin #18), rural historic landscapes (Bulletin #30), battlefields (Bulletin #40), and contributing and non-contributing properties (Bulletin #14). A landscape approach provides a framework for understanding the relationships among history, architecture, landscape architecture, planning, and archeology. Recent National Register nominations of historic districts on military installations reflect this expanded approach with discussions of the overall plan of the installation and the interrelationships among component parts. The evaluation of military installations as singular entities with unique cultural traditions and distinctive physical resources is the key to an integrated investigation encompassing all of the historic resources of a military installation. This document provides the formal guidelines needed for systematic evaluation.

This document is intended to serve two primary functions. It will assist in making evaluations about significance and integrity at all scales, from individual resources to larger historic districts, and it will assist in determining the eligibility and boundaries of a particular type of site or district henceforth known as *historic military landscapes* for National Register nomination. It is designed for use by Cultural Resource Managers on

active military installations, caretakers on inactive installations, and those involved with the management of former installations (i.e. National Park Service personnel, State or local park employees, and museum curators, among others). It should be used in conjunction with Bulletins 15, *How to Apply the National Register Criteria for Evaluation* and 16, *Guidelines for Completing National Register of Historic Places Forms as well as* additional bulletins that address specific property types or issues relevant to the study (see sidebar).

RELATED NATIONAL REGISTER BULLETINS

National Register Bulletins Providing General Nomination Guidance:
#15: How to Apply the National Register Criteria for Evaluation
#16: Guidelines for Completing National Register of Historic Places Forms
#21: How to Establish Boundaries for National Register Properties
#22: Guidelines for Evaluating and Nominating Properties That Have Achieved Significance Within the Last Fifty Years
#29: Guidelines for Restricting Information About Historic and Prehistoric Resources
#32: Guidelines For Evaluating And Documenting Properties Associated With Significant Persons
#39: Researching a Historic Property

National Register Bulletins Associated with Landscape Topics:
#18: How to Evaluate and Nominate Designed Historic Landscapes
#30: Guidelines for Evaluating and Documenting Rural Historic Landscapes
#40: Guidelines for Identifying, Evaluating, and Registering America's Historic Battlefields
#41: Guidelines for Evaluating and Registering Cemeteries and Burial Places

National Register Bulletins Associated with Archeology:
#12: Definition of National Register Boundaries for Archeological Properties
#29: Guidelines for Restricting Information About Historic and Prehistoric Resources,
#36: Guidelines for Evaluating and Registering Historical Archeological Sites and Districts.

National Register Bulletins Associated with the Military:
#25: Guidelines for Evaluating and Documenting Historic Aviation Properties (Pending)
#40: Guidelines for Identifying, Evaluating, and Registering America's Historic Battlefields

Use of this document is of course not limited to nomination issues. It will be useful for other studies, including building surveys and archeological studies, as "landscape thinking" should be integrated into basic survey and evaluation activities that document an installation's overall history and significance. Federal agencies, State Historic Preservation Offices, preservation professionals, and interested individuals will also find useful information in this document.

This document has two general parts. The first defines the terms *military landscape* and *historic military landscape*, describes the relationship between historical context and landscape, and briefly summarizes the development of military installations within a national military historic context. The second part presents detailed methods for the survey, research and nomination of historic military landscapes.

Why Military Installations?

There are three basic reasons for assessing the historical and cultural resources on military installations. First, it is required by Federal law. Foremost among the legislation is the National Historic Preservation Act of 1966 (NHPA), as amended, which provides requirements for consideration of historic properties by Federal agencies. Section 106 of the NHPA requires federal agencies to take into account the effects of their undertakings on historic properties and to afford the Advisory Council on Historic Preservation an opportunity to comment regarding these effects. Historic properties are those properties listed in or eligible for listing in the National Register of Historic Places. Regulations of the Advisory Council on Historic Preservation governing the Section 106 review process are contained in 36 CFR Part 800: Protection of Historic Properties. Section 110 requires installations and commands to develop and implement plans for the identification, management, and nomination of cultural resources (see sidebar). This document will assist with evaluating historic properties to insure compliance with Sections 106 and 110 of the NHPA.

Second, a sizable portion of the valuable historic and cultural resources of our country lie within or are part of the 25 million acres of Department of Defense land. Stewardship of its historic resources by the Department of Defense provides a mechanism for the documentation and preservation of a significant aspect of our national cultural heritage.

Third, it is a matter of national pride and patriotism. The Department of Defense is charged with insuring our current and future national security and with protecting our freedom and the American way of life. The United States military is an integral part of our country’s history and has always been an important part of our national identity. Military installations must actively protect and document the physical reminders and tangible evidence of our past if for no other reason than national pride and patriotism. In essence, preservation is the defense of tangible elements of the past that instruct us and remind us who we are.

Special Circumstances of Military Installations

It must also be recognized, however, that active military installations are primarily responsible for accomplishing the missions they are assigned. A military mission is defined as "the objective or task, together with the purpose, which clearly indicates the

action to be taken." Missions such as training maneuvers or weapons testing can be at odds with preservation and other environmental compliance requirements. Determining the eligibility of cultural resources for the National Register can be a time consuming and expensive process and a potential point of conflict when essential missions involve the same land. To avoid such conflicts, alternatives to the regular Section 106 review process can be established to expedite the compliance process. Special “programmatic agreements” involve consultation on an entire agency program, rather than an individual project. A programmatic agreement will prescribe a review process suited to the program. They are useful when an agency’s program will result in numerous reviews dealing with a single class of undertakings. They are also appropriate when an agency cannot, in advance, identify the historic properties subject to effect and determine what specific effects an undertaking might have on them. For example, in 1986 the Department of Defense entered into an agreement with the National Advisory Council on Historic Preservation and the National Conference of State Historic Preservation Officers to document World War II-era “temporary” buildings mandated by Congress for demolition. The massive number of these buildings and their potential historical significance made the usual compliance regulations unduly burdensome. The agreement permitted a broader, nation-wide study of historical significance, limited the extent of investigations for individual buildings, and resulted in a well documented historical record of an important chapter in American history.

As with most environmental compliance issues, the key to reaching cultural resource compliance successfully and efficiently is to limit crisis situations through planning. This document will assist the managers of military installations in developing comprehensive evaluations of the significance and integrity of the cultural resources of their installations. It will also help managers meet their responsibilities under Section 110 and 106 of the NHPA. The guidelines provide sound recommendations for documenting and evaluating historic landscapes. This establishes what is significant and why. Through proper decision-making up front, it will be easier for managers to assist the installation plan for the future while preserving the historic character.

FEDERAL PRESERVATION LEGISLATION

The two most important legislative requirements regarding historical and cultural resources regarding federal actions on military installations are Sections 106 and 110 of the National Historic Preservation Act of 1966, as amended.

Section 106 of the NHPA requires federal agencies to take into account the effect of their actions on historic properties. More specifically, it requires an agency to take into account the effects of the undertaking on any district, site, building, structure, or object that is included in or eligible for inclusion in the National Register before using federal funds for the undertaking. In addition, the agency head must give the Advisory Council on Historic Preservation a reasonable opportunity to comment on the undertaking [Section 106 (16 U.S.C. 470f)].

Section 110 requires federal agencies to develop and implement plans for the identification, management, and nomination of cultural resources. The main relevant provisions are as follows [Section 110 (16 U.S.C. 470h-2)]:

Federal agencies shall:

- Re-use and preserve historic properties for agency work rather than acquire new ones.
- Establish a preservation program for identifying, evaluating, nominating to the National Register, and protecting historic properties.
- Have a system for assuring permanent documentation of historic properties before they are substantially altered or demolished.
- Designate a qualified Federal Historic Preservation Officer.
- Carry out agency programs and projects to comply with this Act.
- Produce planning and actions to minimize harm from any undertaking to a National Historic Landmark.

A. Definition of Terms

What is meant by landscape*?*

The term *landscape* can have many definitions. For the purposes of this guidance, **landscape is the collective surface features of a place and the spatial relationships among those features, including natural terrain, human affected terrain, and the built environment (i.e. buildings, roads, sidewalks, etc.)**.

What is a military landscape*?*

In this document a **military landscape is a landscape that has been uniquely shaped through human activity in support of single or multiple military missions of the United States Department of Defense or its antecedents**.

What is a historic military landscape*?*

A **historic military landscape is a military landscape that is significantly associated with historically important persons or events, or is an important indicator of the broad patterns of history, or represents a significant example of design or construction.** For the purposes of the National Register, a historic military landscape is a category of property potentially eligible for listing in the National Register of Historic Places as a historic site or district. To be eligible for nomination to the Register, a historic military landscape must have sufficient integrity to convey its significance.

The term "landscape" is commonly understood as spaces that are designed -- parade fields or cemeteries, for example. On military installations this traditional usage is not sufficient because many installations include industrial or purely functional areas that are part of the landscape, but not so apparent. For example roadways, waterfronts, or storage areas are part of the landscape and should be included in the assessment. Therefore, if the installation to be evaluated is not rich with designed landscapes, these guidelines will still be useful in assessing the less obvious parts of the military landscape**.**

B. Scope of Document

What landscape resources does this document include and exclude?

This guidance is intended to be applied to the military landscape of active Department of Defense installations. Installations includes garrisons, forts, air bases, ports and shipyards, training facilities, industrial plants, depots, research facilities, proving grounds, or any other collection of facilities used in day-to-day military operations. This document does not cover battlefields, encampments, or military cemeteries unless these properties are part of an installation. Other recognized types of landscapes, properties that predate the military's use of the site (i.e. farmsteads, many archaeological sites), or architectural/archaeological surveys, evaluations, or

inventories are also not addressed. While these non-military eras of development are not covered in this document, they are a critical part of an installation's landscape history and must also be included in the documentation and preservation process. National Register Bulletins 30 and 18 provide guidance for documenting these aspects of the site's history. The information in this document on developing appropriate historic contexts and conducting archival research also applies to architectural and archeological properties associated with the military, but information on the appropriate methods for conducting field work to identify and evaluate architecture and archeological sites is available in National Register bulletins.

What characterizes military landscapes?

The landscape of a military installation is usually distinctive in its appearance and incorporates several of the following factors:

Military mission, expressed as a fundamental design principle influencing landscape development.
Siting and layout, directly related to the evolution of the military mission and, in many cases, influenced by the local, natural environment.
Military cultural values and traditions, expressed in the landscape as a ranking hierarchy in building placement and landscape treatment, uniform architectural styles, utilitarian land use, etc.
High level of similarity, basic components and designs are repeated within an installation and are often common among many installations.
Restricted access, controlled entrance and exit points.
Clearly defined borders, created through fencing, walls, guard posts, sentry houses, signs, and other features.

How do historic military landscapes *relate to other National Register property and resource types on military installations?*

Historic properties on military installations are usually identified as single properties (an historic building, an archaeological site). This approach advocates a holistic understanding of the overall area. Historic landscapes are sites or districts that often include other historic property types such as structures, buildings and objects. Landscapes are not individual components like a building or a structure. Rather, they are areas that take into account the relationships among important characteristics of the landscape.

The National Register recognizes the following general property and resource types: sites, districts, buildings, structures, and objects. All may be found on military installations. *Historic military landscapes* can be nominated as either sites or districts. The National Register's definition for each of these property and resource types follows with examples relevant to the military landscape.

Site - the location of a significant event, a prehistoric or historic occupation or activity, or a building or structure, whether standing, ruined, or vanished, where the location itself possesses historic, cultural, or archeological value regardless of the value of any existing structure. Examples include a parade ground, cemetery, garden, or testing area.

District - a significant concentration, linkage, or continuity of sites, buildings, structures, or objects united historically or aesthetically by plan or physical development. Examples include large forts, airfields, cantonment areas, medical facilities, residential areas, shipyards, or entire installations.

Building - a type of structure created principally to shelter any form of human activity, such as a barracks, storehouse, school, hangar, clubhouse, chapel, laboratory, or similar construction. "Building" may also be used to refer to a historically and functionally related unit, such as a combination barracks and mess hall.

Structure - a functional construction made for purposes other than creating human shelter. The term "structure" is used to distinguish buildings from fuel tanks, docks, bridges, magazines, palisade fortifications, boats, ships, airplanes, etc.

Object - a construction that is primarily artistic in nature or is relatively small in scale and simply constructed. The term "object" is used to distinguish from buildings and structures items such as such as a monuments, a cannon, or a boundary marker. Although it may be movable, by nature or design, an object is associated with a specific setting or environment.

C. Scale

At what scale is the military landscape evaluated?

As with other types of sites and districts, historic military landscapes exist at different scales. They may be small, consisting of a small group of historic structures and their related open spaces for example. The scale of the installation will guide the scale of an investigation. This document advocates a method of evaluation that starts at a large scale and narrows in on areas of potential historical significance. The information about the larger scale, such as the history of an entire installation and its geographical context, will provide supportive background information for evaluating resources at a smaller scale. Even if only an individual structure is found to have historical significance and integrity, the results of the broader landscape evaluation will inform an understanding of that structure's significance.

II. The Landscape Concept and Military Installations

A. Reading the Landscape

History, Culture, and Landscape

The American landscape is largely shaped by human activity and land-use decisions. While it serves as a setting for events in our nation's history, it is also modified by general trends in society, and the actions of groups or individual persons. Change can occur suddenly and dramatically as in the razing of a courthouse or the construction of a housing development. It can also occur gradually and subtly as in the vanishing of windmills on farms or in the replacement of wooden barns with metal pole barns. In all cases we inherit the decisions and events of the past. Over time, the landscape becomes a record of our decisions, both what to build and what to raze, what to maintain and what to neglect, what to preserve and what to replace. These decisions are guided by our cultural values, be they conscious choices or subconscious impulses. The landscape reflects these decisions and the cultural values behind them.

The Structure of the Landscape

As history plays out on the land, it leaves its mark. Sometimes the land remains relatively unchanged from generation to generation, but more often, changes accumulate in layers. In areas of extensive human activity the landscape often appears as a patchwork, with elements of older layers "poking through" newer layers and surviving side-by-side with the elements of the newer layers. A useful analogy is that of the palimpsest, from a Greek word meaning "scraped or rubbed again." A palimpsest is a writing material such as parchment from which writing has been partly or completely erased to make room for another text. Older writings can often be discerned under the newer writing. Landscape change occurs in a similar way with elements of past landscapes visible amidst more recent additions. (insert diagram of conceptual model of layered landscape)

The Value of Context

The value of reading the landscape comes through recognition of relationships among the components that make up that landscape. Identifying and recognizing these patterns is akin to above ground archaeology. In archaeology an individual projectile point or pottery shard may be important for its form and design, but it possesses greater significance when its context and origin are understood. That is, an understanding of the relationship of the object to other objects of the site, to the soil layer in which it was found, and to the site in general give the object greater meaning and clarify its relative significance. In a similar way, an individual building, structure, or open space in the landscape may have significance, but an understanding of its relationship to other landscape components and its general surroundings clarifies its relative significance.

B. Understanding the Military Landscape

The Interrelationship of Military History and American History

The history of America and the history of its military are integrally related. Historical circumstances determined the support and function of the military, while military activity shaped the character of this country. For example, technological innovations such as the airplane ultimately spawned a whole new branch of the armed services. The military development of the airplane, in turn, contributed to the development of the commercial airline industry. Another general example involves building design. Architectural styles and town planning principles popular in mainstream American culture influenced architectural styles and site plans on military installations. In turn, military developments in temporary, prefabricated housing during World War II influenced the design and construction of civilian housing after the war. This interweaving of military history and the broader American history makes it clear that military installations have national historical significance that extends beyond their role in national security and foreign relations.

The Extent of Military Land

In the United States, a significant amount of land is under the jurisdiction of the Department of Defense. Beginning with frontier posts and coastal fortifications of the early republic and continuing beyond the missile silos of the Cold War, the federal government established military installations according to the country's needs and goals. Today the Department of Defense manages 25 million acres--an area the size of the state of Kentucky--that contain a wide range of unique and valuable cultural and historical resources.

Cultural Values and the Appearance of Military Installations

From a broad perspective, cultural traditions determine the kinds of things a culture builds, for example, baseball diamonds or cricket grounds. In many respects, the U.S. military functions independently and outside the realm of the every day lives of civilian citizens. The military emphasizes a particular set of cultural values and traditions. This independence, born of necessity, has resulted in a military landscape that is both distinctive and unique in the context of the larger American landscape.

Military installations nation wide are dramatically varied in setting, function, and size, but the cultural values associated with the military, such as hierarchy, uniformity, order, utility, discipline, and patriotism, are powerfully symbolized in the landscape regardless of location. These abstract values and traditions are expressed on military installations in the way the land has been modified and built upon. While physically represented in both an organizational sense and an aesthetic sense, these cultural values are apparent in the military landscape in varying degrees. Different parts of an installation may express certain values more strongly than others. For example, a memorial site may express patriotism while a row of officers quarters may express uniformity, order, and hierarchy. Furthermore,

different installations may express particular values over others. These values give military installations the appearance and sense of place that make them easily recognizable.

Military Mission and Landscape Change

The concept of landscape is as much about change as it is about permanence, and change is an on-going characteristic of the military landscape. The driving force that shapes and reshapes the landscape of military installations is military mission. Nothing official occurs on a military installation that is not somehow related to its current mission or support thereof, and as the general missions of the military in America have changed throughout history, so has the military landscape. Landscape change is manifested in several different ways. It can involve any combination of razing, building, rebuilding, acquiring, reclaiming, shaping, reusing, abandoning, or expanding. Military installations often evolve through periods of rapid change in response to crises. They frequently appear as chaotic mixes of land-use areas and unrelated architectural styles. However, patterns are often visible that are the vestiges of an installation's former missions. An understanding of the relationship between the changing mission of an installation and its landscape is the key to identifying the historical significance of the military landscape.

Throughout their histories, many installations have changed dramatically. At some installations, periods of historic development are obvious. As an installation grew, it purchased adjacent land and added a new section in a process analogous to tiling a floor. For example, Fort Sam Houston reflects four major periods of significance between its establishment in 1876 and the pre-world War II landscape of the 1930s. The geographic setting allowed room for each development period to occur separately, thus revealing history juxtaposed. What is evident today are four clearly visible periods of development comprising a whole landscape, each reflecting a period of significance.

In other cases, an installation's development may have involved razing and rebuilding in a process analogous to layering rather than tiling. This is reflected in many Naval installations, such as the Washington Navy Yard, faced with restrictions on horizontal expansion as a result of their location in urban areas. Others, such as the Naval Shipyard at Mare Island, faced natural constraints on expansion. In these cases the solution involved replacing or adapting historical structures and land use areas to accommodate mission needs.

In either case, evidence of changing missions, military life and technological advances may all be apparent on a military landscape. Historic configurations that have been retained may be eligible for the National Register.

PART TWO: HOW TO APPLY NATIONAL REGISTER CRITERIA TO THE HISTORIC MILITARY LANDSCAPE

III. Identification of Historic Military Landscapes

In order to identify a historically significant military landscape it is necessary to know what one is looking for. Understanding the general position of an installation within *the national military historical context* is the first step. Next, more detailed historical research is required involving archival material, site visits, interviews, and other information sources. The systematic documentation of landscape characteristics by listing, photographing, and mapping throughout the research results in the identification of those portions of the military landscape that have historical significance. This section provides a table that summarizes the evolution of military installations within *the national military historical context* and outlines procedures for these research activities.

It is also important to understand the military landscape within a state and local context. Many installations have had significant impacts on surrounding communities, and in some cases installations give rise to whole towns. The military influence extends beyond the boundaries of the installation and conversely, surrounding communities often influence the installations.

A. Historic Context and Levels of Significance

By definition, the identification of historically significant properties can only be achieved through evaluation of their position within the larger historic context. Historic contexts are defined as: *the patterns, themes or trends in history by which a specific occurrence, property or site is understood and its meaning (and ultimately its significance) within prehistory or history is made clear.* The significance of military landscapes must be evaluated in the context of the broader national and military history associated with their development.

The National Register identifies three levels of historic significance: national, state, and local. The military missions that helped shape and reshape installations are often significant within a national military context. Fort Riley, Kansas, for example, was established as a frontier post to protect traders and settlers along the Santa Fe and Oregon Trails. But all installations that are significant within a national context do not necessarily possess national significance. Properties designated as nationally significant are, by definition, those properties that meet the National Historic Landmarks (NHL) criteria. Not all military installations are NHL-eligible. Properties are evaluated in a national context when they represent an aspect of the history of the U.S. as a whole. National historic contexts may have properties that are significant locally or statewide, as well as those of national significance. In many cases, different missions resulted in different levels of significance for the same installation.

It is easy to assume that since the military is such an important aspect of American history, anything related to the military is significant. However, such criteria

are far too general, and it is necessary to evaluate a military property within *the national military context*. Once the general historic context is determined, a property must be evaluated within its more specific context. Often the property is one example of many similar properties found nation wide. If so, a property must also be evaluated against others of its type.

B. Developing the Context of a Military Landscape

Identifying a historic military landscape requires developing a context to explain the property's significance. The National Register has established guidelines (see NRB 15 and 16A) that call for consideration of a property's *chronological periods*, *geographical limits*, and *themes* that provide a perspective from which to evaluate a property. For military properties the issue of *military mission* must be added and emphasized. The relationships among these four basic issues constitute a property's historic context.

Military Mission

The most distinguishing characteristic of a military installation is the manifestation of its military mission on the land. Because the historic significance of a military landscape usually relates to the installation's missions, researchers should first determine past and present missions associated with the installation. The mission always determines the type of installation and usually its location. For example, to fulfill the mission of providing logistical support for the Mexican-American War, the Army established a quartermaster at the Alamo. In the 1876, Fort Sam Houston replaced the Alamo and served as a garrison to help defend the southern border. Years later, the Army Air Corps established what is now Brooks Air Force Base near San Antonio, Texas to support the mission of pilot training at the beginning of World War I. (Insert photos and maps).

Chronological Period

Many significant historic periods in American history are defined by the military events that occurred at the global, national, and local levels such as World Wars I and II, the Civil War, Indian battles, and border disputes. As such, relationships of military installations and their properties to chronological periods can often be fairly straight forward. Military installations are also related to chronological periods that are not defined purely by military actions. Fort Leavenworth, Kansas, for instance, was established in 1827 as a base of operations for westward expansion. It became the main quartermaster depot and cavalry station for new frontier posts constructed by the Army along the Oregon, Santa Fe and California Trails. Many installations have associations with the reforms and technological developments of the Progressive Era (1880s-1920s). For example, Navy shipyards converted from the construction of wooden sailing vessels to steam-powered steel ships. During the inter-war years (1920s-1940) military installations were associated with historical events such as the application of community planning ideas and New Deal construction projects. An installation may be associated with a range of chronological periods in a variety of ways.

Geographic Limits

In determining historic significance, it is necessary to investigate reasons behind the siting of an installation. Little is written specifically about these historical decisions, but there is often a logical relationship between an installation's site and its military mission. Understanding this relationship helps explain the appearance, arrangement, and location of an installation and provides important clues about the installation's establishment and development.

Different missions can have different site requirements. General missions such as weapons testing and combat training have specific site requirements usually involving large expanses of land and specific types of terrain, but the site of an installation may have been selected from a broad range of options. More specific military missions such as coastal protection and frontier protection had more specific location requirements. For example, the Army constructed batteries around harbor entrances and frontier forts at the confluences of important rivers. Nineteenth century armament production facilities had even more specific site requirements. Shot towers often used an elevated location such as a river bluff to provide the necessary vertical drop to form lead shot. More recently, rocket and missile launching and test facilities required sites with safe lines of trajectory, usually over the ocean. Vandenberg AFB, for example, uses its location on a California peninsula for southern projection of missiles over the Pacific.

Natural topography has been an important determining factor in the layout of installations. At Fort Sam Houston, Texas, the construction of the Cavalry and Artillery Post in the early 1900s along a natural ridgeline enabled water and septic fields to drain away from the housing. The design of Fort McClellan, established in 1898 in the middle of the Choccolocco foothills in Alabama, took advantage of landforms that provided an ideal barrier against which to fire shells.

Often a site provides a variety of advantages. For example, the Army established Rock Island Arsenal on an island in the Mississippi River in the mid-1850s to take advantage of the site's access to water power, proximity to rail and water transport, and defensibility. During World War I the Army Air Corps established what is now Bolling Field on the flood plain near the confluence of the Potomac and Anacostia Rivers because the level site constituted a good runway within Washington, DC to provide air defense. In some cases, political pressure by Congressional representatives and Senators and senior military and government officials influences the choice of one location over another.

Once an installation was established, the environment at times provided advantages that affected the mission of the installation. For example, because of its dry climate, Fort Sam Houston was recognized as an appropriate setting for treating tuberculosis. As a result, the installation became and has remained an important Army medical center.

Theme

The National Register has established standardized themes called *areas of significance* (see sidebar in Section V) that are principally used in the evaluation process but are useful for developing an installation's historical context. For example, Walter Reed Medical Center in Washington, D.C. and Fort Sam Houston, Texas are associated with the area of significance *health/medicine*. The United States Military Academy, the U.S. Naval Academy, and the U.S. Air Force Academy are the premiere military installations associated with the area of significance *education*. Many installations have an historical association with *transportation*. For example, the Naval Air Warfare Center Aircraft Division at Lakehurst, New Jersey became the largest naval air facility east of the Mississippi during the 1920s and 30s covering 11.5 square miles. On May 6, 1937, during in its maiden flight, the German airship *Hindenburg's* attempt to dock at Lakehurst ended with one of the most famous air disasters in American history. Other installations are associated with the theme *planning and architecture*. Military development nationwide generally occurred during distinct planning periods in military history. Examples of these periods include early frontier posts, 1790-1875; consolidation and modernization, 1875-1917; and World War I temporary and permanent construction, 1917-1918. Installation planning sometimes followed non-military design styles such as regional architecture, community planning, and landscape architecture, 1918-1940. The horseshoe shape of Fort Benjamin Harrison, constructed between 1906 and 1910, exemplifies the unified planning and architectural elements of consolidated Army posts at the turn of the century. The U.S. Naval Academy displays a prominent example of Beaux-Arts classicism that followed the World's Columbian Exposition of 1893.

DEVELOPING HISTORICAL CONTEXT

Understanding the relative significance of a military installation requires placing it within the context of the history of military installations as a whole. A familiarity with the basic trends in military design and planning in combination with an understanding of issues of geographical location help clarify why the historic parts of an installation are arranged the way they are and look the way they do. Each installation should develop its own detailed context based on the national military context and on the Major Command-wide contexts. If such a context has not already been written, the National Historic Context for Department of Defense Installations, 1790-1940 (R. Christopher Goodwin and Associates 1995), available from the Baltimore District of the U. S. Army Corps of Engineers, is a good place to start.

The following questions exemplify the kinds of issues researchers should consider while developing historic contexts for military installations and their historical properties. These questions are intended to stimulate lines of thinking and do not constitute a complete list of relevant issues. Researchers are encouraged to draft their own list of questions suitable for the properties under study.

Mission:

What were the past missions of the installation?
What are the current missions?
In what ways do the missions have national, state, and/or local significance?
What physical evidence links the installation to these past and present missions? (examples: buildings, roads, parade grounds, airfields, vegetation, important views, etc.)

Chronological Period:

What events were taking place on a global scale during the establishment of the installation?
To what national historical time periods was the establishment and development of the installation related?
In what ways was the installation related to subsequent historical events and time periods?

Geographic Context:

How did the physical geography influence the site selection (i.e. mountains, plains, bays, extreme climate, etc.)? What other geographic factors may have influenced the choice of site (i.e. proximity to an urban area, wilderness, or existing transportation routes and features)? Is there a connection between the initial mission and the installation's geographic setting?
How did the physical geography influence the design and planning of the installation, both initially and through subsequent alterations and additions?
What was the geographic area like prior to the establishment of the installation? How did it change during the installation's development (i.e. fill areas, excavation,

population increases, relationship to nearby town)? What precipitated these changes?

Theme:

With what National Register areas of significance (see list Section V below) is the installation associated?
What themes are associated with these areas of significance?
How are these themes visible in the landscape?

C. "TABLE OF CONTEXT"

The purpose of this table is to provide a general framework for recognizing the different stages of development of military installations throughout United States history. This table chronologically outlines the national military historical context by service, demonstrating by example the relationship among historical trends, military mission, installation types, and landscape appearance. The information presented is general but not comprehensive; it should be used only as a starting point for investigation. It is hoped that this table will help researchers acquire the ability to identify history/landscape relationships on military installations.

How to Use the Table

Connections between historical events or trends and the landscape are not always obvious. Each military installation has its own unique history and each installation has its own unique landscape. However, general trends in American military history have resulted in general changes in the landscape of military installations that can serve as a guide in doing historical landscape research.

The following table is structured to highlight general trends and changes. It covers seven historical periods that are listed in the first column and span across the table in rows. In the second column, each period is further subdivided into the military services active during the period. Reading from left to right, the table lists trends in military history, related military missions, installation types resulting from the missions, examples of installations, and typical installation construction, design, and location characteristics.

The table can be used in a variety of ways. For example, if researchers have identified the period of historical significance for an installation, the table can be read from left to right to help determine how the landscape may reflect the period of significance. If researchers recognize distinctive landscape characteristics, the table can be read from right to left to help determine what kinds of factors caused the landscape to be shaped in that way. The table can be used to point out basic relationships among factors and to stimulate the kinds of questions that will lead to an understanding of the more specific history/landscape relationships of a particular installation. The table may also be useful for identifying and sorting the layers of landscape change that tend to accumulate over time.

Era	Service	Trends in Military History	General Missions	Typical Installation Types	Examples	Typical Construction, Design, and Location Characteristics
The American Revolution and Confederation, 1775-1790s	Army	Continental Army Established 1775	Establishment of Independence Defense Against Foreign Attack Harbor Protection	Garrisons Forts	West Point, NY (Garrison) Fort Ticonderoga, NY	Garrisons and Forts consisted mostly of earthworks and palisades with some masonry fortifications originally built by the British, French, Spanish or Patriots .
	Navy	Continental Navy Established 1775	Establishment of Independence Defense Against Foreign Attack	Ports & Docks	No formal Navy installations	Use of commercial ports.
The Early Republic and the Antebellum Era, 1790s-1860s	Army	Limited peacetime funding War of 1812 Early Indian Wars Mexican-American War	Defense Against Foreign Attack Frontier Protection Coastal Defense Ordnance R&D, Storage Education	Frontier Forts Garrisons Coastal Defense Fortifications Arsenals and Armories Education and Training Installations	Fort Detroit, MI Fort Riley, KS Fort McHenry, MD Springfield Armory, MA West Point, NY (Academy)	Frontier posts consisted of temporary structures constructed by soldiers under the command of the Quartermaster Department. Largely self-sufficient, the Army sited them to guard transportation routes or to contain Indian tribes, constructed of local materials. The Army Corps of Engineers constructed coastal fortifications of masonry.
	Navy and Marine Corps	Limited peacetime funding War of 1812	Defense Against Foreign Attack Protecting Commerce Medical Support Logistical Support	Navy Yards and Stations Educational Facilities Hospitals Logistical Facilities	New York Navy Yard, NY Naval Academy at Annapolis, MD Norfolk Navy Hospital, VA The Naval Observatory, DC	Navy installations consisted of permanent industrial structures constructed of masonry, arranged by function, utilitarian design. Few administrative and residential structures, frame or masonry construction reflecting period architectural styles such as Federal, Classical Revival, and eclectic variants.
The Civil War and National Expansion, 1860s-1890s	Army	Technological modernization Increased specialization Late Indian Wars Development of railroad system Closing of the frontier begins Consolidation of posts begins	Frontier protection & enforcement Coastal defense Education Medical support Logistical support: Ordnance R&D, storage Ordnance testing Supply Communications	Frontier Posts Batteries Hospitals Schools and Training Facilities Logistical Facilities: Arsenals and Armories Proving Grounds Quartermaster Depots Signal Corps Facilities	Fort Sill, OK Battery Spencer, San Francisco Harbor, CA Parkersburg Hospital, WV Fort Monroe Artillery School, VA Rock Island Arsenal, IL Sandy Hook Proving Ground, NJ Jeffersonville Depot, IN Fort Myer, VA	Starting in the late 1870s, the Army constructed new, larger, permanent installations using a higher level of planning, construction, and design. Both military and civilian architects and planners designed buildings and plans reflective of national trends. Simplified versions of Italianate, Romanesque Revival, and Queen Anne styles dominate the architecture. Plans included improved water, sewage, and heating systems, and in some cases, residential areas with curvilinear street patterns reflected new suburban design. Early attempts at standardization applied mostly to frontier posts.
	Navy and Marine Corps	Technological modernization begins Use of steam power	Defense against foreign attack Protecting commerce Shore Training Education Logistical support: Maintenance and repair Supply Ordnance testing, storage	Navy Yards and Stations Schools Logistical and industrial facilities: Coaling Stations Proving Grounds Magazines	Washington Navy Yard, DC Naval War College, RI Key West, FL Indian Head Proving Ground, MD	Shore facilities served as industrial yards, workshops, and depots of supply. Permanently moored receiving ships often served as quarters and offices. Initially the Navy added logistical facilities to existing installations, but eventually a few speciality facilities developed. Buildings and facilities such as "rope walks" primarily supported the needs of wooden sailing vessels.
The Progressive Era, 1880s-1920s & War Overseas	Army	Consolidation & Reorganization Technological Innovation Wartime Mobilization Development of Aviation End of the Indian Wars Closing of the Frontier Spanish-American War Development of automobiles World War I	Defending American interests abroad Coastal Defense Aerial Reconnaissance Education & Training Logistical support: Ordnance R&D, storage Ordnance Testing Supply	Garrisons, Wartime cantonments Batteries Aviation Fields Schools and Training Facilities Logistical and industrial facilities: Arsenals and Armories Proving Grounds Quartermaster Depots	Fort Omaha, NE, Chickamauga Park, GA Fort Mason, CA Kelly Field, TX Fort Leavenworth, KS Edgewood Arsenal, MC Aberdeen Proving Ground, MD Wingate, NM	In the 1890s, the Quartermaster Department expanded its effort to standardize plans for all types of buildings. These plans contributed to the uniform appearance of many installations across the country. Basic installation layout escaped standardization and tended to be influenced by local geographical considerations. In general, parade fields served as center points with buildings organized around their perimeter. In the 1900s, the Army adopted Colonial Revival design motifs for its northern and eastern installations, and Spanish Colonial and Mission styles for its southern and western facilities. The Beaux Arts style influenced few Army installations, West Point and Fort McNair, DC being the best examples. During the mobilization for World War I, the Army devised standardized building plans termed Series 600.

Era	Service	Trends in Military History	General Missions	Typical Installation Types	Examples	Typical Construction, Design, and Location Characteristics
	Navy	Reform & Modernization Transition from Wooden to Steel Navy Integration of New Technologies Overseas Wars	Defending American interests abroad Protecting commerce Ship construction & maintenance Ordnance development Fleet support Communications	Shipyards Bases Ordnance research facilities Specialized Training Schools Logistical and industrial facilities: Coal and fuel oil depots Magazines Proving Grounds Communications facilities	Charleston Navy Yard, SC Norfolk Navy Base, VA Washington Yard, DC Great Lakes Naval Training Station, IL Alaska, Hawaii, Narragansett Bay, RI Mare Island Ammunition Storage Facility, CA Indian Head Proving Ground, MD Arlington Radio Station, VA	At Navy Yards, technological changes prompt adaptation of existing structures for increased specialization; new industrial structures constructed of steel-frame with brick walls and fireproof floors and doors, designed by both private and government architects and engineers with shift towards popular high-style architectural themes such as Beaux-Arts, Neo-Classical, Italian Renaissance Revival, and Colonial Revival; general similarities in building design among installations but local variations predominant. In mobilizing for World War I, the Navy developed the B-1 H-type temporary building, usually used as barracks, and began using a semi-cylindrical prefabricated structure called a "Nissen Bow Hut" (today known as a Quonset Hut).
	Marine Corps	Transition from Navy subsidiary to separate fighting force	Defending American interests abroad Defending advance bases Ships complements Navy Base Protection	Depots Training Facilities Schools	Philadelphia Depot, PA Winthrop Rifle Range, MD Parris Island, NC	The Marines tended to organize their reservations at shipyards by arranging their barracks to face a parade ground. They located officer housing nearby. Civilian architects frequently designed the structures of masonry, reflecting period style trends.
The Inter-war Years, 1920s-1940	Army	Limited funding, slow growth Administrative reforms Installation design improvements New Deal construction Training "civilian components"	Coastal defense Air defense Improve post conditions Special services training	Garrisons Batteries Schools & Training Facilities Logistical Facilities	Fort Knox, KY Battery Chamberlin, San Francisco, CA Fort Benning, GA Picatinny Arsenal, NJ	Professional designers, both civilian and military, redesigned many installations in an effort to improve appearance and efficiency of Army bases. Installations increased in size as training areas expanded. Design styles instituted as part of the improvements to base planning included: Georgian and Colonial Revival in the northern and eastern forts; Spanish Mission in the south and west.
	Army Air Corps	Limited Funding Air Corps Act of 1926 Movement towards a separate air force Development of first long-range bombers	National defense Tactical support of Army Training	Air fields Airship fields Training facilities Logistical facilities	Langley Field, VA Scott Field, IL Brooks Field, TX Engine & Repair Depot (Maxwell AFB, AL)	Air field construction develops from temporary buildings with sod or gravel runways to permanent buildings and hard surface runways (in part to accommodate larger planes). In an effort to reorganize comprehensive national defense, a military board defines seven districts for air field location.
	Navy	Growing threat of Japan Shift of forces from Atlantic to Pacific	Protection against foreign attack Training Research & design Logistical support	Navy Yards Research & Design Facilities Air Fields Airship Fields Submarine Bases Logistical Facilities: Coaling / Fuel Oil Stations Supply Depots Communications Stations	Pearl Harbor, HI Anacostia Naval Air Station, DC Pensacola, FL Lakehurst Naval Air Station, NJ Portsmouth Yard, NH Key West, FL San Diego, CA Chollas Heights, CA	Because of increasing threat of potential war with Japan, the Navy built installations on the west coast and in Hawaii with Pearl Harbor becoming headquarters of the Pacific Fleet. Wireless communications increased in importance and the Navy established numerous radio stations. As with the Army, the navy sought to improve the design and function of its facilities. During this period, shore facilities began to provide services to enlisted personnel and their families.

Era	Service	Trends in Military History	General Missions	Typical Installation Types	Examples	Typical Construction, Design, and Location Characteristics
	Marine Corps	Development of "Fleet Marine Force"	Amphibious support of naval campaigns Foreign occupation Ships complements Guarding Navy Bases Training	Recruit Training Facilities Officer Schools Multi-purpose Installations Combining: Airfields Supply Depots Training	Parris Island, SC Quantico, VA San Diego, CA	The Marines began to function more independently and constructed facilities to support their own missions. As with the other services, the Marines incorporated Spanish Colonial design in the construction of the base at San Diego.
World War II Mobilization, 1940-1945	Army	World War II mobilization Development of nuclear weapons Rapid technological advancement	Mobilization Training Logistical support Ordnance and weapons production	Garrison Educational Training Medical Research Proving Grounds Logistical Facilities: Administrative Communications Industrial Supply and Repair	Fort Rucker, AL Carlisle Barracks, PA Fort Miles, CA Walter Reed Army Medical Center, DC Redstone Arsenal, AL Camp Eglin (AFB), FL Governors Island, NY Fort Meade, MD Lima Army Tank Center, OH Red River Army Depot, TX	Mobilization required the construction of temporary buildings. The Army improved on the designs of the buildings of the WORLD WAR I mobilization by using concrete piers and footings, framing with 2x4s and painting exterior walls. Both 700 and 800 series barracks added showers, latrines, central heating, and improved ventilation. Civilian and military planners designed more centralized cantonment layouts that facilitated the training patterns of larger brigade sized units. Each regimental grouping included barracks for two or three battalions, battalion offices, officers barracks, company offices and supply rooms, a dispensary, two day rooms, a field house, a post exchange, a guard house, several mess halls, a store house, and a regimental headquarters building. Some 25 new training facilities resulted from the mobilization with improvements made to 25 others.
	Army Air Corps	Development of strategic air power Rapid technological advancement	Mobilization Training Maintenance and repair Aircraft development and production	Garrison Training Research Proving Grounds Logistical Facilities: Industrial Supply and Repair	Williams Air Field, AZ Maxwell Air Field, AL Wright-Patterson, OH Eglin AFB, FL Tinker AFB, OK Norton AFB, CA	The Army had series 700 and 800 buildings erected for Army Air Corps cantonments. However, the arrangement of administrative and logistical buildings centered around the system of runways rather than parade fields as in the Army.
	Navy	Increased importance of aircraft carriers Increased importance of submarines	Mobilization Training Logistical support Ordnance and warship production	Navy Base Educational Training Medical Research Proving Grounds Logistical Facilities: Administrative Communications Industrial Supply and Repair	Naval Base Long Beach, CA Naval War College, RI Alameda NAS, CA Chelsea Naval Hospital, MA Goat Island, RI China Lake Naval Ordnance Test Station, CA Naval Station Treasure Island, CA Skaggs Island, CA Charleston, Navy Base, SC Naval Magazine Port Chicago, CA	During mobilization, the Navy made extensive use of a larger version of the World War I Nissen Bow Hut at facilities like the Naval Air Station at Quonset Point, RI. These structures became known as Quonset Huts, and, along with large numbers of improved B-1 H-type barracks, comprised most of the World War II buildings built by the Navy. Because of limitations on the use of steel during the War, architects contracted by the Navy developed high-arching laminated wooden trusses for large drill halls. To strengthen its support of the Pacific Fleet, the Navy focused construction on the West Coast. At the same time, urban congestion in port cities and the need for shore training prompted the Navy to established inland training centers in unlikely places such as Idaho and Kansas.
	Marine Corps	Increased operational independence	Mobilization Training Logistical support	Garrison Training Medical Research Logistical Facilities: Supply and Repair	Cherry Point Marine Corps Air Station, NC El Toro Marine Corps Air Station, CA Camp H. M. Smith, HI Kaneohe Bay Marine Corps Air Station, HI Barstow Marine Corps Logistical Base, CA	As with the Navy, the Marines built Quonset Huts on their new and existing installations. Construction of installations centered on the West Coast and in the Pacific.

The Cold War, 1945-1989	Army	Expanded peace-time budget Development of Nuclear Bombs Korean Conflict Arms Race with Soviet Union Vietnam Conflict Arms Control Treaties Rapid technological advancement Application of new technologies to surveillance and intelligence gathering	Defending American interests abroad Maintaining mobilization and combat readiness	Garrison Educational Training Medical Research Proving Grounds Logistical Facilities: Administrative Communications Industrial Supply	Fort Bragg, NC Fort Leavenworth, KS Fort McClellan, AL Fort Sam Houston, TX Redstone Arsenal, AL White Sands Missile Range, NM Presidio of San Francisco, CA Fort Ritchie, MD Frankfort Arsenal, PA Hawthorne Army Ammunition Plant, NV	Construction during the Cold War involved integrating new missions at existing installations. With the construction of administrative buildings and barracks, the use of cinder block walls replaced the use of wooden frame walls. Architectural styles reflected national trends but were overshadowed by utilitarian and functional qualities. In many cases, the exterior appearance of a building left few clues as to its purpose or function. Residential housing shortages led to the construction of large numbers of Wherry and Capehart units.
Era	**Service**	**Trends in Military History**	**General Missions**	**Typical Installation Types**	**Examples**	**Typical Construction, Design, and Location Characteristics**
	Air Force	Establishment of Air Force Rapid technological advancement Development of space program Development of ballistic missiles Involvement in Korea and Vietnam Application of new technologies to surveillance and intelligence gathering	Defending American interests abroad Containing Soviet threat Maintaining combat readiness from air Monitoring Soviet military activity	Garrison Educational Training Research Proving Grounds Logistical Facilities: Administrative Communications Industrial Supply	Elmendorf AFB, AK USAF Academy, CO Luke AFB, AZ Patrick AFB, FL Vandenberg AFB, CA Bolling AFB, DC Cheyenne Mt, CO Brookley AFB, AL Davis-Monthan AFB, AZ	Following World War II, many Army Air Fields became Air Force Bases. With their new Cold War missions and rapid technological development, the Air Force constructed new installations and refurbished older facilities, lengthening runways and constructing hangers, barracks, and administration buildings. In some cases installations supported a scattering of nearby missile silos. As with the Army, housing shortages resulted in the extensive construction of Wherry and Capehart housing. As computer technology advanced in the 1970s and 1980s, technical support buildings often became generic cinder block sheds whose function could change as frequently their contents.
	Navy	Use of nuclear power for warships and submarines Involvement in Korea and Vietnam Application of new technologies to surveillance and intelligence gathering	Defending American interests abroad Containing Soviet threat Maintaining combat readiness from sea	Navy Base Educational Training Medical Research Proving Grounds Logistical Facilities: Communications Supply Administrative	Charleston Navy Base, SC Naval War College, RI Naval Air Station Pensacola, FL Oakland Naval Hospital, CA Keyport Naval Undersea Warfare Engineering Station, WA Naval Support Activity New Orleans, LA Cutler Naval Communications Unit Naval Weapons Station Yorktown, VA Naval Air Station Quonset Point, RI	The Navy expanded its industrial facilities to accommodate the development of nuclear powered vessels and nuclear weapons. Shore facilities continued to provide expanded support for its enlisted personnel and their families in the form of housing and recreational facilities and the like.
	Marine Corps	Integration of technologies such as the helicopter Involvement in Korea and Vietnam	Defending American interests abroad Defending advance bases Navy Base Protection American embassy and consolute protection Maintaining combat readiness	Garrison Training Research Proving Grounds Logistical Facilities: Administrative Communications Supply	Camp Pendleton, CA Parris Island, SC Mountain Warfare Training Center, CA Marine Corps Air Station Yuma, AZ Camp H. M. Smith, HI Beaufort Marine Corps Air Station, SC Barstow Marine Corps Logistics Base, CA	Maintaining an active force of some 200 thousand throughout the Cold War required the Marines to expand its housing and support facilities at its existing installations. New installations focused on specialized training while existing facilities adapted to new technologies and missions.

D. Conducting Historical Landscape Research

Developing a thorough historic context and identifying landscapes of historical significance requires an approach that integrates archival sources, landscape surveys, and interviews. In some cases computerized sources such as geographical information systems and the Internet may also prove useful. The approach is integrated because it requires continual cross-referencing between research materials and landscape surveys. Archival materials may initially suggest which areas of an installation are historically significant, but a site survey may prompt questions regarding landscape characteristics that require more archival research. Archival photographs and maps are often useful to have along during site surveys for visualizing landscape change over time. The following guidelines suggest specific sources of information and rules of thumb to aid in the research process.

1. Archival Sources

The goal here is to develop a statement of historic contexts based on the installation's missions, primary activities, associations, and periods of development that will be used as a guide for determining the most important areas and landscape characteristics within the installation. Archival information relevant to the history of military installations is found in a variety of places and in a variety of formats. The initial step for researching a military property is to find out what properties (if any) on the installation have been previously documented. The installation itself and the relevant State Historic Preservation Office (SHPO) should be able to provide leads to previous studies. Copies of the existing documentation are usually available from the SHPO, as is information on how to contact the appropriate Federal Preservation Officer (FPO). The FPO may know of existing military contexts or contexts under development, as well as similar studies done at other installations in other states. Existing studies often provide a useful list of initial sources through their bibliographies. Libraries are currently being established by military services on World Wide Web pages that contain all cultural resource projects funded by DoD's Legacy Resource Management Program since 1991, approximately 750 to 1000 in all.

The next step involves searching for archival materials at archives, libraries, and other institutions that hold historical materials that relate to military installations. Useful information may be found in both visual and textual forms such as photographs (including aerial, landscape, and documentary), drawings, plans, maps, and other forms of visual representation in addition to annual reports, correspondence, construction expenditures, contracts, and the like. Oral histories are also an important source of information. The verbal information will help researchers identify the persons, events, and decisions responsible for shaping the landscape of the installation. The visual information will help researchers understand and recognize the phases of historical landscape change.

A well-conceived strategy for researching a property is critical. Some facilities require appointments and need to know how much time a researcher will need with a specific collection. Any repository of research material should be contacted prior to arrival. In most cases, archivists can work with researchers over the phone to determine their needs and to assure the best possible use of time at their facility. To

save time, arrangements can often be made to have certain materials retrieved in advance and ready for researchers when they arrive. For security purposes, photos may have to be processed by the repository itself, so the researcher should allow ample time for this extra step. Over time, the following repositories have proven useful in the investigation of military properties.

a. The National Archives

The National Archives is a major source for primary materials relating to all facets of military history. Among other uses, primary sources such as annual reports, installation plans, maps, and aerial photographs are helpful in determining dates and amounts of funds provided by Congressional appropriations for construction programs and in determining the evolution of an installation's plan. Records are kept at two locations in the Washington, DC area. In general, the **National Archives** in Washington, DC contains pre-WWII Army, Navy, and Marine textual records. **The National Archives at College Park (also known as Archives II)**, just outside of Washington, DC, contains post-WWII textual records as well as cartographic, architectural graphic, still picture, and motion picture resources. The Cartographic and Architectural Branch contains aerial mapping photographs from the 1930s that are of particular value. Resource inventories should be consulted to help determine the applicable record groups. Major record groups that should be investigated include:

Army
Adjutant General's Office (RG 94, RG 407)
Headquarters of the Army (RG 108)
Office of the Chief of Engineers (RG 77)
Office of the Secretary of War (RG 107)
Office of the Quartermaster General (RG 92)
War Department General and Special Staffs (RG 165)

Air Force
Office of Public Buildings and Grounds (verify RG 77)
Headquarters, U.S. Air Force (Air Staff) (RG 341)
Office of the Secretary of the Air Force (RG 340)
Army Air Forces (RG 18)
U.S. Air Force Commands, Activities, and Organizations (RG 342)

Navy
General Records of the Department of the Navy (RG 80, RG 428)
Joint Army and Navy Boards and Committees (RG 225)
Naval Records Collection of the Office of Naval Records and Library (RG 45)
Office of the Chief of Naval Operations (RG 38)
Bureau of Yards and Docks (RG 71)
Bureau of Yards and Docks, Still Pictures

Marines (RG 127)
U.S. Marine Corps, Adjutant and Inspector's Office, General Correspondence
U.S. Marine Corps, Quartermaster, General Correspondence (1927-1939)

U.S. Marine Corps, Still Pictures

There are also thirteen **Regional Archives** located across the country. They house records related to their specific area and contain many useful collections for investigating an installation's history. For example, among the Army-related record groups located in these repositories are Army Air Forces, Army Coast Artillery, Army Ordnance, Quartermaster General, Corps of Engineers, Army Commands, Army Surgeon General, Army Staff, and Selective Service, along with enlistment and service records.

The Regional Archives system consists of:

New England Region - Waltham, Massachusetts
Pittsfield Region - Pittsfield, Massachusetts (microfilm)
Northeast Region - New York, New York
Mid Atlantic Region - Philadelphia, Pennsylvania
Southeast Region - Atlanta, Georgia
Great Lakes Region - Chicago, Illinois
Central Plains Region - Kansas City, Missouri
Southwest Region - Fort Worth, Texas
Rocky Mountain Region - Denver, Colorado
Pacific Southwest Region - Laguna Niguel, California
Pacific Sierra Region - San Bruno, California
Pacific Northwest Region - Seattle, Washington
Alaska Region - Anchorage, Alaska

b. The Library of Congress

The Library of Congress contains both primary and secondary source material. Primary sources housed in the Prints and Photographs Division include a variety of photographic collections and, as a secondary source, the **Historic American Buildings Survey/Historic American Engineering Record (HABS/HAER**) file. The HABS/HAER file contains textual and visual documentation for selected historic structures of all types including military structures and is organized by state. The Manuscript Division of the Library of Congress contains personal papers of prominent figures in American history including military officers, architects, and landscape architects, some of whom were involved with installation development. The Geography and Map Division has a collection of historical maps that is worth searching. Secondary sources of potential value obtainable through the Main Reading Room include War Department Annual Reports and Quartermaster General reports, as well as scholarly works on the military and on military planning and construction.

c. Other federal and military sources

There are several other governmental and military repositories that may be useful, most of which contain both primary and secondary sources. **The Washington National Records Center** at Suitland, Maryland, is a holding facility for records not yet accessioned to the National Archives and contains a large number of military textual records. These are held at the Military Reference Branch of the National Archives. **The Air Force Historical Research Agency** (AFHRA) at Maxwell Air Force Base, Montgomery, Alabama maintains the largest Air Force archive. It is open to the public

and has a large collection of unit histories and oral histories. The **Air Force** also maintains a museum at Wright-Patterson AFB in Ohio and at the Center for Air Force History at Bolling AFB, in DC. **The Army Corps of Engineers** maintains a research collection in the Office of History at the Kingman Building in Alexandria, Virginia. This repository contains a vast number of records pertaining to Army construction, both in paper and microform. Information is available under subjects such as bases, facilities, Corps participation in missile programs, personal papers of Army Corps officers, installation photographs, and construction progress reports. **The Army Center for Military History** in Washington, DC is open to the public and contains files on bases, weapon systems, commands, unit histories, and various other subjects. **The United States Army Military History Institute**, Carlisle Barracks, Pennsylvania, contains a library and serves as a repository for unit histories. **The Naval Historical Center** at the Washington Navy Yard maintains a history program and a small collection of material. The collection can be searched by installation name, and contains information on the Navy and the Marine Corps.

d. Resources on active installations

A great wealth of site-specific information is available on active installations. Much of the useful information is typically found in several different offices and locations. A thorough research investigation would cover these avenues:

Cultural Resources or Base Preservation Office - A Cultural Resources Manager or Base Preservation Officer at an installation will often have a wide variety of information including previous cultural resource inventories, installation design guides, historical reports, and master plans.

Natural Resources Office - A Natural Resources Manager, often trained as a management agronomist, wildlife biologist, or arborist should have any previous natural resource inventories and reports, environmental impact statements, and master plans.

Civil Engineering Office, Public Works Office, Directorate of Public Works - These names vary among the services, but all refer to the office responsible for the construction and maintenance of installation facilities. Their real property management and master planning components keep a variety of technical research materials, including architectural drawings, site plans, master plans, installation maps, property records, and installation photographs. Property records are valuable because they give specific information on every structure, such as construction date and cost and subsequent alterations and additions. All of these sources are useful for understanding the evolution of the installation but are often very specific and detailed in nature.

Base or Command History Office - Individual Army and Air Force Commands often employ historians and possess written command histories. The Army Missile Command, for example, maintains a history office at Redstone Arsenal, Huntsville, Alabama. In addition to possessing

installation or command histories and historical photograph collections, historians will often be able to provide leads on the location of additional records and the names of individuals to interview for oral histories (see Oral History section below).

Installation Library/Archives - This is a good source for both primary and secondary information such as specialized publications (Service, Command, Unit), general military histories, and site-specific manuscripts and correspondences.

Public Affairs Office - while primarily concerned with current activities, this office may have base histories, historic photographs, old press releases, and back issues of an installation newspaper.

Museum - If there is a museum on the installation, it will likely contain artifacts and photographs associated with that installation. It may also have artifacts from other military sites in its collection that place the installation in a broader context. There may be an associated archives. As with a base historian, the curator will be able to provide useful information and additional research leads.

e. State and local sources

A military installation usually plays a large role in the local history. In addition to military sources, there are state and local repositories that may be of help. Libraries, archives, historical societies, courthouses, museums, and preservation agencies in the local area should be investigated. These types of resources can often provide information through collections of local newspapers, previously written scholarly and popular articles and books, land records, oral histories, and postcard collections. A regional arboretum will often have examples of native vegetation and exotic plant materials that will aid in identification of plants at the installation.

f. Other sources of maps and photographs

In addition to the sources above, photographs and maps may be acquired from the U.S. Geological Survey (USGS) and its subsidiaries. The National Mapping Division administers a number of Earth Science Information Centers (ESIC's) that are a primary source of aerial photographs and maps. Most materials are contemporary, but some historical materials are also available. Fact sheets, indexes, and user guides of available products can be obtained by calling 1-800-USA-MAPS.

A variety of types of aerial photographs and maps are available. The National Aerial Photography Program (NAPP) produces high-resolution aerial photographs in both black and white and color infrared. Infrared film distinguish plant materials of different types and age and can be used to detect abandoned roads and archeological sites not visible from the ground. In addition, the NAPP photographs are taken with sufficient overlap to allow three-dimensional rendering with the aid of a stereoscope. The USGS also produces orthophotoquads, aerial photographs scaled and adjusted in USGS quadrangle format.

In addition to multipurpose USGS quadrangular maps, ESIC's make available land use and land cover maps, hydrologic unit maps, ecological inventory maps, and wetland inventory maps. Because not all parts of the United States are covered by all of these maps, it is important to consult an index. The USGS is currently compiling lists of maps available for each state. There are other potentially valuable types of geographical information available such as declassified intelligence satellite photographs, side-looking airborne radar images, and digital elevation models. Request the Index for Maps and Publications (Document #3000) from ESIC for details and updates.

2. Landscape Surveys

To accurately evaluate the military landscape, on-site surveys are essential. Only through a survey can researchers collect information about landscape characteristics, current site conditions, and integrity. The general approach is one of starting broad and narrowing in. The statement of historic contexts developed through archival research should be used as a guide for determining the most important landscape areas and characteristics. Once the potentially significant historic areas are identified, the relative size, scale, and importance of these landscapes will guide the amount of documentation needed for each characteristic. This section is directed towards individuals who will be conducting the site surveys. Some installations may choose to conduct the surveys using on-site researchers while others may decide to hire outside contractors. These guidelines may also be useful for installation managers to ensure contractors are conducting surveys appropriately.

Be aware that some level of survey may have already been completed by the installation or others. The current survey process described here should integrate earlier work to avoid duplication of effort.

a. Initial site visit and orientation

After the initial archival work, researchers should arrange a preliminary site visit to orient themselves to the installation, archival collections, security procedures, and key personnel. This usually occurs through a meeting with the installation *point of contact* (POC) for historic preservation compliance projects. This person is usually the *cultural resource manager or base preservation officer*, who may be a trained architect, landscape architect, archeologist, or planner. The purpose of this position is to ensure that the installation is complying with federal preservation laws. If a historic military landscape evaluation is required, the cultural resource manager will oversee the work or, in some cases, conduct the work. The cultural resource manager should therefore be able to inform researchers of the installation's status on historic preservation compliance. Architecture and archeological surveys may have already been conducted which will help guide the research effort. Additionally, the manager should be able to introduce researchers to key personnel including base historians, archivists, natural resource managers, management agronomists, arborists, gardeners, master planners, and architects. Installations may employ all or some of these specialists. The first site visit is intended to allow researchers to discover what resources and personnel are

available to them. If the research is being done by on-site personnel, familiarity with the installation and the cultural resource manager is, of course, already established.

b. Security procedures

Many military installations have areas to which access is restricted. Unless researchers are given security clearance to enter these areas, **de-classified** archival and **historic** photographic documentation will have to suffice. Restricted areas should never be entered without proper authorization. Before conducting intensive surveys, researchers should understand clearly what areas they can and cannot visit and photograph, and develop a plan for addressing access problems. A possible approach would be to locate someone on the installation with the required security clearance to access the area. That person could then go in, look around, and provide you with the information necessary to complete the inventory. Since the individual would also be aware of what information could be passed along, compliance with security regulations could be maintained as well.

Researchers should always carry proper identification with them while conducting a survey. An official document should be carried at all times stating that the work being conducted is for official government business. This includes government travel orders or work orders if they have been issued. If they are employed by the government, researchers should also carry a government identification card.

Some areas not officially restricted are sensitive in other ways. Research on the grounds of high ranking officers' quarters or other residential areas benefits from forewarning. Researchers should make sure residents, officers, or other personnel in potentially sensitive areas in which a survey is to be conducted are informed and, if necessary, have granted the required permission.

c. Reconnaissance survey (windshield survey)

On most installations, a general tour by car "windshield survey" should be completed before the intensive site surveys commence. Researchers should have a good general map of the installation, reproduced at a manageable scale, for reference before, during, and after the reconnaissance survey. If the researchers are not already familiar with the installation, an initial tour with a local guide will be very beneficial. During the survey, researchers need to *listen* carefully to the tour guide and ask questions. He or she may not be trained in documenting and evaluating landscape characteristics and therefore may not stress potentially important points. Researchers must also carefully *look* at the landscape and, based on preliminary archival research, try to identify which historic periods and military missions are associated with characteristics of the landscape. Researchers should take general notes and annotate the reference map but ought to pay more attention to the landscape of the installation and its general "sense of place." If possible, researchers should tape record the guide while touring the installation, periodically referencing the location at which the comments are made.

At a convenient time soon after the survey, researchers should write comments and first impressions from the windshield survey. Often these first impressions reveal important landscape patterns and anomalies that a familiarity with the place tends to obscure. Surveyors should make note of areas that seemed cohesive and those that did not. Areas that seemed disorienting should also be noted. Sometimes sketching a

map of the installation from memory reveals perceptions of orientation, scale, and boundaries that are useful when determining issues of extent and integrity of a district or site later in the process. Finally, it is useful to retrace the path of the reconnaissance survey on an installation map once again for orientation.

d. Intensive surveys

The keystone of the landscape field work is the intensive surveys. The time and effort required for this detailed site analysis will depend on the size and complexity of the installation as determined by the reconnaissance survey and the scope of the project. As mentioned above, the approach is one of starting with a large-scale, inclusive survey and progressively narrowing in on areas of potential significance. In so doing, researchers are less likely to miss important areas and will better understand the geographical context of the areas identified. These investigations should be directed toward identifying existing landscape characteristics and determining the extent to which historic properties and characteristics remain intact. The survey team should view the military landscape from a variety perspectives by following these rules of thumb:

cover the entire area of the study (unless security restrictions prevent it);
travel all roads;
arrange to utilize a variety of modes of transportation appropriate to the study area (i.e. car, foot, horse, bicycle, boat, helicopter, etc.)

During the survey, researchers should be prepared to take photographs, make detailed notes, and sketch maps in the field. All such activities should comply with required security measures. From their archival work, they should be acquainted with the general history of the area, including major land use areas, important events and persons, historic property types, and the landscape characteristics that are likely to exist. They should be equipped with maps and photographs from various time periods as well as current topographic and base maps for reference during field investigations. On site, surveyors should:

describe and mark on a sketch map natural features, topography, and waterways;
identify both natural and introduced vegetation that is predominant or related to land uses;
date features as accurately as possible (they can be verified by archival research before or after field investigation);
map and record the condition of landscape characteristics, noting 1) major land use areas including but not limited to housing areas, administrative areas, utilitarian areas including storage, loading docks, and parking lots; 2) circulation networks, both in use or abandoned; 3) uniform-style building clusters, 4) prominent buildings such as base headquarters, hotels, hospitals, hangars, chapels, and churches; 5) altered buildings; 6) ground disturbances; 7) new land uses and construction; 8) forested areas; 9) open fields and open spaces (parade grounds, open space parks in housing areas); 10) non-military resources;

relate characteristics to the statement of context and historical data, by associating existing features with specific historic events and activities, land uses, persons, military customs and tradition, and periods of time; note any characteristics or processes requiring further research

Field observations should be recorded systematically in a standard format that can be readily used for evaluation, registration, and planning. Depending on the size and complexity of the installation, the survey area should be divided into geographical units, perhaps based on land use. This will facilitate recording landscape characteristics.

Recent aerial photographs are useful for assessing the military landscape. Aerial views can help determine the spatial relationships among land use areas, natural features, vegetation, open fields, waterways, circulation networks and buildings and structures. Aerial surveys are most helpful in identifying building and landscape layout but are of little use in describing the condition of individual structures and buildings.

e. Follow-up surveys

Follow-up survey may be necessary if important site information was not gathered or is not clear from previous surveys. Further research often points to resources previously not recognized. Researchers should work toward a point of diminishing returns, that is, to the point when continued investment of time and effort in the research process fails to produce additional significant information.

3. Interviews and Oral Histories

Conducting interviews and compiling oral histories can be valuable sources of information on a historic military landscape. Information can be gathered on the original appearance, evolution, and uses of the properties under investigation. Individuals currently associated with an installation should be approached first for ideas on existing sources and repositories as well as their own personal remembrances. This may include the current and former commander, officers and enlisted personnel stationed at the installation, the base historian, cultural and natural resource managers, public affairs employees, real property managers, and maintenance managers. Retired personnel can often be a valuable source of information. The researcher should determine whether oral histories exist on audio or video tape or in transcripts. Although interviews may lead to other sources, they should not be a substitute for library or archival research.

These same individuals may be able to provide information unavailable elsewhere if they had a role in the historical development or activities of an installation. When seeking this type of information, the researcher should be well into the literature, records, and site surveys. This provides a level of information that the researcher can then use the oral histories to build upon. The interviewer should have a predetermined set of informed questions and even have "props" (photographs, news clippings, drawings, maps, or plans) to spark the interviewee to recall details. As turnover is very high in the military, the most useful information often comes from civilian employees who may have spent an entire career on one installation. Civilian maintenance

personnel with a long tenure often have first hand knowledge of the physical evolution of the installation. There may be employees in the real property, planning, public works, or civil engineering offices with valuable information on construction dates, how properties have been altered over time, why certain decisions were made, how the general appearance of the installation has changed, how various properties were used, events associated with the properties, and associations with significant persons.

There are several guides which can be used to improve the techniques for gathering information through oral histories. Two useful volumes published by the American Association for State and Local History are, *Oral History for the Local Historical Society*, and *Transcribing and Editing Oral History*, both by Willa K. Baum. See also Stephen E. *Everett's Oral History: Techniques and Procedures*, published by the U.S. Army Center of Military History.

4. Computerized Resources

Rapid technological change has created new sources of information and ways to manage it. Two computerized resources that are becoming increasingly accessible and powerful are geographic information systems (GIS) and the Internet.

a. GIS

Geographic information systems are computer programs that allow the analysis, manipulation, and visual display of data with spatial coordinates. Depending on the kinds of data stored in the system, GIS programs can create scaled, thematic maps. The maps can be selectively displayed in layers like transparent overlays, providing opportunities to compare relationships among different data types at specific locations. Commonly GIS is used by city planners, landscape architects, and geographers to aid in planning, design, or problem solving. For example, a city planner may want to compare the location of fire hydrants to elementary schools. A landscape architect may want to compare soil types with seasonal weather patterns. A geographer may want to compare population density with income level. Geographic information systems are currently limited by the kinds of data available in a compatible format, by the expense of developing the data, and the expense of the computer software and hardware required to run the systems. Many of these limitations are vanishing with advances in desktop versions of GIS software and the increasing availability of data over the Internet.

Many military installations use GIS to manage information for planning and land management purposes. As such, the kinds of data available tends to relate to infrastructure, vegetation, soil types, watersheds, and the like. Some of this information may be useful as a source of basic information and current maps for researchers of historic landscapes. Some installations such as Fort Riley, Kansas, Wright-Patterson Air Force Base, Ohio, and Fort Bliss, Texas, have integrated archaeological and historical information into their systems. Yet there remains a tremendous potential for integrating the tools of GIS with the management and preservation of historical and cultural properties on military installations.

b. The Internet

The Internet can be a useful source of information in a variety of ways. If available, the home pages of installations provide basic introductory information about the installation, its organizational structure, a recent photograph, and sometimes a synopsis of the installation's history. Frequently, phone numbers, e-mail addresses, and mailing addresses are also available. Universal Resource Locator (URL) addresses, like phone numbers, change from time to time, and conducting a network search with key words may be the best way to find the home pages of many organizations. Try the following URLs:

For links to military organizations:	http://www.dtic.dla.mil/defenselink/
The Army's home page:	http://www.army.mil/
The Air Force's home page:	http://www.dtic.dla.mil/airforcelink/
The Navy's home page:	http://www.navy.mil/
The Marines' home page:	http://www.hqmc.usmc.mil/
Corps of Engineers home page:	http://www.usace.army.mil/

The Internet can also be useful as a research tool. Government agencies such as the USGS and Library of Congress maintain home pages that provide information about the resources they provide. The USGS makes geographical data and maps available for electronic file transfer through the National Mapping Program. Most are currently too general for the purposes of historic landscape analysis, but this resource is of potential value. The following URLs may be useful:

The USGS home page:	http://www.usgs.gov/
National Mapping Program:	http://www-nmd.usgs.gov/
The ESIC home page:	http://www-nmd.usgs.gov/esic/
The National Archives home page:	http://www.nara.gov/
NPS, Links to Past:	http://www.cr.nps.gov/
Library of Congress:	http://lcweb.loc.gov/

E. Identification of Military Landscape Characteristics

In landscape studies the term "landscape characteristic" has a specific meaning. *Landscape characteristics are the tangible evidence of the activities and habits of the people who occupied, developed, used and shaped the land to serve human needs; they may reflect the beliefs, attitudes, traditions and values of these people.* Identifying the characteristics of the military landscape requires an understanding of the natural and cultural forces that have shaped it. This section describes these processes and the resulting landscape components that together comprise the military landscape.

The purpose of this section is to help researchers become sensitive of the overall landscape and how it affects decision making with regard to landscape planning on the ground. Although every body of water or mountain range in the area is rarely historically significant, these characteristic of the landscape may help researchers understand how the built environment was shaped.

a. *Spatial Organization and Land Use*

The implementation of a military mission directs the spatial organization of an installation and the ways a military service uses the land. Over time, as different

missions are implemented, the landscape of an installation changes. The overriding principle of installation development is to implement the mandated mission as expediently as possible. This often leads to a utilitarian landscape in which function is emphasized. Spatial organization consists of the relationship among land use areas, circulation systems, predominant landforms, and natural features. An examination of changing and continuing land uses may lead to a general understanding of how the military has interacted with its environment and provide clues about the kinds of physical features and historic properties that should be present.

Most landscape changes on a military installations are related to military mission, but some changes are direct while others are indirect. Modification that results from activities such as flight training, ship building, weapons testing, or defending a border is directly related. Modification that results from support activities such as recreation, social events, gardening, and food service is indirectly related. Land use areas on military installations may be classified in the following ways:

1. Land uses directly related to mission(s):
    i. air field/runway
    ii. industrial
    iii. testing
    iv. parade ground
    v. administration

2. Land uses indirectly related to mission(s)
    i. residential
    ii. recreational
    iii. support
    iv. retail/commercial
    v. educational

3. Land uses that may directly or indirectly relate to mission(s)
    i. storage, warehouses
    ii. ceremonial

Examples of major change in spatial organization and land use directly related to mission would include the Army's construction of “temporary” barracks at Camp McCoy in the 1940s and the Navy's deposition of fill to create 1500 acres of reclaimed land at the Treasure Island Navy Base in the San Francisco Bay.

Response to the Natural Environment

Major natural features, such as mountains, rivers, lakes, forests, and grasslands have influenced both the location and organization of military installations. Climate, similarly, influenced the siting of buildings, construction material, and the location of clusters of buildings and structures. Traditions in land use, construction methods, and

military customs evolved as the military responded to the physiography and ecological systems of the areas in which installations developed.

The location of installations is often related to the way the natural environment of the site supports the installation's mission. For example, Fort Monroe in Hampton, Virginia, is situated on the tip of the Virginia Peninsula on a natural vantage point overlooking the James River where the Chesapeake Bay meets the Hampton Roads harbor complex. The strategic value of Fort Monroe's location was to guard the entrance to the Chesapeake Bay. This factor is tied to its original military mission, to a chronological period, and to the technology of the time. The natural environment of Fort Monroe remains the same, but it no longer has any bearing on the installation mission. The location of Cape Canaveral Air Station in southern Florida is related to several aspects of the natural environment. Factors included the over-water flight range potential, conducive weather conditions for year round operation, the flatness of the terrain, and the numerous Atlantic islands that offered suitable locations for permanent stations to track missile flights.

c. *Expression of Military Cultural Traditions*

As discussed above in Section II, military cultural traditions are expressed on military installations in both an organizational sense and an aesthetic sense. Abstract values such as hierarchy, uniformity, discipline, utility, and patriotism are physically manifested in the landscape. All of these values are built into the military landscape in varying degrees. Different parts of each installation may hold different values. Different installations may express particular values over others. In sum these values give military installations the appearance and sense of place that make them easily recognizable.

Residential areas exhibit both hierarchy and uniformity. The size, style, and location of officers' quarters usually reflect military rank and hierarchy. In contrast, the design and arrangement of enlisted residential areas and storage areas often reflect uniformity. The installation layout and individual building design reflect uniformity and hierarchy simultaneously. The regular maintenance of lawns in public areas and the performance of activities in their assigned areas represent discipline. Warehouses in a storage area reflect utility. Monuments and flags reflect patriotism.

d. Circulation networks

Circulation networks on military installations are an important characteristic of military landscapes. To facilitate efficient mobilization of troops and supplies, most circulation systems have a distinct hierarchy. For example, primary and secondary roads are designed to carry the heaviest traffic and to connect major land use areas while local roads, cul-de-sacs, and service lanes provide access to land use areas. Over time a variety of networks have transported people, cars, trucks, tanks, airplanes, weapons, machinery, and goods from one point to another. In the past, waterways and trails, such as the Oregon and Santa Fe Trails, were also common modes of transportation. As a result, installations were often sited near rivers, and sometimes trails. Over the years transportation technology advanced to include railroads, canals, paved roads, airstrips, highways, and super highways which may be located on or near

military installations. Other circulation systems found on military installations may include tank and RV trails, pedestrian pathways, and bicycle routes.

e. Boundary demarcations

Boundary demarcations for military installations, unlike city limits, are often very visible. They delineate areas of land use and activities within the installation, and the boundaries of the installation as a whole. Boundaries take on many forms such as chain link security fences or a double row of canopy trees edging a parade field or circulation systems. A residential area may be bounded by paths, roads, or woodland. High security areas such as air fields or testing sites will almost always be delineated by high security fences or signs. Changes in elevation, ravines and waterways may also be used to define boundaries. Some installations are built on fill that was added to provide more room for expansion, including Treasure Island in San Francisco, West Point, and the Naval Academy at Annapolis.

f. Vegetation

Vegetation is a characteristic of the landscape that bears a direct relationship to long-established patterns of land use. Residential neighborhoods are often the most heavily planted areas on military installations; other areas are often left open for various military activities. The Army developed standard landscape plans for the 1920-1930's permanent construction era. Street trees are usually planted in rows along major traffic corridors along parade field perimeters. With the exception of tree-lined edges, parade fields are usually open and grass covered. Patterns of vegetation may delineate boundaries, land use areas, and natural areas such as streams or ravines. Forests are frequently used at the edges of an installation as buffer zones to the surrounding community.

While many features change over time, vegetation is perhaps the most dynamic. It grows, changes, and dies over time, whether people care for it or not. Current vegetation may differ from historic vegetation, suggesting past uses of the land such as old farmsteads or railways. Plantings often reflect the historical trends in landscape design. Some very old trees may even pre-date the installation. For example, the historic Quadrangle at Fort Sam Houston was constructed around an oak tree in 1876. The old tree is still alive today in the Quadrangle's interior courtyard.

g. *Buildings, Structures, and Objects*

Buildings, Structures, and Objects are landscape characteristics that serve human needs related to the occupation and use of the land. Their function, materials, date, condition, construction methods and location reflect the historic activities, military customs, tastes and skills of the people who built them. *Buildings*, designed to shelter military and other human activities, include officers' quarters, barracks, administration buildings, airplane hangars, warehouses, gunsheds, churches, schools and commissaries. *Structures* are designed for functions other than human shelter; they include dams, canals, fences, docks, bridges, ships and highways. *Objects* are

relatively small, but important, stationary or moveable constructions; these include markers and monuments, light poles, site furniture, machinery and equipment. Over the years, the military has developed a series of standardized plans for most buildings, structures and objects on military installations. These plans established an appearance for military installations that is easily recognizable. Probably the most ubiquitous of the standardized building plans are World War II temporary buildings that were constructed on military installations between 1939 and 1945.

h. Clusters of Buildings, Structures, Objects

The organizational and spatial relationships among clusters of buildings, structures and objects on military installations are important military landscape characteristics. Installation plans often followed general formulas to facilitate mission activities. For example, the rectangular arrangement of buildings around a parade field in a World War II cantonment permitted easy access to the parade field and support facilities for each regimental grouping. Each regiment had its own post exchange, dispensary, and mess halls in an arrangement that promoted organized maneuvers. The distinct arrangement of quarters in housing areas may reflect major civilian town planning principles.

i. Archaeological Sites

Military installations often contain both prehistoric and historic archaeological sites. While most of these sites pre-date military use of the land and are unrelated to the military mission, some historical sites may be related to prior military activities (e.g. building foundations, road and railroad bed remnants). There are many guidelines for evaluating archeological sites (refer to the list of related National Register Bulletins in the Introduction to Part One of this document).

QUESTIONS TO GUIDE RESEARCHERS IN DOCUMENTING LANDSCAPE CHARACTERISTICS

A. Spatial Organization and Land Use

How has the landscape been modified to accommodate the mission(s) throughout the development of the installation? How has the spatial organization and land use changed?

- Were water features created, re-routed or otherwise altered to accommodate the mission?
- Were landforms modified?
- Was excavation undertaken?
- When were buildings or structures built or razed?
- Was the installation reorganized or redesigned?
- Did ownership of the installation change from one military service to another?

B. Response to the Natural Environment

How did the natural environment influence the choice of location of the installation? How did it influence the design and organization of the installation?

- Was the installation located near natural waterways or a natural harbor?
- Was the installation situated on a natural defensive location such as a promontory, peninsula, or river confluence or on a flat open space to support aircraft activities?
- How were buildings, flight lines, recreation areas, or other components placed with regard to prevailing, wind, slope, and sun aspect?
- Was officer housing situated on high elevations or in a position to take advantage of scenic views?

C. Military Cultural Traditions

How does the installation landscape reflect and represent military cultural traditions?

- In what ways is hierarchy expressed? For example, how does the relative style, quality, and location of residential accommodations for various ranks of personnel show hierarchy?
- In what ways is uniformity expressed?
- What parts of the installation show utility?
- How is discipline expressed in the landscape?
- What parts of the installation express patriotism?

D. Circulation Networks

What kinds of circulation systems are found on the installation?

- Is there a distinct hierarchy to the road system (primary, secondary, local)?
- Where are rail lines located? Why there?
- How have roads and sidewalks been modified over time? Widened or resurfaced?
- What circulation networks represent historical activity on the installation?
- How was the installation sited to take advantage of existing transportation systems such as railroads, highways, and waterways?

Were runways lengthened, widened, or changed to accommodate new missions or equipment?

E. Boundary Demarcations

How have installation boundaries changed over the history of the installation?

In what ways are the external boundaries of the installation physically marked?

How are interior boundaries marked?

How have ways of marking boundaries changed over time?

. Have boundaries been changed since the installation was established?

F. Vegetation

How have vegetation patterns reflected land use design decisions through the installation's history?

Where are native and non-native species of plants found on the installation?

Have planting conventions changed over time? (i.e. foundation plantings or not?)

How is vegetation used in relation to military mission? (i.e. jungle training)

Were standard planting plans used at the installation?

G. Buildings, Structures, Objects

What characterizes the type, design, materials, and construction of buildings, structures, and objects on the installation?

What kinds of buildings, structures, and objects are found on the installation??

What architectural styles are represented?

Are buildings and structures based on standardized plans?

Did the architectural style change over time?

Are buildings being used for new purposes other than those for which they were built?

H. Clusters

What characterizes the arrangement of buildings, structures, and objects on the installation?

How do clusters reflect installation mission?

How do clusters reflect or depart from military planning and design conventions?

How do clusters reflect organizational needs and command philosophies?

I. Archaeological Sites

Do the archaeological sites on the installation relate to the past installation missions?

Are they used for current recreation/education?

IV. Evaluation

Evaluation entails three major activities: defining significance, assessing integrity, and selecting boundaries. This process uses information gathered through field survey and historic research to determine which properties within a military landscape possess characteristics of importance and what those characteristics represent. Significance, integrity, and boundaries depend on the presence and condition of tangible landscape features associated with the establishment and development of the installation. The result of evaluation is the determination of contributing and non-contributing resources and the definition of the boundaries of a historic military landscape eligible for the National Register.

A. Defining Significance

Defining significance requires several steps. First, researchers need to summarize the landscape history in a way that permits temporal and spatial analysis. Constructing a set of maps representing historical time periods helps in this regard. It will also be helpful to use archival information (photographs, reports and plans discussed in section D1). The next step is to establish the significance of the landscape resources themselves using the standardized National Register criteria. National Register Criteria Considerations are also applied to account for exceptional significance of properties less than 50 years old. Next, periods, areas, and levels of significance are determined. Lastly, a statement of significance is drafted that summarizes the significance of the property as evaluated.

1. Summarizing the Landscape History

Spatial relationships and changes over time are most easily understood when represented graphically in the form a map or plan. The following tasks utilize information gathered during the archival and field research stages and produce thematic maps that will assist in summarizing the landscape history of the installation. These tasks form the basis of the evaluation process.

a. Review all relevant historic base material (maps, documents, etc.): The purpose of this task is to gain a broad overview of the site development history and to assure that all known information is collected and evaluated for accuracy and importance.

b. Prepare historic base maps for significant periods of development, based upon site history: The purpose of this task is to develop a visually-based record of the site development history through a series of historic base maps. This is sometimes referred to as a Historic or “Cultural Landscape Atlas” of the installation. The series of historic base maps should clearly delineate those features built during the map's period, as well as those features which remained from previous periods. In addition, if appropriate, each map may also indicate features built during previous period yet subsequently removed or destroyed. Copies of existing historic maps may be used for the atlas, or new maps may be created. Standard graphic symbols should be used when creating new maps or adding details to existing maps. If

possible, new maps should be created in an electronically-based format. This will allow for easily changed scales and details. If a computerized standard (such as a particular type of CAD or GIS program) exists for an active installation, there may be opportunities to share information.

c. Preliminary identification of contributing features from each historic period: The purpose of this task is to identify those features developed during each historic period which changed or altered the landscape in a critical or defining manner. Each set of two consecutive historic base maps should be compared to determine those features built or developed between the dates of the maps. Periods of significance should become apparent during this task. Some cross-checking with real property records may be necessary during this task since maps may show features that were planned but either never built or built at a later date or features that were removed or destroyed before the map was produced.

d. Prepare current base map: The purpose of this task is to delineate a current base map which includes all of the landscape features regardless of their eventual significance and integrity assessment. This base map should be completed in a format similar to the historic base maps, employing the same symbols and other graphic qualities. If feasible, build upon an existing current base map but verify its accuracy carefully.

e. Compare current base map with historic base maps: The purpose of this task is to identify the landscape characteristics and features which survive from previous historic periods. In this task the base map is overlaid with each historic base map. Each landscape characteristic is dated, based upon the first historic base map on which it appears. Where appropriate, use color coding to help distinguish between layers of information in both manually drawn format and computerized format.

f. Develop preliminary map of surviving historic landscape features: The purpose of this task is to develop a clear set of surviving landscape features from each historic period, as identified in the site history. This will allow for the clear understanding of the significant periods of site development. In this task, those defining landscape features from each historic period identified previously are mapped and identified on the current base map. This step identifies not only surviving historic features but also those that appear to have significance from each historic period.

In completing these tasks, historical facts and field survey information should verify the presence of significant landscape characteristics that shaped the installation and the condition of the properties during each development period. Integrate archival material with field research to identify the patterns of each historic period. For example, at Fort Sam Houston, historical photographs and written histories reveal that the Infantry Post was an open, treeless parade ground bounded on all sides by Victorian officer's quarters and the Long Barracks. In the 1940s the parade field was in-filled with multi-family housing. The only tangible characteristics that remain of the old parade field are the structures and the road that encircles it. Yet with the aid of historic photographs, it is possible to visualize the previous conditions (see illustration).

2. Applying National Register Criteria:

A historic property is determined significant or not significant based on the application of standardized National Register criteria within the property's historical context (as established above). A property is determined significant if it is associated with one or more of four criteria based on historically significant events, persons, design/construction styles and methods, or information potential. Each is described below as it relates to military installations. National Register Bulletin 15 provides more detailed guidelines.

CRITERION A: Properties can be eligible for the National Register if they are associated with **events** that have made a significant contribution to the broad patterns of our history

Most military installations are in some way associated with important events in U.S. history. Eligibility for listing on the National Register of Historic Places is only appropriate if the association is determined to be *significant*.

For example, as part of the requirement for mobilized national defenses at the close of the eighteenth century, the *U.S.S. Chesapeake* was constructed at the location of Norfolk Naval Shipyard. This event was significant because the *Chesapeake* was one of first six frigates authorized by Congress to be constructed in 1794 immediately following the establishment of the Department of the Navy. One significant event associated with Fort Knox, Kentucky, was the establishment and development of the tank during the inter-war years, 1918-1940. Francis E. Warren Air Force Base, formally Fort D. A. Russell, in Wyoming, was initially associated with early transportation development. In the 1860s Union Pacific decided to locate its regional headquarters in Cheyenne, Wyoming. The Army constructed the fort just outside Cheyenne to protect railroad workers.

CRITERION B: Properties may be eligible for the National Register if they are associated with the lives of **persons** significant in our past.

A site may gain historic significance from its association with a person significant in our past,. provided that the site is representative of the person's productive life. For example, CINCPAC Fleet Headquarters Building at Pearl Harbor, Hawaii, is listed in the National Register because of its association with Admiral Chester Nimitz, who was appointed Commander in Chief, Pacific Fleet, shortly after the Japanese attack on Pearl Harbor. The headquarters building is the property most closely associated with Admiral Nimitz's leadership of the Pacific Fleet during World War II.

CRITERION C: Properties may be eligible for the National Register if they 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 the individual distinction.

Some military installations contain landscape features that possess the distinctive characteristics of a type or represent the work of a master. The site plan of an installation may be the work of a master, or may be a representative example of a type of land use significant in military practice. As large numbers of military buildings and structures are identical (i.e. housing units) and not the work of a single individual, significance is often found in the collective whole as representative of a style, type, or period.

For example, the Marine Corps Combat Development Command, Quantico contains elements of a layout design created by architect Glenn Brown. Quantico also has approximately sixty Lustron houses which are significant as the largest existing group of these post-war prefabricated homes, and make up a portion of a proposed historical district. Bryan Hall, a Navy administration building in the former Panama Canal Zone, displays distinctive Art Deco features. Many installations contain a Red Cross building representative of a unique type, as they were constructed with a long axis and a shorter mid-section cross wing. From the air, the red-roofed buildings appear as a cross, thus using form to express function.

CRITERION D: Properties may be eligible for the National Register if they have yielded, or may be likely to yield, **information** important in prehistory or history.

Both former and active installations may contain surface or subsurface remains which are likely to yield information on the installation's history as well as any previous occupation or use of the site. Fort Bliss contains a large number of archeological sites representative of indigenous Americans. At the Fort Larned National Historic Site, the 1867 stables used by the buffalo soldiers were destroyed by fire in 1869. Subsurface remains could provide information on the location, contents, and uses of the building.

Historic military landscapes, because of their historical context and complexity, often relate to more than one of the criterion. Archival information and site surveys in conjunction with the map sets constructed above will help determine the historic contexts associated with the installation and how that history is evident on the landscape. Historic facts and survey data should verify the presence of significant historic landscape characteristics and the condition of the properties that made up the installation historically.

CRITERIA CONSIDERATIONS:

Certain kinds of properties are not usually considered for listing in the National Register. These include: cemeteries, birthplaces or graves associated with historical figures, properties owned by religious institutions or used for religious purposes, structures that have been moved from their original locations, reconstructed historic buildings, properties primarily commemorative in nature, and properties that have achieved significance within the past fifty years. However, exceptions will be made if they are integral parts of districts or if they fall within the following categories called "Criteria Considerations" (see NR 15 for details):

a. a religious property deriving primary significance from architectural or artistic distinction or historical importance; or

b. a building or structure removed from its original location but which is significant primarily for architectural value, or which is the surviving structure most importantly associated with a historic person or event; or

c. a birthplace or grave of a historical figure of outstanding importance if there is no other appropriate site or building directly associated with his or her productive life; or

d. a cemetery which derives its primary significance from graves of persons of transcendent importance, from age, from distinctive design features, or from association with historic events; or

e. a reconstructed building when accurately executed in a suitable environment and presented in a dignified manner as a part of a restoration master plan, and when no other building or structure with the same association has survived; or

f. a property primarily commemorative in intent if design, age, tradition, or symbolic value has invested it with its own historical significance; or

g. a property achieving significance within the past 50 years if it is of exceptional importance.

Of particular concern for military properties is the so called "50 year rule." Since the passage of time is necessary to recognize historic importance, properties less than fifty years of age may be listed *only* if they are exceptionally important. Military missions are ongoing, and many recent missions were associated with events of exceptionally important national, even international, significance. The Korean and Vietnam conflicts, the Cold War, advances in weapons technology, and space exploration are only a few examples. For guidance on how to apply the National Register criteria to properties that potentially derived significance within the past fifty years, refer to bulletin #22, "Guidelines for Evaluating and Nominating Properties That Have Achieved Significance Within the Last Fifty Years."

Military cemeteries can also fall within the National Register's categories of special consideration from their association with persons of transcendent importance, from age, from distinctive design features or from association with historic events. A number of significant historical figures are buried at the U.S. Military Academy at West Point including Lieutenant General Winfield Scott, Major General George W. Goethals (engineer-in-charge of the Panama Canal construction), and General George A. Custer. Military cemeteries can also be significant for their distinctive military design and layout. For more information on evaluating cemeteries and burial places, refer to bulletin #41, "Guidelines for Evaluating and Registering Cemeteries and Burial Places." Similarly, churches and

chapels on military installations may also qualify because of their association with historical events and persons. Religious properties may also be listed for their design and construction under Criterion C.

3 Periods and Areas of Significance

A **period of significance** is the span of time when a property was associated with important events, activities, persons, cultural groups, and land uses or attained important physical qualities or characteristics. Although it may be short, more often it extends many years, covering a series of events, continuum of activities, or evolution of physical characteristics. Properties may have more than one period of significance.

For military installations, the period of significance will most likely begin with the date of establishment, but not always. Continuous land use, association, or function does not by itself justify continuing the period of significance. Properties that have evolved and achieved importance during separate periods should be given separate periods of significance. The length of time should be based on the years when the property historically made important contributions. Generally speaking, the period closes with the date when the events, activities, and construction having historic importance ended. Many military installations, from old frontier forts to recently closed bases, are no longer active. Some historic ones are managed by the National Park Service. The closing date for inactive installations in most cases is the date that it ceased being a military facility. If the installation is active and a specific date cannot be identified, a date 50 years from the present can be used. The Criteria Consideration regarding the 50 year rule should be reviewed carefully. A great number of historic events have been associated with the military in the past fifty years such as the Cold War and Vietnam War.

The National Register defines a series of standardized **areas of significance** that represent aspects or themes of historic development in which a property made contributions. Developing the historic contexts should provide the researcher with knowledge applicable to selecting the appropriate areas of significance. For nearly all historic military landscapes, *military* will be the primary area of significance. In some cases, *archeology* will be an important area of significance for an installation. Other relevant areas of significance may be associated with the designed or built environment such as *architecture* or *landscape architecture*, *engineering*, *community planning and development*, and/or *transportation*. Other areas of significance may be associated with the particular mission of an active or inactive installation, such as *communications*, *education*, *exploration/settlement*, *health/medicine*, *invention*, and/or *maritime history*. The support facilities on an installation could be significant under *entertainment/recreation* or *performing arts*. (see sidebar).

4. Writing a Statement of Significance

The **statement of significance** is a narrative used to describe why the property was important and how, through its characteristics, it is directly related to

specific historic contexts, National Register criteria, areas and periods of significance, and criteria considerations, where applicable. The important events, persons, activities and physical qualities are discussed in relation to specific features identified by the historic military landscape characteristics. The more important landscape characteristics should be given a more factual and detailed discussion.

The statement of significance is a requirement of the Registration process described in section V of this document but is also a necessary preliminary step in establishing the integrity of a historical property. The statement should begin with a summary paragraph describing the overall importance of the historic military landscape. This should be followed with subsequent paragraphs supporting the significance of the landscape, events, persons, activities, and physical qualities. This statement should also make clear the level of significance (local, State, or national) a property holds.

Because the statement involves delineating those features which are associated with historic events, periods, designers, or trends, as specified in National Register criteria requires, it is useful to return to the historical maps constructed in the summary of landscape history above. The following two tasks must be completed:

a. Field check preliminary map to determine accuracy and necessary additions: The purpose of this task is to field check previously developed maps and to locate and add features not previously identified through the mapping process. This task requires an excellent knowledge of both the site and the site's history and significance. It is especially important to determine an acceptable level or scale of documentation prior to field work. For example, in some sites, large scale features such as the geographic location of a road, housing complex, battery or airfield will be emphasized. In other sites, a more detailed level of documentation such as recording curbs, gun placement, or detailed materials will be important. In all cases, the level of detail should be appropriate for the level of historic documentation and analysis.

b. Refine map of surviving contributing historic landscape features: The purpose of this task is to modify the map(s) of contributing historic landscape features, based upon the field work in the previous task. This will require a review of all of the historic base maps and the current base map, a refinement of the scale of concern based upon historic data and landscape data, and the modification of the map(s) of contributing historic landscape features to reflect this new information.

AREAS OF SIGNIFICANCE COMMON AMONG HISTORIC MILITARY LANDSCAPES

Architecture, where high-style or vernacular buildings, by historical association, function, design, spatial arrangement, or setting, are integrally related to large areas of landscape and are indicative of the physical development, building practices, materials, traditions, or land uses of military installations.

Archeology, where patterns visible upon the land or evident in subsurface remains can provide important information about land use and occupation of prehistoric or historic peoples, such as Native American sites, or ruins of early military buildings.

Communications, where the technology and process of transmitting information was applied toward the accomplishment of military mission(s). For example, downrange missile tracking stations would be significant under the area of communications.

Community Planning and Development, where the spatial organization and character of the landscape are the result of a plan designed by military or civilian personnel using contemporary planning styles of the day.

Education, where the process of conveying or acquiring knowledge or skills through systematic instruction, training, or study is geared to military subjects. The Army, Naval, and Air Force academies are obvious examples, but this area of significance could also apply to installations providing educational services such as specialized weapons training, instructor training, or medical training.

Engineering, where the landscape and its uses reflect the practical application of scientific principles to serve military needs, such as missile launch facilities, research and development facilities, and shipyards.

Exploration/Settlement, where the landscape or installation site continues to reflect the exploration, establishment, or early development of the nation or region. This could include remnants of migration trails, ferry sites, locations of treaty signings, or space exploration facilities.

Health/Medicine, where the military care of the sick, disabled, and handicapped, and the promotion of health and hygiene is reflected in the landscape, ranging in scale from the Walter Reed Army Medical Center to an installation clinic.

Landscape Architecture, where the historic military landscape contains sites, including residential landscapes, gardens, parks or recreation areas, that have been based on established design principles or conscious designs, or are the work of a master, having importance within the context of landscape design.

Maritime History, where the exploration, fishing, navigation, and use of in-land, coastal, and deep sea waters for military purposes is reflected in the landscape.

Military, where the system of defending the territory and sovereignty of a people is expressed in the landscape. Most nominations for historic military landscapes will document significance in this area.

Transportation, where the process and technology of conveying passengers or materials for military purposes is reflected in the landscape. Modes of transportation involving the military include foot, animal (oxen, horse or mule), motorized vehicles, rail, ships, and aircraft.

B. Assessing Integrity

Integrity is the ability of a property to convey its significance. Within the concept of integrity, the National Register criteria recognize seven qualities, or aspects, that in various combinations define integrity. Determining which of these aspects are most important for a particular property to convey its significance requires knowing why, where, and when the property is significant. Therefore, assessments of integrity come after the determination of significance. A property's periods of significance become the benchmark for measuring whether subsequent changes contribute to its historic evolution or alter its historic integrity. The seven aspects of integrity are: location, design, setting, materials, workmanship, feeling and association. Decisions about the integrity of historic landscapes require professional judgments about whether the property today reflects the spatial organization, physical components, and historical associations that it attained during the periods of significance. While no landscape will appear exactly as it did fifty or 100 years ago, historic landscapes with integrity retain recognizable qualities of their past.

Using the landscape history, maps, and lists of resources and characteristics compiled during the establishment of significance, apply the following types of questions as they relate to the military historic landscape in question.

Location. Is the place where the historic property was constructed or the place where the historic event occurred. For historic landscapes this applies to the spatial relationships among component parts of the landscape.

Are important elements of the landscape in their original location?
Have buildings been moved or streets relocated in a way that compromises integrity?

Design. Is the combination of elements that create the form, plan, space, structure, and style of a property. For historic landscapes this applies to both conscious and unconscious design decisions over time that affect where land use, organization of space, circulation networks, buildings and structures, and vegetation are located.

Has the general structure of the landscape changed since its period of significance?

Setting. Is the physical environment of a historic property. Whereas location refers to the specific place where a property was built or an event occurred, setting refers to the character of the place in which the property played its historical role.

Does the landscape retain important features such as topography, vegetation, and relationships between open space and buildings that convey the setting from its period of significance?

Materials. Are the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property.

Are the original materials used in the structuring and shaping of the landscape still extant?

Workmanship. Is the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory. For the military landscape, this would apply to both formally designed areas or installation plans that represent particular styles and areas that reflect institutional, prefabricated construction techniques.

Does the property reflect evidence of landscape design or installation planning?

Does the property retain characteristic workmanship from the period of significance?

Feeling. Is a property's expression of the aesthetic or historic sense of a particular period of time.

Does the property invoke a particular sense of time and place?

Is it possible to tell that one has entered a historic landscape based on its appearance?

Association. Is the direct link between an important historic event or person and a historic property. A property retains association if it *is* the place where the event or activity occurred and is sufficiently intact to convey that relationship to an observer.

Is it possible to associate the important events or people with elements of the landscape?

The relationship of landscape characteristics and integrity is complex. Patterns of spatial organization, circulation networks, and clusters directly relate to design and strongly influence the cohesiveness of the landscape. Responses to the natural environment, boundary demarcation, buildings, clusters, and vegetation all add to location and setting as well as design. Continuing and compatible land use and activities can enhance integrity of feeling and association. Buildings, structures, vegetation, and land uses all reflect materials, workmanship and design. Archaeological sites may strengthen integrity by providing physical evidence of activities no longer practiced. Each of the these factors require consideration when establishing the integrity of a resource.

2. Establishing Integrity

The following two tasks complete the integrity assessment process.

a. Develop statement of integrity for entire study area as well as individual landscape units, as needed: The purpose of this task is to delineate, through narrative, the essential integrity of the landscape and any individual landscape units identified through the mapping or field study process. This statement should clearly list those areas which have integrity, specific landscape features which contribute to that integrity, and any features which detract from integrity. It will be helpful to key this narrative to historic and current base maps.

b. Develop final map of contributing landscape characteristics: The purpose of this task is to develop a current base map which indicates only those features which contribute to the landscape's integrity, as determined through this process. This map will also serve as a graphic list of features to be protected or, in the case of development, mitigated. As with the other maps, this map should conform to established professional norms for graphic symbols and displays.

In combination, the statement of significance, the set of maps developed during the establishment of significance, the statement of integrity, and the map of contributing resources will establish a clearly defensible set of steps in determining the boundaries of a historic military landscape.

C. Establishing Boundaries

Boundaries for historic military landscapes must encompass the area having historic significance and contain contributing resources that express the characteristics of the historic property. Selecting the boundary involves formally establishing the proper edges of the areas that are determined significant and possess integrity.

1. Selecting Edges

National Register boundaries must encompass a concentration or continuity of historic military landscape characteristics. The boundaries should include resources that have both historic significance and integrity. Boundaries must be fixed in space and capable of accurate description by metes and bounds, legal descriptions, mapping coordinates, or site plans drawn to scale.

Both active and former military installations will have specific boundaries in place. The National Register boundary will rarely exceed the outer boundary of the installation. For most installations, the boundaries of the historic military landscape will not encompass the entire installation. Often historic installation boundaries can guide the establishment of historic landscape boundaries. For most installations, a legal boundary description will have been defined when the installation was created, and subsequent changes to that boundary will also have been recorded. However, boundaries will need to be selected that conform to the current situation regarding contributing resources.

Boundaries selected should be logical in relation to the natural landscape when possible. Both natural and man-made landforms can provide edges. A channelized stream can serve as an easily identifiable edge, as can a steep hillside or ravine. Often, the historic landscape characteristics determined to be present and retaining integrity can themselves serve as edges. For example, a spatial shift between land uses may present a useful edge, as where a residential area meets an administrative one. Circulation networks often create useful edges, as roads, railroad tracks, pedestrian pathways, and other transport routes often can be used to frame a historic military landscape. Already existing boundary demarcation

methods such as fencing or previously planted screening vegetation may serve as edges. When a historic military landscape contains a significant view that affected location or design decisions, edges should be selected that include the primary characteristics of the viewshed.

2. Sites and Discontiguous Districts

Historic military landscape characteristics should predominate and occur throughout the area being proposed for nomination. Peripheral areas having a concentration of non-historic features should be excluded, while the impact of centrally located non-historic features on historic integrity should be considered. If, because of their density, distribution, and predominance, non-historic features seriously fragment the overall historic integrity of large-scale landscapes, smaller areas or individual resources having integrity should be identified for listing.

As military installations are constantly changing and evolving, it will most often be the case that only smaller areas within the installation as a whole will be identified as historic military landscapes. It is possible to have a combination of sites and districts within the installation as a whole. For the smallest properties, designation as a contributing site will be the most efficient method of identification. For most historic military landscapes, more than one resource will be included in the landscape. When this occurs, it is most useful to designate the area a district. If identified as discontiguous areas, these landscapes do not have to be joined by boundaries into one larger district, which would be likely to contain a large number of non-contributing resources. For example, at the Marine Corps Combat Development Command, Quantico, areas were identified based on the relevant historic context themes. These areas contained an assortment of buildings, structures, sites, and objects.

V. Registration

This section provides guidance on developing a National Register nomination for a historic military landscape. It follows National Register guidance closely and is organized according to the section names on the registration form. It should be used to **supplement** National Register Bulletin 16, *Guidelines for Completing National Register of Historic Places Forms*.

Historic military landscapes can be nominated and listed individually on the National Register Registration Form (NPS 10-900), or as part of a group of thematically related properties in a multiple property approach using the National Register Multiple Property Documentation Form (NPS 10-900-b). The latter form is used to document the contexts, property types, and methodology as a cover document; separate individual registration forms are then used to register each eligible property. If an installation contains a large amount of various property types as eligible but not contiguous resources, a multiple property approach could prove helpful in developing the nomination. If there are several historic contexts for the historic military landscape, these could be separated out and representative property types developed for each. Historic military landscapes are often very complex collections of resources, and the multiple property approach helps to streamline the method of information collected in surveys and research for registration and preservation planning purposes. Evaluation of individual properties is facilitated by comparing them with resources that share similar physical characteristics and historical associations. Multiple property documentation can provide essential comparative information for preservation planning and can be used to establish preservation priorities based on historical significance. A multiple property approach may also be useful when nominating the entire installation is not feasible, or where the installation as a whole lacks integrity.

Nominations are processed in accordance with the regulations specified in 36 CFR Part 60, and submitted to the National Park Service through the appropriate Federal or State Historic Preservation Officer.

A. Classification

Historic military landscapes will be classified either as a *site* or a *district*. According to the National Register, a property where the location itself is the main resource and possesses historic, cultural, or archeological value is a *site*. If the property contains a significant concentration, linkage, or continuity of resources (buildings, structures, objects, or sites), united by plan or physical development, it is classified as a *district*. The resources contained within a historic property are classified as either *contributing* or *non-contributing*.

By National Register definition, a *contributing* resource adds to the historic military landscape, other historic associations, historic architectural qualities, or archeological values for which a property is significant because (a) it was present during the period of significance, relates to the documented significance of the property, and possesses historic integrity or is capable of yielding important information about the period, or (b) it independently meets the National Register criteria.

By National Register definition, a *non-contributing* resource does not adds to the historic military landscape, other historic associations, historic architectural qualities, or archeological values for which a property is significant because (a) it was not present during the period of significance, or does not relate to the documented significance of the property, (b) due to alterations, disturbances, additions, or other changes, it no longer possesses historic integrity or is capable of yielding important information about the period, or (c) it does not independently meet the National Register criteria.

Contributing and non-contributing resources are counted according to the guidance found in Bulletins 14 and 16. Buildings, structures, objects, and sites within the landscape that are substantial in size and scale or are specifically discussed as significant are counted separately.

B. Function

Data categories such as domestic, commerce/trade, social, education, religion, funerary, recreation and culture, health care, defense, landscape, and transportation could have sub-categories applicable in defining the past and present functions of the historic military landscape. Use National Register Bulletin 16 for a complete list. Only the most predominant functions of the property should be listed.

C. Description

According to the National Register, this section of the nomination form is a narrative description of the evolution and current condition of the historic military landscape. The processes that have shaped the landscape are discussed and related to specific features within the property. Changes that have occurred in the use and character of the land should be dated as accurately as possible. The chart on pages 22-24 lists the information to be included for each characteristic.

Information about the historic military landscape characteristics should be organized to best describe the character of the property. If a multiple property approach is being used, describe the resources in a manner that explains how they fit the appropriate property type defined in the cover document. For individual site or district nominations, it may be best to describe the general layout and character of the property, and then provide a more detailed description of the landscape characteristics it contains.

Specialized terminology may be necessary for describing architectural, engineering, botanical or geological resources. When these terms are necessary, they should be clearly explained. Whenever possible, use common names or terms to describe the property. This holds for military terminology as well. It will often be necessary to use the military names for activities, land uses, structures, objects, etc. If the military term is not easily understood, an explanation should be included.

The narrative should begin with a summary paragraph briefly describing the historic military landscape, noting its major physical characteristics and assessing its overall integrity. Subsequent paragraphs are used to describe the landscape and provide support for the summary paragraph.

D. Significance

Following National Register bulletin guidelines, the statement of significance is a narrative used to describe why the property was important and how, through its characteristics, it is directly related to specific historic contexts, National Register criteria, areas and periods of significance, and criteria considerations, where applicable. The important events, persons, activities and physical qualities are discussed in relation to specific features identified by the historic military landscape characteristics. The more important landscape characteristics should be given a more factual and detailed discussion.

The statement of significance should begin with a summary paragraph describing the overall importance of the historic military landscape. This should be followed with subsequent paragraphs supporting the significance of the landscape, events, persons, activities, and physical qualities.

E. Boundaries

Boundaries of a historic military landscape should be delineated as accurately as possible using a measured description, legal descriptions, tax parcel numbers, lines and sections on USGS maps, or a sketch map drawn to a scale preferably no smaller than 1" equals 200 feet.

F. Maps

National Register guidelines request a detailed sketch map for all properties meeting the definition of historic district. The map depicts the extent of the district through clear demarcation of boundaries, and indicates the locations and relationships of the principal landscape features. Buildings and structures, landscape sites, circulation networks, major land uses, archeological sites, important natural features, and large areas of vegetation should be marked on the map. Each resource that is substantial in size, scale and importance should be labeled by name, number, or other symbol, and marked as **contributing** or **non-contributing**. Often, an installation will have current maps available showing all physical property. Other maps may be available indicating current landforms and contour lines, vegetation types, and/or land uses. These can be combined and used as a base map for indicating sites or districts.

According to the National Register, several maps drawn to different scales may be used in place of one overall sketch map for properties with large acreage. A small-scale map, such as a USGS topographic map in the 1:24,000 series, can be used to delineate the overall property, and to depict boundaries, principal land use areas, circulation networks, important natural features, isolated resources, and

clusters. Maps drawn to a larger scale, for example, 1" equals 200 feet, may then be used to locate the individual resources within each cluster.

A series of maps, such as the ones developed for the evaluation of integrity, can be used to show the evolution of the historic military landscape. Copies of historic maps showing the installation at various points in time are useful records, and should be included with the nomination if available. The installation property office, and history office are good places to look for historic maps. The National Archives could also possess appropriate maps.

G. Photographs

Representative views of historic and non-historic land areas and military landscape characteristics must be submitted with the registration form. Copies of historical photographs, engravings, and illustrations may also be included. Contemporary photographs taken from the vantage point of historical photographs may supplement the written description of land changes. Although not required by the National Register, photographs should be processed in keeping with archival standards for best results.

There is always a possibility that some areas of a military installation will be off-limits to photographs. When scheduling field work, be sure to determine which areas are sensitive and secure permission to photograph all areas. In some instances, installation security may provide an escort to inform the researcher what can and can not be photographed.

For further information on taking photographs for National Register nominations, see *National Register Bulletin 23: How to Improve the Quality of Photos for National Register Nominations.*

Appendix A: Glossary of Military and Landscape/Design Terms

Armory 1) A place for storing weapons and equipment. Also an Army Reserve or National Guard installation where the principal purpose is drilling and training, storage of weapons and equipment incidental. 2) A factory for making arms. 3) An arsenal.

Arsenal 1) An installation where weapons, ammunition, and other military matériel is made, repaired, or stored. 2) An armory, but without drill facilities. 3) A stock of weapons.

Artillery Range See Firing Range.

Barracks Buildings used for housing military personnel. The term is often used specifically to designate housing for enlisted personnel, in distinction from separate quarters in which officers and noncommissioned officers live.

Base, Military An installation consisting of facilities for support of military service activities, including living quarters, means of security, internal lines of communication, utilities, and other elements essential to maintaining and operating armed forces units.

Bivouac A temporary assembly or encampment of troops in the field, with either temporary shelter or, more often, no shelter.

Blockhouse A defensive structure of heavy timbers or other substantial material with small openings or loopholes for observation and for firing weapons. In North America from the colonial period into the nineteenth century, blockhouses were often two-story log structures with the second overhanging the first on all sides.

BRAC Base Closures and Realignment Commission. A commission formed by an act passed by Congress on 3 May 1988 to direct the downsizing of the military.

Camp A group of tents, huts, or other shelter for temporarily housing troops. Often synonymous with military post.

Cantonment 1) A group of temporary structures used for housing troops. 2) A military post or camp.

Citadel Fortifications that command or defend the approaches to a city, often on a hill.

Depot A facility, often an installation, for the receipt, storage, issue, maintenance, manufacture, assembly, or salvage of supplies. Or for the reception, processing, training, and assignment of personnel.

DoD Department of Defense

Encampment A temporary camp in the field involving more troops than a bivouac, established for a longer period of time.

Firing Range An area equipped with targets for practice firing.

Fort 1) A strong or fortified structure that is protected by walls and ditches. 2) Permanent US Army installation or garrison.

Fortress A fortified place generally larger than a fort and often including a town within its fortified perimeter.

Garrison 1) All units assigned to a base or area for defense, development, operation, and maintenance of facilities. 2) A military post.

ICBM Intercontinental Ballistic Missile

Landscape The surface features of a place and the spatial relationship among those features, including natural terrain, human affected terrain, and the built environment.

Landscape Characteristics The tangible evidence of the activities and habits of the people who occupied, developed, used, and shaped the land to serve human needs; they may reflect the beliefs, attitudes, traditions, and values of the people.

Landscape Components The physical elements of landscape that in combination define its characteristics such as circulation networks, boundary demarcations, vegetation, buildings, and structures.

Landscape, Designed Landscape designed or planned by a professional. Often refers to landscape designed by a famous landscape architect or planner.

Landscape, Historic A geographical area that historically has been used by people, or shaped or modified by human activity, occupancy, or intervention, and that possesses a significant concentration, linkage, or continuity of areas of land use, vegetation, buildings and structures, roads and waterways, and natural features.

Landscape, Historic Military A landscape that is uniquely shaped in support of a particular military mission and is associated with historically important persons or events, or is an important indicator of the broad patterns of history.

Landscape, Military A landscape that is uniquely shaped through activities in support of a particular military mission.

Landscape Process A series of human actions or a continuous human action that is instrumental in shaping the land. Both large scale and small scale landscape

processes are the forces that result in the creation or alteration of landscape components. For example, the process of fortification may result in earthworks or redoubts; the process of war-time expansion may result in a cluster of barracks of a particular style or an airfield.

Landscape, Vernacular 1) Landscapes that are not designed by professional designers or planners. 2) Landscapes of the everyday or ordinary. 3) Landscapes identifiably shaped by the activity of the people of particular historical period, region, or group.

Launch Complex A localized arrangement of structures and facilities necessary for launching missiles.

Main Post Portion of a military installation where administrative and support services are concentrated.

Military Installation A military facility in a fixed or relatively fixed location, together with its buildings, building equipment, and subsidiary facility such as piers, spurs, access roads, and beacons. Often synonymous with base, post, camp, and station.

Mission 1) The objective; the task, together with the purpose, which clearly indicates the action to be taken. 2) More commonly, a duty assigned to an individual or unit. 3) The dispatching of one or more aircraft to accomplish one particular task. 4) A group or detachment of officers and enlisted men serving in a friendly country for the purpose of providing training or support (often called a "military mission").

Mobilization Preparation for war by assembling and organizing the military resources and, at times, the societal and economic resources of a nation or other political group.

Naval Activity Generic term used by DON to indicate a Navy Facility both active and reserve.

Navy Yard A naval shore establishment which provides a variety of important services to fleets. The largest navy yards have complete facilities for building, refitting, modernizing, repairing, docking, storing, and providing logistic support for ships. Most yards provide only some of these services and with regard to maintenance of ships, are specialized to a particular class of warships.

NHPA National Historic Preservation Act. Federal law passed in 1966 requiring and encouraging the consideration of historic properties in the planning and implementation of and use and development projects. **Section 106** of this act requires that Federal agencies take into account the effects of their undertakings on historic properties. When a historically significant property may be substantially altered or demolished, **Section 110** requires that appropriate records be made of the property and deposited in the Library of Congress.

NRHP National Register of Historic Places. 1) A list of properties which are significant in American history and worthy of preservation. 2) The office in the Interagency Resources Division of the Cultural Resources branch of the National Park Service charged with maintaining and expanding the list through the established National Register Criteria for Evaluation.

Operations Military activities that occur when combat is underway or being rehearsed.

Ordnance All military weapons, ammunition, explosives, combat vehicles, battle matériel, and maintenance supplies.

Parade Ground A large, flat expanse of land, usually covered with mowed turf grass, where troops march in review.

Post Location where troops are stationed, or reside permanently. Synonymous with Fort

Station 1) A general term meaning any military or naval shore installation, location, activity, function or group of functions. 2) A particular kind of activity or function to which other activities or individuals may come for a special service, often of a technical nature.

Appendix B: Suggested Readings

Histories:

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