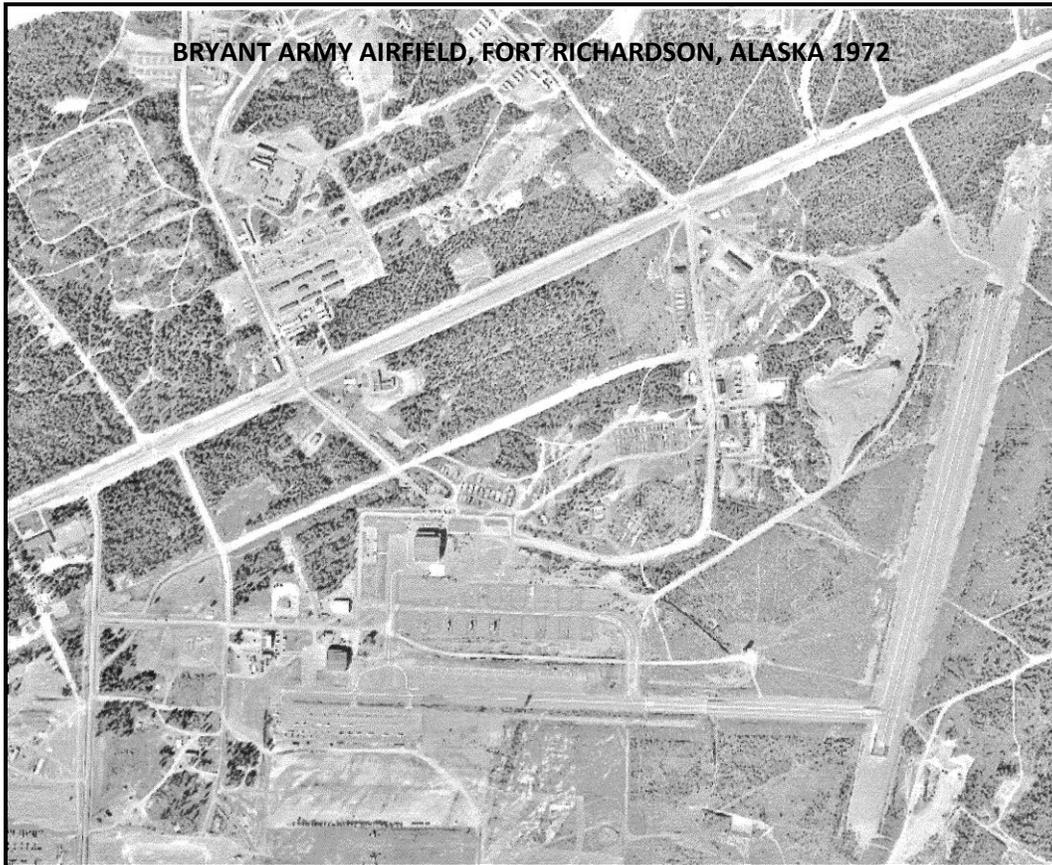


A Phase I Cultural Resource Assessment of Bryant Army Airfield

October 2012

Alaska Army National Guard



Prepared for:
Alaska Army National Guard
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Restricted Data Notice

The locations of cultural resources given in this report are provided to facilitate environmental and engineering planning efforts only. Under the provisions of the Archaeological Resources Protection Act and the National Historic Preservation Act, site location information is restricted in distribution; disclosure of such information is exempt from requests under Federal and State freedom of information laws. This report is not a public document. It is intended for release to the Alaska Army National Guard, the Alaska State Historic Preservation Officer, and appropriate permitting agencies only.

Executive Summary

The Alaska Army National Guard (AKARNG) is proposing to address requirements stipulated in Section 110 of the National Historic Preservation Act of 1966, as amended (NHPA), for buildings and some land associated with the Bryant Army Air Field (BAAF). The Scope of Work includes two related but different activities (and two deliverables) designed to address Section 110 information at BAAF: 1) evaluation of the eligibility for listing on the National Register of Historic Places of the buildings present at BAAF, and 2) a reconnaissance level archaeological surface survey of the lands within the BAAF with a focus on identifying the distribution of disturbed lands. The AKARNG contracted with NHG Alaska LLC (NHG) to undertake both activities at Bryant Army Airfield. This report presents the results of the archaeology survey.

The archaeological survey resulted in a total of 115 areas of disturbance and/or features that fall within one of eight categories. In general, the survey area is characterized by heavy disturbance associated with the construction and dismantling of buildings over the last 50 years, and various building phases, training activities, and recent miscellaneous activities within both Camp Carroll and Bryant Army Airfield. A number of building foundations were identified and associated with general operations within Camp Carroll and the BAAF during the Cold War Period. Training and ground defense features were observed during the course of the survey, specifically small fox-holes and amorphous depressions that possibly represent small bunkers or larger fox-holes. There is little sub-surface potential for any of the identified features. The categories of disturbed areas included excavated areas, push piles, scoured areas, roads, isolated debris (such as drums, automobile components, various metal scraps, and structural debris) and ground disturbance resulting from heavy-equipment operation in recent times.

Certain features may provide some insight into the interplay of EAFB training methods specific to perceived threats and future confrontations in WWII and/or during the Cold War. As such, a formal investigation, spatial analysis, and perhaps archaeological testing of the ground defense features may inform on some aspects of ground defense strategies and efforts at EAFB linked to broader Army operations; for instance, documenting activities that occurred prior to changes in technology and warfare that essentially made ground defense operations on the base obsolete.

The information derived from this assessment related to foundations and roads provide some 'audit' of remnants from past activities and building/demolition phases that can supplement existing records and phases of development as ascertained from aerial imagery. The marking of vast areas of disturbance may guide future planning developments in noting areas where previous activity has been so extensive and complete that there is little need for any future archaeological assessment.

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Acronyms and Abbreviations

AKARNG	Alaska Army National Guard
ATG	Alaska Territorial Guard
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CRM	Cultural Resources Management
DMVA	Department of Military and Veterans Affairs (State of Alaska)
DOE	Determination of Eligibility
FSRC	Federal Scout Readiness Center
HRA	Historical Research Associates, Inc.
HRR	Historical Records Review
JBER	Joint Base Elmendorf-Richardson
ICBM	Intercontinental Ballistic Missile
ICRMP	Integrated Cultural Resources Management Plan
MMRP	Military Munitions Response Program
NATO	North Atlantic Treaty Organization
NHG	NHG Alaska, LLC
NHPA	National Historic Preservation Act
NLUR	Northern Land Use Research, Inc.
NPS	National Park Service
NRHP	National Register of Historic Places
OHA	Office of History and Archaeology (State of Alaska)
SHPO	State Historic Preservation Office(r)

1.0 Introduction

1.1 General Purpose and Description of Project

The Alaska Army National Guard (AKARNG) is proposing to address requirements stipulated in Section 110 of the National Historic Preservation Act of 1966, as amended (NHPA), for buildings and some land associated with the Bryant Army Air Field (BAAF). BAAF is part of Joint Base Elmendorf-Richardson (JBER) northeast of Anchorage, Alaska. Section 110 of the NHPA directs federal agencies to develop a program to inventory and evaluate historic properties in accordance with National Register of Historic Places (NRHP) eligibility criteria. Army Regulation 200-1 Chapter 6-4(b)(2) reiterates that this activity is pertinent to Department of Defense agencies, including the Alaska Army National Guard (AKARNG). The process is designed to provide the AKARNG with information sufficient to plan appropriately for future Section 106 actions.

The Scope of Work called for a NHPA Section 110 reconnaissance level archaeological surface survey of the lands within the BAAF with a focus on identifying the distribution of disturbed lands. The AKARNG contracted with NHG Alaska LLC (NHG) to carry out the archaeology survey at Bryant Army Airfield. (Figure 1 and Figure 2).

Section 110 of the National Historic Preservation Act sets out the broad historic preservation responsibilities of Federal agencies. It is intended to ensure that historic preservation is fully integrated into the ongoing programs of all Federal agencies. This intent was first put forth in the preamble to the NHPA upon its initial adoption in 1966. When the Act was amended in 1980, section 110 was added to expand and make more explicit the statute's statement of Federal agency responsibility for identifying, evaluating, and protecting historic properties and avoiding unnecessary damage to them. Section 110 also charges each Federal agency with the affirmative responsibility for considering projects and programs that further the purposes of the NHPA, and it declares that the costs of preservation activities are eligible project costs in all undertakings conducted or assisted by a Federal agency. The US Army complies with its Section 110 responsibilities through the guidance provided in Army Regulation 200-1 Environmental Protection and Enhancement.

When a specific federal undertaking may affect a historic property, the provisions of Section 106 of NHPA and its implementing regulations codified in 36 CFR 800 (as amended 2004) would apply. These regulations provide a process through which the potential of an undertaking¹ to affect "historic properties" (a regulatory term used to define both prehistoric and historic sites, buildings, structures, and objects) is considered. Historic properties are the districts, sites, buildings, structures, and objects that are listed on, or have been determined eligible for listing on the National Register of Historic Places (NRHP). NRHP eligibility is a key management concept, as National Register eligible sites may require the development of mitigation measures and possibly further archaeological/architectural recordation work prior to starting an undertaking. The federal agency and the Alaska State Historic Preservation officer (SHPO) make determinations of eligibility (DOEs) for listing on the NRHP.

¹ Generally, an undertaking is any federally funded, licensed, permitted, or assisted action.

The purpose of this project was to provide information on the kinds of archaeological resources that may be present within the 600 acres of BAAF lands. Of the 600 acres, approximately 380 acres are currently under the airfield, taxiway, and building aprons. Future AKARNG undertakings may impact the ground surface and subsurface in the BAAF area. Subsurface archaeological resources are not expected to be associated with BAAF developments and contexts, but the BAAF lands do overlap on Camp Carroll and Fort Richardson lands. Consequently, surface and subsurface remains associated with the Army's Fort Richardson and the National Guard's Camp Carroll may be present in and around the area currently associated with BAAF. The primary goal in this activity is to identify where potential cultural resources exist, and don't exist. This report summarizes the results of the background research and field reconnaissance, and associated analysis and management recommendations.

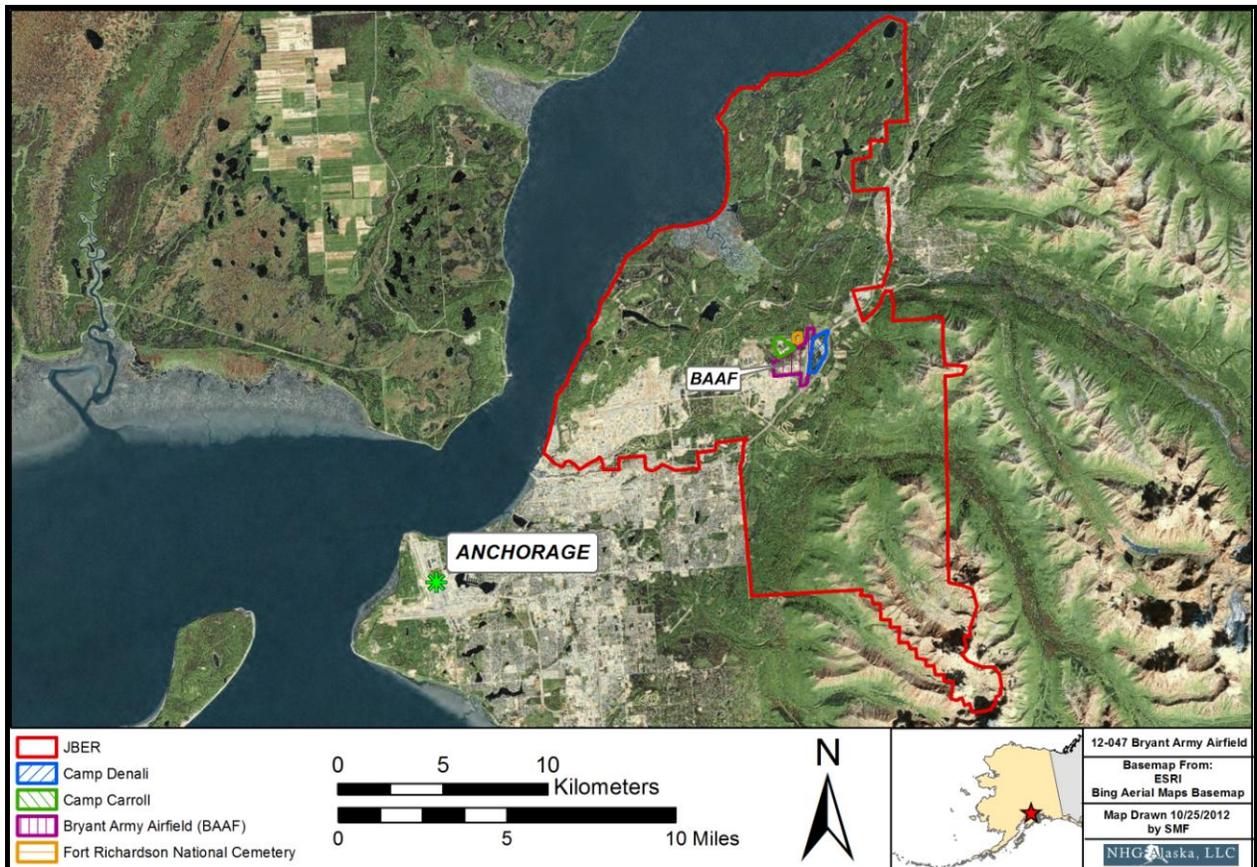


Figure 1. General location map showing the JBBER (red outline) and BAAF areas.

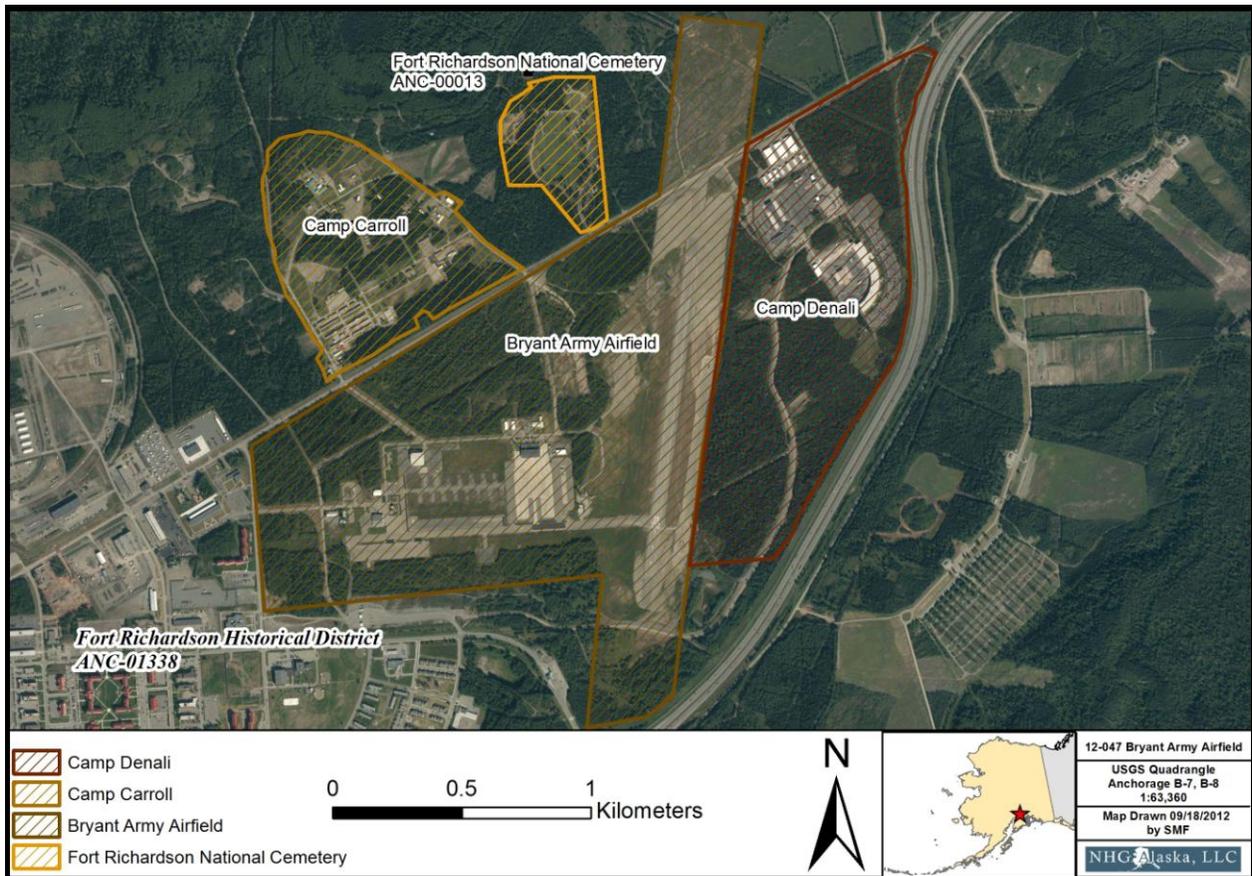


Figure 2. Location of the Bryant Army Airfield (BAAF) survey area in relation to adjacent properties.

1.2 Project Setting

BAAF is situated on the eastern Knik Arm and Upper Cook Inlet, immediately north of Anchorage. This area is encompassed by the Cook Inlet ecoregion that covers approximately 28,000 square miles, including the eastern third of the Kenai Peninsula, a narrow strip of land along the Cook Inlet’s west side, and the Susitna floodplain to the north. All rivers and streams within the Cook Inlet ecoregion flow into the Cook Inlet, including the Susitna, Matanuska, Yentna and Eagle Rivers as well as Deep Creek, Ship Creek and many others (USDA 2004).

The area is sometimes referred to as the “Anchorage Bowl” surrounded by the Chugach Mountains to the east, the Alaskan Range to the west, and the Kenai Mountains to the south. The EAFB is entirely within the Cook Inlet-Susitna lowland physiographic province (Wahrhaftig 1965). This area experiences a relatively mild climate somewhat protected from the Gulf of Alaska storms by the elongated Cook Inlet, and buffered from cold air masses from the surrounding mountains. Temperatures in Anchorage range from 4 degrees Fahrenheit to 66 degrees Fahrenheit with an annual average precipitation of 15 inches.

The Cook Inlet ecoregion was heavily glaciated during the Pleistocene and the effects of glaciation, including moraines, eskers, kettle lakes, drumlin fields and outwash plains remain in the vicinity of Palmer and throughout the ecoregion. South of Palmer are extensive tidal flats that have been raised above sea-level by tectonic uplift or isostatic rebound (Connor 1988). Overlaying much of the glacial landscape is a thick mantle of loess and volcanic ash deposited since the end of the Pleistocene (USDA 2004). The last major glaciation, known as the Naptowne glaciation, began around 25,000 years ago and ended around 9,500 years ago. Geologic evidence indicates that the upper Cook Inlet area was glaciated during the Pleistocene Epoch, with the end of deglaciation occurring approximately 9,000 years ago (Reger et al. 1995:40). As a result, many of the geomorphic features in the region including the numerous erratics, bedrock outcrops, and granitic knobs were shaped or created by glaciers advancing and retreating across the land. However, the majority of the coastal region is relatively flat, and is comprised of numerous small ponds and lakes connected by streams and rivers that empty into the inlet.

The project area is located within the Elmendorf Moraine, a glacially deposited landform consisting of a series of long hummocky ridges oriented in an east to west direction. General topography of the area consists of hills and kettles, with a complexity of aggregated knobs and ridges that are interspersed with ponds and kettle lakes. Average elevations within the Elmendorf Moraine exceed 200 feet, reaching heights of nearly 340 feet within kettles and moraine margins. Knik Arm interrupts the moraine topography to the west of JBER, dropping as much as 204 feet to sea level with average bluff elevations in excess of 100 feet. Previous archaeological assessment of moraine features scattered across JBER and adjoining Fort Richardson (Shaw 2000; Steele 1978; Dille 1996) indicate that such glacial features represent locations possessing a relatively high probability for discovering both historic and prehistoric archaeological sites.

In general terms, the vegetation in the Anchorage Bowl represents a transitional zone between hemlock and Sitka-spruce coastal forests and the interior boreal forests. Flora in the project area is typified by northern boreal forest species including mixed stands of white spruce and birch. Most of the project area is within flat, poorly drained soils south of the Elmendorf Moraine. Low growing black spruce, willows, and alder are found in these areas. Typical understory vegetation includes various grasses, alder, devil's club, ferns, red elderberry, highbush cranberry, and wild rose. Tussock formation is also encountered in more poorly-drained areas. Sphagnum moss and various lichens are also common in denser stands of black spruce. Alluvial fans and floodplains are favored by Sitka spruce, black cottonwood, balsam poplar and paper birch (Gallant, et al. 1995).

Important animal species within the Cook Inlet ecoregion include black and brown bear, moose, caribou, beaver, hare, wolf, coyote, and fox. Spruce grouse are common in the forest, bald eagles reside along the waterways and large numbers of birds, including swans, geese, ducks and sand-hill cranes pass through on their seasonal migrations. Salmon and whitefish are found in the Cook Inlet (USDA 2004).

1.3 Project Locations and Specifications

The AKARNG is a tenant on Joint Base Elmendorf – Richardson (JBER). The Bryant Army Air Field is one of three subdivisions of the Alaska Army National Guard’s tenant lands, all of which (Camp Carroll, BAAF, and Camp Denali) are situated near the center of JBER. The 600 acres of BAAF land overlaps with the AKARNG’s earlier and larger expression of Camp Carroll, and the Army’s Fort Richardson.

The BAAF is located to the east of EAFB and consists of a north-south main runway (100 ft wide and 2,888 ft long), an east-west taxiway (with the east end used as a helicopter crosswind runway), numerous aprons and connecting taxiways. The runway is used by Army rotary-wing aircraft with some small fixed-wing aircraft operations. The runway was originally constructed in 1957. The total survey area is 600 acres (242 hectares) with much of this area currently under the airfield, taxiway, and building aprons. As discussed below, over two-thirds of the project area has been subject to previous disturbance.

The Project is more specifically located within Township 14 North, Range 2 West, Sections 28, 29, 32, and 33, Seward Meridian, Alaska. It is depicted on USGS 1:63,360 scale quadrangles Anchorage B7 and B8.

2.0 Cultural History

2.1 Regional Cultural Chronology

This section provides a synopsis of key historical themes and timeframes encompassing the project area. A more extensive historical context is in the associated architectural survey report. Numerous reports feature the prehistoric and protohistoric context of the Upper Cook inlet and EAFB. The reader is referred to Fall et al. (2003) for comprehensive coverage of EAFB’s (now JBER) ethnographic and protohistoric background. The historic era has also been chronicled in detail. In particular the homestead era and subsequent military development have been the sole focus of some research and publications (see Cook et al. 1999; Daugherty and Saleeby 1998; Hollinger 2001; Shaw 2000). The information in this section has been presented in previous reports focused on Camp Carroll and EAFB (Neely 2009; Stern 2010).

2.2 Cook Inlet Prehistory

Initial archaeological research in the region dates to the 1930s, when Frederica de Laguna conducted extensive surveys of both Cook Inlet and Prince William Sound (de Laguna 1975 [1934]). De Laguna’s survey identified numerous sites along the coast, and she conducted limited testing at eight locations throughout the region (Reger 1981). In the 1960s, archaeologists Don Dumond and Albert Spaulding conducted further research in the Upper Inlet area along Knik Arm, where they tested five archaeological sites (Dumond 1968). In 1975, Douglas Reger (1998) began investigating the Upper Cook Inlet region and eventually constructed a cultural chronology for the area based on excavations at the Beluga Point site.

Few archaeological sites of great time depth are present in the Cook Inlet region. The earliest site in the Upper Cook Inlet area, the Beluga Point Site, has been radiocarbon dated to 4,155±160 years before present [BP]². The site is located on the north shore of Turnagain Arm, approximately 20 miles southeast of Anchorage, and contains three separate cultural components. The first, and earliest, component contains core and blade technology artifacts, including microblades, blade-like flakes, and bifaces. Although radiocarbon dating was not possible, Reger attributes the Component 1 artifacts to the Denali Complex (8,000-10,000 BP), based on microblade technology. The second component, from which the 4,000 year date was derived, has been attributed to the Ocean Bay/Takli cultures located to the south on Kodiak Island and the Alaska Peninsula (Clark 1984; Reger 1981). Finally, the uppermost component at Beluga Point contains artifacts that resemble both the Kachemak and Koniag traditions, and is dated between 650-790 years BP (ca. 1160-1300 A.D.).

Archaeologists have long speculated that the Cook Inlet region was initially populated by Pacific Eskimo peoples, who were subsequently replaced by the Dena'ina as they migrated south into the area (de Laguna 1975 [1934]; Mason 1930); probably no earlier than 1650 A.D. (Dumond 1968). Kari (1995) suggests, on the basis of linguistic evidence, that the Upper Inlet Dena'ina were the first to migrate into the region, arriving from the western slope of the Alaskan Range approximately 1,500 years ago. Later, the speakers of the Lower Inlet dialect gradually migrated eastward, occupying the northern Alaska Peninsula and the Kenai Peninsula. This estimate of a greater period of habitation for the Upper Inlet Dena'ina is further supported by similarities between the Upper Inlet dialect and Ahtna, the Athabaskan language spoken in the Copper River region to the east. These similarities indicate a long period of interaction and association between the two groups (Kari 1995). Kari and Fall (Kari and Fall 2003) point out there is not yet enough archaeological evidence to support when, or from where, the Dena'ina arrived in Upper Cook Inlet; however, the Upper Inlet Dena'ina have their own ethnohistorical views on the length of their occupation of their territory.

2.3 Cook Inlet Ethnohistory

The Cook Inlet region is the traditional territory of the Dena'ina Athabascans (previously referred to as Tanaina). Kari (Kari 1975; Kari and Fall 2003; Kari 1995) identified four distinct dialects of the Dena'ina language that correspond to different geographical areas. A primary dialectical boundary exists that delineates the Upper Inlet Dena'ina from the Lower Inlet Dena'ina, occurring across the inlet in the general area of Turnagain Arm. The Lower Inlet Dena'ina dialect is then further subdivided into three separate dialects: Outer Inlet Dena'ina, spoken in the villages of Kenai, Seldovia and Kustatan; Inland Dena'ina, spoken in Lime Village and Nondalton; and Iliamna Dena'ina, spoken in Pedro Bay and Old Iliamna.

² Radiocarbon (¹⁴C) dates reported here are expressed as "radiocarbon years before present" or simply, "B.P.". Due to a variety of factors that cause fluctuations in amount of radiocarbon at any given time, radiocarbon dates -- especially those from the late Pleistocene epoch -- may differ from actual calendrical (cal AD/BC) equivalents by hundreds or even several thousand years. Calibrated BP (cal BP) ages and calendrical equivalents may be calculated using a calibration program, such as CALIB 5.0 program (Stuiver et al. 2005; see also Reimer et al. 2004).

Townsend (1981) distinguishes three separate societies of the Dena'ina, each of which roughly correspond to Kari's (1975) linguistic data, based on societal differences such as marriage patterns, subsistence strategies, the degree of interaction between groups, and other sociocultural elements. The Kenai Society is represented by the Outer Inlet dialect, and occupies the Kenai Peninsula and eastern Cook Inlet. The Susitna Society speaks the Upper Inlet Dialect and is present in the current Study Area of this report, and the Interior Society speaks both the Inland and Iliamna dialects and occupies western Cook Inlet (Townsend 1981). Before contact, all of the societies had semi-permanent winter villages comprised of anywhere from one to ten semi-subterranean, multi-family log houses. Customarily, these houses had a main communal living area with a central fireplace and sleeping platforms located along the walls, and also had smaller attached rooms that were used as sleeping compartments or sweat baths (Osgood 1937 [1966]; Townsend 1981).

During the summer, individual families would travel to fish camps where they would procure fish, game, and vegetable resources for use throughout the year. Before contact, structures at the fish camp consisted of above-ground log buildings covered with sod, meat and fish drying racks, cache pits, and smoke houses. After contact most families began using canvas wall tents as their primary living structure at fish camps. Travel to and from fish camps was usually accomplished using canoes, both on rivers and lakes, as well as along the seacoast. During the winter, the Dena'ina used snowshoes to travel on foot over an extensive network of trails throughout the Cook Inlet region. Dog traction apparently was not utilized until after Russian contact, although dogs were used as hunting and pack animals (Townsend 1981).

Historically and today, the Dena'ina are organized into matrilineal clans which cross-cut both societal and linguistic boundaries, meaning that members of a clan in a particular village have relatives in other villages based on clan membership. Dena'ina societies were also ranked, meaning that there was a division of power within the village based on accumulated wealth. "Rich men" functioned as the headman or chief of a village. The headman was responsible for the redistribution of subsistence resources, the care of orphans and the sick, and the retention of traditional values. However, residents of the village were not required to support the headman, and could leave and establish their own village if a headman became too domineering (Townsend 1981). Today, many villages in the Cook Inlet Region still have traditional chiefs, respected elders who preserve and transmit Dena'ina culture to the younger generations.

Historians have documented Dena'ina and Ahtna historic land use in the eastern Knik Arm and Upper Cook Inlet area that includes place names (see Table 1) (Kari and Fall 2003; Potter, et al. 2000). These reviews reveal no known traditional place names within the Bryant Army Air Field. Immediately to the south runs Ship Creek, listed as a traditional Dena'ina name, *Dgheyaytnu*, or in Athna, *Dghayitna*. The name means "where stickleback run". Shem Pete provides information on traditional use of this waterway describing how people collected this resource in spring (Kari and Fall 2003:332; see also Stephan 1996).

Also nearby to BAAF is a pond along upper Ship Creek (on the military’s Moose Run Golf Course) labeled as *Dishno Pond* in the 1962 USGS map. Although there is no recorded place name meaning, it may be an Athabascan-origin place name (Kari and Fall 2003:332). To the east, a place name is listed as *Dgheyay Tl’u* (meaning “*Stickleback Headwaters*”) and is discussed as a caribou place. Collectively these place names provide some indication of the movement and use of lands between the foothills and the waterways that run into eastern Knik Arm, areas encompassing the JBER lands.

Table 1. Dena’ina place names in the Study Area of eastern Knik Arm and Upper Cook Inlet.

Place Name	General Description and Location	Reference
<i>Dgheyaytnu</i>	Ship Creek, eastern Knik Arm. The name means “ <i>Where Stickleback Rrun.</i> ” Written as <i>Dghayitna</i> in Athna.	Kari and Fall 2003: 332
<i>Dishno Pond</i>	Upper Ship Creek.	Kari and Fall 2003: 332
<i>Dgheyay Tl’u</i>	“ <i>Stickleback Headwaters</i> ” and possible caribou hunting place	Kari and Fall 2003: 332
<i>Qatuk’e’usht</i>	The Dena’ina name for the Anchorage area meaning “ <i>Something Drifts Up To It</i> ”	Kari and Fall 2003: 332

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Source: Kari and Fall 2003

2.4 Cook Inlet History

The first recorded Euro-American contact with the Dena’ina of Cook Inlet occurred in 1778, the year that James Cook sailed into the area in search of a Northwest Passage (Fall 1981; Kari and Fall 1987; Townsend 1981). However, Cook reported that the inhabitants already possessed items of European manufacture and assumed that they were indirectly trading with the Russians, who had established trading posts on Kodiak Island and the Alaska Peninsula. Soon after, the Russians extended their direct influence into Cook Inlet, establishing forts at English Bay (the Aleksandrovsk fort), near present-day Kenai (Nikolaevski Fort), and at Iliamna and Tyonek (Fall 1981). In 1794 Captain George Vancouver explored the Cook Inlet region reporting that many of the natives who approached his ship were familiar with the Russian language and appeared to be on friendly terms with the Russian traders (Vancouver 1798 [1984]). However, this was apparently not always the case as both the Tyonek and Iliamna outposts were destroyed by the Dena’ina in 1797.

In 1799, the Tsar of Russia granted the Russian American Company (RAC) exclusive possession of the established trading posts in Alaska. From this time forward, the Dena’ina mainly served as middlemen between the Russians and Interior Alaska groups, such as the Ahtna (Fall 1981). The Dena’ina population was estimated at 3,000 for the year 1805 (Osgood 1937 [1966]), a number that was greatly reduced by a smallpox epidemic between 1836 and 1840 (Townsend 1981). Intensive missionary efforts by the Russian Orthodox Church began shortly after the epidemic, with the Upper Cook Inlet region not being converted until the 1870s due to its great distance from established Russian settlements. In 1891, the St. Nicholas Russian Orthodox Church was built in Tyonek on the western shore of Upper Cook Inlet.

The short-lived and late Russian-American period settlement of Ninilchik [1858-1883 AD], served as a retirement community for approximately 40 RAC employees and their families (Arndt 1996).

Russia sold Alaska to the United States in 1867, and the Alaska Commercial Company took over the RAC trading posts (Fall 1867). Canneries became prevalent throughout the region during the 1880s (Townsend 1981) which, coupled with the high prices of fur during the 1890s, resulted in a depletion of local resources and an increased reliance on a cash economy by the Dena'ina. Gold prospecting began in the Susitna River drainage and the upper inlet in the late nineteenth century, resulting in the establishment of the Willow Creek and Turnagain Arm mining districts.

2.5 Homestead Era, 1914-1930s

Much of the Anchorage Bowl was available for homestead entry throughout the late nineteenth and first half of the twentieth centuries. Federal land withdrawals for the Alaska Railroad, the Anchorage townsite and military reserves gradually decreased the amount of land available to homesteaders. Construction of Fort Richardson in World War II led to the demise of homesteads on the lands that became the Fort and later, Elmendorf Air Force Base. Homesteads were condemned by the federal government, and repurchased at fair market values. Hollinger (2001) documented the locations, histories, and land acquisitions and disposals of homesteads on Fort Richardson, Alaska. Daugherty and Saleeby (1998) documented the history of homestead lands on Elmendorf Air Force Base. Carberry and Lane (1986) discuss homesteading throughout the Anchorage Bowl. NPS published a study of homesteading on EAFB in 1998 (Daugherty and Saleeby 1998). The reader is referred to those publications for a more detailed account of local homesteads. Key trends and dates are noted below:

- Early homesteading in the region began as early as 1903 and was centered on the small supply center of Knik, located across Cook Inlet and north of EAFB. The discovery of gold in the Willow area followed by coal in the early twentieth century attracted Euro-American homesteaders to the region. By 1914, as many as 130 homestead patents had been issued in the Matanuska Valley in the vicinity of Knik, Wasilla, and Palmer.
- The choice of Anchorage in 1915 as the supply center and main construction camp for the Alaska Railroad prompted a population boom along Ship Creek. The rectangular survey completed along the railbelt facilitated homesteading in the region by laying out the township, range, and sections used to file for homestead patents. The growing population created a market for agricultural products grown on homesteads.
- Eleven individuals filed for homesteads in the “Early Years” from 1914-1919, on what eventually become EAFB land. During the 1920s, another 11 individuals or families filed for homesteads on what would become EAFB. Maps demonstrate that most of the homesteads were west of the current project area, either along the coast or in the hill country of the Elmendorf Moraine. During the 1930s, 18 more homestead patents were awarded - again oriented toward the coast and immediate hills east of the coast. No homestead applications were filed after 1939 when the land was withdrawn from the public domain to serve as a military reservation. The

concentration of patents was north and west of the EAFB runway. No homesteads were recorded in the current project area.

2.6 Military Base Development, 1930s to Cold War

BAAF is part of Joint Base Elmendorf-Richardson (JBER) northeast of Anchorage, Alaska.

JBER was created by combining Fort Richardson, constructed in 1939, and Elmendorf Air Force Base, originally called Elmendorf Field, constructed in 1940. The two facilities grew in size and population over the course of World War II and thereafter. The 1950s saw a major period of military development once the Air Force was created as a separate military branch in 1947 and as air defense became increasingly important to homeland security during the Cold War.

2.6.1 Strategic Importance, 1930s

Alaska's strategic geopolitical importance as a defense post was recognized even before the United States entered WW II. Alaska's Congressional delegate, Anthony J. Dimond, requested funds for the construction of military installations as early as 1934 (Nielson 1988). Dimond understood the shortest distance from Japan to the United States was along the Aleutian Archipelago. As the conflict grew in Europe and the Pacific during the mid-1930s, the dearth of military personnel and bases in Alaska, the closest U.S. soil subject to enemy invasion, was obvious. The response from Congress was not immediate, but by 1939 with the threat of Japanese attack a real possibility, a full-scale effort to allocate lands and fund defensive military reservations in Alaska was underway. As a result, 43,490 acres of land for Elmendorf Field and Fort Richardson was withdrawn from the public domain by Presidential Order on April 22, 1939 (Cook et al. 1999). The land north of Ship Creek was an ideal location; it provided access to both the Cook Inlet Harbor and the Alaska Railroad, had level topography, and the climate was comparatively moderate (Cook et al. 1999).

2.6.2 Fort Richardson and Elmendorf Air Field Construction, 1940-1944

In May of 1940, the War Department budget provided over \$12,000,000 for construction of an airfield in Anchorage (Fagen 1944 in Cool et al. 1999). Under the direction of Major Colonel E.M. George, Construction Quartermaster, groundbreaking began in early June (Shaw 2000). Laborers concentrated on land clearing, grading, and the construction of temporary headquarters and supply storage buildings. By late June, nearly 800 soldiers, including an engineering company and various infantry and artillery units, were on site for the construction effort. By the end of August 1, 250 workers were employed and the number grew to over 2,000 by the end of October (Cloe 1986 in Cook et al. 1999). The installation was technically an Army Post, named Fort Richardson, with an associated airfield. The Elmendorf Field name was officially recognized in November 1940 (US Army 1940 in Shaw 2000) in honor of Captain Hugh M. Elmendorf who was killed in an air accident in Ohio in 1933. Construction actions were designated as either temporary or permanent and the overall construction plan was divided into three priorities (Fagen 1944 in both Cook et al. 1999 and Shaw 2000b). "Temporary" referred to buildings constructed of wood or other material meant to be used for 15 years and "permanent" described

buildings and structures constructed of steel or concrete, stone, or brick with a 100 year or more expectancy. The overall plan was described:

To provide for 2 concrete runways (N/S 5,000' long, E/W 7,500' long) and aprons, one temporary and 3 permanent hangars, Air Corps gasoline facilities consisting of 600,000 gallon tactical storage and fueling system, a 1,500,000 gallon operations reserve storage system, concrete igloos for both Air Corps and ground troop bomb and ammunition storage, and other essential technical facilities. Also included in construction were administration units and housing for a garrison of approximately 7,000 men and a 294 bed hospital. The major utilities include a water-borne sewage system, outfall sewer and mains, a 7,000,000 gallon per day gravity water system with reservoir and chlorinator, a 6,000 Kw central heating and power plant and bombproof radio transmitter building. (Bush 1944 in Cook et al. 1999)

Construction laborers tallied over 2,000 in 1941 and peaked in August of that year at 3,415 (Bush 1944 in Cook et al. 1999). Construction efforts continued to expand as the war developed and by mid-1944, allocated funds topped \$50,000,000 (Shaw 2000). The original plan expanded to accommodate additional officers and soldiers, provide fuel reserves, storage facilities, and increased hangar, runway, and aviation support structures. The buildings and structures were clustered in patterns based on functionally related purposes, such as the flightline, fuel and water systems, residential units, and recreational facilities (Cook et al, 1999). The historic context report prepared by the National Park Service (NPS) (Cook et al. 1999) provides specific construction development descriptions for each of these categories.

2.6.3 Ground Defense, 1944 to the Cold War

When the United States did enter WWII, the threat for ground invasion on Alaska soil heightened. While primarily an air base populated by members of the Army Air Corps, there was a perceived need to train and prepare for a possible ground attack (Shaw 2000). Accounts from annual reports in 1944 illustrate the need for ground defense; surrounding terrain was studied to determine likely approach angles of enemy troops, pillboxes were erected, and troops excavated slit trenches and foxholes. The 1944 report noted that: "After awhile, when the troops got into the spirit of the thing, foxholes became so numerous that it was hazardous to walk in the unfamiliar areas during the time of enforced blackout. One could follow the lighted cigarette of a soldier ahead until it disappeared, with its owner, into a foxhole or slit trench" (1944 Report in Shaw 2000). Building a ground defense network and providing infantry training to the Army Air Corps troops became mutually beneficial objectives.

Base commanders soon recognized that a ground attack at Elmendorf Field was unlikely, and efforts to continue extending a ground defense network waned. Elmendorf was a rear echelon support facility, not a frontline staging base (Shaw 2000). By late 1944, contemporary reports stated that defense was playing a lesser role and that training and digging foxholes was busywork until more planes arrived and kept the Air Corps troops occupied with aircraft maintenance (Shaw 2000). It is important to note that the historic context of buildings and structures at EAFB does not mention ground-defense facilities. In 1947, the U.S. Air Force was created as a separate entity from the Army, at which time the boundary between Fort Richardson and EAFB was created. Nearly \$500,000,000 was spent constructing a

separate Army post east of the Air Force base, and as more Army troops arrived, the ground defense function of EAFB shifted to Fort Richardson (Shaw 2000). Shaw (2000) summarizes some of the key strategies associated with EAFB ground defenses, from a review of an annual report dated to 1951. In general, the ground defenses involve perimeter-type defense, foxholes, and activities associated with clearing of fields of fire, signal communication and preparing obstacles and camouflage. This is discussed in more detail below, in the review of some features identified during the archaeological survey that appear to represent this broader ground defense strategy.

2.6.4 Bryant Army Airfield (BAAF)

In 1957, BAAF was established, consisting of a hangar and landing strip that were used primarily for aircraft providing logistical support to remote areas. Although originally conceived as a fixed-wing airfield, in later years, the facility was renamed Bryant Army Heliport, reflecting the helicopter traffic it came to predominantly service. Understanding the evolution of the base's mission is essential to contextualizing the significance of BAAF.

The building phases of BAAF began in 1958 coinciding with the growth of Army aviation during the Cold War, especially in the use of helicopters (Home Engineering and Environmental Services 1996:23; Blythe 1998). Thus, during the Cold War period, although able to support fixed-winged aircraft, Bryant Army Airfield's primary function was the heliport. Blythe (1998:31-32) provides a summary of the main construction phases for BAAF. Blythe (1998:32) states that airfield's properties are ineligible for the National Register as Cold War resources (under Criteria Consideration G) as they do not meet the standards set within the Army Cold War Historic Context. As discussed in the survey results section below, several foundations were located within BAAF, though most areas associated with Quonset Huts and other buildings are associated with the earlier manifestation of Camp Carroll. For a description of the properties refer to the BAAF architectural history report prepared by Sneddon and Miller (2012).

2.6.5 Camp Carroll

Camp Carroll is associated with the Alaska Army National Guard that utilized many of the Army's facilities for training and administration. These facilities consisted predominately of Quonset huts and World War II-era semi-permanent buildings. The cantonment became officially designated as the National Guard Camp Carroll in the 1960s (Blythe 1998:32). Blythe (1998:33-35) provided a summary of the main construction phases for BAAF, as cited here:

Camp Carroll contains the greatest concentration of World War II-era construction on Fort Richardson. Eighteen of the 22 properties dating to World War II are Quonset huts. The Quonsets have served a wide variety of purposes, including use as administration buildings, enlisted barracks, officers' quarters, storage facilities, and even a unit chapel. Four properties constructed during World War II are semi-permanent wood-frame buildings, including the General's Quarters (Building #57427) and two administration buildings (Buildings #57024 and #57040).

In 1972 a facilities modernization program began at Camp Carroll to provide permanent, concrete buildings. Of the 28 properties built between 1972 and 1974, all but one, an enlisted barracks (Building #60732), are of concrete-block construction. Notable

buildings include the Camp Headquarters (Building #60600), two battalion headquarters (Buildings #60700 and #60802), and a medical clinic (Building #60602).

Table 2 presents a list of the buildings constructed at BAAF during the Cold War era, the date of construction, and the building function.

Table 2. Cold War construction at Bryant Army Airfield, Fort Richardson.

Building Number	Year of Construction	Description	Building Number	Year of Construction	Description
60600	1974	Camp Headquarters	60722	1973	Enlisted Barracks
60602	1974	Medical Clinic	60724	1972	Enlisted Barracks
60620	1974	Enlisted Mess	60726	1972	Enlisted Barracks
60700	1974	Battalion Headquarters	60728	1973	Enlisted Barracks
60702	1972	Storage Building	60730	1973	Enlisted Barracks
60704	1973	Company Headquarters	60732	1972	Enlisted Barracks
60706	1973	Company Headquarters	60734	1972	Enlisted Barracks
60708	1973	Company Headquarters	60736	1972	Enlisted Barracks
60710	1973	Company Headquarters	60738	1973	Enlisted Barracks
60712	1970	Latrine	60740	1973	Enlisted Barracks
60714	1972	Latrine	60802	1974	Battalion Headquarters
60716	1973	Enlisted Barracks	60806	1974	Company Headquarters
60718	1973	Enlisted Barracks	60808	1974	Company Headquarters
60720	1973	Enlisted Barracks	60820	1974	Enlisted Barracks

Source: Blythe 1998:35.

3.0 Previous Research

The broader Cook Inlet Region has been the subject of numerous cultural resource investigations; however, only a handful of studies have been conducted on JBER (former Fort Richardson and EAFB) land. In the regional context, early research and archaeological work that provides the framework of prehistoric archeology in the Cook Inlet area dates to the early 1930s (de Laguna 1975). Later studies include Dumond and Mace’s (1968) research, where they suggested that the first occupation of the region by Dena’ina was sometime between A.D. 1650 and A.D. 1780. The Beluga Point Site south of Anchorage was excavated in the early 1980s (Reger 1981) and has continued to inform interpretation of mid- to late-Holocene prehistory of the region. North of JBER, significant investigations include Reger (1980; 1983), Bacon (1983); and Dixon (1985), all of which contributed to the understanding of the Susitna River area prehistory.

The archaeology of Fort Richardson, east and adjacent to EAFB, was overviewed by the U.S. Army Corps of Engineers (Steele 1980). Ethnographic studies, particularly those completed by Jim Kari and Priscilla Kari (J. Kari 1978 and 1988; Kari and Kari 1982; P. Kari 1983 and 1987; J. Kari and Fall 2003), have provided valuable information on traditional Dena'ina land use and place names in the region.

3.1 EAFB-Specific Investigations

The first reports specific to EAFB archaeological potential and resources date to 1996 when the geo-archaeological potential of the base was examined by Dilley (1996). This report was closely followed by the Office of History and Archaeology's cultural resource survey of high-potential areas on EAFB (McMahan and Holmes 1996). Scant evidence of prehistoric and early historic activity was discovered during this survey. The report estimated that nearly 35-40% of the entire land area within EAFB had been disturbed and that sites were conceivably destroyed during ongoing development of the base. It further postulated that shore erosion and eolian siltation may have either destroyed or buried coastal-oriented sites. Nine historic sites, consisting mainly of cabin ruins and likely dating to the homestead-era, were discovered during the survey. Three of the sites (ANC-443, ANC-839, and ANC-840) were recommended as NRHP-eligible and the remaining six were recommended as not eligible (ANC-837, ANC-838, ANC-841, ANC-842, ANC-843, and ANC-844). This report is informative to the current project because 1) scant evidence of prehistoric use or occupation was identified, suggesting the prehistoric archaeological potential of the base to be relatively low, and 2) the study stratified EAFB into areas of high, medium, and low archaeological potential through use of ethnographic data and environmental parameters - none of the high potential areas are in the vicinity of the current project area.

Two years later, the National Park Service (NPS) completed a Homestead Study of EAFB (Daugherty and Saleeby 1998). The report provides maps that delineate homestead parcels on EAFB between 1914 and 1929; no homesteads were identified in the current project area. The following year, NPS published a historic context for WWII buildings and structures on the base (Cook et al. 1999). This NPS historic context provides the conceptual framework used in this report to evaluate site significance of WWII and Cold War features identified during the survey. The context addresses base construction by property type and/or general location and defines logical groupings of functionally related structures which form three NRHP-eligible historic districts (Flightline, Alaska Air Depot, and Generals' Quad). The study first identifies, through application of the NRHP Criteria for Evaluation, which buildings and structures are eligible either individually or as contributing properties to each of the historic districts. Secondly, the buildings established groupings of buildings based on function (fuel and water pump buildings, ammunition storage and defense, Post Engineer yard buildings, recreational buildings and chapel, and Cold War-era buildings).

As a follow up to early ethnographic studies, the "Dena'ina Team" published the results of its investigations and research on traditional land use at EAFB (Fall et al. 2003). No sites were identified in the APE. More recently, the realignment corridor of the Alaska Railroad across EAFB and Fort Richardson was the subject of an intensive paleontological and cultural resource investigation (Shaw 2000). EAFB gravel sources used for the Port of Anchorage (POA) intermodal expansion project were the subject of a cultural resource reconnaissance (Braund 2006).

Table 3. Summary of previous archaeological research and investigations in the vicinity of BAAF.

Date (1)	Project (2)	Results (3)	Sources (4)
1996	Office of History and Archaeology cultural resource survey of high-potential areas on EAFB	Nine historic sites, consisting mainly of cabin ruins and likely dating to the homestead-era, were discovered during the survey. Scant evidence of prehistoric and early historic activity was discovered during this survey. The report estimated that nearly 35-40% of the entire land area within EAFB had been disturbed and that sites were conceivably destroyed during ongoing development of the base. It further postulated that shore erosion and eolian siltation may have either destroyed or buried coastal-oriented sites.	McMahan and Holmes 1996
1998	National Park Service (NPS) Homestead Study of EAFB	The report provides maps that delineate homestead parcels on EAFB between 1914 and 1929.	Daugherty and Saleeby 1998
1998	Cold War Resources Inventory, United States Army Alaska: Fort Richardson, Fort Wainwright, Fort Greely.	Inventory and evaluation of properties associated with U.S. Army Alaska’s historic role in the defense of Alaska and the United States during the Cold War. Twenty-four properties on Fort Richardson and Fort Wainwright were identified as having potential Cold War historic significance and evaluated for National Register eligibility. None of the properties were determined to meet the vigorous standards for exceptional significance required under Criteria Consideration G. However, Hangar 6 (Building #6085) on Fort Wainwright was determined eligible for the National Register under standard criteria for its association with the Cold War mission of the 46 th /72 nd Reconnaissance Squadron during 1946-1948. Many inventoried properties would likely be eligible for the National Register under standard criteria and should be re-evaluated once they reach the 50-year plateau. These properties include the Nike Missile Maintenance Facility (Buildings #59000-1, #59003-8), Bryant Army Airfield, and Post Headquarters (Building #1) on Fort Richardson and the Special Weapons Magazines (Buildings #2201-2207) on Fort Wainwright.	Blythe 1998
1999	NPS historic context for WW II buildings and structures on EAFB	This NPS historic context provides the conceptual framework used in this report to evaluate site significance of WW II and Cold War features identified during the survey.	Cook et al. 1999
2000	Paleontological and cultural resource investigation for the port intermodal expansion project.	Shaw (2000) carried out an assessment for the ARR realignment through EAFB. Useful for the purposes of this report, it provides a summary of some of the key strategies associated with EAFB ground defenses, and develops a typology. An associated cultural resource report of the EAFB gravel sources used for the port intermodal expansion project took place later in 2006.	Shaw 2000; Braund 2006

Date (1)	Project (2)	Results (3)	Sources (4)
2003	The “Dena’ina Team” investigations into traditional land use at EAFB	No sites were identified in the BAAF APE.	Fall et al. 2003
2008	Phase I survey of proposed gravel pits on EAFB	NLUR completed a Phase I Identification Level survey of eight discontinuous parcels on EAFB in advance of a proposed expansion of existing gravel pits. NLUR recommended a finding of “No Historic Properties Affected” for the EAFB Gravel Pit Expansion Project.	Neely 2008
2009	Cultural resources assessment for nine buildings on Camp Carroll scheduled for demolition.	The AKARNG planned to demolish nine buildings located at Camp Carroll, Alaska. Clarus contracted with NLUR to provide cultural resources services in connection with the planned demolition of these buildings. NLUR recommended a finding of “No Historic Properties Affected” for the proposed demolition project.	Stern 2009
2010	NRHP Determination of BAAF Air Traffic Control Tower	The AKARNG proposed to rehabilitate the Bryant Air Traffic Control Tower constructed in 1961 but vacant since 1996. NLUR completed the documentation and evaluation of the building and recommended the building as not eligible. The SHPO concurred and delivered a finding of “No Historic Properties Affected” for this undertaking.	Gomez 2010

- (1) Exact dates are listed for projects when known.
- (2) Project Names are summarized from report titles, or authors’ descriptions.
- (3) Results are summarized from available reports.
- (4) The primary source of information only is listed. Subsequent reports may provide additional information. These are listed in the References Cited section.

Sources: Compiled by NHG Alaska, LLC (2012) from cited reports and publications.

3.2 Previously Known Cultural Resources

There are currently five sites on the AHRS register within the project area at BAAF. The site number, site name, brief description, and eligibility status are summarized below for each site, as taken from the AHRS site card information (Table 4 and Figure 3).

Table 4. Summary of previously known cultural resources in the project area (from OHA-IBS).

AHRS #	Site Name	Site Description/Location (References)	NRHP Status
ANC-1091	Building 47430, Hangar 1	Building 47430 is a 21,370 sf building on a concrete foundation with a steel/metal roof. Built in 1958 to service rotary wing aircraft it serves the heliport at Bryant Army Airfield.	Determined Not Eligible under Criteria Consideration G for Cold War significance, 1998
ANC-1092	Building 47431, Hangar 2	Building 47431 is a 36,091 sf hangar at the heliport at Bryant Army Airfield. It has a concrete foundation and metal walls and roof. It has sliding hangar doors opening to the E and W. The main hangar area has a gable roof while other areas have flat roofs. The hangar roof was replaced in 1986 [DOE]	Determined Not Eligible under Criteria Consideration G for Cold War significance, 1998
ANC-1093	Building 47432,	Building 47432 is a 4,718 sf building with reinforced	Determined Not Eligible

AHRS #	Site Name	Site Description/Location (References)	NRHP Status
	Flight Operations Center	concrete and concrete block walls on a concrete foundation.	under Criteria Consideration G for Cold War significance, 1998
ANC-1094	Building 47433, Hangar 3	Building 47433 is a steel framed hangar measuring 7,036 sf with metal/steel walls and a metal/steel gable roof. It sits on a concrete foundation and has sliding hangar doors on the E and W elevations. Built in 1963 as a helicopter hangar It continues to serve that purpose.	Determined Not Eligible under Criteria Consideration G for Cold War significance, 1998
ANC-1095	Building 48000, Flight Control Tower	Building 48000 is a 1,139 sf building with a flat metal roof and concrete foundation. This is a steel framed tower supporting a control center accessed by an enclosed stairway. Built in 1961 for the control of air traffic the structure continues in that use.	Determined Not Eligible: (1) under Criteria Consideration G for Cold War significance, 1998, and (2) Not Eligible under A, B, C, or D in 2010.

Source: Office of History and Archaeology-Integrated Business System (OHA-IBS), 2012.

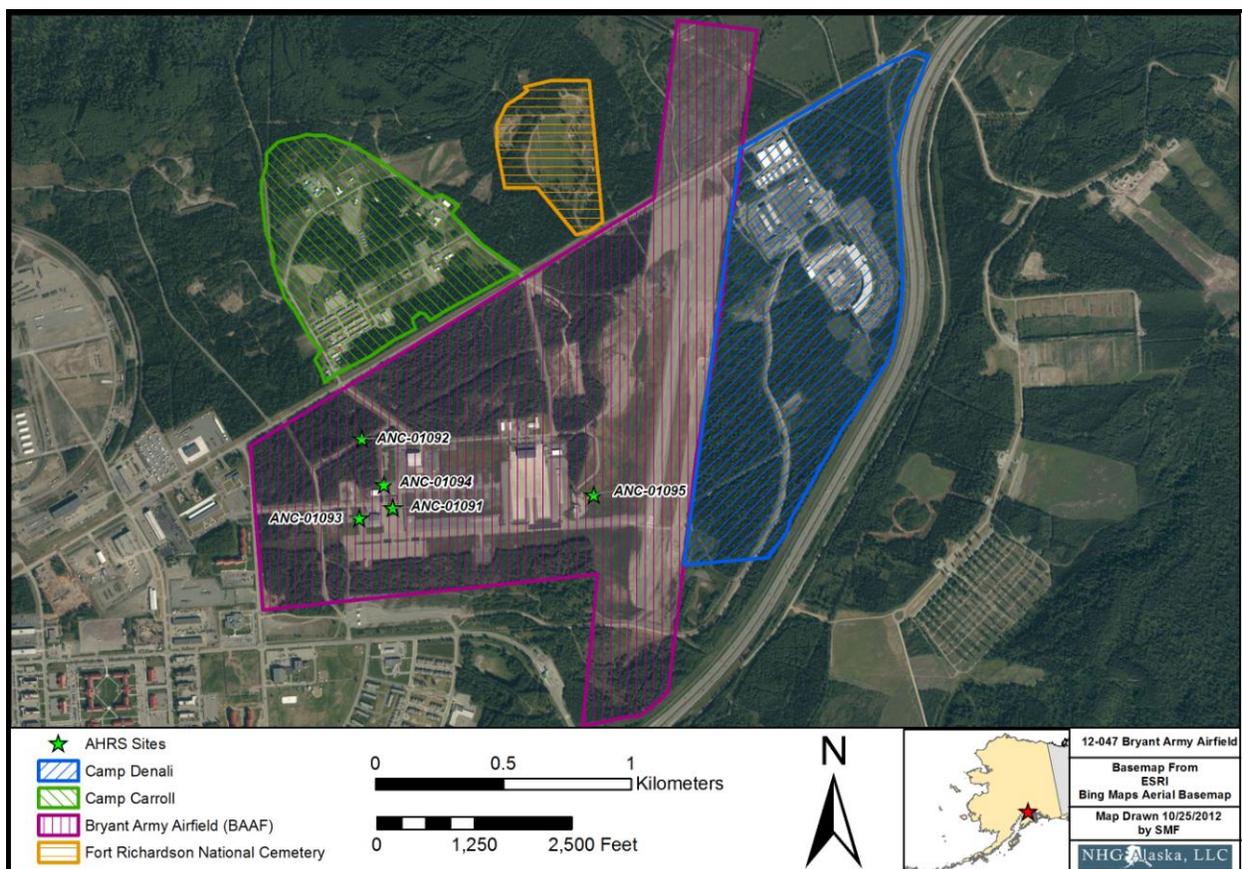


Figure 3. Map showing the location of AHRIS sites in relation to the BAAF survey area.

4.0 Methodology

NHG used available literature and aerial photography to identify locations where historic archaeological materials are located at BAAF. A sequence of historical air photographs of the BAAF lands were compared to identify areas where Army and National Guard built-landscapes, such as trails, living quarters, activity areas, etc., once existed. Armed with results from the literature and photography review, NHG conducted an archaeological surface survey over 100% of the BAAF lands and inspected all built-landscape areas identified in historical air photographs.

4.1 Background Research and Consultations

Research methods included a background study which examined aerial photographs, maps, and literature relating to the history and archaeology of the region and the project area. Published and unpublished sources in the extensive files and library of NHG formed the primary source of information. These included previous technical archaeological survey reports as well as general references on the prehistory and history of the Upper Cook Inlet region. Files and library holdings at the DMVA, Facilities Management Office were examined. The Alaska Heritage Resource Survey (AHRS) files, maintained at the Alaska Department of Natural Resources, Office of History and Archaeology (OHA), were consulted. The AHRS files, a database of recorded archaeological and historic site locations within Alaska, provide information about reported sites in the project vicinity. Another essential component to the research on BAAF was informal and informational interviews with knowledgeable personnel on or off base. Base personnel have firsthand knowledge about themes and people of importance to BAAF and know of further avenues for research.

NHG undertook this approach to identify areas of high potential for field examination and to develop a 'guiding' document as per the bulleted points listed above. The review identified the potential to encounter cultural resources and anticipate the cultural resource site types that may be present in the project area. Much of the background literature material has been gathered during previous investigations for DMVA at Camp Carroll and Bryant AAF.

A project "kick-off" meeting was held on June 11, 2012 at the DMVA offices within Camp Carroll, at which time expectations for the field work, safety and communication protocols, and access to reports and GIS data was discussed. This coincided with an initial tour of the facility and a preliminary review of on-site document repositories. DMVA transferred extant documents, correspondence, air photos, maps, and other relevant materials to the project team at that time.

4.2 Aerial Imagery

Aerial photographs provide graphic information about the origins, growth, and changes in the landscape at BAAF over time. The NHG staff used aerial photographs taken over various time periods to graphically depict changes in land and resource use, building construction and abandonment, and other cultural and natural phenomena. This effort is designed to meet the DMVA goal of relating features observable in the historic air photos to features identified on the ground. Part of the archaeology field survey effort was to ground-truth these correlations between air-photo features and actual ground features. NHG worked with DMVA to use the available photographs to clearly illustrate the research findings and recommendations.

NHG staff examined the aerial photographs acquired from DMVA listed in Table 5.

Table 5. Historic aerial imagery used in this analysis.

Aerial Photographs of BAAF	
1947	Very blurry image
1948	Good quality image
1950	Good quality image
1957	Poor image (over-exposed)
1964	Only the extreme northeastern section of the project area is covered
1972	Good quality image
1995	Good quality image

NHG Alaska, LLC. 2012.

A series of recent maps dating from 2002 to present-day were also supplied by DMVA. Despite the varying quality of the aerial photographs, they provided some sense of the history of construction activity. A number of key features were identified from ground-truthing. In addition, the aerial imagery provided a basis from which to establish some chronology for identified buildings/foundations.

4.3 Archaeological Field Survey

The pre-field work planning involved examination of USGS topographic maps, historical photos and aerial imagery to document the nature of the terrain and vegetation types, and how it has changed over time. NHG used the BAAF historical photographs to identify high potential areas for field examination. The purpose of this effort was to meet the goal of relating features observable in the historic air photos to features identified on the ground. Part of the archaeology field survey effort was to ground-truth these correlations between air-photo features and actual ground features, and to identify areas of disturbance.

The archaeological field survey took place between June 18 and June 20, 2012. The survey was conducted as a Level I or "Identification-Description" survey as defined by the Alaska Office of History and Archaeology (OHA) (Historic Preservation Series No. 11, revised 2003). These surveys are designed to locate sites on BAAF and gather sufficient information to make preliminary recommendations for future activities.

Archaeological fieldwork involved visual survey while walking in parallel transects with two field crewmembers spaced 10 m to 15 m apart. Survey documentation included standard archaeological field data observations, photographic coverage and GPS points at each feature. The field crew divided the area into separate sectors (A-E) based on defined parcels of land. At the discretion of the field archaeologist, and as time and surface vegetation allows, transects were walked either north to south or east to west, and at closer intervals. The analysis of the Bryant Army Airfield air photos concluded that approximately half of project area's 600 acres are disturbed by existing buildings, runways, taxiways, and aprons. It is estimated that the remaining acres were "transected" by the field crew. Most of these areas were in a previously disturbed state.

Standard fieldwork methods resulted in obtaining written field notes and observations of the survey area. The field crewmembers collected information to describe the surface geology, soils, and vegetation emphasizing the extent of surface disturbance. They collected information to describe the man-modified landscape (for example, windrows of trees and earth piled from bulldozing and leveling the ground). They described sites encountered, with basic site sketch maps (where required), an inventory and description of material remains, and photographs.

The field crew conducted GPS mapping of the surveyed area and necessary photographs to document both the project survey area and cultural resource sites, with special attention to the contract requirement to document observed features on the ground with their correlates on the historic air photos. As an evaluation level survey, artifacts were not collected. The written descriptions and photographs provide sufficient documentation of artifacts and cultural materials at this level of effort.

4.4 Survey Area Description

The survey area consists of the current Bryant Army Airfield boundary that incorporates a segment of land that was once part of the oval-shaped Camp Carroll that is still outlined by the existing road system. Two areas to the north and south of the existing runway were also included as part of the archaeological survey area. To the north the survey area is bound by Davis Road and to the east by Camp Denali (Figure 2). Segments of the survey area include a parcel of land to the north and south of the existing runway. The vegetation consists of mixed boreal forest species dominated by an overstory of black and white spruce with a lesser quantity of birch. Thick alder stands are located in damp or disturbed portions of the survey area, reducing ground surface visibility, and the understory includes various grasses, wild rose, horsetail, highbush cranberry, sphagnum moss, and occasional broad leaf shrubs. The topography is consistently flat with ground surface visibility generally quite low (20-35%) at the time of the survey. Numerous disturbances are evident in the form of secondary regrowth, cleared areas, buildings, old foundations, excavated areas, roads, and associated debris.

5.0 Results

The background research deemed the potential for prehistoric sites at BAAF to be low, due to its distance from Cook Inlet/Turnagain Arm, absence of nearby anadromous streams, mixed spruce birch forest habitat with low animal biomass, and previous disturbances. The archaeological survey resulted in no findings of archaeological resources or evidence, and an assessment that there is low potential for archaeological resources within the boundaries of BAAF. The potential for historical archaeology sites and military features was considered to be high, given the history of land use of the BAAF lands.

The archaeological survey resulted in a total of 115 areas of disturbance and/or features that fall within one of eight categories, as shown in Table 6, Figure 4 (all results) and Figure 6 (only foundations, structures and excavated areas/foxholes). The majority of the identified features/disturbances were associated with the old segment of Camp Carroll that is now incorporated as part of the BAAF area.

Table 6. Total number of observed areas of disturbance and/or features identified during the archaeological survey.

Category	Number
CLEARED AREA	9
DEPRESSION	16
EXCAVATED AREA	27
FOUNDATION	9
ISOLATED FEATURE	12
PUSH PILE	11
ROAD/TRACK	25
STRUCTURE	6
TOTAL	115

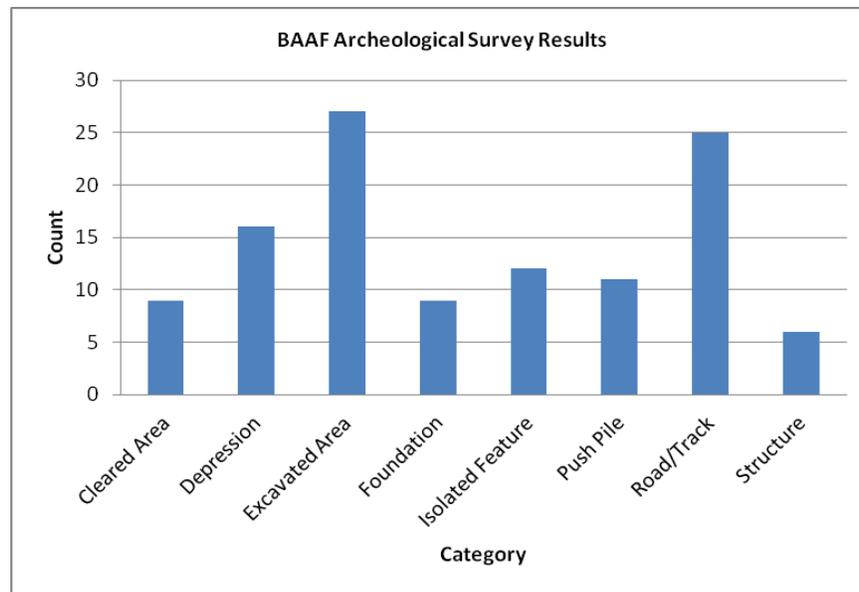


Figure 4. Graph showing number of features and/or disturbance categories.

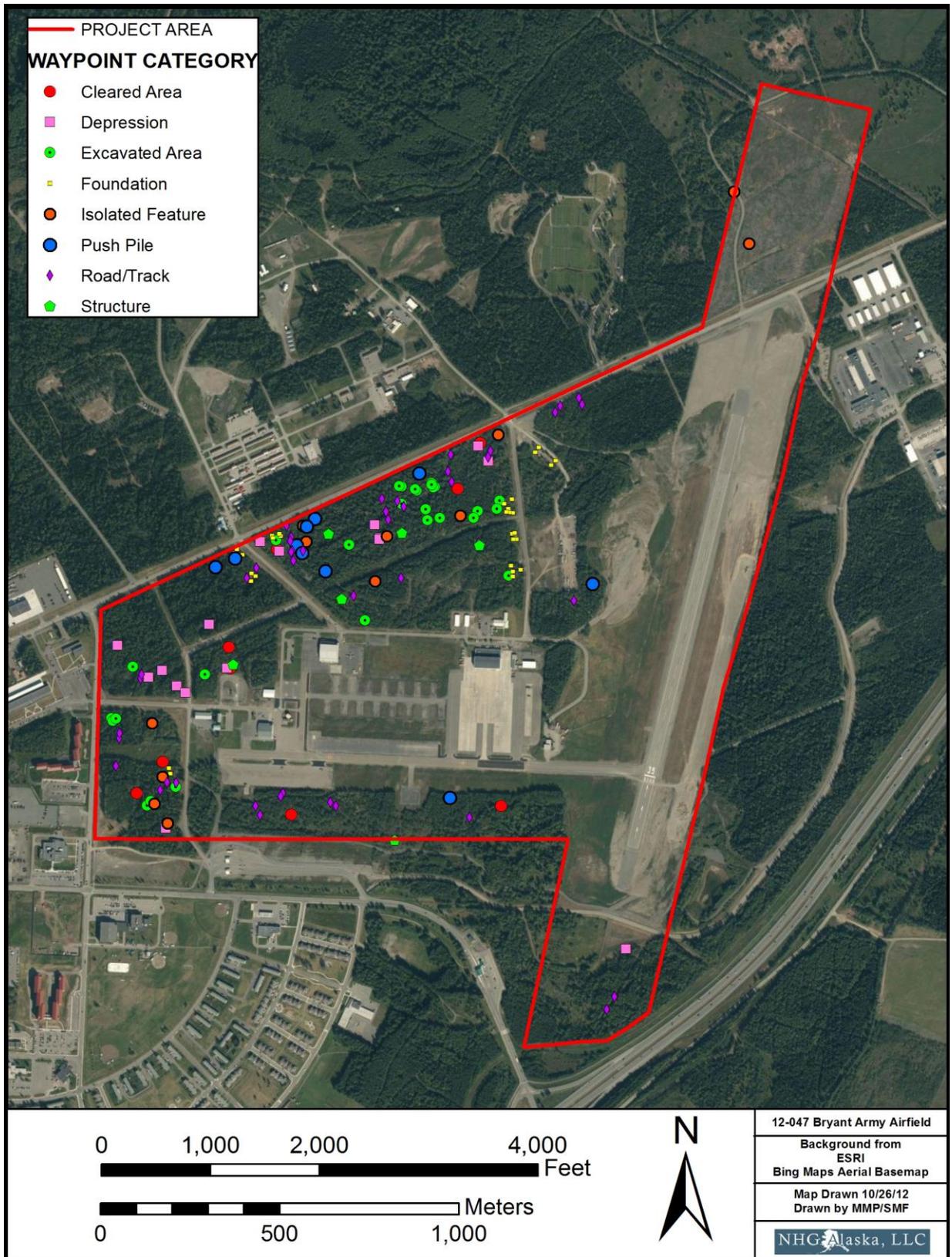


Figure 5. Map showing the overall results of features and disturbed areas identified during the archaeological survey.

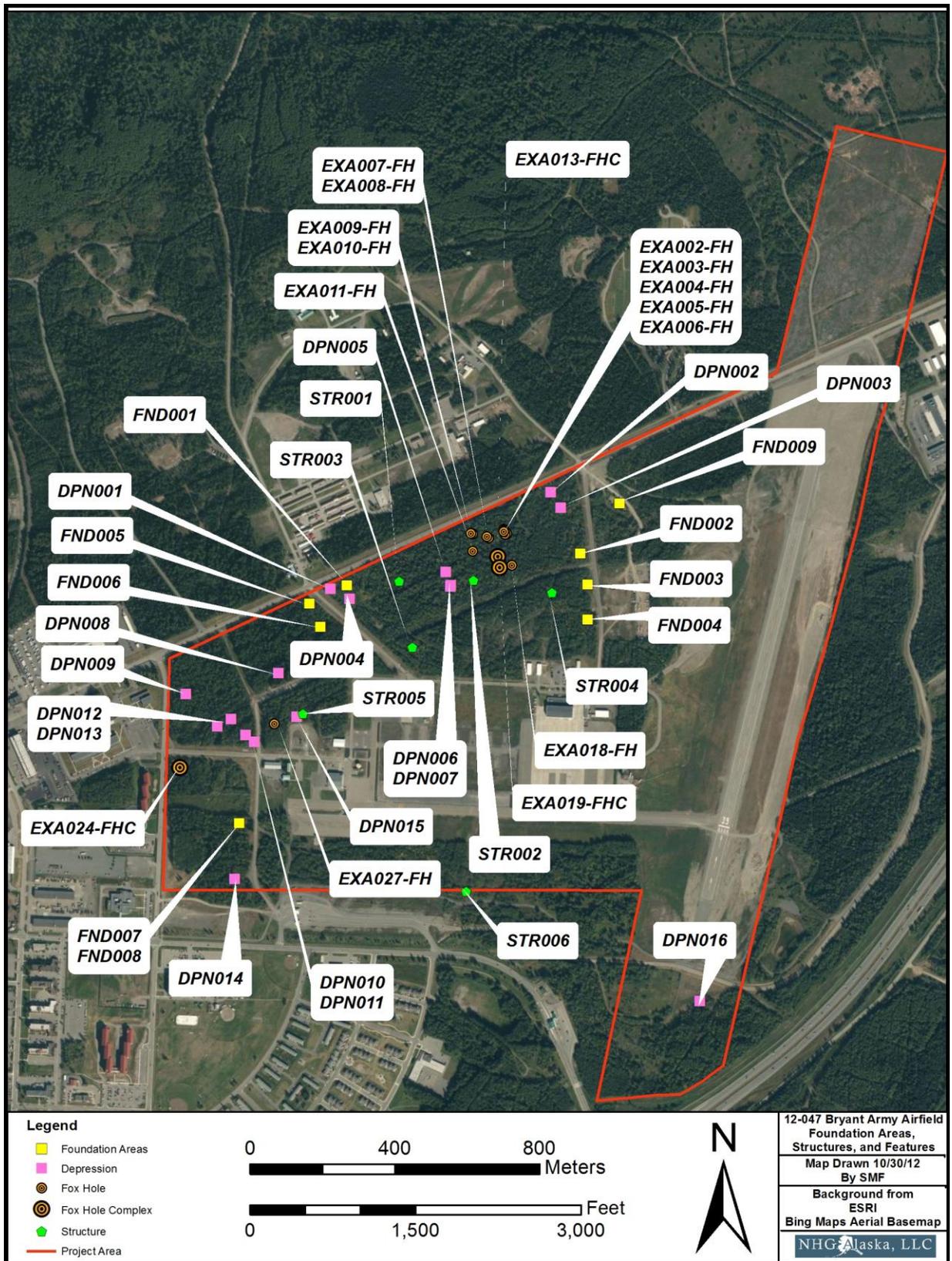


Figure 6. Map showing the location of identified foundations, structures and features.

5.1 Cleared Areas

These areas were defined on the basis of discernible, recent disturbance marked by vegetation removal, soil disturbance and/or amorphous open areas, with no visible building remains or other features. A total of nine cleared areas were located during this survey, as summarized in Table 7. It is possible that these cleared areas are associated with remnant buildings, general vegetation clearing, and perhaps ground defense activities.



Figure 7. View of a cleared area CLD006 (view east).

Table 7. Summary of cleared areas identified during the archaeological survey of BAAF.

Map Code	UTM Location*	Description
CLD001	357147/6795821	Clearing within a ~40 m x 40 m area – no discernible associations.
CLD002	356580/6795523	Large cleared area with a wooden beam (wall stabilizers) suggesting remnant building/foundation.
CLD003	357084/6795692	Disturbance evident by deflated soil, invasive species, tire and nets, located directly south of old east-west running track, encompassing ~20 m x 20 m area.
CLD004	356261/6794929	This is a broad, clearing associated with a foundation that is not visible due to dense ground cover but associated with buildings as represented on aerial imagery.
CLD005	356188/6794840	Disturbance evident by deflated soil, low bushes, and invasive species, within a ~40 m x 40 m area, with no foundation remnants visible.
CLD006	356450/6795189	Disturbance evident by deflated soil, low bushes and low alders flourishing, oval shaped, 20 m x 6 m.
CLD007	356446/6795249	This extensive cleared area is marked by a barbed wire fence marking old building area, ~30 m x 10 m area.
CLD008	356620/6794780	Disturbance evident by deflated soil and low bushes perhaps outlining a foundation.
CLD009	357206/6794805	Generalized cleared/previously disturbed area marked by low bushes/alder.

* All UTM coordinates for this table and the following tables within this section are provided as Easting/Northing, Zone 6.

5.2 Depressions

This category was defined on the basis of amorphous, shallow depressions below the modern ground surface with definite, shaped borders/berms. A total of 16 amorphous depressions were identified, with no known function/association. The possibility that some of these depressions represent house-pits from ethnohistoric or prehistoric times was considered, given the size and shape resembling known house-pit (surface) forms; however, surface examinations and the isolated nature of the depressions suggest otherwise. These areas may represent larger foxholes or other ground defense features such as bunkers.



Figure 8. View of DPN005.

Table 8. Summary of depressions identified during the archaeological survey of BAAF.

Map Code	UTM Location	Description
DPN001	356534/6795546	Circular depression measuring 180 cm x 70 cm x 40 cm
DPN002	6357143/6795813	Small, oval-shaped depression measuring 1 m x 0.5 m x 0.4 m, associated with FND001.
DPN003	357171/6795770	Depression associated with a storage tank measuring 4 m x 3 m x 1.2 m and lined with medium-sized cobbles.
DPN004	356587/6795518	Depression associated with partially buried/overtaken storage tank and attached piping with associated track (RDT003), measuring 6 m x 8 m x 0.8 m
DPN005	356852/6795593	Bell-shaped depression 10m south of an east-west aligned road, measuring 1.5

Map Code	UTM Location	Description
		m x 1.5 m x 0.4 m
DPN006	356866/6795556	Square-shaped depression measuring 1.5 m x 1.5 m x 0.4 m
DPN007	356866/6795552	Square-shaped depression measuring 1.5 m x 1.5 m x 0.4 m (adjacent to DPN006)
DPN008	356391/6795313	Square-shaped depression with yellow-painted cobbles/rubble
DPN009	356134/6795255	Square-shaped depression in a disturbed area, measuring ~20 m x 20 m
DPN010	356300/6795141	Square-shaped depression with yellow-painted cobbles/rubble, measuring 2 m x 2 m
DPN011	356324/6795123	Amorphous depression adjacent to Randall Road, measuring 4 m x 2 m x 0.8 m
DPN012	356259/6795185	Square-shaped depression within a disturbed area, measuring 2 m x 2 m x 0.5m
DPN013	356222/6795165	Circular depression with a radius of 2 m
DPN014	356269/6794742	Rectangular depression measuring 3 m x 2 m
DPN015	356440/6795191	Depression measuring 2 m x 2 m
DPN016	357555/6794405	Small depression near fence with metal beams and corrugated metal roof.

5.3 Excavated Areas

This category includes any area where soil has been removed either by hand or machine excavation, and includes sub-categories dominated by (presumed) fox-holes and areas where buildings or pipes have been removed. Only those excavated areas considered to be “fox-holes” are depicted in the archaeological survey results map shown in Figure 6, while excavated areas assumed to be associated with more recent disturbance are included with other identified disturbance in Figure 20.



Figure 9. View of EXA009.

Table 9. Summary of excavated areas identified during the archaeological survey of BAAF.

Map Code	UTM Location	Description
EXA001	356578/6795549	Excavated area being a possible cistern associated with FND001, sub-surface utility pipes present, within an area 3.5 m x 3 m x 2.5 m
EXA002	357012/6795710	Possible Foxhole 2.5 m x 0.5 m x 0.4 m
EXA003	357014/6795709	Possible Foxhole 2.5 m x 1 m x 0.5 m
EXA004	357021/6795699	Possible Foxhole 2.5 m x 1 m x 0.5 m
EXA005	357017/6795697	Possible Foxhole 2.5 m x 1 m x 0.6 m
EXA006	357013/6795705	Possible Foxhole 2.5 m x 1 m x 1 m
EXA007	356971/6795687	Possible Foxhole 2.5 m x 1 m x 1 m
EXA008	356967/6795691	Possible Foxhole 2.5 m x 1 m x 1 m
EXA009	356928/6795699	Possible Foxhole 2.3 m x 0.8 m x 0.9 m
EXA010	356922/6795700	Possible Foxhole 2.5 m x 1 m x 1 m
EXA011	356928/6795651	Possible Foxhole 2.5 m x 1 m x 1 m
EXA012	356782/6795536	Large rectangular excavated hole (20 m x 15 m) and a push pile located 8 m to the south
EXA013	356996/6795636	Fox-hole complex, at least 6 foxhole-type features in a 40 m x40 m area
EXA014	357202/6795660	Large, excavated pit measuring 20 m x 8 m x 3 m, with a smaller pit to the west.
EXA015	357194/6795636	Excavated pit measuring 3 m x 15 m x 2.5 m with a smaller pit to the west
EXA016	357142/6795630	V-shaped excavated ditch 2 m x 1.5 m x 0.8 m
EXA016	357129/6795611	V-shaped excavated ditch 2 m x 1.5 m x 0.8 m
EXA018	357035/6795612	Possible Fox-hole 2.2 m x 1.1 m x 0.9 m
EXA019	357001/6795605	Fox-hole complex with at least 7 foxhole-type features in a 30 m x 30 m area
EXA020	357227/6795450	Drainage ditch running from southwest corner of Foundation 004
EXA021	356827/6795324	Two large oval (10 m wide) areas with pipes extruding from ground
EXA022	356177/6795195	An excavated area with associated push pile encompassing an area ~40 m x 40 m
EXA023	356297/6794858	Excavated area with concrete rubble perhaps part of an old road of foundation (2 m deep) and with a push piles marking the boundary
EXA024	356118/6795051	Fox-hole complex and perhaps some larger (two-person) foxholes (2 m x 1 m x 0.30 m) in an ill-defined area ~30 m x 30 m
EXA025A/B	356122/6795043	Drainage 1.5 m in width aligned east-west
EXA026A/B	356131/6795049	Drainage alignment 1.5 m in width aligned northeast-southwest
EXA027	356218/6794806	Isolated (possible) foxhole 2.2 m x 0.9 m x 0.4 m

5.3.1 Ground Defense Features (Fox-holes)

As the major sub-category of “excavated areas’ identified were identified as single fox holes”, some discussion is presented here on the context and potential management. An annual report from 1951 provides useful snippets as to the strategy of defense on EAFB (as presented in Shaw 2000):

- The perimeter-type defense, consisting of prepared firing and weapons emplacement with barbed wire and antipersonnel mine obstacles was provided around the main bases and warehouse areas. The positions on the defended perimeter were manned in sufficient strength to hold until reinforced against an enemy attack.

- Assigned sectors were organized and prepared for defense in depth. *Foxholes* for riflemen in forward defensive areas were prepared. Wherever possible those were two-man foxholes with fields of fire in at least two directions. Alternate and supplementary positions were chosen and prepared for riflemen and automatic weapons.
- Other activities included clearing of fields of fire, providing signal communications, and preparing obstacles and camouflage.

Ground defense strategy changed dramatically as the Cold War conflict continued to accelerate the development of ballistic missiles. Conventional attack was no longer a viable strategy in the age of airborne attack. By the early 1950s, perimeter defense on EAFB was abandoned and a new strategy relying on radar and early warning systems emerged. Base ground defense installations were obsolete (Shaw 2000).

This summary of the overall strategy provides some context of which to evaluate the fox-holes identified in this survey, in being an important component of both training and defense, and within a specific period of use (i.e. prior to the development of ballistic missiles etc). This information provides a context of which ground defense activities (fox-holes) relate to larger themes and historic events. Shaw (2000) provides a typological classification for defensive earthworks located on EAFB Table 10). The majority of the excavated areas identified during this assessment appear to represent “single fox-holes” as described below.

Table 10. Typology of Defensive and Training Earthwork Features Observed on EAFB.

Feature Type	Feature Description
Berm	Mounded dirt of variable height and length resulting from grading or excavating a road or pit. Height is proportional to volume of excavated dirt.
Single Fox-Hole	One man rectangular pit, 18 to 24 inches wide, 18 to 30 inches deep and typically 6 feet long. Occasional design variance includes L-shaped pit.
Double Fox-Hole	Two or three man rectangular pit, 24 to 48 inches wide, 18 to 30 inches deep, 6 to 8 feet long. May have “entrance” dugout one short side of rectangle.
Trench	(a.k.a. slit trench) Typically less than 2 feet wide, 18 to 30 inches deep, variable length. Often serving as connectors between foxholes and/or bunkers. Design variation includes U-shaped trench, possible for automatic weapon placement.
Small Bunker/Machine Gun Nest	Typically round shaped pit roughly 48 inches in diameter, 24 to 36 inches deep. Design variations include smaller “entrance” dugout on one side of circle or two or more small bunkers connected by a trench. Usually have berm on one side resulting from excavation oriented toward anticipated line of fire.
Medium Bunker	Round or rectangular shape of varying size larger than small bunker. May also be machine gun nest. May have “entrance” dugout on one side. Usually have berm on one side resulting from excavation oriented toward anticipated line of fire.
Large Bunker	Rectangular or L-shaped pits, often 6 to 10 feet wide, 20 to 40 feet long, 4 to 8 feet deep. Remnants observed suggest Quonset type roof typical and varying methods of wall cribbing (sand bags, local cut spruce and birch poles, milled lumber). May have creosote covered or natural posts and ridge beams.

Source: Shaw (2000)

5.4 Foundation

Large concrete slab foundations were identified both by aerial imagery review and ground-truthing. The majority of the foundations appear to be concrete slabs for Quonset Huts. A review of the available imagery provides some information relating to chronological associations of construction, function/use and demolition/removal of specific buildings. For example, as shown on Figure 13 and Figure 14, Foundation 004 is not associated with any building on the 1948 image, but is clearly associated with a building on the 1972 image.



Figure 10. Foundation 005 (view southwest).



Figure 11. Foundation 004 (view north).



Figure 12. Cobblestone platform (4 courses, no mortar) in association with FND007.

Table 11. Summary of foundations identified during the archaeological survey of BAAF.

Map Code	UTM Location*	Description
FND001	356567/6795561	Rectangular concrete slab foundation that appears on 1948 aerial as built structure then only as a foundation from 1975. The foundation area measures 21 m x 10 m.
FND002	357237/6795664	Multiple joined foundations visible on 1948 aerial representing Quonset Huts built within Camp Carroll. The foundation area is 40 m and 20 m wide.
FND003	357237/6795567	Rectangular-shaped concrete foundation that appears to correspond to a small Quonset hut on the 1948 aerial image, aligned north-south. The foundation measures 20 m by 10 m.
FND004	357260/6795466	T-shaped concrete slab foundation that first appears on the 1972 aerial. The foundation measures 30 m (central "T") by 32 m (line "T"), and is 5 m wide.
FND005	356462/6795513	Concrete slab foundation aligned northwest/southeast, eastern portion is moderately destroyed, while western half in better condition. Appears faintly on the 1948 aerial though appears to have been removed/destroyed on the 1972 aerial as a wide cleared area is discernible. The foundation measures ~17 m x 13 m.
FND006	356510/6795456	Concrete foundation aligned east-west, with wall footers only present along north and south outline of foundation. A small "porch" (3 x 3 m) concrete slab is located on the south side (IMG 100-0049). Appears that this foundation is on the 1948 and 1972 aerials though the alignment does not seem to match up

Map Code	UTM Location*	Description
		exactly. The foundation measures 30 meters by 20 meters.
FND007	356282/6794896	This appears to be a larger, cleared area with possible covered foundations representing a Quonset hut complex as visible on the 1948 aerial. By 1972, it is apparent that all the structures were removed (bar the foundations) and the area was exposed as a large clearing. On the ground, the area remains open suggesting that the foundations are intact, though covered by low grasses and brush, with only one corner of the foundation (as point FND007). The cleared area is ~30 m x 30 m. Informal discussions with base personnel suggest this area may have once housed a church and engineers' barracks/housing.
FND008	356278/6794911	Cobblestone platform associated with FND007 perhaps housing a boiler or some other specific feature.
FND009	357302/6795794	Rectangular-shaped concrete foundation aligned northwest/southeast that appears as a dark-roofed building on the 1972 aerial. The foundation is 60 m long and 15 m wide.

* One corner only (all corners were plotted and provided in project database).

Two figures are located on the following pages, based on historic air photos provided by DMVA. Figure 13 is a map based on the 1948 aerial image. It shows the location of nine foundations identified during the field survey in relation to the 1948 configuration of BAAF. Figure 14 is a map based on the 1972 aerial image. It shows the same nine foundations in relation to the 1972 configuration of BAAF.



Figure 13. Map showing the location of the foundations identified during the archaeological survey in relation to the 1948 aerial image.

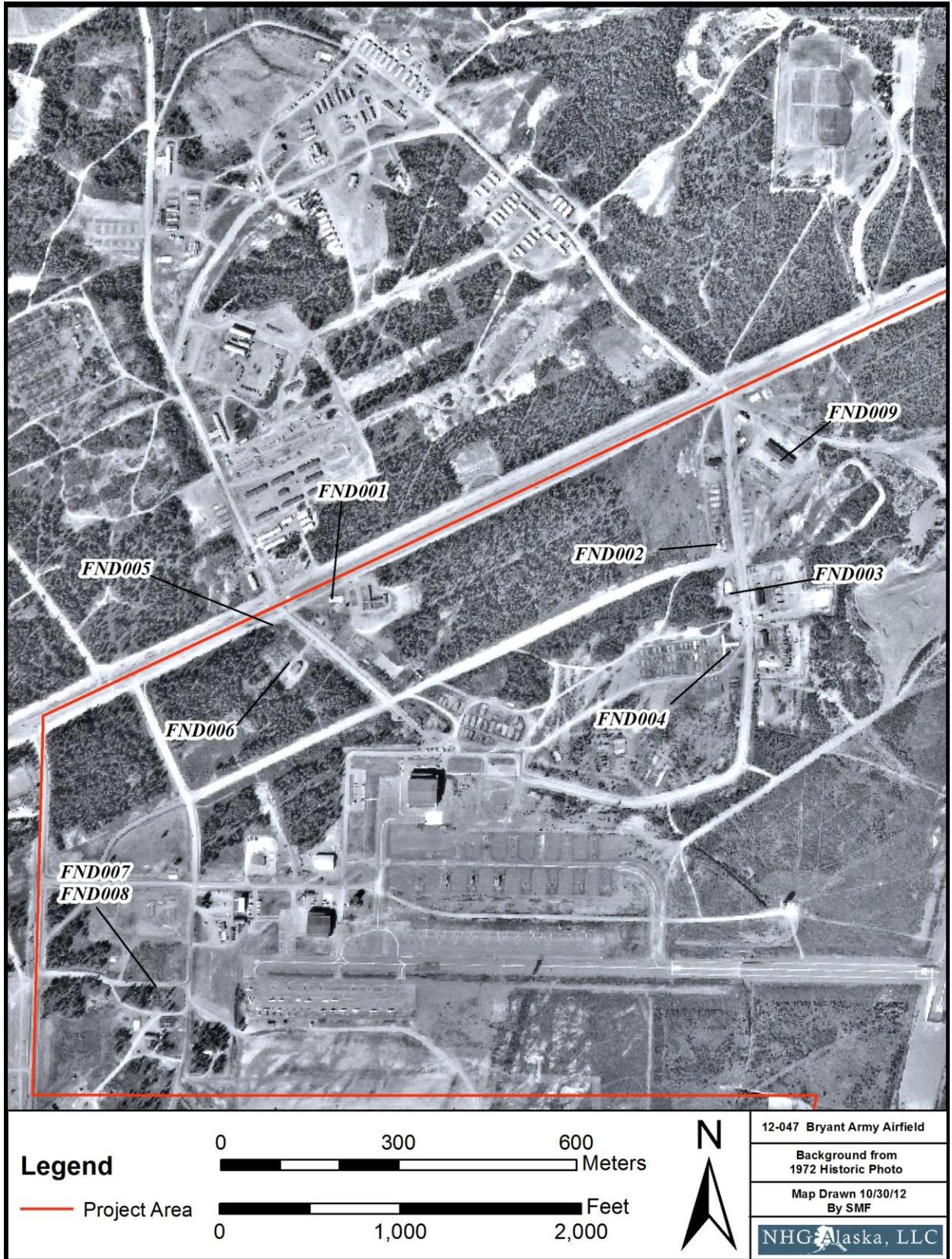


Figure 14. Map showing the location of the foundations identified during the archaeological survey in relation to the 1972 aerial image.

5.5 Isolated Features

This category is represented by any feature located without any clear association to any other feature or structure, and includes historic objects, modern debris, or the only surviving remnants of larger features/activity areas. Figure 15 is a photograph of a concrete man-hole access point and its associated cast iron man-hole cover, stamped “SEWER”. The man-hole cover is embossed with *Olympic Foundries Seattle*. This Foundry Company was established in 1900 in Seattle by C.W. Kucher and serviced the city for various industries. It also became an important supplier to Alaskan-based mining companies.

Table 12 presents the UTM coordinates, map code, and description of the Isolated Features identified during the 2012 NHG field survey at BAAF. The locations of the Isolated Features are depicted on Figure 5.



Figure 15. Isolated feature ISF011.

Table 12. Summary of isolated features identified during the archaeological survey of BAAF.

Map Code	UTM Location	Description
ISF001	356652/6795590	Partial cinder block likely associated with Foundation 001 (1972)
ISF002	357199/6795844	Isolated fence posts of recent origin.
ISF003	356663/6795545	Canister "1976" located 2m away from disturbed camp area. Circular cut clearings 10m off east-west road, possible campsites/training areas evident by disturbed soil cut tree piles/cut trees.
ISF004	357092/6795618	Wooden box/crate of recent origin.
ISF005	356887/6795560	Recently square-cut pile of logs.
ISF006	356854/6795435	Isolated metal pipe 8 cm in radius and 28 m in length
ISF007	356275/6794756	An excavated pipe in a disturbed area.
ISF008	356237/6794812	Sewer drain cover.
ISF009	356261/6794886	Isolated concrete slab
ISF010	356232/6795037	Pile of construction materials (pipe, fence post, wire)
ISF011	357899/6796379	Sewer drain cover.
ISF012	357857/6796525	Isolated fire hydrant in Sector E.

5.6 Push Piles

This category is associated with areas where large amount of earth have been deposited from dozer pushes, scoured areas, excavations, or road berms. Most of the push piles represent most prominent feature in a larger disturbed area; however, it is possible that some isolated, more discrete berms represent mounds as part of training exercises associated with ground defense.

Table 13 presents the UTM coordinates, map code, and description of the Isolated Features identified during the 2012 NHG field survey at BAAF. The locations of the Isolated Features are depicted on Figure 5.

Table 13. Summary of push piles identified during the archaeological survey of BAAF.

Map Code	UTM Location	Description
PPL001	356686/6795609	Discrete, push pile with extensive leaf-litter cover, in a dome-shape mound 2.5 m high and 22 m circumference.
PPL002	356978/6795736	Push pile/berm extending at least 40 m in length and up to 2 m high.
PPL003	356635/6795535	Push pile with associated rubble/concrete block debris, located on east side of 10 m e/w x 8 m n-s clearing (possible sub-floor gravel).
PPL004	356651/6795514	Area of modern disturbance.
PPL005	356664/6795587	15 m from old east-west running road.
PPL007	356716/6795463	15 m north of existing east-west running road.
PPL008	356408/6795474	Disturbed area circular in shape, 20 m in diameter.
PPL009	356463/6795498	Extensive raised, linear, push pile with evidence of nearby scouring.
PPL010	357463/6795426	Extensive, linear push pile following all along the eastern boundary of maintenance yard.
PPL011	357064/6794828	A 10 m x 10 m push pile area with associated cobbles.



Figure 16. View of a push pile (PPL010) along eastern boundary of maintenance yard (NHG Photo #108).

5.7 Road/Tracks

Numerous alignments were observed on the ground in various states of condition/visibility, identified both from aerial imagery and during pedestrian survey. Roads and tracks represent histories of activity and also degrees of overall disturbance to the ground surface. Only those tracks not immediately obvious from aerial imagery were recorded in the field, and associations to historic maps were made where possible. For the purposes of this Level I assessment, only two or three waypoints were taken on these roads/tracks to show the alignment (see Table 14, Figure 17 and Figure 18).



Figure 17. Overgrown track/road alignment (view south).

Table 14. Summary of roads/tracks identified during the archaeological survey of BAAF.

Map Code	UTM Location	Description
RDT001A/B	356607 6795590 (a) 356619 6795558 (b)	Overgrown road/track alignment running north-south within old section of Camp Carroll. Appears faintly within a cleared around on the 1948 aerial.
RDT002A/B/C	357066 6795789 (a) 357059 6795741 (b) 357068 6795712 (c)	Overgrown two-track that appears faintly on the 1948 aerial but appears to have been “cut” as a short access road by 1995.
RDT003A/B	357177 6795798 (a) 357170 6795782 (b)	Overgrown two-track leading from Davis Highway to storage/tank depression (DPN003) most likely related to the building complex that appears on the 1948/1950 aerials.
RDT004	356935 6795643	Overgrown two-track running north-south that appears to curve slightly and of more recent origin (not visible on 1948, 1950 or 1972 aerials).
RDT005	356916 6795659	Overgrown two-track running east-west that truncates the survey area (intersects with RDT006) and is visible on the 1950 aerial.
RDT006A/6B	356873 6795665 (a)	Overgrown track running north-south run from a facility apparent on the 1950 aerial (on the north side of Davis Highway).

Map Code	UTM Location	Description
	356885 6795629 (b)	
RDT007A/7B	356618 6795546 (a) 356624 6795518 (b)	Overgrown track/road being a continuation of RDT001.
RDT008	356626 6795491	North-South Road with 0.6 m berm along western side (continuation of RDT006)
RDT009A/9B	356620 6795516 (a) 356652 6795519 (b)	Northwest/southeast running overgrown road/track
RDT010	356892 6795606	North-south aligned road continuation of RDT006 but with recent use evident.
RDT011	356795 6795394	Curved road alignment representing the southern "oval" perimeter boundary of Camp Carroll noticeable on the 1948 map to present.
RDT012A/12B	356927 6795443 (a) 357144 6795541 (b)	Curved road alignment representing the southern "oval" perimeter boundary of Camp Carroll noticeable on the 1948 map to present. North-south running
RDT013A/13B	356523 6795471 (a) 356496 6795444 (b)	Overgrown gravel-packed road (east-west, 10 m wide) clearly discernible on the 1948 map (to present) and representing a short access road to these buildings from the camp Carroll perimeter road alignment, and associated with FND006.
RDT014	356199 6795162	Gravel track (overgrown) that first appears on the 1972 aerial as an extension to the main access road to facility areas.
RDT015	356202 6795173	Continuation of RDT014.
RDT016A/B/C	356298 6794870 (a) 356273 6794871 (b) 356254 6794849 (c)	Series of overgrown tracks that first appear (most clearly) on the 1972 aerial.
RDT017A/17B	356140 6794994 (a) 356141 6795009 (b)	Possible alignment (railroad?)
RDT018	356131 6794918	Old track that appears as a faint line on the 1948 aerial.
RDT019A/19B	357357 6795907 (a) 357371 6795925 (b)	Northeast/southwest track alignment that appears on the 1950 aerial but appears to have not been used (cleared) in 1972.
RDT020A/20B	357423 6795947 (a) 357433 6795928 (b)	Track running from Davis Highway with a short "dog-leg" that appears first on the 1972 aerial.
RDT021	357409 6795380	Faint segment of a road alignment that appears on the 1948 aerial to present and appears to have been improved by 1972, though unused by 1995.
RDT022A/B	356520 6794805 (a) 356533 6794780 (b)	A north-south running road segment that appears to be associated with the major developments in this area in the 1970s.
RDT023A/B	356597 6794841 (a) 356590 6794832 (b)	A north-south running road segment that appears to be associated with the major developments in this area in the 1970s.
RDT024A/24B	356730 6794815 (a) 356745 6794805 (b)	Isolated alignment that appears on the 1972 map to run into a turnaround area, perhaps a helipad.
RDT025A/B/C	357117 6794773 (a) 357523 6794272 (b) 357502 6794236 (c)	A north-south running road segment that appears to be associated with the major developments in this area in the 1970s.

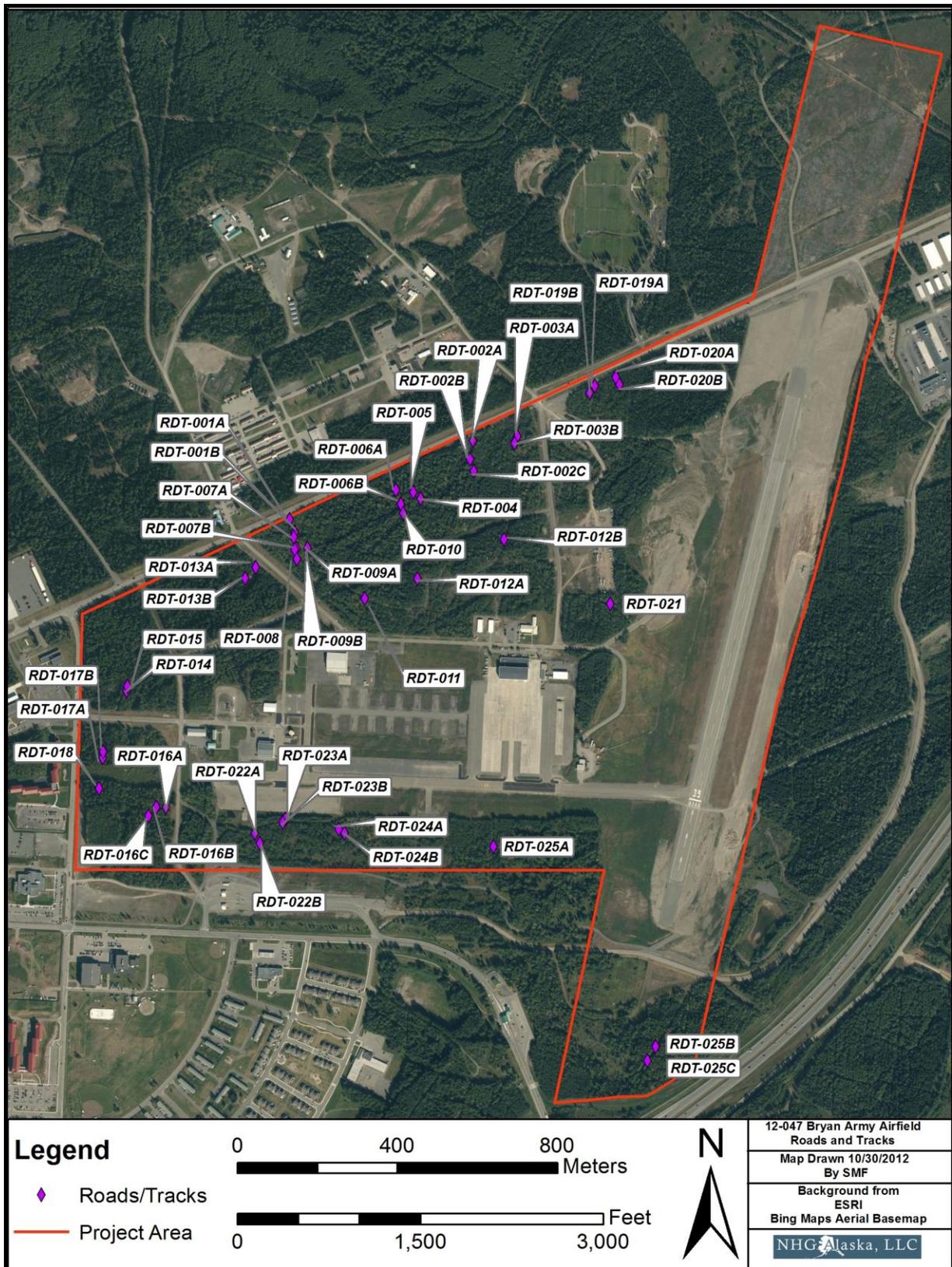


Figure 18. Road/Tracks waypoints collected during 2012 BAAF field survey. See Table 15 for historic photograph analysis of roads and tracks.

5.8 Structures

This category includes any remnant standing structure, whether historic or modern, and included recent storage buildings and several lean-tos (presumably used as part of training activities). Of most interest was Structure001 (Figure 19), comprised of a collapsed cut-wood triangular frame manifest as a cut timber pile. It is likely that this functioned as a field barrack or perhaps a dog hut, as it seems to outline a square-shape with mixed axe and saw cuts, in dense scrub with nearby cut stumps. The timber posts have not been de-barked and are relatively short lengths (1.5 m). No artifacts were identified within or around the structure. Informal discussion with personnel on base suggests that this structure likely represents training tools and/or related to training activities.



Figure 19. Collapsed structure STR001.

Table 15. Summary of structures identified during the archaeological survey of BAAF.

Map Code	UTM Location	Description
STR001	356724/6795567	Cut-wood (collapsed) structure manifest as a cut timber pile that possibly functioned as a field barrack or dog hut, seems to outline a square-shape with mixed axe and saw cuts, in dense scrub with nearby cut stumps. The timber has not been de-barked and is of relatively short lengths (1.5 m).
STR002	356929/6795570	Recently constructed lean-to (fallen)
STR003	356761/6795384	Recently constructed lean-to complex
STR004	357146/6795535	Recently constructed lean-to (near rusted car)
STR005	356458/6795201	Isolated structured with a corrugated roof and metal beams
STR006	356910/6794709	Possible remnant of a temporary barrack consisting of thin rough-cut tree limbs tied to standing trees.

5.9 General Disturbance

A component of the scope for the archaeological survey was to note areas of general disturbance. This section examines both the major areas of disturbance noted during the archaeological survey (aside from foundations, roads/tracks, and surface debris) and major areas of clearing and construction as ascertained from aerial imagery. What is most evident is that the current project area has segments of high forest that is of more recent growth and obscures much evidence of past clearing/disturbance. As depicted on the 1948 aerial image (see Figure 13), vast segments of land area were cleared within the north-central portion of the project area; associated with the southern half of the original Camp Carroll area. The extent of clearing/disturbance greatly expands by 1972 (Figure 14), as the aerial image shows extensive clearing and numerous buildings covering approximately two-thirds of the area encompassing the current project area. Additionally, a range of more modern disturbances are evident as part of the archaeological survey, and depicted on Figure 20. As a way to demonstrate the combined effect of both historic and modern ground disturbances within the project area, Figure 21-23 depict the areas discernible on the 1948, 1965 and 1972 aerial imagery, and the archaeological survey observations. In addition, Figure 24 depicts the combined areas of past disturbance as discernible on the 1948, 1965 and 1972 aerial imagery. As can be seen, vast areas of construction and clearing have progressively impacted the current project area. This evidence of extensive past and present disturbance suggests that few areas within the project area are likely to have intact archaeological deposits or features. The total project area encompasses 600 acres (242 ha) and the estimated areas of extensive past disturbance is estimated to encompass approximately 380 acres (153 ha).



Figure 20. Major areas of disturbance identified during the archaeological survey of BAAF (excavated areas, push piles, cleared areas, debris).



Figure 21. Map showing the generalized areas of disturbance as depicted on the 1948 aerial images in relation to areas of disturbances identified during the archaeological survey.



Figure 22. Map showing the generalized areas of disturbance as depicted on the 1965 aerial images in relation to areas of disturbances identified during the archaeological survey.

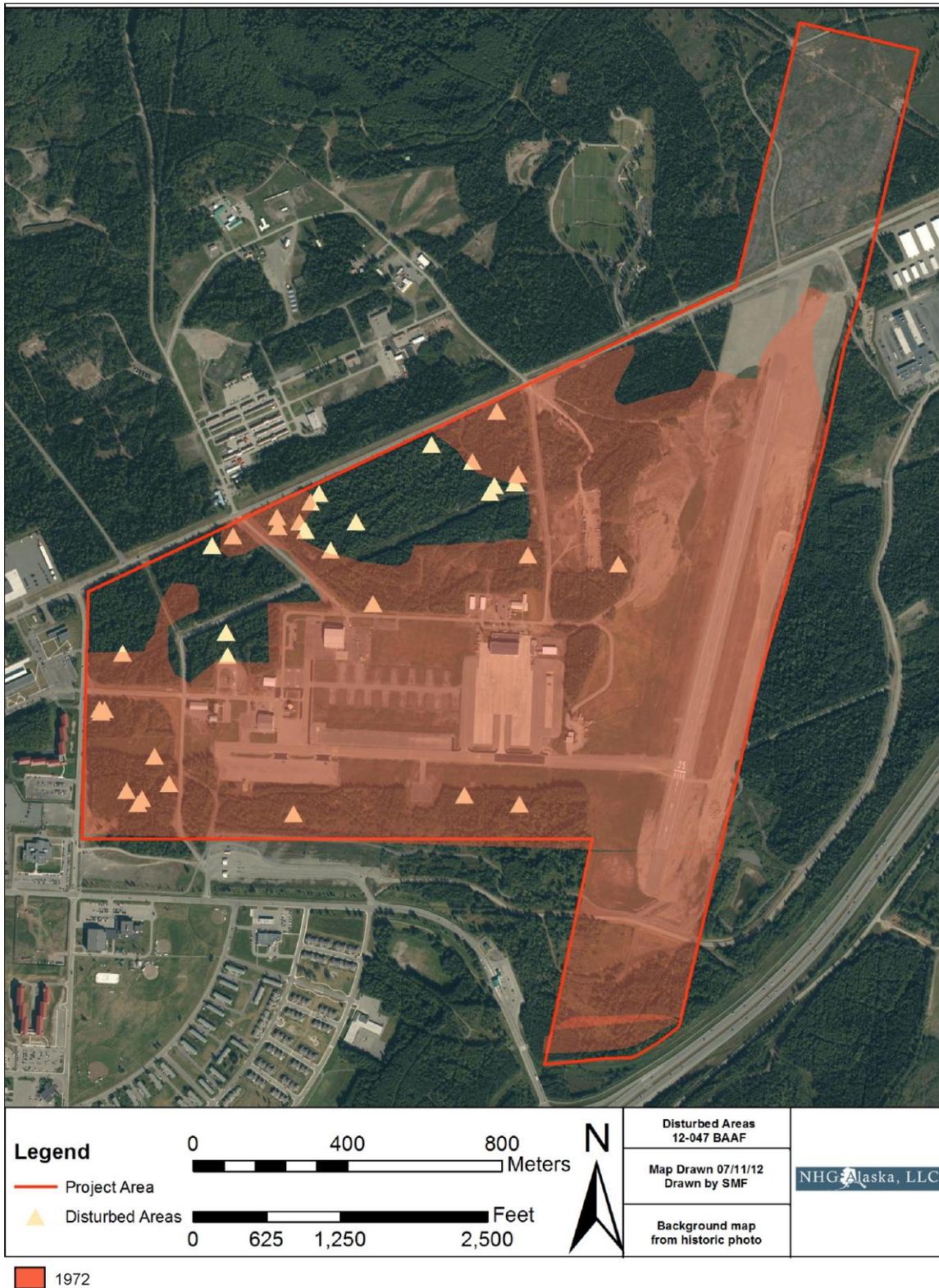


Figure 23. Map showing the generalized areas of disturbance as depicted on the 1972 aerial images in relation to areas of disturbances identified during the archaeological survey.

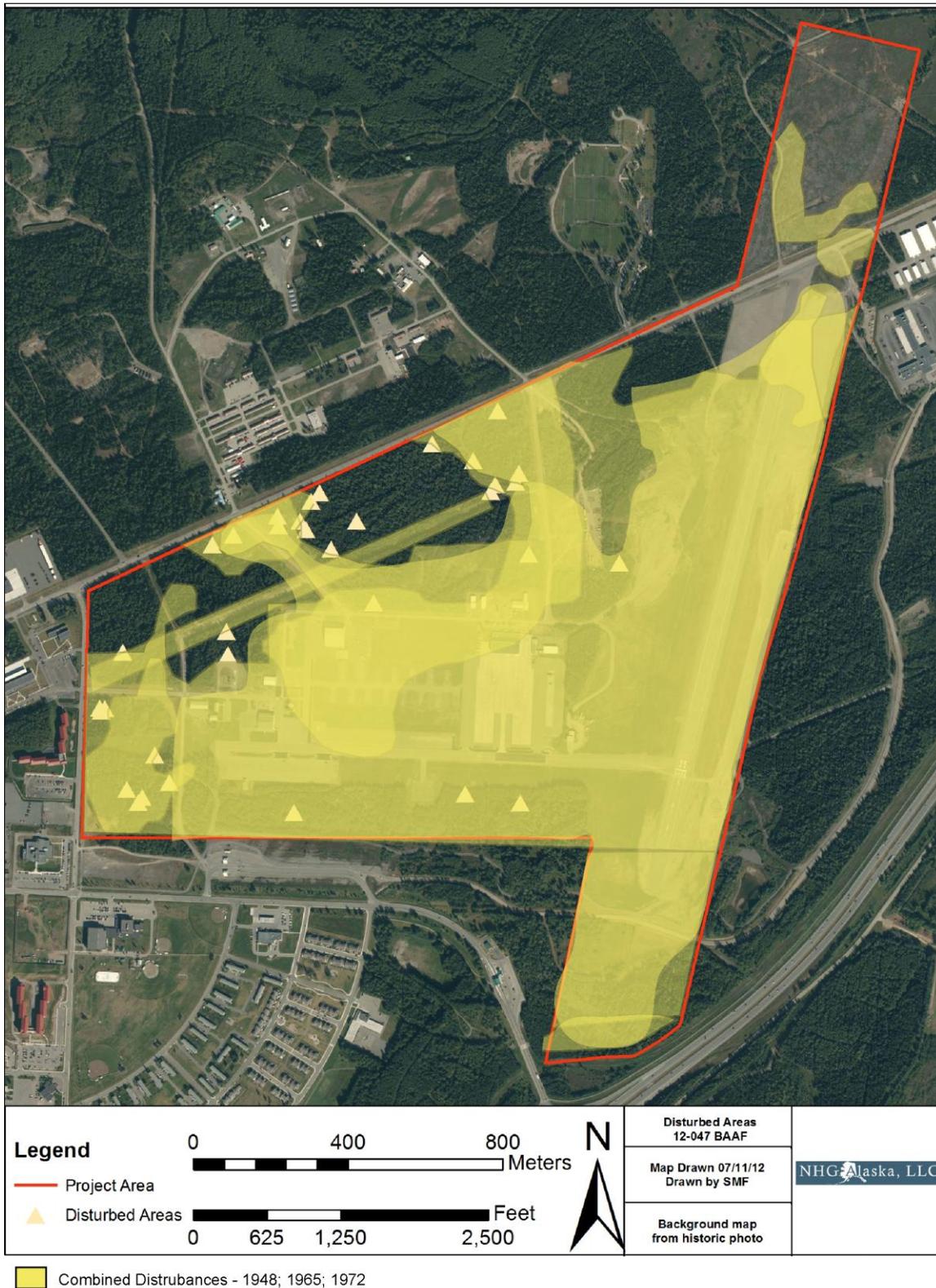


Figure 24. Map showing the combined, generalized areas of past disturbance as depicted on the 1948, 1965 and 1972 aerial images in relation to areas of disturbances identified during the archaeological survey.

6.0 Summary and Recommendations

6.1 Summary

NHG conducted a Level I (Identification Phase) survey of the Bryant Army Airfield between June 18 and June 20, 2012. Level I Identification Phase surveys are described by the Alaska Office of History and Archaeology (OHA) as surveys designed to locate archaeological sites and historic properties for future evaluation (OHA 2003 [revised] *Standards and Guidelines for Investigating and Reporting Archaeological and Historic Properties in Alaska*). Information gathered at this level is sufficient to identify and describe cultural resources and gather accurate information on the specific location of those resources. A Level I or reconnaissance-level survey is not intended to evaluate resources for NRHP eligibility or to prepare any site treatment or mitigation or management plans.

The objective was to identify historic properties, record their location, and generally characterize the quantity and character of newly discovered structures, objects, and features in relation to generalized levels of disturbance. The archaeological survey resulted in a total of 115 areas of disturbance and/or features that fall within one of eight categories, as shown in Table 6. In general, the survey is characterized by heavy disturbance associated with the construction and dismantling of buildings over the last 50 years, and various building phases, training activities, and recent miscellaneous disturbances associated with both Camp Carroll and Bryant Army Airfield.

A number of building foundations were identified and associated with general operations within Camp Carroll and the BAAF during the Cold War Period. Training and ground defense features were observed during the course of the survey, specifically small fox-holes and amorphous depressions that possibly represent small bunkers or larger fox-holes. The categories of disturbed areas included excavated areas, push piles, scoured areas, roads, isolated debris (such as drums, automobile components, various metal scraps, and structural debris) and ground disturbance resulting from heavy-equipment operation in recent times.

6.2 Preliminary Evaluation

Although restricted to a Level I assessment, the scope of work requests a brief discussion of potential for features/remains to be considered eligible for listing on the NRHP. In NHG's opinion, none of the training and ground defense features, isolated artifacts, or structural debris, warrant further investigation and all are recommended as not eligible for inclusion on the NRHP. Primarily due to abandonment and neglect, the ground features do not possess the historic integrity required for consideration as an NHRP-eligible property. Further, these features are only indirectly associated with broader historic themes, such as BAAF's role in Cold War, and do not individually or collectively meet any of the criteria used to evaluate NRHP eligibility. Furthermore, previous investigations of the standing buildings on both Camp Carroll have indicated that none are considered eligible for listing on the NHRP.

When considered as an integrated area, and with only identifying the basic categories and geographic location of an array of features, the lack of both integrity and association to significant historic events would suggest that no feature would be eligible for inclusion on the NRHP. Due to the indirect and tenuous association with historic activities, and with no structural remnants or associated artifacts, these features both individually and collectively lack the integrity to be considered eligible sites. Furthermore, the project area has undergone numerous and extensive phases of construction, re-development, demolition and generalized ground disturbances since World War II.

6.3 Section 110 and 106 Recommendations

The scope of work also requires a statement to provide recommendations for how best to proceed with cultural resources studies to comply with Section 110 and Section 106 of the NHPA.

The descriptions and maps in this report show where features are located to support future AKARNG cultural resources management decisions. The confirmation of known features and identification of new features (fox-holes, small and medium bunkers, and isolated structures and debris) generated a thorough map that demonstrates both an updated perspective on the spatial extent of the associated history of use of this area as well as the overall level of disturbance.

The information derived from this assessment related to foundations and roads provide some 'audit' of remnants from past activities and building/demolition phases that can supplement existing records and phases of development as ascertained from aerial imagery.

The marking of vast areas of disturbance may guide future planning developments in noting areas where previous activity has been so extensive and complete that there is no need for any future archaeological assessment.

Certain features may provide some insight into the interplay of military training methods specific to perceived threats and future confrontations in WWII and/or during the Cold War. As such, a formal investigation, spatial analysis, and perhaps archaeological testing of the ground defense features may inform on some aspects of ground defense strategies and efforts at Fort Richardson and EAFB linked to broader military operations; for instance, documenting activities that occurred prior to changes in technology and warfare that essentially made ground defense operations on the base obsolete.

6.4 Limitations

This project was carried out, and this report prepared, in accordance with generally accepted professional practices for the nature and conditions of the work completed in the same or similar localities, at the time the work was performed. The archaeological survey was carried out as a preliminary identification of surface features only, and so no detailed assessment or analysis was undertaken. It is intended for the exclusive use of the AKARNG and DMVA. It should be noted that NHG relied upon written information and/or verbal accounts provided by the agencies and individuals

indicated in the report. NHG can only relay this information and cannot be responsible for its accuracy or completeness. This report is not meant to represent a legal opinion. Any questions regarding our work and this report, the presentation of the information, and the interpretation of the data are welcome and should be referred to Senior Project Archaeologist Richard O. Stern in Anchorage (907) 345-2457 or to NHG Operations Manager Burr J. Neely in Fairbanks at (907) 474-9684.

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