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Cultural Landscape Study of Fort Davis National Historic Site, Texas

David Keith Myers
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CULTURAL LANDSCAPE STUDY OF FORT DAVIS NATIONAL
HISTORIC SITE, TEXAS

David Keith Myers

A THESIS

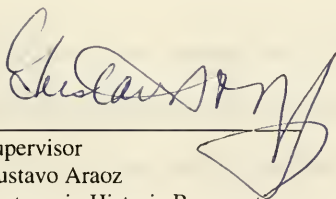
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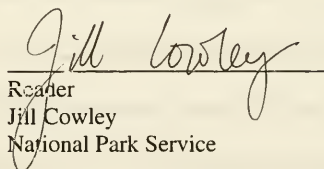
Presented to the Faculties of the University of Pennsylvania in
Partial Fulfillment of the Requirements for the Degree of

MASTER OF SCIENCE

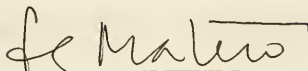
2000



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INTRODUCTION

In 1961, President John F. Kennedy signed into law legislation that created Fort Davis National Historic Site, Texas. Located in the rugged but majestic Davis Mountains in the area of west Texas known as the Trans-Pecos, which lies between the Pecos River and the Río Grande, Fort Davis attained historical significance as a U.S. Army post from 1854 to 1891 that protected the transcontinental road going through west Texas on its way to California and the surrounding frontier from Apache, Comanche, and Kiowa incursions. This study examines the cultural landscape at Fort Davis National Historic Site, which represents the combined interactions between the military complex that existed there and the natural environment.

Although the concept of cultural landscapes was first used in the United States within the field of cultural geography in the 1920s, it has more recently been widely applied in the practice of the conservation of heritage resources. Until now, though, no study of Fort Davis has ever used a cultural landscape approach. Previous studies concerning the site have tended to emphasize static structures. Other isolated areas of land use, such as the post's garden and cemetery, have been described, as has the site's historic vegetation. However, a more comprehensive documentation and analysis connecting nature and culture has been lacking. As a result, the site's conservation and interpretation has emphasized static buildings as well. By recognizing contextual complexities, a cultural landscape approach offers a broader understanding of the significance of heritage sites,

which in turn brings greater depth to the definition of what should be conserved and interpreted.

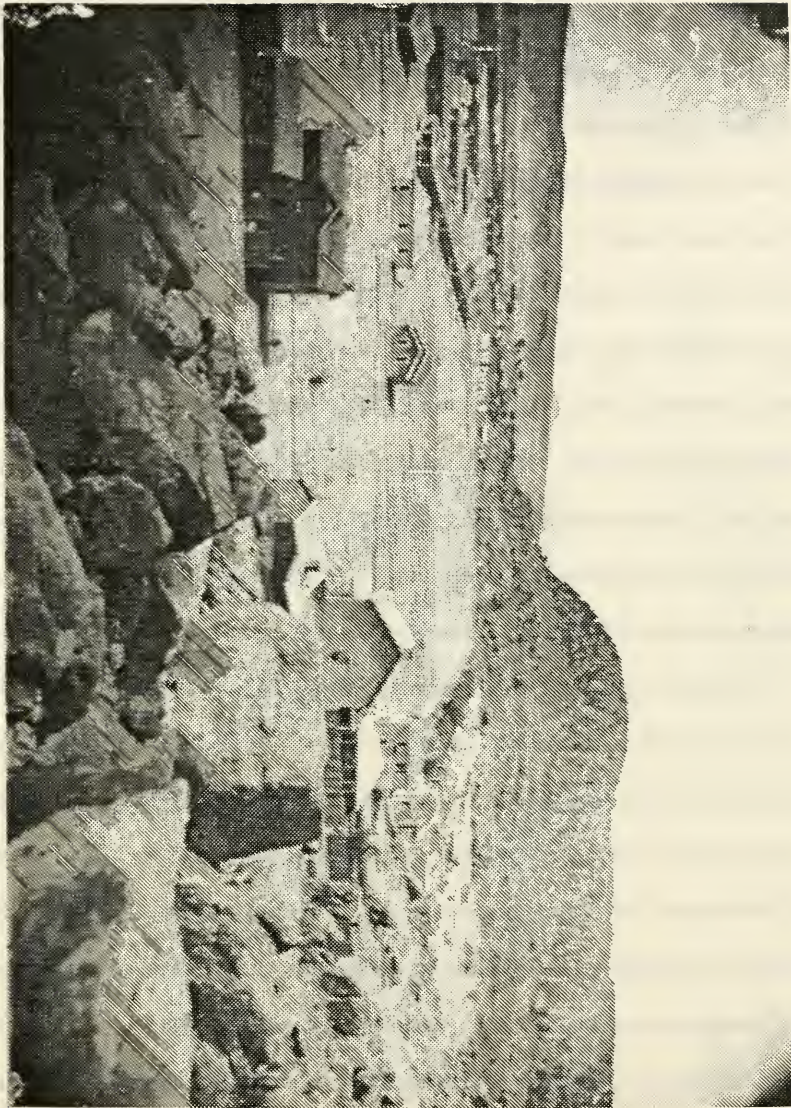


Figure 1. Photograph, Second Fort Davis from north, ca. 1886 (Source: Fort Davis NHS Archives)

Before dealing with significance, the first primary objective of this thesis is to document and describe the development of the site's cultural landscape over time. This objective is dealt with in the thesis's first chapter, which begins with a discussion of the site's broader geographic context and then focuses on historic landscape development within the boundaries of the current historic site. The latter discussion is organized according to the following periods of development: 1) the pre-European period (prior to 1583); 2) the period during which there was a European presence but prior to the creation of Fort Davis by the U.S. Army (1583-1854); 3) the period of the first Fort Davis (1854-1861); 4) the period of Confederate occupation and abandonment (1861-1867); 5) the period of the second Fort Davis (1867-1891); 6) the period after the departure of the U.S. army and prior to the creation of Fort Davis NHS (1891-1961); and 7) the period since the creation of Fort Davis National Historic Site (1961-present). This history is written in greatest detail concerning the site's periods of greatest historical significance, the time of occupation by the U.S. Army both prior to and after the Civil War. The description of each of these periods first provides a general historical overview, and then describes the period's significant landscape characteristics. These characteristics are defined in the National Park Service's *Cultural Landscapes Inventory Professional Procedures Guide*, and include the following: natural systems and features; spatial organization; land use; topography; vegetation; circulation; buildings and structures; cluster arrangement; views and vistas; constructed water features; and small-scale features.¹

¹ National Park Service, *Cultural Landscapes Inventory Professional Procedures Guide*. Prepared by Robert R. Page (Washington, D.C.: U.S. Department of the Interior, National Park Service, 1998).

It should be noted that the remnants of cultural landscape features formed during the past that still exist today are described entirely within the discussion of the period since the acquisition of the site by the Park Service. The purpose of the description of preceding historic periods is to document the development of those features.

Based upon the findings produced through this research and documentation of the site, the thesis's second main objective is to identify what is significant in the Fort Davis cultural landscape of today, which is dealt with in Chapter 2. The chapter commences with a discussion of the definition and application of the cultural landscape concept within both academia and the practice of heritage management. The proceeding discussion deals specifically with Fort Davis, defining the significance of the cultural landscape there through the values that reside in the site. The criteria used for defining significance are those contained in the *Burra Charter*, which was first adopted by the Australia Committee of the International Council on Monuments and Sites (ICOMOS) in 1978, as well as an additional value proposed by Australian cultural landscape specialist Ken Taylor.²

The final chapter of the thesis, entitled "Discussion," offers recommendations for both conservation and interpretation of the Fort Davis cultural landscape based upon the preceding statement of significance. The end goal of this chapter is to enhance the ability

² Australia ICOMOS, *The Burra Charter (The Australia ICOMOS Charter for Places of Cultural Significance)* (1988), < <http://www.icomos.org/australia/>>; Ken Taylor, "Interpretive Values and Cultural Landscapes: An Australian Perspective," *CRM* 17, no. 7 (1994), pp. 16-18.

of the Park Service to conserve those values that give the site significance and present them to the public.

CHAPTER 1: GEOGRAPHIC CONTEXT AND HISTORY OF LANDSCAPE DEVELOPMENT

GEOGRAPHIC CONTEXT

GEOMORPHOLOGY

Fort Davis National Historic Site is located at the eastern edge of the Davis Mountain region of western Texas that is located within the North American Basin and Range physiographic province. The numerous basins and ranges of the province were produced by faulting that started in the Tertiary geologic period, which has been accompanied periodically into the present by volcanic activity and regional uplift. The Davis Mountains in particular were formed during volcanic eruptions approximately thirty-five million years ago that centered around two main points – the Buckhorn Caldera, northwest of Fort Davis, and the Paisano Volcano, located west of Alpine in Brewster County. These rugged mountains, comprised of horizontal strata of igneous rock, are surrounded by a relatively flat plain. Large parts of this plain, which are elevated around 4,000 feet above sea level, are basins filled with eroded debris from the surrounding mountains. Much of the main mass of mountains lies higher than 5,000 feet, making it Texas's second highest range, including Mount Livermore, the state's fifth highest peak at 8,378 feet. The region spans an area of approximately forty-five miles in length from north to south and about thirty-five miles wide from east to west.



Figure 2. Map, Physiography of Trans-Pecos region (Source: Erwin Raisz, *Landforms of the United States*, 6th revised edition (Melrose, Mass.: Raisz Landform Maps, 1957), map.

While many peaks and ridges are separated by broad, level valleys, several intermittent streams that run through the area have created narrow, steep-walled canyons.¹

Fort Davis National Historic Site in particular is situated around the entrance of just such a canyon. Hospital Canyon has steep rock cliffs surrounding it on three sides, with Sleeping Lion Mountain to the south and the North Ridge to the north. The canyon floor slopes gently from west to east, where its mouth is situated at an elevation of around 4,900 feet. The tops of the surrounding ridges are approximately 300 feet higher.

The geologic makeup of the site and its vicinity is comprised of three distinct Tertiary geologic units, all of which were created through igneous processes. The lowest exposed unit is the upper part of a medium-gray andesite flow, which Everett notes “is commonly seen as rock fragments in the colluvium and alluvium at the mouth of Hospital Canyon and along the foot of the slopes of the canyon.” Overlying the andesite is rhyolite porphyry, which makes up most of the slopes and cliffs surrounding Hospital Canyon. This unit dominates the appearance of the landscape above the canyon floor when facing Hospital Canyon from the east.

¹ W. Frank Blair, *A Contribution to the Ecology and Faunal Relationships of the Mammals of the Davis Mountain Region, Southwestern Texas* (Ann Arbor, Mich.: University of Michigan Press, 1940) p. 7; James A. Henry and Joann Mossa, *Natural Landscapes of the United States*, 5th Edition (Dubuque, Iowa: Kendall/Hunt Publishing Co., 1995), p. 327; Texas State Historical Assoc., *The Handbook of Texas Online*, <http://www.tsha.utexas.edu/handbook/online/index.html>; Robert Wooster, *History of Fort Davis, Texas* (Santa Fe, N.M.: National Park Service, Southwest Cultural Resources Center, 1990), p. 2.

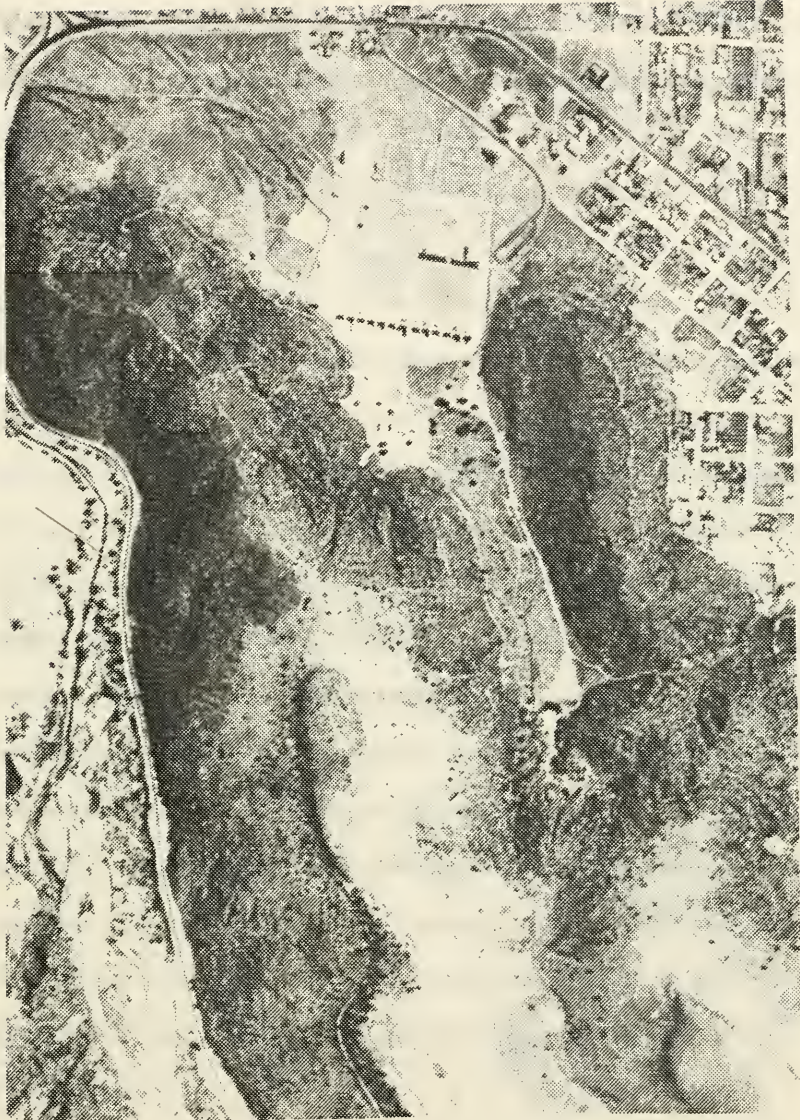


Figure 3. Aerial photograph, Fort Davis National Historic Site, 1985 (Source: National Park Service, Albuquerque GIS Support Center)

When freshly exposed, it is pale red purple to grayish purple, and with oxidation its color turns to grayish red to moderate brown. Atop the rhyolite porphyry is an ignimbrite or volcanic ash flow tuff.²

CLIMATE

Although the surrounding plains of the Trans-Pecos are part of the Chihuahuan Desert, the higher elevation of the Davis Mountains causes the area to receive enough precipitation to be considered semiarid. This precipitation occurs as the mountains force air brought by westerly-prevailing winds to rise, causing the air to cool and the moisture that it contains to condense. Consequently, these mountains receive up to eighteen inches of yearly precipitation while the surrounding plains generally receive from six to twelve inches annually. The maximum precipitation occurs during the months of July, August, and September in the form of convectional thunderstorms. The mountain range's higher elevation also causes it to have significantly milder average temperatures than the surrounding plains, giving the area the reputation as a haven from the long, hot summers experienced by most of the rest of Texas. Extended periods with temperatures either below freezing or higher than 100°F are uncommon. Summer mean daily maximum temperatures average around 88°F while mean daily minimum winter temperatures average about 37°F.³

² A. Gordon Everett, *Geologic Reconnaissance of the Fort Davis National Historic Site, Texas*, (Austin, Tex.: Texas Memorial Museum, 1967).

³ Nelson, p. 2; Texas State Historical Assoc., *The Handbook of Texas Online*, <http://www.tsha.utexas.edu/handbook/online/index.html>.

VEGETATION

Vegetation patterns in the region at large generally reflect elevation levels. Lowlands ranging from 3,600 to 4,600 feet are generally occupied by desert grasslands interspersed with desert shrubs. At higher elevations, such as the Davis Mountains, desert grasslands become open woodlands, although grasses and desert shrubs are still present. Only the highest elevations of mountain ranges in the region have dense woodlands. Spread across the region along water courses are isolated areas of riparian vegetation.⁴

In the area of Fort Davis in particular, tree species include oak, juniper, yellow pine, hackberry, and along streams, the Río Grande cottonwood. Common shrubs include sumacs, catclaw, Texas mountain laurel, mormon tea, algarita, and honey mesquite. Beargrass is present on hills and sotol grows on rocky slopes. Several species of pricklypear cactus occur at most topographic locations, as well as the striking century plant. The most common grass type is blue grama, although several other species occur, including alkali sacaton in creek bottoms.⁵

⁴ Texas State Historical Assoc., *The Handbook of Texas Online*, <http://www.tsha.utexas.edu/handbook/online/index.html>.

⁵ Nelson, p. 4-5; Texas State Historical Assoc., *The Handbook of Texas Online*, <http://www.tsha.utexas.edu/handbook/online/index.html>.



Figure 4. Photograph, Century plant, 1999 (Source: author)

HYDROLOGY

Turning to the region's hydrology, the Davis Mountains are situated between two major streams, the Río Grande to the west and the Pecos River to the east. The nearest stream to the study area is Limpia Creek, which flows from its headwaters on the northeastern slopes of Mount Livermore seventeen miles northwest of Fort Davis to pass just to the north and east of the study site. From there, the Limpia runs northeast for sixty-three miles where it meets Barrilla Draw in western Pecos County, which feeds into the Pecos River.⁶

At Fort Davis National Historic Site, runoff from precipitation flows from the ridge tops into the canyon and through a shallow gully, also known as a draw, from the west end of the canyon to the east toward an open plain. The draw frequently overflows, even with light rains.

⁶ Texas State Historical Assoc., *The Handbook of Texas Online*, <http://www.tsha.utexas.edu/handbook/online/index.html>.

HISTORY OF LANDSCAPE DEVELOPMENT

PRE-EUROPEAN CONTACT PERIOD (Prior to 1583)

Historical Overview

The Paleo-Indian period (ca. 9,200 B.C. – 6,000 B.C.) is the earliest recognized era of human habitation of North America. Although archaeologists have not discovered evidence of human activity within the Davis Mountains from this time, they have identified sites in West Texas within a 125-mile radius of Fort Davis near Langtry and Van Horn and in the Guadalupe Mountains.⁷

A relatively greater number of sites from the Archaic period (6,000 B.C. to 1,000 A.D.) have been discovered in the West Texas region. Remains include chipped stone tools and projectile points, grinding stones used for preparing plant materials, and rock paintings. Few sites from the period, however, have been identified in the Davis Mountains, indicating that there was only limited human activity at that time in the Davis Mountains area. Nevertheless, outstanding examples of rock art paintings from this period are located just fifteen miles west of Fort Davis, near Mount Livermore.⁸

The Late Prehistoric period spans from 1,000 A.D. to the point of European contact. Scholars believe that, in addition to the already existing hunter-gatherer, nomadic peoples in the region, Puebloan agriculturalists expanded southward down the Rio Grande in the 11th century. Evidence of their influence is most visible at what was a large settlement at

⁷ Wooster, p. 3.

⁸ Wooster, p. 4.

La Junta de los Ríos, at the confluence of the Río Grande and Río Concho, south of the present-day border town of Presidio, Texas. A significant concentration of Trans-Pecos natives who practiced farming, and to a lesser extent hunting-and-gathering, was located there.⁹

Significant Landscape Characteristics of the Period

Archaeological Sites

Known remnants of pre-European activity by Native Americans within the boundary of Fort Davis National Historic Site are few in number and essentially imperceptible to those unaware of their presence. Only one location within the site indicates a possibly extensive occupation prior to the arrival of Europeans. Wide-spread lithic scatter, burned rock, and stone tools were found at this open campsite, which indicates occupation from the Late Archaic through the Late Prehistoric periods, and possibly going back further to the Early Archaic. Other known Native American remnants are products of more isolated activity from the Late Archaic and Late Prehistoric periods. These include rock shelters, faded pictographs, stone tools, and a circular stone enclosure that possibly served as a hunting blind. Due to the sensitivity of these sites, they are not described in details in this work.¹⁰

⁹ Wooster, p. 4; Ellvyn R. Stoddard, et al., eds., *Borderlands Sourcebook: A Guide to the Literature on Northern Mexico and the American Southwest* (Norman, Okla.: University of Oklahoma Press, 1983), p. 71.

¹⁰ Jerome A. Greene, *Fort Davis National Historic Site* (Denver, Col.: GPO, 1986), p. 408.

POST-EUROPEAN CONTACT, PRE-FORT PERIOD (1583-1854)

Historical Overview

At the time of the arrival of the Spanish in 1535, who were the first Europeans to arrive in the Trans-Pecos region, several Native American peoples resided there. The people who the Spanish called the Jumanos were far-ranging nomads throughout West Texas but also were found concentrated in villages along the Río Concho near its meeting point with the Río Grande. Groups of the Suma people were encountered to the west of the future location of Fort Davis along the Río Grande, between El Paso and La Junta. Another sedentary tribe who occupied the Río Grande valley was the Patarabueyes. The Apaches were the predominant group on the Plains of the Trans-Pecos when the Spanish entered the region. The Spanish referred to the area controlled by these peoples as the *Gran Apacheria*, which generally spanned north-south from present-day Wichita, Kansas, to Austin, Texas, and east-west from Austin to Tucson, Arizona. Among the Apaches, the Mescalero band inhabited West Texas and southern New Mexico. East of the Pecos River were the Lipan and Llanero bands, and the Faraones occupied the mountains of southern New Mexico between the Río Grande and the Pecos River.¹¹

The first group of Spanish visitors to the Trans-Pecos region consisted of a small party that was led by Alvar Núñez Cabeza de Vaca. The group landed on the Gulf Coast of southern Texas after fleeing the failed 1528 expedition of Pánfilo de Narváez to Florida. After years of Native American slavery, the group debarked for Mexico, travelling through the Fort Davis area and visiting villages of the Jumanos at La Junta in 1535. The

party finally encountered a Spanish party seeking Indian labor in the spring of 1536 near the Sinaloa River.¹²

Spain's coercion of the Native Americans of the region to provide labor for their mines and *encomiendas* to the south laid the groundwork for the hostile responses of those peoples to Europeans and Americans in the future. The eventual result of this hostility was the U.S. Army's creation of Fort Davis in 1854.

Reports of the gold and other precious minerals and gems by the Cabeza de Vaca party sparked the curiosity of the Spanish colonial government in Mexico City, leading to an overland expedition from Mexico in 1539 into present-day New Mexico led by Franciscan friar Marcos de Niza. Although much of Fray Marcos' party was killed in an encounter with the Zuni people, he returned to Mexico City claiming to have seen the grand city of Cibola, which he described as being larger than Mexico City.¹³

Hoping to find riches approaching those found in Mexico, viceroy Mendoza in Mexico City sent a larger-scale expedition in 1540 directed by Francisco Vásquez de Coronado in search of Cibola. This party searched for two years, travelling from Mexico through the territory now covered by the states of Arizona, New Mexico, Texas, and Kansas.

¹¹ Wooster, pp. 5-10. Stoddard, *et al.*, eds., pp. 33-34.

¹² W.W. Newcomb, Jr., *The Indians of Texas: From Prehistoric to Modern Times* (Austin, Tex.: University of Texas Press, 1961).

¹³ Stoddard, *et al.*, eds., p. 34.

Although the Coronado expedition failed to discover the wealth that had been hoped for, additional Spanish *entradas* continued to scour the region for riches.¹⁴

One such expedition that traveled through the area of the future site of Fort Davis in 1583 was led by Antonio de Espejo. After venturing up the Río Grande into present day New Mexico, Espejo and his party turned east down the Pecos River and then south down Toyah Creek. Thenceforth they passed through the Limpia Canyon in the proximity of present-day Fort Davis before continuing south to return to the Río Grande. This presumably marked the first European contact in the Davis Mountains. After the Espejo expedition, Spain's attention shifted to other areas of the region, and European contact in the area did not occur to any significant degree until the mid-nineteenth century with the incursion of explorers from the United States. In the meantime, the area was dominated by the Mescalero Apaches.¹⁵

After the conclusion of the Mexican War in 1848, the U.S. government quickly developed an interest in the region. Its newly acquired territory included the contemporary states of New Mexico, Arizona, Utah, Nevada, and California. In response to the discovery of gold in California in the same year, the federal government began to actively pursue an overland route through the Southwest to the Pacific.

¹⁴ *Ibid.*, p. 34.

¹⁵ Wooster, p. 16; Texas State Historical Assoc., *The Handbook of Texas Online*, <http://www.tsha.utexas.edu/handbook/online/index.html>.

With the purpose of identifying a portion of such a route between the settlements of San Antonio and El Paso del Norte, lieutenants William H.C. Whiting and William F. Smith departed in February 1849 from San Antonio with a party of twelve men. El Paso del Norte, now known as Juarez, Mexico, was the location where the Río Grande intersected a major trading route between Santa Fe, the western terminus of the Santa Fe Trail, and Chihuahua, Mexico. From there, the trail traveled south to Mexico City. The following month, the party passed through the Davis Mountains, then known as the Apache Mountains. As the expedition traveled along a stream through the mountains, Whiting noted an abundance of wild roses. He gave the place the name “Wild Rose Pass” and called the stream “Limpia Creek.” Upon leaving the pass, the party camped within a grove of tall cottonwoods where the Limpia formed a deep pool of water. The cottonwood trunks were marked with Native American pictographs, which inspired Whiting to name the location “Painted Comanche Camp.” This stopping point was located just to the northeast of where Fort Davis was eventually constructed. The party passed through Painted Comanche Camp a second time on their return trip from El Paso del Norte, this time noting that the grass there had been trampled by “the hoofs of hundreds of horses” and that “(m)ore than two hundred lodges had been placed around our camp fires” as evidenced by the remnants of their frames.¹⁶

¹⁶ Greene, p. 7; Robert M. Utley, *The National Survey of Historic Sites and Buildings Special Report on Fort Davis, Texas* (Santa Fe: National Park Service, 1960), p. 5; William Henry Chase Whiting, “Journals of William H.C. Whiting,” in *Exploring Southwestern Trails, 1846-1854*, ed. Ralph P. Bieber and Averam B. Bender (Glendale, Calif.: Arthur H. Clark Company, 1938), pp. 279 and 330; Wooster, p. 31.

At the same time as the Whiting-Smith expedition, another party led by Robert S. Neighbors and John S. “Rip” Ford sought out a more northerly route from San Antonio to El Paso del Norte. The trail that they established passed through the Guadalupe Mountains, a range northwest of the Davis Mountains. The Whiting-Smith route came to be known as the Lower Road and the Neighbors-Ford route was referred to as the Upper Road. Although both trails were traveled quite heavily in the following years, the Lower Road was not only slightly shorter, but it also provided more reliable supplies of water and wood. Consequentially, by the mid-1850s the Lower Road became the primary route connecting San Antonio and El Paso del Norte.¹⁷

In June of 1849, within months of the Whiting-Smith expedition, a topographical reconnaissance party under the command of Bvt. Lt. Col. Joseph E. Johnston departed from San Antonio to map and improve the route that the earlier party traversed. Along Limpia Creek a short distance upstream from Painted Comanche Camp, members of the expedition noted the presence of a few Native American brush shelters as well as cultivated corn. Although no residents were detected there, they concluded that the settlement was inhabited by Apaches.¹⁸

At the same time as Johnston’s expedition, a party under Lt. Francis T. Bryan reconnoitered a northern route between San Antonio and El Paso del Norte that passed

¹⁷ Wooster, p. 29.

¹⁸ Utley, *Special Report on Fort Davis, Texas*, p. 12; Wooster, pp. 29, 31.

through the Guadalupe Mountains. This route improved upon the path taken by the Neighbors-Ford expedition.¹⁹

Mostly in response to the California Gold Rush, in 1849 around three thousand persons crossed the two routes through western Texas as well as through Chihuahua. Many stopped at Painted Comanche Camp, where they took advantage of the shade, water, and grass for their animals. Between 1850 and 1854, the route also was used for many cattle drives from Texas to California. The creation of an American commercial hub across the Río Grande from El Paso del Norte, which would later be known as El Paso, additionally encouraged the participation of east Texas business interests in the thriving Santa Fe-Chihuahua trade. In addition, in 1851, the federal government granted a contract to Henry Skillman to transport mail from San Antonio to El Paso, and he subsequently established stage stations in the area.²⁰

A significant threat to American traders, mail carriers, and emigrants travelling through west Texas during the period were the Mescalero Apaches, who saw western Texas and eastern New Mexico as their traditional hunting grounds. Travelers also encountered confrontations with Comanches, as the Great Comanche War Trail crossed the Lower Road enroute to Mexico. Based upon an extensive tour of west Texas in 1852, Col. Joseph K.F. Mansfield advocated the establishment of several military posts to protect

¹⁹ Wooster, p. 29.

²⁰ Wayne R. Austerman, *Sharps Rifles and Spanish Mules: The San Antonio-El Paso Mail, 1851-1881* (College Station, Tex.: Texas A&M University Press, 1985), p. 315; Greene, p. 9; Wooster, p. 29; *The Handbook of Texas Online*, <http://www.tsha.utexas.edu/handbook/online/index.html>.

American travelers along roads in west Texas and to encourage settlement in the area. Mansfield recommended that one of those posts be erected at the headwaters of Limpia Creek. Within two years, Mansfield's proposal would be realized through the erection of a post near Painted Comanche Camp known as Fort Davis.²¹ The establishment of the San Antonio-El Paso Road during this period, though, marked the beginning of a non-Native American imprint on the site's cultural landscape.

Significant Landscape Characteristics of the Period

Archaeological Sites

The time of activity at some of the Native American archaeological sites discussed in the previous section concerning the pre-European period may also overlap into the Historic period, or since European contact in the region. Due to the sensitive nature of those sites, specific details concerning them are not dealt with in this work.²²

Circulation

The Lower Road between San Antonio and El Paso, which was constructed toward the end of this period, traveled just to the east of the mouth of Hospital Canyon. To the west it stopped at several springs on its way to El Paso, and then went through southern New Mexico and Arizona on its way to California. In the opposite direction, it went northeast

²¹ Wooster, pp. 32, 39.

²² Greene, p. 408.

to the Pecos River and then southward to San Antonio, 466 miles away. From there, the route was connected to destinations throughout the eastern United States. It should be noted that the road was significant not only as a transportation route, but also as a means of communication.²³

A trail used by the Comanches to travel between the plains of Texas to the north and Mexico to the south also traversed approximately 60 miles to the east of Hospital Canyon. This route was referred to by the Americans as the Great Comanche War Trail.

²³ Greene, pp. 89, 306.

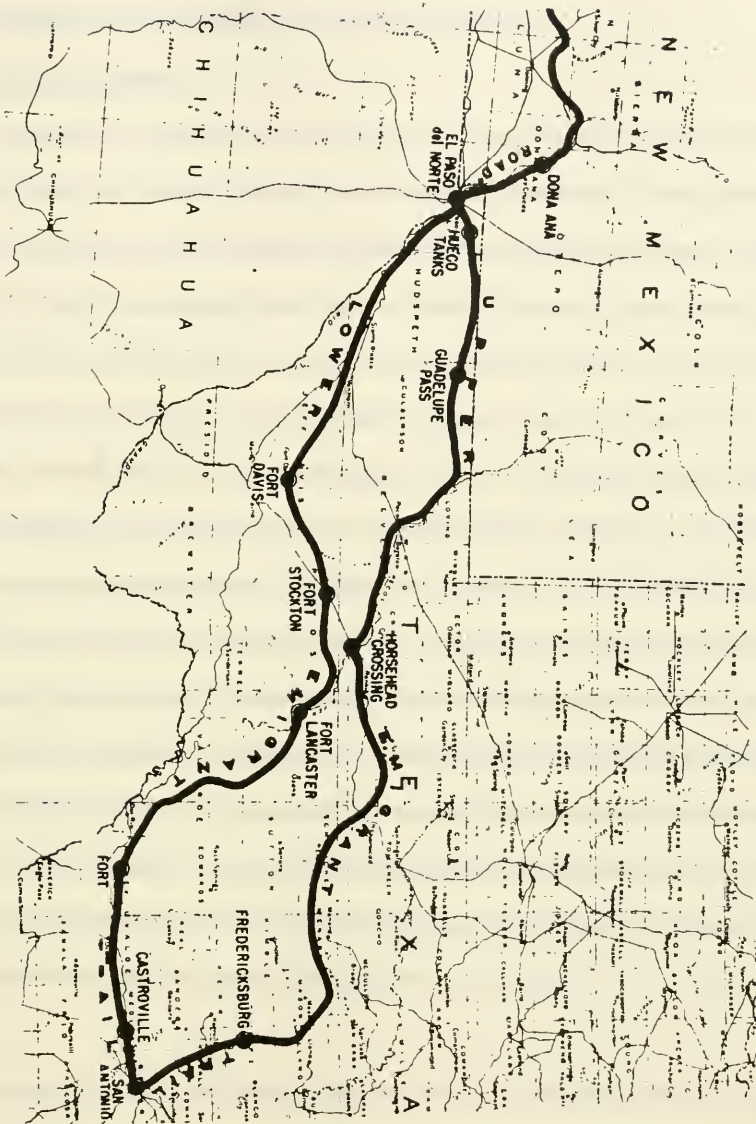


Figure 5. Map, Lower and Upper roads between San Antonio and El Paso, 1850s (Source: Greene, p. 437; Originally excerpted from "Overland Migrations West of the Mississippi River." Map created in 1959 for the National Survey of Historic Sites and Buildings)

PERIOD OF THE FIRST FORT DAVIS (1854-1861)

Historical Context

In response to Mansfield's recommendation for a frontier defense system in west Texas, Bvt. Maj. Gen. Persifor F. Smith, Commander of the Department of Texas, responded by constructing a series of posts just ahead of the line of settlement in the state. In May 1854, Smith recommended a site for a new post near the head of Limpia Creek a few miles from Wild Rose Pass. In order to confirm the appropriateness of the site himself, Smith set out to inspect it, reaching Painted Comanche Camp in October of 1854. Smith was impressed by the location's strategic proximity to both the Lower Road to El Paso del Norte and the trail heading south to Presidio del Norte, a settlement of around 2,000 people located approximately 100 miles to the southwest on the southern side of the Río Grande in the area known as the Big Bend. The site also provided adequate supplies of water, grass and wood. The site that Smith chose was located approximately one-quarter mile south of Painted Comanche Camp. With the intention of sheltering the fort from cold northerly winds of the approaching winter, Smith chose a location within a box canyon surrounded on three sides by steep rock cliffs. Smith named the post "Fort Davis" in honor of then Secretary of War Jefferson Davis, who would later serve during the U.S. Civil War as president of the Confederate States of America.²⁴

During this site-selection process, Smith was met by six companies of the U.S. Eighth Infantry. These troops stayed on to make up most of the initial post garrison. Despite protests from Lt. Col. Washington Seawell, Commander of the Eighth Infantry, as well as

several other officers, that the site could be attacked too easily by unobserved Indians from the surrounding cliffs. Smith insisted on maintaining his choice of location. Eighth Infantry troops started work to construct the post in October of 1854. Smith negotiated a lease of the site that consisted of 640 acres from John James, a large landowner in the Davis Mountains. These actions represented the beginning of the U.S. Army's imposition of a military complex on the site, a key event in the development of the cultural landscape that exists there today.²⁵

Like at other Texas posts of the period, the initial buildings of the fort were constructed as temporary structures out of local materials. Most of these structures consisted of wooden pickets or slabs driven vertically into the ground, with cracks in between filled with mud. Most of the buildings had thatched roofs. It should be noted that the use of local materials, especially wood, undoubtedly transformed the natural environment in the area.²⁶ Inspection reports referred to these buildings as *jacales* (literally “huts” in the Spanish language of Mexico and the southwestern United States). A row of barracks was situated along the east side of a parade ground, with their fronts facing the San Antonio-El Paso road, which was about 1,000 feet further east. The remaining structures were scattered to the north and west in Hospital Canyon, with some grouped in clusters. Soon

²⁴ Greene, p. 19; Wooster, pp. 42-43.

²⁵ Wooster, p. 43; Welsh, p. 4.

²⁶ This phenomenon is discussed in the subsequent section concerning vegetation of the period.

after the post's establishment, a stage and mail stop known as La Limpia also was constructed within one mile of the fort.²⁷

Although Fort Davis was deemed by the Department of Texas to be temporary, during the absence of commanding officer Lt. Col. Seawell in 1856, Capt. Arthur T. Lee ordered the construction of six stone barracks across the mouth of Hospital Canyon to replace the original wooden dwellings. This event represented the first step toward giving the post a more permanent foothold. By the mid-1850s, the number of military personnel at Fort Davis was around 400, making it one of the West's largest at the time. Despite this level of military presence, it was still not enough to curtail attacks by Apaches and Comanches upon travelers through the area.²⁸

The U.S. Army's occupation of the post during the early 1860s was short lived due to the coming of the Civil War. By 1860, the number of troops assigned to the garrison there was reduced from six to two companies as the U.S. Army reduced its number troops in the West in anticipation of sectional conflict in the East. By that time, most of the fort's non-masonry buildings were in poor condition. In January of 1861, the Texas legislature met to begin debate about secession from the Union in favor of joining the Confederate States of America. In March, Texas voted to join the Confederacy, and two months later,

²⁷ Willard B. Robinson, *American Forts: Architectural Form and Function* (Urbana, Ill.: University of Illinois Press, 1977), p. 147; Welsh, pp. 4-5.

²⁸ Welsh, p. 4.

the federal troops at Fort Davis abandoned the post and departed for San Antonio, as all federal posts in Texas were evacuated.²⁹

²⁹ *Ibid.*, p. 5.

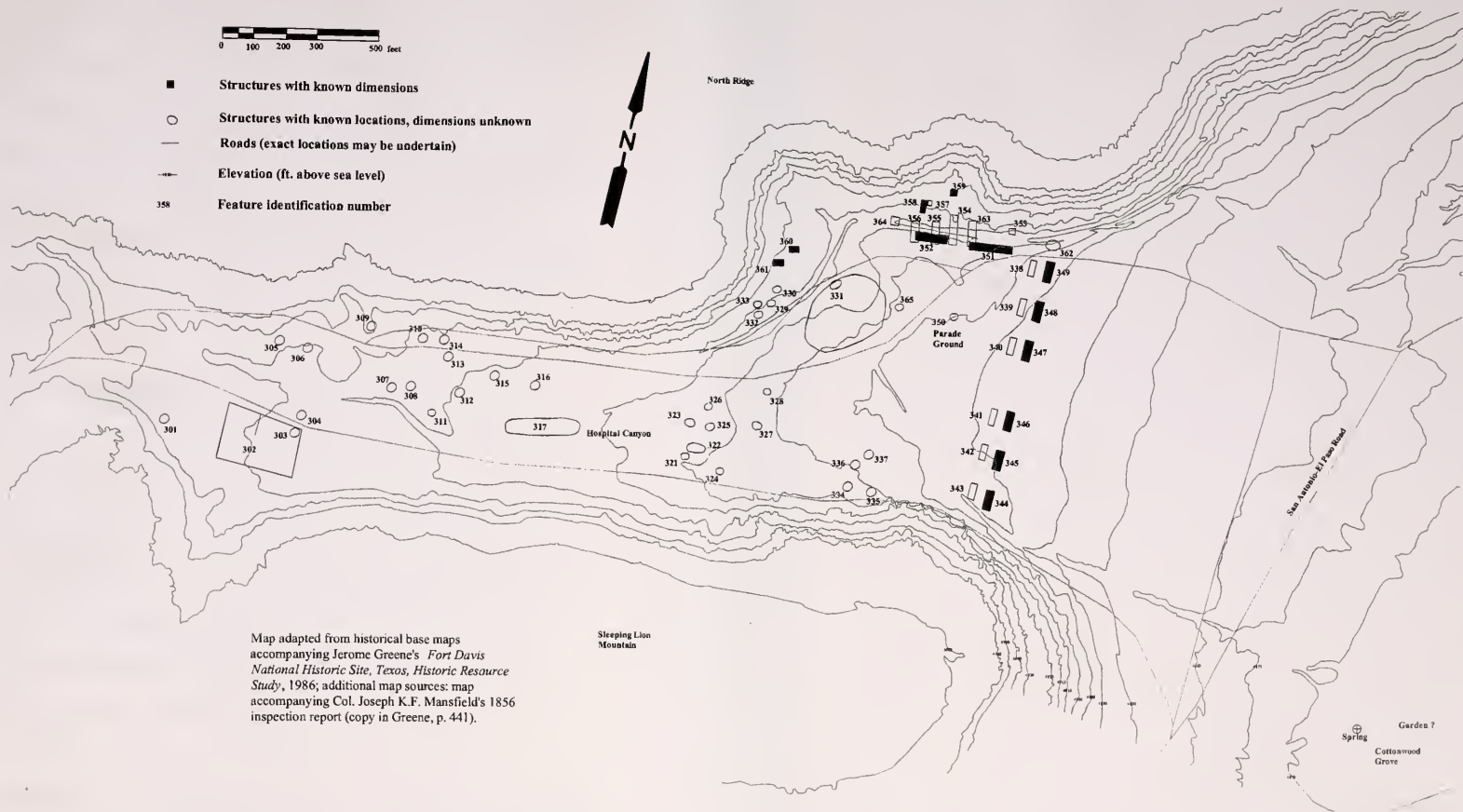


Figure 6. Plan of first Fort Davis (Source: author's adaptation of historic base map accompanying Greene)

Significant Landscape Characteristics of the Period

Buildings and Structures

During the initial construction of buildings at Fort Davis in the fall of 1854, records specifically mention the erection of six enlisted men's barracks, apparently twelve officers' quarters with adjacent kitchens, including a commanding officer's quarters, and a sawmill. These structures were built hurriedly in order to provide shelter from the cold winds of the approaching winter. As a result, their construction was quite crude, primarily utilizing locally available materials. Other buildings could have been erected at the time without receiving specific mentioning.³⁰

The six barracks (HB-338 through HB-343) stretched linearly across the mouth of Hospital Canyon in a north-south orientation so that their east entrances faced the El Paso Road, which was approximately 1,000 feet away. Each of these structures was 56 feet long by 20 feet wide, and they appear to have been spaced approximately 30 yards apart from one another, with the exception that the two middle barracks (HB-340 and HB-341) were separated by a somewhat greater distance. The barracks were made of vertical wooden pickets that were forced into the ground and had thatch roofs. The pickets consisted of oak and cottonwood, which are commonly found in the area.³¹

The officers' quarters (HB-321 through HB-336) were built to the west and further within the canyon from the infantry barracks. Based upon Mansfield's 1856 map, these

³⁰ Greene, pp. 53-54.

³¹ *Ibid.*, pp. 54, 65-72.

buildings appear to have been loosely congregated in four clusters, three of which were in the southern part of the canyon. The first cluster, consisting of two quarters, was adjacent to the canyon's south wall, just west of the barracks. The second cluster, made up of three to four buildings, was further west in the canyon along the south wall, approximately midway between the barracks and where the hospital would later be located. The third cluster, consisting of two quarters, was situated between the second cluster and the later location of the hospital. The fourth cluster, comprised of the commanding officer's quarters (HB-331) and three to four other quarters, was located across the parade ground from the north half of the barracks, and extending toward the northwest wall of Hospital Canyon. Adjacent to each of these buildings was a kitchen. All of these dwellings were built of pine slabs chinked with mud and implanted vertically into the ground, and were roofed with thatch as well as canvas. Inspection reports indicate that seven of the officers' quarters measured 32 feet in length by 16 feet in width, with four others being 20 feet by 16 feet. The kitchens each measured 18 feet by 16 feet.³²

³² Greene, pp. 82-85.

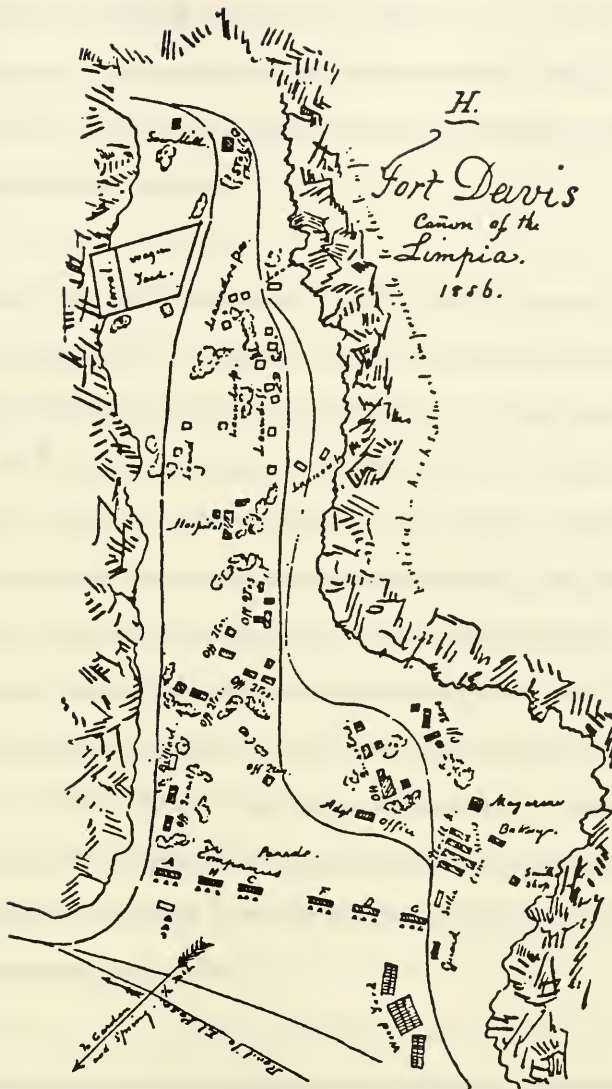


Figure 7. Mansfield's map of first Fort Davis, 1856 (Source: Greene, p. 441.)

The mule-powered sawmill was located at the extreme west end of Hospital Canyon, being the structure located farthest to the rear of the barracks. It began operating soon after the fort's establishment in October 1854, cutting logs brought by wagons into planks and slabs for building structures.³³

By the time of Mansfield's inspection of the post in June 1856, several additional structures were present. It is not known, though, exactly when between the fort's founding and that time that each of them was erected. In the western part of Hospital Canyon were a hospital, a wagon yard and corral, a stable, and laundresses' quarters, although no references are made to a structure used as a laundry. The hospital (HB-317) originally consisted of a large tent and what Mansfield called a *jacal*, or wooden hut. The laundresses' quarters (HB-305 through HB-315) were spread somewhat isolated in the western part of the canyon, tending to be situated toward its north side. They were essentially temporary huts built of pickets or pine slabs and had thatch roofs. The wagon yard and corral (HB-302) was a large fenced area situated near the western end of the canyon, just east of the sawmill. The stable also was located at the rear of the canyon, but just northeast of the sawmill. In later reports, it was described as a barn and measured approximately 50 feet by 14 feet.³⁴

In a cluster near the north wall of the canyon in the vicinity of the northernmost barrack were the quartermaster and commissary storehouses, a guardhouse, a bakery, a magazine,

³³ *Ibid.*, p. 80.

³⁴ *Ibid.*, pp. 55, 78-79, 81, 86-87.

the sutler's store, and a blacksmith shop. Mansfield indicated that the quartermaster and commissary storehouses consisted of four structures (HB-354, HB-355, HB-356, and HB-363), with each having a north-south alignment. Mansfield noted that the quartermaster storehouses were made of stone covered with canvas. The guardhouse (HB-362) was a *jacal* and tent. The original bakery also was a *jacal* with mud chinked pickets built on a north-south alignment, and probably had a stone oven. The magazine (HB-364) was made of adobe covered with canvas and was 20 feet by 18 feet. The blacksmith shop (HB-359) was constructed of stone and had a thatch roof, with dimensions of 20 feet square.³⁵

Just south of this cluster, near the commanding officer's quarters and the surrounding cluster of officers' quarters, was the adjutant's office (HB-365). It had a north-south orientation, was constructed of wooden pickets and thatch roof, and measured 28 feet by 16 feet.³⁶

Later in 1856, work began to erect more sturdy barracks to provide increased protection from the elements during the winter. Six new stone structures (HB-344 through HB-349) were built in the same north-south linear arrangement as their predecessors, with each barrack situated approximately ten yards to the east of one of the six initial barracks. This configuration was meant to allow each of the earlier wooden barracks to be converted into an easily accessible kitchen and mess room for the troops housed in the adjacent new

³⁵ *Ibid.*, p. 55, 73, 75-77, 86-87.

³⁶ *Ibid.*, p. 78.

barracks. Each of the stone structures had a thatch roof and was 60 feet in length and 20 feet in width. It is believed that the stone used to build these structures was locally quarried vitric tuff of ignimbrite, which was found to be easily workable.³⁷

By June 1857, the temporary structures of the hospital had been replaced by a “rickety” picket building with a thatch roof that was 85 feet by 20 feet. In addition, the former barracks had all been converted to kitchen and mess buildings. Thirteen married soldiers’ quarters were present as well, each made of pine slabs with thatch roofs and measuring 16 feet by 14 feet. Greene speculates that these dwellings likely were located in the western part of the canyon. The first bakery also had been replaced by a stone structure (HB-358) with a thatch roof that measured 42 feet by 15 feet, with a second stone oven (HB-357) located outside.³⁸

During the remainder of the first fort period, few additions were made in terms of the erection of new buildings. This situation stemmed largely from the fact that the number of troops at the post was reduced from six to two companies. Among the notable changes, a July 1859 post inspection indicates the presence of a new, two-story quartermaster and commissary storehouse (HB-352) located within the same cluster as the former storehouses. It was constructed with a shingle roof, was 100 feet by 20 feet, and had an east-west orientation. The northernmost barrack also had been converted to a guardhouse and prison and the adjacent barrack, to the south, housed the regimental band.

³⁷ Everett, pp. 8-9; Greene, pp. 65-72.

³⁸ Greene, pp. 57-59, 76-79, 84, 86.

In October 1860, Inspector General Mansfield returned to the fort for the last inspection prior to the Civil War. At this point in time, the hospital and kitchens behind the barracks were severely dilapidated, and Mansfield recommended that one of the stone barracks be taken down to construct a new hospital. The only other significant addition was the presence of a temporary saddlesmith's shop, although its location is unknown.³⁹

³⁹ *Ibid.*, pp. 62-63, 75, 87.

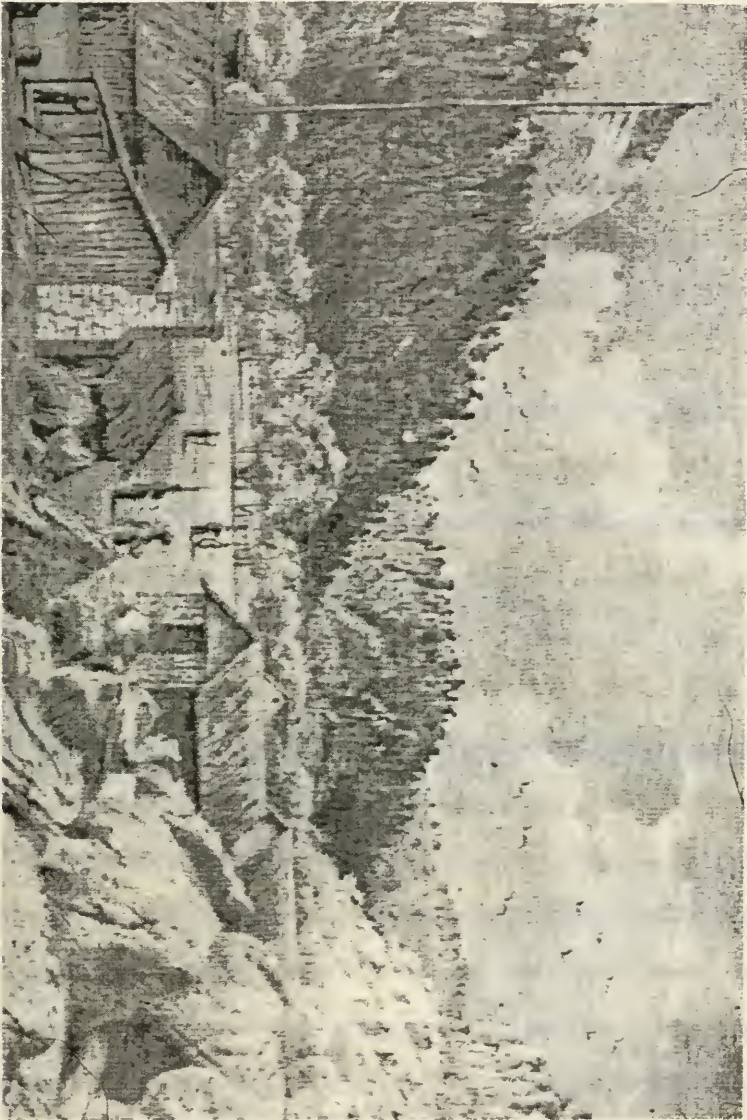


Figure 8. Illustration, first Fort Davis by Arthur T. Lee, ca. 1854-1858 (Source: Greene, p. 451)

Circulation

Roads and Trails

The first fort was established less than one-quarter mile to the west of the Lower Road between San Antonio and El Paso, which traveled just to the east of the mouth of Hospital Canyon. As in the previous period, the road continued to serve as a significant transportation route and means of communication.⁴⁰

Another road, which was characterized as being “very rough,” also led from the post to pineries “about twenty or twenty-five miles distant.” Although the road’s exact route is not mentioned, the pineries were apparently located up Limpia Canyon. The road was noted as being so treacherous that it caused great damage to both wagons and mules.⁴¹

The first fort also had several roads and walkways that ran within the reservation. Due to discrepancies between the 1856 and 1860 maps from Mansfield’s post inspections, which provide the primary remaining clues about their configuration, it is difficult to ascertain exactly what the arrangement was. Both maps show a road leading from the Lower Road at the southeast part of the post to the west, along the south wall of Hospital Canyon, and running past the sawmill at the canyon’s extreme rear. Both maps also show another road emanating from the Lower Road, but at the fort’s northeastern extreme. This route also runs west, but along the north wall of Hospital Canyon, running between the guardhouse

⁴⁰ *Ibid.*, pp. 89, 306.

⁴¹ “Statement made by 2nd Lieut. Thomas M. Jones, Regt. Quar. Mas. 8th Infy. relative to the establishment, resources, means of communication & c. & c. of Fort Davis Texas, June 4th, 1857.” National Archives, RG 92. Microfilm Roll 63-172 (2082), p. 61; Note: Greene’s study states on p. 57 that the pinery was 70 to 75

and the northernmost of the barracks and then in front of the sutler's store. At that point, the more detailed 1856 map shows that the road split in two, with the more northerly section running in front of the series of buildings located adjacent to the north wall of Hospital Canyon, including the commissary stores, bakery, and magazine. The southerly section passed in front of the adjutant officer's quarters and just to the north of the parade ground, and then in front of a series of officers' quarters and then laundresses' quarters. The two sections then met in the far western part of Hospital Canyon, and continued as one route that joined the road that followed the south wall of the canyon to the west of the sawmill.⁴²

Land Use

Cemetery

Although the exact location of the first fort's cemetery is not known, Greene states that it was located in Hospital Canyon "behind the new fort's officers' quarters and beyond the temporary hospital," and indicates that it was not enclosed. At the time of the first fort, this location would have been behind the enlisted men's barracks. An 1872 report by Acting Assistant Surgeon Daniel Weisel indicates that both soldiers and civilians were buried at this location and that it "contained about a dozen graves." Records of the post surgeons preceding the Civil War, however, record twenty-one soldier deaths at Fort

miles distant, but, upon close analysis, the original document appears to read 20 to 25 miles; Greene, pp. 89-90, 93.

⁴² Map, "Fort Davis canon of the Limpia. 1856" (Copy at Fort Davis NHS Archives); Map, "Fort Davis. 29th Oct. 1860" (Copy at Fort Davis NHS Archives); Greene, pp. 89-90.

Davis from 1854 and 1861. The discrepancy between Weisel's accounting of graves and the surgeon's records of the number of deaths poses the questions of, first, whether Weisel's figure of twelve graves was accurate, and secondly, whether burials took place at other unknown locations.⁴³

Garden

In his report concerning the status of the fort in June 1856, Inspector General J.K.F. Mansfield stated that Col. Seawell had established a large garden. Although Mansfield does not state its specific location, his accompanying map shows an arrow pointing to the southeast, marked that the garden and spring are one-quarter mile distant. The arrow is placed so that it intersects the San Antonio-El Paso Road, near the mouth of Hospital Canyon. Based upon this evidence, it appears likely that the first fort garden was located near the spring on the southeastern part of the reservation, around the same location as what was referred to as the "Hospital Garden" of the second. When Mansfield returned to the post in 1860 for another inspection, the garden had been relocated to Limpia Creek, about a mile from the reservation, and was being irrigated.⁴⁴

⁴³ Mary Williams, "Care of the Dead: A Neglected Duty; The Military Cemeteries at Fort Davis Texas" (Typescript, Fort Davis National Historic Site, 1983), pp. 5-6; Greene, p 291.

Parade Ground

The parade ground of the first fort was located in Hospital Canyon, immediately to the west of the middle and northerly company barracks. It was used primarily for drilling troops and for more formal military parades.⁴⁵

Stone Quarry

During the fall of 1856, work began under the direction of Capt. Arthur T. Lee on the construction of stone barracks at the mouth of Hospital Canyon. During an inspection of the post in June of 1857, Second Lt. Thomas M. Jones, Regimental Quartermaster of the Eighth Infantry, noted that the stone had been obtained “within a mile of the Post” where it was blasted from a quarry. No other details were given as to the quarry’s location. Everett notes that the type of building stone used in construction at both the first and second forts was vitric tuff of ignimbrite, and that two abandoned quarry sites exist at the northeast end of Dolores Mountain on the southeast edge of the town of Fort Davis.⁴⁶

Trash Dumps

During the archaeological survey of Fort Davis National Historic Site conducted in the mid-1980s, eight trash dumps were located that are believed to be affiliated with the first

⁴⁴ Martin L. Crimmins, ed., “Colonel J.F.K. Mansfield’s Report of the Inspection of the Department of Texas in 1856,” *Southwestern Historical Quarterly* 42 (April 1939), p. 356; Greene, p. 301; Wooster, p. 120.

⁴⁵ Map, “Fort Davis canon of the Limpia. 1856” (Copy at Fort Davis NHS Archives).

⁴⁶ “Statement made by 2nd Lieut. Thomas M. Jones, Regt. Quar. Mas. 8th Infy. relative to the establishment, resources, means of communication & c. & c. of Fort Davis Texas.” June 4, 1857. National Archives, RG 92. Microfilm Roll 63-172 (2082), p. 60; Everett, p. 8.

fort (HB-301, HB-311, HB-312, HB-316, HB-324, HB-328, HB-329, and HB-330). All of those sites are located in Hospital Canyon.⁴⁷

Wood Yard

According to Mansfield's June 1856 map, a wood yard was located directly east of the first fort's guard house and northernmost barracks, near the intersection of the San Antonio-El Paso Road and the road entering the post from the northeast. The map depicts the wood yard being comprised of three parts adjacent to one another. No wood yard is shown on Mansfield's 1860 inspection map.⁴⁸

Small-Scale Features

The first fort's flagpole (HB-350) appears to have been located on the parade ground of the time, to the west of barracks (and later kitchens and messrooms) HB-339 and HB-340, and directly south of the building cluster centered around the commissary storehouse.⁴⁹

⁴⁷ Greene, pp. 399-402, and accompanying "Fort Davis National Historic Site Historical Base Map, First Fort, 1854-1862."

⁴⁸ Greene, pp. 88, 440-443.

⁴⁹ Greene, p. 403.

Spatial Organization and Cluster Arrangement

During the period of the first fort, the military complex was entirely situated within Hospital Canyon, where Bvt. Maj. Gen. Persifor F. Smith had located the post to protect it from northerly winter winds. Thus, the fort's outlay was defined by the extents of the canyon floor, generally giving the complex an east-west spatial arrangement, which became wider toward the canyon's mouth. The roads running through the post from the San Antonio-El Paso road also generally ran east-west. The line of enlisted men's barracks, and kitchens to their rear, stretching across the canyon's mouth essentially represented the easternmost extent of the post's buildings. The barracks were aligned to magnetic north so that their fronts faced the San Antonio-El Paso Road, which traversed around 1,000 feet to the east. This line represented the only real linear arrangement of structures of the first fort. Within these boundaries, the remaining structures of the post were essentially scattered throughout the canyon, but in several building clusters.

Space within the complex was generally divided into functional areas. To the far east toward the San Antonio-El Paso road were the enlisted men's quarters, officers' quarters, and adjutant's office, all centered around the parade ground. This arrangement reflected the focus of the troops and officers' on the protection of the main road. The placement of the barracks at the eastern extreme also provided for their defense of the fort from Native Americans approaching from the plain to the east.

The cluster of service buildings just north of the parade ground were placed so as to readily serve the needs of the officers and troops. As previously mentioned, these structures included the commissary, quartermaster, bakery, blacksmith, sutler, and magazine.

To the west of the officers' quarters and further into the canyon were other service structures, including the hospital and laundresses' quarters. These buildings were likely placed within the shelter of the canyon so as to shield them from attack.

At the very rear of the canyon was situated a final grouping of service uses, including the corral, wagon yard, sawmill, and stable. It is probable that livestock were placed at the extreme rear of the canyon to protect them from Native American raiders and keep their odors away from the living quarters. During times of rain, a small waterfall and stream also run in this area today. Perhaps this provided a source of water for the livestock then. It is also possible that the sawmill was isolated there because of noise associated with it.

Isolated to the southeast of the post was the first garden, which was later located to the northeast of the fort on Limpia Creek.

Vegetation

Historical evidence concerning the types of vegetation present during the period of the first fort, whether native or introduced, may be gathered from contemporary written accounts and sketches. However, the amount of this information is quite limited, and its level of accuracy is at times uncertain. In general, though, it should be noted that the Army's development of the site and use of natural materials for construction transformed the natural environment in the area significantly.

In Emory's 1857 account concerning the Davis Mountains region, he characterized the areas between mountain ranges as dry prairies with less than thriving grasses and interspersed yucca. His senior botanist, C.C. Parry, noted pinyon pine and emory oak trees with an understory of wild grape in the mountains, and willow and cottonwood growing along water courses.⁵⁰

Looking at the site of Fort Davis in particular, Capt. Arthur T. Lee, who was stationed there during the antebellum period, characterized it many years after he had last been there. Lee provided the following romanticized description:

“[a] wide deep [canyon], carpeted with the richest verdure, overshadowed by live oak, its lofty and precipitous sides festooned with perennial vines, and mantled with moss and flowers, looking out over smiling prairies and table lands, to miniature lakes, and lofty mountain peaks, that lost their summits in the clouds.”⁵¹

⁵⁰ James T. Nelson, “The Historical Vegetative Aspect of Fort Davis National Historic Site, Texas” (Typescript, Fort Davis National Historic Site, 1981), p. 15.

⁵¹ Arthur T. Lee, “Reminiscences of the Regiment,” in Thomas Wilhelm, ed., *History of the Eighth U.S. Infantry* (New York: 1871, vol. II), pp. 56-367, and quoted in W. Stephen Thomas, *Fort Davis and the Texas Frontier: Paintings by Captain Arthur T. Lee, Eighth U.S. Infantry* (College Station, Tex.: Texas A & M University Press, 1976), p. 5.

Although this account is relevant, it should not be considered literally for documenting site vegetation.

In Nelson's "The Historical Vegetative Aspect of Fort Davis National Historic Site," he identifies vegetative types present in Lee's paintings and sketches, which were composed at Fort Davis during the 1850s. From these sources, Nelson notes the presence of cottonwood trees along Limpia Creek, patches of brush and grass on slopes and hills, shrubs and trees amid rocks and cliffs, and what he characterizes as a "very definite oak savannah" in the Hospital Canyon area. Nelson adds that it is difficult to ascertain the accuracy of these sources because Lee may have taken a good degree of artistic license, but Nelson does state that the patterns mentioned tend to correspond with information in historic photographs from the period of the second fort.⁵²

According to a recollection by Zenas R. Bliss, a second lieutenant at the post in 1855, "the live oak trees which were permitted to stand furnished a delightful shade, and almost concealed the officers' houses from view." This account implies that a significant number of trees in Hospital Canyon were cut down within the first two years that the post was established.⁵³

With regard to cultivated species grown at the post garden, the available information is also sketchy. It is known that in the 1850s Bvt. Maj. Larkin Smith obtained a number of

⁵²Nelson, p. 65. Note: Lee's paintings and sketches are published in Thomas (cited in preceding footnote).

⁵³ "Reminiscences of Zenas R. Bliss, Major-General, U.S.A.," p. 15 (copy at Fort Davis NHS archive).

experimental seeds from Washington, D.C. Under his direction, Wooster states that the garden, then located near the spring, produced “hard-to-get items such as cabbages, celery, and sugarcane.”⁵⁴

Views and Vistas

At the mouth of Hospital Canyon, the barracks of the first fort were generally situated to view the San-Antonio-El Paso road, which was located around 1,000 feet to the east, and the open plain and Arkansas Mesa beyond. From this location, one also could view the valley of Limpia Creek and the continuation of the overland trail toward San Antonio to the northeast. More distant views could be gained from the vantage point of the two ridges overlooking Hospital Canyon. From further within Hospital Canyon, aside from the dominating presence of the canyon walls to the north, south, and west, viewers would have seen the back of the barracks and the open plain to the east. Atop Sleeping Lion Mountain, one could view to the south the continuation of the overland road in the direction of El Paso, the valley of Chihuahua Creek, Dolores Mountain, and Mitre Peak in the distance. To the east and northeast it offered an even more distant view of what was described from the barracks location. To the north, one could see the fort and Hospital Canyon from above and the top of the North Ridge. From the top of the North Ridge, one could see Limpia Creek from above and its valley to the north. To the south, one could see the fort and Hospital Canyon as well as the top of Sleeping Lion Mountain. The views to the east, northeast, and southeast were essentially the same as those

⁵⁴ Wooster, p. 120.



described from Sleeping Lion Mountain.

CIVIL WAR AND SUBSEQUENT ABANDONMENT PERIOD (1861-1867)

Historical Overview

Soon after the departure of federal troops from Fort Davis in April 1861, Confederate troops occupied the post, consisting of one company of the Second Regiment of Texas Mounted Rifles. Like their predecessors, they intended to use the fort to defend the San Antonio-El Paso Road. Their numbers were soon reduced, though, as in July of the same year, all but 25 of the Confederate personnel there departed to counter Union forces in New Mexico and Arizona. Over the next year, troop strength at the post fluctuated between 25 and around 63. This relative reduction in forces compared to the federal strengths prior to the Civil War resulted in increased Indian raiding in the area, especially by the Mescalero Apaches.⁵⁵

In February 1862, Confederate forces defeated Union troops at Valverde, New Mexico, and captured both Albuquerque and Santa Fe. However, their loss at Glorieta Pass the next month signaled the end of rebel hopes to secure New Mexico. During these conflicts to the west, Fort Davis served as a Confederate medical receiving station. As rebel troops retreated from pursuing Union forces after their defeat in New Mexico, they stopped at Fort Davis in August 1862. Later that month, the Confederates abandoned the post, as well as other forts that they maintained in the area.⁵⁶

⁵⁵ Greene, pp. 25-29.

⁵⁶ *Ibid.*, pp. 29-30.

Following on the heels of the departing Confederate forces was the Union First California Cavalry. Under the direction of Capt. Edmond D. Shirland, these forces reclaimed Fort Davis in late August of 1862 and hoisted the United States flag at the parade ground. Shirland's party departed three days later. Soon thereafter, the post was pillaged by Apaches. For the next five years, the fort remained unoccupied, except for the presence of stagecoach drivers, and Apaches and Comanches reclaimed their dominance over the area.⁵⁷

Significant Landscape Characteristics of the Period

Buildings and Structures

Three sources of information exist concerning the status of the fort's buildings and structures during the period between the post's abandonment by the U.S. Army in April 1861 and its reestablishment six years later. The first of these is a drawing made in June 1862 during the Confederate occupation of the post. This sketch provides scant information, except showing the six stone barracks buildings (one of which had been converted to a guardhouse) standing and still roofed across the mouth of Hospital Canyon, as well as two structures in the area of the quartermaster storehouse.⁵⁸

⁵⁷ *Ibid.*, pp. 30-32.

⁵⁸ Sketch of Fort Davis, June 22, 1862, by Alfred B. Peticolas, in Alfred B. Peticolas, *Rebels on the Rio Grande: The Civil War Journal of A.B. Peticolas*, ed. Don E. Alberts (Albuquerque, N.M.: University of New Mexico Press, 1984).

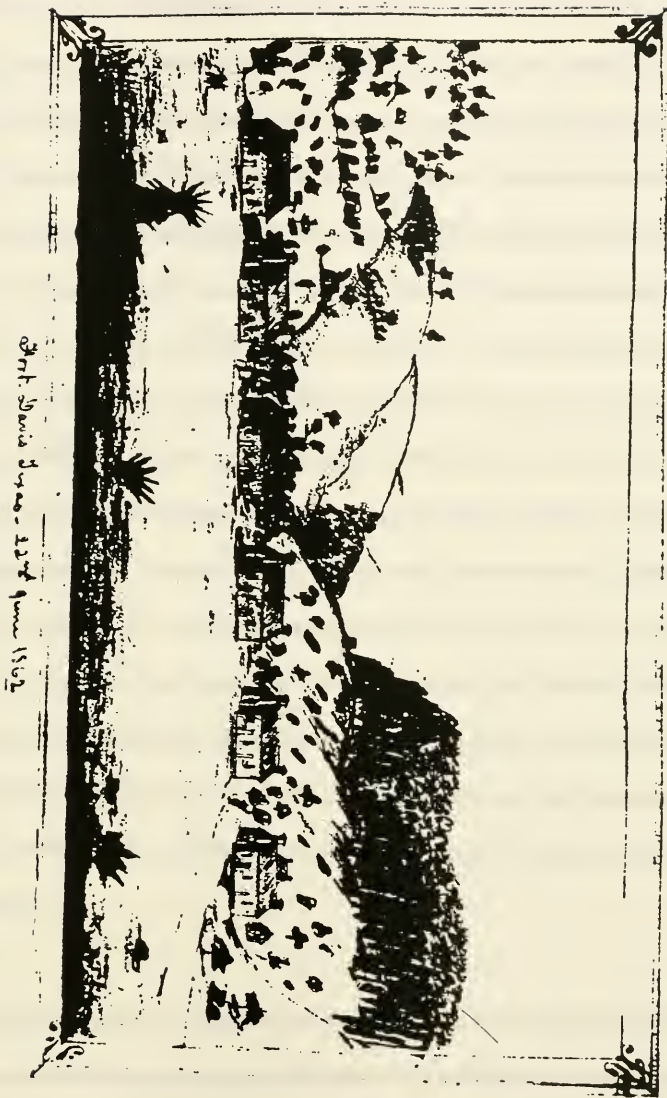


Figure 9. Sketch, Fort Davis during Civil War by Alfred B. Peticolas, 1862 (Source: Greene, p. 453)

The second, and most complete, documentary source from the period is a report made by Capt. Shirland in 1862 during the brief reoccupation of the post. Based on this source, in August 1862 the five stone barracks and one stone guardhouse (a converted barrack) still stood at the mouth of Hospital Canyon, although the roofs, doors and windows of one of the barracks and the guardhouse had been burned. The two-story stone quartermaster storehouse also remained standing to the northwest of the barracks, although its roof, doors, and windows had also been entirely destroyed. The quartermaster storehouse was also surrounded by several small buildings, presumably the same ones mentioned as being in a cluster in that area during the period of the first fort. Also present were the adjutant's office and commanding officer's quarters, with a kitchen and several small buildings around it. Shirland's report mentions four other structures of indeterminate uses and locations, all made of wood except one stone and mud house. In addition, he noted the presence of eight outhouses. It should be noted that Shirland's inventory did not account for about half of the structures described in building reports between 1857 and 1859, including the hospital and the stone blacksmith shop and bakehouse. It is not known whether those unrecorded structures were no longer standing or they merely were overlooked.⁵⁹

During the five years after Shirland's visit to the post, it presumably lay abandoned. The only available evidence to determine the state of the buildings and structures during that period is a sketch of the post made in October 1867, when the construction of the second

⁵⁹ National Park Service, Fort Davis National Historic Site, "Report on the Appearance of Fort Davis in August 1862" 1963, pp. 10-15.

fort began. The identifiable first fort structures in that drawing included four of the six stone barracks, three of which were roofless with the fourth only having a partial roof. Also depicted are the stone quartermaster warehouse, also roofless, and the magazine. Visible as well are the blacksmith shop, also roofless, and ruins of the adjutant office, bakery, and sutler's store. In addition, three freestanding chimneys appear for what may be the remains of the commanding officer's quarters and two other officers' quarters.⁶⁰

⁶⁰ Drawing, "Fort Davis, Texas, Octobre [sic] 1867" (copy at Fort Davis NHS archive and in Greene, pp. 456-457); Greene, pp. 76-78, 85.

PERIOD OF THE SECOND FORT DAVIS (1867-1891)

Historical Overview

After the conclusion of the Civil War in 1865, the Army reopened Fort Davis two years later to counter the sharp increase in Indian raiding along the San Antonio-El Paso road. The post would continue to operate through the heated Indian wars that persisted in the West through the 1870s and 1880s. During this time, all four of the Army's African-American units were stationed at Fort Davis (the 9th and 10th Cavalry and the 24th and 25th Infantry), as well as members of the famed Seminole Negro scouts.⁶¹ In general, the Army's development of the site during the period was much more intensive than had occurred at the first Fort Davis. These activities impressed an even greater complexity of cultural features on the site's landscape and transformed the natural environment of the area even further.

Lt. Col. Wesley Merritt, a Civil War hero, commanded the post at the time of its reestablishment. After finding little remaining of the first fort's buildings, Merritt designed a new configuration for the second fort, situating it on the flat plain just outside the mouth of Hospital Canyon. Merritt's plan provided for a formal arrangement of buildings around a large parade ground, with a row of officers' quarters along the long side to the west and a line of barracks on the opposite side. Although most of the buildings were made of adobe, some of the officers' quarters were constructed of locally-quarried stone.⁶²

⁶¹ Welsh, pp. 6-7.

⁶² Robinson, p. 154.

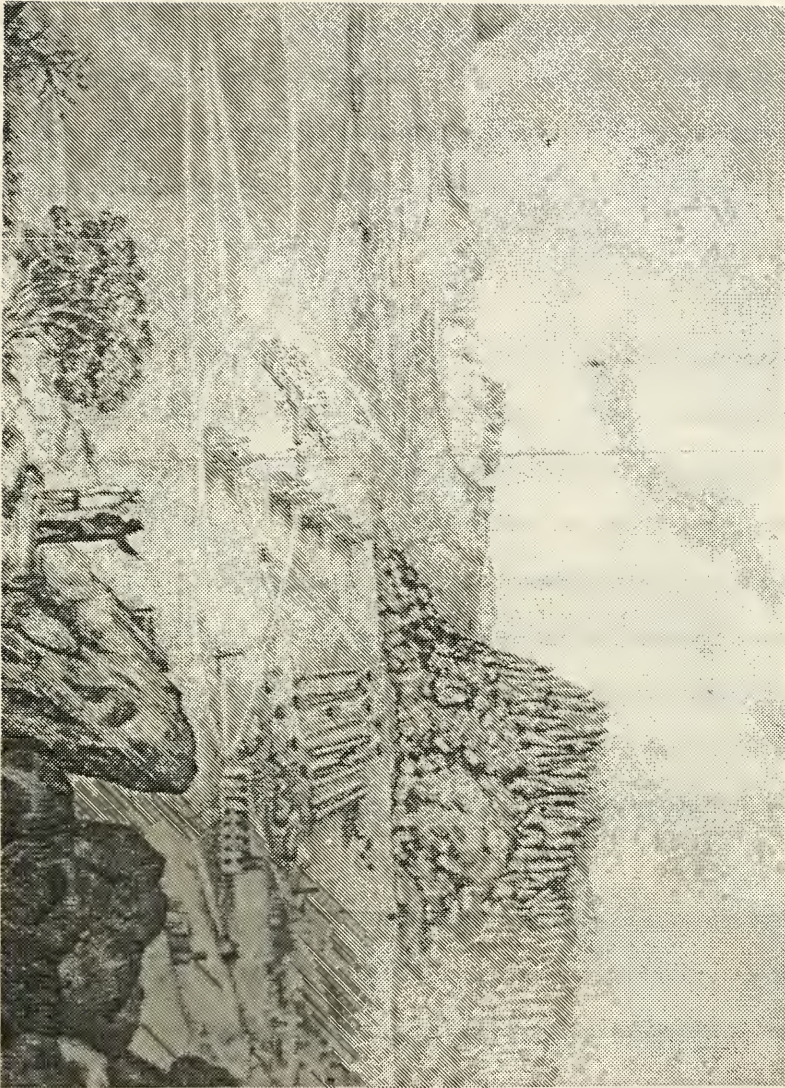


Figure 10. Sketch, second Fort Davis, 1867 (Source: Fort Davis NHS archives)

During the 1870s, the number of structures at the fort continued to grow as increased American commerce and settlement in the area caused an increase in conflicts with Native American tribes in the region. Aside from sending out parties to engage Indians, the troops at Fort Davis additionally were involved in defending the stage and mail stations and coaches, performing construction work at the post and on military roads, and stringing telegraph wire.⁶³

During the second fort period, Fort Davis forces fought their most significant encounter in 1880 against the Warm Springs Apaches and their chief Victorio. Victorio refused to take his people to the Apache reservation at San Carlos, Arizona, desiring instead to have a reservation at Ojo Caliente, New Mexico. On July 30 of that year, U.S. troops under the leadership of Col. Benjamin Grierson, later the commander at Fort Davis, engaged Victorio's band at the Battle of Tinaja de las Palmas near the Río Grande to the southwest of El Paso. After another skirmish between the two sides at Rattlesnake Springs, Victorio retreated into Mexico, where he was killed by the Mexican army. Afterward, Fort Davis and the Trans-Pecos experienced no further significant confrontations with the Apaches.⁶⁴

Under Grierson as post commander during the early 1880s, the number of personnel grew to more than 680 and the extent of the fort's facilities expanded significantly as well, including a piped water system supplied from a well near Limpia Creek. But as conflict with Native Americans tapered off, the need of the post for defensive purposes also

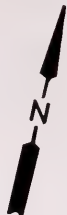
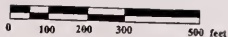
⁶³ Welsh, pp. 6-7.

⁶⁴ *Ibid.*, pp. 7-8.

lessened. In its last years, the War Department cut funding for the fort, and the number of troops assigned there also fell. Other factors that worked against its continued operation included the fact that it was 20 miles distant from the nearest railroad at Marfa, the uncertainty of the post water supply from the Limpia Creek, both in terms of its quantity and quality, and that it was located on property that the Army did not own. As part of a large-scale realignment of defenses in the West, Fort Davis was deactivated in 1891, with the last troops there departing in June of that year.⁶⁵

⁶⁵ *Ibid.*, pp. 9-10.

- Structures
- Small-scale features
- Constructed water features
- Parade ground boundary
- Earthworks
- Roads (exact locations may be uncertain)
- Incomplete structures
- Elevation (ft. above sea level)
- 358 Feature Identification number



North Ridge

Hospital Canyon

Sleeping Lion Mountain

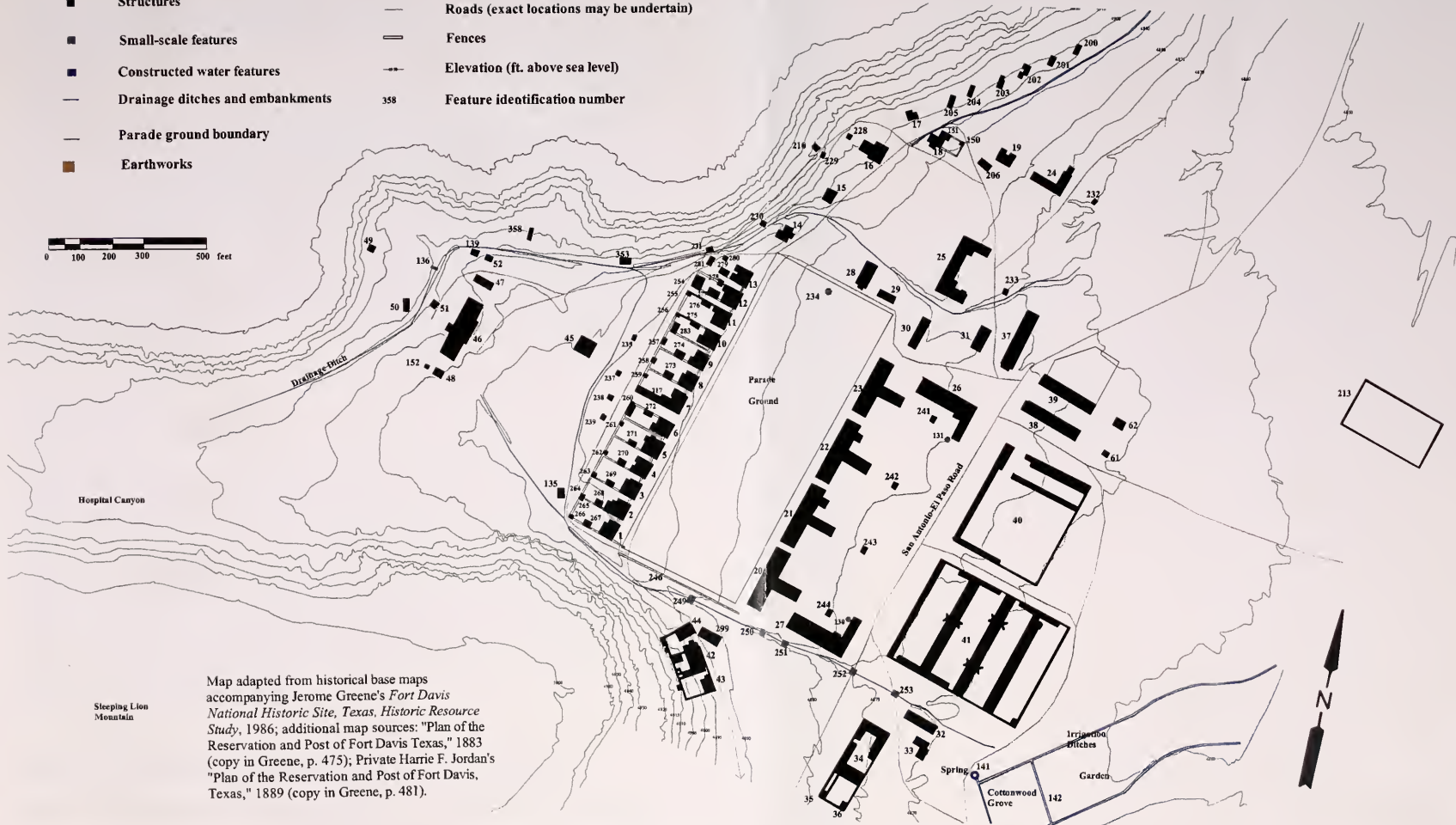
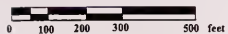
Map adapted from historical base maps accompanying Jerome Greene's *Fort Davis National Historic Site, Texas, Historic Resource Study*, 1986; additional map sources: "Plan of Fort Davis, Texas," 1871 (copy in Greene, p. 465).



Figure 11. Plan of second Fort Davis, 1867-1873 (Source: author's adaptation of historic base map accompanying Greene)



- Structures
- Small-scale features
- Constructed water features
- Drainage ditches and embankments
- Parade ground boundary
- Earthworks
- Roads (exact locations may be uncertain)
- Fences
- Elevation (ft. above sea level)
- 358 Feature identification number



Map adapted from historical base maps accompanying Jerome Greene's *Fort Davis National Historic Site, Texas, Historic Resource Study*, 1986; additional map sources: "Plan of the Reservation and Post of Fort Davis Texas," 1883 (copy in Greene, p. 475); Private Harrie F. Jordan's "Plan of the Reservation and Post of Fort Davis, Texas," 1889 (copy in Greene, p. 481).

Figure 12. Plan of second Fort Davis, 1874-1891 (Source: author's adaptation of historic base map accompanying Greene)

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Significant Landscape Characteristics of the Period

Buildings and Structures

Bakery

After initially using the bake house left from the first fort, a post bakery (HB-33) was constructed in 1871 near the spring in the southeast part of the post and just south of the old commissary storehouse (HB-32). It was made of adobe and measured 40 feet by 16 feet. In 1876, this structure was replaced by a new bakery (HB-31) located about 40 yards northeast of the guardhouse (HB-30). It also was made of adobe, had a tin roof, and measured 46 feet by 30 feet.⁶⁶

Chapel and School

In 1870, the post chapel and school were situated in an adobe building (HB-206) located about 240 yards north of barrack HB-23, which measured 50 feet by 25 feet. By sometime in either 1878 or 1879, a new post chapel and school (HB-28) was completed at about 70 yards north of the northeast part of the parade ground. It was a one-story adobe building with a tin roof and measured 30 feet by 65 feet. By 1890, the school was relocated to one of the empty barracks.⁶⁷

Commissary Storehouse and Office and Commissary Sergeant's Quarters

The first commissary storehouse and office (HB-32) of the second fort, which maintained the fort's foodstuffs, was finished in 1869 and was located south of the cavalry corrals

⁶⁶ Greene, pp. 176-180.

(HB-41) and about 175 feet east of the parade ground's southeast corner. It was a one-story adobe structure with a shingled roof and measured 28½ feet by 104 feet. Sometime before 1873, a building was erected to the south of the old quartermaster storehouse (HB-34) and just east of the quartermaster sergeant's quarters (HB-35) that served as the commissary sergeant's quarters (HB-36). It was a one-story adobe structure that measured 17 feet by 30 feet and housed the commissary sergeant until the late 1880s. By the late 1870s, growth in commissary operations caused the commissary office to be moved to the old bakery (HB-33). A new commissary (HB-37) had been built by 1885 just east of the new bakery (HB-31) and next to the west side of the El Paso road. It also was a tin roofed, adobe structure that by 1889 measured 33 feet by 105 feet with a 60-foot extension.⁶⁸

Corrals, Stables, and Forage House

The quartermaster corral (HB-40) was completed in 1869 just to the east of where barracks HB-22 and HB-23 would be located. It measured 330 feet by 345 feet and had a perimeter wall primarily made of adobe, but underwent many changes up until 1890. At that time, it had adobe shops with tin roofs along the north and west sides. In addition, it had wooden stalls along the west side, along the west half of the south wall, and in a line extending into the corral from the east side, approximately 60 feet south of the north side.⁶⁹

⁶⁷ *Ibid.*, pp. 155-158, 160-161.

⁶⁸ Greene, pp. 181-186, 195.

⁶⁹ National Park Service, "National Register of Historic Places Inventory – Nomination Form for Fort Davis, Texas," 1978; Greene, pp. 200-206.

The primary structure of the cavalry corral (HB-41) was erected in 1870, with additions and modifications made to it through 1886. It was located just south of the quartermaster corral. In 1890, its overall measurements were 496 feet by 334 feet. The perimeter of the corral was formed by an adobe wall. It also had seven rows of stalls lined north-to-south, as well as adobe shops with tin or shingle roofs situated along the inside of most of the north wall and about one-third of the south wall.⁷⁰

By 1886, a forage house (HB-39) used to store feed for cavalry and quartermaster animals had been built parallel to and north of the new quartermaster storehouse (HB-38). It was 28 feet by 180 feet in area, was made of adobe, and had a shingle roof.⁷¹

Enlisted Men's Barracks

The enlisted men's barracks of the second fort were oriented north-south in a line along the east side of the parade ground. Construction of the first four barracks apparently began after work was initiated on the first officers' quarters in October 1867. Each barrack was to be one story, made of adobe plastered inside and out, and measuring 186 feet by 27 feet, with a rear extension of 86 feet by 27 feet. The structures were laid out 30 feet apart from one another, with the space between the two middle barracks being directly across the parade ground from the commanding officer's quarters (HB-7).

⁷⁰ National Park Service, "National Register of Historic Places Inventory – Nomination Form for Fort Davis, Texas," 1978; Greene, pp. 207-212.

⁷¹ Greene, pp. 197-199.

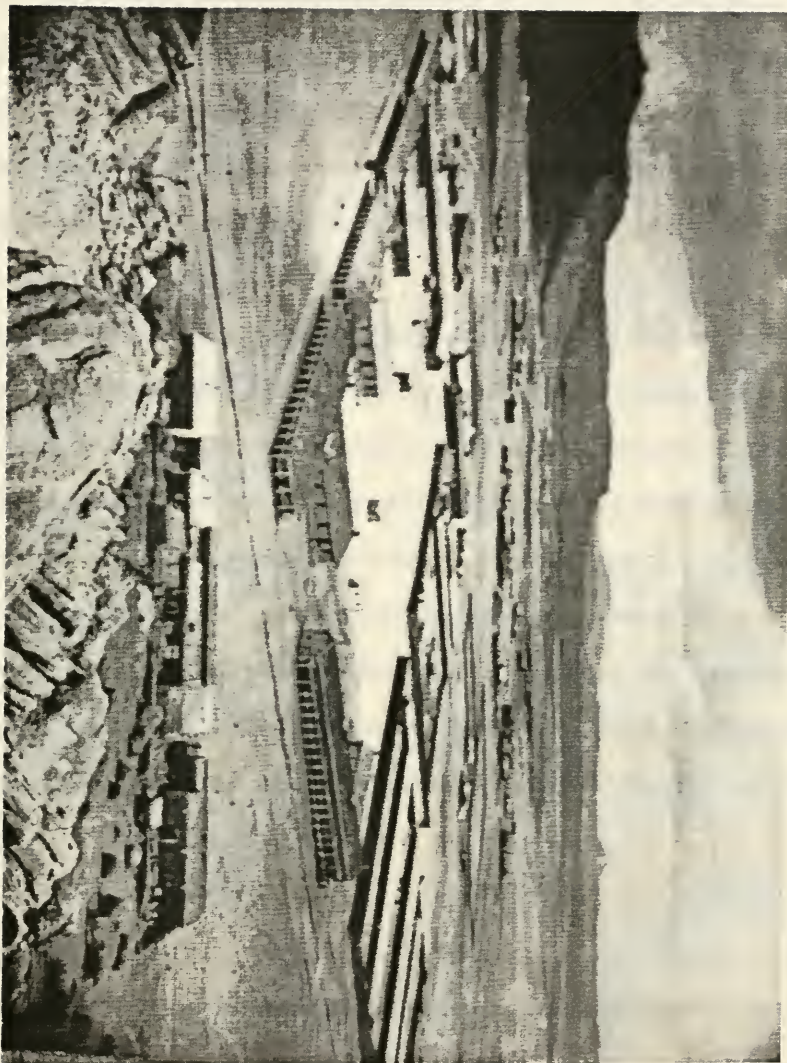


Figure 13. Photograph, second Fort Davis sutler's store, barracks and corrals from south, 1886 (Source: Fort Davis NHS archives)

By September 1869, two of these structures (HB-20 and HB-21) were complete, having shingle roofs, and the two others (HB-22 and HB-23) only needed their roofs finished. Due to funding difficulties, the latter two structures were not completed until late 1875 or early 1876. When completed, these two northern barracks had tin roofs. Adobe sinks measuring 12 feet by 18 feet were located 200 feet east of each of these four barracks.⁷²

By August 1882, two more barracks had been completed. HB-25, an infantry barrack, was located just to the northeast of the parade ground, and was a one-story structure made of adobe, and measured 328½ feet by 23½ feet, with two wings, 23 feet by 59 feet each. A band barrack (HB-24) was situated even further to the northeast. It was also an adobe, one-story building having a tin roof, with its main length 100 feet by 28 feet and a wing 23 feet by 49 feet. Between 1883 and 1885, the fort's final two barracks were constructed at right angles to each end of the barracks along the parade ground. HB-26 was situated just to the east of HB-23 and HB-27 to the east of HB-20. Both of these buildings, which housed cavalry troops, measured 28 feet by 188 feet and had one wing of 87 feet by 23 feet.⁷³

Guardhouse

At the time of the reestablishment of Fort Davis, its guardhouse occupied the former guardhouse, as well as barrack, of the first fort (HB-349). By 1869, a new stone guardhouse (HB-299) measuring 54 feet by 22 feet was completed. It faced the south

⁷² Greene, pp. 141-144.

⁷³ *Ibid.*, pp. 146-148.

side of the parade ground near its southeast corner, and was just north of the post trader's complex. Finally, to relieve overcrowding, a new guardhouse (HB-30) was completed in 1882 north of barrack HB-23, adjacent to the northeast corner of the parade field. It was constructed of adobe, had one story, and measured 23 feet by 100 feet.⁷⁴

Hospital Complex

Initially, the hospital of the second fort was intended to be located about 130 yards north of the parade ground, just northwest of the adjutant's office. Construction began on this building (HB-207) around 1869, although work on it never progressed beyond the point of laying stone foundations and partial walls.⁷⁵

In the meantime, a temporary hospital (HB-74) was constructed in Hospital Canyon about 170 yards behind officers' row. It was a one-story, adobe structure, 50 feet by 19 feet, with an L-shaped addition of 14 feet by 26 feet. Both an office (14 feet by 28 feet) and a storeroom (12 feet by 16 feet) were constructed several yards to the south as well.⁷⁶

By 1876, the temporary hospital had collapsed and material from the originally planned hospital north of the parade was being used to construct the foundations of a new hospital about 220 yards west of the front of officers' row. The main part of this one-story adobe structure measured 63 feet by 46 feet. In addition, a wing to the north was 41½ feet by 27½ feet while a south wing was 19 feet by 17 feet. By the early 1880s, several

⁷⁴ Greene, pp. 168-173.

⁷⁵ *Ibid.*, pp. 222-223.

outbuildings had been built around the hospital, including a storehouse (HB-50) and wood house (HB-51) to its west and a laundry (HB-47) and privy (HB-52) to its north. Around 1884, a new ward (27 feet by 55 feet) was added to the south end of the hospital, and in late 1886 or early 1887 a two-story, adobe hospital steward's quarters (HB-48) measuring approximately 18½ feet by 23½ feet was raised directly south of the hospital, with a privy (HB-152) to its west.⁷⁷

Laundry and Laundresses' Quarters

Post floorplans dating from 1890 show a Chinese laundry that measured around 15 feet by 31 feet. Although its exact location is unknown, Greene notes that residents of the town of Fort Davis "recalled that the laundry stood near the present street running from the southeast park boundary to the modern Anderson School."⁷⁸ With regard to laundresses' housing, records from 1871 show that they lived in tents behind the barracks. Later, they lived in various small adobe buildings on the post. Around 1882, they lived in the structure that had been the Sergeant Major's and Principal Musician's Quarters (HB-54).⁷⁹

⁷⁶ *Ibid.*, pp. 223, 226.

⁷⁷ *Ibid.*, pp. 229-232, 234, 238-239.

⁷⁸ *Ibid.*, p. 252.

⁷⁹ *Ibid.*, p. 245.

Lime Kiln

A lime kiln (HB-140) existed at the southeast corner of the post, to the southeast of the spring. Little is known about its construction, except that it appears to have been made of red brick.⁸⁰

Magazine

The magazine (HB-49) for storing ammunition was completed in 1869 and was located a few yards west of where the post hospital (HB-48) was eventually erected. It was built of stone, had a shingle roof, and was 13 feet square. According to Greene, in 1873 there was a second adobe magazine measuring 16 feet square that “stood some distance north of the plane running between the hospital and the commanding officer’s stables.” However, this structure was used only temporarily.⁸¹

Married Men’s Quarters

Two small, adobe quarters for married enlisted men and their wives and families (HB-214 and HB-215) were built sometime prior to 1883, and were situated east of the new quartermaster storehouse (HB-38) and forage house (HB-39). Each quarter had dimensions of around 12 to 15 feet square. By 1889, there were five to six more adobe

⁸⁰ National Park Service, “National Register of Historic Places Inventory – Nomination Form for Fort Davis, Texas,” 1978

⁸¹ Greene, p. 240.

quarters (HB-200 through HB-205 and HB-298) interspersed along the water line at the base of the North Ridge, north of the garrison.⁸²

Officers' Quarters

Officers' row consisted of thirteen officers' quarters built in a north-south orientation linearly across the mouth of Hospital Canyon. These structures were situated along the west side of the parade ground and were spaced approximately 24 feet apart from one another. Their fronts faced to the east where the company barracks lined the parade ground's east side.⁸³

Construction of the row began first on HB-5, HB-6, HB-7, and HB-8 at the time of the reestablishment of the post in October 1867. Each of these buildings was made of stone and had wooden porches. The commanding officers' quarters was 48 feet by 21 feet with a wing 41 feet by 18 feet. Each of the other three structures was 48 feet by 21 feet, with the exception that HB-5 had a later wing addition of 21½ feet by 18 feet. Adobe kitchens were erected behind all four of those structures, with privies further to the rear.⁸⁴

By 1871, six more officers' quarters had been completed along officers row (HB-9, HB-10, HB-11, HB-12, HB-13) to the north of HB-8. Each of these structures was made of adobe and had wooden porches. They all measured 21 feet by 48 feet, and HB-9 and HB-12 both had later wing additions of 18 feet by 21½ feet. Each of these quarters had an

⁸² *Ibid.*, pp. 247-248.

⁸³ *Ibid.*, p. 116.

adobe kitchen behind it. . In addition, an adobe commanding officers' stables (HB-45) was built by 1871 about 115 yards west of the commanding officer's house (HB-7), to the west of the officers' kitchens and privies.⁸⁵

The following year, one more structure (HB-4) was added at the south end of the row. It was also constructed of adobe and measured 21 feet by 48 feet. At that time, two of the stone barracks from the first fort remained to be used as officers' kitchens, one (HB-346) behind HB-4 and the second to its south (HB-345). Both of these structures were gone by 1873. Later, an adobe kitchen was built to the rear of HB-4.⁸⁶

By 1882, officers' row was completed through the addition of three more structures (HB-1, HB-2, and HB-3) to the south of HB-4. These buildings were all of stone construction, and also measured 21 feet by 48 feet, with the exception that HB-2 had a wing addition of 18 feet by 21½ feet. They all had wooden porches and adobe kitchens to their rears.⁸⁷

After officers' row's buildings stretched across the entire mouth of the canyon, the continuing need for officers' housing necessitated their placement elsewhere. This situation resulted in another line of officers' quarters to the northeast of HB-13 along the base of the North Ridge. This grouping, which housed either noncommissioned officers or unmarried officers, was more loosely assembled and spread farther apart than officers'

⁸⁴ *Ibid.*, pp. 113, 120, 132

⁸⁵ *Ibid.*, pp. 115, 120, 220-221.

⁸⁶ *Ibid.*, pp. 115-116, 403.

⁸⁷ *Ibid.*, p. 120.

row. In 1882, the first structure of this group (HB-16) was completed. It was a two-story, adobe building measuring 52 feet by 40 feet, with a rear wing measuring 31 feet by 27 feet. A privy was located at its west end and three wooden shed-type buildings were situated to its rear.⁸⁸

⁸⁸ *Ibid.*, p. 123.

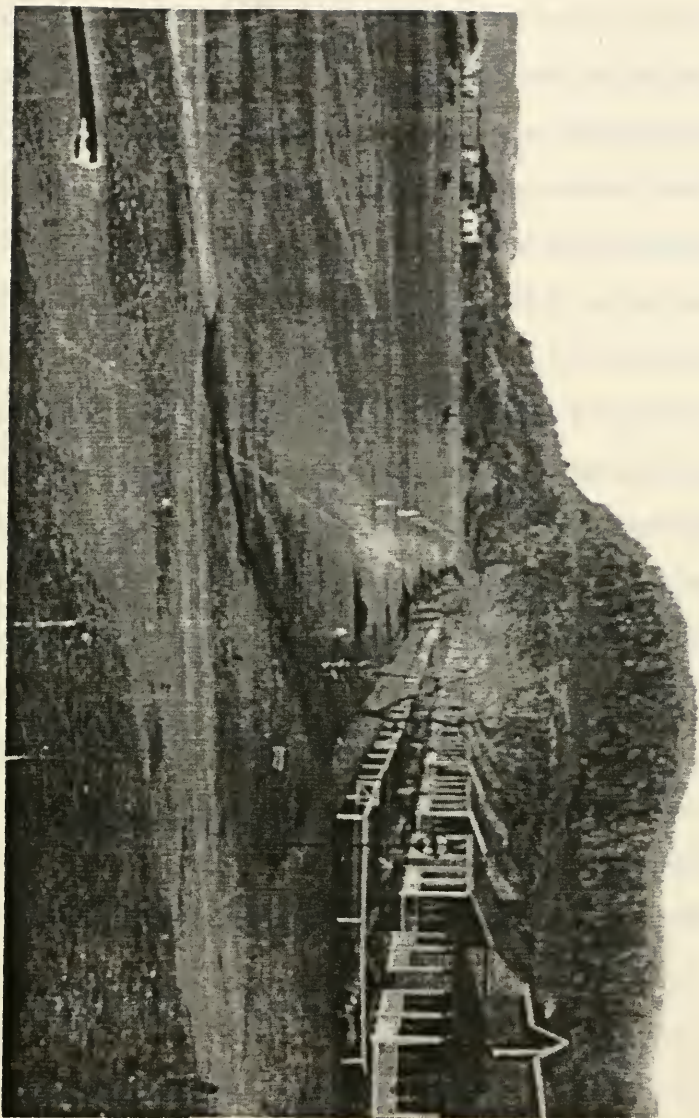


Figure 14. Photograph, second Fort Davis, officers' row from north, 1888 (Source: Fort Davis NHS archives)

The positioning of the four other officers' quarters that were built in this line was likely related to the April 1883 plan for the construction of a water line from the area of Limpia Creek to the post. By 1885, three of these quarters were completed along the path of the water line around the base of the North Ridge on its way to officers' row. HB-17, situated to the northeast of HB-16, was made of vertical wooden poles or slabs, measured 12 feet by 18 to 20 feet, and had a privy to its north. HB-14, built just northeast of officers' row, was a two-story adobe structure measuring 19 feet by 40 feet, with a one-story wing addition on its west side of 15½ feet by 13 feet. Between HB-14 and HB-16 was HB-15, also a two-story, adobe building measuring 36 feet by 40 feet and having a privy at its rear. Finally in 1886, the fort's last officers' quarter was completed. HB-18 was located just to the east of HB-17, and had two stories, was made of adobe, and measured 20 feet by 45 feet. It also had a kitchen and another outbuilding to its rear.⁸⁹

Oil House

The oil house (HB-61), which stored flammable materials such as kerosene and lard, was located to the east of the new quartermaster storehouse (HB-38). It was a one-story, adobe structure measuring about 12 feet by 13 feet. The date of its construction is unknown.⁹⁰

⁸⁹ "Plan of the Reservation and Post of Fort Davis, Texas," 1883, National Archives (Copy at Fort Davis NHS); Greene, pp. 123-129, 257, 259.

Ordnance Sergeant's Quarters and Signal Office

The ordnance sergeant's quarters and signal office (HB-19) was located northeast of the parade ground, between barrack HB-24 and officers' quarter HB-18. This structure may have previously been the post chapel prior to 1879, and for a short time thereafter housed the chief musician. It was a one-story, adobe building with a tin roof that measured 28 feet by 53 feet, with a wing addition being added some time before 1885.⁹¹

Post Headquarters

The post headquarters (HB-29), which housed offices of the commanding officer, the adjutant, and the sergeant major, was located about 70 yards north of the northeast corner of the parade ground and just east of the chapel (HB-28). It was first built in 1871, and then rebuilt in 1875 after a fire. It was a one-story, adobe structure measuring 19 feet by 45 feet.⁹²

Post Trader's Complex

During the early part of the second fort, several traders operated private stores in the vicinity of the reservation. By 1872, Daniel Murphy became the sole trader, and his store was established as the post store. This facility served throughout the rest of the fort's operation as the core of the post trader's complex. This complex consisted of a cluster of buildings that were located directly south of the parade ground and were roughly aligned northwest to southeast. The northernmost building was the post trader's residence (HB-

⁹⁰ Greene, p. 248.

⁹¹ *Ibid.*, pp. 137-139.

43), the center structure was the post store (HB-42), and the telegraph office (HB-45) was the southernmost. The store was established first, sometime before 1870, and was made of adobe. By 1873, the store had two more outbuildings (HB-293 and HB-295) and an adobe wall around it. Around 1880, the telegraph office and sutler's residence had been added, and they were also made of adobe. Around that time, HB-295 was torn down and privies were built for both the store (HB-294) and the residence (HB-292), with the latter also receiving a shed (HB-291). In addition, the adobe wall was extended around the entire complex.⁹³

Pump House

The second fort's water supply system had a pump house located at a well near Limpia Creek, approximately 600 yards north of the fort. This masonry structure housed the steam pump that forced water from the well to the post complex. It was completed in 1884 and measured approximately 44 feet by 21 feet.⁹⁴

Quartermaster Storehouse and Quartermaster Sergeant's Quarters

The second fort's initial quartermaster storehouse (HB-34), which housed soldiers' clothing and equipment, was built sometime before 1871 south of the first commissary storehouse (HB-32) and adjacent to the east side of the San-Antonio-El Paso road. It was a one-story adobe building with a tin roof and, after several alterations, measured 90 feet by 137 feet. An adobe quartermaster sergeant's quarters (HB-35) also was built

⁹² *Ibid.*, pp. 165-167.

⁹³ *Ibid.*, pp. 213-219.

sometime before 1873 to the south of the first quartermaster storehouse and just west of the commissary sergeant's quarters (HB-36). After some modifications, its dimensions were 13 feet by 39 feet. By 1883, a new quartermaster storehouse (HB-38) had been built north of the quartermaster corrals (HB-40) and east of the San-Antonio-El Paso road. It also was a one-story, adobe structure and measured 33 feet by 180 feet.⁹⁵

Sawmill

The second fort's sawmill (HB-62) was completed sometime around 1886, and was probably located just east of the forage house (HB-39). It was a wooden frame structure built in the form of a shed and measured 21 feet by 32 feet.⁹⁶

Circulation

Railroads

The transcontinental Southern Pacific Railroad ran south of Fort Davis in connecting San Antonio and El Paso. In January 1882, the section of the railroad was completed through the town of Marfa, about twenty miles south of Fort Davis, where it intersected the road leading from the fort to Presidio del Norte. A second line, the Texas and Pacific Railroad, passed north of the post, and connected to the Southern Pacific to the west at Sierra Blanca, Texas. It was also completed in 1882. Although both lines helped to connect the post to the region and the nation, and resultantly aided in communication and

⁹⁴ *Ibid.*, p. 246.

⁹⁵ *Ibid.*, pp. 187-193.

supply distribution, the fact that Fort Davis was not located directly on a railroad line aided in its eventual closure.⁹⁷

Roads and Paths

The second fort was located immediately adjacent to the San Antonio-El Paso road. Once the second fort's buildings were laid out, this road bisected the post, traveling behind the barracks (HB-20 and HB-21), passing the west side of the cavalry and quartermaster corrals (HB-40 and HB-41), and running in front of the old quartermaster storehouse (HB-34). As mentioned previously, this road connected the post to El Paso to the west and San Antonio to the east, and from those points to other parts of Texas and the nation at large.⁹⁸

By the late 1870s, at least six secondary roads connected Fort Davis to its local and regional surroundings. Most of these routes traveled to springs and other sources of water. One went northwest from the post's north side across Limpia Creek to Antelope Springs, about thirty miles away. Another split from the San Antonio-El Paso road south of the fort to follow the edge of the mountains north and west to Tinaja Voluntaria, about forty miles distant. At least four other roads split off from the San Antonio-El Paso road near Fort Davis, heading to other springs to the south and east. Around one-quarter mile south of the post, a primary route forked off from the San Antonio-El Paso road to the

⁹⁶ *Ibid.*, p. 247.

⁹⁷ "Military Map of Western Texas, 1884." National Archives, Cartographic Archives Division (copy in Greene, pp. 438-439); Wooster, pp. 302; 375-378.

⁹⁸ Greene, p. 306.

southeast toward Landrum's Ranch and continued to the southwest, paralleling the Chihuahua Trail to the Río Grande. Later, a route was established that traveled more directly to the south, through what became the town of Marfa, and then to Presidio del Norte. This road was significant to the post in providing supplies. In 1880, another route was begun that left the fort from the southeast to travel east to Peña Colorado, a subpost of Fort Davis, and continue on to San Antonio. This route diminished the distance between the fort and San Antonio to 390 miles.⁹⁹

Several roads and paths also crossed within the Fort Davis reservation to connect its various parts. Perhaps the most complete representation of the second fort's interior road network is represented by Pvt. Harrie F. Jordan's 1889 plan of the post. In addition to the San Antonio-El Paso road, roads existed in front of officers' row along the west side of the parade ground and in front of the enlisted men's barracks to the parade's east side. Another pathway ran east-west across the middle of the parade ground, connecting the commanding officer's quarters (HB-7) to the barracks. During the period that the flagstaff was located at the center of the parade, this path formed a circle around it.¹⁰⁰

Greene additionally identifies five other internal roads based on Jordan's plan. The first of these, termed by Greene as "Road No. 1," forked off to the west from the San Antonio-El Paso road at the western end of the granary (HB-39) and ran in front of the commissary

⁹⁹ "Military Map of Western Texas." Compiled by Captain W. R. Livermore, 1878. National Archives, RG 393. Cartographic Archives Division. Department of Texas 4 (copy in Greene, pp. 434-435); "Military Map of Western Texas, 1884." National Archives, Cartographic Archives Division (copy in Greene, pp. 438-439); Greene pp. 306-308.

storehouse (HB-37) to pass by the guard house (HB-30). It then skirted the north end of the parade ground, and, upon reaching its northwest corner, split. One part went on to join a road running to the southwest toward the hospital (HB-46). This road divided about 200 feet northeast of the hospital, with one part going west and then south behind that structure and the other part passing in front of the hospital. The other route, upon leaving the northwest corner of the parade ground, headed south along the western border of the parade, and then ran southeast past the post trader's complex (HB-42-44) to exit the post before rejoining the San Antonio-El Paso road.¹⁰¹

The second road, which Greene calls "Road No. 2," ran north and east from the northwest corner of the parade ground, running in front of officers' and noncommissioned officers' quarters (HB-14 through 16) and between HB-16 and HB-18, and then cutting east and south beyond the signal office (HB-19). It then joined with another route from the north at the rear of barrack HB-25. From that point, it ran south between the new commissary storehouse (HB-37) and bakery (HB-31), continuing on to meet with "Road No. 1."¹⁰²

A third road, which Greene designates as "Road No. 3," split off from "Road No. 2" just north of barrack HB-25 to go directly west. It passed in front of HB-18 and then traveled to the base of the North Ridge, where it ran south along the ridge. Finally, it began to

¹⁰⁰ Pvt. Harrie F. Jordan map of Fort Davis, 1889. National Archives, RG 92. Microfilm Roll 65-855 (10427)1 (copy at Fort Davis NHS archives and in Greene, pp. 480-481).

¹⁰¹ Pvt. Harrie F. Jordan map of Fort Davis, 1889. National Archives, RG 92. Microfilm Roll 65-855 (10427)1 (copy at Fort Davis NHS archives and in Greene, pp. 480-481); Greene, p. 308.

¹⁰² Greene, pp. 308-309.

turn west close to the mouth of Hospital Canyon, passing across the north drainage ditch to meet “Road No. 1” at the rear of the north end of officers’ row.¹⁰³

Greene’s “Road No. 4” split off from the Lower Road between the new quartermaster storehouse (HB-38) and the quartermaster corral (HB-40). From there, it went directly east, running to the south of the married soldiers’ quarters. It then divided around the northeast corner of the corral, with one part leading to the south to run along the east side of the quartermaster and cavalry corrals (HB-40 and HB-41) and then by the spring at the post’s southeast corner. It then continued southeastwardly out of the reservation.

Another short road connected the Lower Road to “Road No. 4” by running between the corrals. Another short connecting road emanated from the Lower road near the southwest corner of the cavalry corral, running southeast over the south drainage ditch and between the old quartermaster storehouse (HB-34) and the old bakery to join “Road No. 4” and then leave the fort complex.¹⁰⁴

The road that Greene refers to as “Road No. 5” split off from the hospital road at the rear of officers’ quarters, HB-12, to run due south behind officers’ row. It then angled east around HB-1 to meet with “Road No. 1” around the southwest corner of the parade ground.¹⁰⁵

¹⁰³ *Ibid.*, p. 309.

¹⁰⁴ *Ibid.*, p. 309.

¹⁰⁵ *Ibid.*, p. 309.

In 1871, the fort's internal road system was less complex. At that time, it simply consisted of somewhat modified versions of "Road No. 1" and "Road No. 5." In addition, a short connector road ran from "Road No. 1" northeast of the post to "Road No. 4" at the corner of the quartermaster corral (HB-40).¹⁰⁶

Constructed Water Features

Cisterns

The first mentioning of a cistern being constructed at Fort Davis was in 1867, when Col. Merritt caused one to be built near the hospital to collect non-alkaline rainwater. This action was taken in response to concerns at the time that the water supply in part had caused outbreaks of dysentery. A second cistern was built behind the commanding officers' quarters (HB-7).¹⁰⁷

Dams

Due to low water levels in Limpia Creek in 1886, a dam was constructed there in that year for the purpose of holding water for horses.¹⁰⁸

¹⁰⁶ "Plan of Fort Davis, Texas," 1871. National Archives, RG 77. Cartographic Archives Division (copy at Fort Davis NHS); Greene, pp. 309-310, 464-465.

¹⁰⁷ Greene, pp. 254-255; Michael Welsh, *A Special Place, A Sacred Trust: Preserving the Fort Davis Story* (Santa Fe, NM: National Park Service, 1996), p. 113.

Piped Water Supply System

In addition to the spring located in the southeast part of the post, Limpia Creek was the primary source of water throughout the history of Fort Davis. A visit to the post in March 1883 by General Philip Sheridan precipitated the creation of a system for bringing water to the fort from the Limpia by pipe. The following month, a survey was conducted for the system and its construction was completed by April 1884. Water for the system was obtained from a well located about 130 yards south of Limpia Creek. A steam-powered pump was located next to the well and forced water in an iron pipe up to a 32,000-gallon cypress tank (HB-220) located at the base of the North Ridge 130 yards further south of the well. The tank was approximately 25 feet in diameter and 8 feet high and rested on beams placed into sockets into the rock of the hillside. Water then flowed downhill from the tank by gravity to the fort in iron pipes. At an arroyo located west of the second fort's official cemetery (HB-92), the pipe ran across the top of a support embankment faced with stones (HB-91). The primary pipe went southwest into the post where two-inch distributing pipes sent water to hydrants at officers' row, the barracks, the hospital, the storehouses, and the corrals. In 1886, a second water tank (HB-221) was placed next to the first tank and was situated on two stone and Portland cement footings, one of which was constructed against the slope of the hill and the other built against a large boulder to the east. The tank was of the same approximate size as the first water tank and sat on a wooden platform atop the footings, which had three piers built between them to support

¹⁰⁸ Greene, p. 260.

the tank's center. By 1889, additional water pipes were in place to provide water to more buildings, such as the married soldiers' quarters at the east part of the post.¹⁰⁹

Spring Development

During the period of the second fort, a spring (HB-141) at the southeast part of the reservation was used as an important source of water. In 1869, officers at the post recommended that it be developed. Six years later, a stone wall was constructed around it, and a small pump was put in place to aid the flow of water. To address problems with contamination of the spring water, in 1878 Post Surgeon Ezra Woodruff recommended that the wall surrounding the spring be made impervious through the application of hydraulic cement and that a stone wall be constructed around it "at a proper distance to prevent persons and animals from directly approaching the edge of the spring and dipping dirty vessels of all kinds directly into it." A post inspection in the early 1880s described the walled spring as measuring "13 ft. x 10 ft. diameter, with 6 ft. of water." Additionally, a windmill had been constructed there to pump water.¹¹⁰

Wastewater Drains

During the mid-1880s, a sewer system was completed at the post that transported wastewater from kitchens, bathrooms, and newly created urinals. It took watery waste from the urinals behind the barracks (HB-21, HB-22, HB-23, HB-26, and HB-27) and at

¹⁰⁹ "Plan of the Reservation and Post of Fort Davis, Texas," 1883, National Archives (Copy at Fort Davis NHS); "Plan of the Reservation and Post of Fort Davis, Texas," by Pvt. Harrie F. Jordan, 1889, National Archives (Copy at Fort Davis NHS); Greene, pp. 257-261, 389, 394.

the guardhouse (HB-30) to a pipe going south and east between the cavalry corrals (HB-41) and the old quartermaster storehouse (HB-32), where it presumably ended. Remains of such a drain at HB-26 consisted of flat, stone slabs that were square in cross section. A separate, smaller sewer pipe took wastewater from barrack HB-25 a short distance east where it probably filtered into the ground.¹¹¹

Wells

Records indicate that by 1872, several wells had been dug “at the barracks” to contribute to the post’s water supply. Greene speculates that they were likely located behind those structures. At least one additional well was located behind officers’ row, and by the early 1880s another was located about 130 yards south of Limpia Creek to supply the post’s piped water system. A plan of the post from 1883 also indicates that a well had been dug at the rear of Hospital Canyon to a depth of 35 feet “without getting water.”¹¹²

Land Use

Cemeteries

At the second Fort Davis, records indicate the presence of four cemeteries. The first of these was the cemetery of the first fort, and was located up Hospital Canyon, behind the

¹¹⁰ Woodruff to Post Adjutant, Fort Davis, Texas, June 30, 1878, in “Medical History of Posts. Fort Davis, Texas,” Microfilm Roll 66-790 (7834), p. 221. Copy in library of Fort Davis National Historic Site; Greene, pp. 254-257.

¹¹¹ “Plan of the Reservation and Post of Fort Davis, Texas,” by Pvt. Harrie F. Jordan, 1889, National Archives (Copy at Fort Davis NHS); Greene, pp. 279, 399.

¹¹² “Plan of the Reservation and Post of Fort Davis, Texas,” April, 1883. National Archives, RG 77. Cartographic Archives Division (copy in Greene, pp. 474-475); Greene, pp. 255, 258.

second fort's officer's quarters and past the temporary hospital. Records indicate that it contained both military and civilian graves.¹¹³

The second cemetery of the period, which was the first to receive burials during the period of the second fort, was established off the military reservation approximately one-half mile southwest of the fort, near the present Fort Davis Presbyterian Church. This cemetery was used by the post between July 1867 and October 1870, and contained the graves of twenty-eight enlisted men.¹¹⁴

A third cemetery was established on the post in 1871 "about 150 yards over North of the Flagstaff" beyond the stone foundation of the second fort's proposed, but never completed, hospital. The original intent behind its creation was to move to it and consolidate the remains of the military dead who were buried elsewhere. According to Greene, it contained twenty-eight graves within two rows in an east-west orientation, was unenclosed, had no trees or shrubs planted at it, and had no pathways.¹¹⁵

By 1873, a "new cemetery" was established about one-quarter mile northeast of the flagstaff at what was described as "a beautiful site at the base of the mountain." In the same year, the burial ground 150 yards north of the flagstaff was being referred to as the "Old Grave Yard Northwest of the Post." Reports between 1873 and 1879 indicate that it

¹¹³ Mary Williams, "Care of the Dead: A Neglected Duty; The Military Cemeteries at Fort Davis Texas" (Typescript, Fort Davis National Historic Site, 1983), p. 5.

¹¹⁴ "Care of the Dead." This source does not indicate the year in which bodies were moved from the off-post cemetery to the site one hundred fifty yards north of the flagstaff; Greene, p. 291.

was not enclosed and that it was devoid of walkways, trees, or any other types of shrubs or plants.¹¹⁶

A fourth cemetery, located in Hospital Canyon about 500 yards west of the flag pole, received the bodies of seven dead Fort Davis personnel between February 1876 and September 1878. This location became known as “west cañon” cemetery.¹¹⁷

In 1879, department headquarters in San Antonio ordered that the site one-quarter mile northeast of the flagstaff be designated as the official “Post Cemetery.” An 1883 plan of the fort locates it about 260 yards north of the parade ground. From that time until the fort was abandoned in 1891, it was the only burial ground used at the fort and received the bodies of enlisted men, their families, and civilians employed at the fort. Despite the designation of this site as the official post cemetery, an 1881 inspection report states that “(g)raues without enclosures are scattered in various parts of the reservation.” The official cemetery also appears to have been poorly maintained. For instance, a report from 1883 states that “the cemetery is not enclosed by any fence, and the graves are thereby exposed to loose stock wandering about the post.” Not all graves were marked, and those that were had wooden markers that eventually rotted. Not until after the departure of the Tenth Calvary in the spring of 1885, which reflected the end of the fort’s expansion, did cemetery care-taking receive much of a priority. During the late 1880s, permanent stone markers were placed at graves, and an 1887 inspection report states that

¹¹⁵ Greene, pp. 291-292.

¹¹⁶ “Care of the Dead;” Greene, pp. 292-293.

“the post cemetery is surrounded by a wire fence, and is in fair condition.” However, a report just two years later indicates that it was “in bad condition generally,” as “the fence was broken down,” and no trees, shrubs, or walkways were present. Finally, a year following the fort’s 1891 closure, the remains of those soldiers and their families buried at the post were removed and sent to be reburied at the San Antonio National Cemetery.¹¹⁸

Firing Ranges

The earliest location for target practice to improve the marksmanship of the troops at the second fort appears to have been southeast of the post at an indeterminate location. The primary firing-range location during this period, however, was in Hospital Canyon behind the hospital. In 1884, there were several ranges located at this site. Post commander Col. Benjamin Grierson stated that “there are two ranges 1,000 yards in extent, two 600 yards and two 300 yards.” In 1889, the ranges were still “up the canyon.” In addition, another range used for skirmish practice was located on property east of the fort acquired from former post trader Daniel Murphy.¹¹⁹

Gardens

During the period of the second fort, gardening for the purpose of supplying fresh vegetables took place at two primary locations. The first of these was established in 1868 in response to troops suffering from scurvy. It was a fenced, four-acre plot of land

¹¹⁷ “Care of the Dead,” Greene, pp. 292-293.

¹¹⁸ “Care of the Dead,” p.8; Greene, pp. 292-295.

located about one-half mile north of the fort along Limpia Creek, near the mouth of Limpia Canyon. In March 1869, the post surgeon reported that “a piece of ground near the post of about 3 acres has been enclosed and put under cultivation this month for the post hospital.” Although its exact location is not indicated, one may speculate that this garden was established adjacent to the spring located in the southeastern part of the reservation, where the garden of the first fort also appears to have been located. Around 1870, the garden on the Limpia was given up in favor of a new one six to eight miles to the southeast of the post at the Musquiz Ranch. By 1871, though, this garden was abandoned, and the only garden appears to have been near the spring. Throughout the rest of the decade of the 1870s, the post garden remained at the spring, with the exception of its temporary relocation to Limpia Canyon in 1879. Four years later, a plan of the fort shows two irrigated gardens, one located on the Limpia and the other at the spring. At the latter location, the map shows that the spring was contained by a circular wall and had an irrigation ditch leading directly east from it to the garden. Although records show that there was no post garden in 1885, they indicate that there was more than one garden in 1886, and that “(t)hese are divided and are under the charge of the adjutant and the troop commanders.” In May 1888, it was reported that there were “several gardens at the post.” No indication is given as to whether there were gardens at locations other than at the spring and on the Limpia, or whether the plots at these two sites were divided into several

¹¹⁹ Greene, pp. 298-300.

company gardens. A plan of the post from the next year simply shows gardens located at the spring and at Limpia Creek.¹²⁰

Hay and Wood Yard

Based upon the recommendation of Col. Carleton, who inspected the fort in June 1871, an enclosure for the retention of hay and wood was established north of the cavalry corral (HB-40) in the northeast part of the post. Previously, hay had been kept at the quartermaster corral (HB-41), but Carleton saw that location as a potential fire hazard due to its proximity to the blacksmith shop. Sometime between 1883 and 1886, the hay and wood yard (HB-213) was apparently moved about 160 yards to the northeast. It consisted of two sections, with the eastern part stretching across the boundary between the original reservation and the parcel of land purchased in 1883 to expand the size of the post. Both yards were apparently bounded by an adobe wall. After the erection of the forage house (HB-39) in 1886, the initial location of the hay and wood yard became a smaller yard used for storing wood. It was located on the north side of the forage house and was enclosed by an adobe fence.¹²¹

Parade Ground

¹²⁰ Report of Post Surgeon Weisel, April 1869, Fort Davis NHS Archives; "Plan of the Reservation and Post of Fort Davis, Texas," 1883, National Archives (Copy at Fort Davis NHS); "Plan of the Reservation and Post of Fort Davis, Texas," by Pvt. Harrie F. Jordan, 1889, National Archives (Copy at Fort Davis NHS); Greene, pp. 301-305, 474-475, 480-481.

The *Regulations Concerning Barracks and Quarters for the Army of the United States, 1860*, state that the flagstaff should be “[i]n the center of the parade ground.” An 1867 drawing of the fort from the time of its reestablishment after the Civil War shows the flagstaff to be in Hospital Canyon, north of the former barracks of the first fort. Based upon this evidence, one may speculate that the parade ground of the second fort initially was located in the same area, which was in the general vicinity of the first fort’s parade ground. By 1871, though, the parade ground had been relocated to the prairie just to the east of the mouth of Hospital Canyon, where it was situated throughout the remainder of the existence of the second fort. Although its dimensions on historic plans of the post vary, they were generally around 800 feet in length, running north-south, and about 400 feet in width, running east-west.¹²²

Stone Quarry

Stone for the construction of second fort buildings was obtained from a quarry at at Dolores Mountain, about one and one-half miles southeast of the post flagpole. Greene, however, also states that Lt. Col. Wesley Merritt “opened quarries only a half mile away from the new fort” upon reestablishment of the post in 1867. As already mentioned, Everett indicates that the type of building stone used in construction at both the first and second forts was vitric tuff of ignimbrite. He also notes that during the second fort

¹²¹ Plan of the Reservation and Post of Fort Davis, Texas,” 1883, National Archives (Copy at Fort Davis NHS); Greene, p. 245, 388, 393, 474-475.

¹²² *Regulations Concerning Barracks and Quarters for the Army of the United States, 1860* (Washington, D.C.: George W. Bowman, Printer, 1861), p. 7; Greene, pp. 249-250, 456-457, 462-477, 480-481.

period, buildings constructed of the tuff were erected between 1867 and 1869, while later buildings were made of adobes laid over tuff foundations.¹²³

Trash and Manure Dumps

In order to provide for the health of the troops, both trash and animal wastes had to be properly disposed of. Information about the locations that served as dumping grounds is incomplete, though. Early on during the period of the second fort, refuse was dumped into several pits near the stables and commissary warehouse. When those holes became a problem when they began to overflow, post surgeon Weisel ordered that they be limed and filled. In 1871, Col. Carleton recommended that all animal waste from corrals and stables be deposited at a location in the valley floor below the spring in the southeast part of the reservation. In 1883, the post surgeon recorded that “the eastern approach to the Post and the low grounds in that vicinity” were used as a dumping ground for both manure and “offal” from the fort.¹²⁴

Natural Systems

Hydrology

Despite the construction of earthworks, walls, and digging drainage ditches, accounts repeatedly describe the second fort being flooded when waters rushed through Hospital

¹²³ Everett, pp. 8-9; Elvis Joe Ballew, “Supply Problems of Fort Davis, Texas, 1867-1880” (master’s thesis, Sul Ross State University, 1971), p. 96; Greene, pp. 93, 97.

Canyon during periods of heavy rain. The canyon served as the drainage basin for waters falling on slopes of the overlying ridges to the north, south, and west.¹²⁵

Although the site sometimes experienced times of heavy precipitation, especially during the summer, Limpia Creek's flow levels lessened significantly in the late 1880s, apparently due to decreased precipitation. This factor strained the fort's supply of drinking water, ultimately threatening the continued operation of the post.¹²⁶

Small Scale Features

Bridges

A number of small bridges (HB-249 through HB-253) were constructed during the period of the second fort to allow passage across drainage ditches. In 1871, one was built across the south ditch where the avenue in front of the barracks crossed the ditch and between barrack HB-20 and the old guard house (HB-299). It was later removed. Other bridges were constructed across the south ditch, including one west of the post trader's complex (HB-42 through HB-44) where the road in front of officers' row turned southeast. Two others were southwest of the cavalry corral (HB-41) where roads crossed the ditch, one being a foot bridge south of barrack HB-20, and another footbridge south of barrack HB-27. At the north drainage ditch, one road bridge was north of the rear of officers' quarter

¹²⁴ "Miscellaneous orders from the Department of Texas, February 2, 1871." National Archives, RG 159. Microfilm Roll 66-790 (7834); "Report of Post Surgeon William H. Gardner, September 30, 1883;" Greene, pp. 277-278.

¹²⁵ Greene, pp. 106-107, 129-130, 152; Wooster, pp. 369, 371.

HB-13 and another was situated between HB-14 and HB-15. A footbridge also spanned the ditch a few yards northeast of the post headquarters (HB-19). Other foot and wagon bridges, as well as culverts, were built over arroyos and other small drainage paths around the post.¹²⁷

Fences and Walls

By 1886, fences had been built around most of the officers' quarters at the post to provide privacy to their inhabitants. On officers' row, there was a low rail extended across the entire front that by 1889 had a "rustic fence of sticks" built over it. A six-foot-high adobe wall with stone foundations also enclosed the back yards. In addition to its privacy purpose, the latter also was intended to divert floodwaters that periodically ran down Limpia Creek from inundating officers' row.¹²⁸

Another enclosing wall (HB-246) ran along the south end of the parade ground between the road across this end of the parade and the drainage ditch to the south. It was present in the late 1880s and appears to have been around four feet high.¹²⁹

Flagstaff

When the post was first reestablished in 1867, the flagstaff may have been located at the same point as it was during the first fort, near where the adjutant's office had been. By

¹²⁶ Greene, pp. 260-261.

¹²⁷ *Ibid.*, p. 253.

¹²⁸ *Ibid.*, pp. 127-128.

¹²⁹ *Ibid.*, p. 396.

1875, the flagpole (HB-240) was driven into the ground at the approximated center of the second fort's parade field, where it served as the visual focal point of the fort. Not until 1884-85 was it relocated to a site (HB-234) at the center of the north end of the parade, near the post headquarters. The flag remained at this place until the fort's closure.¹³⁰

Gas Lampposts

Historic photographs from the 1880s show the presence of gas lampposts around all sides of the parade ground. In addition, one appears to the north of the parade, between HB-16 and HB-18.¹³¹

Spatial Organization and Cluster Arrangement

The initial placement of the second fort and the spatial arrangement of its structures and roads was generally based upon the specifications called for in the manual, *Regulations Concerning Barracks and Quarters for the Army of the United States, 1860*. With regard to fort placement, these regulations provided only generally that "healthy localities" be chosen that provide proper drainage and ventilation. With respect to the layout of buildings and roads, the regulations stated the following:

Officers' quarters, chaplain's quarters, and officers' mess on one line, facing a parade ground open at both ends and varying in breadth at different posts, according to the ground and other circumstances, from 250 to 400 feet; all other buildings on the other side from the officers' line . . .

¹³⁰ *Ibid.*, pp. 249-250.

¹³¹ *Ibid.*, pp. 525, 539, 545.

These regulations further provided specific ground plans for building and road placement to allow for future growth of the complex. However, they ultimately provided flexibility to the commanding officers in charge of construction to respond to factors such as limits on the availability of materials and, to a certain degree, expediency of the particular situation.¹³²

In the case of the selection of the site of the second Fort Davis, the post was originally situated just east of the first fort, essentially extending from the mouth of Hospital Canyon onto the open plain to the east. This was the general location where Lt. Col. Washington Seawell had recommended placement of the first fort. This site also provided that the San Antonio-El Paso road ran through the garrison, rather than being located adjacently as was the case with the first fort.

In terms of the spatial arrangement of the fort complex, it was organized along a north-south axis, with the parade ground serving as its core. Officers' row was lined along its west side, with the commanding officer's quarters (HB-7) at its center, and four barracks stretched along its east side. The San Antonio-El Paso road ran directly behind the barracks. A secondary east-west axis was formed by a road that bisected the parade ground, stretching from the commanding officers' quarters to the center of the four barracks to the east. During most of the second fort period, the flagstaff of the post was located at the center of the parade field and at the midpoint of this road. The flag served

¹³² *Regulations Concerning Barracks and Quarters for the Army of the United States, 1860* (Washington, D.C.: George W. Bowman, Printer, 1861), pp. 7-8, Plate XVI.

as the visual focus point of the post complex. The structures of the various supplying departments, such as the quartermaster and commissary, were situated to the east and southeast of the barracks, which was just on the other side of the San Antonio-El Paso road. Eventually, additional barracks were built both in a continuation of the line along the parade, but north of the parade field, as well as behind and at right angles to those along the parade. The new structures of the supplying departments followed suit, also continuing to be built to the north and behind the new barracks.

Turning specifically to officer's row, this line stretched across the mouth of Hospital Canyon in the same general location as the line of barracks of the first fort. The northern part of officer's row, however, extended further to the east compared to the line of the old barracks because officers' row was oriented toward true north while the first fort's barracks were oriented toward magnetic north. Just to the rear of officers' row sprang up a series of kitchens, privies, and eventually fenced yards. Eventually, a line of trees was planted along the front of the row.

Early on during the second fort period, another cluster of buildings comprising the post sutler's facilities was erected at the south end of the parade field. Just to the east of this complex existed another cluster of features comprised of the spring encircled by a masonry wall, a garden, irrigation ditches running from the former to the latter, and a grove of cottonwood trees. At the north of the parade field were erected the post headquarters and chapel.

After the completion of all thirteen quarters on officers' row, the physical constraints posed by the canyon walls produced the need to find another location for the continued construction of officers' quarters. After 1880, a line of new officers', as well as married soldier's, quarters was extended to the northeast from HB-13 along the base of the North Ridge. Many of these structures were situated along the path of the piped water system, which was surveyed in April 1883. This system stretched from a pump house and well near Limpia Creek to run south to water tanks on the North Ridge, and then followed the base of the ridge to enter the core of the garrison near the northern end of officers' row. Directly downhill from the water tanks was the official post cemetery.

In Hospital Canyon to the west of officers' row, a cluster of several buildings had emerged by the mid-1880s around the new post hospital. In addition to the main hospital building, which faced the parade ground, these structures included a hospital steward's quarters, a laundry, a storehouse, a wood house, and a privy. Drainage ditches also ran along the north and south walls of Hospital Canyon, skirting around the north and south end of officers' row. Earthworks were constructed behind officers' row as well for the purpose of diverting floodwaters rushing down the canyon toward the drainage ditches just mentioned.

In addition to the San Antonio-El Paso road, which ran through the reservation, other roads ran through the post complex for the purpose of interior circulation. Although

more specific details are provided in the previous section concerning the second fort's circulation, these roads generally connected the various clusters of structures just described, with all networks eventually working back to the San Antonio-El Paso road. Avenues also ran entirely around, as well as bisected, the parade ground.

Topography

Drainage Ditches and Earthworks

In order to mitigate the chronic flooding of the post from waters rushing down Hospital Canyon, in the summer of 1880, Post Commander Napoleon B. McLaughlen ordered the excavation of a large drainage ditch to direct floodwaters out of the fort. Based upon an April 1883 plan of the reservation, this ditch appears to have run from the rear of Hospital Canyon along the base of the North Ridge, leaving the mouth of the canyon just north of officers' row, continuing north of the chapel (HB-28) and ending between the guard house (HB-30) and barrack HB-25.¹³³

Due to continued flooding, in the spring of 1883, Col. Grierson instructed civil engineer William H. Owen to design a more comprehensive system of drainage ditches and earthworks. Owen suggested that:

the present ditch, on the north side, be made wider through the post, shallow enough to be sightly and offer no obstruction to crossing with wagons, and paved with large flat stones, set on edge transversely to the axis of the ditch, and well buried in the earth. [Also,] . . . that two other

¹³³ "Plan of the Reservation and Post of Fort Davis, Texas," April 1883. National Archives, RG 77. Cartographic Archives Division (copy in Greene, pp. 474-475); Wooster, p. 369.

smaller ditches be formed, one near the center, the other at the south side of canon. These ditches to commence a little west of rear of line of officers' quarters & extend a little east of line of Barracks, . . . [to pass beneath the?] parade ground with an occasional iron grating to admit surface water . . . and be open and paved like ditch No. 1 at upper and lower ends . . . Low banks of earth to be made at upper ends to form wings to these culverts, to direct the water into them.¹³⁴

Work on the plan that Owen devised was finished soon after completion of the post's piped water supply system. Owen's recommendations were altered substantially in that the previously existing ditches along the north canyon wall and at the rear of officers' row were widened. These additions provided for the connection of the ditch behind the officers' quarters to one running along the canyon's south wall.¹³⁵

After a severe flood at the post in July 1888, Post Commander Cochran described the ditch system as follows:

Ditch A [north ditch] is situated so high that it does not receive any storm water from the grounds in front of the Hospital . . . Ditch "B" [south ditch] is not wide or deep enough to receive all the water that flows down the southerly side of the Canyon during a heavy rain. Ditch . . . "C" [behind officers' quarters] does not have sufficient fall to empty itself into Ditch "B" . . . I would recommend that all the above ditches . . . be widened and deepened and that a new ditch be extended along the foot of the southerly cliff . . .¹³⁶

¹³⁴ Owen to Chief Quartermaster, Department of Texas, May 2, 1883. National Archives, RG 92. Microfilm Roll 65-855 (104271)1 (quote taken from Greene, p. 279).

¹³⁵ Greene, p. 279.

¹³⁶ Cochran to AAG, Department of Texas, July 19, 1888. National Archives, RG 393. Microfilm Roll 66-783 (7675)2, p. 181 (quote taken from Greene, p. 280).

The work that Cochran recommended was completed in the fall of 1888. After continued flooding, intermittent maintenance continued on the ditch system up until the post's closure in 1891.¹³⁷

Vegetation

Vegetation patterns at Fort Davis during the period of the second fort receive comprehensive treatment in Nelson's 1981 study. In formulating a picture of site vegetation during that period, he consulted historic photographs, written accounts, and examined old-growth vegetation still present today. Nelson concluded that during the early 1870s, flatlands to the east of the mouth of Hospital Canyon were dominated by beargrass with "a low grama sod underneath." By the mid-1880s, the beargrass was gone from this area, leaving only a grass cover. In all photographs from this period, the grass shows a closely grazed condition, probably by many cavalry horses. Nealley, who visited the fort in 1887, mentioned an abundance of Johnsongrass, an introduced species.¹³⁸

¹³⁷ Greene, p. 281. Note: for a comparison of the work proposed by Owen in 1883 to the way the drainage system appeared in 1889, see "Plan of the Reservation and Post of Fort Davis, Texas," April 1883, National Archives, RG 77, Cartographic Archives Division, and Private Jordan's map, 1889, National Archives, RG 92, Microfilm Roll 65-855 (10427)1.

¹³⁸ Nelson, pp. 46-47, 65-71; Historic photograph HG-10, Fort Davis NHS archives.

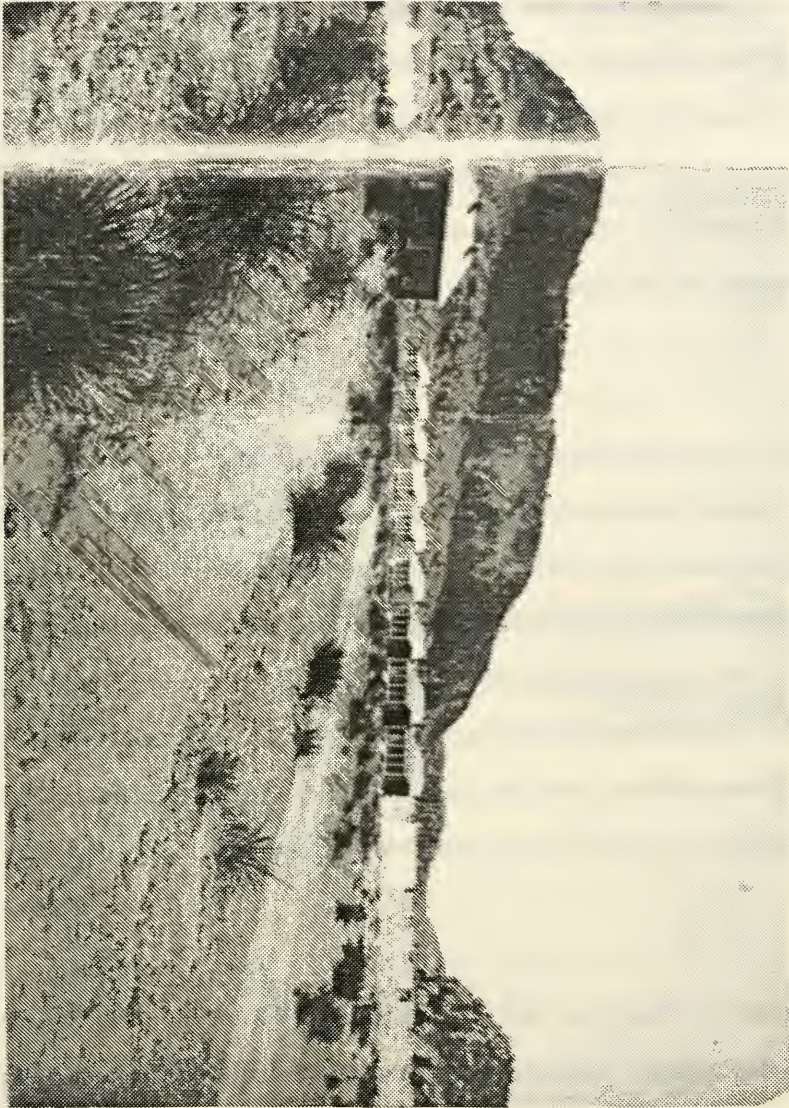


Figure 15. Photograph, second Fort Davis from north showing bear grass, 1871
(Source: Fort Davis NHS archives)

Around the parade ground, an 1871 photograph shows newly planted trees in front of officer's row. By the 1880s, these trees had become mature. Nelson states that "many cottonwoods were present here in the 1880's period." These trees, which require a steady source of water, were likely watered by hoses connected to the post's piped water system. Records indicate that this system also was intended to irrigate the parade ground. In addition, Havard specifically mentioned desert willow growing around the parade ground in the mid-1880s.¹³⁹

Among the cliffs and slopes of surrounding ridges, vegetation generally consisted of trees and brush, with some grassland present. Identifiable tree types included oaks and junipers. In historic photographs, brush appears to have been of light density over most of the slopes and ridges. The species that Havard identified in the mid-1880s among the fort's cliffs and canyons include *frijolillo* (known also as Texas mountain laurel), madroone, chokecherry, cliff fenderbush, thyrreleaf, littleleaf and skunkbush sumac, catclaw mimosa, and Gregg's acacia. Yucca and prickly pear cactus also appear in these areas in photos. In 1887, Nealley mentioned many goats browsing in these areas of the reservation.¹⁴⁰

On the floor of Hospital Canyon, Greene states that there was "grazed grass with an open oak overstory (oak savannah). Trees appear evenly spread across the entire width of the canyon." Photographs from 1887 depict 10 to 12 oaks and what Nelson identifies as

¹³⁹ Greene, p. 259; Nelson, pp. 15-19, 30-31, 34-35, 76; Historic photograph HG-4/6, Fort Davis NHS archives.

“closely grazed grama grazzes” between officers’ row and the hospital (HB-46).

Dendrochronological analysis indicates that existing trees that were living during the period of the second fort include gray and emory oaks.¹⁴¹

In addition to their presence in front of officers’ row, cottonwoods appear to have grown at naturally well-watered locations. In the 1880s, a mature stand of cottonwoods was present at the spring in the southeast part of the post, and large cottonwoods were also well documented along Limpia Creek. In 1885, Havard also reported that groves of oak, willow, and hackberry trees were growing along Limpia Creek.¹⁴²

Post records also mention some of the various types of vegetables and fruits grown at the gardens. These crops included corn, beans, Irish and sweet potatoes, cabbage, beets, carrots, cucumbers, lettuce, onions, turnips, peas, squash, tomatoes, and melons.¹⁴³

Views and Vistas

Views and vistas of the second fort period were generally the same as those mentioned from the period of the first fort. However, the view described from the first fort’s barracks applied in the latter period to officers’ row. From atop Sleeping Lion Mountain, one also could see the newly constructed road heading south to Marfa and Presidio as

¹⁴⁰ Nelson, pp. 65-71; Historic photograph AB-4, AB-16, Fort Davis NHS archives.

¹⁴¹ Nelson, pp. 48-52, 63-71, 90; Historic photographs HG-21, HC-27, Fort Davis NHS archives.

¹⁴² Nelson, pp. 15, 16, 36-37, 70; Historic photograph AB-11, Fort Davis NHS archives.

¹⁴³ Greene, pp. 301-305.

well as the developing town of Fort Davis (also known during that period as Chihuahua and Murphysville).

PERIOD BETWEEN ARMY ABANDONMENT AND HISTORIC SITE CREATION (1891-1961)

Historical Overview

After the U.S. Army abandoned Fort Davis for the last time, their lease with the James family expired on September 30, 1891. During the following years, the site was used for cattle ranching for many years. Local families from time-to-time also leased and occupied buildings at the site, including HB-6 and HB-8 on officers' row. Local festivities also continued to be held at the old fort, as they had during occupation. Fourth of July celebrations were held at the old hospital building, and members of the local Mexican community came to the site to celebrate Mexican Independence Day, or *las Fiestas Patrias*, and *Cinco de Mayo*, the commemoration of the Mexican army's defeat of French occupational forces at the city of Puebla, Mexico, on May 5, 1862. In addition, plays were sometimes held at the cottonwood grove around the spring. After the U.S. Army established a post at nearby Marfa in 1917, later to be known as Fort D.A. Russell, the Army over the next 20 years regularly sent troops from there as well as forts Clark, Bliss, and Brown, to old Fort Davis for training there.¹⁴⁴

In 1930, Hollywood western movie star Jack Hoxie arrived in Fort Davis with plans to turn the old fort into a movie set and resort, including "a half mile track, a polo field, golf course, baseball diamond, a big swimming pool and a rodeo arena." His plans for movie production included the restoration of old buildings. Hoxie persuaded a small group of local residents to back him financially, and proceeded to renovate HB-1 and HB-2 on

officers' row as well as construct a large swimming pool. The most noteworthy event that Hoxio held at the site was a rodeo in March 1930 that attracted over 2,000 onlookers. Although Hoxie's plans fell apart by the spring of 1931 with the onset of the national economic depression, they spurred interest in the historic fort. Afterward, the old fort buildings continued to deteriorate, with some collapsing while others were subject to vandalism.¹⁴⁵

After the Hoxie episode, a group of local residents hoped to turn the site into a state or federal historical park. However, the James family's asking price for the property was deemed to be too high. In 1935, the historical board of the Texas Centennial Commission approved commemorative markers for both the fort ruins and for the purported gravesite of Indian Emily at the second fort's official post cemetery. According to local legend, Indian Emily was a young Apache woman who warned personnel at the fort of an impending Apache attack out of her love for an officer there, only to be killed by a sentry's bullet while she was approaching the fort's perimeter.¹⁴⁶

In 1945, the property finally was sold to Mack H. Sproul, who in turn sold 453.9 acres of the 640-acre site the following year to David A. Simmons, a prominent Houston attorney. Simmons' motivation in purchasing the property was to restore the buildings to create a privately-operated historic site and to provide vacation homes. Through the assistance of locally-hired help, Simmons proceeded to build a fence around the property, erect a gate

¹⁴⁴ Greene, pp. 313-316; Welsh, pp. 23-26.

¹⁴⁵ Greene, p. 316; Welsh, pp. 32-33.

at the entrance, fill abandoned wells, and construct a trading post and information center on the foundation of an old fort barrack. Furthermore, Simmons remodeled HB-1, HB-2, and HB-3 on officers' row and rented them as vacation cottages. In 1948, the Fort Davis Boys Camp also was erected at the rear of Hospital Canyon. By the next year, Simmons reported that he had refurbished eight structures at the site, which was being operated as a local historical attraction. Simmons unexpectedly died of a heart attack in 1951.¹⁴⁷

After Simmons's death, his heirs leased the site to Malcolm and Sally Tweedy, who moved into one of the restored officers' quarters and operated a gift shop, museum, and, for a brief time, a restaurant. The Tweedys, along with other local residents, soon organized the Fort Davis Historical Society for the purpose of preserving the site. In 1954, a well-attended celebration took place at the old post to commemorate the 100th anniversary of the establishment of Fort Davis. By the mid-1950s, the Tweedys left their tenure at old Fort Davis and vandalism at the site increased. However, local efforts to promote the creation of a national monument there helped persuade the National Park Service to include Fort Davis, in addition to forts Union and Bowie, in a 1953 study entitled "Frontier Military Posts of the Southwest" that considered the possibility of adding the sites to the national park system. Of the three former posts, the report recommended only Fort Union. One factor working against the addition of new parks at the time was the conservative fiscal environment in Congress since World War II, which

¹⁴⁶ Greene, pp. 316-317; Welsh, p. 44.

¹⁴⁷ Greene, p. 317; Welsh, pp. 56-59.

severely limited the Park Service's historical research mandated in 1935 by the Historic Site Survey.¹⁴⁸

¹⁴⁸ Welsh, pp. 59-60, 73, 77, 79, 84.

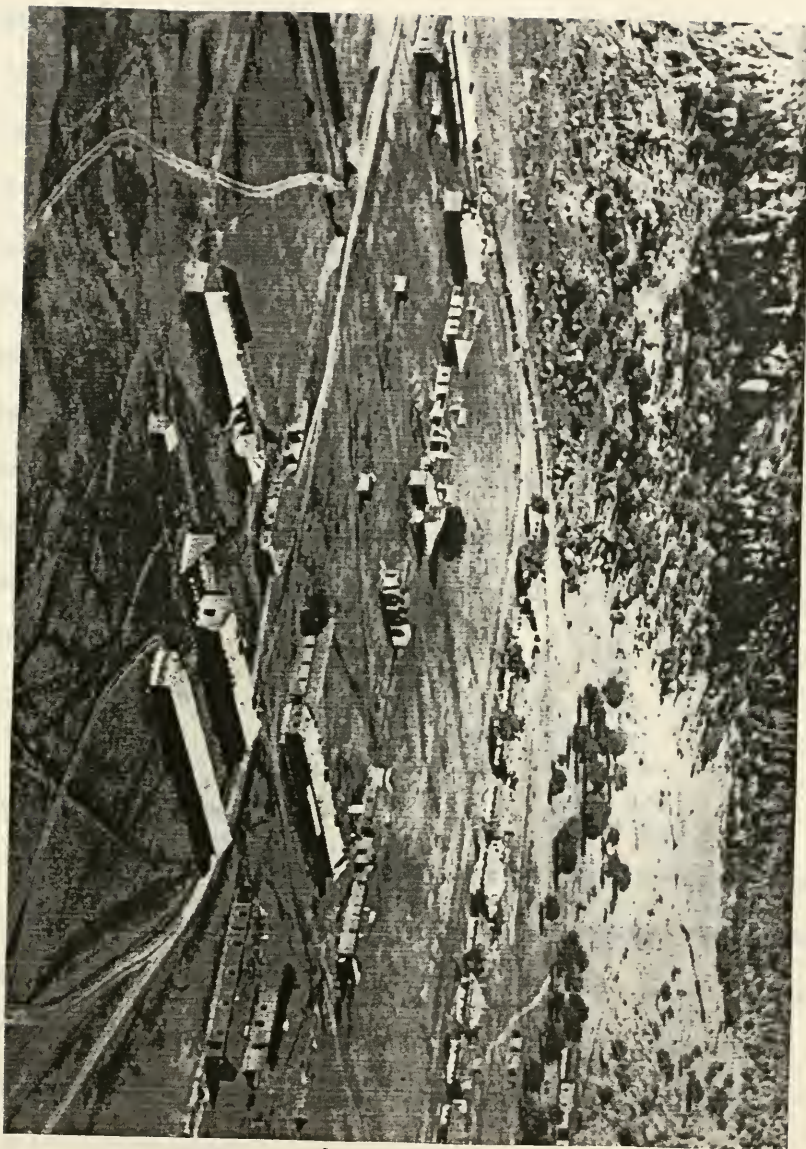


Figure 16. Photograph, abandoned Fort Davis, ca. 1930-1940 (Source: Greene, p. 585)

Significant Landscape Characteristics of the Period

As the federal government did not occupy the site of the fort during the period between its abandonment and its acquisition by the Park Service, the amount of detailed information concerning the landscape features present during the period is quite limited. The most extensive site documentation during this time is contained in Park Service historian Robert M. Utley's *Special Report on Fort Davis, Texas*, of 1960 that was completed just prior to the arrival of the Park Service. Consequently, the following description of features is not comprehensive, and reflects Utley's emphasis on buildings and structures. With the exception of cases where the Park Service has attempted to restore features to their past appearance, it may be assumed that those features that are documented in the subsequent section concerning the period of Park Service occupation were present during this period as well.

Buildings and Structures

During the period between the Army's abandonment of the post and its acquisition by the National Park Service, the buildings and structures deteriorated greatly, with some being lost entirely. It should be noted as well that the remains of buildings and structures from the first fort period no longer existed above the surface of the ground. Except where otherwise noted, the following descriptions of buildings and structures are from 1960, when Utley surveyed the site.

Among the officers' quarters, all of the structures remained standing except for the pine slab building (HB-17) that stood to the northeast of officers' row. The roofs of the other quarters were essentially wrecked, with the exception that the three southernmost quarters on officers' row (HB-1, HB-2, and HB-3) as well as three kitchens behind the row were remodeled during the 1940s for their use as rental cottages.¹⁴⁹

In Hospital Canyon, much of the main hospital building's (HB-46) walls still stood but its roof was wrecked. Extensive ruins also existed of the hospital steward's quarters (HB-48) and the storehouse (HB-47). The magazine's (HB-49) walls also still stood, but its roof was gone.¹⁵⁰

Of the barracks, during the late 1940s the decaying walls of barrack HB-23 were torn down and a new structure was erected on the foundations of half of the barrack to serve as a trading post and museum of the Fort Davis Historical Society. By 1960, the two southernmost barracks facing the parade (HB-20 and HB-21) had standing walls remaining in 1960, but their roofs had fallen in. Of the remaining barracks, essentially only foundations remained, except portions of walls of one of them.¹⁵¹

Behind the barracks, the office part of the new commissary office and storehouse (HB-37) was in remarkably good condition with its roof still intact, although only the foundations remained of the storehouse. At the quartermaster and cavalry corrals, only foundations

¹⁴⁹ Utley, *Special Report on Fort Davis, Texas*, p. 97.

¹⁵⁰ *Ibid.*, pp. 98, 100.

remained at the cavalry corral (HB-41) except for one of the adobe shops still present. A horse riding concession operated at the location of the old quartermaster corral (HB-40), which otherwise consisted of foundations.¹⁵²

To the parade ground's north and northeast, the post headquarters (HB-29) only had foundations remaining and the chapel's (HB-28) north wall still stood. The guardhouse (HB-30) and bakery (HB-31) only had foundations remaining as well. From the second fort's water system, stone ruins of a reservoir and pump house (HB-53) were present near Limpia Creek on the south side of Texas Highway 118. In addition, the foundation of the second water tank (HB-221) remained directly to the south on the slope of the North Ridge.¹⁵³

To the south and southeast of the parade ground, essentially nothing remained of the sutler's complex (HB-42 through HB-44). The old commissary office and storehouse (HB-32) south of the corrals also had no remains existing above ground.¹⁵⁴

Additions of new structures to the site during the period included the construction in 1930 of a 50 feet by 80 feet swimming pool. Around the same time, a camp house for the Fort Davis Boys Camp also was constructed at the rear of Hospital Canyon.¹⁵⁵

¹⁵¹ Utley, *Special Report on Fort Davis, Texas*, p. 97; Greene, p. 317; Welsh, p. 57.

¹⁵² *Ibid.*, pp.99-100.

¹⁵³ *Ibid.*, p.98, 100; Greene, p. 394.

¹⁵⁴ *Ibid.*, pp. 99-100.

Circulation

Greene notes the following changes with regard to the old San Antonio-El Paso road during this period:

Between 1910 and 1915 the route across Fort Davis was built up and bridges constructed to carry the highway over the drainage ditches of the fort. By the 1950s the highway had been diverted to its present route.

The new path of the road mentioned lastly was approximately 1,100 feet to the east of the location of the old road as it passed behind the barracks.¹⁵⁶

Constructed Water Features

Historic photographs from the early 1900s show the presence of a windmill and water tank in the middle of the parade ground. These features were associated with a well at that location.¹⁵⁷

Land Use

After the Army's abandonment of the post, much of the property was leased for grazing by local ranchers. From 1917 until late in the 1930s, the old fort's parade ground was

¹⁵⁵ Utley, *Special Report on Fort Davis, Texas*, p. 98; Greene, p. 316; Welsh, p. 57.

¹⁵⁶ Greene, p. 391.

¹⁵⁷ *Ibid.*, pp. 568-569, 580-581.

used as well for Army training exercises by troops from Fort D.A. Russell at Marfa, as well as other forts in south Texas.¹⁵⁸

Small-Scale Features

Historic photographs from the early 1900s show a bridge crossing the drainage ditch that was south of the parade ground, as well as a low fence around the parade. Greene also states that the “Rainbow Bridge” (HB 144), which lies in the northeast part of the site, was erected in 1915 as part of the road improvements of the time mentioned previously. At the location of the second fort’s official post cemetery, the Texas Centennial Commission placed a commemorative marker to denote the alleged gravesite of Indian Emily, the subject of a local legend. No factual evidence exists to confirm the truth of this story.¹⁵⁹

Vegetation

Historic photographs from the early part of the period show that trees continued to grow in front of what was officers’ row, and that one large tree was located in front of barrack HB-21. By the 1950s, trees were apparent in front of only the south half of the row, where the structures continued to be occupied by overseers and guests. Cattle and horse

¹⁵⁸ Greene, p. 315; Welsh, pp. 26-27.

¹⁵⁹ Greene, pp. 319, 568-569; Welsh, p. 44.

grazing on the premises during the period also encouraged the growth of mesquite throughout the flatter areas of the site.¹⁶⁰

¹⁶⁰ Greene, pp. 568-569, 588-589; Welsh, p. 168.

NATIONAL HISTORIC SITE PERIOD (1961 to Present)

Historical Overview

In the late 1950s, the Administration of President Dwight D. Eisenhower pushed a new Park Service initiative known as MISSION 66, which aimed to increase facilities at parks and recreation areas to serve 80 million visitors by 1966, the 100th anniversary of the founding of the National Park Service. This initiative resulted in a significant increase in the agency's historical programs and sites, including the reinstatement of the Historic Site Survey.¹⁶¹

Based upon the recommendations of a resulting theme study of "Military and Indian Affairs," in 1959 the Park Service's Advisory Board on National Parks, Historic Sites, Buildings, and Monuments recommended to the Secretary of Interior that Fort Davis be studied for possible addition to the National Park System. In February of the following year, legislation was introduced in both houses of Congress by Senator Ralph W. Yarborough and Representative J.T. Rutherford, both of Texas, to authorize a national historic site at the old fort. In response to the introduction of these two bills, Park Service historian Robert M. Utley prepared two reports concerning the site, one a detailed historical report and the other a suitability and feasibility report. These two studies were completed in June 1960. Through the support of Vice President Lyndon B. Johnson, also a Texas native, Senator Yarborough's version of the legislation was approved in the next

¹⁶¹ Welsh, pp. 76-77.

Congress, and was signed into law by President John F. Kennedy on September 8, 1961 as Public Law 87-213.¹⁶²

After the enactment of legislation creating Fort Davis National Historic Site and the acquisition of the site property the following year, much work had to be accomplished before the park would open to the public in 1966. Over the next five years, the Park Service carried out an extensive program of planning and implementation to ready the site for public visitation. This effort focused especially on preserving, rehabilitating, and reconstructing historic buildings. Other tasks were carried out as well, including the removal of structures that had been erected after the Army's abandonment of the fort, landscaping and construction of a trails system, creation of a museum and visitors center, and construction of an access road, parking lot, housing for Park Service personnel, and a maintenance facility. Building preservation focused on reconstruction of exterior walls and addition of roofs and porches to buildings around the parade ground, including all of the structures on officers' row and the southernmost barrack (HB-20). The visitors center, museum, and park offices also were constructed in the interior of barrack HB-20. Other structures that received similar restoration treatment included the post hospital (HB-46) and its storeroom (HB-47), two noncommissioned officers' quarters (HB-14 and HB-18) as well as one of their kitchens (HB-151), part of what was the new post commissary (HB-37), the old forage house (HB-39), and the magazine (HB-49). It should also be noted that the commanding officer's quarters (HB-7), the kitchen to the

¹⁶² Robert M. Utley, *Special Report on Fort Davis, Texas*, p. i; Robert M. Utley, *Proposed Fort Davis National Historic Site: An Area Investigation Report* (Santa Fe, N.M.: National Park Service); Welsh, pp.

rear of HB-12, and part of the now post commissary (HB-37) underwent more extensive exterior and interior restorations.¹⁶³

On April 4, 1966, First Lady Lady Bird Johnson presided over the dedication ceremony and was joined by other dignitaries including Texas Governor John Connally, Secretary of the Interior Stewart Udall, and National Park Service director George Hartzog. In the more than three decades since the park's dedication, only one additional restoration of significance has occurred, the roof and exterior walls of barrack HB-21 on the parade ground. In terms of the management of other landscape features, buildings and structures have been maintained, footprints of ruins have been marked with either wooden stakes (for first fort buildings) or soil cement adobes (for second fort buildings), and trees have been both planted and maintained at the cottonwood grove near the spring and in front of officers' row.¹⁶⁴

In 1999, the Park Service acquired additional property totaling nearly 14 acres at the south end of Sleeping Lion Mountain, just south of the second fort's sutler's complex (HB-291 through HB-294). This acquisition was made to prevent the development of the property by private economic interests, a prospect which was deemed to be threatening to the site's interpretive values.

86-91.

¹⁶³ National Park Service, "National Register of Historic Places Inventory – Nomination Form for Fort Davis, Texas," 1978; Pamphlet; Southwest Parks and Monuments Assoc., *Guide to Buildings and Ruins: Fort Davis National Historic Site* (Tuscon, Ariz.: Southwest Parks and Monuments Assoc., 1990); Welsh, pp. 93, 100, 176.

¹⁶⁴ Welsh, p. 140.

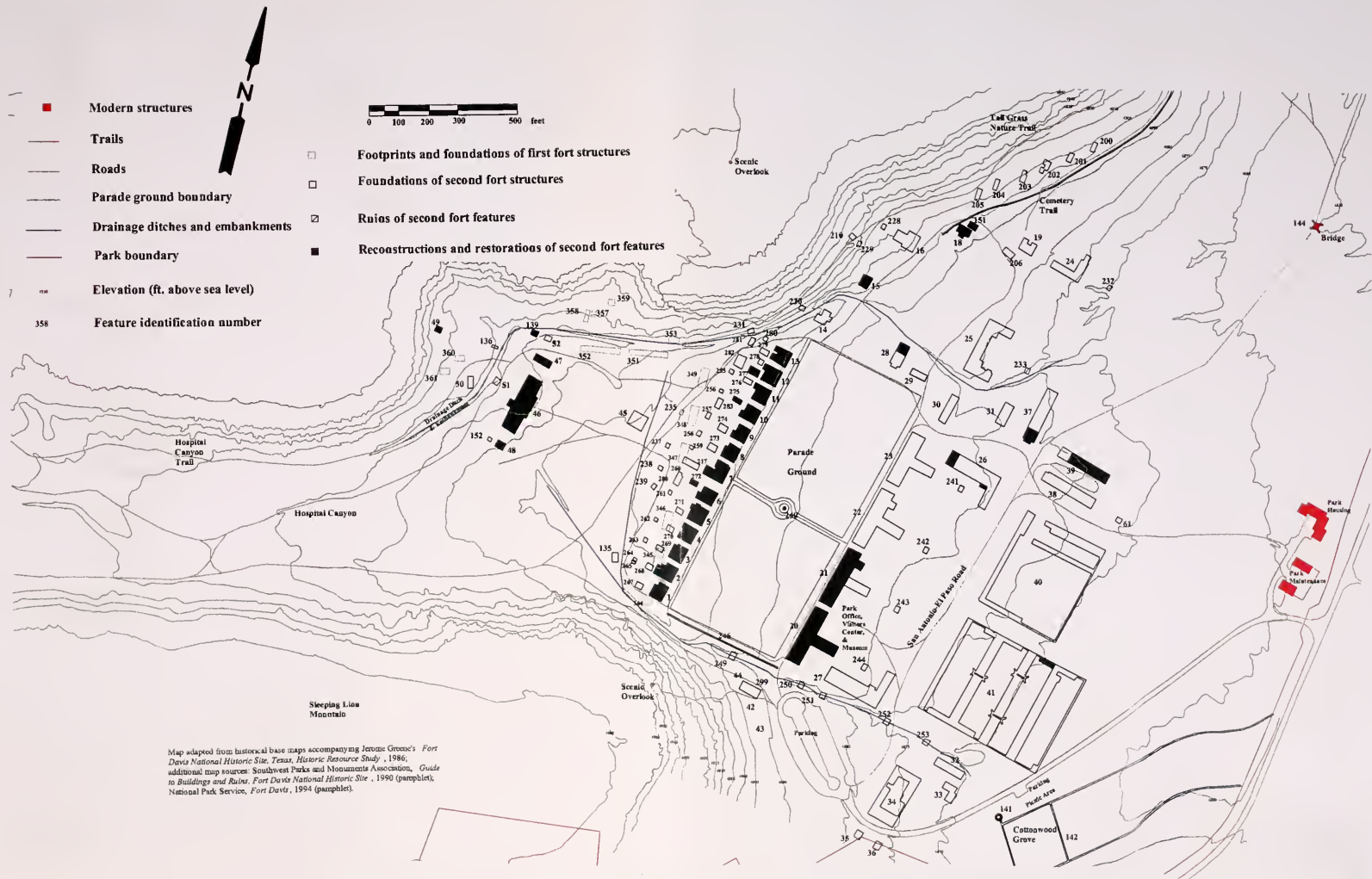


Figure 17. Plan of Fort Davis NHS (Source: Author's adaptation of historic base maps accompanying Greene)



Significant Landscape Characteristics of the Period

Archaeological Sites

During the Park Service's tenure at the site, archaeological investigations have identified remains of both pre-European habitation and activity from the first fort period. A description of the latter is provided in the previous section entitled "Pre-European Contact Period." All remains of first fort structures consist of stone foundations or remnants of hearths that have been unearthed through excavations, while traces of wooden pickets of *jacales* were found as well. The structures for which masonry remnants have been located include barracks (HB-344 through HB-348) and their kitchens (HB-340 through HB-343) to the rear of the second fort's officers' row, laundress houses (HB-307, HB-309, HB-310), temporary commissary and quartermaster warehouses (HB-354 through HB-356), and the first guardhouse (HB-362). Adobe wall traces from the first fort's stable (HB-301) and corrals and wagon yard (HB-302) also were located. Probable sites of other first fort structures have been found through the location of concentrations of mid-19th century glass, nails, ceramics, trash, and other remains.¹⁶⁵

¹⁶⁵ Greene, pp. 66-71, 399-404.

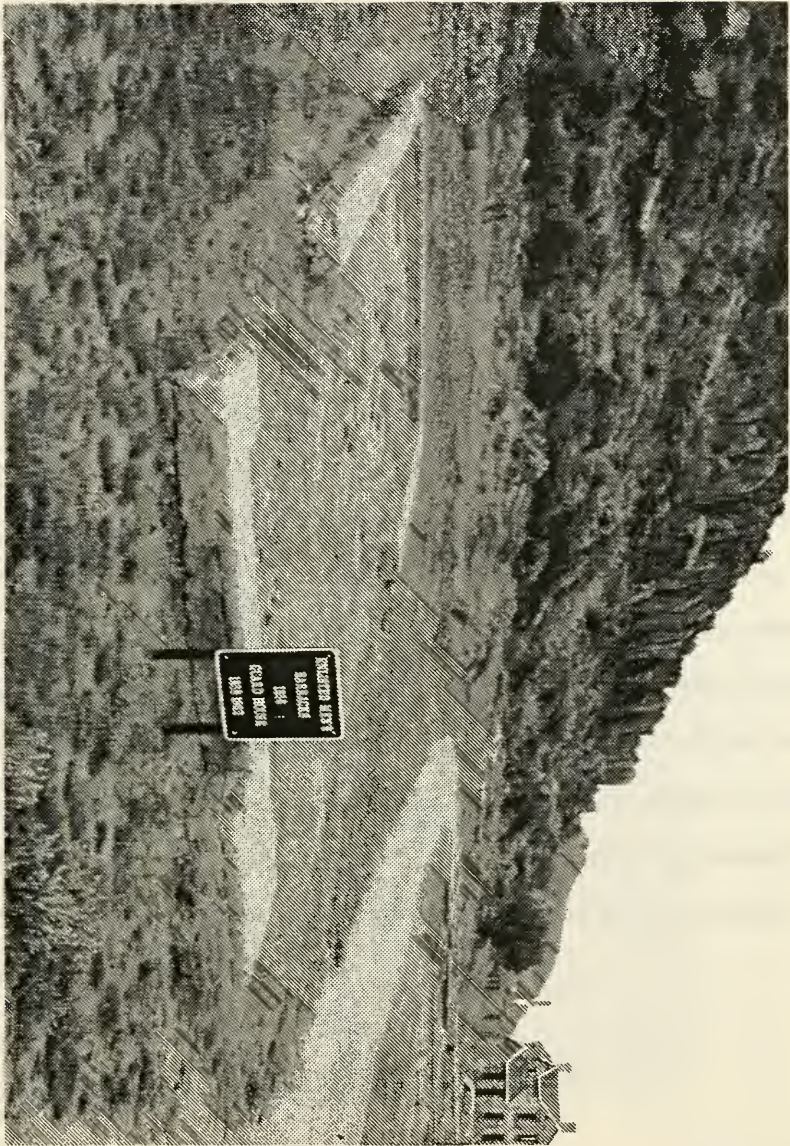


Figure 18. Photograph, First fort foundation footprint, 1999 (Source: author)

Buildings and Structures

As the remnants of the first fort's buildings and structures are considered by this study as archaeological sites, the only historic buildings and structures described in the national historic site period are affiliated with the second fort. Since the park's creation in 1961, the most concentrated restoration efforts have been applied to second fort buildings located around the parade ground. All 13 of the structures comprising officers' row (HB-1 through HB-13) have been restored to varying extents, including the addition of new roofs and porches at them all. In particular, the commanding officer's quarter (HB-7) has been fully restored to the period when Col. Benjamin Grierson and his family lived there (1882-1885). Officer's quarter HB-2 and the kitchen behind HB-12, which is the only one still standing behind officers' row, also have been restored to that time period. HB-4 and HB-9 through HB-13 have received exterior stucco coatings. The outline of the foundations of three other kitchens (HB-281, HB-282, and HB-288) behind the row have been stabilized as well. Among the officers' quarters to the northeast of officers' row, both HB-14 and HB-18 have been partially restored, including the construction of new roofs and porches. The kitchen behind HB-18 (HB-151) has been partially restored as well. Of the other officers' quarters in this area, ruins exist of HB-15 while only the foundations of HB-16 remain.¹⁶⁶

¹⁶⁶ Greene, p. 398; National Park Service, "National Register of Historic Places Inventory – Nomination Form for Fort Davis, Texas," 1978; Pamphlet; Southwest Parks and Monuments Assoc., *Guide to Buildings and Ruins: Fort Davis National Historic Site* (Tuscon, Ariz.: Southwest Parks and Monuments Assoc., 1990); Welsh, pp. 93, 100, 176.

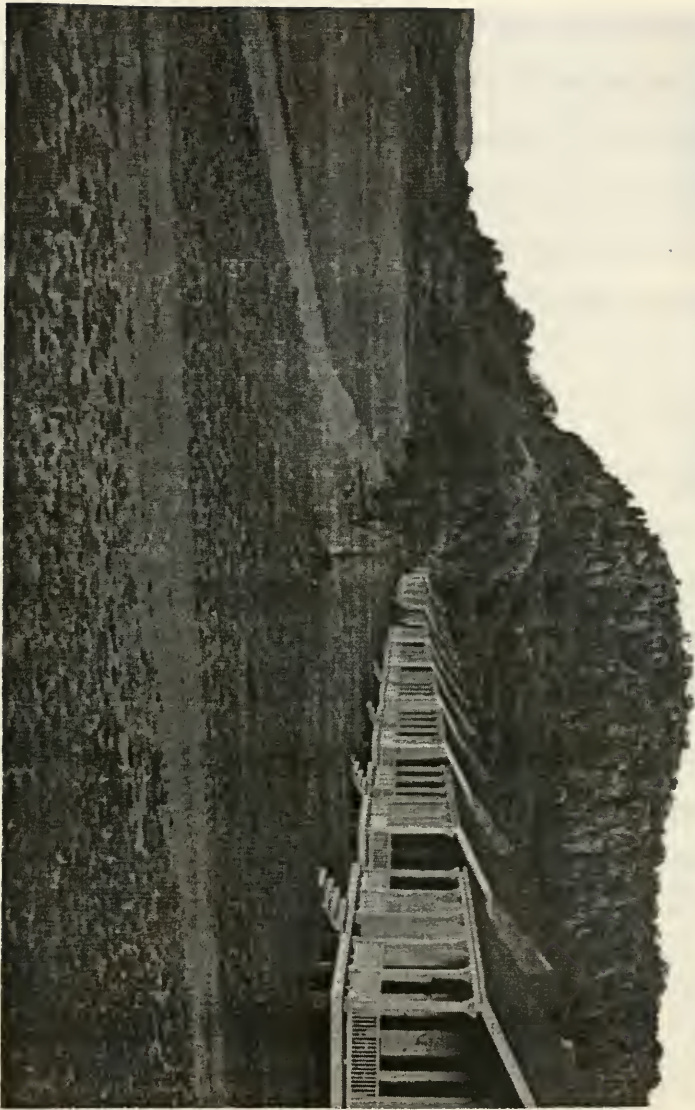


Figure 19. Photograph, Second Fort Davis officers' row, 1999 (Source: Author)

On the east side of the parade ground, the exteriors of barracks HB-20 and HB-21 have been restored, including walls, roofs, and porches. HB-20 houses the park's offices, museum, and visitor's center. Only the foundations remain of the other barracks, except that HB-26 has ruins of part of the sergeant's room at one end and of the bathhouse at the other. During the mid-1960s, the Park Service also demolished the private museum situated on the foundation of barrack HB-23 that had been operated by the Fort Davis Historical Society.¹⁶⁷

Behind the barracks, the office part of the second fort's new commissary office and storehouse (HB-37) also was restored both inside and out and holds museum exhibits. The storehouse portion of the building to the rear remains as a ruin. A roof has been added to what was the forage house (HB-39) as well, which the park uses as a storage facility. At the cavalry stables and corrals (HB-41), only part of an adobe shop on the north end remains beyond the foundations. Essentially only foundations remain as well of what was the new quartermaster storehouse (HB-38), the oil house, the quartermaster stables and corrals (HB-40), and the old commissary and quartermaster offices and storehouses (HB-32 through HB 35).¹⁶⁸

¹⁶⁷ National Park Service, "National Register of Historic Places Inventory – Nomination Form for Fort Davis, Texas," 1978; Welsh, p. 111.

¹⁶⁸ Welsh, p. 106.

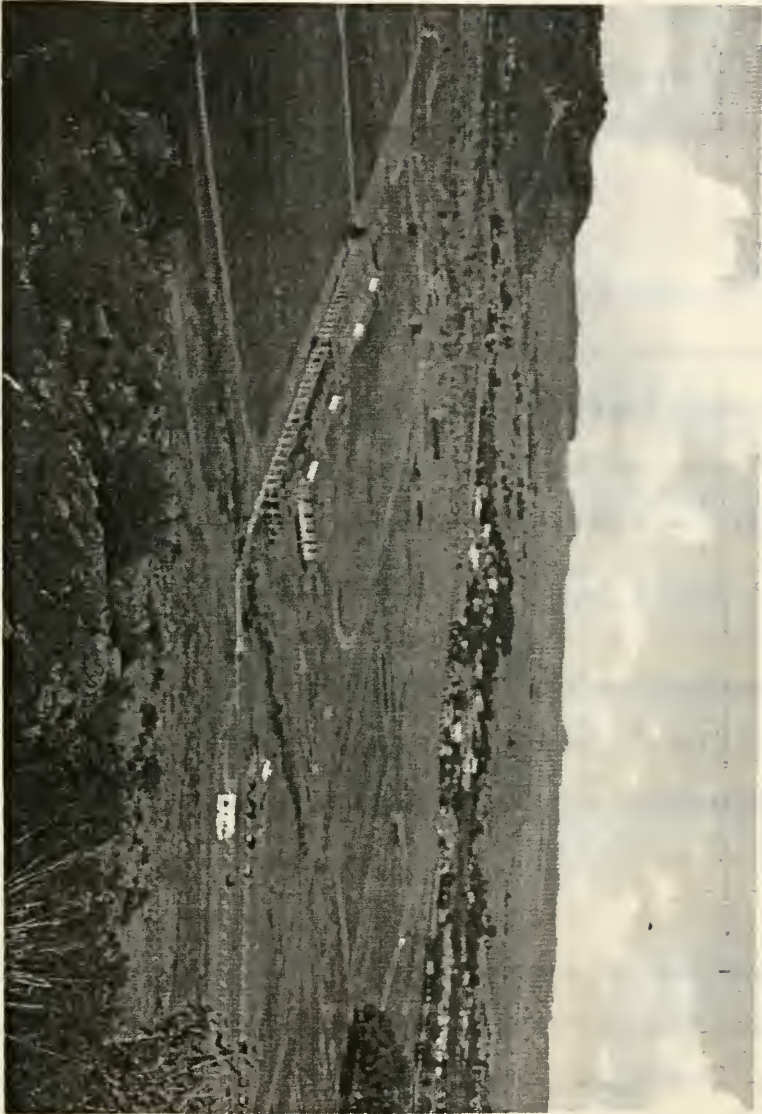


Figure 20. Photograph, Fort Davis NHS from south, 1999 (Source: Author)

On the north end of the parade the north wall of the post chapel (HB-28) still remains, as well as foundations of the post headquarters (HB-29). Further to the north, the foundations remain of what was the ordnance sergeant's quarters and signal office (HB-19).

Among the structures in Hospital Canyon, the post hospital (HB-46), the hospital storehouse (HB-47), and the magazine have been partially restored. Additions to the hospital in particular have included a new roof and exterior porch and the reconstruction of portions of exterior walls. The other two structures have received new roofs. Ruins also remain of the hospital steward's quarters (HB-48) and the hospital privy (HB-52), while the foundations remain of the hospital laundry (HB-50).¹⁶⁹

The remnants of the pump house (HB-53) and foundation of the second water tank (HB-221), which were both affiliated with the piped water system and are located at the north end of the site, were mentioned previously in this period's section concerning constructed water features.

Modern buildings erected by the Park Service are concentrated in a complex on the eastern edge of the park, near where the second fort's sawmill (HB-213) was located.

These structures include housing for park personnel and a maintenance shop.

Circulation

Roads

Clearly visible traces of the Lower Road between San Antonio and El Paso continue to exist on the site today. Although the first fort was erected within 1,000 feet of the road, the second fort was created immediately adjacent to it. To the contemporary visitor to the site, one sees traces of this dirt road running between remnants of the second fort's quartermaster and cavalry corrals (HB-40 and HB-41) and quartermaster storehouse (HB-34), to the east, and the enlisted men's barracks (HB-20 and HB-21), to the west. The Park Service recognizes its existence to the public through signage and on maps in pamphlets and other publications.¹⁷⁰

Traces of other historic roads exist as well, most noticeably portions of the second fort roads that Greene identified as "Road No. 1," "Road No. 2," and "Road No. 5," which are described in the second fort period's discussion of circulation systems. The contemporary presence of these roads is marked with hatched lines on the historical base maps included with Greene's *Historic Resource Study*.

A modern asphalt road constructed by the Park Service also runs from the entrance gate at the park's east boundary on Texas Highway 17/118 to the visitors parking lot, which is south of the visitor's center and offices located in HB-20. A spur off of this road also

¹⁶⁹ *Ibid.*, pp. 176-177.

¹⁷⁰ Greene, p. 306; National Park Service, *Fort Davis* (Washington, D.C.: GPO, 1994). Pamphlet; Southwest Parks and Monuments Assoc., *Guide to Buildings and Ruins: Fort Davis National Historic Site* (Tucson, Ariz: Southwest Parks and Monuments Assoc., 1990).

travels to the modern building complex on the eastern edge of the site that contains park personnel housing and a maintenance shop.

Trails

In the 1960s, the Park Service built a series of trails at the site for visitors to observe wildlife and to view the park from higher elevations. One such trail, known as the “Tall Grass Nature Trail,” leads from the northeast corner of officers’ row and then to the northeast along the eastern slope of the base of the North Ridge. Eventually, the trail winds higher to the top of the North Ridge where it meets a second trail called the “North Ridge Trail.” This trail traverses back to the southwest along the top of the ridge to a scenic overlook above the north end of officers’ row. From there, the trail leads along the top of the ridge to the west above Hospital Canyon. Toward the rear of the canyon, it is met by a third trail that runs down the slope of the ridge into the canyon known as the “Hospital Canyon Trail.” This trail leads from there toward the front of Hospital Canyon to its starting point to the rear of the second fort’s hospital (HB-46). A fourth trail known as the “Cemetery Trail” runs north from the northern end of the parade ground to what was the second fort’s official cemetery (HB-92). Finally, a fifth path travels from the visitors’ parking lot to a scenic overlook on the slope of Sleeping Lion Mountain, directly south of officers’ row.¹⁷¹

Constructed Water Features

Of the constructed water features described previously for the period of the second fort, remnants exist from the piped water system in the form of a circular masonry wall built around the former well and the masonry walls of the former pump house (HB-53) located south of Texas Highway 118. In addition, a metal pipe runs vertically out of the ground at the masonry foundation of the second water tank (HB-221), and remnants exist of the earthen and masonry embankment (HB-91) that once supported the water line as it ran across an arroyo just west of the second fort's official post cemetery. Other remains from the second fort period are a masonry cistern to the rear of the commanding officers' quarters (HB-7), the circular masonry wall around the spring (HB-141) at the cottonwood grove, and the remains of irrigation ditches (HB-142) that ran from the spring directly east to the garden. The ditches are presently lined with large cottonwood trees.¹⁷²

Land Use

The presence of the official post cemetery of the second fort (HB-92) is marked by Park Service signage, and Greene notes that "the remains of embankments can be seen in the area which may have been low adobe dividing walls or plot enclosures." As mentioned in the discussion concerning constructed water features, the presence of the second fort's garden near the spring is denoted by the remains of irrigation ditches (HB-142) within the

¹⁷¹ Welsh, p. 117.

¹⁷² Greene, pp. 389-390.

cottonwood grove. The park also has attempted to restore the parade ground to its appearance during the first period of the second fort, with the flag staff at its center.



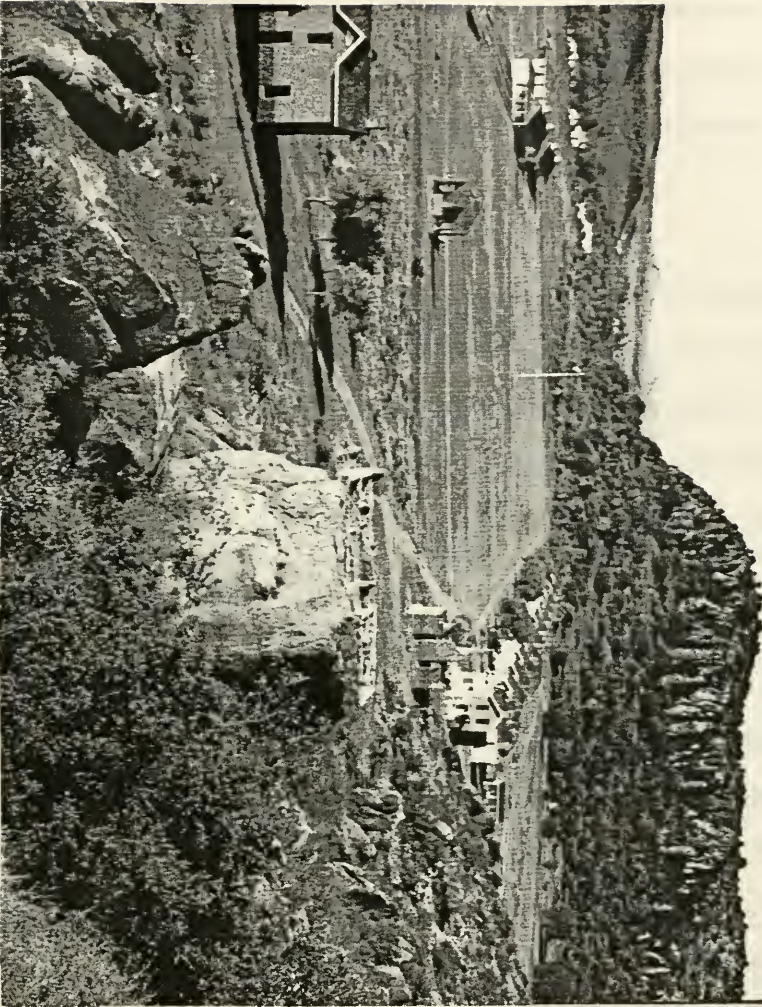


Figure 21. Photograph, Fort Davis NHS parade ground from north, 1999 (Source: Author)

Outside the bounds of the park, scars of an abandoned quarry may be seen on the northeast slope of Dolores Mountain as one approaches the town of Fort Davis on Texas Highway 118, appearing to the left when passing over the last hill before entering town.¹⁷³

Turning to modern land uses, during a portion of the year the Park Service uses an area toward the rear of Hospital Canyon to manufacture soil cement adobes that are used for the restoration of structures and the demarcation of the footprints of foundations.

Furthermore, the park has established a picnic area with wooden tables at the cottonwood grove near the spring.

Small-Scale Features

Traces of wagon and foot bridges from the period of the second fort remain in the form of concrete and stone abutments (HB-249 through HB-253) in several locations along the south drainage ditch as well at one site (HB-136) behind the hospital. The Park Service has erected a flagpole at the center of the parade ground, where the second fort's flagstaff (HB-240) was situated between circa 1875 to 1884. The park also has placed interpretive signs at the location of most historic structures, ruins, and sites for the purposes of identification and explanation. Additional interpretive signs have been placed along all

¹⁷³ Elvis Joe Ballew, "Supply Problems of Fort Davis, Texas, 1867-1880," p. 96; Greene, p. 390.

of the park's trails and scenic overlooks, with those along the former identifying and describing natural vegetation.¹⁶⁹

Spatial Organization and Cluster Arrangement

The spatial organization of the site today is comprised of landscape features from five of the six historic periods since European contact in the area, with the Civil War period being the only exception. Features from the period of the second fort are most prominent, as this was the period of greatest fort development and the most recent period of historic significance. The Park Service has concentrated its restoration and preservation efforts on these features, especially those around the parade ground, in attempting to create a visual representation of the fort as it existed in the 1880s.

As was the case during that period, the site today is arranged around what was the second fort's parade ground, with a partially restored officers' row on the west side and a row of former barracks consisting of two partial reconstructions and two foundation outlines to the east. The southernmost barrack (HB-20) is a center of activity at the park today, as it houses the park offices, visitors center, and museum. The former company roads leading around and bisecting the parade ground from the commanding officers' quarters to the barracks have been restored by the Park Service as well. Just to the rear of officers' row

¹⁶⁹ Greene, pp. 390, 395-396.

is a line of foundations of the barracks of the first fort that were uncovered through archaeological excavations.





Figure 22. Photograph, First and second fort alignments, 1999 (Source: Author)

Traces of the San Antonio-El Paso road, which was built during the period immediately preceding the erection of the first fort, run between the remaining foundations of barracks HB-26 and HB-27 and the partially restored new commissary storehouse (HB-37) to the west and the foundations of the quartermaster and cavalry corrals and stables and quartermaster storehouse (HB-38), as well as the partially restored forage house (HB-39), to the east. The remains of two other historic roads traveling within the post traverse east-to-west to the north and south of the parade ground.

Leading from the park's main entrance gate at Texas Highway 17/118 and then between what was the cavalry corrals and the cottonwood grove is the modern asphalt entrance road, which takes visitors to a modern parking lot directly southeast of the visitors center. A modern sidewalk and bridge lead from the parking lot to the visitors center. A trail built by the Park Service also leads to the southwest from the parking lot up the slope of Sleeping Lion Mountain to a scenic overlook directly south of officers' row. Just inside the entrance gate, a spur off the entrance road leads to a cluster of modern park housing and maintenance facilities, which have been shielded from the historic core of the park by evergreen trees.

In the area of the spring and cottonwood, remnants from the second fort period include irrigation ditches and a circular masonry wall around what was the spring. The Park Service has added modern picnic benches to this cluster of features.

To the north of officers row and the parade ground are remnants representing essentially the same spatial arrangement as that described during the period of the second fort. The ruins of the post chapel and foundation of the post headquarters lie together at the northeast corner of the parade field. A row of remains of what were noncommissioned officers' quarters runs northeast from the north end of officers' row, including three partially restored structures (HB-14, HB-18, and HB-151) and several foundations. Leading from this area to the north is the modern "Cemetery Trail," which runs to the location of the second fort's official post cemetery, which is still the site of a Texas Centennial marker memorializing the purported grave of Indian Emily. The modern "Tall Grass Nature Trail" also runs from the north end of officers' row to the northeast along the slope of the base of the North Ridge. Traces of what were married soldiers' quarters in the area of this trail have essentially disappeared. Through close inspection in this area, though, one may discern what was the path of the second fort's piped water system traversing northeast and then north up the slope of the northeastern extreme of the North Ridge to what was the masonry foundation of the second water tank (HB-221). Although the former path of the water pipe down the north side of the North Ridge toward Limpia Creek is virtually not discernable, its former endpoint is visible just to the south of Texas Highway 118 at the remains of what was the water system's steam pump house (HB-53) and well.

The floor of Hospital Canyon contains a large concentration of footprints of first fort structures that have been largely represented by the Park Service through the placement of

either soil cement adobes or vertical wooden stakes. These footprints are found in two clusters along the foothill of the North Ridge, one being to the west and northwest of the second fort's hospital complex and the second situated to the north and somewhat east of that complex.

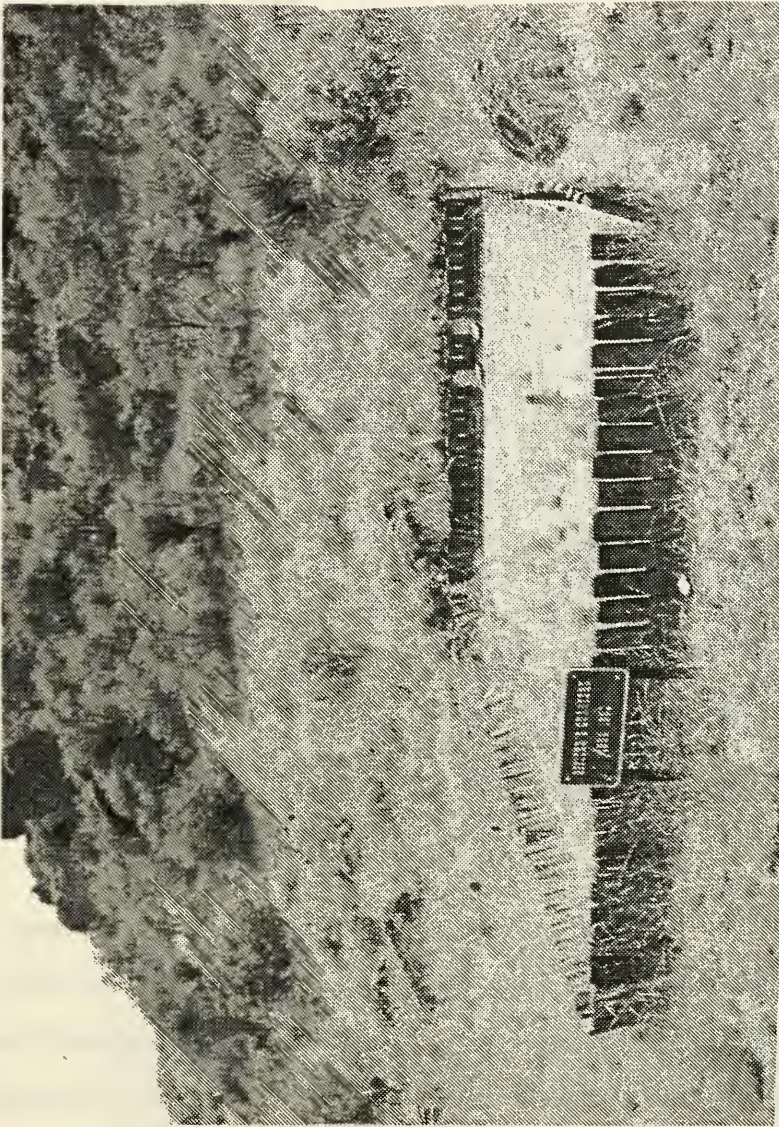


Figure 23 Photograph, Representation of first Fort Davis wooden picket footprint, 1999 (Source: Author)

The remnants of the hospital complex represent the other cluster of structures within the canyon, including the partially restored hospital building (HB-46) and storeroom (HB-47). Also located in the canyon are the remains of drainage ditches and earthen berms, which were described in the previous section concerning the topography of the second fort period. In addition, traces of a series of historic roads are principally located to the rear of officers' row and running along the north and south canyon walls. As the road that runs along the south canyon wall approaches the rear of the canyon, it passes an area where the Park Service periodically produces soil cement adobes. Further to the northwest the road approaches the front of a structure that once housed the Fort Davis Boys Camp. Also running along the foothill of the North Ridge within the canyon is the "Hospital Canyon Trail," which was constructed by the Park Service to be used by the public. This trail winds to the top of the North Ridge where it joins the "North Ridge Trail," which leads to another scenic overlook above officers' row. The trail also leads down the slope of the ridge to the north end of officers' row.

Topography

Each of the drainage ditches built at the time of the second fort, which are described in the "Topography" section affiliated with that period, remains today, although they apparently have been filled somewhat with sediment. The earthen embankment built to the rear of officers' row during the same period also remains.

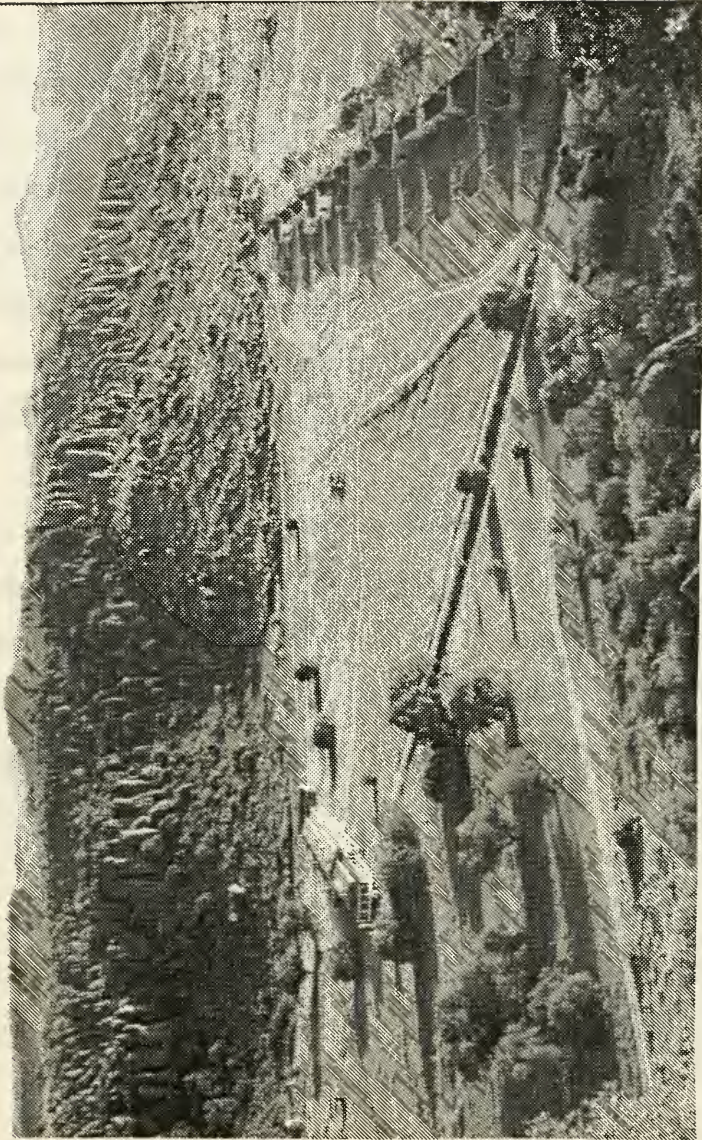


Figure 24. Photograph, Remnants of Hospital Canyon drainage system, 1999 (Source: Author)

Vegetation

In comparing the condition of vegetation between the period of the second fort and the present, Nelson's 1981 vegetation study states that "[t]he overall pattern of vegetation types postulated for the 1880-1900 period appears very similar to that of today."

However, the general differences are that areas dominated by grasses have diminished today, while those covered with desert plants, shrubs, and juniper trees have increased. He attributes these changes to both decreases in annual precipitation since the 19th century and the absence of large numbers of grazing animals, including goats on ridge slopes.¹⁷⁵

Looking at specific zones of the site, the flat plain that represents the core area of the second fort, including the parade ground and the area where most structures are located, is covered generally with grama grass today. In some parts of this zone, the presence of mormon tea, yucca, and mesquite have increased significantly since the 1880s. Although grass is regularly mowed today on the parade ground and around the core area of historic structures, it provides greater ground cover today compared to its well-grazed condition in historic photographs that date to the period of the Army's occupation. On officers' row, one historic tree remained as of July 1988 (in front of HB-2), and other trees (cottonwood and desert willow) have been planted and maintained in front of other buildings there since the establishment of the park. The park also has adopted a policy to

¹⁷⁵ Nelson, pp. 67, 72-73.

attempt to limit the size of the trees in front of officers' row to the approximate size of trees there in the 1880s.¹⁷⁶

The cottonwood trees near the spring in the southeast part of the site are generally remnants of the period of the Army's occupation of the site, although the number of trees in the grove appears to have decreased considerably. When the park was established, the grove was overgrown with brush, which park personnel removed in the 1960s.¹⁷⁷

¹⁷⁶ Nelson, p. 70; National Park Service, Fort Davis NHS, *Historic Scene Management Plan*, 1983, p. 9; National Park Service, Fort Davis NHS, *Historic Tree Management Plan*, 1988, p. 2; Welsh, p. 168.

¹⁷⁷ *Historic Tree Management Plan*, p. 5; Welsh, p. 168.



Figure 25. Photograph. Cottonwood grove and spring enclosure, 1999 (Source: Author)

In Hospital Canyon, the oak savannah continues to persist, but the numbers of oak trees has decreased significantly since the second fort period, especially between officers' row and the hospital. Some areas formerly covered with grass in this zone have also been taken over by brush. The park has attempted to decrease the amount of brush there in order to better approximate its historic appearance.¹⁷⁸

The slopes and tops of Sleeping Lion Mountain and the North Ridge also have become covered with a much heavier density of brush, especially catclaw. This was not the case during the second fort period, mainly due to the fact that goats browsed these areas then. The numbers of trees in these areas have increased somewhat as well.¹⁷⁹

Furthermore, the Park Service has planted evergreen trees around the sides of the complex of park housing and maintenance facilities that face the parade ground in order to shield those modern structures from the view of visitors.

Views and Vistas

In addition to the views of the natural landscape described in the section concerning the first fort period, it should be noted that the Park Service has established two scenic overlook locations. One is located on the lower slope of the south end of Sleeping Lion Mountain, just above where the second fort's sutler's complex (HB-291 through HB-294)

¹⁷⁸ Nelson, p. 67; National Park Service, Fort Davis NHS, *Historic Resource Management Plan*, 1988, p. 5.

¹⁷⁹ Nelson, p. 71.

was located. It provides a view of almost all of the buildings, ruins, and other features of the site, with the exception of those in the northern part. The second scenic overlook is situated atop the North Ridge on the "North Ridge Trail," more than 200 feet above officers' row. Due to its location and elevation, one may see from it an even greater part of the site than provided by the other overlook, including areas even further north. The park has created one additional viewpoint at the north end of the North Ridge where one may see the remains of the pump house and well associated with the second fort's water system as well as Limpia Creek.

CHAPTER 2: DEFINITION AND APPLICATION OF THE CULTURAL LANDSCAPE CONCEPT

A major definitional issue in recent years in approaching cultural landscapes has involved differences in seeing the concept as meaning material places or as cultural symbols or ways of seeing the world. Both academicians and practitioners of historic preservation have attempted to balance these various meanings. The following discussion addresses the definition and application of the concept within both fields.

ACADEMIC DEFINITION OF CULTURAL LANDSCAPES

The original American academic definition of the cultural landscape concept comes from the cultural geographer Carl Sauer in his 1925 article, "The Morphology of Landscape." This work represents the first published usage of the term in academic literature in the United States. Sauer defines the concept as follows:

The cultural landscape is fashioned out of a natural landscape by a culture group. Culture is the agent, the natural area is the medium, the cultural landscape is the result. Under the influence of a given culture, itself changing through time, the landscape undergoes development, passing through phases, and probably reaching ultimately the end of its cycle of development. With the introduction of a different, that is, alien culture, a rejuvenation of the cultural landscape sets in, or a new landscape is superimposed on remnants of an older one. The natural landscape is of course of fundamental importance, for it supplies the materials out of which the cultural landscape is formed. The shaping force, however, lies in the culture itself.¹

The following diagram from the same article provides an illustrative representation of this concept:

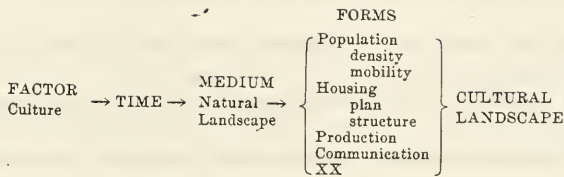


Figure 26. Sauer diagram (Source: Sauer, 1925)

A fundamental question when considering what cultural landscapes are is whether they include both entities constructed by human beings *and* the natural environment. Under Sauer's definition, cultural landscapes are clearly comprised of both. Essentially, everything that is part of, or that is situated on, the land that has been shaped or affected by human beings is a cultural landscape. This includes both the intentionally built environment and those parts of the world that have been unintentionally shaped by humans. Excluded would be those places in nature that have not received the imprint of human activity. It is not clear how Sauer's definition would apply to places that are not physically modified by humans but that have associated cultural values or meanings.

For the purpose of demonstrating the application of Sauer's abstract concept to the real world, it seems worthwhile to identify exactly what elements of the environment at Fort Davis National Historic Site that would be included under his definition of the cultural landscape. A fundamental question from the standpoint of the field of historic

¹ Carl O. Sauer, "The Morphology of Landscape," *University of California Publications in Geography*, 2 (2)(1925), p. 46.

preservation is whether the site's buildings and structures are part of the cultural landscape there. Since all building and structures are shaped out of natural resources through culture, they are undoubtedly included. At Fort Davis, the types of structures present range from shelters for humans and animals, such as officers' quarters and corrals, to masonry footbridges. Other structures present were erected for the containment, transport, or control of water, such as cisterns, earthen embankments, enclosures around both a spring and well, and the remains of a masonry foundation that formerly supported water supply tanks. Also included are all roads and trails, whether they are still actively used or faint traces that have been abandoned. In both cases, they are human imprints on the land. All plots or areas of land that have been utilized for specific purposes are included as well, such as the site's locations of past agricultural production, its parade ground used for military exercises, and its cemeteries.

Just as real, but perhaps less obvious to those who are not aware of the environmental history of the area, are the places within the site where the state of vegetation has been shaped either in terms of its physical characteristics or in terms of the species present. For instance, through the park's *Historic Tree Management Plan*, the National Park Service has sought to restore the late-19th century appearance of aspects of the site's vegetation. For example, the park has actively maintained the presence of historic cottonwoods in the area of the spring as well as historic oaks in Hospital Canyon. In both areas, the agency also has removed brush that is considered to be undesirable. Furthermore, cottonwood and desert willow trees have been planted in front of the

structures on officers' row. All of these human-induced changes to the vegetative environment represent elements of the Fort Davis cultural landscape.²

Another significant issue in studying this particular site is what Sauer describes as the superimposition of landscapes by differing cultures. At various locations within the site, physical remnants exist of Native American habitation and use prior to the creation of the first fort in 1854. These remains on the land include faded pictographs and rock shelters. Although these traces, which are hardly discernible today, indicate only a sparse Native American presence, they nonetheless represent what could be viewed as a different experience of and adaptation than that of the U.S. Army to the same geographic place.

In the case of most Native American peoples, it should be noted that what makes up a cultural landscape is vastly different from the elements previously identified from the cultural landscape representing the 19th century U.S Army post at Fort Davis. Many of the most significant places within the cultural systems of Native Americans are natural landforms that hold a metaphysical significance, rather than tangible manifestations of human activity. For example, in a survey of sites sacred to the Navajo people, the study

Navajo Sacred Places states:

most important places are features of the natural landscape (on which evidence of human use is incidental to their significance): mountains, rock outcrops, canyons, springs and other bodies of water, natural discoloration of rocks, areas where certain plants grow, mineral deposits, isolated trees,

² National Park Service, Fort Davis NHS, *Historic Tree Management Plan*, 1988, pp. 5-6.

places where rocks produce echoes, air vents in rocks, sand dunes, flat open areas, lightning-struck trees and rocks.³

Most of these places signify particular meanings within a cosmology. In the case of the land contained within and around Fort Davis National Historic Site, little if anything is known about what landscape features may have held special significance to Native Americans. This subject clearly merits further study.

Since the 1980s, some cultural geographers have made efforts to formulate new conceptions of cultural landscapes that differ from Sauer's object-oriented approach. For example, cultural geographer James Duncan stresses the interpretive value of cultural landscapes in their signification of social systems. In defining the concept, Duncan states that:

[t]he landscape, I would argue is one of the central elements in a cultural system, for as an ordered assemblage of objects, a text, it acts as a signifying system through which a social system is communicated, reproduced, experienced, and explored.

Duncan adds that landscapes "encode" information through their intertextuality, meaning that they lie within the context of larger systems that also may be read as texts. He specifically points out the importance of the contexts of both "structured political practices and individual intentions" in their relation to the creation and interpretation of cultural landscapes.⁴

³ Klara Bonsack Kelley and Harris Francis, *Navajo Sacred Places* (Bloomington, Ind.: Indiana University Press, 1994), p. 39.

⁴ James S. Duncan, *The City as Text: The Politics of Landscape Interpretation in the Kandyan Kingdom* (Cambridge: Cambridge University Press, 1990), pp. 4-5 (quoted phrases), 17 (offset quote).

Such new conceptions of cultural landscapes have given the idea a more fluid meaning within the field of cultural geography. Today, the term *cultural landscape* is used with reference to a combination of Sauer's original material-centered concept and as being more symbolic.

ADOPTION AND DEFINITION OF CULTURAL LANDSCAPES IN HERITAGE MANAGEMENT

Although the cultural landscape concept has been used within American geography since Sauer's 1925 article, its adoption and application within the field of heritage management in the United States and other countries is a relatively recent phenomenon. The U.S. National Park Service's publication, *Cultural Landscape Bibliography: An Annotated Bibliography on Resources in the National Park Service*, states that until the 1960s, landscape-related research at the agency dealt "primarily with historic sites and the emphasis was on the grounds associated with historic structures." During the 20th and early 21st centuries, the Park Service has served as the national leader in the making of historic preservation policy. According to *Cultural Landscape Bibliography*, pre-1960s Park Service reports presenting this research "rarely dealt with landscape features, such as land use, spatial organization, and vegetation."⁵

⁵ *Cultural Landscape Bibliography: An Annotated Bibliography on Resources in the National Park System*, (Washington, D.C.: GPO, 1992), p. ix.

It was not until 1981 that cultural landscapes were first officially recognized by the Park Service as a distinct resource type, in the first release of its *Cultural Resources Management Guideline, NPS-28*. This adoption of cultural landscapes arose from a relatively recent awareness of the need to take into account the contextual complexities of heritage sites. Previously, the field in the U.S. had taken a building- or monument-centered perspective that tended to treat heritage as museum objects, detached from their surroundings and cultural contexts. Viewing heritage through a cultural landscape approach recognizes the intricacies of context, both in terms of natural and cultural systems.⁶

In defining the concept, the agency's *Preservation Brief No. 36* states that a cultural landscape is: "a geographic area, including both cultural and natural resources and the wildlife or domestic animals therein, associated with a historic event, activity, or person or exhibiting other cultural or aesthetic values." They further specify that there are four general types of cultural landscapes, which are not mutually exclusive: 1) historic sites, 2) historic designed landscapes, 3) historic vernacular landscapes, and 4) ethnographic landscapes. In this definition, a cultural landscape clearly is viewed as primarily a physical entity, representing primarily a Sauerian approach. However, it does differ from

⁶ National Park Service, *Cultural Resources Management Guideline, NPS-28*, (Washington, D.C.: GPO, 1981); National Park Service, *Cultural Landscape Bibliography*, p. xi (quote).

Sauer in that uses are included, as well as feelings, associations, and ethnographic values.⁷

It should be noted that heritage management agencies of other countries have adopted the cultural landscape idea as well. Australia is a notable example. The nation's public documents relating to cultural heritage, such as the Australian Heritage Commission Act (1975) and the Australia ICOMOS *Charter for the Conservation of Places of Cultural Significance (The Burra Charter)*, accentuate *places* of significance, rather than monuments or buildings. Australian academician and heritage specialist Ken Taylor equates the Australian use of the term *place* with cultural landscapes. However, Taylor asserts that in Australia, “[p]laces – cultural landscapes – are a way of seeing, not something which is simply seen as a physical object or objects.” The key point to stress here is that the concept is defined more as an approach to viewing the world and assigning significance in addition to being a set of physical entities.⁸

Turning to the global scale, Taylor notes that a shift in North American and Australian practice from “the European Venice Charter’s emphasis on works of high art and ancient monuments to a wider understanding of the concept of cultural significance” has “played a major role in international discussions leading to the inclusion of categories of cultural landscapes of outstanding universal value for world heritage nomination in the early

⁷ Charles A. Birnbaum, *Protecting Cultural Landscapes: Planning, Treatment and Management of Historic Landscapes* (U.S. Department of Interior, National Park Service, Preservation Briefs, no. 36. Washington, D.C.: GPO, 1994), p. 1.

1990s.”⁹ Today, cultural landscapes are prominently represented in the World Heritage Centre’s *Operational Guidelines for the Implementation of the World Heritage Convention*. This document states the following in this regard:

Cultural landscapes represent the ‘combined works of nature and man’ ... They are illustrative of the evolution of human society and settlement over time, under the influence of the physical constraints and/or opportunities presented by their natural environment and of successive social, economic and cultural forces, both external and internal.

The document places cultural landscapes within three main categories: 1) a landscape “designed and created intentionally by man;” 2) an organically evolved landscape, which “results from an initial social, economic, administrative, and/or religious imperative and has developed its present form by association with and in response to its natural environment” through an evolutionary process (which is further broken down into the subcategories of relict landscapes and continuing landscapes); and 3) an associative landscape, which retains “powerful religious, artistic or cultural associations of the natural element rather than material cultural evidence, which may be insignificant or even absent.”¹⁰ As is the case with the U.S. National Park Service, the World Heritage Centre defines the term as a physical entity, and not as an approach as well, which is the case with Taylor and others.

⁸ Ken Taylor, “Interpretive Values and Cultural Landscapes: An Australian Perspective,” *CRM* 17, no. 7 (1994), pp. 16-18.

⁹ Ken Taylor, “Reconciling Aesthetic Value and Social Value: Dilemmas of Interpretation and Application,” *APT Bulletin* 30, no. 1 (1999), p. 51.

It appears that using the concept as both a way of seeing the world, or as a cultural landscape approach, and as a physical entity, as Sauer first proposed, can work well together. One should keep in mind, though, that in using either a materialist or symbolic definition of the term, or a combination of the two, that the formulation of cultural landscapes is done by human beings, each of whom perceives the world in differing ways and with his or her own biases.

¹⁰ World Heritage Centre, *Operational Guidelines for the Implementation of the World Heritage Convention* (Paris: United Nations Educational, Scientific and Cultural Organization, 1999), pp. 9-10. (This publication may be accessed at <http://www.unesco.org/whc/nwhc/pages/doc/main.htm>.)

CHAPTER 3: STATEMENT OF SIGNIFICANCE

The practice of historic preservation goes a step further than that of history in that it considers what features of an historic site that exist in the present are significant, and selects for conservation those features that are deemed to be most significant. The process of identifying features of significance and then discriminating between them to assign relative levels of significance is inherently subjective. The first step in undertaking this process is the selection of criteria for assigning significance.

Two types of criteria for considering significance in historic preservation are value and integrity. A value in this regard is essentially a quality or property that is recognized as being intrinsically desirable or of worth. Integrity may be defined in many ways. I define it here as meaning the existence of the material, form, color, and texture of physical characteristics that existed during the time period, or periods, in which the place or feature is deemed to have acquired its significance.

For an entity to be assigned significance, the primary requirement is that it possess value. If value is present, then it must also contain integrity, but the requirement of integrity follows from the primary presence of value. After all, a place or feature that is unanimously considered to be ordinary, or not of special value, but that contains a high degree of integrity, would not be considered especially significant. As the subsequent discussion will demonstrate, different kinds of values consider integrity in different ways.

CULTURAL SIGNIFICANCE UNDER THE BURRA CHARTER

For the purpose of this study, the criteria used for determining the significance of the Fort Davis cultural landscape and its constituent parts is based primarily upon the Burra Charter, also known as the Australia ICOMOS Charter for Places of Cultural Significance, which was adopted by the Australia Committee of the International Council on Monuments and Sites (ICOMOS) in 1979.¹ This charter, which has since been revised, contains perhaps the most appropriate statement of criteria used for assigning significance toward the conservation of cultural landscapes, as it focuses the practice of preservation upon places, rather than isolated buildings or monuments. The 1999 draft revision of this document states that the term *place* “means site, area, land, landscape, building or other work, group of buildings or other works, including components, contents, spaces and views.”

In pursuing the adoption of a conservation policy toward a place, guidelines to the *Burra Charter* state that “[t]he assessment of cultural significance and the preparation of a statement of cultural significance . . . are essential prerequisites to making decisions about the future of a place.” The Charter further states that the term *cultural significance* means “aesthetic, historic, scientific or social value for past, present or future generations.”²

The charter’s guidelines define each of these values as follows:

¹ Australia ICOMOS, *The Burra Charter (The Australia ICOMOS Charter for Places of Cultural Significance)* (1988), < <http://www.icomos.org/australia/>>.

2.2 Aesthetic value

Aesthetic value includes aspects of sensory perception for which criteria can and should be stated. Such criteria may include consideration of the form, scale, colour, texture and material of the fabric; the smells and sounds associated with the place and its use.

2.3 Historic value

Historic value encompasses the history of aesthetics, science and society, and therefore to a large extent underlies all of the terms set out in this section.

A place may have historic value because it has influenced, or has been influenced by, an historic figure, event, phase or activity. It may also have historic value as the site of an important event. For any given place the significance will be greater where evidence of the association or event survives in situ, or where the settings are substantially intact, than where it has been changed or evidence does not survive. However, some events or associations may be so important that the place retains significance regardless of subsequent treatment.

2.4 Scientific Value

The scientific or research value of a place will depend upon the importance of the data involved, on its rarity, quality or representativeness, and on the degree to which the place may contribute further substantial information

2.5 Social Value

Social value embraces the qualities for which a place has become a focus of spiritual, political, national or other cultural sentiment to a majority or minority group.³

² *The Burra Charter*, Article 1.2 (1988) < <http://www.icomos.org/australia/>>.

³ *Burra Charter Guideline: Cultural Significance* (1988) < <http://www.icomos.org/australia/>>.

The most commonly used criteria used in the United States for determining significance in the practice of historic preservation are contained in the U.S. Department of Interior's literature concerning the National Register of Historic Places, which is administered by the National Park Service. Placement of a property on the National Register depends upon its *historic significance*, which the Park Service defines as follows:

Historic significance is the importance of a property to the history, architecture, archaeology, engineering, or culture of a community, State, or the nation.⁴

The agency provides the following general criteria for the assessment of historic significance:

The quality of **significance** in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

- A. That are associated with events that have made a significant contribution to the broad patterns of our history; or
- B. That are associated with the lives of persons significant in our past; or
- C. That embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- D. That have yielded, or may be likely to yield, information important in prehistory or history.⁵

⁴ U.S. Department of Interior, National Park Service, *National Register Bulletin: How to Complete the National Register Registration Form* (Washington, D.C.: GPO, 1997), p. 3.

⁵ *Ibid.*, p. 37.

The decision to use the *Burra Charter* rather than the U.S. Department of the Interior's criteria for historical significance for the National Register of Historic Places was based on two primary reasons. First, the *Burra Charter*'s place-centered approach makes it especially useful for examining cultural landscapes as physical entities. As has already been mentioned, Australian heritage specialist Ken Taylor equates places with cultural landscapes.⁶ Following his argument, the *Burra Charter* constitutes a cultural landscape approach to conserving heritage.

Another subtle, but fundamental, difference between the *Burra Charter* and the National Register is that only the Australian approach explicitly uses values in assigning significance to heritage (with the exception of the reference in the criteria of the National Register to aesthetic values). Rather than explicitly deal with how a place is valued by society, the National Register instead bases significance on associations ("with events, activities, or patterns" or "with important persons"), the presence of distinctive physical characteristics ("of design, construction, or form"), or "potential to yield important information." Clearly, the underlying reasons for preserving any place or entity lie in the values that people attribute to it. Therefore, thinking through acts of preservation should involve an explicit recognition of values.

⁶ Ken Taylor, "Interpretive Values and Cultural Landscapes: An Australian Perspective," *CRM* 17, no. 7 (1994), p. 16.

TAYLOR'S INTERPRETIVE VALUE

One additional value that this study considers is “interpretive value,” which Australian academician Ken Taylor has identified as an additional value category to consider in assessing the cultural significance of heritage. Taylor states that interpretive value, specifically relating to cultural landscapes, is:

the ability of a landscape to inform and enlighten us on social history, promote a sense of place feeling, create links with the past; it is an understanding of what has occurred, when things have occurred, who was involved, and why things have occurred. It enhances the feeling of participation – we could have been involved – in the making of a particular place.⁷

The ideal purpose of the interpretation of a heritage site is to communicate a current understanding of that site's cultural significance to its visitors. The story told is about the past, but it is presented through the lens of the present and is conveyed to present-day visitors.

INTEGRITY AND ITS RELATION TO DIFFERING VALUES

Having defined each of the values, it is useful to now briefly consider the level of integrity that would appear to be required in the case of each value for a place to maintain its significance. Although the charter states that conservation “should not distort the evidence provided by the fabric,” it also states that “[t]he conservation policy appropriate to a place must first be determined by an understanding of its cultural significance and its

physical condition.”⁸ Therefore, it is useful to attempt to draw logical conclusions about the kind of integrity required based upon a close reading of meaning of each of the values.⁹

In the case of aesthetic value, some appreciators of the value in an entity require that the entity reflect the original creative intent of the work’s creator, whether the entity is a work of art, a landscape design, or a building. Therefore, any distortions of that original intent through a restorative process are seen as devaluing. Aesthetic value is also attributed to entities that are simply pleasing to the senses. In this case, interventions affecting the appreciated entity are not devaluing if their effects do not reduce the degree of pleasure provided. In the unique case of the aesthetic appeal of ruins or antiquity, though, any noticeable restorative effort would likely be seen as devaluing.

With regard to historic value, the *Burra Charter* definition states plainly that a high degree of integrity is desirable, although the importance of the historical events related to some places allows for them to retain value “regardless of subsequent treatment.”¹⁰ It appears that this latter provision could hold, though, only if the place were valued for its association with history, rather than to serve as an historic document used to provide facts about past events.

⁷ “Interpretive Values and Cultural Landscapes: An Australian Perspective,” p. 17.

⁸ *Burra Charter*, Article 6 (1988) < <http://www.icomos.org/australia/>>.

⁹ The conclusions drawn are in part aided by a reading of Alois Riegl, “The Modern Cult of Monuments: Its Character and Its Origin,” Translated by Kurt W. Forster and Diane Ghirardo. *Oppositions* 25: 20-51 (1982). Originally published in Alois Riegl, *Gesammelte Aufsätze*. Augsburg-Vienna: Dr. Benno Filser, 1928.

¹⁰ *Burra Charter Guideline: Cultural Significance*, Section 2.3 (1988) < <http://www.icomos.org/australia/>>

Scientific value always requires that a place be preserved with its original form and material to the greatest extent possible. Therefore, scientific value seeks the most complete conservation of a place in its present condition that can be achieved. Scientific value therefore is strongly opposed to any form of restoration, which is always subject to human error and bias.

Social value appears to require a lower level of integrity relative to the other three values. Its significance rests in the sentiment that it evokes from a particular social group. The production of such sentiment may not require that the physical character of the place remain exactly in its original state.

Interpretative value also requires a relatively lower level of integrity. One could conclude that the restoration or reconstruction of cultural landscape features is acceptable if it is deemed that the interpretation of the site would benefit from doing so. Therefore, in terms of its approach to conservation, interpretative value may be at complete odds with the level of integrity that other values desire. An excellent example of interpretative value applied to the extreme is Colonial Williamsburg, where the primary purpose is to interpret 18th century life in the colonial capital of Virginia. In order to carry out this mission, buildings from later periods were demolished, structures existing from the colonial era were restored to what was believed to be their original appearance, and several missing buildings were completely reconstructed.¹¹

¹¹ William J. Murtagh, *Keeping Time: The History and Theory of Preservation in America* (Pittstown, N.J.: The Main Street Press, 1988), pp. 94-96.

SIGNIFICANCE OF THE FORT DAVIS CULTURAL LANDSCAPE

The primary significance of the Fort Davis cultural landscape stems from the historic, aesthetic, and interpretation values that it contains as one of the most intact surviving examples of a post-Civil War military complex in the U.S. Southwest. The remnants of this complex fundamentally reflect 19th century conflict between the United States and Native Americans as the nation's territory and ensuing settlement expanded westward. The still largely surviving spatial arrangement of the second fort, and to a lesser extent the first fort, also reflects the U.S. Army's 19th century planning policies for the design of forts, and their adaptation to the local environment.

Contributing greatly to all three of these values is the relatively small change that has occurred in the environmental setting of the fort since the time of its occupation. The continuance of this original setting, in addition to cultural remains, allows the landscape to still signify the complex dynamics that operated between the military, social, and environmental systems during the U.S. Army's occupation. The interplay of these dynamics may still be seen specifically in terms of the persisting factors that influenced the placement of the post, including the continued presence of traces of the San Antonio-El Paso Road as well as the water source of Limpia Creek and the shelter from northerly winds provided by Hospital Canyon. In addition, remains of the second fort's steam-powered water supply system, irrigation ditches that watered the garden at the spring, and drainage ditches and earthworks used for flood control continue to reflect the Army's responses to the natural environment.

Fort Davis also holds significance through the social value that it contains as a place where a significant number of African-American troops exercised their newly-acquired freedom and opportunity after the Emancipation Proclamation of 1863. The site also retains social value as a place representative of the opportunity sought and hardships experienced by U.S. citizens in general in the nation's 19th century western frontier. Equally important is the social value that exists there as a place representing the nation's dark past in its systematic pursuit of the destruction of Native American inhabitants.

In its management of the site since the early 1960s, the National Park Service has sought to capitalize to a great extent on the site's interpretive value for the purpose of attracting the public to inform them of the history of Fort Davis and its role within the history of the nation. In doing so, the agency pursued a policy during the early years of the site that focused largely on partially reconstructing a number of historic structures, mainly those situated around the parade ground. In addition, efforts were made to restore the vegetative appearance of the parade ground as well as the appearance of some of the roads traversing through and around the parade ground and part of the San Antonio-El Paso road. The agency has more recently adopted a policy that is more inclined toward conservation treatments to structures that are less intrusive in their effects to original fabric. Despite the care taken to carry out these reconstructions and restorations to a high level of historical accuracy, by their very nature these activities detract from the authenticity required for the maintenance of the cultural landscape's historic value. They

also detract from the aesthetic value that resided in the landscape's original fabric. However, one could argue that aesthetic value has been enhanced in the restoration of the site's overall sense of form. Looking at the scale of the interiors of structures, the reconstruction of roofs also has clearly furthered the life of aesthetically-appealing original painted surfaces and woodwork as well as the texture of adobe walls.

CHAPTER 4: DISCUSSION

Having addressed the documentation and significance of the Fort Davis cultural landscape, it is now necessary to conclude with a discussion of suggested ways to enhance the ability of the Park Service to conserve the values that make that landscape significant. First, it should be reiterated that no study of Fort Davis has ever used a cultural landscape approach. As mentioned previously, the agency's program of site conservation has focussed heavily on individual structures, although a few previously mentioned studies and management plans have considered vegetation, cemeteries, and what has been called the *historic scene*. However, a more comprehensive approach to understanding the site's connections between nature and culture has been lacking. Therefore, management approaches to the site's conservation and interpretation likewise have lacked such breadth.

CONSERVATION

The conservation guidelines to the *Burra Charter*, which was used to determine the cultural landscape's significance, state the following concerning the definition of a conservation policy appropriate to a particular place: "The conservation policy should identify the most appropriate way of caring for the fabric and setting of the place arising out of the statement of cultural significance and other constraints."¹ Therefore, as the definition of significance of Fort Davis expands through the adoption of a cultural

¹ Australia ICOMOS, *Guidelines to the Burra Charter: Conservation Policy*, Section 2.2 (1988).

landscape approach, the set of site features that should be taken into consideration in a conservation policy also grows. That set of features should directly contribute to the values that were identified in the preceding statement of significance. The following discussion provides specific recommendations for the conservation of significant features such an approach.

EARTHEN LANDSCAPE FEATURES

Aside from buildings, significant landscape features that should be conserved included the second fort's set of earthworks and ditches to the rear of officers' row that were constructed for flood control. A conservation policy toward these features might include the selective planting of grasses to prevent their erosion. Limiting visitor foot traffic over these features would be beneficial as well. The same approaches could be applied to the remains of the irrigation ditches at the cottonwood grove and then earthen embankment to the west of the second fort's post cemetery that supported the water supply line. As the latter feature at one point is bisected by an arroyo, its conservation at that location would benefit from arroyo stabilization. In any conservation policy, though, it is essential that the significant landscape patterns be preserved.

GEOGRAPHIC INFORMATION SYSTEMS (GIS)

Geographic Information Systems (GIS) is a computer-based system used for solving geographic problems.² This technology is increasingly used within the field of cultural resource management for a variety of purposes.³ At Fort Davis, the adoption of GIS would be extremely useful in linking data concerning park resources within computer databases to the geographic location of those resources. For example, data contained in a condition survey of historic structures, such as treatment priority and digital images of structural problems, could be viewed geographically, showing maintenance personnel automatically where the highest priority problems exist. Used in tandem with Global Positioning System (GPS) technology (described below), GIS would also allow for the instant retrieval of information regarding the location of underground utility lines and their proximity to historic resources. Placing the park's historic base maps within GIS would also provide for the quick amendment of the maps when new artifacts are discovered.

GEOREFERENCING THROUGH GLOBAL POSITION SYSTEM (GPS) TECHNOLOGY

Global Positioning System (GPS) technology uses satellites to pinpoint locations on the earth within +/-1 meter.⁴ This pinpointing process is referred to as georeferencing. The

² Terry Slocum, *Principles of Geographic Information Systems* (1998), p. 7 (unpublished manuscript).

³ Also see the subsequent discussion of the use of GIS in the three-dimensional modeling of the Fort Davis landscape.

⁴ David W. Lowe and Bonnie A. Burns, "Using GPS and GIS to Create a Historic Base Map," *CRM*, (5) 1998, pp. 38-39.

use of GPS units at the site would aid greatly in several ways, including locating hard-to-find archaeological sites and underground utility lines. Use of the technology would also provide for the quick and accurate determination of the location of newly-discovered features of significance, which would allow for the addition of their accurate location to the park's historic base maps.

VEGETATION

This study endorses the vegetation-related procedures provided for in the previously mentioned *Historic Scene Management Plan* (1983) and the *Historic Tree Management Plan* (1988). Both documents provide sound recommendations based upon Nelson's thorough investigation of historic and contemporary site vegetation (1981). It should be stressed that the planting of new trees in the cottonwood grove and in front of officers row to replace existing ones should focus on preserving the same historic landscape patterns.

INTERPRETATION

VIEWS

This study recommends that the richness of the story of Fort Davis would be enhanced if the park were to present it to the public using a cultural landscape approach rather than

placing such heavy emphasis on structures. Interpretation using such an approach benefits greatly from the presence of high ridges lying more than 200 feet above much of the site, where visitors may view a large expanses of the cultural landscape from single viewpoints. Although the park has created trails and scenic overlooks atop the North Ridge and scenic overlooks along the slope of Sleeping Lion Mountain, it could take greater advantage of these viewpoints to convey a more complete picture that recognizes the interplay of military, social, and environmental systems that operated at the fort.

Examples of specific actions that could be taken to utilize these views include daily tours led by park personnel to specific viewpoints to recount, for instance, the environmental factors of the site that led to the placement of the fort, how the natural landscape shaped the fort's spatial arrangement, and how the entire military complex operated within the environmental context. This type of interpretation would benefit from a discussion of the geographic context of Fort Davis, which should include the factors of regional geomorphology, climate, vegetation, and hydrology. Distant views could be discussed as well addressing former paths of historic roads and their accompanying stagecoach stops and the outlying subposts, pineries, and quarry sites utilized by Fort Davis. The relationship between the fort and the adjacent town of Fort Davis would also provide for useful discussion. Perhaps existing trails could also be modified to provide additional views of the site and beyond. Although the agency is presently interpreting many pieces of this story, taking a cultural landscape approach to interpretation would pull those pieces together and fill in gaps.

COMPUTER MODELING

A second possible aid to interpreting the site as a cultural landscape could be found in the three-dimensional (3-D) modeling capabilities of Geographic Information Systems (GIS) computer software. Illustrations 28-31 show 3-D representations of Fort Davis at different points in time using the Spatial Analyst[®] extension to ArcView[®] 3.2, a GIS package produced by the Environmental Systems Research Institute (ESRI). This software permits navigating through the 3-D virtual landscape and taking snapshot images from particular points in space. An ultimate benefit of this technology is its ability to simulate the evolution of cultural landscapes over time.⁵

⁵ For a demonstration and discussion of other similar, although non-GIS, 3D-modeling work by the Park Service, see Tom Patterson, *3D Landscape Presentation: Experiments at the US National Park Service* (1998) <<http://www.nps.gov/carto/silvretta/mtn.html>>.

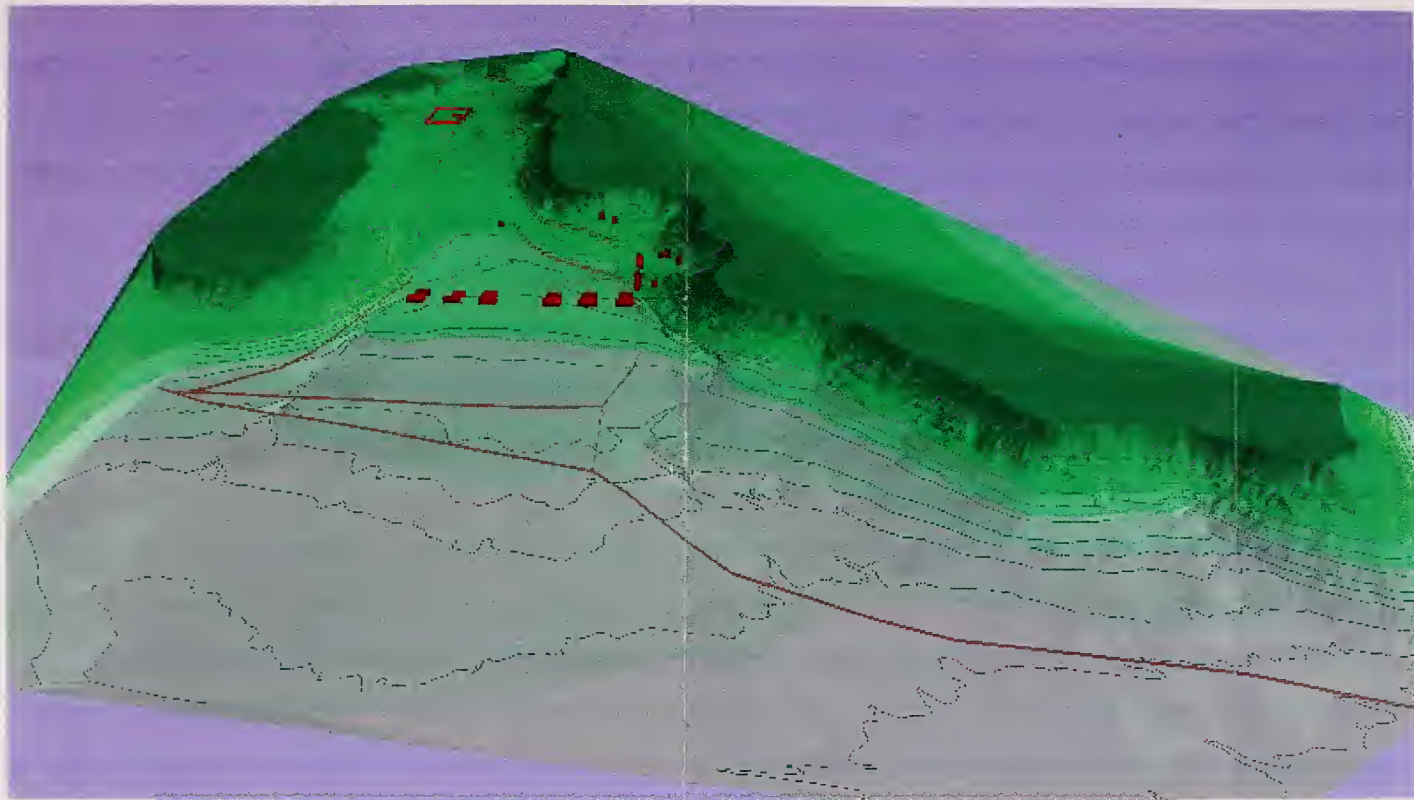


Figure 27. GIS 3-D model of first Fort Davis, 1854-1861 (Source: Author based on historic base map accompanying Greene)



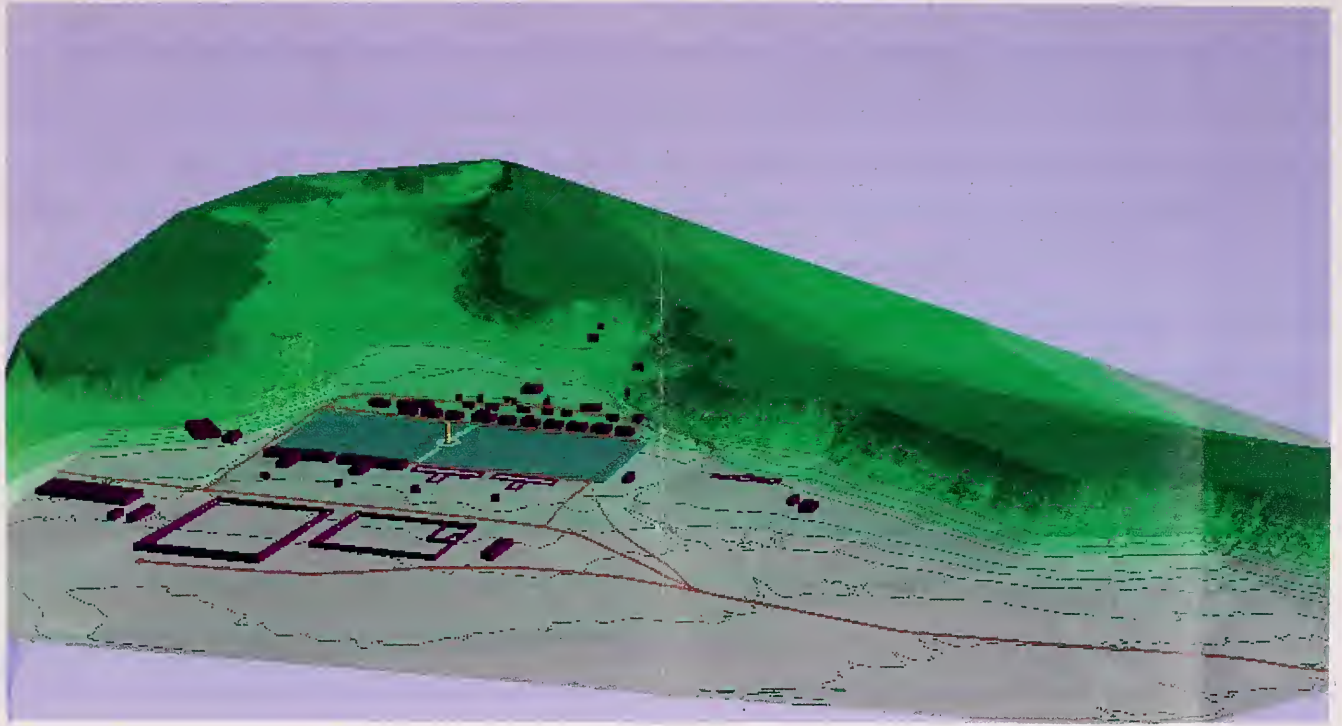


Figure 28. GIS 3-D model of second Fort Davis, 1867-1873 (Source: Author based on historic base map accompanying Greene)

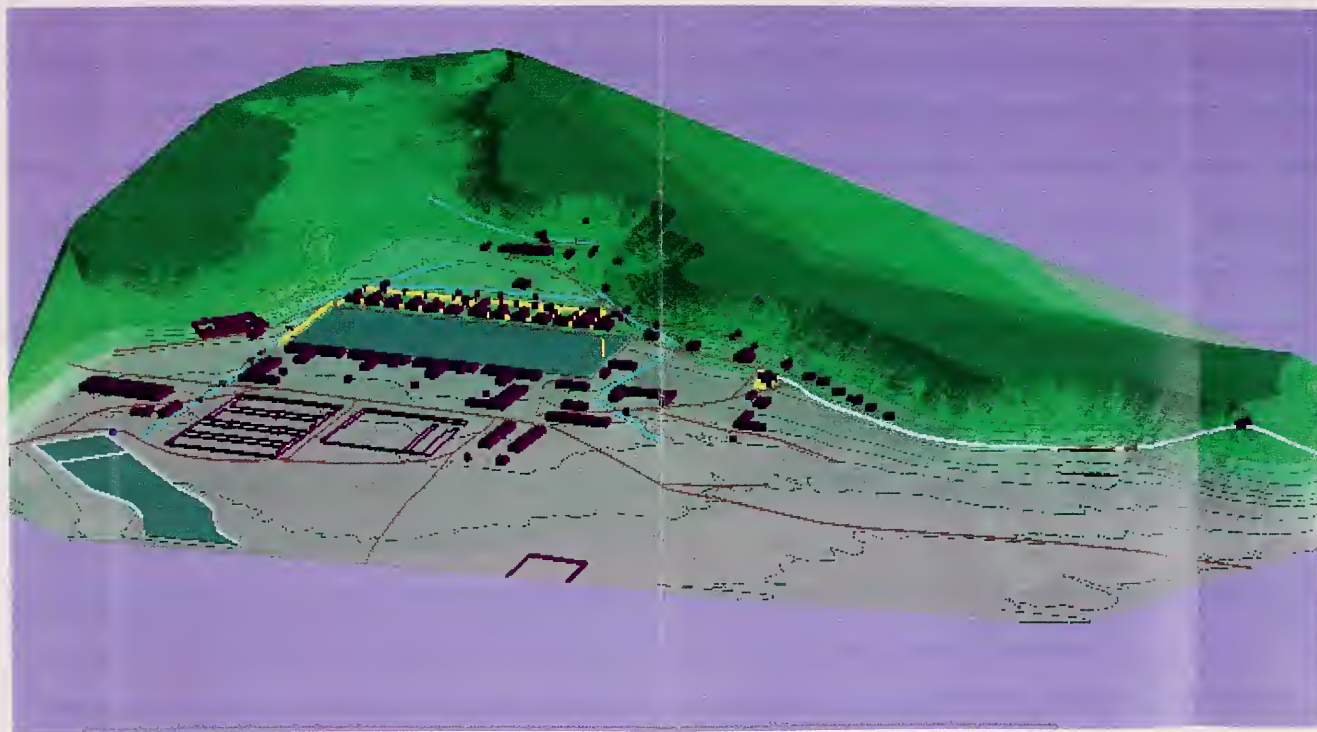


Figure 29. GIS 3-D model of second Fort Davis, 1874-1891 (Source: Author based on historic base map accompanying Greene)

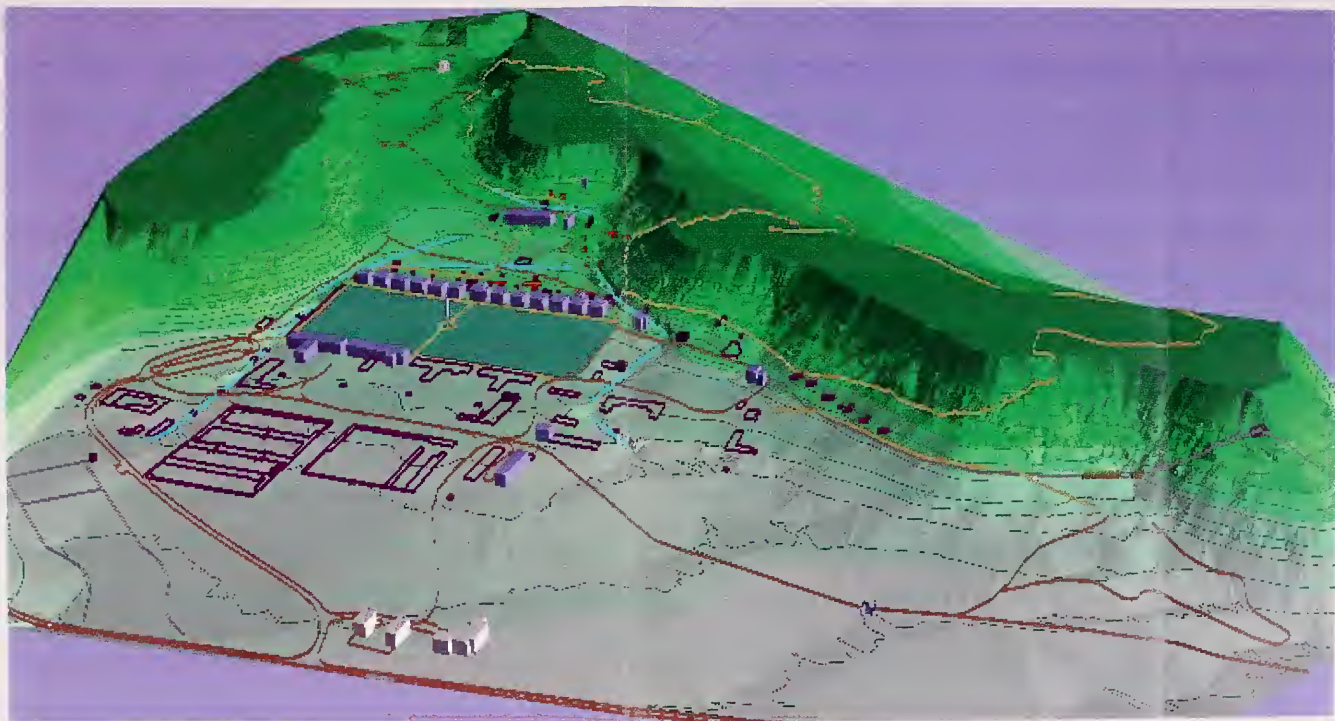


Figure 30. GIS 3-D model of Fort Davis NHS, Present conditions (Source: Author based on historic base maps accompanying Greene)



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Appendix

List of Historic Features

The following list identifies historic features at Fort Davis National Historic Site and indicates the Historic Building (HB) numbers that have been assigned to each of them by the National Park Service. These numbers should be used to read the site plans contained in this work. (Source: Greene, pp. 385-404)

<u>HB#</u>	<u>Historic feature description</u>
1	Lieutenant's Quarters
2	Captain's Quarters
3	Lieutenant's Quarters
4	Lieutenant's Quarters
5	Captain's Quarters
6	Lieutenant's Quarters
7	Commanding Officer's Quarters
8	Lieutenant's Quarters
9	Captain's Quarters
10	Lieutenant's Quarters
11	Lieutenant's Quarters
12	Captain's Quarters
13	Lieutenant's Quarters
14	Officers' or Noncommissioned Officer's Quarters
15	Officers' or NCOs' Quarters
16	NCOs' Quarters

- 17 Married Men's Quarters
- 18 Officers' or NCOs' Quarters
- 19 Quarters and Office
- 20 Barracks
- 21 Barracks
- 22 Barracks
- 23 Barracks
- 24 Band Barracks
- 25 Infantry Barracks
- 26 Barracks
- 27 Barracks
- 28 Chapel
- 29 Post Headquarters
- 30 Guardhouse 2
- 31 Bakery
- 32 Old Commissary Storehouse; Ordnance Storehouse
- 33 Commissary Office
- 34 Quartermaster's Office and Storehouse
- 35 Quartermaster Sergeant's Residence
- 36 Ordnance Shed; Commissary Sergeant's Quarters
- 37 New Commissary Storehouse
- 38 New Quartermaster's Storehouse

39	Forage House; Hay and Wood Yard
40	Quartermaster Corral
41	Cavalry Corral; Cavalry Saddle Shop; Cavalry Stables
42	Sutler's Store
43	Telegraph Office
44	Sutler's Residence
45	Commanding Officer's Stables
46	Hospital
47	Hospital Storehouse; Hospital Laundry
48	Hospital Steward's Quarters
49	Magazine
50	Hospital Laundry; Hospital Storehouse
51	Hospital Woodhouse
52	Hospital Privy
53	Steam Pumphouse
61	Oil House
62	Sawmill Shed
74	Temporary Second Fort Hospital
90	Waterpipe Line
91	Masonry Water Pipe Support Embankment
92	Cemetery
125	Drainage Ditch and Dike System

130	Historic Manhole
131	Historic Manhole
133	Runoff Channel
135	Stables
136	Portable Footbridge Abutment
139	Hearth Closet
140	Kiln
141	Spring
142	Irrigation Ditch
143	Old Bridge Crossing
144	“Rainbow” Bridge
150	Privy for HB-18
151	Kitchen for HB-18
152	Privy for HB-48, Hospital Steward’s Quarters
200	Married Men’s Quarters
201	Married Men’s Quarters
202	Married Men’s Quarters
203	Married Men’s Quarters
204	Married Men’s Quarters
205	Married Men’s Quarters
206	First Post Chapel and Schoolhouse
207	Unfinished Hospital

210	Unidentified Structure
213	Hay and Wood Yard
217	Kitchen for HB-7
218	Privy for HB-22, HB-23
220	First Water Tank
221	Second Water Tank
224	Privy for HB-202
228	Privy for HB-16
229	Privy for HB-15
230	Privy for HB-14
231	Privy for HB-13
232	Privy for HB-24
233	Privy for HB-25
234	Flagpole Site, 1885-1891
235	Privy for HB-9, ca. 1870
236	Privy for HB-7, ca. 1870
237	Privy for HB-7, ca. 1870
238	Privy for HB-6, ca. 1870
239	Privy for HB-5, ca. 1870
240	Flagpole Site, ca. 1875-1884
241	Privy for HB-23
242	Privy for HB-22

243	Privy for HB-21
244	Privy for HB-20
246	Enclosing Wall
249	Bridge
251	Bridge
252	Bridge
253	Bridge
254	Privy for HB-12, after 1881
255	Privy for HB-11, after 1881
256	Privy for HB-10
257	Double Privy for HB-9, after 1881
258	Double Privy for HB-8, after 1881
259	Privy for HB-7, after 1881
260	Privy for HB-6, after 1881
261	Privy for HB-5, after 1881
263	Privy for HB-3, after 1881
264	Privy for HB-2, after 1881
265	Privy for HB-1, after 1881
266	Privy for HB-1
267	Kitchen for HB-1, after 1880
268	Kitchen for HB-2, after 1880
269	Kitchen for HB-3, after 1880

270	Kitchen for HB-4, after 1880
271	Kitchen for HB-5, after 1880
272	Kitchen for HB-6, after 1880
273	Kitchen for HB-8, after 1880
274	Kitchen for HB-9, after 1880
275	Kitchen for HB-10, after 1880
276	Kitchen for HB-11, after 1880
277	Kitchen for HB-12, after 1880
278	Servant's Room for HB-12
279	Kitchen for HB-13, after 1880
280	Privy for HB-13, after 1881
281	Kitchen for HB-13, 1870-1890
283	Kitchen for HB-10, 1870-1890
284	Kitchen for HB-9, 1870-1875
285	Kitchen for HB-8, 1870-1875
286	Kitchen or Servant's Quarters for HB-7, 1870-1875
287	Kitchen or Servant's Quarters for HB-7, 1870-1875
288	Kitchen for HB-6, 1870-1890
289	Kitchen for Officer's Mess, 1867-1870
299	First Guard House
301	Trash Dump
302	Corrals and Wagon Yard

303	Stable
304	Barn
305	Laundress House
306	Laundress House
307	Laundress House
308	Laundress House
309	Laundress House
310	Laundress House
311	Trash Dump
312	Trash Dump
313	Laundress House
314	Laundress House
315	“Maggie’s” House and Kitchen
316	Trash Dump
317	Hospital
321	Officer’s Quarters
322	Officer’s Quarters
323	Officer’s Kitchen
324	Trash Dump
325	Officer’s Quarters
326	Officer’s Quarters
327	Officer’s Quarters

- 328 Trash Dump
- 329 Trash Dump
- 330 Trash Dump
- 331 Commanding Officer's Quarters
- 332 "Charlie's House"
- 333 "Charlie's Kitchen"
- 334 Structure
- 335 Structure
- 336 Structure
- 337 Structure
- 338 Barracks, 1854-1856
- 339 Barracks, 1854-1856
- 340 Barracks, 1854-1856
- 341 Barracks, 1854-1856
- 342 Barracks, 1854-1856
- 343 Barracks, 1854-1856
- 344 Barracks, 1856-1861
- 345 Barracks, 1856-1861
- 346 Barracks, 1856-1861
- 347 Barracks, 1856-1861
- 348 Barracks, 1856-1861
- 349 Barracks, 1856-1861; Guardhouse, 1860-1861

- 350 Flagpole
- 351 Sutler's Store
- 352 Commissary and Quartermaster's Warehouse
- 353 Unidentified Building
- 354 Temporary Commissary Warehouse
- 355 Temporary Quartermaster Storehouse
- 356 Temporary Quartermaster Storehouse
- 357 Bakery Second Oven, 1857-1861
- 358 Bakery, 1854-1861
- 359 Blacksmith Shop, 1854-1860
- 360 Officer's Quarters
- 361 Officer's Quarters
- 362 First Guardhouse, 1854-ca. 1858
- 363 Temporary Quartermaster Storehouse
- 364 Magazine
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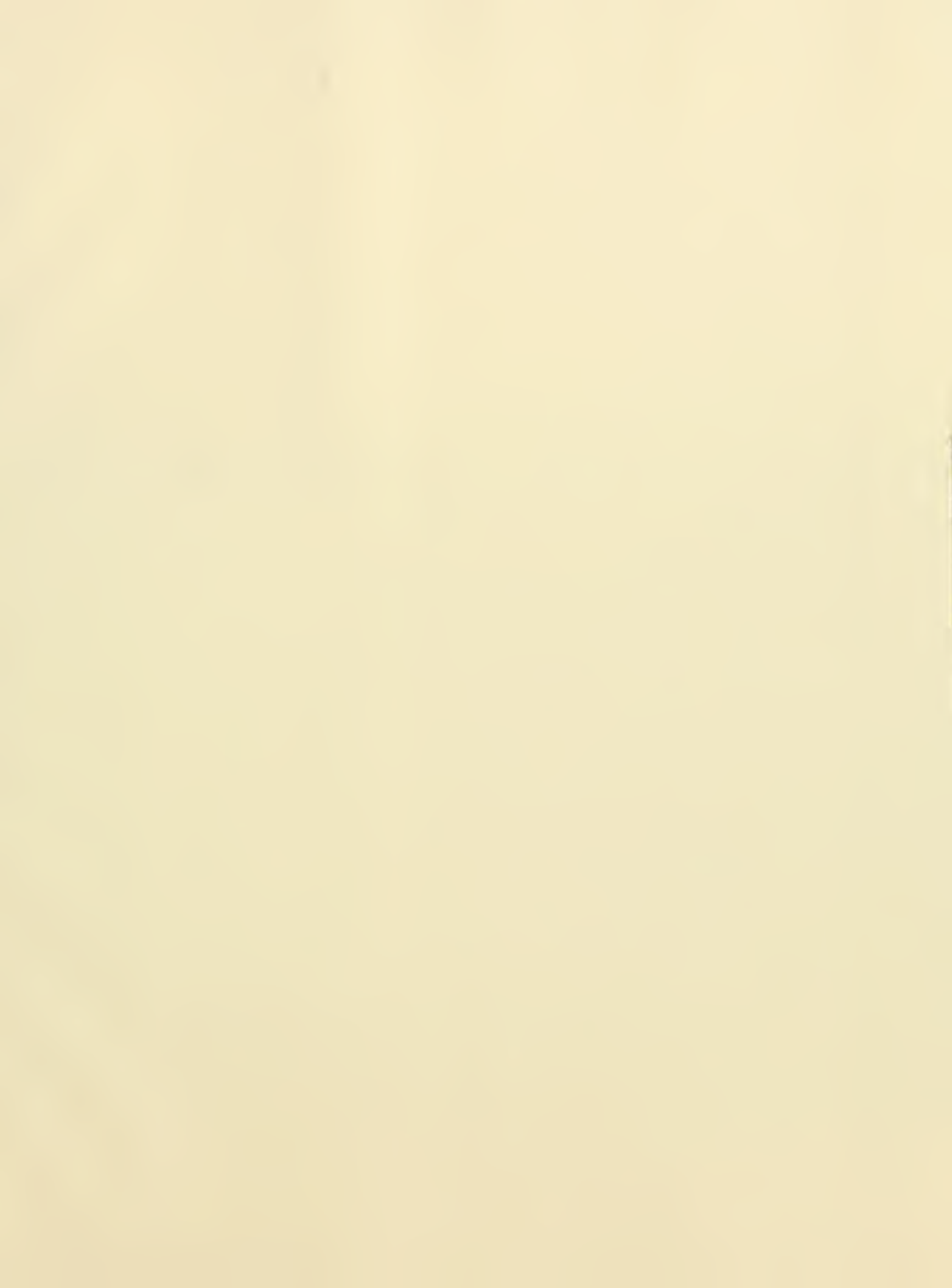
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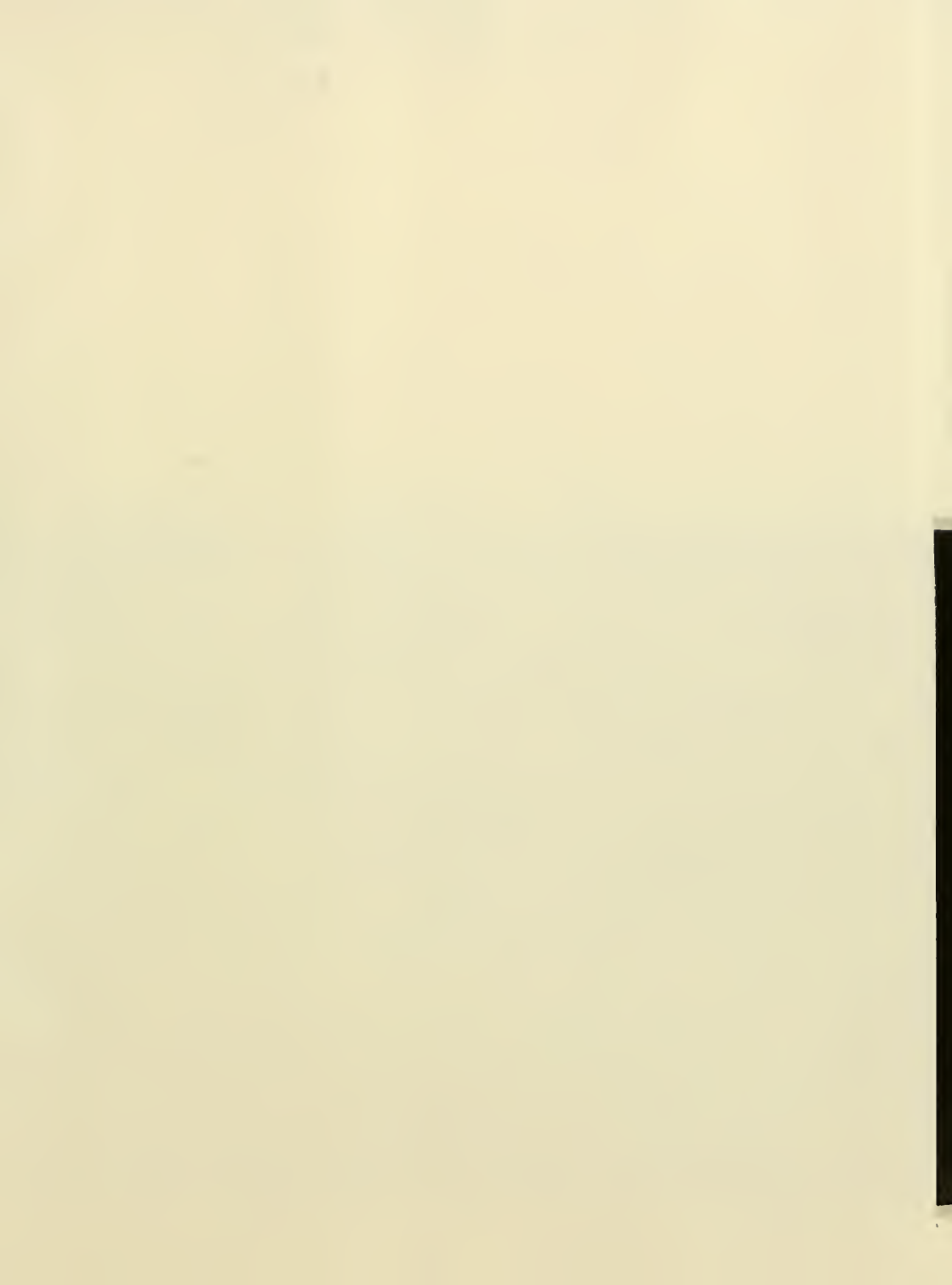
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