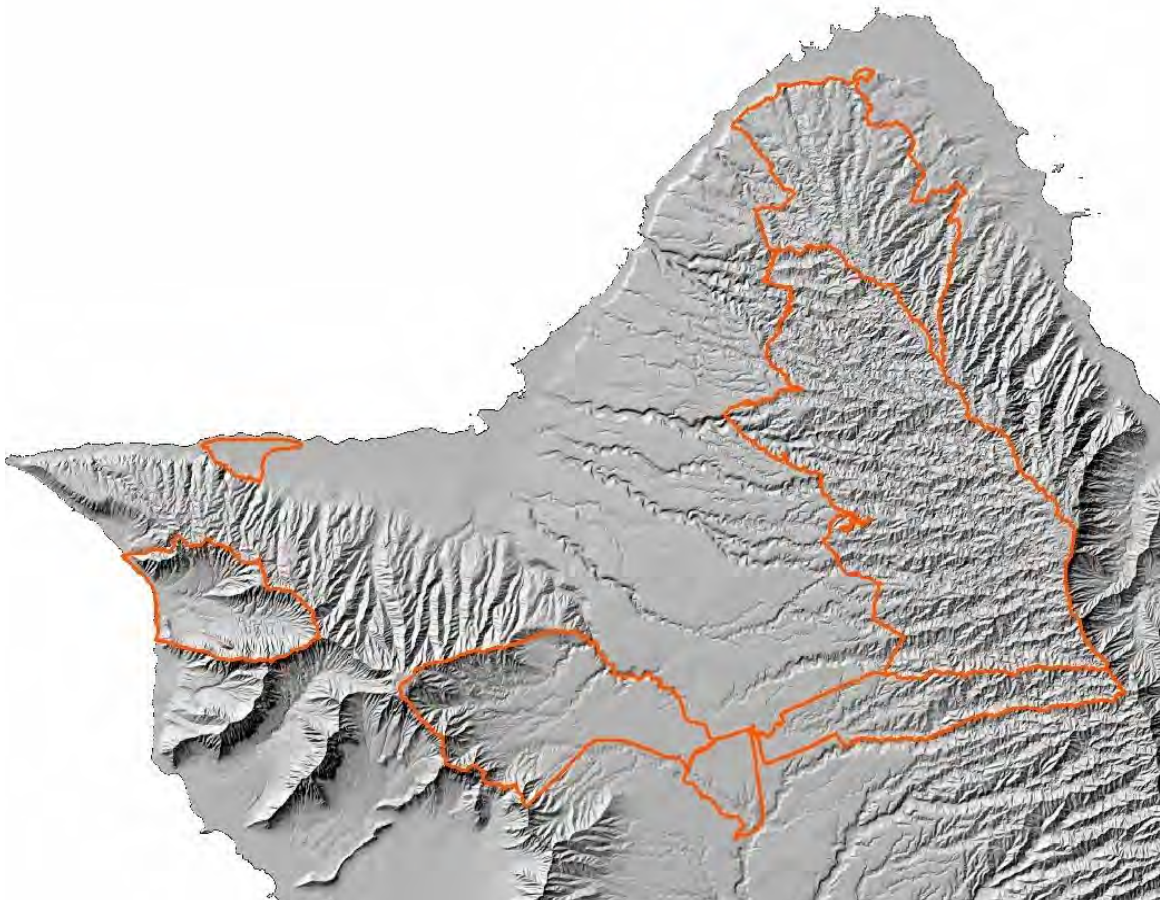


**CULTURAL RESOURCE MANAGEMENT
OF THE ARMY SUB-INSTALLATIONS
ON THE ISLAND OF O`AHU**

ANNUAL REPORT [June 2007 – May 2009]



Prepared for: The U.S. Army Garrison-Hawaii
Directorate of Public Works
Environmental Division

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ABSTRACT

This report documents the results of field, research, and support activities of the seventh and eighth years of an ongoing year-to-year cooperative agreement. The Cultural Resource Section's normal fiscal year starts on the 1 June and ends on the 31 May. The present document, then, is a two-year combined report covering the period from June 2007 to the end of May 2009.

The goal of the Cultural Resources Section of the U.S. Army Garrison-Hawaii (USAG-HI) Ecosystem Management Program, of the Environmental Division, Directorate of Public Works (DPW), with the research personnel and support of the Pacific Cooperative Studies Unit (PCSU), is to provide the research, documentation, support, and data needed to conserve, protect, and enhance the cultural resources of Hawai'i. The cooperative agreement calls for a verity of Natural and Cultural Resources Management activities involving field investigations, data collection, archival studies, and other related actions to be undertaken on behalf of the U.S. Army on lands owned and/or controlled by the Army, on the islands of O`ahu and Hawai'i, in support of that goal.

The primary Army lands considered for these research activities are the eight major training areas and ranges on O`ahu. These are: Mākua Military Reservation (MMR), Kahuku Training Area (KTA), Dillingham Military Reservation (DMR), Kawaihoa Training Area (KLO), and Schofield Barracks Military Reservation (SBA). Schofield Barracks is further functionally subdivided into the Cantonment Area (SBC) and the various attached training areas - East Range (SBE), West Range (SBW, which includes the active Impact Area), the South Range Acquisition Area (SRA) and South Range (SBS) (refer to Map 1). In addition, the Cultural Resources Section is responsible for all historical and cultural properties on the other 15 garrison sub-installations on O`ahu and has occasionally provided assistance with support for activities at Army properties on the island of Hawai'i.

The Cultural Resources Section was established as part of the DPW Environmental Division's Conservation and Restoration Branch in June 1999, with the hiring of two Cultural Resource Specialists on O`ahu. The CR Section was set up at that time as a smaller version of the previously established and much larger Natural Resources Section, which initially shared office space and facilities with them. By February 2004, three more Specialists and an Architectural Historian were added to the CR Team after a move to the Environmental Division's main offices at Building 105, Wheeler Army Airfield. Also during this period, the Conservation and Restoration Branch added a full-time federal Government Service (GS) position as the O`ahu Archaeologist, to directly assist the Garrison Cultural Resources Manager, Dr. Laurie Lucking.

The projects, research, and data recovery activities called for in the Ecosystem Management Program Scope of Work (SOW), and which are presented in this report, consist of a variety of research actions and deliverables, listed as follows:

- Field Inventory Surveys and Reports
- Site Identification and Documentation
- Site Relocation (with sub-meter GPS)
- Site Monitoring
- Development and Preparation of Field Data, Field Record and other Forms
- Development and Management of an Archaeological Site Database
- Establishment and management of a Curational Storage Facility
- Various Other Duties Performed Outside the SOW

The Cultural Resources Section crew has grown from two in early 2004, to seven, with the addition of Carly Anton, Alton Exzabe, Laura Gilda, Moana Lee, Jill Sommer, Jamie Raduenzel, and David Cox, as well as two part-time and five temporary hires.

LIST OF MAPS

Map 1:	The Eight Major Training Areas (plus SBC and WAA) on O`ahu	2
Map 2:	O`ahu Training Areas, Centers, and Camps, June 1944	5
Map 3:	Archaeological Sites and Training Areas at DMR	11
Map 4:	Proposed Fire Break Road and Protective Works	14
Map 5:	Training Areas at KTA, with 19 Sites Recorded to 1998	23
Map 6:	The <i>ahupua`a</i> at the Northern Tip of O`ahu	24
Map 7:	Cultural Resources in Proximity to the CACTAF, KTA	29
Map 8:	The <i>ahupua`a</i> of the Northern Half of O`ahu	32
Map 9:	Areas in MMR with Archaeological Sites	34
Map 10:	East Range, 1940	35
Map 11:	The Western Edge of East Range, April 1940	37
Map 12:	Training Area W, East Range, April 1942	39
Map 13:	The HAD Sub-Assembly Depot	42
Map 14:	The HAD Sub-Assembly Depot and Crew Housing Areas	43
Map 15:	Archaeological Sites Identified in West Range	47
Map 16:	UAC Training Facilities Layout, with Sites	51
Map 17:	UAC Area Showing the Breach House 300m SDZ	56
Map 18:	Schematic Map of Site DPW-35	58
Map 19:	South Range Training Area, Schofield Barracks	65
Map 20:	Archaeological Sites Identified in SBS, as of June 2007	66
Map 21:	The South Range Acquisition Area (SRA)	67
Map 22:	Location Insert from 1931 Construction Plan	70
Map 23:	Helemano Military Reservation in its Present Configuration	72
Map 24:	The Cantonment Area at Schofield Barracks (SBC)	74
Map 25:	Archeological Resource Map of Schofield Barracks (SBC)	75
Map 26:	Location of project at the Veterinary Clinic at Duck Field	76
Map 27:	Aerial Photo of the Middle Lyman Road Area, SBC	82
Map 28:	The Post Cemetery and the Planned Force Main	84
Map 29:	Fort Shafter, a 1984 Base Map.	87
Map 30:	Tripler, on a Location Insert from a 1974 Regional Master Plan of O`ahu	88
Map 31:	A 1932 Composite Aerial Map of Wheeler Field	93
Map 32:	Sea Wall Replacement Project at PAR	98
Map 33:	Map of Fort DeRussy	99
Map 34:	The Above-Ground Part of the Kunia Field Station	104
Map 35:	Mākaha Natural Resources Management Sub-Unit II	110
Map 36:	Field Sketch Map of Site 6690	112
Map 37:	Sketch Map of Site DPW-34, From Field Notebook	115

LIST OF TABLES

Table 1:	U.S. Army Garrison, Hawaii Sub-Installations	3
Table 2:	Tax Map Key (TMK) Designations for the Training Areas at DMR	12
Table 3:	Field Visits made to DMR	22
Table 4:	Tax Map Key (TMK) Designations for the Nine Training Areas at KTA	25
Table 5:	SCS Summary of KTA Sites, as of Mid-2007	26
Table 6:	Field Visits Made to KTA	30
Table 7:	Tax Map Key (TMK) Designations for the Training Areas at KLO	32
Table 8:	Tax Map Key (TMK) Designations for MMR	33
Table 9:	Field Visits Made to MMR	34
Table 10:	Field Visits Made to SBW	64
Table 11:	Field Visits Made to FSM	86
Table 12:	Field Visits Made to DRD	106
Table 13:	Curation Activities for First Quarter 2009	131

LIST OF FIGURES

Figure 1:	Site 5487, Feature 2, and Protective Fencing	15
Figure 2:	Site 5487, Feature 7, and Existing Roadway	16
Figure 3:	East Range and Wahiawa Town, 1933	36
Figure 4:	East Range and Wheeler Field, April 1943	38
Figure 5:	The Hawaiian Air Depot (HAD) and Dole Siding	40
Figure 6:	Wai`eli Gulch Runway, Part of HAD, 1945	44
Figure 7:	West Range and the Impact Area at Schofield Barracks	46
Figure 8:	Esme Hammerle on Top of South Opening of Underground Trainer	52
Figure 9:	Cultural Monitor Site, Feature 1, Boulders in Stream Bed	53
Figure 10:	Zulick and Hammerle at Feature 2	54
Figure 11:	Shoot House, Under Construction	55
Figure 12:	Hale`au`au <i>Heiau</i> , Site 215	61
Figure 13:	Hale`au`au <i>Heiau</i> , at Left	61
Figure 14:	UXO scattered on flat just to south of Hale`au`au <i>Heiau</i>	62
Figure 15:	More UXO, a 155mm artillery shell at center	62
Figure 16:	Start of Construction of New Housing at AMR, 2008	71
Figure 17:	Existing Housing and New Construction Area at AMR	71
Figure 18:	AC Unit Pad Foundation	78
Figure 19:	Stockpile Remnant in Profile	79
Figure 20:	The Electrical Conduit Trench South of the Sidewalk	79
Figure 21:	Plan for Road Improvement at the Post Cemetery, 1945	81
Figure 22:	The Entry Driveway into the Post Cemetery	83
Figure 23:	The Cavalry Drill Field at Schofield, September 1921	90
Figure 24:	The First Canvas Hangars at Wheeler Field, April 1922	91
Figure 25:	The First Wheeler Field, 1930	92
Figure 26:	Wheeler Field Flight Line, 1935	94
Figure 27:	Wai`eli Gulch Runway, from the West	95
Figure 28:	Damaged Section of Existing Sea Wall at PAR	97
Figure 29:	Cable for Video System at Fort DeRussy	102
Figure 30:	WAS and Kipapa Army Airfield, April 1943	107
Figure 31:	Site 6690, Central Corner of Feature 1 Terrace	111
Figure 32:	Lithic Scatter, DPW Site 34	113
Figure 33:	DPW Site Form for New Find in Upper Mākaha Valley	114
Figure 34:	Two Fine-Grain Basalt Fragments, Collected at DPW Site 34	116
Figure 35:	Final Graphic Used for One of the 24x36-Inch Enameled Outdoor Signs	125
Figure 36:	Permanent Signage at the Canby Neighborhood	128
Figure 37:	Salvaged Items Stored in Conex, at SBE	132

CONTENTS

ABSTRACT	iii
LIST OF MAPS	v
LIST OF TABLES	vi
LIST OF FIGURES	vii
INTRODUCTION	1
DILLINGHAM MILITARY RESERVATION (DMR)	11
KAHUKU TRAINING AREA (KTA)	23
KAWAILOA TRAINING AREA (KLO)	31
MAKUA MILITARY RESERVATION (MMR)	33
SCHOFIELD BARRACKS / EAST RANGE (SBE)	35
SCHOFIELD BARRACKS / WEST RANGE (SBW)	46
SCHOFIELD BARRACKS / SOUTH RANGE (SBS)	65
CANTONMENT AREAS	69
Aliamanu Military Reservation (AMR)	69
Helemano Military Reservation (HMR)	72
Schofield Barracks Cantonment (SBC)	74
Fort Shafter Military Reservation (FSM)	86
Tripler Army Medical Center (TMC)	88
Wheeler Army Airfield (WAA)	90
RECREATION AREAS	96
Mokuleia Army Beach (MAB)	96
Waianae-Kai Military Reservation (PAR)	96
Fort DeRussy Military Reservation (FDR)	99
MILITARY PROJECTS OFF ARMY LANDS	109
OUTREACH ACTIVITIES	117
CURATION ACTIVITIES	131
OPERATIONS AND TRAINING	133

REQUESTS FOR INFORMATION AND ASSISTANCE	135
APPENDIXES	141
A) Copies of consultation and official correspondence	141
B) Articles and other reports	189
REFERENCES AND SOURCES	209

INTRODUCTION

This report documents the combined field and research activities of the seventh and eighth years of this project. The Cultural Resource Section's normal 'year' or fiscal year starts on the 1 June and ends on the 31 May. The present document, then, is a combined report covering the two-year period from June 2007 to the end of May 2009. Projects initiated during this period that continued into the following reporting period(s) will be discussed in introduction only.

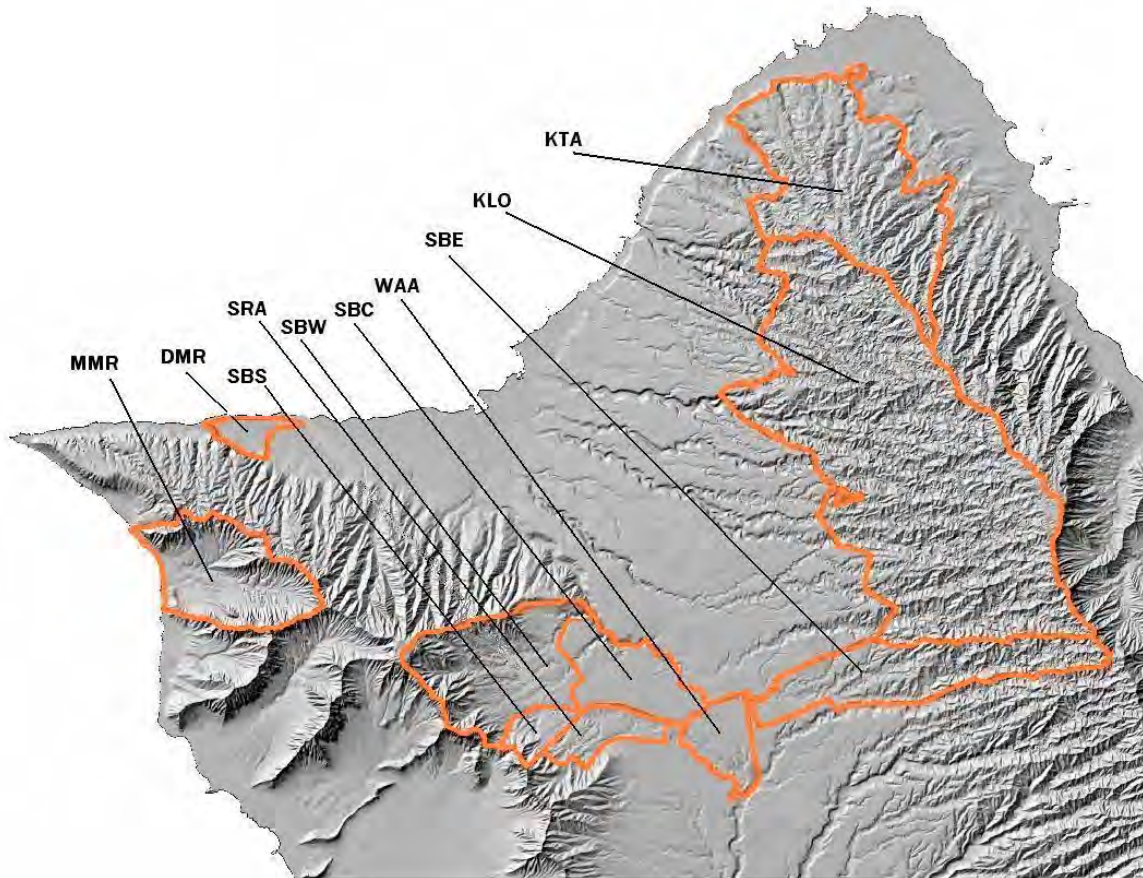
These actions are undertaken on behalf of the U.S. Army, on lands owned and/or controlled by the Army, on the Island of O`ahu. The present report specifically addresses those project elements and activities as they are outlined in the Cooperative Agreement section entitled Cultural Resources Management. The provisions and details of that cooperative agreement are specified in the Scope of Work (SOW) for the ECOSYSTEMS MANAGEMENT PROGRAM at Various Training Areas, Island of O`ahu (as revised 8 June 1998). The revised Ecosystems Management Program SOW calls for a wide variety of Natural Resources and Cultural Resources Management actions to be undertaken on behalf of the U.S. Army on lands owned and/or controlled by the Army in the State of Hawai`i, on the islands of O`ahu and Hawai`i. It was on the basis of that Cooperative Agreement with the Pacific Cooperative Studies Unit, University of Hawai`i (PCSU), that a Cultural Resources Section (CRS) was added in the spring of 1999. The new Cultural Resources Section, under the direction of the garrison's Cultural Resources Manager became part of the garrison's Directorate of Public Works (DPW) - Environmental Division's Conservation and Restoration Branch.

The present report specifically addresses those project elements and activities as they are outlined in the SOW, *Section 5. Part c, sub-parts (1) and (2) - Cultural Resources Management*. The Cultural Resources Section was implemented as part of the DPW Environmental Division's Conservation and Restoration Branch in June 1999, with the hiring of two Cultural Resource Specialists on O`ahu. The new CR Section was set up as a smaller version of the previously established and much larger Natural Resources Section, which initially shared office space and facilities with that group. In February 2004, three more Specialists were added to the CR Team after a move to the Environmental Division's main offices at Building 105, Wheeler Army Airfield. Also during this period, the Conservation and Restoration Branch added a full-time federal Government Service (GS) O`ahu Archaeologist.

The Cultural Resources Section crew has grown from two in 2003 to seven by mid-year 2007, with the addition of Carly Anton, Alton Exzabe, Laura Gilda, Moana Lee, Jill Sommer, and Jamie Raduenzel, David Cox, as well as two part-time and five temporary hires.

The goal of the Cultural Resources Section of the U.S. Army's Ecosystem Management Program, of which we are a part, is to provide those research and support activities needed to conserve, protect, and enhance the cultural and historical resources of Hawai'i in general, and specifically, those that are found on Army lands. In practice, this means balancing compliance with federal and state Historic Preservation laws and regulations with improving the Army's ability to conduct training and maintain military readiness.

The primary Army lands considered for our investigation and protection of resources are the current eight major training areas and ranges on O`ahu, as shown on Map 1.



Map 1: The Eight Major Training Areas (plus SBC and WAA) on O`ahu.

In general, these active training areas and live-fire ranges are the properties most likely to be impacted by the result of the regular and recurring military field and range training activities of the 25th Division and others. It has also been shown by numerous past field investigations that, of all Army-controlled properties on O`ahu, it is these larger tracts that still have the biggest sections of

mostly undeveloped and relatively undisturbed areas. Consequently, these training areas have proven to be the most likely to have the surviving cultural, archaeological, and historical properties that require our identification, documentation, and protection.

The garrison’s Cultural Resources Management Program (CR) also has responsibility for the historical and cultural properties on the additional remaining 16 Army sub-installations on O`ahu, as well as the six on the island of Hawai`i. The latter group of six are under the care of the DPW Environmental Division’s separate Cultural Resources Section team, based at Pohakuloa Training Area (refer to Table 1, below).

The most recent property addition on O`ahu is the South Range Land Acquisition (SRLA, now SRA). It is located immediately south of Schofield Barracks, east of and adjacent to the existing South Range. The Army purchased this 1,402-acre parcel in the northernmost section of Honouliuli District in 2005. The majority of the flatter portions of this potential training area had been almost entirely commercial plantings of pineapple for nearly a hundred years, until 2004. Planning for a variety of projects and uses at SRA is underway, with one project now completed – the new live-fire Qualification Target Range 2 (QTR-2).

Table 1: U.S. Army Garrison-Hawaii Sub-Installations

<u>ISLAND OF O`AHU (23)</u>	<u>Abrv.</u>	<u>Estb.</u>	<u>Acquired</u>	<u>Acreage</u>
TRAINING AREAS (8)				
Dillingham Military Reservation	DMR	1942	1974	664
Kahuku Training Area	KTA	1942	2004	9,480
Kawailoa Training Area	KLO	1955	(leased)	23,310
Mākua Military Reservation	MMR	1941	1943	4,190 (fee&leased)
Schofield Barracks / East Range	SBE	1909	1909	5,154
Schofield Barracks / West Range	SBW	1909	1909	4,131
Schofield Barracks / South Range	SBS	1909	1909	4,144
Schofield South Range Acquisition	SRA	2005	2005	1,402
CANTONMENT AREAS (6)				
Aliamanu Military Reservation	AMR	1915	1915	538
Helemanu Military Reservation	HMR	1943	1943	290
Schofield Barracks / Cantonment	SBC	1909	1909	1,605
Fort Shafter Military Reservation	FSM	1899	1899	592
Tripler Army Medical Center	TMC	1944	1944	367
Wheeler Army Airfield	WAA	1927	1927	1,370
RECREATION AREAS (3)				
Fort DeRussy Military Reservation	FDR	1902	1902	73

Mokulē`ia Army Beach	MAB	1942	1974	17
Wai`anae-Kai Military Reservation	PAR	1918	1918	14

OTHER USE AREAS (6)

Kipapa Ammunition Storage Site	KAS	1944	1944	402
Kunia Field Station	KFS	1943	1948	95
Mauna Kapu Communication Station	MKS	1961	1965	16
Pūpūkea Pa`ala`a-``Uka Military Road	DRD	1935	1935	109
O`ahu Signal Trunking System	OTC	1937	1937	10
Waikakalaua Ammo Storage Site	WAS	1944	1946	312

HAWAII ISLAND (6) [not covered in this report]

TRAINING AREAS (2)

Pohakuloa Training Area	PTA	1938	1955	108,045
Ke`āmuku Maneuver Area	KMA	2006	2006	24,013

CANTONMENT AREAS (2)

Kawaihae Military Reservation	KMR	1956	1956	11
SFC Kuneida Army Reserve Center	RCH	1960s	1960s	4

RECREATION AREAS

Kīlauea Military Camp	KMC	1916	1921	72
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OTHER USE AREAS

Kawaihae Tank Trail	KTT	1956	(easement)	24+ mi.
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[Note: all dates provided by the DPW Real Estate Division].

An interesting comparison of the current Army training areas and other land uses, as shown on Map 1 and listed above, is now possible with the discovery of a copy of a 1944 map. This map was among the items acquired from the DPW Engineering Division when they completed a review of their entire archive of older construction plans and drawings in late 2004 and 2005. At that time, they had amassed material numbering as many as a few hundred thousand sheets. Their collection had been housed at Building 113, Wheeler Army Air Field (WAA). As they scanned items, we received those that were discarded, and our office has kept approx. one-third of those items we have reviewed since 1999. The items we have retained are an assembly of plans and construction drawings, detailing buildings and later changes. The June 1944 map by the Headquarters, Central Pacific Area, is titled TRAINING AREAS, CAMPS AND CENTERS. In spite of having been assembled from a series of poor quality scans, it is very informative.

Map removed to protect rare resources. Available upon request

Map 2: O`ahu Training Areas, Centers and Camps, June 1944. (Hatched areas indicate Impact Areas)

The number and extent of the numerous WWII-era active Army-utilized properties on O`ahu is impressive. There were 18 training areas and four training centers (seven of these included impact areas), six camps, four ranges and three separate impact areas, as well as 11 previously established forts and other installations. This tally does not include those gunnery ranges dedicated strictly to off-shore target training, such as those at Camp Makakole (once part of the Barber's Point Training Area), or the Ka`ena Point Anti-Aircraft Artillery Training Range (then part of the much larger Mākua Training Area), nor does the 1944 map include any of the seven Army air fields that were active at that time.

As stated above, the Cultural Resources Management Program, as outlined in the SOW, consists of a series of interrelated research projects and activities that form the basis for the research and undertakings of the CR Team. These duties and projects call for the implementation of the actions necessary for compliance with various laws and regulations governing possible impacts the Army's actions might have on historical properties or cultural resources found on Army lands.

The range of the majority of activities performed by the CR Team in meeting the program goals, and which are presented in this report includes:

- Reconnaissance Field Inspections
- Site Identification, Documentation, and Assessment
- Field Inventory Surveys (Level 1)
- Area of Potential Effect (APE) Determinations
- Preparing and Staffing Section 106 and Consultation Documents
- Relocation and Documentation of Previously Identified Sites (using sub-meter GPS)
- Site Monitoring (either for construction impacts or periodic revisits to specific selected sites)
- Literature Searches (tracking down historic records and documents)
- Review of Proposed Army Actions:
 - planning documents and construction proposals (REC)
 - all excavation activities
- The Review and Monitoring of Troops (individual units):
 - field training plans
 - construction activities (not covered by REC)
 - maneuvers and field exercises in sensitive areas
- Assisting and Supporting:
 - Range Division and ITAM maintenance and improvement activities
 - Natural Resources Program activities
 - other contract archaeologists working on large Army construction projects
 - consulting parties and general researchers

- Establishing and Managing Various In-House Research Databases, Reference Materials, Archival, Artifact and Other Collections.

One of the CR Team’s primary functions is to assist in maintaining compliance with the requirements of the National Historic Preservation Act (NHPA). If a cultural resource/site/building/structure’s status is Listed on the National Register (NR), is a National Historic Landmark (NHL), is Eligible, or Needs Determination of Eligibility (DOE), a cultural resources consultation (Section 106 Consultation) must be conducted before an undertaking can take place. An “undertaking” is defined as follows: “a project, activity, or program funded in whole or in part under the direct or indirect jurisdiction of a federal agency, including those carried out by or on behalf of a federal agency; those carried out with federal financial assistance; those requiring a federal permit, license or approval; and those subject to state or local regulation administered pursuant to a delegation or approval by a federal agency.”

Status terminology is identified as:

- NR Listed – listed on the National Register of Historic Places
- NHL – listed as a National Historic Landmark
- Eligible – evaluated as eligible for the National Register
- (will be treated as NR Listed)
- Not Eligible – evaluated as not eligible for the National Register
- Needs DOE – needs to be evaluated for National Register significance
- Bldgs < 45 Yrs – no consultation necessary
- Demo – building has been demolished

Cultural Resources Crew and Product Evolve

As the size of Cultural Resources Section crew has grown since early 2004 from two to seven personnel, with the addition of Carly Antone , Alton Exzabe, Laura Gilda, Moana Lee, Jill Sommer and Jamie Raduenzel, it has become apparent that the past annual reports are being utilized more and more as in-house references for our own research and planning for further field work, consultations, support of outside contractors, and additional data collection.

These annual reports have grown to be working documents that are more than just ‘deliverables’ at this point. They are now the most readily accessible grouping and documentation of the record of our previous activities.

The earlier format of all of the previous annual reports had been based directly on the sub-parts of the original SOW, so the Annual Reports took the form of a series of chapters based primarily on function—that is, as a discussion of the

activities that had been undertaken to meet the requirements as specifically outlined in the SOW—rather than being based primarily on location, project, area, or installation. The chapters, therefore, were organized by kind or type of action, and were collections of similar research activity undertaken anywhere on garrison lands or areas used by the Army, even off Army lands. Early on, when there were initially only two crew members, this format was found to be adequate as a deliverable. The two personnel generally worked together as a field team (a requirement of the safety SOP) and knew the details of the majority of the data collected, or co-wrote the field reports and findings, and, therefore, jointly knew the whole ‘record.’ Once the size of the crew grew larger, to the point that individuals were assigned to specific projects, areas, or sub-installations, it became much more difficult for any one person to stay abreast of the details of current (let alone past) activities of the rest of the larger crew. It is apparent that when a crew member needed data or information about something outside their own ‘area’ or *kuleana* (responsibility, concern, province), the older reports were still a useful source for an item of specific or detailed data; however, those reports are proving to be more difficult to use if one requires a general overview of past activities and findings about a specific sub-installation. At present, the first choice of action is an enquiry directed to the ‘lead person’ assigned to that ‘area’ or project.

The individual author of an item or section will be indicated by initials in brackets at the end of the section: i.e., Carly Antone [CA]; Alton Exzabe [AE]; Laura Gilda [LG]; Moana Lee [ML]; Jill Sommer [JS] and Jamie Raduenzel [JR]. David Cox wrote those sections where brackets are not found.

The general layout has been redesigned for these annual reports. In an attempt to make the presented data and information more readily accessible, as well as simplifying the reporting process, the main chapters are now organized geographically, or by sub-installations, as they are grouped in Table 1.

Most of our attention and field research activity has been directed at the large major training areas as discussed above, so a full chapter will be devoted to each of those training areas. The chapter sub-sections will consist of a short introduction of the training area or sub-installation and its relationship to the general section and district of O`ahu.

Where appropriate there will also be a discussion of:

- A) Pedestrian (reconnaissance) or other archaeological Inventory Surveys. These are often done in response to a Request for Environmental Consideration (REC), used for smaller construction-type proposals from within the garrison
- B) Ongoing Periodic Monitoring of selected sites or Construction Monitoring during construction projects. These are often larger Military Construction Contract (MilCon) projects that include subsurface excavations

- C) Summary and updating of the Archaeological Site Database & Geographic Information System (GIS) maintained by the CR Section
- D) Prioritization of remaining unsurveyed areas, indicating where additional research efforts should be directed
- E) Data, information, support, or other assistance provided to and shared with U.S. Army units, other Military groups, the public, and others
- F) Sites added to the inventory during this reporting period
- G) Other activities.

The rest of the 15 O`ahu sub-installations are covered in a chapter with sub-sections for each grouping, again as categorized in Table 1. This is followed by additional chapters as needed for the discussion of other activities and undertakings.

Within all of these chapters, there will still be documentation of those functional research activities called for in the SOW, as listed in A) to F) above, undertaken during the period in question. An outline of those major research components (taken from a previous CR Annual Report, November 2005:2-5) is presented here. The specific project elements performed under provisions of Section 5.c of the SOW for the Cultural Resources Management Program, are briefly summarized by sub-section below and are expanded on in the body of the report:

- **Section 5.c (1)(a&b)** of the contract specifies that pedestrian (reconnaissance) archaeological inventory surveys will be performed in training ranges and other sub-installations on O`ahu.
- **Section 5.c (1)(c&g)** calls for an ongoing Periodic Monitoring Program, to collect and assess information regarding the effects of various impacts to cultural resources at selected archaeological sites.
- **Section 5.c (1)(d)** provides a summary of the Archaeological Site Database created and maintained in Microsoft Access. This section also explains the Geographic Information System (GIS) data set.
- **Section 5.c (1)(f)** contains the assessment and prioritization of remaining unsurveyed areas within U.S. Army training ranges and sub-installations.
- **Section 5.c (2)** summarizes the data and information provided to and shared with U.S. Army units and groups.

All Cultural Resource Management projects undertaken are designed, planned, and executed in compliance with the requirements of the following regulations, laws and statutes:

- Sections 101, 106, and 110 of the National Historic Preservation Act (NHPA) (36 CFR 800) & (16USC 470-470w)
- The Archaeological Resources Protection Act (ARPA) (32 CFR 229) & (16 USC 470aa-470ll)
- The Native American Graves Protection and Repatriation Act (NAGPRA) (46 CFR 10) & (25 USC 3001-1013)
- Army Regulation AR-200-4, Cultural Resources Management
- Curation of Federally Owned and Administered Archaeological Collections (36 CFR, Part 79)

DILLINGHAM MILITARY RESERVATION (DMR)

Introduction

Dillingham Military Reservation (DMR), with its airstrip and designated training areas, occupies the lowland portions of three traditional land divisions, or *ahupua`a* in the Mokulē`ia section of the *moku* (or District) of Waialua. These are the *ahupua`a* of Ka`ena (a small area at the west of DMR), Keālia (at center—Training Area P3 and part of P1 and P2), and Kawaihapai (to the east) (Map 3).

The Tax Map Key (TMK) designations for the three training areas and the shared sections of DMR are shown in Table 2.

Table 2: Tax Map Key designations for the Training Areas at DMR

<u>Training Areas</u>	<u>TMK</u>
P – 1	1- 6 - 8 – 002: 018
P – 2	1- 6 - 8 – 002: 018
P – 3	1- 6 - 8 – 002: 018, and the inland part of 6 - 8 – 014: 001
Cantonment and Airfield	1 - 6 - 8 – 014: 001

Although the Army technically owns all 664 acres of DMR on the flats inland of Farrington Highway, the main airstrip, the old WWII Cantonment, and the airfield operations area at the west end of the runway are presently shared with the State of Hawai'i Department of Transportation under a lease agreement. These sections at the west end of the airstrip are used for private light aircraft operations, hangars, and open storage of private airplanes. The activities there also include commercial flight services for gliders and flight training. The grassy area at the opposite (east) end of the main runway is reserved for the operations of skydiving schools and their drop zone.

Today, the Dillingham Military Reservation is divided into three training areas for Army training and scheduling purposes (Map 3). DMR is designated as a No-Live-Fire area, meaning only small-caliber blank rounds can be used here. Training Areas P-1 and portions of P-2 and P-3 are used fairly often for training by small ground units, and regularly for helicopter and Air Assault practice and training activities. There are occasionally larger unit maneuvers and bivouac use at DMR as well. Field training exercises involving as many as two battalions have trained here for periods of up to three weeks in the past.

Consultation regarding Protective Works for Vegetation Clearance

Project Description

A letter dated 25 April 2007 from the Director of DPW on behalf of USAG-HI, to SHPO and interested parties, opened consultation regarding protective works for sites at Dillingham Military Reservation (DMR) (refer to Appendix A-1, page 141). The project was initiated to mitigate possible impacts to cultural resources during required vegetation clearance for the expansion of existing firebreaks in accordance with the "10-20-30" Firebreak Specification rule. The "10-20-30" rule calls for removal of all flammable vegetation within 30 feet of the inside of the

existing 20-foot-wide training area perimeter road (or other area used for training) and from within 10 ft. of the outside of the road.

The protective works mitigation plan includes: limiting vegetation clearance to hand tools and utilizing only a towed chipper for mulching cut vegetation; committing an archaeological monitor to the project, who will direct the clearance crew in working near all identified sites; installation of orange safety fencing (attached to t-posts) prior to commencement of the clearance project; and, later, the installation of Siebert stakes as a permanent indicator (used Army-wide) marking areas that will be off limits to training. The protective works are described in detail in the Section 106 letter for the following locations: an unrecorded historical ditch, Site 5485, and Site 5487 (incl. various portions of Feature 2, Feature 4, Feature 7, and an unrecorded wall likely an extension of Feature 7).

Summary of Cultural Resources Management Action

Locations that required protective works within the vegetation clearance project were identified by Cultural Research Specialists through research of documented surveys (McGerty and Spear 2001; McGerty and O'Rourke 2005) and a series of more recent archaeological field inspections.

In response to an 11 May 2007 letter from the SHPO, the garrison replied on 7 June 2007, clarifying questions raised by the SHPO. That garrison response is attached as Appendix A-2, page 146.

An archaeological survey of approximately five acres at DMR, on the east side of the old runway, was conducted on 10 October 2007 by DPW Cultural Resource Specialists. Transects approximately 10 meters wide were conducted in a north/south direction. No historical properties were encountered. The area was highly disturbed, with push-piles of rock, soil, concrete, and other rubble observed. Military use of the area was evident, with trash, MREs, and communication wires present. Modern irrigation ditches (with concrete culverts), trails, and jeep roads were present throughout the area.

Upon completion of these preliminary assessments, DPW, on behalf of USAG-HI, continued the 106 consultation for this firebreak project with another letter on 7 November 2007, a copy of which may be found in Appendix A-3, page 148, (includes Map 4, below).

Summary of Later Consultation

The State Historic Preservation Division (SHPD) provided later comments in a 22 December 2008 letter, stating that, had they responded in the allotted time period, their comments would have been: "Provided that all protective works

offered in the protection plan are adhered to, we concur with the Army Garrison's determination that there would be "no adverse impacts to historic properties." In a 20 November 2007 letter, the Office of Hawaiian Affairs (OHA) recommended all work be conducted without the use of heavy machinery and requested that OHA and SHPD be notified, should significant cultural deposits and or human skeletal remains be encountered (Appendix A-4, page 152).

Map removed to protect rare resources. Available upon request

Map 4: Proposed Firebreak Road and Protective Works.

Project Status

On 15-16 January 2008, Cultural Resource Specialists erected the orange fencing and t-posts at seven areas: five areas in Site 5487, one in Site 5485, and one in the area of the unrecorded site.



Figure 1: Site 5487, Feature 2 and Protective Fencing.



Figure 2: Site 5487, Feature 7, and Existing Roadway.
This view was taken before any vegetation had been cleared.

Between 14-30 April 2008, archaeological monitoring of the vegetation clearance project in the segment D and E areas to the southeast was conducted by a DPW Environmental Division Cultural Resource Assistant. Below, Adam Thompson discusses the field monitoring and findings in his 2 May 2008 Memo for the Record (MFR) of that phase. That MFR is attached as Appendix A-5, page 154.

Summary of Findings

A modern asphalt road that traversed the entire extent of segment E was relocated, and a large stone rubble pile, likely from the clearance of the area for the construction of the road, was located beyond the edge of the vegetation clearing corridor. Fence posts marking the edge of the existing roadway, remnants of a drainage feature, an old water pump, large metal machinery, and two long bones from a short-legged quadruped (likely a pig) were also encountered. One out-of-context adze perform was located. Site 5480, located at the southern region of segment E, remained undisturbed by the project. Vegetation clearance in segment D posed no threat to culturally significant resources, as it occurred on the edge of revetments that stuck into the 60-ft. corridor.

Archaeological monitoring of segment C was performed by a cultural resource assistant between 1-30 May 2008. Between 1-30 June 2008, archaeological

monitoring of segments A and B were conducted by a Cultural Resource Specialist. The archaeological monitor assisted with clearing the cut vegetation from sites located in the project area to ensure stones were not displaced. Once cleared, sites were photographed and their locations plotted with a GPS. Stone terraces perpendicular to the road, stone wall features, and concrete footings were identified within segment C. A multitude of archaeological sites were identified beyond a berm bordering the roadway in segments A and B. These sites were surveyed by Scientific Consultant Services (SCS) in February 2008. Sites 5485, 5487, and the other sites located in the project area remained undisturbed by the clearing activities in segments A-C.

Monitoring of vegetation clearance within segment E for phase II of construction of the firebreak road at Dillingham Military Reservation, as part of the Integrated Wildland Fire Management Plan between 14-30 April 2008, was performed by Cultural Resource Assistant Adam Thompson. The vegetation clearance was performed by Glad's Landscaping & Tree Trimming, Inc. for the construction of a firebreak road around part of the Dillingham Military Reservation. The area of vegetation clearance had been referred to as segment "E" during previous consultation. Guidelines for the manner in which vegetation clearance was to be conducted in segment E was detailed in paragraph 5 of Section 106 letter dated 25 April 2007.

Vegetation clearance began at B Gate (or Bravo Gate) and continued south (magnetic) along the berm and ditch boundary separating the existing farmed area (to the east) from the military lands of DMR. As the corridor of vegetation clearance followed this berm and ditch boundary, it was assured that a relatively large portion consisted of disturbed land, with barbed-wire fencing as the dominant feature along one side. The other half of the area along this corridor held greater potential for cultural features. Surveying was performed ahead of vegetation clearance to locate any cultural materials before they would be affected, as the initial result of vegetation clearance was a thick mat of cut limbs and vegetation, through which it would be impossible to see any cultural features. Once a cultural feature in or near the corridor was located, it was hand-cleared, photographed, flagged and recorded before the landscaping crew began their work, allowing the area around it to be cleared of vegetation and the feature to be left exposed. Monitoring was performed to ensure that no features would be buried by cut vegetation and go unnoticed. The beginning of the corridor (the north end) had many trees, providing good surface visibility beneath a canopy of woven limbs. Thus the area of heaviest vegetation, and hence the area most affected by vegetation clearance, provided the best visibility for the locating of archaeological features.

Beyond the first 150 meters, the ground cover turned to thick grass, providing poor surface visibility, and monitoring was consequently performed alongside grass clearance. As the Guinea Grass was cleared away, a roadway was revealed, only exposed as the vegetation thinned. Following the roadway, it

continued along the berm and ditch boundary throughout the corridor. To the north, where vegetation clearance began, the road lay under a humus layer a few centimeters thick, preventing it from being seen earlier; however, once known, this buried roadway was clearly decipherable from the raised landform covering it. A transect was later cleared to demonstrate that the road did indeed traverse the entire extent of segment E. It is this road, then, that must be referred to in the 106 consultation letter, which states: "the objective of clearing segment 'E' is to reclaim the previous road." A 1998 satellite photograph shows the roadway clearly at that time, only 10 years before. The road was completely surfaced by asphalt and is very modern; however, in the tropical climate of Hawai'i, it took only a decade for the road to be overgrown and 'lost' when unmaintained.

According to the "10-20-30" specifications for firebreaks as specified by the Director of the Installation Fire and Safety Office, "...vegetation would be cleared 10 feet on the outside of the firebreak road, the road itself serves as 20 feet of access width and 30 feet would be cleared of vegetation inside of the firebreak road..." as stated in paragraph 6 of the Section 106 consultation letter. In the context of these specifications, the outer 30 feet of the corridor represented land disturbed by the construction of the modern road and the berm and ditch boundary. Surveying and monitoring, therefore, focused on the inner 30 feet of the corridor of vegetation clearance.

A large pile of stone rubble was located early on, just beyond the edge of the corridor. This pile of stone is believed to have been a push-pile caused by the clearance of the area by bulldozers due to marks on some stones that appear to be the result of impact with the bulldozer blade. The pile is made up of stones, concrete, barbed wire, electrical wire, and cinder blocks. Its composition appears to represent material from the historical or modern military era. Approximately 20 meters in the direction away from the corridor, remnants of a structure of sheet metal construction may be associated with this push-pile, corroborating the age of the feature. Beyond the feature listed above, some large, metal machinery was located and photographed. One piece appeared to be the axle from a large truck from the 1940s. The bulk of the debris was a large pipe. These features were all well-outside the corridor. Also found were two long bones from a short-legged quadruped, believed to be a single wild pig, based on evidence for their presence in the area. Such pigs are hunted on the nearby ridge. Along the roadway, fence posts marked a former boundary, and the remains of a shallow drainage ditch paralleled its path, with an old water pump still remaining. These features likely represent a former farm/plantation road that marked the land boundary. The drainage and water pump support the belief that the farm was used for sugarcane. The hubcap of a Dodge Dart, dated to the 1970s, show that the road was likely in use at that time. These findings represent a relatively recent period of disturbance, and though an adze perform was discovered out of context, showing that the area was occupied in pre-contact times, no other features remained of the previous Hawaiian settlement. Such features were likely destroyed in the construction of the ranch, which was later disturbed by the

construction of the military, which was later again demolished and left as the rubble pile described above.

Site 5480, interpreted as a cattle chute, was located at the far southern region of segment E, farthest *mauka* (inland), along with associated features, including a stone wall along the drainage ditch and fence posts from the former cattle pen. All of these features lay in thick grass with little other vegetation needing to be cleared. There was, therefore, no threat of their disturbance. A two-track access road bypassed this site, allowing the workers to continue their work without needing to cross through the site.

In conclusion, the outer half of the corridor was found to be disturbed by a modern road, of which the focus of the project is to reclaim, and a berm and ditch boundary. The inner half of the corridor was thoroughly surveyed and no cultural features of any great significance found, other than site 5480, for which no threat of disturbance existed. According to these conclusions, there is no threat for the destruction of cultural materials in segment E of the firebreak road, and if necessary, the use of heavy machinery may be granted in future consultation so the buried road may be properly cleared and reclaimed, as is the objective of this phase of vegetation clearance. Adam Thompson, Cultural Resource Assistant.

Installation of Cautionary Signage

With the completion of the project for vegetation clearance of the expanded firebreaks, it was determined that a series of signs is needed to identify and protect the archaeological sites located along those firebreaks.

Project Description

The proposed undertaking involves installation of cautionary signage as an archaeological site protection measure along activity boundaries at Dillingham Military Reservation (DMR). An estimated 56 signs, attached to posts approximately 6 ft. in length and with concrete footings, will be placed at various locations on DMR. The signs will mark restricted areas to prohibit training and to limit the personnel and equipment allowed into the areas. No earth-moving activities are proposed, and no archaeological features will be disturbed. The signs will serve as protective measures for archaeological sites recorded by Scientific Consultant Services (SCS).

Summary of Consultation

A Section 106 letter dated 15 September 2008 was sent out to the SHPO and interested parties with a determination of “no historic properties affected” (Appendix A-6, page 158).

In a 12 October 2008 letter, the Office of Hawaiian Affairs (OHA) concurred with the USAG-HI determination of “no adverse effect” on historical properties.

A letter dated 29 September 2008 from Thomas Shirai stated, “I appreciate and concur with the Army’s signage project to protect the historical sites within DMR...[and] I support the Army’s efforts to protect the cultural and historical sites within Kawaihapai Ahupua’a ” . [AE]

A NAGPRA Situation at DMR

Between 30 Oct 2005 and 1 Nov 2005, a human mandible was recovered from sand at a Waialua residential house lot and reported by the homeowner. The homeowner had purchased a number of loads of sand from Stay and Sons. The sand had been delivered sometime between 2003-2004, after being excavated by Stay and Sons from a location at DMR. The human remains were initially taken into custody by HPD, then turned over to the State Historic Preservation Division (SHPO) - Burial Program when it was determined to be Native Hawaiian.

A 3 Nov 2005 article in the *Honolulu Advertiser* identified the sand as having come from DMR and, further, that it had been removed (without authorization) from the airfield area by Stay and Sons. They then illegally sold numerous loads of the DMR sand between 2003 and April 2005. The reporter was able to identify the sand containing the human remains as having been removed from within a small, fenced area just inland of the runway area, enclosing what had once been the Shirai family homestead (refer to Appendix A-7: DMR, SHPO Identification of Shirai Family Kupuna Burials, page 162).

An agreement between the SHPO and the U.S. Army Garrison-Hawaii (the land owner) resulted in the Army initiating the resolution of the situation through the steps of the NAGPRA process. The first action was consultation, resulting in identification of a single lineal descendant claimant of the recovered human remains. Then, following the approval from the garrison, a one-day notification in both the *Honolulu Advertiser* and the *Star Bulletin* was published as a final opportunity for additional claimants to come forward prior to disposition to the lineal descendant under NAGPRA:

“Notice of Intended Disposition

Notice is hereby given in accordance with the Native Graves Protection and Repatriation Act (NAGPRA), 25 U.S.C. 3002(d) and the implementation of regulations of 43 CFR 10.4 and 5, of a determination of affiliation and custody for human remains in control of the Hawaii State Historic Preservation Division with permission by the U.S. Army Garrison-Hawaii, Oahu, Hawaii.

Between October 25, and November 1, 2005 a single human mandible fragment was recovered from sands at a Waialua residence. The imported sands were purchased from Stay and Sons, a State of Hawaii Department of Transportation airport maintenance company at the time and had been intentionally removed from the Dillingham Airfield leased land at Dillingham Military Reservation. The sand was removed from a known burial area at Dillingham Military Reservation and within the Kawaihapai Ahupua'a; however the contactor claimed to be unaware of this area. The human remains were taken in custody by the Honolulu Police Department and immediately transferred to the State Historic Preservation Division.

Officials of State Historic Preservation Division have determined that, pursuant to 43 CFR 10.2 (d)(1), the human remains described above represent the remains of one individual of Native Hawaiian ancestry. Officials of U.S. Army Garrison-Hawaii have determined according to 43 CFR 10.6 (a)(1) that a relationship exists between the recovered human remains and Mr. Thomas Shirai of Waialua, Hawaii who is a documented lineal descendant of the area in accordance with 43 CFR 10.14(b).

Representatives of any other Native Hawaiian organization or individuals that wish to claim ownership or control of the human remains should contact Dr. Laurie Lucking, Cultural Resources Manager, Environmental Division, USAG-HI, 572 Santos Dumont Avenue WAAF, Schofield Barracks, HI 96857, telephone 6565-2878 extension 1052 before November 10, 2007.

Disposition of the human remains to Mr. Shirai will proceed after that date if no additional claimants come forward.

The USAG-HI is responsible for notifying Mr. Shirai of this published notice" (Appendix A8: DMR, Notice to Tomas Shirai, on page 163).

Table 3: Field Visits made to DMR.

<u>Date</u>	<u>Area/Site(s) Visited</u>	<u>By</u>	<u>REF , or Field Book Page</u>
10 Oct 07	survey, 5 acres, east of 'Bravo Gate'	CA & AE	MFR
15 &16 Jan 08	Installed Protective Fences	CA & AE	MFR
14 to 30 Apr 08	Monitoring Veg. Clearance, Area "E"	AT	MFR
1 May 08		DWC & ML	p. 8
1 to 30 May 08	Monitoring Veg. Clearance, Areas "A" through "C"	AT	MFR
5 Jun 08		DWC	p. 8

KAHUKU TRAINING AREA (KTA)

Introduction

Kahuku Training Area (KTA), with its nine designated training areas, occupies a roughly trapezoidal area of 3,839.4 hectares (9,480 acres) in the foothills at the northern end of the Ko`olau Mountain Range (Map 5). Up until the property was purchased by the U.S. Army in 2004, the inland area had been used for field training and other uses under a lease agreement with Campbell Estate since just before WWII.

Map removed to protect rare resources. Available upon request

Map 5: Training Areas at KTA, with 19 Sites Recorded to 1998.
(Area in yellow shows maximum extent of areas in Kahuku in Sugar Cultivation in 1924,
per Davis 1991)

All of the KTA property is located at an elevation of 100 meters (300 feet) or more, on the bluffs above the flats of the coastal plain. The upper edge of that steep-fronted bluff line roughly defines the boundary along approx. five kilometers of the north edge of KTA. The few relatively flat and open sections within KTA are found in the areas just back from that prominent bluff edge. These open areas are cut and separated by six steep-sided and narrow-bottomed, north-flowing (intermittent) stream gulches. The resulting narrow, triangular-shaped 'open' areas that are used most heavily for training and landing zones extend up-slope to the south no more than two kilometers. The boundary in the area to the northeast and toward Kahuku Town is characterized by a series of low, scattered hills and small, mostly dry stream beds. The remaining deeply dissected, hilly interior sections of the training area extend southeast just over 12 kilometers, along the northern end of the Ko'olau Summit Ridge. This forested upland section is a continuation of that seen in the Kawaihoa Training Area, adjacent to the south.

The KTA installation includes inland portions of 15 traditional (pre-*Mahele* - 1848) land divisions or *ahupua`a* in the northern half of the *moku* (or District) of Ko'olauloa. These *ahupua`a*, from west to east, are: Paumalu, Kaunala, Waiale'e, Pahipahiālua, `Ōpana (One and Two), Kawela, Hanaka`oe, `Ō`io (One and Two), Ulupehupehu, Punalau, Kahuku, Ka`ena, and Mālaekahana (Map 6).

Map removed to protect rare resources. Available upon request

Map 6: The *ahupua`a* Located at the Northern Tip of O`ahu.
Detail of map prepared by the Hawaiian Studies Institute, Kamehameha Schools, 1987.

With the exception of the two largest land units to the east, Kahuku and Mālaekahana, most of these are generally rather narrow *ahupua`a* confined to one gulch, stream, or ridge area. A few of these *ahupua`a* extended only a relatively short distance inland from the coast. This truncated form of coastal *ahupua`a* are rather unique, yet a number are found in this northern section of Ko`olauloa.

Table 4: Tax Map Key (TMK) Designations for the Nine Training Areas at KTA.

<u>Training Areas</u>	<u>T M K</u>
A – 1	1- 5 - 8 - 02 - 2, & 6
A – 2	1 – 5 – 8 – 02 – 2, 6 & 8, part of 1 – 5 – 8 – 02 – 1
A – 3	1 – 5 – 9 – 05, part of 1 – 5 – 9 – 06
B – 1	1 – 5 – 8 - 02 – 6, and 1 – 5 – 7 - 02 – 1
B – 2	1 – 5 – 7 - 02 – 1
C – 1	part of 1 – 5 – 7 – 04 – 1, part of 1 – 5 – 6 – 08 – 1, 2, 3 & 4
C – 2	part of 1 – 5 – 7 – 02 – 1, part of 1 – 5 – 7 – 04 – 1, part of 1 – 5 – 6 – 05 – 8
D – 1	part of 1 – 5 – 6 – 08 – 1 & 2
D – 2	part of 1 – 5 – 6 – 08 – 1 & 2

SCS Survey

A series of GPS field surveys of all the known and identified archaeological sites at KTA was initiated by SCS. The preliminary findings were presented in the summer of 2007 and are summarized in the following table. Their ‘Survey Area’ is the same as the KTA Training Areas listed above and on Map 3.

Table 5: SCS Summary of KTA Sites, as of Mid-2007.

<u>Temporary Site #</u>	<u>Survey Area</u>	<u>Site Type</u>	<u>Avg. Area - in Square Meters (m²)</u>	<u>Prob. Function</u>	<u>Notes Period</u>
TS-1	A1	Foxhole Complex	96 m ²	Military Foxholes	Historic-Modern Use
TS-2	A1	Terrace and Mound	145.5 m ²	Military Gun Placement	Historic-Modern Use
TS-3	A1	Foxhole Complex	468 m ²	Military Foxholes	Historic-Modern Use
TS-4	A1	Rock Concentration	600 m ²	Military Clearing Pile	Historic-Modern Use; Modifications Associated with Military Training
TS-5*	A1	Terrace/ Mound Complex	c. 33 m ²	Military Training; Residential?	Mounds are Historic-Modern; poss. Prehistoric Terrace.
TS-6	B2	Terrace Remnant	91 m ²	Retention/ Training	Possibly Associated with Sugar Cultivation or Military; Historic
TS-7	A1	Enclosure and Mounds	c. 36+ m ²	Residential / Agricultural Complex	Prehistoric; Early Historic Complex; A.D. 1740-1870 **
TS-8	A1	Rock Mound Complex	300 m ²	Clearing Mounds	Historic- Modern Era
TS-9	A1	Enclosure	13 m ²	Military Encampment/ Gun Placement	Historic; Military Training
TS-10	A1	Platform, Terraces, Enclosure	420 m ²	Military Training Complex	Historic-Modern Military Use
TS-11	A1	Terrace	10 m ²	Slope Retention for Road.	Historic Period
TS-12	A1	Terrace, Mounds, Wall Remnant, Foxholes	1500 m ²	Clearing Mounds, Training Features	Historic; Ranching & Military Features
TS-13	A1	Terrace	60 m ²	Road Retention	Historic Period.
TS-14	A1	Rock Concentration	20 m ²	Clearing Mound	Historic Feature with Prehistoric Flake
TS-15	A1	Rock Concentration	28 m ²	Clearing Features	Ranching Period
TS-16	A1	Rock-Lined Foxhole	8 m ²	Military Training	Historic-Modern
TS-17	A1	Modified Outcrop, Mound, C-Shape	572 m ²	Military Training	Military Use (Historic-Modern)
TS-18	A1	Rock Mound	9 m ²	Clearing Mound	Historic-Modern
TS-19	B1	Concrete Structure	15 m ²	Generator	Military, WWII-Historic Period
TS-20	B1	Terrace, Rock Mounds	872 m ²	Clearing / Road Retention	Historic-Military; Associated with Radar Station Construction.
TS-21	B1	Rock Mound	40 m ²	Clearing Mound	Historic Period
TS-22	B1	Rock Mound	20 m ²	Clearing	Ranching Period
TS-24	B1	Rock Mound	7 m ²	Clearing Mound	Historic-Modern; Mechanically Stacked.
TS-25	B1	Rock Mounds	c. 25 m ²	Clearing Mound	Historic-Modern; Mechanically Stacked.

TS-26	B1	Rock Mound	27 m ²	Clearing Mound	Historic Period; Also Used During Military Training.
TS-27	B1	Platform	21 m ²	Foundation for Water Tank	Historic Period
TS-29	B2	Fire Pits/ <i>Imu</i> Pits	15+ m ²	Food Preparation	Prehistoric; A.D. 1660-1790 **
TS-30	C2	Bunker & Concrete Slabs	100+ m ²	Coastal Defense	Military, WWII and Post-WWII.
TS-32	C1	Linear Rock Pile	54+ m ²	Clearing Mound	Historic-Modern
TS-33	C1	Rock Mound	52 m ²	Clearing Mound	Historic Period.
TS-34	C1	Wall, Modified Outcrops, Terraces, Rock Mounds, Ditch	264 m ²	Temporary Habitation, Agriculture/Ranching, Foxholes	Prehistoric (A.D. 1190-1310)** , Historic Ranching, Military Periods
TS-36	C1	Concrete Slab	10 m ²	Military	Military, Post-WWII?; Associated with Site 50-8-02-6537
TS-37	C1	Concrete Slabs	100+ m ²	Water Tank Support	Military, Post-WWII?
TS-40	C1	Concrete Slabs	300+ m ²	Structural Foundations	Military, Post-WWII?; Part of Site 6537, 1943, & Tent Camp
TS-41	C1	Concrete Slabs	Undeterm. (Buried Slabs)	Structural Foundation	Military, Post-WWII? Part of Site 6537
TS-42	C1	Trash Pits	Undeterm. (Not Tested)	Trash Deposits	Military, Post WWII-Modern
TS-43	C1	Concrete Slabs	50+ m ²	Structural Foundations	Military, Post-WWII? Part of Site 6537
TS-44	C1	Concrete Slab	Undeterm. (Buried)	Structural Foundations	Military Post-WWII? Part of Site 6537
TS-45	C1	Concrete Slab	38 m ²	Structural Foundation	Military, Post-WWII? Part of Site 6537
TS-46	C1	Rock Terrace	902 m ²	Retainment/Erosion Control	Military, Post-WWII?
TS-47	C1	Concrete Slabs	96+ m ²	Structural Foundations	Military Post-WWII? Part of 6537
TS-48	C1	Concrete Blocks	16 m ²	Structural Foundations	Military Post-WWII? Part of 6537
TS-49	C1	Concrete Storm Drainage	42 m ²	Erosion Control or Water Transport	Military, Post-WWII? Historic Period
TS-50	C1	Rock Mound	6 m ²	Clearing Mound, Pole Support	Military/ Historic-Modern
TS-51	B2	Agricultural Terraces, Mounds, Outcrops	65+ m ²	Agriculture, Temporary Habitation	Prehistoric; Near Site 9509
TS-52	B2	Rock Mounds	64 m ²	Clearing Mounds	Historic & Recent Military Use
TS-53	D1	Concrete Pillbox	6 m ²	Minor Fortress	Historic-Modern
TS-54	D1	Concrete Pillbox	6 m ²	Minor Fortress	Historic-Modern
TS-55	D1	Rock Mound	109 m ²	Plantation Clearing Mound	Historic; Mechanically Piled.

TS-56	D1	Fire Pit	Undeterm.	Trash Pit	Military, Modern Fire Pit
TS-57	D1	Rock Mound	80 m ²	Clearing Mound	Historic Period
TS-58	D1	Lithic Scatter	Boundary Undeterm.	Tool Manufacturing Loci	Prehistoric Period
TS-59	C1	Rock Mound	9 m ²	Clearing Mound	Historic Period
TS-60	D1	Rock Mound & Depression	55 m ²	Clearing Mound; Foxhole	Recent Military
TS-61	D2	Fire Pit	20+ m ²	Trash Deposit	Military-Modern
TS-62	D1/D2	Wall Segments	Full Extent Undeterm.	Boundary or Ranching?	Prehistoric-Historic
TS-63	B1	Rock Mound	15 m ²	Clearing Mound	Historic-Modern
TS-64	B1	Mounds and Terraces	100+ m ²	Clearing Mounds	Historic Period
TS-65	B1	Fire Pit (<i>Imu</i>)	Unknown (Remnant)	Food Preparation	Prehistoric; A.D. 1400- 1530; Native Species **
-----	-----	END	-----	-----	-----

*Note: In the sequence, some consecutive TS numbers are absent. These sites, originally designated, have been decommissioned or delisted as sites; Example: TS-23.

**All calibrated Radiocarbon dates are presented as 1 Sigma.

Map removed to protect rare resources. Available upon request

Map 7: Cultural Resources in Proximity to the CACTAF, KTA.

Planning for Additional Training Support Facilities

With increased training at Kahuku in the near future, there is a need for more robust fire control options and other environmental protection measures at the training area. Two projects are being proposed that will meet some of the requirements.

Dip Pond

A large 250,000-gallon Dip Pond is to be built to provide an onsite water supply for helicopter water drops in the event that a wildfire occurs at or near KTA. The facility will include a lined pond in-formed by a square berm (10 ft. high, measuring nearly 120 ft. on a side), access roadways and parking, and an adjacent helicopter landing pad. Appendix A-9, page 164 is a copy of the garrison's Request for Environmental Consideration (REC) for the Dip Pond Project. An REC is where the proponent presents the possible impacts of a project for a critical review. Each REC includes a description of the proposed project.

Summary of Consultation

A Section 106 letter dated 27 June 2007 was sent to SHPO and interested parties with a determination of "no historic properties affected" (Appendix A-10, page 165).

In a 12 October 2008 letter, the Office of Hawaiian Affairs (OHA) concurred with the USAG-HI determination of "no adverse effect" on historical properties for this project (Appendix A-11, page 170).

Tactical Vehicle Wash Facility

The other adjacent project being proposed for the future is the construction of a Tactical Vehicle Wash Facility. [LG]

Table 6: Field Visits made to KTA.

<u>Date</u>	<u>Area/Site(s) Visited</u>	<u>By</u>	<u>REF</u> , or Field Book Page
27 Oct 08	recon of proposed TWV location	LG & JP	
May 08	flaging feat.s along new road	LZ & DWC	29
2 Jun 08	flaging more feat.s along road	ML & DWC	30
29 Sep 08	checking barriers	ML & JR	

KAWAILOA TRAINING AREA (KLO)

Introduction

This large training area, totaling 9,440.6 hectares (23,310 acres), is used by the Army under lease agreements from a number of landowners. This section of O`ahu encompasses the northern half of the area between the Ko`olau Summit Ridge and the easternmost edges of the uneroded central plain or plateau. The latter are the *mauka* (inland) flats to the north and south of Wahiawa formerly used for commercial agriculture. Almost all of the Kawaiiloa Training Area proper is a rugged, undeveloped, forested upland, with the majority of the area designated as Forest Reserve. The whole area is characterized by deeply cut, narrow, tightly winding stream gulches, alternating with razor-top ridges. The gulches generally flow to the west, then to the northwest, and drain the large, dissected area in the immediate lee of the main Ko`olau Ridgeline. There is very little flat land anywhere in this large section, except in a few portions along the western edges (refer to Training Area KLO, on the 'Hill Shade' Map 1, page 2).

The Army has utilized a few small sections of these uplands for troop maneuvers in the past, but recently, the only regular activity performed there is helicopter flight training, including 'nape of the earth' flying, a specialized kind of low- to very-low-level training for 'stealthy' flight. The other major military use of the area at present is as a dedicated access corridor for Army vehicles between Schofield Barracks and Kahuku Training Area via the Army's restricted-access Drum Road (DRD). DRD is entered at the Helemano Gate 1 at the south end of HMR, and it extends to the north, entering KTA at McCormick Gate, inland of Pūpūkea on the North Shore of O`ahu. This military access route is discussed in greater detail in other sections of this report and in previous CRM Annual Reports.

All of the KLO Training Area is designated a No-Live-Fire area, meaning that only blank rounds can be used in any training undertaken here. In addition, the whole upland area is now strictly a No-Open-Fires zone, for obvious reasons.

In its present configuration, Kawaiiloa Training Area (KLO) is comprised of the upland portions of the seven traditional *ahupua`a* in the eastern half of the *moku* (district) of Waialua, and Waimea, which is the westernmost *ahupua`a* in the *moku* of Ko`olauloa (Map 5). From the north, along the southern edge of Kahuku Training Area, to the south, these *ahupua`a* are: Waimea, Kāpaeloa, Punanue, Kuikuiloloa, Lauhulu, Kawaiiloa, Pa`ala`a and Kamananui. Some of these *ahupua`a* have been combined since the 1920 redistricting, and the names may no longer be commonly used. The eastern third of Kamananui is now part of the redrawn Wahiawa District. Waimea remained the same but is now in Waialua District, and Kawaiiloa encompasses the rest.

Map removed to protect rare resources. Available upon request

Map 8: The *ahupua`a* of the Northern Half of O`ahu.
Detail of map prepared by the Hawaiian Studies Institute, Kamehameha Schools, 1987.

The Tax Map Key (TMK) designations for Kawaiiloa Training Area are shown in the following table, listed by the present sub-districts from south to north.

Table 7: Tax Map Key (TMK) Designations for the Training Areas at KLO.

<u>Sub-District</u>	<u>Land Owner</u>	<u>TMK</u>
Pa`ala`a `Uka	Dole Food	1 - 6 - 4 - 02 : 01
Kawaiiloa	Kamehameha Schools	1 - 6 - 2 - 11 : 01, 1 - 6 - 3 - 01 : 04, 1 - 6 - 1 - 07 : 01,
Waimea	OHA, <i>et al.</i>	1 - 6 - 1 - 02 : 02

MAKUA MILITARY RESERVATION (MMR)

Introduction

Makua Military Reservation (MMR) is a 1,697-hectare (4,190-acre) training area in the Wai`anae District. It is owned partially in fee (70.9 hectares, or 175 acres, only), with the remainder under lease from the State of Hawai`i. At one time during WWII, MMR included all four valleys at the western tip of O`ahu: Keawa`ula, Kahanahāiki, Mākua and `Ōhikilolo. Keawa`ula Valley, to the northwest, is no longer part of MMR, having been returned to the State for use as a beach park, as was the area at Mākua oceanside (*makai*) of Farrington Highway. `Ōhikilolo, to the east, where Camp Mākua was located during WWII, was returned to its private owners after the war.

Today, MMR can be characterized as two large, adjoining amphitheater valleys, each approx. one kilometer wide at their convergent mouths. This leads some to assume that they are viewing a single valley; however, Mākua Valley is the portion to the south, with Kahanahāiki Valley to the north. They are separated only at the back by a short, central ridge. The third section of MMR is just over another kilometer wide and is characterized by the steep oceanfront cliff face (*pali*) to the northwest. This is where the highway runs skirts the rocky shoreline, extending to Kaluakauila Stream, at the edge of Keawa`ula Valley, and “Yokohama Beach.” The ridgeline seen along the back of both valleys at MMR is part of the main Wai`anae Summit Ridge. In the two main valleys there are three intermittent streams that separate the central, sloping flat areas. The streams generally flow (only after sufficient rainfall) to the west and drain directly to the sea across the sandy beach.

Table 8: Tax Map Key (TMK) Designations for MMR.

<u>Sub-Unit</u>	<u>TMK</u>
Mākua Valley	1 - 8 - 2 - 01, & 1 - 8 - 2 - 02
Kahanahāiki Valley and Kahanahāiki Pali and Upland	1 - 8 - 1 - 01

The two valleys and the *pali* are large traditional land subdivisions (or *ahupua`a*). The south valley (or right half, when viewed from the sea) was the *ahupua`a* of Mākua. The section to the left of the central stream, or the north half of the ‘combined valley’ as well as the large block of mountains farther northwest to the next big beach area, make up what was the *ahupua`a* of Kahanahāiki.

The number of known archaeological sites documented to date at MMR stands at 119. These identified cultural resources include many multi-featured sites: six

heiau, a system of dry land (*kula*) agricultural terraces and shrines, habitation complexes, house platforms, enclosures, wells and springs (*puna*), trails, historical walls, ranch features, and military features from the era between the two World Wars (Antone and Exzabe 2006; Cox and Zulick 2002). The majority of these cultural resources are located in the valley floor and stream bottom areas rather than on the upper slopes or ridges (Map 9).

Map removed to protect rare resources. Available upon request

Map 9: Areas in MMR with Archaeological Sites.

Table 9: Field Visits made to MMR.

<u>Date</u>	<u>Area/Site(s) Visited</u>	<u>By</u>	<u>REF</u> , or Field Book Page
1 Sep 07	Public Access, w/ members of Malama Mākua, Hui Malama O Mākua, Koa Mana and representatives from OHA	CA & AE	
5 Sep 07	Site visits w/ SHPD representatives	CA & AE	
23 Oct 07	Site visit w/ SHPD representatives	CA & AE	

SCHOFIELD BARRACKS / East Range (SBE)

Introduction

This large training area of 2,087.4 hectares (5,154 acres) is the eastern part of the original 1909 Schofield acquisition. It lies in the present District of Wahiawa. Traditionally, this was the easternmost portion of the *moku* of Wai`anae, called Wai`anae ``Uka. For the population of the leeward coast, this inland section of land provided access to the resources that are unique to upland environments.

East Range is located just southeast of the town of Wahiawa in the central plain between the two main mountain ranges on O`ahu. It is a narrow strip of land, 12.5 km. long by 1-2.5 km. wide, extending between the Ko`olau Summit Ridge at the east and Kamehameha Highway at its west edge, directly across from Wheeler Army Airfield.

Map removed to protect rare resources. Available upon request

Map 10: East Range, 1940.

This is a map of the relatively accessible west half of the sub-installation. It shows the area where live-fire training was still allowed prior to WWII. East Range stretches another 3.5 miles due east, across very rough terrain, to the Ko`olau Summit Ridge .

The eastern two-thirds of the southern boundary line of this installation is the narrow, meandering east-west ridgetop between two streams. Kaukonahua Stream lies to the north (filling into Lake Wilson, then draining farther north), and Waikakalaua Stream flows south to Pearl Harbor. The sections of SBE that are closest to Schofield and Wheeler are relatively uneroded. These flats to the

south of Kaukonahua Gulch were used for commercial agriculture and were planted with pineapple prior to the Army taking over in 1909. Kaukonahua Gulch became the upper reaches of Lake Wilson, when its dam was completed in 1906.



Figure 3: East Range and Wahiawa Town, 1933.

Wright Gate, Wheeler Field, is to the left of Kamehameha Highway and the OR&L “Pine Junction” and turning wye. The remains of old pineapple field roads can still be seen in the fallow sections of East Range to the south of the meandering upper reaches of Lake Wilson. The “Peterson Trig Station,” shown on Maps 10 and 11, is located at the right of this view.

The OR&L Wahiawa Branch Line had a large section camp, with housing, double water tanks, a fuel-oil tank, a scale track (for loaded pineapple cars), and a five-track yard for empty and loaded cars at Dole Siding. This was also where the rail line serving Schofield Barracks left the main route and wound around the south side of the “new” runways at Wheeler Field. These rail lines were in use until the abandonment of most of the OR&L rail system in 1947.

Map removed to protect rare resources. Available upon request

Map 11: The Western Edge of East Range, April 1940.

This detail of the pre-war-era map features the area of the OR&L yard at Dole Siding. It is still relatively unchanged from the 1933 oblique photo of Figure 3. The only significant exception is the structure in the small, fenced area at the northeast leg of the rail line's turning wye. This is the head building of Schofield's primary water supply source. The deep, diagonal water tunnel and the system of pumps here were completed in 1938. The area just to the north of that became the site of the Post Laundry by late 1940. The row of small buildings indicated at 'East Base' are for the OR&L Wahiawa Branch section crew housing, at Dole Siding.

With the start of hostilities following 7 December 1941, activity at Wheeler Field and East Range saw rapid and substantial changes. An area of the old pineapple fields in East Range, as well as the Wheeler side of Kamehameha

Highway, were both converted for dispersed parking of standby-ready "Pursuit Squadron" fighter aircraft. The tight row of smaller, protective, earthen revetments (some covered) were put up at the edge of Wheeler Field, along Kamehameha Highway. These numbered more than 40 revetments in the April 1943 photo, Figure 4. Other revetments were spotted all the way around the south edge of the Wheeler Field runways. In East Range, the pursuit planes were more spread out, with the more open parking areas scattered out among the trees.



Figure 4: East Range and Wheeler Field, 1943.

SBE and WAA are separated by Kamehameha Highway. The newly completed Wai`eli Gulch Runway and its additional aircraft storage area can be seen to the southwest, beyond the triangle of the main Wheeler Field runways. The long row of revetments for "Pursuit Squadron" fighter aircraft line the Kamehameha Highway edge of Wheeler Field. The Schofield Post Laundry and its attached Italian labor/POW camp are at the extreme right, to the north of East Range Road. This oblique is a NARA photo.

At the south edge of the East Range area, a series of a much larger revetments were erected. This became the aircraft storage site of a major aircraft engine maintenance and repair facility, as part of the Hawaiian Air Depot (HAD). Thirteen of the large revetments were constructed for semi-protected storage of

multi-engined aircraft. These revetments were sited along both sides of the tree-lined road on the south side of SBE. This is in the section identified as Area W, on Maps 10 and 12. Map 12 is a partial revision of the 1940 "East Range Training Map," redone in April 1942, and also shows the wartime expansion to the south into the former sugar fields beyond East Range. The same section of Area W is shown in the January 1943 NARA oblique photo, as viewed to the southwest, in Figure 5.

Map removed to protect rare resources. Available upon request

Map 12: Training Area 'W', East Range
Detail of the East Range Training Map, as revised in April 1942. This map only shows the layout of the revetments, but none of the other existing major changes in East Range or Wheeler by this time.



Figure 5: The Hawaiian Air Depot (HAD) and Dole Siding

The HAD Aircraft Storage Area facility at East Range was part of a major aircraft engine maintenance and repair depot. During WWII, the area at the left, on either side of the tree-lined road near the OR&L Dole Siding, was the location of the Aircraft Storage part of the HAD. The larger revetments on either side of the two wide taxiways in this section were used for temporary parking of multi-engine aircraft while their engines were removed and swapped-out for complete rebuilding. To the lower center, smaller single-engine fighters on standby/alert can be spotted in the T-shaped, open ready ramps. Unlike the row of covered revetments at Wheeler, these were in open, scattered parking areas, set among the scrub growth trees that flourished in the old pineapple fields. This NARA oblique photo was taken January 1943.

The Air Depot facility at East Range was one of the sub-units of the Army Air Corps's big Hawaiian Air Depot (HAD). The HAD main headquarters was at Hickam Field, with sub-units scattered about O`ahu. In J. A. Sproule's *Brief History of the Air Force in Hawaii* (no date), the HAD is first mentioned as having started on a two-year-long relocation move to Hickam from the Navy's Luke Field in the fall of 1938. This would be the last of the Army Air Corps units to leave what had been the shared Navy/Army airfield at Ford Island, Luke Field (page 2, in attached Appendix: H- A). Sproule continues:

“After December 7th, Hawaii grew into a key position in the logistical organization of the Pacific war. One of the biggest elements of this organization was the Hawaiian Air Depot [based] at Hickam, which served

as an in-transit supply, repair, and modification center for forces scattered all the way to Australia. The Air Depot had to expand its activities, which in peace time (had) included assembly, repair and reconditioning of the Hawaiian Department's planes, to [now] handle large numbers of P-39's and P-40's which were rushed out [to Hawaii] in crates for assembly, flight-testing, and delivery to combat units. Hickam also became the hub of the Pacific aerial network – supporting, in addition to Depot functions, the 4-engine all-weather transport used in ferrying troops, supplies, and evacuating wounded from the forward areas” (p.3).

One of the Depot functions at this East Range facility was the actual aircraft engine repair and refurbishment for all of the Pacific Theater. The core of this operation was the Sub-Assembly Depot, housed in a series of large, open-sided warehouse-like structures at the bottom of the narrow Kaukonahua Gulch, located 4.5 km. to the east of Kamehameha Highway. The location was selected for concealment and protection from possible attack. The roadways, foundations, and floors of most of these buildings, as well as the bridge to the large storage tunnel system (now sealed off), are all still there.

The Aircraft Engine Rebuild Area and its associated sub-units are discussed in a 1992 report prepared by Harding Lawson Associates for the Corps of Engineers. The report concerns possible solvent contaminated soils at Wheeler and East Range. The East Range portion of the report (Section 5) discussed some details of the HAD Aircraft Engine Rebuild Area, the Aircraft Storage Area, and the nearby overhaul crew housing and mess hall area (pp. 5-10 to 5-12, Appendix: T-H). The report includes an even earlier interview with a former Schofield employee, who was interviewed in the mid-1980s by the Corps of Engineers. He described the Aircraft Engine Rebuild Area in Kaukonahua as being operated on a continuous-shift basis, 24 hours a day, from 1942 through 1945. This major 'rebuild' operation was set up in assembly-line style, with teams working on separate stages of the disassembly, inspection, repair, rebuild, and test process. Once reassembled, each engine was put on a static test-stand and run for four to five hours. When passed and certified, these tested units were then stored until needed, in the extensive tunnel system built into the ridge to the south, between the Kaukonahua and Waikakalaua Streams.

Map removed to protect rare resources. Available upon request

Map 13: The HAD Sub-Assembly Depot in SBE.
Part of HAD, located in the narrow bottom of Kaukonahua Gulch. This section of the Depot was composed of the 17 large structures of the Aircraft Engine Rebuild Area, located in the bottom of Kaukonahua Gulch. Also note the Ku Tree Reservoir in the upper right.

Map removed to protect rare resources. Available upon request

Map 14: The HAD Sub-Assembly Depot and Crew Housing Areas

This shows the layout of the Engine Rebuild buildings in the gulch at the right and the roads connecting the Crew Housing and Mess Hall complex to the left (as depicted in part along the lower edge of Map 12).



Caption reads: "War weary Northrop P-61s, North American B-25s and Consolidated B-24s rest in the graveyard at Wheeler Field, Oahu, T.H., where they will be stripped for salvage. Note tails removed from the B-25s. April 4, 1945." (Photo from NARA 342FH-3A41110-75056AC, courtesy of footnote™)

56

American Aviation Historical Society Journal, Spring 2011

Figure 6: Wai`eli Gulch Runway, Part of HAD, 1945

This photo is taken from an article by John Bennett. This view was shot to the north, from up at the edge of the pineapple fields just to the south of the greatly modified gulch. The long taxi ramp up to the main Wheeler Field runways and the roofs of Hangar Row can be seen in the distance, through the trees. Seen parked in this small section of Wai`eli were a variety of bombers and fighters. To the north, across the main lower runway, are three B-17 "Flying Fortresses" at the left rear and eight B-24 "Liberators" facing the camera. On this side of the runway is a row of five B-25 twin-engine medium bombers, known as "Mitchells" (two with tails and other parts removed), and five twin-engine P-61 "Black Widow" night fighters. The P-61 was assigned to the Pacific Theater in 1944. The two smaller single-engine fighters are probably old P-36s, which were obsolete even before Pearl Harbor.

Other elements of HAD in the East Range / Wheeler area were the Wai`eli Gulch Runway, and the Kunia Facility (discussed starting page 103). These two projects were undertaken originally as part of the same, or at least directly related, HAD construction programs. In any case, the Wai`eli Gulch Runway was completed first and used immediately for the open storage of aircraft.

Much of the area to the north of the Peterson Trig Station in SBE is now the site of the large warehouses and maintenance shops of the Directorate of Logistics

(DOL), along the north side of East Range Road. The rest of the Area 'W' triangle, to the east of H-2 Highway, is presently the site of the Army's Leilehua Golf Course.

SCHOFIELD BARRACKS / West Range (SBW)

Introduction

This is the largest active live-fire range on O`ahu, with a total of 4,993 acres. At its center is the biggest artillery impact area on the island. SBW is the western-most section of the Army's original 1909 Schofield Barracks acquisition. West Range extends up to the top of Mount Ka`ala and the summit ridge and from the eastern slopes of the Wai`anae Range from Ka`ala to the north to Kolekole Pass at the south. These upland forested sections, however, are not in the targeted Impact Area, which is surrounded by the Fuel Break Road. The northern boundary of both West Range and Schofield Barracks is formed by the spur ridge extending east from Ka`ala to Pu`u Pane and on to Kaukonahua Gulch. The south edge of the range borders Kolekole Pass Road, and to the east it extends as far as Beaver Road.



Figure 7: West Range and the Impact Area at Schofield Barracks

The Range Offices on Beaver Road and the firing line for the set Qualification Ranges are in the lower left. Kolekole Pass is in the low spot to the left, with the Lualualei Naval Magazine and the Leeward Coastline beyond. Mt Ka`ala, the highest point on O`ahu at 1,220 meters (4,003 feet), is the flat-topped peak to the right. This is a NARA photo, taken November, 1937.

West Range is in the present District of Wahiawa. Traditionally, this was the easternmost portion of the *moku* of Wai`anae, called Wai`anae ``Uka. For the population of the drier leeward coast, on the other side of the Wai`anae Summit Ridge to the west, this inland area provided access to resources that were unique to upland environments.

With the transformation of one of the 25th Division's three battalions to a Stryker Combat Team, the requirement arose for the establishment of a live-fire training maneuver course for the Stryker-equipped battalion. The live-fire training is being planned in a sizable portion of the present Impact Area and will be called the Battle Area Complex (BAX). To date, only extremely limited survey for cultural resources has been allowed within the targeted Impact Area as a result of safety concerns. This 2008-acre area has been used continually for artillery, mortars, small-arms and aerial firing, rockets, and bombardment since 1910.

Map removed to protect rare resources. Available upon request

Map 15: Archaeological Sites Identified in West Range.

The Archaeological Sites are indicated here in yellow, and the existing ranges are outlined in white. The new UAC discussed below is located at the left end of the area at the bottom outlined in white. The red line is the Impact Area perimeter or the West Range Fire Break Road.

The Urban Assault Course (U A C) Project

One of the new projects calls for the construction of a dedicated Urban Assault Course (UAC). This began as part of the improvement and expansion of the training facilities associated with the 2nd Brigade transformation to a Stryker Brigade Combat Team. The site selected for the new course is a 4.2-acre area situated in the area of the entrance to KR-2, (Kolekole Range # 2) just north of Kolekole Pass Road, on the west edge of the West Range Complex.

Cultural Monitor Report (Draft)

Initially, the presence of cultural resources in the area of the proposed UAC was pointed out by the cultural monitors working on the neighboring BAX project. The following is their preliminary submission:

“The construction site for a new Urban Assault Course at Schofield Barracks lies within the culturally significant area of Kolekole Pass and its saddle juxtaposition between Wai`anae Kai and Wai`anae `Uka. The area is traditionally known for trails crossing the Wai`anae mountain range, connecting various *moku*. Gulches throughout the Wai`anae range provided access, water, food, and shelter during travels between *moku*. A gulch extending from Pu`u Makali`i along the southwest edge of the UAC contains habitation, religious, and cultivation sites that are similar to sites found in gulches leading to Kolekole Pass. Vegetation such as *ti*, *laua`e*, *kukui*, mango, and guava are found growing in clusters around cultural sites and are not found in clusters away from these sites. Hawaiians used and traveled through the Urban Assault Course site and surrounding area.

No cultural artifacts were found within the project by the cultural or archaeological monitors during construction activities. However, because of the close proximity of the gulch sites, it is presumed that any cultural evidence within the UAC footprint has been obliterated through military, ranching or other modern uses. There are vegetation growing within the UAC site that were and are still used by Hawaiians for food and medicine. Some of these are *kinehe*, *uhaloa*, *poepoe*, *maile hohono*, *popolo*, *laua`e*, *ha`uwowi*, and several types of ferns. These and other vegetation are also noted along the fire break road immediately west of the UAC site. The fact that these types of plants are evident around the UAC site and not abundant at other construction sites or further north on the gunnery range indicates their proximity to areas Hawaiians once inhabited.

Two Hawaiian cultural monitors, Keala Margeson and Keona Mark saw rock alignments and felt the “mana” of the cultural sites within the gulch and were compelled to repeatedly express their concern for site protection. Comments by Keala were: “Cultural monitors are concerned about the entrance/exit for access to the Underground Trainer. The entrance/exit falls

directly adjacent to culturally significant sites (as reported by the cultural monitors). Although the sites fall outside of the construction footprint, training activities may impact the site area when accessing the Underground Trainer. It is suggested that prior to training activities a site protection buffer is placed around the site area-furthermore that an archaeological and cultural site assessment is provided.” “Appropriate site protection fencing has been recommended by the cultural monitors to ensure the safety and protection of the site during training activities.” “Cultural monitors will pursue the site protection measure with DPW.”

Comments from Keona were: “... Esme (Hammerly), Jim from Zapata and I entered gulch south of project to look at cultural site previously marked off by Keala. The site perimeter pink and blue tags (previously set) by Keala begin just uphill from the individual task trainer building and ends approximately below the south corner of the underground trainer building. The site is marked on the Corps of Engineers “Overall Site Plan” dated September 12, 2005 as a 3 meter circle. We looked at the site as marked on the Site Plan and the surrounding areas in the gulch. The “cultural site” runs the entire length of the river bottom portion of this gulch and also includes the marked 3 meter site. We marked individual features that comprise this gulch complex but did not extend the site perimeter tags. It is my recommendation that Ganda, the Corps of Engineers, and the Garrison note and extend the perimeter of the Cultural Site to the entire gulch and that steps be taken to protect and preserve such.”

Runoff during construction and later military activities are also of concern to cultural monitors. Keala noted “...silt fence installation was successful and that it should alleviate concerns about runoff effects during Underground Trainer Area construction, particularly the entrance to the UTA.” During meetings with Ganda, the Corps, and Alan Shintani, Inc., Keona voiced similar concerns. She also noted that the silt fence may not be adequate for cultural site or runoff protection.

During a July 17, 2007 site visit it was noted that no site protection fencing has been installed to date.

It is the recommendation of cultural monitors that site protection and preservation measures be taken to protect cultural sites that may be impacted by military training and other activities”.

A number of field investigations and recons resulted and were under taken in the general area of the UAC before and after construction of this project. The preliminary and planning period surveys have been discussed in the SBCT Annual Reports, *Cultural Resources Management of U.S. Army SBCT Transformation Projects, O`ahu and Hawai`i Islands*, of 2007 and 2010.

Two of the Post-Construction Investigations in the area are presented here.

Post-Construction Field Check

A post-construction field check of the UAC was conducted on 30 July 2007 by Loren Zulick (POH Archaeologist), Esme Hammerle (DPW-ENV CRS), and Laura Gilda (DPW-ENV CRS) to determine if construction activities have been completed to a degree that no further archaeological or cultural monitoring is necessary, and to assess concerns that were expressed in the Cultural Monitors Draft Report. Consultation of termination of monitoring at the end of construction is a requirement of the SBCT Programmatic Agreement (PA).

The group met at DPW Cultural Resources office at Wheeler at 1100 and caravanned to the UAC area, checking-in with Ken Kamai of the contractor for the project, Alan Shintani Construction Company. At 1300, we came upon Ken Torre, Training Support Manager for the Range Control Division, who was conducting a routine check. Then Joel Bonfiglio, Chief Safety Officer with Shintani, met up with us at that point also. Our field check was completed at 1330.

We walked with Kamai up Kolekole Road to where it had been previously decided by the cultural monitor and Zulick to place orange safety fencing in the nearby gulch as a protective measure against soldiers training at the new UG Trainer (Under Ground Trainer) of the UAC. The south entry/exit tube has a four-meter landing area and faces the gulch. Cultural Monitors have expressed concern over this training location and its potential for soldiers to impact features that cultural monitors have identified (tentatively) in the gulch. We decided to set a safety fence from the edge of Kolekole Road, running north approx. 50 meters, along the edge of the gulch (refer to Map 16). The fence will be laid approx. two meters up the slope from the bottom of the gulch so as not to be affected by any stream flow and possible debris build-up.

The fence will be approx. 20 meters down-slope from the south opening of the UG Trainer (Figure 8, below). We feel this mitigation addresses the concern expressed for accessing the gulch (no archaeological features were observed in the gulch area along the selected fence route) and should discourage access to the Cultural Monitor sites (CM Sites).

Map removed to protect rare resources. Available upon request

Map 16: UAC Training Facilities Layout, with Sites.
Triangles indicating Site 9616, Cultural Monitor feature 2, and Site DPW – 00.
Mitigation (Protective) Fence to be set up for Site DPW – 005.

This placement of the safety fence should allow soldiers a fair amount of space to attack and access the opening to the “tunnel,” while still preventing access into the gulch bottom. Kamai and Bonfiglio expected placement of the fence to be done by their crew by the end of this week. No monitoring of the fence will be required as the fence route has been previously decided, the support posts will be direct-driven, and there is no visible soil in this location. Monitoring of the fence and any impacts to the gulch and CM Sites may be needed after training exercises. Following this fence placement decision, Kamai left us and resumed his other work.



Figure 8: E. Hammerle on top of South Opening of Underground Trainer. L. Zulick is in trees about 20m below (the white hard hat), flagging part of the location for the route of new protective safety fencing.

On our own, we trekked to see the CM Site in the lower gulch. There are two features in the bottom of the small gulch. This seems to be a tributary gulch, as the topo map shows another gulch and main stream further to the south. Both features here appear to be natural stream steps of a few boulders crammed together. Feature 1 (Figure 9) is the lower feature and spans the width of the dry stream bed, approxi. 2 m. wide by 50 cm. high, and would act as a small waterfall if there were any water running. Very little water would be contained or collected here, and there is no soil being retained by the boulders to cultivate anything. Feature 2 (Figure 10) is about 5 meters upstream, along the NE edge of the dry stream bed, and is approx. 60 cm. high with somewhat of an undercut. There is little soil on the undercut side but a lot of small cobbles as can be expected in a stream bed like this. There is a grenade lodged in the small cobbles (at N2376048.26/E592020.179), and data on this has been forwarded to Range Control with a caveat that, if it cannot be removed, we'll need to take action



Figure 9: Cultural Monitors Site, Feature 1, Boulders in the Stream Bed. Viewed up slope, with Zulick and Hammerle above at Feature 2.

if it will require demolition in place. Access to these features from the area of the UG Trainer is not directly adjacent, as mentioned in the report. The two features are at least 80 meters west of the UG Trainer, through fairly dense vegetation, and the UGT tube aperture faces south, encouraging movement away from these features. These two features were not considered to be archaeological by the CR staff.



Figure 10: Zulick and Hammerle at Feature 2.

We then visited the upper area, where the main training stations of the UAC are located. All the construction-related ground-disturbing actions appear to be completed here, and this was confirmed by Bonfiglio when he joined us. A few of the new buildings still require structural and electrical work. The Shoot House seems to be the only issue. Apparently, specs have changed, and it may need to be rebuilt, but it would be within the same footprint as it is now (Figure 11). The shoot rooms require a sheet of metal in the concrete and sand walls, which was not foreseen previously.

From the main training stations, we could see into the tributary gulch across from the Breach Facility and Shoot House where the cultural monitors and GANDA archaeologists noted small terraces and mounds. We were not able to access this area due to existing UXO concerns. We are attempting to coordinate a survey date with DPW personnel and UXO escort from Donaldson Enterprises (DEI). (That visit is discussed below.)



Figure 11: Shoot House, Under Construction. Viewed to the north, from main Range road. Most of the UAC is behind and to the left of this point.

Site Number DPW-005, a possible historical road/trail site (identified by Tom Lenchanko), was also not visited at this time. Impacts to this site were not addressed in the Cultural Monitor Draft Report. It is said to be 60 meters away from the UG Trainer. It is located on a hill on the opposite side of the gulch and is unlikely to be affected by use of the UAC. When we were near the feature, we were not yet aware the impending training was to occur.

Another potential mitigation for protection of the CM Sites mentioned in the report was for a gravel path to be constructed to guide soldiers between the south aperture of the UG Trainer and the Offense/Defense building. It was decided that this would not be helpful in protecting the site, as soldiers would be least likely to follow an established path during training exercises; furthermore, we are trying to limit construction in and damage to the gulch area, so constructing something additional seems ineffective.

Ken Torre informed us that training is expected to begin as early as mid-August (possibly as early as 13 August, per Ryan Murphy), as long as they can get permission to train without a functioning Shoot House and Breach Facility. Torre

also mentioned that the Breach Facility will have a 300-meter Surface Danger Zone (SDZ) for debris fallout from demolition of doors, windows, and walls (indicated on Map 17). [EH]

Map removed to protect rare resources. Available upon request

Map 17: UAC Area Showing the Breach House 300m SDZ, and the various other training facilities in the KR-2 area.

Recommended Follow-up:

- a. Survey is necessary ASAP. DEI was contacted for availability for UXO escort on 30 July 2007. No availability until 8 August, then again in later August. Scheduling conflicts with CR staff and UXO escort has limited initial survey of the upper gulch area to the end of August.
- b. Site recording will be necessary in order to be able to monitor any impacts from training. Some level of eligibility assessment will also be needed to determine the level of protection of the cultural monitor sites and any archaeological sites. Estimated area of training also needs to be

determined so a large enough survey area can be defined. The only specific training impact currently known is the 300-meter SDZ, which will have potential for debris fallout landing on sites. The DPW 2005 survey is the only survey within the 330-meter radius, with the exception of the 1977 PHRI survey, which is generally not acceptable at this date.

Follow-up of Investigations at the UAC

As recommended in the preceding section, Alton Exzabe, Carly Antone, Moana Lee, and Laura Gilda, accompanied by DEI UXO Tech, Charles Donaldson, resurveyed the UAC portion of Schofield Barracks on 22 August 2007. The reason for this visit was to assess some of the sites reported by the cultural monitors, and to survey areas not previously investigated. Since training here may encroach on these sites, we surveyed the area.

We checked-in with Range Control, then proceeded along the main range road to the UAC and entered the area where the previous survey had left off. Once on foot and inside the area, we immediately started up-slope and along the side of the dry stream bed drainage.

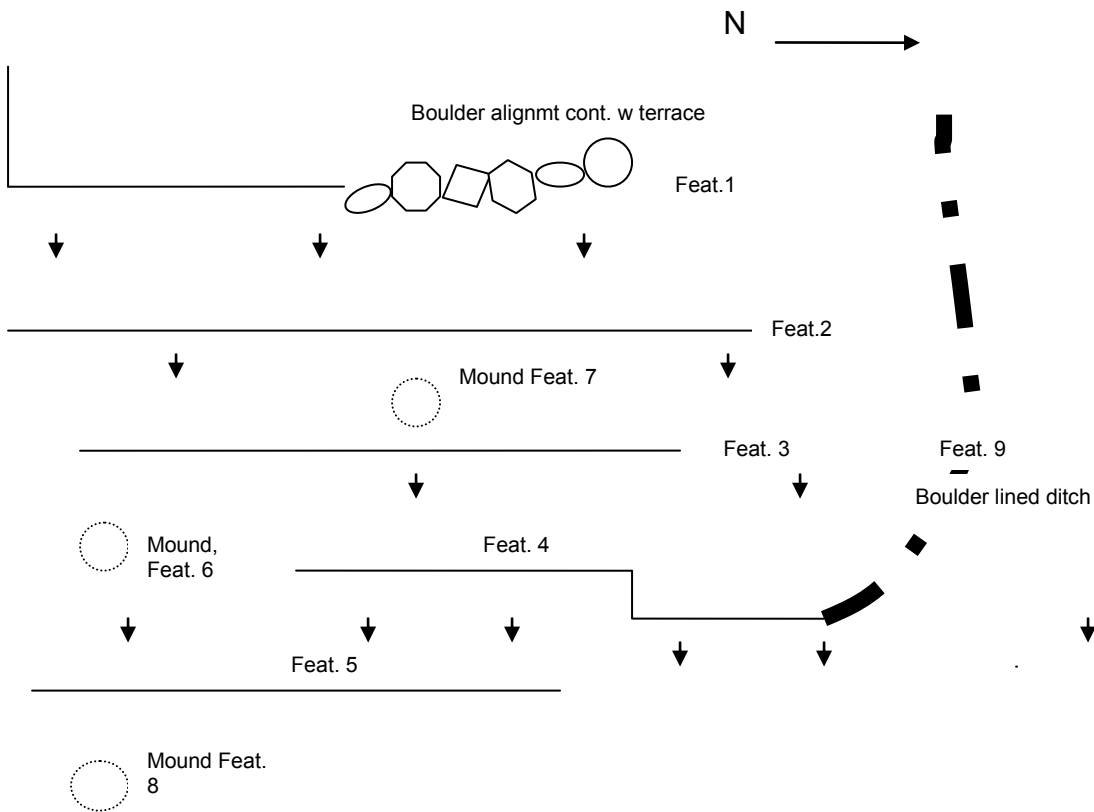
The area is heavily vegetated with a cover of large Formosan acacia/koa, albizia, Cook pines, ironwood, and other large trees. The overhead canopy is dense and lush, making it difficult to collect GPS points. This also adversely affects the growth of underbrush, as it is not that thick. Obstacles on the surface are the thick buildup of needles, dead and fallen tree trunks, and in some places, the steep terrain. Other than that, travel through the area is relatively easy and much of the surface is visible. Household and liquor bottles (i.e., ink, household cleaners, and other bottles from the mid- to late 20th century; some possibly pre-WWII) were encountered in the vicinity adjacent to the gulch and the road. There were also numerous “stubby,” brown beer bottles. The glass items were left in place (not collected). Throughout our traverse sweeps through the area, there were many beer bottles that were found in concentrated clusters. Some of these concentration locations were recorded.

The gulch was closely swept during the survey, and many new and some “suspect sites” were discovered. The newly identified features are due to the military use of the area. There are both excavated foxholes and sandbag ‘defensive’ enclosures. Some the sandbag enclosures may have been built on “suspect sites” or old structures, such as rock walls and/or enclosures. This is not possible to ascertain until the sandbag structures are removed. The locations of the sandbag enclosures were recorded using a Trimble to obtain GPS points.

The next day, Wednesday, 23 July, we found a large agricultural complex at the end of the third transect. It was given temporary site number DPW-35. This site is a group of 12 features, incl. five terraces, three excavated ditches, and three

mounds. Although the last terrace is about 30 meters from the road, the south boundary, for ease of designation, is Kolekole Pass Road; and to the west is a gulch. Having no ready physical boundary to the north and east, these boundaries were not designated at this time.

Associated with this site are excavated ditches. These are possibly *`auwai*; however, the adjoining water sources are neither close nor up-slope from this site. Several ditches were located, and the individual ditches did not seem to have a discernible connection to each other (see Map 18). There were very large trees growing in portions of the mounds of dirt alongside one of the ditches. Determination of the function of the ditches will require more investigation.



Map 18: Schematic Map of Site DPW-35. (NOT TO SCALE)

This is a schematic map of the site that was identified on 22 Aug 22 2007 in the UAC. Not pictured on this map are two ditches that were found and are associated with the site. The two ditches are NE of the site. Arrows indicate slope. Depth and length were not recorded at this time.

The five terrace features were built parallel (or contoured) to the slope, roughly in a N/S orientation (bearing 004 degrees). A series of terraces, some perhaps 3-6 meters apart, extend down-slope at 092 degrees. The terrace at the top of the slope, Feature 1, measured 5 m. (at 092°) x 8-9.5 m. (at 004°). The rocks that make up this terrace are sub-rounded, large cobbles that measure 30 cm x 30

cm x 50 cm. Continuous with this terrace is a single boulder alignment, about 6.7 m. long, oriented at 175°. Boulders were about 1 m x 1 m and 50-75 cm high. It stood a little higher than the terrace by 10-20 cm.

The other four terraces are located further down-slope from this terrace. The four down-slope terraces, Features 2-5, are large boulder alignments in the same E/W orientation as Feat. 1. Feat. 4 has an excavated ditch associated with it. It is the only terrace that is not a simple alignment. Rather, it takes a couple of turns, adapted to that particular part of the slope. The terrace is then extended north by a contiguous, rock-lined ditch.

Assessment of Hale`au`au Complex and Temp. Site Number 210

On 5 September 2006, a visual assessment of the Hale`au`au *heiau* complex and TS 210 was completed. The two sites are located approximately 2,000 meters west of the area known as MF-2, and approximately 50 meters north of the firebreak road, Schofield Barracks West, respectively. Two Cultural Resources Specialists conducted the inspection (Carly Antone and Alton Exzabe), with unexploded ordnance (UXO) and safety support from Zaul Acevito of Donaldson Enterprises, Incorporated (DEI).

Construction activities at the BAX had changed much of the plateaus overlooking the Hale`au`au Stream gulch, causing some difficulty with vehicle access as several roads were obscured. Once navigated, the team's initial observation of the Hale`au`au *heiau* complex revealed that nearly the entire gulch had been burned, leaving little indication of any of the once-dominant vegetation (Guinea Grass) in the area. Soils atop the plateau and on the slopes leading down into the gulch were loose and silty. Due to the loose soils, both Cultural Resources Specialists had to be led single-file by the UXO technician/safety escort from the point where the vehicle was parked to the edge of the plateau to overlook the complex. While conducting this investigation, several items of UXO were noted, including a 155-mm projectile, which is located just south of the *heiau* structure at the bottom of the slope. The presence of UXO items in conjunction with the loose, silty soil that the team would need to traverse in order to reach the gulch bottom, presented some potentially serious personnel safety concerns. The team's escort advised avoidance of such questionable areas as a measure of safety. The team determined that further descent into the gulch was not necessary for the purposes of conducting visual inspection, and we remained atop the plateau. Several photos of the Hale`au`au complex and surrounding area have been included to show current conditions.

The vegetation at TS 210 has not been impacted by the recent fire. Upon inspection, the team noted that the protective shield had been grazed in three places by what appears to be bullet fire; however, the angle of the scratches suggests the shots originated from the south, paralleling the protective shield,

rather than originating from the MK-19 range. No damage to the features was observed; however, grassy vegetation (Guinea Grass) has overtaken the site, which was once cleared of vegetation by the cultural monitors who had initially identified it. Photos of the protective shield and TS 210 are presented in this document to show current conditions.

Results and Conclusions

Due to the presence of unexploded ordnance at the Hale`au`au complex, it is unlikely that the Installation Fire and Safety Office will approve entry into the stream bottom area by those other than essential personnel with appropriate UXO training. While it may be possible to visually access the area from the plateau edge with UXO and safety escort, it is recommended that movements by individuals be controlled and designated by the escort. This practice is recommended until such time when the appropriate clearance for unexploded ordnance in and around the Hale`au`au complex may be completed. Should entry to the area be approved, a briefing on etiquette for safety and resource conduct is recommended.

Entry to the location of TS 210 is more feasible. No unexploded ordnance has been observed in the area of the site. There is a trail from the point of entry, just off the firebreak road, to the site. The footpath is clear of vegetation and is relatively easy to traverse. An escort providing UXO and safety support is recommended as a precaution. The grassy overgrowth at the site itself may compel some to request grass maintenance. This may be done with minimal safety risk and disturbance at the site; however, it is recommended that personnel from Cultural Resources undertake the vegetation clearance prior to any approved access to the site, in order to avoid unnecessary risk and disturbance in the area. Should entry to TS 210 be approved, a briefing on etiquette for safety and resource conduct is recommended.

This report was prepared as a letter-form Memo For Record (MFR) dated 10 September 2007. The point of contact for this action is Cultural Resources Specialist Carly Antone. Secondary contact is Cultural Resources Specialist Alton Exzabe, (808) 655-9729.



Figure 12: Hale`au`au *Heiau*, Site 215
Viewed to NW, from part-way down into the stream gulch



Figure 13: Hale`au`au *Heiau*, at left. The stream gulch, viewed N.



Figure 14: UXO scattered on flat, just to south of Hale`au`au *Heiau*. Viewed to NW. The circle of boulders at center is shown at the lower left in Figure 12.



Figure 15: More UXO, a 155mm artillery shell at center. Also note the cluster of mortar rounds at lower left.

Assessment of Site T6

A field visit to site T6 (Temporary Site Number 6), subsequent to adjacent road repairs on South Fire Break Road, was made during the OHA survey of the BAX on 14 Jan 2009. Participants: Laura Gilda and John T. Penman (DPW), Buster Stangil (DEI – UXO Escort), Chris Monahan (SECA), Jessie Yorck and Kamoia Quitevis (OHA). The action consisted of travel to the West Range South Fire Break Road (SFB) up to Mile Marker 5 (SFB 5), so that Chris Monahan could view the BAX project area from a promontory adjacent to and above the proposed BAX project. On the trip up to the observation point, recent construction of a ditch crossing the Fire Break Road in the vicinity of Site T6 was noted. The new rock-lined ditch crosses the road at an angle with the down-slope end directly in line with Site T6. Material removed during the ditch construction has been piled on Site T6. Site T6 is located between SFB 3 and SFB 4, and is down-slope, directly adjacent to the road. The site had been marked previously with survey ribbon. The ribbon demarcating the site edges was still attached to trees on both sides at the time of the January survey. Intact segments of ribbon were noted on the ground outside the construction area as well. Even though the earthmoving may have caused only minimal damage to the site, rainwater, channeled through the ditch as it is presently aligned, will flush out across Site T6 and may undercut the over-burden and erode the site. On 15 January 2009, Ken Torre of the Range Control Office met with Laura and John at Site T6 to discuss the needed relocation or redirection of the ditch. Laura indicated that, if the ditch were curved, any flow would be channeled further down-slope along the Fire Break Road and beyond Site T6. Refilling the newly constructed ditch to original grade-level would prevent water from draining onto or across Site T6, thus reducing the possibility of further damage to the site.

Lessons Learned

Recent flooding has damaged several roads on the training ranges, prompting numerous repair projects. Laura notified Range Control that future road repair should avoid Site T6. Apparently, this communication was not relayed to the private contractor working on the South Fire Break Road repairs. Use of survey ribbon or flagging tape is obviously not a sufficient deterrent to site encroachment. Installation of Seibert posts is a more permanent solution to site protection. Seibert posts are used by the U.S. Army to identify Limited Entry for Maneuver Activities and Training (LEMAT) areas. Unlike survey ribbon, Seibert posts, or LEMAT stakes, do not degrade as rapidly. Placement of a line of Seibert posts between the Fire Break Road and Site T6 is proposed. Installation of Seibert posts at site boundaries on other archaeological sites adjacent to roads and similar facilities may prevent damage caused by routine maintenance. [JP]

Table 10: Field Visits made to SBW.

<u>Date</u>	<u>Area/Site(s) Visited</u>	<u>By</u>	<u>REF</u> , or Field Book Page
30 Jul 07	UAC	Loren Zulick (POH Archaeologist), Esme Hammerle (DPW-ENV CRS), Laura Gilda	
22 Aug 07	UAC		
23 Aug 07	UAC		
29 Jun 08	survey of QTR-1 area, w/ Ganda & Zapata UXO		LG
8 Oct 08	supporting OHA Survey / BAX		LG
16 Oct 08	OHA Survey / BAX		LG
25 Oct 08	supporting OHA Survey / BAX		LG
30 Oct 08	OHA Survey / BAX, w/K. Torre, M. Katkow and L. Lucking		LG
5 Nov 08	supporting OHA Survey / BAX		LG

SCHOFIELD BARRACKS / South Range (SBS)

Introduction

South Range is in the present District of Wahiawa. Traditionally, this was part of the easternmost portion of the *moku* of Wai`anae, called Wai`anae `Uka (literally, 'upland Wai`anae').

South Range is part of the original 1909 Schofield land acquisition. SBS is roughly triangular, covering a total of 1,678 hectares (4,144 acres). From the range's highest point at the top of Pu`u Hapapa (878.7 m or 2,883 ft. elevation) to the south, the boundary extends along the Wai`anae Summit Ridge to Kolekole Pass at the northwest, then along Kolekole Pass Road eastward to Lyman Road, returning southwest to Pu`u Hapapa (refer to Map 19).

Map removed to protect rare resources. Available upon request

Map 19: South Range Training Area, Schofield Barracks.

Detail from a 1940 Quad Map. Pu`u Hapapa (at 878.7 m. or 2,883 ft. elevation) is the southern apex of the roughly triangular training area. The SW (the Wai`anae Ridge line, to Kolekole Pass) and SE (from Pu`u Hapapa diagonally up to the three large, black structures to the south of Lyman Road), the southern boundary of SBS is highlighted in pink. The north edge of SBS is along Kolekole Pass Road and Lyman Road.

This training area and range is presently used as a bivouac, engineering, and maneuver area, with live-fire ranges for small-arms and demolitions. There are

also a number of established firing points (FP) for mortars and medium artillery (up to 105mm). At the FP, firing is allowed only to the north, out into the designated West Range Impact Areas.

Map removed to protect rare resources. Available upon request

Map 20: Archaeological Sites Identified in SBS as of June 2007. The sites are indicated in yellow, with the training areas outlined in white.

SCHOFIELD BARRACKS / South Range Acquisition (SRA)

Introduction

The South Range Acquisition Area was purchased from Campbell Estate by the Army in 2005. The purchase added 567.8 hectares (1,402 acres) to Schofield's training areas. This new parcel is the northernmost section of the District of `Ewa. It is designated as Tax Map Key (TMK) 1-9-2-5-02.

Most of SRA's eastern edge is near Kunea Road, and the northern boundary is shared with the south edge of the Schofield Cantonment Area. To the northwest is South Range, SBS, with SRA reaching almost up to Pu`u Hapapa (Map 21). The majority of the lower-elevation sections of SRA, approx. half of the total property, has been used for intensive commercial pineapple cultivation for almost 100 years. Only the upland sections to the southwest are now forested.

Map removed to protect rare resources. Available upon request

Map 21: The South Range Acquisition Area (SRA).
The perimeter of SRA is indicated by the black line. The Schofield Cantonment Area is to the north. South Range, with its training areas in white, is to the northwest. This ortho was taken while much of the property was still actively planted with pineapple.

Pedestrian (Reconnaissance) Archaeological Inventory Surveys

Jaime Raduenzel, Cultural/Historical Research Technician, undertook the following activities during the week of 22-28 September 2008:

- Monitored the South Range Acquisition topographic survey being done by Hiroto, Inc., and maintained daily communication with their field team leader to confirm their continued work at points checked on 24 Sept 2008
- Completed trip report, and updated Dave on monitoring needs at SRA
- Reviewed 106 letter and responses for SRA topographic survey, geotechnical investigation, and soil contamination
- Reviewed 2004 Ganda reconnaissance survey of SRA.

CANTONMENT AREAS

Introduction

Cantonment Areas are military installations, or sections of an installation or post, that are built-up, developed, or otherwise urbanized (primarily with quarters and barracks or residences, but also may include command and headquarters buildings or commercial type activities). They may also be industrialized to some degree, with maintenance areas, shop facilities, or warehouses, although the latter are usually located in peripheral areas of a cantonment.

ALIAMANU MILITARY RESERVATION (AMR)

Introduction

Aliamanu Military Reservation today encompasses 218 hectares (538 acres) in and around the northernmost of two large remnant volcanic craters. Aliamanu and Salt Lake Craters are located between the west edge of Honolulu and Pearl Harbor. The earlier Red Hill Military Reservation was established to the northeast of the rim of Aliamanu in 1898 by presidential executive order. In the late 1920s, this small inland section was expanded, with the Army taking over the whole interior of the Aliamanu Crater area. With its proximity to Pearl Harbor, the main coastal artillery installations at Forts Kamehameha, Ruger, DeRussey, and Armstrong, as well as the planned Hickam Air Field, the large, flat area of the enclosed floor of the crater was used for the open storage of ammunition of all types for both the Army and the Navy. There was convenient access by rail to the west, as well as to the north (to Red Hill) and west by road. The munitions storage area was operated as a sub-unit of the Hawaiian Ordnance Depot. It was at that time that the enlarged sub-installation was renamed Aliamanu Military Reservation. A construction program was initiated in 1931 for an extensive series of horizontal tunnels into the nearly vertical sections of the walls of the interior of the crater for more secure, covered storage of ammunition. The Navy opened its own, even larger munitions storage facility at the Lualualei Magazine on the leeward coast and moved all their operations there in 1933.

Map removed to protect rare resources. Available upon request

Map 22: Location Insert from a 1931 Construction Plan

This is a location detail was from one of the early construction plans for the first of the Ammo Storage Tunnels at AMR. The initial set of the nine planned tunnels are shown along the road in the northeast section of the inside of the crater.

With the disbanding of the Coastal Artillery Corps in the early 1950s, the Army relocated all their primary ammo storage to facilities at the Naval Magazine at Lualualei. Most of the open areas at AMR became the location of a major military housing complex. By the mid 1970s, there were more than 2,600 family units constructed there. Since the 1990s, the majority of the storage tunnels have been permanently sealed or at least welded shut.



Figure 16: Start of Construction of New Housing at AMR, in 2008.
Ground cleared in North half of Crater.



Figure 17: Existing Housing and New Construction Area at AMR
View of the central section of the crater from near the peak of Salt Lake Hill

HELEMANO MILITARY RESERVATION (HMR)

Introduction

Helemano Military Reservation is located in the upper portion of the traditional *ahupua`a* of Pa`ala`a `Uka, in TMK 1 – 6 – 4 – 4. This 117-hectare (290-acre) parcel was originally acquired from the Dole Company in 1943. The Army required the site for construction of a long-distance radio communication antenna farm. The array formed a big ring of directional rhombic antennas around a receiver/building, centered approx. 2.5 km. east of Kamehameha Highway. A combined headquarters and barracks for the Signal Corps was built to the north of the access road. Today, HMR is primarily being utilized as a military housing area (refer to Map 23, below).

Map removed to protect rare resources. Available upon request

Map 23: Helemano Military Reservation in its Present Configuration
HMR with family housing areas, community center, recreation areas, barracks, motor pools, etc. The southern end of Drum Road (DRD) northeast from the area above the motor pool.

The military's restricted access route, Drum Road (DRD), starts north to one of the Army's primary field training facilities, Kahuku Training Area at HMR, and passes through the adjacent Kawaihoa Training Area on the way to Kahuku.

SCHOFIELD BARRACKS CANTONMENT (SBC)

Introduction

The Cantonment Area at Schofield Barracks is the 1,605-acre core, or urbanized central section, of the Main Post for the units that make up the 25th Division (refer to Map 24, below). In its entirety, Schofield Barracks, with all of its contiguous training areas, has now expanded to a total of 18,608 acres.

Map removed to protect rare resources. Available upon request

Map 24: The Cantonment Area at Schofield Barracks (SBC)

SBC is indicated by the area within the heavy black line. The West Range (SBW) is to the immediate northwest of SBC, and the South Range Acquisition Area (SRA) is to the south.

The Schofield Cantonment is the home, or garrison, of the 25th Infantry Division and most of its attached units, support and maintenance facilities, motor pools, barracks, dependant housing, and associated amenities, etc. The 2000 Census identified 14,200 dependents residing in on-post housing units here.

More quarters are being planned or are under construction. The number of 25th Division military personnel averages just over 6,000. In addition, there are approximately another 2,000 in other units normally based here.

To date, there are a total of five archaeological sites (all of historic period content) and three sensitive areas, all with potential for data recovery, that have been identified within the Cantonment Area. These are indicated on Map 25, below.



Map removed to protect rare resources. Available upon request



Map 25: Archeological and Historical Resource Map of Schofield Barracks, SBC.

Renovation and expansion of the Veterinary Clinic at Duck Field, Schofield Barracks

Background

The Veterinary Clinic is located near Lyman Gate at Duck Field, in the southeast corner of Schofield Barracks (Map 26). Presently, SBC provides administration,

housing, maintenance, and training facilities for military mission requirements, including security and law enforcement K-9 support. Military construction has extensively modified the landscape of the Cantonment Area. The Veterinary Clinic is in an area currently utilized for office/administrative purposes.

The U.S. Army Garrison-Hawaii (USAG-HI) is converting room usage and expanding the Veterinary Clinic at Schofield Barracks on the island of O`ahu, Hawai`i. This project will require ground disturbance for the construction of a covered walkway and the pouring of concrete pads to house mechanical equipment.



Map removed to protect rare resources. Available upon request



Map 26: Location of Duck Field and the Project at the Veterinary Clinic

The Veterinary Clinic is comprised of buildings 935 and 936. USAG-HI proposes to transform building 936 into the main examination and clinic building. One of the existing two kennel structures at Building 935 will change its room usage from storage to business use. The kennel will be converted to accommodate the relocation of an x-ray room, a pre-op room, a surgery room, and a kennel/storage room. Work to be performed will include the removal of the existing concrete kennel walls and chain link fence enclosures, leveling the existing concrete floor

slab, and providing a covered walkway between buildings 935 and 936. Two small (1'-3" x 2'-6") and two larger (4'-6" x 14'-0") concrete pads will be poured behind building 935 for mechanical equipment, and by the parking lot for an electrical transformer.

On 26 Nov 2007, Cultural Resource Specialist Moana Lee visited the Duck Field Vet Clinic to inspect the area planned for renovation. At that time, the outer walls, the chain link fence, and the floor of the kennel structure at Bldg. 935 had been removed. The construction crew of DBS had a meeting to ensure all plans were understood. Ms. Lee was given a tour of the area, and excavation plans were laid out. Pictures prior to any ground disturbance were taken at that time. (All pictures taken of the project by Ms. Lee are located at I:\ARMY INSTALLATIONS\SBA-Schofield(ALL)\Photos_SBA (Schofield - all)\SBC (Cantonment Area) Folder\Duck Field\Vet Clinic Renovation Nov-Dec 2007.

During the initial inspection, no cultural material or resources were observed on the surface.

The greatest depth for the excavations planned for the renovation will be three feet. This will constitute a trench for the electrical conduit from the mechanical equipment and the AC unit behind Bldg. 935, to the front of Bldg. 936 (under the flower bed), to the electrical transformer in the parking lot. The depth of the excavations for the cement slabs will be no deeper than four inches. The maximum depth of the trench will be approx. one meter.

Methods and Discussion of Findings

Ms. Lee visually monitored all excavations. Soil samples were taken in the pads behind Bldg. 935 and the trench under Bldg. 935. Soil samples were also taken from the trench in the sections under the floor of Bldg. 935 that parallel the sidewalk now connecting the laundry room and Bldg. 936. All samples in the pads were taken from the bottom (four inches below surface). Soil samples in the trenches were taken from the wall of the trench, at 10 cm. and 40 cm below surface.

With the exception of the dry well for the AC unit, the excavations for the pads only penetrated the sod layer to a maximum depth of 10 cm. The dry well was 30" in diameter x 22" in depth. The soil for both the dry well and the pads behind Bldg. 935 was a uniformed texture and dark reddish-brown throughout the excavation. No cultural material was found to be associated with any of the pads or the dry well.

The longest trench, excavated from the AC unit to the front of Bldg. 936, did not exceed 70 cm. in depth. A total of four soil samples were taken in various sections of the trench. The soil samples were very uniformed, displaying a dark reddish-brown layer on top of a very dusky, red layer. Under the floor, there was

also a top layer of fill, a very dusky, red layer inter mixed with gravel. Two other utility pipes, one for water and the other for sewer, were also located under the floor. This area had obviously been previously disturbed.

The section parallel and to the south side of the sidewalk was a dark reddish-brown layer on top of a very dusky, red layer, as in the previous section. The bottom layer was hard and compact, unlike the softer and crumbly top layer. The excavation cut into the old construction stockpile area. This is where sand and fine, gray gravel was stockpiled. Below the stockpile layer is probably the original surface before the clinic was built. The dark reddish-brown layer over the very dusky, red soil continues after the break of the two-meter-long stockpile layer.



Figure 18: AC unit pad foundation
The dry well is on the right. This view is to the north.

Recommendations

There are no cultural resources or materials on the surface, or below surface, associated with the renovation of the veterinary clinic. The top of the original surface has been graded and leveled. A thick layer of top fill was then layered atop the surface to level the ground before construction of the clinic. No further monitoring is recommended. [ML]



Figure 19: Stockpile remnant in profile; view to the south



Figure 20: The electrical conduit trench, south of the sidewalk. Note the two distinct layers—the dark reddish-brown atop the dusky, red layer.

Investigation of Possible Impacts to the Post Cemetery, SBC

Cultural Resources Specialists Moana Lee and Adam Thompson did a walk-through of the area in which Phase 2 of the planned wastewater collection system force main line that will be installed in mid-January 2008. The purpose of this walkthrough was to check if this project warranted a 106 review.

The Post Cemetery dates from 1912 (Belt Collins, April 2000). The cemetery was improved and expanded in the late 1930s, and again in the early 1940s. The present tool shed at the cemetery was built in 1939. The original cemetery office was constructed in 1945 but is now gone. The graves in the cemetery illustrate the events of the early decades of Schofield. Consequently, the cemetery is a significant part of the historic landscape of Schofield Barracks, one of the earliest U.S. Army bases in Hawai'i. The graves are of soldiers, their dependents, civilian employees, Italian prisoners of war, and executed military criminals. The earliest interment here was an employee of the Quartermaster Corps.

The Cemetery Office was demolished in 1996. It was located outside of the main perimeter hedgeline on the north front lawn, facing Lyman Road, just to the west of the formal entrance (see Figure 21, below). The planned excavations for the force main trench may be within the footprint of that office building, as well as in the area where the OR&L rail line, c. 1945 (the latter was removed in 1947).

This portion of the improvements to the wastewater collection system will be installed along the south side of Lyman Road. The excavations are needed to replace an existing 12-inch-diameter force main with a 15-inch line. The new force main will extend from north of the Post Cemetery (refer to general area maps, Map 25 on page 83 and Map 26, page 84) to a hook-up across from the vehicle maintenance facility to the west, near Paukuwaho Pl. This phase of the project will extend an approximate distance of 740 to 750 meters. The eastern 150 meters of the excavations will cut through the lawn fronting the cemetery and across the existing entrance driveway and the walkway, as indicated in Figure 22, on page 92. The other 600 meters will front the construction staging yard (to the west) and pass between the area south of the AC pathway behind the ironwood and coconut tree landscaping that edge Lyman Rd. and the boundary fence. The south portion of the open area just west of the cemetery is reported to be the area where emergency burials from 7 December 1941 were buried. This section west of the cemetery was part of the Kalakaua Golf Course—specifically, the green and fairway for Hole #13. This area is now part of the housing construction staging area. It is unknown if all of the burials were removed; however, this portion of the staging yard is not in the area of potential effect (APE) of the present project.

Map removed to protect rare resources. Available upon request

Figure 21: Plan for Road Improvement at the Post Cemetery, 1945.

The rest of the trench excavation to the west (of the cemetery) will occur outside of the historic area.

Map removed to protect rare resources. Available upon request

Map 27: Aerial Photo of the Middle Lyman Road Area, SBC

The Post Cemetery is the rectangle of trees just off the east end of the long field of pineapple. Although dated here by Google as 2008, this photo was taken no later than 2003-2004. By 2005, Actus Lend Lease, LLC., had started construction of family quarters throughout the golf course area. In 2006, the Army purchased the land DelMonte Pineapple had been leasing from the Campbell Estate.



Figure 22: The Entry Driveway into the Post Cemetery

This was taken from between the gate posts, with Lyman Road beyond to the north.

The four painted dashes indicate where the planned force main line will cross the driveway. The 15-inch line will angle diagonally to the NE, to the right of the hibiscus bushes, to connect to an existing line very near Lyman Road.

The excavation for the trench (in the section to the north of the cemetery) will affect the historic site of the Post Cemetery. It will go across the driveway / walkway at the main entrance. It may also expose some of the foundation or other structures associated with the old office building.

Another concern of effect will be the trenching through the construction yard area adjacent to the west side of the cemetery. The exact boundaries of the area, which was used for emergency interments during WWII, are unknown; however, prior to its use as Hole #13 of the King Kalakaua Golf Course, maps and aerial photos, dating from the 1940s and 1950s, show buildings 3027, 3028, and 3029 in this area, adjacent to the cemetery. Furthermore, various newspaper clippings describe how WWII emergency burials were removed to Punchbowl or sent home by request of the families, but official reports of the removal of the burials have not been found. It is unknown if all of the interments have been removed, but it is a high probability that, if some interments do remain, they are not in the area of the presently planned excavations.

Map removed to protect rare resources. Available upon request

Map 28: The Post Cemetery and the Planned Force Main.

This is an explanation of Map 28: The aerial photo pictured here is a few years old (probably 2003 or 2004) and, therefore, some of its features no longer exist. The field to the south of the cemetery is no longer used to grow pineapple.

Identified by its small trees, it is now a grassland with Guinea Grass (*Panicum maximum*) and African Tulip (*Spathodea campanulata*) trees as its primary vegetation. The Army purchased this parcel in 2006.

The area that was once the green and the fairway of the golf course's 13th Hole is now identified by black, diagonal hash marks, to the left or west of the red-outlined Post Cemetery. As earlier discussed, the golf course no longer exists. The cross-hatched area, bordered in federal gray, is now Actus housing for military dependents

The location of the trench for the 15-inch force main is outlined by a blue dashed line.

Recommendations

This project warrants a Section 106 review. At this present stage, the possible former emergency interment area has a large mound of soil being stored on it. As a result, it is not possible to test the area in any way at this date. It is, therefore, recommended that any excavations adjacent to this area be monitored during all excavation activities. All excavations will only take place within the planned area of the force main and will not deviate from any of the planned construction areas without the consent of DPW Cultural Resources Section supervisory personnel.

All historical properties that are removed or damaged during the construction of the wastewater collection system will be replaced in a manner that will match the surrounding landscapes. This means that the sidewalk and the asphalt will be replaced to look like the sidewalk and the asphalt that is now there. Furthermore, any plants that are affected will also be replaced with the same kinds of plants that are currently there.

In the event any interments are encountered, all work in the area will stop and DPW will be notified immediately. The interments will be covered and left in place.

A Section 106 Consultation was initiated, with a finding of "No Adverse Affect" to historical properties. The letter was drafted and staffed in February 2008. The draft is attached to this report as Appendix A-12, page 172. [ML]

FORT SHAFTER MILITARY RESERVATION (FSM)

Introduction

The *ahupua`a* of Kahauiki is located near the west edge of the District of Kona, slightly more than four kilometers (over two miles) west of downtown Honolulu. This *ahupua`a* is the area that became Fort Shafter. It was one of two properties identified by General J.M. Schofield for possible use by the U.S. Army, even before Hawai`i's annexation in 1898. The Army's primary role at that time was to provide protection for what was to become Pearl Harbor.

Prior to being taken over by the Army, the *ahupua`a* of Kahauiki was sparsely populated and relatively small, at 1,344 acres (originally), when compared to its much larger neighbors, Moanalua to the west and Kalihi to the east

The inshore flats and the low plateau area inland of King Street at Kahauiki provided growing space for the slowly expanding needs of the post. Facilities were added over time as requirements demanded, eventually utilizing almost all of the relatively flatter sections of the post. In 1981, the Army declared the inland 750 acres of the steeper ridges and V-bottomed gullies in "excess to its needs," however, and returned that parcel to the State of Hawai`i.

Table 11: Field Visits made to FSM.

<u>Date</u>	<u>Area/Site(s) Visited</u>	<u>By</u>	<u>REF</u> , or Field Book Page
16 Jun 08	Construction Monitoring, Actus new housing at Radar Hill, Hau`oli South, & Funston Village	DWC	
17 Jun 08	Construction Monitoring, Actus	DWC	
18 Jun 08	Construction Monitoring, Actus	DWC	

Map removed to protect rare resources. Available upon request

Map 29: Fort Shafter, a 1984 Base Map.

TRIPLER ARMY MEDICAL CENTER (TMC)

Introduction

The Tripler Army Medical Center (TMC), a 148.72-hectare (367.21-acre) property, is officially identified as Tax Map Key parcel / TMK-1-1-12:05 and is located in the District of Honolulu, City and County of Honolulu, Island of O`ahu, Hawai`i.

Map removed to protect rare resources. Available upon request

Map 30: Tripler on a Location Insert from a 1974 Regional Master Plan of O`ahu. This also shows TMC's proximity to Aliamanu Military Reservation and Fort Shafter.

The TMC complex provides comprehensive medical services and facilities for personnel of all military branches, active and retired, and their dependents stationed in, or who are residents of, the State of Hawai`i. TMC serves approximately 45,000 active duty personnel, 59,000 dependents and family members, 11,000 retirees, and 15,000 of their dependents and families. The TMC facility also supports an additional 186,000 U.S. Pacific Command military personnel and dependents, but also 152,000 referrals of citizens of various Independent Pacific Island Nations, as well as Guam, Ānewetak, Kuwajleen, and American Samoa.

The Tripler Army Medical Center (TMC) is situated on the high ground of the wide southwest tip of one of a number of parallel spur ridges that dominate this

area. This specific ridge extends 8.5 kilometers (about 5.5 miles) out to the southwest from Pu`u Keahiakahoe. Pu`u Keahiakahoe is a prominent peak on the main Ko`olau Ridge.

The hospital and all its support facilities are located on a roughly rectangular parcel of land that measures just over 367.72 acres (or 178.72 hectares). At the west, or seaward edge, of the property, the elevation is 36 meters (118 feet) above mean sea level (MSL) at its lowest point. Inland, the highest point on the property is at the location of the facilities' upper 500,000-gallon water reservoir, an elevation of 795 feet (or 242.3 meters) above MSL.

WHEELER ARMY AIRFIELD (WAA)

Introduction

Wheeler Army Airfield is located on land included in the original 1909 executive order that established all of Schofield Barracks. Before 1909, the large, open areas here had been planted with pineapple fields. Initially, the area was used by the Army primarily for field training by mounted cavalry units.

Map removed to protect rare resources. Available upon request

Figure 23: The Cavalry Drill Field at Schofield, September 1921, viewed to NE. The numerous overlapping ovals were cut into the open, grassy fields by large groups of drilling mounted cavalry troops. Wilikina Road crosses the view just beyond in the middle distance (horizontally here). Kamehameha Highway is just beyond. The latter was the only road up from Honolulu and the Pearl Harbor area at this time, separating East Range from what, in 1922, would become Wheeler Field. The 'highway' runs diagonally from the sugar fields at the right (and parallel to the OR&L line, from Dole Siding), up to Pine Junction and the bridge (across this arm of Lake Wilson; OR&L had its own bridge) into Wahiawa at the upper left corner (also compare this section to Map 10, East Range, on p. 43). A train can just be made out on the middle of what was the earliest OR&L rail line to Schofield Barracks. That rail line crosses Wilikina Road at the left of the photo (the same grade crossing is seen in Figure 24). Another shorter train, on the Wahiawa line, is almost to Pine Junction.

In February 1922, a small detachment from the Army Air Service, based at Luke Field (on Ford Island, Pearl Harbor), moved up to establish what would become Wheeler Field. Initially, they cleared brush for a small landing area, erecting a row of five large WWI-era canvas hangars and a series of tents for the new Division Air Service.



Figure 24: The First Canvas Hangars at Wheeler Field, March 1922.

The fifth hangar is still being framed, at right. The ovals from cavalry field drills are still visible in the grass. The telephone lines and poles (from bottom right corner) to Schofield had not been relocated yet, but are gone in a photo of this same area taken a month later. The trees planted earlier along Wilikina Road are coming up. The OR&L rail line to the main post at Schofield (off to upper left) crosses Wilikina Road just behind the row of hangars.

Since its establishment as an airfield in 1922, this has been the Army's longest serving air arm installation in Hawai'i. Even after being taken over by the newly established U.S. Air Force in 1947, Wheeler served primarily as a facility to directly support Army fixed- and rotary-wing air units. An exchange agreement in 1993 returned Wheeler to the Army, with the Air Force taking over what had been Fort Kamehameha, along the seaward side of Hickam Air Base.

Map removed to protect rare resources. Available upon request

Figure 25: The First Wheeler Field (1930)

An oblique view, to the southwest, of the original grass landing field area at Wheeler. The early (original) alignment of Wilikina Road is in the lower left corner, with its double row of ten-year-old trees at middle bottom. The six large, permanent hangars were located in the same place as the row of earliest canvas hangars. This is also approximately where the middle of the triangular runways were laid out later, during WWII. These six original hangars were replaced by 1932, with the construction of the present flight line and Hangar Row (Map 30 and Figure 26, below). The new rail line to Schofield Barracks was being laid down to the southwest of the grass landing field at this date. The large timber trestle crossing the small gulch at right is not complete in this photo. The smoke in the lower right is from a locomotive on the older track to Schofield Barracks. A NARA photo.

Records from OR&L Operations Division, the General Manager's Orders, GMO No. 720, dated 16 May 1930, was "For relocation of railroad tracks at Wheeler Field in way of aviation field. U.S. Government contract awarded to OR&L for \$72,600.00."

This order is from a list of 37 Army GMOs provided by researcher Jeff Livingston (see email, Appendix A-13, page 175). The photo in Figure 25 shows the "relocation" of the new line as it progressed around the edge of the level-topped bluff on which the first grass landing area had been located. By July 1930, the rail had been completed as far as the small gulch to the west, where work was

underway on the timber trestle across that gap. Map 30 shows the completed line and the last remnants of the earlier direct route from Dole Junction to Lyman Road and the Main Post.

Map removed to protect rare resources. Available upon request

Map 31: A 1932 Composite Aerial Photo Map of Wheeler Field

This ortho, or vertical photo map, shows both the early landing field and hangars seen in Figure 25, and the new hangar row under construction. The old (original) OR&L line into Schofield and the middle section of Wilikina Road have both been cut by that construction, but the remnants of their location can still be made out. A direct road connection to Kunia from Wheeler has not yet been established.



Figure 26: Wheeler Field Flight Line, 1935

The landing area being used at this time was greatly expanded but still only grass. The Boeing P-12 open-cockpit biplanes of the two pursuit squadrons are lined up for a review on the small, concrete parking ramp, fronting the hangars. The six original (1922-23) hangars that had been located just off to the left of this view, and which are still there in Map 30 of 1932, were finally gone by 1935. The new road connecting Kunia to Wheeler, and Schofield can be seen to the west, in the area to left of the smaller cloud of smoke.

Kunia Road connected with Wright Avenue and continued on to Wahiawa via Kamehameha Highway, as both Wheeler and Schofield were “open” posts at this time.

The gap in the Wai`anae Mountains in the distance to the right is Kolekole Pass.

The row of World-War-Era hangars (built in 1932), the flight line aircraft parking apron just to the south of the hangars, some of the cluster of barracks and admin buildings just to the north, and both loops of housing shown in Map 30 are all now included in the Wheeler National Historic Landmark District.



Figure 27: Wai`eli Gulch Runway, from the West
This WWII view of the motor pool and four tightly packed rows of B-24s was probably taken from up along the edge of Kunia Road. A NARA photo.

RECREATION AREAS

MOKULEIA ARMY BEACH (MAB)

MAB is located immediately across Farrington Highway from Dillingham Air Field and just to the west of the City and County's Mokolē`ia Beach Park. Presently, MAB is not fenced and is completely unimproved, with no facilities of any kind, but it remains open to the public.

No activities of any nature involving this sub-installation were undertaken or supported by the Cultural Resources Section during this reporting period. Subsequently, there is nothing additional to document at this time.

WAIANAЕ-KAI MILITARY RESERVATION (PAR)

The Pīlilaau Army Recreation Center (formally designated the Waianae Army Recreation Center) at Pokai Bay is one of the best beach facilities on the island. PAR is a long, narrow, 14-acre beachfront recreation facility for military personnel. It is located on Pokai Bay, on the Leeward Coast of O`ahu, in the town of Wai`anae, 35 miles from Waikīkī and 18 miles from Schofield Barracks. The facilities presently available at PAR include 39 beachfront cabins, a distinguished visitor cabin, an equipment rental center, a club facility, and a cove pavilion area for group outings.

The whole sub-Installation has been designated a Site on the State Historic Register, #50-80-05-3998. This is as a result of the discovery of Native Hawaiian burial remains interred in the sand dunes inland of the beach. The burials were found when excavating was needed for the replacement of utilities during construction in the 1980s, and then again in the 90s. A physical inventory of the partial human remains collected at that time, and a review of the accompanying excavation documentation, indicates that the human skeletal remains recovered from PAR are most likely those of Native Hawaiians who prehistorically and historically occupied or used the coastal land on which the installation is now located. At least 33 human burials have been recovered during the course of three archaeological projects conducted at the installation to date. The majority of the human remains and some of the associated funerary objects that were collected were subsequently reinterred in a traditional-style crypt, or *paepae*, specially built for them at the installation.

Sea Wall Replacement Project

A project to replace a large section of the deteriorating sea wall at the inland rear of the beach fronting the north half of the facility has been proposed. Approximately 650 linear feet (198 meters) of the damaged wall (Figure 28) will

be removed and replaced by a waterproof concrete wall with an embedded rock surface.



Figure 28: Damaged Section of Existing Sea Wall at PAR.
The cones indicate area where erosion at high tide is flushing sand seaward through the damaged sea wall.

The portion of the wall to be replaced is highlighted on Map 32, below.

Map removed to protect rare resources. Available upon request

Map 32: Sea Wall Replacement Project at PAR.

Consultation under Section 106 of the National Historic Preservation Act of 1966 was initiated in January 2008. The 106 letter to the State Historic Preservation Officer and others is attached, Appendix A-14, page 176.

FORT DeRUSSY MILITARY RESERVATION (FDR)

Fort DeRussy, located near the east end of Waikīkī Beach, was authorized in 1902 and established in 1908 as a Taft-era Coastal Artillery post to protect both Honolulu and Pearl Harbors. In 1913, a mounted pair of 14-inch disappearing guns at Battery Randolph and two mounted disappearing 6-inch cannons at the nearby Battery Dudley were commissioned and ready for use, and post facilities to support personnel for the four batteries were completed.

During WWII, all the large cannons were replaced with 90mm anti-aircraft guns. The Coastal Artillery was officially disbanded by the U.S. Army in June 1950. The four big guns of Fort DeRussy were cut up for scrap, and the Fort was redesignated as an Armed Forces Recreation Area, with the Army Reserve Center for Honolulu occupying the section inland of Kalia Road.

In 1994, Kalia Road was realigned and the Army Reserve Center started an incremental move to Fort Shafter. Today, the central section of FDR is a large, open, public park area located in Waikīkī that pays tribute to all branches of the United States Armed Services.

Map removed to protect rare resources. Available upon request

Map 33: Map of Ft. DeRussy, 2003

To the west side of the park between Kalia Road and the beach are the two towers of the high-rise hotel, Hale Koa (meaning “House of the Warrior”). The first tower opened in 1976, and the second tower was built in 1994. This resort is available only to active and retired service personnel of all the uniformed services and was constructed without any congressionally appropriated funding. It was paid for entirely through returns from Army and Air Force PXs and Commissaries. Battery Randolph, at the east edge of the park, was turned into the U.S. Army Museum of Hawaii.

Remote Video Monitoring System Upgrade at Fort DeRussy

The Fort DeRussy security video monitoring system has a large number of remote cameras (130+) that were installed in 2002. Twelve have now quit working and need to be replaced. A few were wireless and will possibly require trenching for new cabling. Consultation with the SHPO and others was initiated for this project in May 2008. The 106 letter and a response are attached as Appendix A-15 and A-16, pages 179 and 183 respectively.

Monitoring the Upgrade Project for Hale Koa’s Remote Video Monitoring System

On 21 July 2008, the installation of a new electrical system for portions of the Hale Koa Video Monitoring System project began. The project area is located in the open lawn area between Battery Randolph and the Hale Koa Hotel’s luau garden, *makai* from Kalia Road. Limited, shallow trenching (to about 50 cm. in depth) and the use of a three-foot-long cylindrical pneumatic-propelled piston, referred to as the “bullet,” was used to install new underground cables. The “bullet” created a three-inch tunnel beneath the surface of the ground without need of open trenching. The power and video cable were pulled through the conduits when the pneumatic line was removed. The cables were set to be installed between an existing communication manhole and two existing light poles. The total length of the two lines is about 265 feet (or 80.5 m). This would allow the proposed cameras to be mounted to the light poles and be hardwired rather than wireless. A wireless connection is not preferable because it is less reliable than a hardwired connection. Ground-disturbing components of the project were estimated to take a day or two to complete. Cultural Resources Specialists Carly Antone and Alton Exzabe were on-site to monitor the excavations from 21-24 July, and David Cox, Senior Cultural Resources Specialist, monitored on 28 July. The “trench” work and electrical installation was performed by electricians from SIM Electrical Contracting. A total of five days were needed to complete the project.

The first section spanned from the manhole to the light pole near Battery Randolph. From within the manhole, at about 14 inches below the surface, the bullet tool was aimed toward the light pole. The bullet moved at a very slow rate; depending on how compact the ground was, sometimes only a few feet per hour

were gained. The bullet came to the surface two times, having been deflected by rocks. In order to realign and restart the bullet, trenches were dug using hand tools. These trenches were approximately four feet long, one foot wide, and 15 inches deep. When the bullet reached the light pole, a third trench, approximately the same size as the previous two, was needed to finish the installation of the new cable to the pole. Each of the three trenches had similar stratigraphy: the first eight inches below the surface was turf and top soil; the layer eight to 11 inches below the surface consisted completely of crushed coral fill; and the layer 11 to 15 inches below the surface contained a mixture of basalt gravel and cobbles with soil fill. No cultural material was observed. The trenches were back-filled and compacted.

On 22 July 2008, the next segment began again at the central manhole, connecting the system to the light pole located adjacent to the sidewalk near the hotel's luau garden. An additional electrical box was also installed. Because of the dense consistency of the fill, the larger cobbles forced the bullet to resurface two times before reaching the location of the electrical box. Again, trenches had to be excavated to realign the bullet. A rectangular hole, approx. 24 x 36 in. and 20 in. deep, was also dug in order to install the new electrical box. No cultural materials were observed in these excavations. The completed trenches were filled and compacted.

On 23 July 2008, the last section of the project continued from the new electrical box to the existing light pole. The variable consistency of the soil caused the bullet to resurface yet again. This time, the crew was able to reverse the bullet and dig a shallow hole in order to reposition it. The progress of the bullet was extremely slow in this area. Toward the afternoon, the bullet's actual location or position was undetectable by the crew. This time, rather than resurfacing, the bullet burrowed deeper into the ground. The bullet could not be reversed or extracted from the tunnel. The crew ascertained they would have to dig the bullet out by hand. A trench, approximately 3 x 3 ft., tapering down to 41 inches (1.05m), was dug in order to find and retrieve the bullet. The stratigraphy of one of the side walls was noted as follows: within the first 15 centimeters below surface (cmbs), the layer consisted of turf and top soil; from 15 to 30cmbs, there was a layer of crushed coral fill; at about 30cmbs, a 5-cm-thick layer of asphalt was present; from 35 to 40cmbs, there was a fill layer made up of a mixture of soil, crushed basalt gravel, and basalt cobbles; the last layer (30 cm. thick), where the bullet was found, was composed of sand. The sand was closely inspected. No cultural materials were observed. Being late in the day, the hole was not back-filled. Plywood and caution tape marked the area off. Work resumed the next day.

On 24 July 2008, the pit was reopened, the bullet was repositioned, and the operation continued. Again the bullet advanced slowly. The crew checked the depth and position regularly to ensure the bullet would not go off course. In the mean time, the crew finished installing other wiring and conduits. The hole was

filled in up to the depth of the repositioned bullet, at about 14 inches below the surface. The bullet resurfaced once more and was readjusted. In the late afternoon, the crew decided to finish the remaining 10 meters of the conduit line the following week. The groundskeeping personnel from the hotel requested that the open trenches be filled because of the events planned in the area for that coming weekend. Consequently, the remainder of the day was spent back-filling.

The project resumed on 28 July 2008. David Cox monitored the final segment of the project. The crew made very little progress with the bullet. They decided to trench the remainder by hand. This trench was approximately 30 feet long, 12 inches wide, and 14 inches deep. The excavated material was observed as top soil and fill. No cultural materials were detected. The cables were put in place and the wiring installed. Trenches were back-filled, and all other elements of the project were completed.



Figure 29: Cable for Video System at Fort DeRussy

OTHER USE AREAS

Introduction

No activities of any nature involving the six sub-installations in this group were undertaken or supported by the Cultural Resources Section during this reporting period. As a consequence, there is nothing additional to document, other than background information at this time for the following sub-installations:

KIPAPA AMMUNITION STORAGE SITE (KAS)

This sub-installation is located in Kipapa Gulch and consisted of three sections. The ammunition storage areas were a series of horizontal tunnels cut into the rock at the base of the steep sides of Kipapa Gulch. The lower unit is accessed off the south side of the Kamehameha Highway's Roosevelt Bridge and extends south along the gulch as far as the north boundary of the Kipapa Navy Ammunition Storage Area. The other two units are in Kipapa Gulch but farther to the east of Mililani Town. This facility was identical in design to the Waikakalaua Ammo Storage tunnels. The facility is inactive and mothballed.

KUNIA FIELD STATION (KFS)

The Kunia Field Station is located in Wai`eli Gulch, immediately west of Kunia Road and adjacent to Wheeler Army Airfield, Schofield Barracks, and the South Range Acquisition Area. Presently, the Kunia Facility is being used as a Navy Regional (Communications) Security Operations Center (RSOC).

The top secret "Hole" was one of the largest underground construction projects in existence during the early months of WWII. This huge, 250,000 sq. ft. floor area complex was initially identified as a major element in Army Air Corps HAD (Hawaiian Air Depot). At a cost of \$23 million, construction on the facility began in the pineapple fields west of Wheeler Field in 1942 and was completed in late 1944.

The three-story, cut-and-cover structure was said to be designed as a bomb-proof aircraft assembly and repair facility. It was claimed to be capable of handling B-17 heavy bombers (but only with wing tips removed) and the assembly of pursuit planes (early term used for fighters). Access to the resulting underground structure was by means of a quarter-mile-long tunnel on the south bank of Wai`eli Stream Gulch. At the end of the tunnel were massive blast doors and, beyond, elevators for the different levels. Each elevator was reputed to be capable of handling an aircraft or four 2.5-ton trucks side-by-side.

The whole facility was air-conditioned and illuminated throughout by fluorescent lighting, both considered unusual factors for that period of time. The "Hole" even

had a cafeteria that could turn out 6,000 meals a day. There is no historical evidence to suggest the facility was actually ever used for aircraft assembly, since by the time it was completed in 1944, this “requirement” was no longer needed.

During his search for details about the history of Tripler Army Medical Center (TMC), Ken Hays (DPW Architectural Historian) came across various letters describing the current (early WWII) military construction projects underway or planned in Hawai`i. These letters were found in General Richardson’s sizable archive of his correspondence and records, now housed at the Hoover Institute, Stanford University.

Map removed to protect rare resources. Available upon request

Map 34: The Above-Ground Part of the Kunia Field Station
Wheeler Field (to the east) is separated from KFS (upper left) diagonally by Kunia Road and Wai`eli Gulch. The entrance to KFS is off Kunia Road, with the roadways and large parking areas in Wai`eli Gulch to the west (upper left). The large, covered access tunnel to the main level of the “Hole” is indicated by the double broken line at the far left of this sheet. This is a 1947 Air Force index map of utilities plan (1 of 18), during the period when WAA and KFS became part of Wheeler Air Force Base.

One of the planned priority projects Richardson discusses was a major Command Survival Bunker to house the Army Command for the Pacific Area in an extreme emergency. The Pacific Area Army Command was normally stationed at Fort Shafter. The underground bunker was to be built in the central section of O`ahu. That planned bunker became the Kunia Facility, with the cover story claiming it was part of the extensive and wide spread HAD, which was actually just across Kunia Road, to the east.

During the last stages of World War II, the 30th Base Engineering Battalion and the 64th Topographic Company used the "Hole" for topographic and cartographic work. Using photographs and other material supplied by Army and Navy air reconnaissance and intelligence units, the facility became highly proficient at turning out the many maps of Japanese-held areas needed by American landing and occupation forces. After the end of the war, the facility continued to be an ideal location for the production and printing of charts and maps.

Shortly after the end of WWII, the facility was turned over to the newly created Air Force in 1947. It was kept in a reserve status until 1953, at which time the Navy took over as the primary occupant, using it as their communications security facility, with the Army again becoming the installation custodian.

MAUNA KAPU COMMUNICATION STATION (MKS)

This small facility is located in the uplands at the south end of the Wai`anae Ridge in Palehu, above Makakilo. It was built in 1960 as the control facility for one of four launch sites for the Cold War Era Nike Missile system for O`ahu. The facility is inactive and mothballed, although the antenna towers are used by a number of state and city communications systems.

PA`ALA`A `UKA PŪPŪKEA MILITARY ROAD (DRD)

The Pa`ala`a `Uka Pūpūkea Military Road, otherwise known as the General Drum Road or, more commonly, **Drum Road** (hence DRD) is the restricted and dedicated direct-access military road between Helemano (HMR) and the heavily utilized 9,000-acre Kahuku Training Area (KTA). The route is located almost wholly within the Kawailoa (KLO) and Kahuku (KTA) Training Areas. The sections that pass through KLO cross privately owned lands, to which the Army has access under various permanent easement agreements. For more information on the construction of this and other early Army roads and trails on O`ahu, see C. Descantes, in Appendix B -1.

Table 12: Field Visits to DRD

<u>Date</u>	<u>Area/Site(s) Visited</u>	<u>By</u>	<u>REF</u> , or Field Book Page
17 Jun 08	Recon. HMR to Haleiwa, w/ ML & LZ	DWC	

O`AHU SIGNAL TRUNKING SYSTEM (OTC)

The Signal Trunking System was established in 1941 by the Signal Corps to provide a relatively secure but simple underground cable system for military communications on O`ahu. The system provided additional and redundant buried landline connections for the six Army Com Centers built at locations on the island in 1936. Other additions to the system continued into the Cold War era (1960s), primarily to support the four Nike air defense missile system sites. At present, there are still over a thousand miles of interconnected cables and 56 structures in the landline network. As stated in the latest CRMP, the system “literally ringed O`ahu, connecting every coastal defense installation, every command post, every fire control station, and almost everything else occupied by the military” (June 2007: 98).

SCHOFIELD – HELEMANO TRAIL

USAG-HI consulted with the SHPO previously for Helemano Trail in letters dated 12 July 2004, 04 August 2005, and 28 March 2006. We now wish to reconsult, since, due to proposed changes to the project in three areas, the Garrison has reopened consultation. The three proposed realignments are: through Dole property, between Pa`ala`a `Uka Pūpūkea Road and Kamehameha Highway near Helemano; a geometry change to the existing trail in Paomoho Gulch; and similar slope changes to old road beds near the Wahiawa Reservoir Ditch and Schofield Barracks. A draft of the 106 Consultation letter is attached as Appendix A-17 on page 185.

WAIKAKALAUWA AMMUNITION STORAGE SITE (WAS)

This facility was built in the 1940s as a secure storage area for bombs and other ordnance, primarily for the aircraft using the new Kipapa Army Airfield constructed in the middle of Oahu Sugar Company’s upland cane fields. The ammunition storage area took the form of a series of 50 well-spaced, horizontal tunnels cut into the rock near the base of the side of the steep east bank of Waikakalauwa Gulch (Figure 30).

The storage tunnel system was accessed by a roadway and a rail spur off the existing OR&L branch line that connected Waipahu (and Honolulu and Pearl Harbors) with Wahiawa and Schofield Barracks.

Kipapa Field was used by a variety of aircraft during WWII; however, it was designed primarily as a base for the larger four-engine bombers. The intention was to keep some physical separation from nearby Wheeler Field so that that facility could continue to serve as the main base for the Army's single-engine pursuit or fighter aircraft on O`ahu. Hickam served as the main long-distance transit point (to the mainland and to the south) and as the headquarters for the Pacific Army Aircorps. Kipapa was the home base for the aircraft assigned to the Army's long-range bomber patrols in the Hawai'i sector of the Pacific.



Figure 30: WAS and Kipapa Army Airfield, April 1943

Some of the Waikakalaua Ammo Storage Tunnels can be seen as the series of black openings along the roadway at the gulch bottom below Kipapa Field. The airfield area that had been cut out of the sugar fields is now part of Mililani Town. Runway 3 roughly paralleled the lower ends of the present Kealakaa Street and Meheula Parkway, extending to where the latter crosses Kamehameha Highway today. The east end of Runway 7 is where Kamehameha Highway is shown here, coming up from the narrow, tree-filled gulch at the upper right. At the lower end of this small gulch is the 1934 Roosevelt Bridge across Kipapa Gulch, off the photo to the right.

The airfield located immediately above WAS was served by a series of switchback roadways for moving bombs to the B-17 patrol bombers and other planes stationed there.

MILITARY PROJECTS OFF ARMY LANDS

Introduction

The Army occasionally undertakes training and other activities in areas beyond its own installations. Agreements for such activities can be covered by short or long term rentals, leases, easements, construction or funding support or even exchanges with private land owners, state or local government entities. The Army also occasionally has joint activities and agreements with, and or supports actions undertaken by other branches of the Service.

When there is the potential for cultural resources or historic properties to be involved in any of these joint activities, our office is frequently tasked with providing the review, compliance and support that is required and appropriate for the proposed action.

Upper Mākaha Valley

On 1 June 2007, Laura Gilda filed a trip report for a field visit the previous month to Board of Water Supply property in upper Mākaha Valley. This was a post-installation archaeological field inspection of one of the Natural Resources Section's Mākua Implementation Plan – MIP Management Unit (MU) fences.

The low saddle between Wai`anae Kai and Mākaha is referred to as Kumaipo Ridge. The forest along this ridge is of extremely high quality. The forest in the proposed fence area encompasses areas dominated by Koa (*Acacia koa*) and `Ohi`a (*Metrosideros polymorpha*), diverse mesic forest dominated by Lama (*Diospyros hillebrandii*), and dry forest, with Lama (*Diospyros sandwichensis*) and Lonomea (*Sapindus oahuensis*) dominating the canopy. This project area is rich in native plant diversity and home to at least twelve species of listed, proposed, and candidate plant species, one species of endangered tree snail, and one endangered bird (*Chasiempis sandwichensis*), the `Elepaio. This fence will protect one of the healthiest populations of *Alectryon macrococcus* and the largest known population of *Gouania meyenii*. Much of the general area remains to be explored and probably harbors undiscovered resources.

The Mākaha Sub-Unit II Fence is a large ungulate enclosure (see Map 35, below) that encloses 66 acres (26.7 hectares), with a perimeter of 2,880 feet (878 m.) and elevation ranges from 1,840 to 2,920 feet (560.8 to 890.0 m). The initial section of the enclosure fence, a clearing for a temporary camp or field station, and an adjacent fence material helicopter drop zone were constructed on the same ridge and in proximity to a Temporary Habitation Site, Site Number 50-80-07-6690.

Map removed to protect rare resources. Available upon request

Map 35: Mākaha Natural Resources Management Sub-Unit II
Site 6690 is at the northern tip of the fence line, just below the 'Camp DZ'.

Description: Site 6690 occupies a narrow north-descending ridge at an elevation of approximately 1,800 ft. (549 m.) and consists of a remnant terrace (Feature 1) and several alignments (Feature 2). Refer to Map 35, a field sketch map, below. Upslope, additional short terrace alignments intermittently cross the slope but are discontinuous and difficult to define. Extensive ungulate activity has impacted the feature integrity and the surrounding ground surface. The features likely supported dry land agriculture; however, the larger size and construction of a central corner at Feature 1 terrace may indicate temporary or repetitive habitation. Agricultural sites located during the Mākaha Valley Historical Survey are located well down-slope, along the Mākaha Stream.

Feature 1 terrace is 10 meters NE/SW by 6.4 meters NW/SE, and between 0.5 to 0.9 meters high. The terrace occupies the center of the ridge, with a down-slope side defined by large boulders (some likely natural), with smaller boulders and cobbles placed between. The most intact portion of the retaining wall terrace is located near the center, where the facing makes a short 90-degree corner, utilizing cobbles fitted between the larger boulders (Figure 31). Significant ungulate disturbance has churned the terrace and the soil surface, and obviously dislodged several stones from the rough facing. The terrace surface is largely soil, sloping approximately 5-10 degrees, with a few short and low terrace alignments extending southwest from a boulder alignment defining the northeast side of the terrace.



Figure 31: Site 6690, central corner of Feature 1 Terrace

Map removed to protect rare resources. Available upon request

Map 36: Field Sketch Map of Site 6690

A small, terraced area between two large, natural boulders immediately below Feature 1 may be culturally modified. This area is roughly 4 meters NE/SW by 1.5 meters NW/SE, and 0.5m high, with a fairly level soil surface. Feature 2 at Site 6690 consists of two short cobble and small boulder alignments running almost parallel and extending southwest from a sheer gulch edge. It appears the

edge has eroded off the 30-meter-high ledge. The alignments are roughly 5 meters long and create low terrace steps across the slope. Feature 1 is 21 meters to the southwest.

Along its east side (paralleling the Mākaha side of the Kumaipo Trail), the fence terminates at the base of a vertical cliff, an elevation of approx. 2,400 ft. This cliff is on the spine of the very narrow ridge leading up to the summit of Pu`u Kawiwi (at 2,856 feet of elevation). This peak is at the north end of the massive Kamaile`una Ridge separating the valleys of Wai`anae and Mākaha. The section of the MU along the 2,400-foot contour to the south, then west, is so steep that a combination of short, strategic fencing and natural barriers will be employed to prevent ingress of goats and pigs from the south into the MU fenced area in this 1,970-foot-long (600 m.) section.

During the May 2007 field inspection of the entire fence route, LG discovered an additional site, designated Temporary Site Number DPW-034, a Lithic Scatter, shown in Figure 32.



Figure 32: Lithic Scatter, DPW Site – 34

Map 36 is the field sketch map of the site, and Figure 33 is a scan of the Field Record Form for this find.

USAG-HI DPW CULTURAL RESOURCES
SITE RECORD

PROJECT: _____
PAGE OF

Temp No: <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	Site: _____	Recorder: LG
Total No. of Features: 1	Age: <u>Pre-C</u> Post-C Modern	Date: 5/30/07
Camera: 7	GPS: <u>yes</u> no / Rover no.	Site Map: scale _____ sketch _____
Roll: _____ Exp: _____	UTM: N(y) _____ / E(x) _____	Site Tag _____

Recommended Treatment: NFW Data Recovery Preserve Other _____

Vegetation: coconut, mango, taro, guava, alala

Geologic Landscape: ridge Aspect: _____ Natural Slope: _____

Site Type (descriptive): lithic scatter

Function: tool production Historic Context: _____

Site Size 1cm m by 2cm m Long axis 140° ° Condition: Excellent () Good (X) Fair () Poor ()

Impacts: Human mineral/trace Animal pig/cow tail Natural erosion

Excavation Potential: Excellent Good X Fair Poor Reason: shallow crappily soil

Feature Types Present (note quantity [#] and feature designations):

Type	#	Designation	Type	#	Designation
• Alignment			• Modified outcrop		
• Berm			• Mound		
• Cairn			• Midden/artifacts		
• Cave/rockshelter			• Platform		
• Cleared area			• Pavement		
• Concrete Structure			• Retaining wall		
• C-Shape			• Terrace		
• Ditch			• Wall		
• Depression			• Historic Scatter		
• Enclosure			• Traditional Scatter	1	Basalt
• Hearth			• Petroglyph/Photograph		
• I-Shape			• Other		

Site Narrative: (use continuation sheet on back if necessary)

Tiny knob on narrow ridge w/ beautiful dark blue basalt flakes + scatter. Knob top is ~4m 140/320° x 2m 40/320°. 20' flakes ranging from ~7cm dia to less than 1cm. Trace w/ visible bulb in rock surface + other flake debris. Small possible disturbed mound ~40m 140° back on trail. Fence trail (but a area of strategic fencing) is 5m SW. Several flakes collected for small sample. Scatter in pig trail, esp @ SE end. Some flakes falling down pig trail.

Figure 33: DPW Site Form for New Find in Upper Mākaha Valley

The following is a direct copy of the scan of the "Site Narrative" from the faint penciled original:

"Tiny knoll on narrow ridge w/beautiful dark blue basalt flakes shatter. Knoll top is 4m 140/320 x 2m 40/220. 20+ flakes ranging from ~7cm dia. to less than 1cm. Many w/ visible bulb of percussion & other flake scars. Small possible disturbed mound 40m 140 back on trail. Fence trail (but in area of strategic fencing) is 5m SW. Several flakes collected for basalt sourcing. Scatter in pig trail, esp @ SE end. Some flakes falling down pig trail."

Map removed to protect rare resources. Available upon request

Map 37: Sketch Map of Site DPW -34, From Field Note Book.

The basalt flakes that were collected included one large, dense basalt flake with a possible utilized or worked edge; three other dense basalt flakes; five smaller pieces of possible volcanic glass, one with a fine, straight edge; and one chunk of the softer material typical of the majority of the rock scatter at the top of this small knoll. The two largest flakes are shown in Figure 34.



Figure 34: Two Fine-Grain Basalt Fragments, Collected at DPW Site 34

OUTREACH ACTIVITIES

Jaime Raduenzel, Cultural/Historical Research Technician WEEKLY LOG, NOVEMBER 2008 TO MARCH 2009

Week of 3-9 November 2008:

- Drafted guidelines for planning outreach activities
- Attended PCSU meeting regarding personnel issues
- Assisted with primer, sealant, and roof cement on both Conexes
- Located Channing to establish computer access, including email and shared files
- Completed System Security Awareness Certification and USB Thumbdrive Awareness Training
- Attended Environmental Compliance Officer training with Natural Resources staff to determine if training on cultural resource management might be incorporated
- Met with Natural Resources Outreach Specialists to discuss potential collaboration on new projects and incorporation of education in cultural resources to existing NR outreach activities and materials
- Assisted with inventory of map drawers at Bldg. 102
- Researched partners in HPI-CESU for potential collaboration
- Researched Kahuku Training Area as a potential site for outreach activities

Week of 10-16 November 2008:

- Since access to a computer has just been made possible, files from previous work on a personal computer were transferred and organized on employer's computer, email contacts and mailboxes were organized, and regularly used bookmarks for internet resources were imported
- Discovered and reviewed a DPW Cultural Resources Education Plan within the ICRMP Electronic Resources Database
- Drafting potential goals, responsibilities, and tasks for the proposed position of Cultural Resources Outreach Specialist
- Reviewed reports on Mākua Military Reservation in preparation to attend natural resources service project at Kahanahāiki on 15 Nov and share cultural/historical background
- Researched groups and organizations already affiliated with installations that may be partners in outreach, including Army Education Outreach Program, Blue Star Program, Self Help Program, and Get-A-Cloo Army Civilians
- Assisted with inventory of map drawers at Bldg. 102

- Assisted with Conex repairs and improvements, including installing supports for the sagging roof and patching holes
- Since the computer available at the provided desk could not be reimaged, Daniel Bow gave permission to utilize, or borrow, a desk and computer in the Planners' office space
- Relocated office supplies, reports, and files to new workspace and organized
- Assisted with a Natural Resources service project at Kahanahāiki. Discussed potential education in cultural resources with the participants, teachers from Punahou, and provided interpretation regarding the history of Kahanahāiki and Mākua.

Week of 17-23 November 2008:

- Assisted with primer, sealant, and roof cement on both Conexes
- Assisted with inventory of map drawers at Bldg. 102
- Researched partners in HPI-CESU for potential collaboration
- Researched Kahuku Training Area as a potential site for outreach activities

Week of 24-30 November 2008:

Drafting potential goals, responsibilities, and tasks for the proposed position of Cultural Resources Outreach Specialist

- Reviewed reports on Mākua Military Reservation in preparation to attend natural resources service project at Kahanahāiki on the 15th (?) and share cultural/historical background
- Researched groups and organizations already affiliated with installations that may be partners in outreach, including Army Education Outreach Program, Blue Star Program, Self Help Program, and GetA-CLOO Army Civilians
- Assisted with inventory of map drawers at Bldg. 102

Week of 1-7 December 2008:

- Researched possible collaboration with Tropic Lightning Museum
- Email correspondence with Public Affairs regarding meeting for introductions, etc.
- Reviewed National Park Service training for interpreting historical places
- Attended EEO training at UH Mānoa
- Dropped off existing brochure to print at Aiea Copy Center
- Drafted potential job description and provided to Dave
- Researched potential collaboration with the Army's eCybermission for science education

- Met with Public Affairs Office (Stefanie, Kayla, Loran, Dennis)
- Worked with Patrice at Bldg. 102 to inventory
- Discussed brochures with Dave
- Reviewed collections database to determine if teaching collection may be easily identifiable
- Measured trifold display for new posters
- Met with Alton and Carly regarding outreach at Kamaile Academy

Week of 8-14 December 2008:

- Met with Laurie regarding potential changes to job duties
- Discussed Keālia Trail and Dillingham with Alton
- Searched and sorted images for brochures, other outreach materials
- Received info on walking tours for Centennial Celebration
- Emailed draft job description to Laurie, saved on Squirrel
- Completed last coat of sealant on roof of Conex
- Researched content for signage for Hangar 206 (aviation pioneers)
- Alton provided draft MFR for MMR cultural access
- Attended BAX meeting at Bldg. 105 (Laurie, Laura, Loren, GANDA)
- Talked with John about shared files, emails
- Agreed to cover 26 April 2009 Cultural Access at MMR

Week of 15-21 December 2008:

- Went to Schofield Library to find public history of Fort Hood
- Reviewed research projects under Pat Kirch for possible collaboration
- Reviewed landscape management posters provided by Laurie
- Searched for *Imprint on the Land*, located online and saved
- Explored other military photo databases for possible photos to use in outreach materials
- Moana stopped by to provide an update on her contacts with Waimea Valley and her efforts to coordinate a program at that site
- Compiled list of potential outreach projects
- Updated weekly logs from November to present
- Began working on brochures, listing multiple needed brochures
- Worked with Patrice in 102 and photographed artifacts for brochure
- Attended RCUH CRM staff meeting

Week of 22-28 December 2008:

- Email correspondence regarding markers for historic sites on Centennial walking tour
- Completed NPS *Effective Interpretation of Archaeological Resources*
- Worked with Patrice on Bldg. 102 inventory
- Began draft text for brochure of general overview of CRM
- Researched Mākaha Studios for potential video of Army's cultural resources
- Drove bus tour with Ken, confirmed location of historic markers
- Revised bus tour and mapped route
- Confirmed approval from LL to work on signage for Centennial Celebration
- Discussed office furniture with Ken and Moana, offered to assist as needed
- Christmas Holiday

Week of 29 December 2008 – 4 January 2009:

- Email with Kayla in PAO to discuss outreach opportunity in January
- Sought estimates from three companies for signage to mark historic buildings
- Worked on draft general brochure
- Met with Ken to discuss details of signs, created draft image of sign, dimensions
- Selected and edited photos for brochures
- Emailed *Imprint on the Land* to LL, JP, DC
- Holiday

Week of 5-11 January 2009:

- Provided brief tour to Linda Hee on her first day
- Worked with Ken on Hangar 206 signage, confirmed location and met with building manager
- Researched display cases according to requirements
- Went to Office Max to see furniture for Fire Station
- Worked on draft brochure
- Selected frame, received quote at Pictures Plus for Hangar 206 display
- Follow up on sign to mark historic buildings
- Attended military Partnership Conference at Hilton Coral Ballroom, provided brochures
- Visited Army Museum in Waikīkī

- Assisted with volunteers from Halau Mohala `Ilima during NR service project at Kahanahāiki, exchanged information on cultural uses of plants

Week of 12-18 January 2009:

- Follow-up on sign estimates for Centennial, made revisions as needed
- Continued work on draft brochure
- Met with Clint from Fisher and Ken regarding furniture for the Fire Station
- Walked location for additional signage at Schofield with Ken
- Spoke with Post Office personnel regarding signage
- Confirmed location of centennial signage at meeting with Tropic Lightning Museum
- Organized and typed notes from meeting with Ken regarding sign details
- Communicated with PAO regarding potential partnership with Army's Get-A-Cloo program

Week of 19-25 January 2009:

- Library research for signage
- Primary task this week was to finalize estimates for porcelain enamel signage and historic site markers
- Obtained complete estimates from Winsor Fireform, including design, fabrication, and shipping
- Obtained complete estimates from Honolulu Signs, Peterson Signs, Brandy Signs for historic site markers, including design, fabrication, and installation
- Shared draft brochure with Ken, Jill, Dave, Peter, Patrice for comments
- Revised brochure

Week of 26 January – 1 February 2009:

- Met with DPW and Ken regarding producing and installing lava rock veneer mounts for centennial signage
- Listed some proposed expenses for current budget ending 30 June
- Assisted Jill with boxes, organizing at Conex
- Followed up with Alton regarding roads at MMR and delay of working with Kamaile Academy
- Revised brochure
- Updated AKO account
- Communicated regarding potential articles for EMP Bulletin, etc.
- Reviewed list of articles, research projects sent by PTA

- Scheduled date with NR Outreach Coordinators to assist with service project
- Completed email communication regarding signs before leaving for vacation

Week of 2-8 February 2009:

- Off island using annual leave

Week of 9-15 February 2009:

- Completed B3 Combination Helicopter/Airplane Safety course on the 10th
- Attended Centennial Committee meeting, provided update on progress of signage to mark and interpret historic properties at Schofield Barracks
- Began work on revisions to posters for MMR public meetings
- Received Schofield Barracks CRM Plan from Ken for content of interpretive signage
- Requested draft mock-up of historic site marker from Peterson Signs
- Communicated with Ken and Kayla (PAO) regarding tour of historic district for HHF
- Communicated with Loran (PAO) for clarification on request for MMR posters for meetings; suggested standard method of communicating request to Laurie for delegation
- Reviewed hard copy of ICRMP Database of Traditional Places
- Drafting text for centennial signs

Week of 16-22 February 2009:

- Drafted text for revised MMR posters; solicited comments from coworkers
- Requested any quality pictures from Kayla (PAO) showing community groups at MMR
- Talked to AE/CA regarding posters for MMR public meetings, offered assistance/input/review; archaeologists to complete posters independently
- Requested ideas for EMP Bulletin articles, no feedback
- Worked with Ken to revise walking tour for Centennial Celebration (changed path, stops)
- Submitted service requests to configure Outlook to receive all emails that currently go to AKO account and requested installation of Adobe Photoshop software on computer
- Registered for NPI training in NEPA and TCPs
- Received request for excavation permit from Ken for centennial signs; marked sign locations on map of Schofield; requested enlarged map from Ron G.

Week of 23 February – 1 March 2009:

- Completed weekly logs for October to December for CLS tracking
- Attended training in RCUH procedures for purchasing at UH on the 23rd
- LL requested review of Fort Lewis website as an example of sharing standards for historic buildings (did not find this on their website)
- Provided hardcopy of revised general CRM brochure to LL for review and comments
- Moana requested plan for program at Kahuku High School from JR
- Attended additional training on PCSU procedures for purchasing from Linda Hara at Wheeler
- Found tab for outreach in LL's task log for CLS (probably created by PTA), made additions to list and updated completed tasks for Oct to Dec
- Asked Ken about method of purchasing centennial signage (to be provided by Beverly, donations)
- Moved boxes to, cleaned at the Fire Station
- Picked up business cards from Sally
- Reviewed HPI CESU/PCSU website to see how our program might increase its presence by sharing reports or updates
- Checked Hawai'i Conservation Conference website for possible contribution, poster at HCC
- Collected info on various subscriptions, such as the National Association for Interpretation
- Compiled list of books (with costs) needed as resources for outreach planning, preparation, research
- Following-up on signage quotes and revisions
- Researched lesson plans in archaeology (BLM, Project Archaeology, NPS, SAA, AIA, etc.) and considered modifications for teaching archeology in Hawai'i
- CR Outreach Specialist position was posted internally on RCUH website; submitted application online and via fax, confirmed with Sharon Vong at RCUH

Week of 2-8 March 2009:

- Emailed LL about feedback on brochure so that content could be morphed into posters for trifold
- Sick leave from 2-5 March (received doctor's note for absence)

Week of 9-15 March 2009:

- Continued follow-up on centennial signage quotes, designs
- Attended Earth Day planning meeting with Actus, DPW
- Discussed assisting with annual report preparation with DC, LL
- Explored files for inclusion of documents in annual reports
- Received comments from LL on CR brochure
- Found PTA photos in shared files and sorted images for outreach materials
- Discussed TNC trail at SRLA with LG, potential for program sites
- Met with Kim (NR) regarding Earth Day activity
- Received hardcopy of chain of emails from previous month regarding new MMR posters for public meetings
- Purchased books for planning outreach activities (UH Bookstore, Native Books)
- Signed revised field policy
- Checked Fort Lewis website again for standards for historic buildings

Week of 16-22 March 2009:

- Followed-up on PTA visit with PAO
- Revised design of historic markers and requested additional quotes
- Looked for Kalakaua Community Center to preview space for Earth Day event
- Visited three sign companies in person to follow-up on quotes - Pacific Signs & Graphics, Kapiolani Signs, Signarama
- Attended Earth Day meeting with Actus/DPW
- Researched and wrote text for centennial signage, continued discussions about funding of project with Ken
- Emailed state contact for Project Archaeology to begin dialogue, learn current status in Hawai'i
- Completed reimbursement requests

Text Used for Permanente Interpretive Out-door Signs for Selected Historic Schofield Sites**Post Hospital****1919 – 1938**

The first building of the medical complex, Building 679, was completed in 1919. Following several delays in construction after the United States entered World War I, the hospital was completed in 1929 and became the largest military medical facility on O`ahu. The hospital was built as a series of interconnected

structures with a central administration building flanked by two wings that contained 13 separate wards. Two more structures were added in 1939 to increase the hospital's capacity for patients. The hospital was used extensively during World War II and continued to serve as the post hospital until 1965. It was converted into a health clinic and hospital functions were centralized at Tripler Army Medical Center. Now strictly used for out-patient treatment, the complex remains the installation's health care facility.

POST HOSPITAL 1919 – 1938

Following several delays in construction after the United States entered World War I, the hospital was completed in 1929 and became the largest military medical facility on O'ahu. The first building of the medical complex, Building 679, was completed in 1919.

The hospital was built as a series of interconnected structures with a central administration building flanked by two wings that contained 11 separate wards. Two more structures were added in 1939 to increase the hospital's capacity for patients.

The hospital was used extensively during World War II and continued to serve as the post hospital until 1965. It was converted into a health clinic and hospital functions were centralized at Tripler Army Medical Center. Now used for out-patient treatment, the complex remains the installation's health care facility.



Figure 35: Final Graphic Used for One of the 24 x 36 Inch Enameled Signs

Quad Row 1914 – 1931

The quadrangle barracks are the core of the Historic District and provide the centralized housing, dining, and administrative space for troops stationed at Schofield Barracks. The configuration of three barracks and one administration building surrounding a central courtyard became known as a "Quad". The first of the quad barracks, Quad B, was completed in 1914 and the last, Quad F, was finished in 1931. Although the quad buildings are laid out according to the same general plan, they differ significantly in their details.

Quad B was built using the tilt-up construction method, where the framework for the walls was laid out on the ground, the concrete poured, and when the

concrete was set, the walls were tilted up to standing position and locked in with the other walls. It was a very early application of this technique and one of Hawai'i's only remaining structures built by this means.

All the quads were constructed with theatres for troop entertainment on weekends. The theatres would provide movies and live entertainment by local bands as well as periodic balls. Most of the theatres in the quads were converted to gymnasiums during the late 20th century. Quad F, however, retains its original theatre features, including classical columns, carved medallions, decorative wall moldings, and a coffered ceiling decorated with stenciled wood paneling. These features were restored in preparation for the Centennial Celebration of Schofield Barracks in 2009. During the restoration, a mural was discovered under several layers of paint on either side of the stage. The mural was painted by artists from the Works Progress Administration in the 1930s and depicts U.S. Army soldiers from the Revolutionary period up to World War II.

Caption for accompanying photo

Author James Jones was stationed at Schofield for two years with the 27th Infantry. His observations of Army life and the December 7, 1941 attack were later the basis for the book "From Here to Eternity."

The 1953 movie version starring Montgomery Clift, Deborah Kerr, and Burt Lancaster was filmed at Quad C.

Community Life

Soldiers' Chapel	1920
Conroy Bowl	1923
Sgt. Smith Theater	1933

A number of facilities were constructed south of the quadrangle barracks to support the Schofield military community. Buildings in this area of the Historic District include a post office, gymnasium, theater, church, and amphitheater. Although these structures all functioned to support community life, they vary widely in architectural design.

Conroy Boxing Bowl

The boxing bowl was constructed in 1923 with seating for 10,000 people. Only the area above the central stage was covered. It was called the "boxing bowl" because boxing matches were one of its major uses, although it has also been used for other events over the years – such as roller skating, movies, and basketball. A roof was added in 1932 to protect spectators from rain showers that frequented the area. In 1954, the bowl was renamed in honor of Colonel James G. Conroy of the 165th Regiment of the 27th Infantry Division. Colonel Conroy was killed during the invasion of Makin Atoll in 1943.

Celebrities such as Bob Hope and Sammy Davis, Jr. performed at the Conroy Bowl. Elvis Presley held his last concert of the 1950s here in November of 1957.

Theater

The post theater opened on May 27, 1933. It was designed in the Art Deco style that was popular during that period for architecture, art, and furnishings. When it was completed, the theater was the largest building of its type in Hawai'i, capable of seating 1,400 people. In 1967, the building was named in honor of Sergeant E. R. Smith, a Hawai'i-born soldier and former resident of Wahiawa who was posthumously awarded the Medal of Honor for heroism in Vietnam.

Chapel

The first chapel on Schofield Barracks was built in 1913 in the "Upper Post" area, close to the Wai'anae Mountains. Oral history relays that the 1913 chapel was constructed by funds provided by Queen Lili'uokalani, the last reigning monarch of the Hawaiian Kingdom. A larger "Soldiers' Chapel" was built in 1920 using portions of the original and moved to its present location near Quad D in 1925. The Soldiers' Chapel holds a bell donated in 1912 from the 5th U.S. Cavalry Regiment. It also has a rare 1931 vintage pipe organ, one of the only two of its kind in Hawai'i.

Family Housing

General's Loop	1918
Canby Neighborhood	1919 – 1931

The Canby Neighborhood includes the homes in General's Loop, the "woodies" and the "stuccos". These quarters for the officers and their families date from the early years of Schofield Barracks. Two types of architecture can be seen here, Craftsman/Hawai'i Plantation-Style and Mission-Style.

The wooden officer's quarters across the street from the quads were built between 1919 and 1923 to house the officers of the regiments assigned to the neighboring quads. The neighborhood's grid pattern of streets emphasizes the physical association of barracks and family housing; streets led directly to arched entryways into the Quadrangles. The Craftsman-Style units are characterized by stone foundations, raised floors, wood single-wall construction, and board-and-batten siding.

The homes were custom designed to suit the Hawaiian environment. The U-shaped bungalows take advantage of the cooling tradewinds and the small alleyways between houses provide natural ventilation. Local lava rock was used as facings on foundations, as chimneys, and as interior fireplaces in Craftsman-Style houses. Today, the houses generally retain much of their historic integrity and original materials.

The Mission-Style houses of the Canby Neighborhood were constructed in 1932 and 1933 as officer's quarters. The homes are constructed of concrete with a stucco finish. Some of the noted features include acid washed concrete floors, bronze doors, fireplaces with copper hoods and built-in cabinetry. The spacious

homes were originally designed for Fort Huachuca in Arizona, and had flat roofs which were later changed to pitched roofs better suited to Hawai`i's climate.



Figure 36: Permanent Signage at the Canby Neighborhood.

Post Library 1915

The current home of the Tropic Lightning Museum was originally built in 1915 as the post library. General Carter, commander of Schofield Barracks, was concerned about the lack of recreational outlets for soldiers. Ground was being broke for Kemoo Farms, located across the street from Schofield Barracks, so General Carter arranged for the unwanted boulders to be transported to Schofield, where stockade prisoners built the library. Over 10,000 books were donated in the first six months by personal friends and professional associates of Carter. The post's Educational and Recreation Fund was established in 1922 and took over financing of the books and staff, allowing the library thereafter to

be well-stocked and well-ordered. In 1939, the building was expanded and was then officially dedicated to Major General William J. Carter.

Carter Hall's significance includes the use of local building materials and vernacular form, its relatively unaltered state, and its continuous compatible use since its construction. It is Schofield's only building with lava rock as the full exterior wall finish and one of the earliest structures still in existence. Portions of the interior have been remodeled, but the central portion has been restored to nearly its original condition and contains the original lava rock fireplace and a plank wood floor replicating the original.

Week of 23-29 March 2009:

- Attended NPI seminars
 - NEPA Compliance, March 23 – 24
 - Identification and Management of TCPs, March 25 – 26
- Received complete quote from Pacific Signs & Graphics, including design, fabrication, permitting, and installation for both historic site markers and interpretive panels with mounts

Week of 30 March – 5 April 2009:

- Reviewed new sign estimates
- Read `Ōhikilolo reports for information to potentially include in signage at NR office
- Reviewed SRLA report for info on potential program sites
- Visited archaeological sites with LG along the TNC Honouliuli Contour trail to evaluate as potential sites for education/outreach activities
- Reviewed TNC's Project Stewardship curriculum to understand past use of TNC trail, sites, and to identify potential partners in program development
- Formatting signage materials according to art specifications for porcelain enamel panels
- Sent follow-up emails to NPI training of previous week
- Requested Ron G. digitize map showing locations of centennial signage at Schofield
- Attended Earth Day meeting [JR].

Presentation at EAH Meeting

On Friday, 27 February 2009, Ken Hays and David Cox presented a slide show on the "Historic Preservation of Buildings on Army properties on O`ahu." The

event was for the weekly gathering, the “Friday Luncheon Meeting” of the Engineers and Architects of Hawaii.

"Engineers Meet for Discussions: Among the technical men there has been formed the Honolulu Engineering Association, which has gathered in already the principle men in electrical and mechanical engineering." With these words, over one hundred years ago, the first meeting of the Engineers and Architects of Hawaii (EAH) was announced in the Honolulu Star Bulletin for the May 2nd meeting in 1902.

The first President of record was Alonzo Gartley, a U.S. Naval Academy graduate who had been brought out from the mainland to be the Manager at the Hawaiian Electric Company for \$250 per month. Mr. Gartley shepherded the young organization, then know as the Hawaiian Engineering Association, for five years between 1902 and 1908.

Appropriately, the first meeting was on electrical fuses presented by a Navy Lieutenant Holmes. One of the goals of the organization was to standardize the electrical work for the City. This is something the association would later be officially tasked to do in 1925 that is to develop an Electrical Code for Honolulu. At that time the Hawaiian Engineering Association, had joined the American Association of Engineers as the Honolulu Chapter in 1920. The first President was Honolulu Mayor John H. Wilson. Since that time **"EAH"**, as the members fondly call it, has hosted between 3,600 to 4,000 weekly programs in its goal to keep Hawaii's engineers, architects and the community abreast of both local and international engineering technology.

EAH has met essentially continuously for the last 60 years and continues to average more than 40 weekly programs a year. **EAH** remains committed to carrying on the tradition of getting first hand information from experts in their fields for its members and the community. Professionals should remember, in this day of the Internet, that any organization depends on its members and the old saying is still true, the more you put into something the more you get out of it. If you don't attend a meeting you'll never know what opportunities you've missed."

(The section above was excerpted from the Engineers and Architects of Hawaii web page.)

CURATION ACTIVITIES

Table 13: Curation Activities, for First Quarter of 2009

(January to March, from CLS listing information)

<u>Curation [Jill Sommer]</u>	Required Actions	Completed Actions
Curate/Archive		
Curate archaeological material (# of boxes)	8	8
Archive associated documents and records (# of folders)		
Maintain records on collections held by contractors		
Artifact care and conservation (# of objects)		
Re-house Material (# of boxes, folders, or bags)		
Monitoring/Controlling Physical Space		
(environmental, pest, etc.)	9	7
Storage Equipment and Materials (facility design, ordering, maintenance of...)		
	7	6
Collections Access (# of requests)		
Public	4	4
Staff	3	3
Loans		
Policies and Procedures		
Create	2	1
Update	1	0
PP4 Data Entry (# of records)		
Main Catalogues: Photos, Objects, Library, Archives		
Supporting Records: Accessions, Sites, Contacts, etc.		
Excel Inventory (by # of box or drawer)	16	15
Training/Assistance		
Conducting		
Receiving	3	3
Other		
TOTAL	53	47



Figure 37: Salvaged Items Stored in CONEX, at SBE.

OPERATIONS AND TRAINING

PCSU Student-Hire for Cultural Resources

Collections Intern, Patrice M. Mineshima

Employee Category: Student Assistant Employee (no benefits)
Start/End Date: 1 Oct 2008 – August 2009

Job Description: A temporary student-hire position with the Pacific Cooperative Studies Unit will perform project tasks pertaining to property of the U.S. Army Garrison, island of O`ahu (USAG-HI). The student will assist the Cultural Resource Management Section, Directorate of Public Works, Environmental Division (DPW-ENV) with the organization and inventory of architectural, engineering, and historic document collections. The student may be required to work independently, performing specialized tasks. The student will have completed an undergraduate degree and be working toward an advanced degree. This position requires previous work experience related to collections management or studies in collections management issues. Student must be highly organized with attention to detail, dependable, and personable. Must be able to lift up to 30 lbs. and climb ladders. The student-hire will coordinate and report to one or more Cultural Resources staff members.

Specific Job Tasks and Requirements include a basic inventory of DPW Systems Engineering document collections, to include title, year, building number, installation, medium, drawing number, and location of drawings. The student will work with the Curator of Cultural Resources in organizing and inventorying approximately 100,000 drawings and maps from the Engineering collection. The student will be responsible for computerized data entry of the inventory. The data collected will allow for planning and budgeting for the removal of historically significant documents for preservation. The student must be capable of passing basic U.S. Army security screening. A valid driver's license would allow for use of company vehicles, but is not required. Primary work space will be provided at the Cultural Resources office located on Wheeler Army Airfield, O`ahu.

Certification and other Training

On the 31 July 2008, the whole crew attended our annual Hazardous Waste and Emergency Response Operations Refresher (HAZWOPR) class at Donaldson Enterprises Inc.'s (DEI) new Ka`uka office. This eight-hour recertification session serves to:

- qualify one to perform our normal duties on a UXO contaminated hazardous site
- provide one with the knowledge to recognize hazards and take appropriate precautions to prevent injury

- provide training and experience on equipment and procedures used to prevent or respond to injuries while on a hazardous site
- to comply with OSHA regulations (as set forth in Title 29CFR part1910.120).

Our next refresher was completed on 22 July 2009.

Most of the crew was recertified for helicopter use after attending the Interior Department's Office of Aviation Safety (OAS) course on 10 February 2009. The course was give by Perry Bednorz, and certification is good for three years.

REQUESTS FOR INFORMATION AND ASSISTANCE

The following letter was forwarded to our office by Mr. D. Sanborn from the Office of the Deputy Under Secretary of Defense (Installations and Environment). It was a general memo to members of a group representing the various military commands in Hawai'i. The DPW Cultural Resources Section had represented the Army while participating in the activities mentioned below, in 2006. The 2006 and later meetings were with a large body of organizations and individuals.

Mr. Sanborn's request:

Oct 07

Subject: Request for Comment: Draft Consultation Protocol

Good Afternoon,

My name is David Sanborn and I am the new DoD Native American Senior Tribal Liaison for the Department of Defense (DoD). My predecessor, Mr. Paul Lumley, initiated a consultation protocol project in May 2006 to help clarify the relationship between DoD and Native Hawaiian Organizations (NHO) concerning statutory and regulatory consultation responsibilities and other aspects of consultation that would serve to improve the working relationship between DoD and Native Hawaiian Organizations. I wanted to bring you up to date on the latest progress on this project and request your continued involvement as we go forward:

Activities to date:

. DoD project began in May 2006 after meeting with many of you and requesting ideas on how to clarify and improve your consultation responsibilities to Native Hawaiian Organizations.

. DoD held August 2006 workshops between DoD representatives and NHOs in Honolulu, HI. Many of you were also involved in those meetings. Workshop involved facilitated discussions and case studies in DoD and NHO consultations, what works, what does not work. Information from workshops is being used to develop draft consultation protocol.

. DoD held November 2006 small group and community meetings on several islands to receive comments and recommendations on the proposed consultation protocol outline and draft Native Hawaiian Cultural Communications Training Course (NHCCC).

Current status:

A core group of HQ DoD representatives has completed a draft consultation protocol document based on the comments and recommendations DoD received from the August workshops, November

meetings, and individual discussions between Native Hawaiian and DoD officials. The draft is now being provided to you for review and comment. DoD is also developing a Native Hawaiian Cultural Communications Course which will be presented in an executive session at the Deputy Assistant Secretary (DAS) level in December 2007. Plans call for the course to be presented in Hawaii in early 2008.

In a meeting hosted by the Assistant Deputy Under Secretary of Defense (ESOH), DoD briefed the Deputy Assistant Secretaries of the Army, Navy, and Air Force on the status of this project on August 10, 2007. All expressed their continued enthusiastic support.

Next steps:

. We now need your support in reviewing and commenting on the draft document prepared by the DoD core group. We are requesting your comments and recommendations by NLT November 30, 2007. NOTE: This document is for internal DoD review only.

. With your support, we would like to finalize a draft that can be provided to the Native Hawaiian Community in early 2008 for review and comment and have consultation meetings on the document similar to the series of meetings held in 2006.

. We will present the NHCCC in executive session to the DoD management December 13, 2007

I believe that we have the full commitment of DoD and Military Departments to completing the consultation protocol project. Following receipt of comments from DoD Hawaii, we will schedule a conference call to discuss your comments and recommendations.

I look forward to meeting and speaking with you.

David Sanborn

Senior Tribal Liaison
Office of the Deputy Under Secretary of Defense (Installations and Environment)

1225 South Clark St., Suite 1500
Arlington, VA 22202

Subject: Request for Comment: Draft Consultation Protocol

In conjunction with the effort to improve the working relationship between DoD and other federal agencies and Native Hawaiian organizations, the Department of Interior was tasked with the creation of a Native Hawaiian Organization

Notification List. The following draft of the DoI proposal was forwarded to our office on 25 September 2007:

Department of the Interior

Office of the Secretary

Native Hawaiian Organization Notification List

AGENCY: Office of Hawaiian Relations

ACTION: Creation of a Native Hawaiian Organization Notification List to be maintained by the U.S. Department of the Interior, Office of Hawaiian Relations

SUMMARY: The Office of Hawaiian Relations (OHR), within the Office of the Secretary, U.S. Department of the Interior (DOI), has developed criteria for establishment of a Native Hawaiian Organization Notification List (Notification List). The purpose of the Notification List is to provide the DOI officials with a tool to help satisfy their statutory notification obligations under such laws as the National Environmental Policy Act (NEPA), the National Historic Preservation Act (NHPA), and the Native American Graves Protection and Repatriation Act (NAGPRA). It is also the intent of the Office of Hawaiian Relations to make available to other Federal agency officials this mechanism to assist them with their reasonable and good faith efforts to identify Native Hawaiian organizations that are to be notified or consulted with when required by statute or when desired.

DATES: Eligible organizations should submit their application for inclusion on the list. Although organizations may apply for inclusion on the list at anytime, we will begin using the list on **[60 days after date of publication in the Federal Register]**.

ADDRESSES: To apply for placement of an organization on the Notification List send certification to: Ka'i'ini K. Kaloi, Director, Office of Hawaiian Relations, 1849 C Street NW. MS 3543, Washington, DC 20240.

SUPPLEMENTARY INFORMATION:

- 1. What does the Native Hawaiian Organization Notification List do?**
 - a. The Native Hawaiian Organization Notification List, to be maintained and housed within OHR, is designed to assist the DOI and other agencies to locate and communicate with interested Native Hawaiian organizations when statutory, regulatory, or when otherwise desired by the agency.
 - b. The Native Hawaiian Organization Notification List may assist other Federal agency officials with their reasonable and good faith efforts to identify Native Hawaiian organizations that are to be notified or consulted with when required by statute or when otherwise desired by the agency.
 - c. The Native Hawaiian Organization Notification List is voluntary, and Native Hawaiian organizations are not required to participate in the Notification List. However, it is anticipated that Federal agencies will rely on this list.

- d. The placement of an organization on the Notification List shall not be construed as recognition by the Federal Government that the organization is a governmental, tribal, or other similar type entity.
- e. The placement of an organization on the Notification List is not intended to and does not confer any substantive or procedural right, benefit, or privilege enforceable at law or in equity, which is not otherwise available to the organization by law, by any party against the United States, its agencies or instrumentalities, its officers or employees, or any other person.
- f. The Notification List is created as a convenience for the U.S. Government and Native Hawaiian organizations. It does not provide a basis for legal action against the U.S. Government.

2. How Does a Native Hawaiian Organization apply to be on the Native Hawaiian Organization Notification List?

- a. An organization must certify in writing to OHR the following:
 - i. The organization serves and represents the interests of Native Hawaiians;
 - ii. The organization has as a primary and stated purpose the provision of services to Native Hawaiians;
 - iii. The organization has expertise in Native Hawaiian affairs; and
 - iv. The organization would like to be placed on the Notification List.
- b. The certification must be signed and dated by the organization's governing body and include a valid U.S. mailing address where the organization wants notifications to be sent.
- c. The request may also include the organization's topical and geographic areas of interest.
- d. If the certification from the organization is incomplete, the organization may not be listed.
- e. It is a violation of Federal law to make false, fictitious, or fraudulent statements to the Federal Government.

3. How Long Does Registration on the Notification List Last?

Placement on the list is valid for five years. Placement automatically expires at the end of five years, measured from the date the organization was placed on the Notification List or last had its membership renewed, whichever is more recent. The OHR will notify the organization at the last listed address of the need to renew their membership on the Notification List.

4. How Will DOI Manage and Provide Public Notification of the List?

- a. The DOI will maintain the Native Hawaiian Organization Notification List and will periodically update it.

- i. The OHR will publish on the DOI website the names and contact information of the listed Native Hawaiian organizations. The information contained therein will be updated periodically
- ii. Copies of the Notification List and instructions outlining how to become a listed organization will also be available online or may be requested from the OHR.

5. How Will Listed Native Hawaiian Organizations Be Notified of Federal Actions?

- a. Agency officials who are seeking to consult with Native Hawaiian organizations regarding a NAGPRA or NHPA action should notify those Native Hawaiian organizations on the Notification List.
- b. The notification should:
 - i. Be sent to the address listed on the Native Hawaiian Organization Notification List;
 - ii. Outline the Federal action to take place that will affect Native Hawaiians;
 - iii. Provide a point of contact within the acting agency for the Native Hawaiian organization where inquiries may be sent.

6. What Must a Listed Native Hawaiian Organizations Do in Order to Remain on the Notification List?

- a. To remain on the Notification List, Native Hawaiian organizations must submit a written request at least every five years. It is the responsibility of the organization to notify the OHR of changes to its U.S. mailing address.
- b. The request to remain on the Notification List must be sent to the DOI, OHR, within 30 days before the organization's listing expires.
- c. The request to remain on the Notification List must include a certification, signed and dated by the organization's governing body, that includes:
 - i. The organization's current contact information, including a valid U.S. mailing address;
 - ii. A statement that the organization meets the criteria listed in 2(a)(i)-(iii); and
 - iii. A statement that it is the official position of the organization to remain on the Notification List.
- d. If the information submitted by an organization to update its registration is incomplete, the organization may not remain listed.
- e. If an organization does not provide a satisfactory update every five years, registration on the Notification List will automatically expire. Registration automatically expires at the end of two years measured from the date the organization was placed on the Notification List or the date the organization last submitted a written request to remain on the Notification List, whichever is more recent.

- 7. How Does an Organization Voluntarily Remove its Name from the Notification List?**
- a.** If an organization wants to be removed from the Notification List prior to the automatic expiration date, the organization must send a signed and dated written statement from the organization's governing body affirmatively requesting removal from the Notification List.
 - b.** After receipt of the removal request, the OHR will remove the organization during the periodic update of the Notification List.

Ka'i'ini Kaloi
Director, Office of Hawaiian Relations

(The public announcement from the Department of Interior for this initiative can be seen at Appendix A-18, page 187).

APPENDIXES

Appendix A: Section 106 Consultations and Other Official Correspondence

Appendix A-1: DMR Section 106 Letter



REPLY TO
ATTENTION OF

Directorate of Public Works

DEPARTMENT OF THE ARMY
HEADQUARTERS, UNITED STATES ARMY GARRISON, HAWAII
SCHOFIELD BARRACKS, HAWAII 96857-5000

APR 2 5 2007

Mr. Peter Young
Chairman and State Historic Preservation Officer
Department of Land and Natural Resources
Kakuhihewa Building, Room 555
601 Kamokila Boulevard
Kapolei, Hawaii 96707

Dear Mr. Young:

The US Army Garrison, Hawai'i (USAG-HI) is writing to open consultation with you about an undertaking to clear vegetation on and along roads within Dillingham Military Reservation (TMK: 6-8-014:001 and 6-8-002:018). Details of the project are being provided to you in accordance with the National Historic Preservation Act, of 1966, as amended, as an undertaking requiring consultation under Section 106.

This project is being implemented as part of the Integrated Wildland Fire Management Plan. The project will occur in three phases over the course of several years. These roads will only be available for use by the Installation Fire and Safety Office (IFSO) for maintaining the firebreaks and for access in case of fire. Signage for designating "no-go" areas for training will be installed to ensure the roads are used only for fire access. All areas within Dillingham Military Reservation (DMR) have been archaeologically surveyed by Scientific Consultant Services/Cultural Resource Management Services in 2001 and 2005 to include both previously surveyed and unsurveyed lands. Therefore, archaeological support of this project will include monitoring and development and implementation of site protection plans.

In the first phase of work, vegetation clearance on existing roads would be carried out with hand tools. Some of the area to be cleared in phase I was previously consulted on in a Section 106 letter dated 06 February 2006. In phase I, no vegetation clearance would deviate from the established edge of the roads. All work would occur under the observation of an archaeological monitor. The areas proposed for phase I work is labeled "A" through "C" on the attached map. The stretch of proposed firebreak labeled "B" is a portion of Site -5490, an earthen ditch or canal used to divert water from what was known as the "100 year flood". Stretch "B" is the only location that has not been previously established as a road, but has been used in the past by vehicles for maintenance of a fence that runs along the mauka side of the canal. Stretch "C" is a coral/gravel road, designated as Feature 1 of Site -5487. This feature is interpreted as a World War II era access road between plane revetments and the taxiway. The road has been somewhat maintained, as no heavy vegetation covers the road. However, grasses do obscure the center of the access road, and would require removal.

The second phase of work is to occur following the development and implementation of site protection plans for any archaeological feature located within the project area. Site types represented at Dillingham Military Reservation are associated with traditional Hawaiian habitation and subsistence farming, ranching and commercial agriculture, and military functions. Archaeologically sensitive buffer areas are shown on the attached map adjacent to the roads labeled from "A" to "E". The buffer does not indicate the location of specific features. Rather, the buffers show the areas within the project of heightened emphasis with regard to monitoring and/or site protection. Site protection may include permanent fencing and seibert stakes around features. Consultation on the mitigative measures will occur prior to its implementation. Archaeological monitors will be present during all field operations.

Work in phase II will consist of vegetation clearance in the areas labeled "D" through "E" on the attached map on the former runway ("D") and 60 feet from the center of the runway to the south to create a buffer. The buffer highlighting the transition from "D" to "E" is near a single feature site, -5480, interpreted as a cattle chute for loading animals on and off vehicles, and associated with ranching and agriculture. Segment "E" will be the most labor intensive road to clear of vegetation. The existing road is only marginally visible, presently overgrown with vegetation. The objective of clearing segment "E" is to reclaim the previous road. All vegetation clearance to take place in Phase II will utilize hand tools only for removal. Chainsaws, chippers to mulch the cut vegetation, and weed trimmers may be used, but no heavy equipment will be authorized.

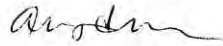
Phase III of the project focuses on meeting the "10-20-30" specifications for firebreaks as specified by the Director of the Installation Fire and Safety Office for segments "A" through "C" and segment "E" indicated on the attached map. Under this rule, vegetation would be cleared 10 feet on the outside of the firebreak road, the road itself serves as 20 feet of access width, and 30 feet would be cleared of vegetation inside of the firebreak road. If a landscape feature or archaeological site is located within the 10 or 30 feet on either side of the road, the width specified in the 10-20-30 rule may be reduced to avoid encounter and accommodate the feature or site. All vegetation cutting to occur in phase III will utilize hand tools only. Chainsaws, chippers to mulch the cut vegetation, and weed trimmers may be used, but no heavy equipment will be authorized. Archaeological monitors will be present during all field operations.


Following the completion of the project, maintenance of the established firebreaks will be regulated. The office responsible for arranging vegetation maintenance will also be responsible for informing the Cultural Resources Section of the maintenance schedule. Archaeological monitors from the Cultural Resources Section will do unannounced monitoring of field activities to ensure that the required maintenance follows the hand clearing methods aforementioned in this document and report the results of clearing activities to the Cultural Resources Manager.

Archaeologists from the USAG-HI's Cultural Resources Section will be working closely with the IFSO and the contractor in coordination of this project. Should any significant deposit, including *iwi kūpuna* be found while conducting operations, all work will cease and notification in accordance with applicable law will be adhered to. We believe a no adverse effect determination can be made for this undertaking, since the use of monitors, signage and physical barriers will prevent impacts to the sites.

Our office is now opening consultation on this issue, and we look forward to a continuing dialogue on this project. We ask that if any of the consulting parties are aware of any locations of traditional cultural importance in the areas to be affected by the project to please contact our office. We are also requesting comments from several agencies and organizations. Letters have also been sent to the parties on the enclosed distribution list. If you have any comments or concerns that you would like our agency to address, please contact the USAG-HI within thirty days from receipt of this letter or call the Cultural Resources Manager, Dr. Laurie Lucking at (808) 656-2878 extension 1052, laurie.lucking@us.army.mil for more information.

Sincerely,



 Steven M. Raymond
Director of Public Works

Enclosure

DISTRIBUTION LIST

Mr. Peter Young
State Historic Preservation Officer

Mr. Clyde Namuo
Administrator
Office of Hawaiian Affairs

Mr. Thomas T. Shirai, Jr.

Mr. Jace McQuivey
Oahu Island Burial Council
HRI

Mr. Edward Ayau, Po'o
Hui Malama I Na Kupuna O Hawai'i Nei

Mr. Charles Maxwell
Kahu, President Board of Directors
Hui Malama I Na Kupuna O Hawai'i Nei

Map removed to protect rare resources. Available upon request

Appendix A-2: The Garrison's Reply to SHPO



DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND, PACIFIC REGION
HEADQUARTERS, UNITED STATES ARMY GARRISON, HAWAII
SCHOFIELD BARRACKS, HAWAII 96857-5000

JUN 07 2007

Directorate of Public Works

Ms. Melanie Chinen
Administrator, State Historic Preservation Division
Department of Land and Natural Resources
Kakuhihewa Building, Room 555
601 Kamokila Boulevard
Kapolei, Hawaii 96707

Dear Ms. Chinen:

This letter is in response to your May 11, 2007 letter regarding the US Army Garrison, Hawaii proposed undertaking to conduct vegetation clearance on and along roads within Dillingham Military Reservation (DMR), TMK: [(1) 6-8-014:001 & 6-8-002:018]. Your letter requested further information and clarification. We hope the following paragraphs provide you with sufficient explanation to your inquiries.

Your letter asks for clarification on the second-to-last sentence in paragraph 2 of our initial consultation letter. The sentence states, "All areas within Dillingham Military Reservation (DMR) have been archaeologically surveyed by Scientific Consultant Services/Cultural Resource Management Services (SCS) in 2001 and 2005 to include both previously surveyed and unsurveyed lands." To clarify, SCS completed an inventory survey in 2001, and phase II archaeological evaluation of sites in 2005. The work completed by SCS encompassed all lands within DMR, including those lands which had been previously inventoried by Thrum (1907), McAllister (1930), Rosendahl (1977), and Barrera (1985). The SCS inventory survey was referenced in our consultation letter because it is the most updated and comprehensive survey of DMR.

Your second question requested the area of potential effect (APE) to be depicted. Our consultation letter included a map and described the APE as 10 feet outside of the firebreak road, 20 feet of the road itself, and 30 feet within the firebreak road. This totals a 60-foot wide (approximately 18 meters) corridor. We are resending the map showing the width of the red line (60-foot/18-meter corridor), which is the APE.

Your letter also states that the archaeological buffers are not clearly depicted on the map. For clarification, the legend on the map describes the yellow hatching as the "archaeologically sensitive areas." These areas are the same as the "archaeologically sensitive buffer areas" referred to in our initial letter. Also as described throughout the letter, the short green lines labeled "A" through "E" refer to project segments, and have nothing to do with the archaeologically sensitive areas.

The last portion of your letter requested the monitoring and site protection plans to be submitted to your office for review, including "language committing to full-time

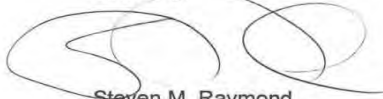
monitoring of all ground disturbance...and to a pre-construction meeting between the monitoring archaeologist and the contractor in charge of the work." Our initial consultation letter stated, "In phase I, no vegetation clearance would deviate from the established edge of the roads. All work would occur under the observation of an archaeological monitor." It goes on to say, "The second phase of work is to occur following the development and implementation of site protection plans for any archaeological feature located within the project area...Site protection may include permanent fencing and seibert stakes around features. Consultation on the mitigative measures will occur prior to its implementation. Archaeological monitors will be present during all field operations."

We believe that it is clearly stated that we are committed to full-time monitoring of this project, as well as to consultation on any mitigation that may be proposed. As stated in the second paragraph of our initial letter, this project is to occur over a period of several years. Thus, any mitigation necessary would be consulted on at the appropriate phase of this project. We would also like to emphasize that archaeologists from our Environmental Division will be working closely with the Installation Fire and Safety Office and the contractor in coordination of this project, and will be meeting prior to commencement of work and throughout the project.

We hope this letter provides clarification and a better understanding of the project. Thank you for your cooperation in continuing consultation on this undertaking. We appreciate your response, and we will also continue to discuss this project with other interested parties.

If you need further clarification, the point of contact for this undertaking is our Cultural Resources Manager, Dr. Laurie Lucking at (808) 656-2878 extension 1052, laurie.lucking@us.army.mil.

Sincerely,

A handwritten signature in blue ink, appearing to read 'S. Raymond', with a large, stylized flourish extending to the right.

Steven M. Raymond
Director of Public Works

Enclosure

Appendix A-3: DMR, Second 106 Letter to SHPO



DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND, PACIFIC REGION
HEADQUARTERS, UNITED STATES ARMY GARRISON, HAWAII
SCHOFIELD BARRACKS, HAWAII 96857-5000

NOV 07 2007

Directorate of Public Works

Ms. Laura H. Thielen
State Historic Preservation Division
Kakuhihewa Building, Room 555
601 Kamokila Boulevard
Kapolei, Hawai'i 96707

Dear Ms. Thielen:

The Directorate of Public Works, Environmental Division, is writing on behalf of the US Army Garrison, Hawaii on proposed protective works for sites at Dillingham Military Reservation (DMR), TMK: 6-8-014:001 and 6-8-002:018. The protective works will serve to mitigate vegetation clearance required by the Installation Fire and Safety Office's specification for firebreaks. In our initial letter dated April 25, 2007, our office explained that we would be consulting on proposed protective measures prior to implementation. We are now opening formal consultation for this undertaking in accordance with Section 106 of the National Historic Preservation Act of 1966, as amended.

The purpose of the vegetation clearance is to meet the "10-20-30" specifications for firebreaks. Under this rule, vegetation would be cleared 10 feet on the outside of the firebreak road, the road itself serves as 20 feet of access width, and 30 feet would be cleared of vegetation inside of the firebreak road. If a landscape feature or archaeological site is located within the 10 or 30 feet on either side of the road, the width specified in the 10-20-30 rule may be reduced to avoid encounter and accommodate the feature or site. The overview map included shows the 10-20-30 firebreak route and areas requiring protective works to facilitate avoidance.

Cultural Resources Specialists from our office have identified locations within the 10-20-30 firebreak vegetation clearance project that will require protective works through research of documented surveys and a series of archaeological field inspections of the project area. We are proposing a mitigation plan that would establish several levels of protection throughout the project. The first level of protection is to restrict the vegetation clearance to hand tools (chainsaws, weed trimmers, and the like). Only a chipper will be allowed for mulching the vegetation that has been cut. The next level of protection will commit an archaeological monitor to the project who will work alongside the clearance crew to help direct them in working near the sites. Orange safety fencing attached to t-posts will also be set up by the archaeological staff prior to the start of work as an additional precaution. A schematic example of how the orange fencing is to be utilized has been included for your information. Finally, as a permanent indicator, Seibert stakes will be installed. Seibert stakes are used Army wide to mark

environmentally sensitive areas off limits. We believe that the proposed protection plan creates a multi-leveled approach to safeguarding the sites.

Each location requiring protective measures is described below by a protective works (PW) number which corresponds to PW numbers on the large scale map included.

PW 1. Unrecorded historic ditch constructed with cobbles and mortar. The west end of this ditch is within the project area. Archaeological staff will place 15-20 meters of orange safety fencing along its boundary to signal avoidance of the site to the clearance crew. An archaeological monitor will also be present to ensure the site is avoided.

PW 2. Site -5485. Unrecorded features including remnant terracing and walls disjoined by the existing road. The features lie within the 10 foot side of the project area. Archaeological staff will install 60-65 meters of orange safety fencing to indicate avoidance of these features to the clearance crew. An archaeological monitor will also be present to ensure the site is avoided.

PW 3. Site -5487, feature 2. The west end of this boulder and cobble constructed wall feature is within the 30 foot side of the project area. Approximately 15-20 meters of orange safety fencing will be used to indicate avoidance during vegetation cutting. An archaeological monitor will be present.

PW 4. Site -5487, feature 4, and portion of feature 2. Feature 4 rock terrace and "L" shaped section of wall (feature 2) is within the 30 foot side of the project area. A 15-20 meter length of orange safety fencing will be installed by archaeological staff. An archaeological monitor will be present to ensure avoidance of the site.

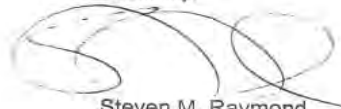
PW 5. Site -5487, feature 2. The east portion of this wall which has been cut by a dredged canal is within the 30 foot side of the project area. A 15-20 meter length of orange safety fencing will be installed and an archeological monitor will be present to direct avoidance of the feature.

PW 6. Site -5487, feature 7. This section of core-filled "L" shaped wall is within the 30 foot side of the project area. A 15 meter length of orange safety fencing will be installed to indicate avoidance of the area during vegetation cutting. An archaeological monitor will also be present.

PW 7. Site -5487, unrecorded wall. This feature is likely an extension of feature 7, disjoined by the existing road. It continues to the south for a distance, along with other unrecorded features on the 10 foot side of the project area. Here, orange safety fencing will be installed along 60-70 meters of the road to indicate the sensitive nature of the area. An archaeological monitor will ensure the site is avoided.

Under the proposed site protection plan, our office has determined that there will be no adverse effect to historic properties resulting from the vegetation clearance associated with the 10-20-30 firebreak project. We ask for your comments regarding the proposed protective measures and your concurrence with the no adverse effect determination. We are also sending this correspondence to the parties on the attached distribution list. For inquiries regarding the protective works proposed here, please contact our Cultural Resources Manager, Dr. Laurie Lucking by email at laurie.lucking@us.army.mil or you may call (808) 656-2878, extension 1052. Otherwise, you may send your reply to the Directorate of Public Works at the letterhead specified address.

Sincerely,

A handwritten signature in black ink, appearing to read "Steven M. Raymond". The signature is fluid and cursive, with the first name "Steven" being the most prominent part.

Steven M. Raymond
Director of Public Works

Enclosures

DISTRIBUTION LIST

Ms. Laura H. Thielen
State Historic Preservation Officer
Department of Land and Natural
Resources

Mr. Clyde Namuo
Administrator
Office of Hawaiian Affairs

Mr. Thomas T. Shirai, Jr.
Council Member at Large
Native Hawaiian Historic Preservation
Council

Mr. Jace McQuivey
Oahu Island Burial Council
HRI

Mr. Edward Ayau
Po'o
Hui Malama I Na Kupuna O Hawai'i Nei

Mr. Charles Maxwell
Kahu, President Board of Directors
Hui Malama I Na Kupuna O Hawai'i Nei

Appendix A-4: OHA's DMR 106 Reply

PHONE (808) 594-1888

FAX (808) 594-1865



STATE OF HAWAII
OFFICE OF HAWAIIAN AFFAIRS
711 KAPĪOLANI BOULEVARD, SUITE 500
HONOLULU, HAWAII 96813

HRD07/3350

November 20, 2007

Steven Raymond
Director of Public Works
Department of the Army
Headquarters, U.S. Army Garrison, Hawaii
Schofield Barracks, HI 96857-5000

RE: Section 106 Consultation for proposed protective works for sites at Dillingham Military Reservation (DMR), TMK (1) 6-8-014: 001 and (1) 6-8-002: 018, Waialua, O'ahu

Dear Mr. Raymond,

The Office of Hawaiian Affairs (OHA) is in receipt of your November 7, 2007 submission for Section 106 consultation regarding proposed protective works for a firebreak road and offers the following comments:

The protective measures outlined in the submission and the previous submission, dated April 25, 2007 serve as a way to mitigate adverse effects toward cultural resources due to the vegetation clearance required by the Installation Fire and Safety Office's specifications for firebreaks. Due to the fact that cultural resources are located with the "10-20-30" specifications for firebreaks, mitigation efforts must be followed in order to preserve these resources.

Our office would recommend that all work be conducted with no heavy machinery, in case unearthing of additional cultural resources. We assume the archeological monitoring will be conducted by a professional archeologist, upheld to appropriate professional standards.

If the project moves forward, and if any significant cultural deposits or human skeletal remains are encountered, work shall stop in the immediate vicinity and the State Historic Preservation Division (SHPD/DLNR) shall be contacted. OHA would also like to be notified.

Steven Raymond
Department of the Army
November 20, 2007
Page 2

Thank you for the opportunity to comment. If you have further questions or concerns, please contact Jason Jeremiah, Policy Advocate-Preservation, Native Rights, Land and Culture, at (808) 594-1816 or jasonj@oha.org.

Aloha,

A handwritten signature in black ink, appearing to read "Clyde W. Nāmu'o". The signature is fluid and cursive, with a prominent loop at the end.

Clyde W. Nāmu'o
Administrator

Appendix A-5: Monitoring MFR – DMR Firebreak



REPLY TO
ATTENTION OF:

DEPARTMENT OF THE ARMY
HEADQUARTERS, UNITED STATES ARMY GARRISON, HAWAII
DIRECTORATE OF PUBLIC WORKS
947 WRIGHT AVENUE, WHEELER ARMY AIRFIELD
SCHOFIELD BARRACKS, HAWAII 96857-5013

IMPA-HI-PWE

2 May 2008

MEMORANDUM FOR THE RECORD, Directorate of Public Works, Environmental Division, Conservation and Restoration Branch - Cultural Resources, 572 Santos Dumont Avenue, 3rd Floor, WAAF, USAG-HI, Schofield Barracks, Hawaii 96857-5013

SUBJECT: Trip Report, Monitoring of vegetation clearance within segment "E" for phase II of construction of the fire break road at Dillingham Military Reservation as part of the Integrated Wildland Fire Management Plan

1. Between the 14th and the 30th of April 2008, monitoring was performed by cultural resource assistant Adam Thompson on vegetation clearance performed by Glad's Tree Trimming services for the construction of a fire break road around the Dillingham Military Reservation. The area of vegetation clearance has been referred to as segment "E" during previous consultation.

Guidelines for the manner in which vegetation clearance are to be conducted in segment "E" are stated in the fifth paragraph of section 106 letter dated 25 April 2007. This portion of the letter has been included as enclosure 1.

2. Vegetation clearance began at B gate and continued (magnetic) south along the berm and ditch boundary separating the existing farm from the military lands. As the corridor of vegetation clearance followed this berm and ditch boundary, it was assured that a relatively large portion consisted of disturbed land with barbed wire fencing as the dominant feature. Though the other half of the corridor held greater potential for cultural features.

Surveying was performed ahead of vegetation clearance to locate any cultural materials before they would be affected as the initial result of vegetation clearance was a thick mat of cut limbs, through which it would be impossible to see any cultural features. Once a cultural feature was located it was hand cleared, photographed, and recorded before the landscaping crew began their work allowing the area around it to be cleared of vegetation and the feature to be left exposed. Monitoring was performed to ensure that no features would be buried by cut vegetation and go unnoticed.

The beginning of the corridor held many trees providing good surface visibility beneath a canopy of woven limbs. Thus the area of heaviest vegetation, and hence the area most affected by vegetation clearance, provided the best visibility for the locating of archaeological features. Beyond the first 150 meters though the ground cover turned to thick grass providing poor surface visibility and monitoring was performed alongside grass clearance.

As the grass was cleared a roadway was revealed only exposed as the vegetation thinned. Following the roadway showed that it continued along the berm and ditch boundary throughout the corridor. To the north where vegetation clearance began the road lay under a humus layer a

few centimeters thick preventing it from being seen earlier. However, once known, this buried roadway was clearly decipherable from the raised landform covering it. A transect was later cleared to demonstrate that the road did indeed traverse the entire extent of segment E.

It is this road then that must be referred to in section 106 letter which states “the objective of clearing segment ‘E’ is to reclaim the previous road.” A 1998 satellite photograph clearly shows the roadway cleared at this time only 10 years before. The road was completely composed of asphalt and very modern. However in the tropical climate of Hawai‘i it took only a decade for the road to be overgrown when unmaintained.

According to the “10-20-30” specifications for firebreaks as specified by the Director of the Installation Fire and Safety Office, “vegetation would be cleared 10 feet on the outside of the firebreak road, the road itself serves as 20 feet of access width and 30 feet would be cleared of vegetation inside of the firebreak road” as stated in paragraph 6 of the section 106 letter of agreement. According to these specifications the outer 30 feet of the corridor represented land disturbed by the construction of the modern road and the berm and ditch boundary. Surveying and monitoring therefore focused on the inner thirty feet of the corridor of vegetation clearance.

3. A large pile of stone rubble was located early on just beyond the edge of the corridor. This pile of stone is believed to have been a push pile caused by the clearance of the area by bulldozers due to marks on some stones that appear to be the result of impact with the bulldozer. The pile includes, stones, concrete, barbed wire, electrical wire, and cinder blocks. Its composition appears to represent material from the historical or modern military era. Approximately 20 meters in the direction away from the corridor remnants of a structure of sheet metal construction may be associated with this push pile corroborating the age of the feature.

Beyond the feature listed above some large metal machinery was located and photographed. One piece appeared to be the axle from a large truck from the 1940’s era. The bulk was a large pipe. These features were all well outside the corridor.

Also found were two long bones from a short-legged quadruped, believed to be a single wild pig based on evidence for their presence in the area. Such pigs are hunted on the near-by ridge.

Along the roadway, fence posts marked its former boundary and the remains of a shallow drainage paralleled its path with an old water pump still remaining. These features likely represent a former farm road that marked the land boundary. The drainage and water pump support the belief that the farm was used for sugar cane. The hubcap of a Dodge Dart dated to the 1970s show that the road was likely in use at that time.

These findings represent a relatively recent period of disturbance, and though an adze preform was discovered out of context showing that the area was occupied in pre-contact times, no other features remained of the previous Hawaiian settlement. Such features were likely destroyed in the construction of the ranch, which was later disturbed by the construction of the military, which was later demolished and left as the rubble pile described above.

4. Site 5480, interpreted as a cattle chute, was located at the far southern region of segment E, furthest mauka, along with associated features including a stone wall along the drainage ditch and fence posts from the former cattle pen. All of these features lay in thick grass with little other vegetation needing to be cleared. There was therefore no threat of their disturbance. Further a two-track access road bypassed this site allowing the workers to continue their work without even needing to cross through the site.

5. In conclusion, the outer half of the corridor was found to be disturbed by a modern road, of which the focus of the project is to reclaim, and a berm and ditch boundary. The inner half of the corridor was thoroughly surveyed and found no cultural features of any great significance other than site 5480 for which no threat of disturbance existed. According to these conclusions there is no threat for the destruction of cultural materials in segment E of the fire break road, and if necessary the use of heavy machinery may be okayed in future consultation so that the buried road may be properly cleared and reclaimed as is the objective of this phase of vegetation clearance.

6. For more information please contact cultural resources assistant Adam Thompson at (808) 656-3083. Secondary contact is cultural resources manager, Dr. Laurie Lucking at (808) 656-2878 x 1052, laurie.lucking@us.army.mil of the Directorate of Public Works, Environmental Division, Conservation and Restoration Branch.

1 Encls

Adam Thompson
cultural resource assistant

Map removed to protect rare resources. Available upon request

Appendix A-6: DMR Protective Signage, SHPO Letter



REPLY TO
ATTENTION OF:

DEPARTMENT OF THE ARMY
HEADQUARTERS, UNITED STATES ARMY GARRISON, HAWAII
DIRECTORATE OF PUBLIC WORKS
947 WRIGHT AVENUE, WHEELER ARMY AIRFIELD
SCHOFIELD BARRACKS, HAWAII 96857-5013

SEP 15 2008

Directorate of Public Works

Ms. Laura H. Thielen
State Historic Preservation Division
Kakuhihewa Building, Room 555
601 Kamokila Boulevard
Kapolei, Hawaii 96707

Dear Ms. Thielen:

The US Army Garrison, Hawaii (USAG-HI), is writing about a project to implement protective works at Dillingham Military Reservation, TMK: 6-8-014:001 and TMK: 6-8-002:018. Cautionary signage will be installed as a measure of archaeological site protection along activity boundaries. We are providing information about this project under Section 106 of the National Historic Preservation Act of 1966, as amended.

Approximately 56 signs will be attached to posts approximately 6 feet high with a concrete footing for stability. The signs will be placed above ground primarily in the highlighted area on Enclosure 1, and along interior roads mauka of the highlighted area. The signs will mark restricted areas to prohibit training and limit personnel allowed into the area, where many sites are located. Enclosure 2 shows the three types of signs planned.

The signs will act as a protective measure for archaeological sites recorded by Scientific Consultant Services in reports dated 2001, 2005, and 2008. No earth-moving activities will be carried out to complete the project, and no archaeological features will be disturbed. The USAG-HI has determined that this project will have no adverse effect on historic properties.

We are also providing this information to those on the attached distribution list. For any comments or additional information, please contact the Cultural Resources Manager, Dr. Laurie Lucking, within 30 days of receiving this letter at the above address or by phone at (808) 656-6790 or email at laurie.lucking@us.army.mil.

Sincerely,

A handwritten signature in blue ink, appearing to read "Alan K. L. Goo".

Alan K. L. Goo
Director of Public Works

Enclosures

DISTRIBUTION LIST

Ms. Laura H. Thielen
State Historic Preservation Officer
Department of Land and Natural Resources

Mr. Clyde Namuo
Administrator
Office of Hawaiian Affairs

Mr. Thomas T. Shirai, Jr.
Council Member at Large
Native Hawaiian Historic Preservation
Council

Mr. Jace McQuivey
Oahu Island Burial Council
HRI

Mr. Edward Ayau
Po'o
Hui Malama I Na Kupuna O Hawai'i Nei

Mr. Charles Maxwell
Kahu, President Board of Directors
Hui Malama I Na Kupuna O Hawai'i Nei

Map removed to protect rare resources. Available upon request

Sign Types for Installation at DMR

Category 1: Consists of 10 signs to be placed approximately at points along the DMR boundary where the Kalia Trail provides potential access into the restricted area.

WARNING – STAY ON EXISTING TRAIL/EASEMENT

- 10 24"x24"x.80" Diamond Shape with High Intensity (day glow) Orange Background



Category 2: Consists of 2 signs to be used approximately at the entrances of fire roads to indicate that only emergency vehicles are allowed on the roadways.

RESTRICTED AREA: EMERGENCY VEHICLES ONLY

- 2 18"x24"x.063" High-Intensity (day glow) Orange Background



Category 3: Consists of 44 signs to be used throughout the installation to identify areas as "No access" to vehicle or foot traffic.

RESTRICTED AREA: NO VEHICLE OR FOOT TRAFFIC

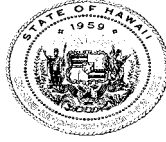
- 44 24"x18"x.063" High-Intensity (day glow) Orange Background



Enclosure 2

Appendix A-7: DMR, SHPO Identification of Shirai Family Kupuna Burials

LINDA LINGLE
GOVERNOR OF HAWAII



STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES

STATE HISTORIC PRESERVATION DIVISION
601 KAMOKILA BOULEVARD, ROOM 555
KAPOLEI, HAWAII 96707

PETER T. YOUNG
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

ROBERT K. MASUDA
DEPUTY DIRECTOR - LAND

DEAN NAKANO
ACTING DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
BUREAU OF CONVEYANCES
COMMISSION ON WATER RESOURCE MANAGEMENT
CONSERVATION AND COASTAL LANDS
CONSERVATION AND RESOURCES ENFORCEMENT
ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

November 29, 2005

SUBJECT: **Dillingham Air
Field: Thomas
Shirai Jr.
Kupuna Burials
Waialua District,
Kawaihāpai
Ahupua'a, Island
of O'ahu
TMK: 6-8-
014:002**

Two burial areas were identified by Thomas Shirai Jr. at Dillingham Air Field and were GPS located using a Trimble GeoXT hand-held unit.

Kupuna 1, is composed of a single burial according to Mr. Shirai, and has the following UTM coordinate:

N 2386332.31
E 583078.10

Kupuna 2-5, is composed of three individual burials in a designated area according to Mr. Shirai, and has the following center-point coordinate and description:

Center-point
Maximum length is 35
meters
N 2386389.98
Maximum width is 20
meters
E 583086.63

Appendix A-8: DMR, Notice to Tomas Shirai



DEPARTMENT OF THE ARMY
U.S. ARMY INSTALLATION MANAGEMENT COMMAND, PACIFIC REGION
HEADQUARTERS, UNITED STATES ARMY GARRISON, HAWAII
SCHOFIELD BARRACKS, HAWAII 96057-5000

FORM 1 OF 2
5/10/04 (10M 0000)

Directorate of Public Works

Thomas Shirai
P.O. Box 601
Waialua, HI 96791

Dear Mr. Shirai:

This letter is to inform you that a Legal Notice of Disposition was published in the Honolulu Advertiser on November 7, 2007. The public notice is a final request for additional claimants to come forward regarding the recovered human remains. A copy of the notice published is attached as Enclosure 1.

Should you require additional information, the point of contact is Dr. Laurie Lucking, Installation Cultural Resources Manager, at (808) 656-2878 extension 1052 (laurie.lucking@us.army.mil).

Sincerely,

Steven M. Raymond
Director of Public Works

Appendix A-9: KTA Dip Pond REC

RECORD OF ENVIRONMENTAL CONSIDERATION (REC)

TO: Directorate of Public Works
ATTN: Environmental Division (APVG-GWV)
U.S. Army Garrison, Hawaii
Schofield Barracks, HI 96857-5013 (Stop 253)
Phone: 656-2878, ext. 1051, Fax: 656-2878

DATE: 27 April 2007

FROM: Scott Yamasaki, Fire Management Officer
(acting)

851 Wright Ave. Bldg 106

Wheeler Army Airfield, HI 96857-5000

Phone: 656-1331 Fax: 656-3740

REC CHECKLIST (Check before submitting)

- | | |
|-------------------------------------|----------------------------------|
| <input checked="" type="checkbox"/> | Detailed Project Description |
| <input checked="" type="checkbox"/> | Location Map and Plans |
| <input checked="" type="checkbox"/> | Date of Proposed Action |
| <input checked="" type="checkbox"/> | Reason for Categorical Exclusion |
| <input checked="" type="checkbox"/> | Impact Analysis Checklist |

1. PROJECT TITLE: Kahuku Training Area – Dip Pond Construction and Fire Access Road Maintenance(FEWR – DS000037J)

2. DESCRIPTION OF PROPOSED ACTION *(Provide detailed description of the proposed action. Attach location map and site plan, or other information that will help to clearly describe the proposal):*

There shall be one (1) 250,000 gallon water dip pond constructed at Kahuku Training Area. The pond will be constructed IAW existing designs (i.e. Schofield Barracks) and shall have a suitable helipad located to the pond. This will not preclude better engineering criteria, but shall serve as a minimum standard. Dip pond specifications and location are included as attachments.

One pre-existing road will need to be improved to provide access and egress to the dip pond. Road upgrades will include grading, construction of water bars, and application of gravel to the road surface.

Environmental considerations, to include but not be limited to, natural and cultural resources, shall be considered in the design phase of this requirement. National Historic Preservation Act (NHPA) Section 106, as well as Endangered Species Act (ESA) Section 7, consultations may be required for construction/earth disturbing actions. The Garrison will conduct all consultations. Coordination with the US Army Garrison – Hawaii Department of Public Works Environmental Staff is essential during both the design and construction phases. Permits and or licenses will be obtained by the Contractor.

The contractor cannot begin the construction phase of the projects until written approval is received from the Garrison indicating that Section 106 and or Section 7 consultation(s) have been completed and all permits are obtained. Upon receipt of written approval the Contractor can begin those actions as outlined in the Design Documents and the Project Schedule. The construction services to be performed hereunder shall commence as provided on the Project Schedule

3. DATE OR DURATION OF PROPOSED ACTION: To be determined in design phase

4. IT HAS BEEN DETERMINED THAT THIS ACTION *(Choose one):*

APVG-GW Form 29, Nov 04

This form is prescribed in DPW SOP APVG-GWV-V, SUBJECT: Environmental Analysis of 25th ID (L) & USARHAW Actions

Pg 1 of 2

Appendix A-10: KTA Dip Pond 106 Letter



DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND, PACIFIC REGION
HEADQUARTERS, UNITED STATES ARMY GARRISON, HAWAII
SCHOFIELD BARRACKS, HAWAII 96357-5000

JUN 27 2007

Directorate Of Public Works

Ms. Melanie Chinen
Administrator
State Historic Preservation Division
Kakuhihewa Building, Room 555
601 Kamokila Boulevard
Kapolei, Hawaii 96707

Dear Ms. Chinen:

The Directorate of Public Works, Environmental Division ((DPW-ENV) is writing on behalf of the US Army Garrison, Hawaii (USAG-HI) to open consultation with you regarding a project to construct a dip pond at Kahuku Training Area (KTA), TMK: (5-8-008:002). Information about this project is being provided to you in accordance with the National Historic Preservation Act, of 1966, as amended, as a new undertaking requiring consultation under Section 106.

The project to construct a dip pond at KTA is in support of the Installation Fire and Safety Office's (IFSO's) Integrated Wildland Fire Management Plan (IWFMP) and associated Environmental Assessment (EA). The construction project includes the dip pond, a helicopter pad, and access road. The project area is depicted on the first enclosed map, and takes account of working space for vehicles and machinery. Therefore, the project area includes the area of potential effect (APE). The project location was chosen in part because the area had been previously disturbed.

The dip pond will measure approximately 118ft² (36m²) and 10ft (3m) deep, holding 250,000 gallons of water. The excavated soil will be used to build the pond's perimeter berm. A fence, no more than 3-feet high, will be installed around the dip pond to prohibit the access of animals into the pond. The helicopter pad will be located approximately 50ft (15m) west of the dip pond. The road accessing the proposed dip pond location will require rehabilitation. The rehabilitation of the road involves vegetation clearance and grading in order to make the roads accessible to fire emergency vehicles.

The first enclosed map shows the nearest archaeological site and area of traditional importance (ATI). The second map provided shows the most recent archaeological survey of this area in KTA completed by Garcia and Associates (GANDA) in 2005. The GANDA survey overlapped previous surveys, so the survey area on the map includes the area surveyed by Scientific Consultant Services (SCS) in 2003 as well.

Temporary Site (TS) -49 (no State Site number assignment yet) is recorded as a historic concrete storm drainage associated with military activities. It is located approximately 50 meters outside of the APE. The site was inventoried by (SCS) during pedestrian survey. No additional archaeological sites were inventoried near the project area. Areas of traditional importance were identified by cultural monitors during the GANDA survey. The nearest ATI to the project area is TS-25, approximately 50 meters outside of the project area. Only the locational information of TS-25 was recorded. The Area of Potential Effect contains no historic properties or ATI, but because of the grading activities and excavation required for this project, periodic archaeological monitoring is proposed throughout field operations, and full time monitoring is proposed during excavation of the dip pond.

We believe that, because no historic properties or ATI have been identified through previous surveys in the heavily-disturbed project area, a "no historic properties affected" determination may be applied to this undertaking. Our office remains committed to coordination with the IFSO and contractor, as well as to full-time archaeological monitoring of the dip pond excavation and periodic monitoring through the rest of the project. Should any sensitive finds, including *Iwi Kupuna* be identified while work is being conducted, field operations will cease and DPW-ENV shall issue notification in accordance with applicable law for the USAG-HI.

We are now requesting review and comments regarding this project. Letters have also been sent to the parties on the enclosed distribution list. If you have any comments or require additional information, please contact DPW-ENV within thirty days from receipt of this letter. The point of contact for this action is our Cultural Resources Manager, Dr. Laurie Lucking at (808) 856-2878, extension 1052, or email laurie.lucking@us.army.mil.

Sincerely,



Steven M. Raymond
Director of Public Works

Enclosures

DISTRIBUTION LIST

Ms. Melanie Chinen
Administrator
State Historic Preservation Division

Mr. Clyde Namuo
Administrator
Office of Hawaiian Affairs

Mr. Jace McQuivey
Oahu Island Burial Council

Mr. Edward Ayau
Po'o
Hui Malama I Na Kupuna O Hawai'i Nei

Mr. Charles Maxwell
Kahu, President Board of Directors
Hui Malama I Na Kupuna O Hawai'i Nei

Mr. Tom Lenchenko
Waha olelo 'Aha Kukaniloko

Mr. Alike Silva
Koa Mana

Mrs. Leimale Qutevis
Kahunana

Map removed to protect rare resources. Available upon request

Map removed to protect rare resources. Available upon request

Appendix A-11: KTA Dip Pond – OHA 106 Response.

PHONE (808) 594-1885



STATE OF HAWAII
OFFICE OF HAWAIIAN AFFAIRS
711 KAPIOLANI BOULEVARD, SUITE 500
HONOLULU, HAWAII 96813

ENV
- Fall Your Asses
R
10/10/07

HRD07/3114

August 9, 2007

Steven Raymond
Director of Public Works
Department of the Army
Headquarters, U.S. Army Garrison, Hawaii
Schofield Barracks, HI 96817-5000

**RE: Proposed Dip Pond at the Kahuku Training Area; TMK: 5-6-008: 002, Kahuku
Hawaii**

Dear Steven Raymond,

The Office of Hawaiian Affairs (OHA) is in receipt of your June 27, 2007 submission concerning the proposed dip pond in the Kahuku Training Area (KTA) and offers the following comments:

OHA recommends a Cultural Impact Assessment (CIA) be completed in order to assess the impacts of cultural resources by the proposed project. During a previous letter concerning the proposed meteorological towers in the KTA, our office requested *A Planning-Level Traditional Cultural Places (TCP) Survey of Kahuku Training Area (KTA) and Kawaihoa Training Area (KLOA), U.S. Army Garrison, Hawaii, Island of Oahu, Hawaii* by McGerty and Spear (Scientific Consultant Services Inc., 2004). Our staff requests a copy of this study for a review of the potential impacts of this project on cultural resources and traditional properties in the area.

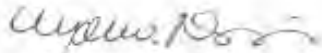
The full-time archaeological monitoring of the grading during the excavation of the dip pond is noted. We recommend that during the rehabilitation of the road, if any ground disturbance is planned, an archeologist be on-call in order to deal with any cultural deposits found during construction.

Furthermore, we would like to request that during the construction of the proposed project, if any cultural deposits should be discovered and avoidance is not possible, a representative of OHA and the State Historic Preservation Division be consulted during that process.

Steven Raymond
Director of Public Works
August 9, 2007
Page 2

Thank you for the opportunity to comment. If you have further questions or concerns, please contact Jason Jeremiah, Policy Advocate-Preservation, Native Rights, Land and Culture, at (808) 594-1816 or jasonj@oha.org.

Aloha,



Clyde W. Nāmu'ō
Administrator

Appendix A-12: Post Cemetery, Waste Water Force Main (SBC) 106 Letter.

LETTERHEAD

[Name]
[Title]
[Address]

[Date]
(ca. Feb 2008)

Dear [Name],

This letter is to open consultation with your office under Section 106 of the National Historic Preservation Act of 1966, as amended; concerning the upgrade of the wastewater collection system in support of the military housing on Lyman Rd. and on the other streets adjacent to Lyman Rd. The area of effect is located in TMK 7-7-1-1 and is identified in Enclosure 1, Map 1., a vertical aerial view of the general area.

The primary goal for this project is to replace an existing 12 inch diameter force main with a 15 inch line. The new force main will go from north of the Post Cemetery (located across Lyman Rd. from Bldg. 2086) to a hook up across from the vehicle maintenance facility near Paukuwaho Pl. , and will extend an approximate distance of 740 to 750 meters. The eastern 150 meters of the excavations will cut through the lawn fronting the cemetery and across the existing entrance driveway and the walkway. The course of the trench is delineated in blue dashed lines.

The 199X 'ortho' aerial pictured here in Enclosure 1 is now a few years old and therefore some of the depicted elements do not exist anymore. With the purchase of South Range Acquisition Area from Campbell Estate the field shown to the south of the old Post Cemetery is no longer used to grow pineapple. Symbolized with small trees, it is presently abandoned pineapple and grassland with Guinea grass (*Panicum maximum*) and African Tulip (*Spathodea campanulata*) trees as the primary vegetation.

The project is anticipated to impact the entrance drive/walk way of the historic Schofield Barracks Post Cemetery established in 1912. The earliest interment is an employee of the Quartermaster Corps. The cemetery was improved and expanded in the late 1930's to the early 1940's. The present tool shed at the cemetery was built in 1939. An office for the cemetery was constructed in 1945. it was located outside of the cemetery on the north lawn to the west of the walkway (Enclosure 2, Figure 1). This structure was demolished in 1996.

The cemetery is a significant part of the historic landscape of Schofield Barracks, one of the earliest U S Army bases in Hawai`i and the largest U S Army base outside the continental U S. The graves in the cemetery illustrate the events of the early decades of Schofield. Those interred here are soldiers, their dependents, civilian employees, Italian prisoners of war and executed military criminals.

The planned trench excavations may be within the old boundary of the office building.

The other 600 meters will front the existing Housing construction staging yard and pass between the area south of the AC Pathway behind the ironwood and coconut trees border both the edge of Lyman Road and the old boundary fence. The south portion of the open area west of the cemetery is reported as the area where emergency burials from December 7th, 1941, at the start of WWII were buried. This section to the west of the cemetery was part of the Kalakaua Golf Course, as the green and fairway for Hole #13. This is now part of the housing construction staging area. It is unknown if all of the burials were removed. However, this portion of the staging yard is not in the area of potential effect (APE).

Prior to its use as the green for Hole #13 of the King Kalakaua Golf Course, maps and aerials dating from the 1952 (Figures 2 and 3) show buildings 3027, 3028 and 3029 in this area adjacent to the cemetery. Further more, various newspaper clippings tell of how the burials were moved to Punchbowl or sent home by request of the families, but official reports of the removal of these burials from the Post Cemetery have not been found. It is unknown if all of the emergency interments have been removed, but it is a high probability that any interments that do remain are not in the area of the presently planned excavation activity.

In compliance with Section 106, the U.S. Army Garrison-Hawai`i has determined that this project will have no effect on the existing historic properties discussed above. With the possibility for the recovery of data and other material during the planned excavation activity in proximity to historic property the Army will monitor this project closely.

We request your concurrence on this determination of no effect. A copy of this correspondence has been provided for review and comment to the Office of Hawaiian Affairs and other Native Hawaiian organizations (see Enclosure ____, the list of parties consulted).

Please feel free to contact Dr. Laurie Lucking, Cultural Resources Manager, at 656-2878 ext. 1052 (lucking.laurie@schofield.army.mil) if you have any questions or require further information.

Sincerely,



Map removed to protect rare resources. Available upon request

Figure 1. The Post Cemetery (just left of center) is the rectangle surrounded by cypress trees with 3 buildings to the west of it. Note the Delmonte pineapple fields to south of the Installation Boundary. The KK Golf Course (in upper left corner) has not been extended to south and east yet. (a 1952 aerial from the DACE 2-22 series; photo courtesy of Hawaii State Archives.)



Map removed to protect rare resources. Available upon request

Map 1. Layman Road 15 inch Wastewater System Upgrade.

Appendix A-13: Letter from J. Livingston, re List of Army related Railway Work Orders and Contracts, 1916 to 1947.

-----Original Message-----

From: Jeff Livingston [<mailto:jeff@abelectrichi.com>]
Sent: Wednesday, July 22, 2009 4:33 PM
To: Cox, David W Mr CTR USA IMCOM
Cc: 'John D. Bennett'; Bob Paoa
Subject: Military Railroad at Schofield

David,

I don't want to inundate you but the Army railroad ops have really been an enigma. We have some track plans for Schofield but they are rather general. There is precious little detail. Unlike the Naval facilities where the OR&L was not allowed to operate, Schofield seems to have been a mix of OR&L and Army operations. One of our projects at Bishop Museum was to organize and record the General Manager's Orders (GMOs). The General Manager's Orders are sequentially numbered documents prepared by various railway personnel, usually the head of a department, and submitted to the General Manager for approval. They contain the following note:

"NOTE - Authorization by the General Manager must be obtained for expenditure on this form as follows:

For all new work (outside of repairs) including additions to, replacements or reconstruction of existing structures, chargeable to the Operating Expenses or Betterments, regardless of amount.

For all new work to be performed involving expenditure in any amounts."

In actual practice it appears the form was used for new construction and rebuilding of all kinds including rolling stock, track work, structures etc. There are 2066 GMOs beginning on 31 May 1916 and ending on 26 November 1954. A number of these GMOs pertain to the Army [three pages on the list] and I have extracted those and included them as an attachment. Most apply to the Schofield/Wheeler area so that is how the attachment is titled. I've added some additional items in bold that are Army related but not Schofield/Wheeler. It appears that while the construction of Wheeler may have begun in 1922 the growth did not immediately cause the OR&L to make any realignments of their track.

Jeff

Appendix A-14 Sea Wall Replacement Project (PAR), 106 Letter.



REPLY TO
ATTENTION OF:

DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND, PACIFIC REGION
HEADQUARTERS, UNITED STATES ARMY GARRISON, HAWAII
851 WRIGHT AVENUE, WHEELER ARMY AIRFIELD
SCHOFIELD BARRACKS, HAWAII 96857-5000

JAN 6 - 2009

Office of the Garrison Commander

Ms. Laura H. Thielen
State Historic Preservation Officer
State Historic Preservation Division
Kakuhihewa Building, Room 555
601 Kamokila Boulevard
Kapolei, Hawaii 96707

Dear Ms. Thielen:

The US Army Garrison, Hawaii (USAG-HI) is writing to open consultation on a project planned at the Piliia`au Army Recreation Center (PARC), TMK: 8-50-01:009. The project is to replace the north portion of the sea wall, which is in a state of disrepair. The new sea wall will be constructed in the same footprint as the existing wall. This document is to provide you with information to begin consultation under Section 106 of the National Historic Preservation Act of 1966, as amended and serves as the written notice for intentional excavations under the Native American Graves and Repatriation Act.

The project is expected to begin in the spring of 2009 and be completed within 18 months. A length of approximately 650 feet of sea wall is to be removed and replaced with a water-proof cement wall with embedded rock fascia. The portion to be replaced is highlighted on the map attached. A photo has also been inserted for your reference.

In addition to the proposed sea wall replacement project, the trees along the sea wall were requested to be removed during the wall replacement work because of maintenance costs caused by root damage and large quantities of dropped foliage.

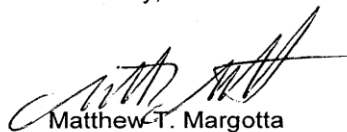
Both projects raise concerns about subsurface disturbance. The PARC area is well documented as a location containing numerous burials, and there is a strong possibility that human remains may be encountered during the execution of these projects. For this reason, USAG-HI will prepare a draft Native American Graves Protection and Repatriation Act (NAGPRA) Plan of Action to address this contingency in advance of any work. USAG-HI is prepared to meet and consult with any NAGPRA claimants, Native Hawaiian Organizations, and administrative bodies (State Historic Preservation Division and others) to consult on the undertaking. Priority of custody will follow 43 CFR 10.14, and be given first to those claimants that meet the criteria for determining lineal descent. If no lineal descendent can be identified, then the appropriate claimant will be determined from those who meet the standard of cultural affiliation and be established by a preponderance of evidence.

The parties named on the enclosed distribution list have received a copy of this letter. We will be holding an initial meeting on the proposed project at the PARC Beach Club banquet facility on Saturday, January 24, 2009 at 1:00 pm.

The USAG-HI recognizes the sensitive nature of conducting this project. However, if the sea wall is not replaced, inevitable collapse and erosion will occur and possibly lead to human remains or other cultural deposits being exposed. By urging your participation in this consultation during these preliminary planning stages, it is hoped that a mutually agreeable solution will be achieved.

The points of contact for consultation on this undertaking are Cultural Resources Specialist, Carly R. Antone and the Cultural Resources Program Manager, Dr. Laurie Lucking, through the above address. They may also be reached by phone at (808) 656-3077 and (808) 656-6790 respectively or email at carly.r.antone@us.army.mil, or laurie.lucking@us.army.mil.

Sincerely,



Matthew T. Margotta
Colonel, US Army
Commanding

Enclosures

DISTRIBUTION LIST

Ms. Laura H. Thielen
State Historic Preservation Division
Department of Land and Natural
Resources

Mr. Clyde Nāmu'o
Administrator
Office of Hawaiian Affairs

Mr. Charles Maxwell
President, Board of Directors
Hui Mālama I Na Kupuna O Hawai'i
Nei

Mr. Edward Halealoha Ayau
Po'o
Hui Mālama I Na Kupuna O Hawai'i
Nei

Mr. Jace McQuivey
Oahu Island Burial Council
HRI

Mr. Glen Makakaualii Kila
Kahu Kulaiwi, Ko'a Mana,
Kupukaaina o Wai'anae Moku, O'ahu

Mr. Alike Poe Silva
Kahu Kulaiwi, Ko'a Mana,
Kupukaaina o Wai'anae Moku,
O'ahu, Hawaiian National

Henry Kila Hopfe
Kahu Kahakai, Ko'a Mana,
Kupukaaina o Wai'anae Moku,
O'ahu, Hawaiian National

Mr. Clarence Ha'o DeLude
Kahu Kulaiwi, Ko'a Mana,
Kupukaaina o Wai'anae Moku, O'ahu

Mr. Rocky Naeole
President
Waiana'e Military Civilian Advisory
Council

Appendix A-15 106 Letter for Fort DeRussy Video Monitor System



REPLY TO
ATTENTION OF:

DEPARTMENT OF THE ARMY
HEADQUARTERS, UNITED STATES ARMY GARRISON, HAWAII
DIRECTORATE OF PUBLIC WORKS
947 WRIGHT AVENUE, WHEELER ARMY AIRFIELD
SCHOFIELD BARRACKS, HAWAII 96857-5013

MAY 06 2008

Directorate of Public Works

Mrs. Laura Thielen
Chairman and State Historic Preservation Officer
Department of Land and Natural Resources
Kakuhihewa Building, Room 555
601 Kamokila Boulevard
Kapolei, Hawai'i 96707

Dear Mrs. Thielen:

The US Army Garrison, Hawai'i (USAG-HI) is writing to open consultation with you about an undertaking to replace a portion of an existing system of wireless video cameras at the Fort DeRussy Military Reservation (TMK: 1-2-6-005). Details of the proposed project are being provided to you in accordance with the National Historic Preservation Act of 1966, as amended, as an undertaking requiring consultation under Section 106.

This project is being implemented to replace twelve out-door video cameras that are part of the Hale Koa Hotel video monitoring system. The Hotels Access Control Security System (ACSS) was installed in 2002 and has a total just over 130 cameras at various locations, both inside the buildings and through out the surrounding facilities and grounds. The twelve cameras are presently completely inoperative and the plan is to upgrade them with more capable and up to date equipment. All those being proposed for replacement were originally connected to the main Security Office on a wireless hookup. The present proposal however calls for two of the upgraded camera units to be mounted on existing lamp pole fixtures M-10 and M-14 and to be hardwired rather than wireless (refer to Enclosure 1 – Site Plan). Hardwiring the two cameras will require shallow trenching excavations for the underground cables between the single centrally located existing communication manhole and the two light poles. Unlike the situation at other locations in the system these two camera units would have to be rewired for power at these poles in any case. The POC at the Hotels Contracting Office indicates that the necessary excavation will be only 14 inches (about 35 cm) below existing surface.

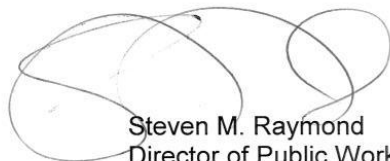
As there will be subsurface excavations in general proximity to known or previously identified historic and prehistoric features and finds, archaeological support will be provided by the Army for this project. This support will include excavation monitoring, following the procedures that have been established for subsurface excavations for similar projects in the past at Fort DeRussy. The specific Area of Potential Effect (APE) for the proposed trenching extends from close to the driveway to the entrance loop of the Battery Randolph – Army Museum, and to the West some 265 feet (80.8m).

Previous investigations this APE in the open area between the beach and Kalia Road however have not indicated the presence of historic or prehistoric remains at shallow depths.

Archaeologists from the USAG-HI's Cultural Resources Section will be present when the subsurface excavations are undertaken during this project. Should any significant deposit, including *iwi kūpuna* (human remains) be found while conducting the trenching operations, all work will cease and notification in accordance with applicable law will be adhered to. Due to the shallow depth and relatively short length of the planned excavations we believe a no adverse effect determination can be made for this undertaking.

Our office is now opening consultation on this issue, and we look forward to a continuing dialogue on this project. We ask that if any of the consulting parties are aware of any locations of traditional cultural importance in the areas to be affected by the project to please contact our office. Letters have also been sent to the parties on the enclosed distribution list. If you have any comments or concerns that you would like our agency to address, please contact the USAG-HI within thirty days from receipt of this letter or call the Garrison Cultural Resources Manager, Dr. Laurie Lucking at (808) 656-6790, or at laurie.lucking@us.army.mil for more information.

Sincerely,

A handwritten signature in black ink, consisting of several overlapping loops and curves, positioned above the printed name and title.

Steven M. Raymond
Director of Public Works

Enclosures

Map removed to protect rare resources. Available upon request

O'AHU DISTRIBUTION LIST

Kona District (East Honolulu) : DeRussy/FDR, Ft. Ruger, Punchbowl, etc.

Mrs. Laura H. Thielen
State Historic Preservation Officer
Kakuhihewa Building, Room 555
601 Kamokila Boulevard
Kapolei, HI 96707

Mr. Charles Maxwell
Kahu, President Board of Directors
Hui Malama I Na Kupuna O Hawai'i Nei
157 Ale'a Place
Pukalani, HI 96788

Mr. Edward Ayau, Po'o
Hui Malama I Na Kupuna O Hawai'i Nei
P.O. Box 365
Hoolehua, HI 96729

Mr. Robert C. Paoa
1428 Onipaa Street
Honolulu, Hawaii 96819

Ms. Nalani Olds
Post Office Box 4673
Kaneohe, Hawaii 96744

Mr. Clyde Namuo
Administrator
Office of Hawaiian Affairs
711 Kapiolani Boulevard, Suite 500
Honolulu, Hawaii 96813

Mr. Jace McQuivey
Oahu Island Burial Council
c/o H R I
55-510 Kamehameha Highway
Laie, Hawaii 96762

Ms. Kirsten Faulkner
Executive Director
Historic Hawaii Foundation
681 Iwalei Road / Suite 690
Honolulu, HI 96817

Mrs. Donna Ann K. Camvel
46-522 Haiku Plantation Drive
Kaneohe, Hawaii 96744

Appendix A-16 Response From OHA, to 106 Letter for Fort DeRussy Video Monitor System

PHONE (808) 594-1888

FAX (808) 594-1865



STATE OF HAWAII
OFFICE OF HAWAIIAN AFFAIRS
711 KAPI'OLANI BOULEVARD, SUITE 500
HONOLULU, HAWAII 96813

HRD08/3684

June 2, 2008

Steven M. Raymond
Department of the Army
Directorate of Public Works
947 Wright Avenue, Wheeler Army Airfield
Schofield Barracks, HI 96857-5013

RE: Section 106 consultation regarding an undertaking to replace a portion of an existing system of wireless video cameras at Fort DeRussy Military Reservation, TMK (1) 2-6-005.

Aloha e Steven M. Raymond,

The Office of Hawaiian Affairs (OHA) is in receipt of the above-mentioned letter dated May 6, 2008. The US Army Garrison, Hawai'i (USAG-HI) is opening Section 106 consultation, in accordance with the National Historic Preservation Act of 1966, regarding the proposed undertaking to replace a portion of an existing system of wireless video cameras at the Fort DeRussy Military Reservation. OHA has reviewed the project and offers the following comments.

The proposed project calls for the upgrade and replacement of twelve wireless security cameras. Two of the upgraded cameras will require hardwiring and shallow trenching excavations for the underground cables. According to your submission, the proposed shallow trenching is located in the general proximity of known or previously identified historic and prehistoric features.

Construction in the Waikīkī area is known for unearthing burials, especially in the area of this proposed project. Recently, iwi kūpuna has been unearthed from projects adjacent to the subject parcel. The proposed project area is also in close proximity to ancient loko i'a, or Native Hawaiian fishponds. Due to the traditional land uses of the area, the likelihood of unearthing historic properties, including iwi kūpuna should not be ruled out.

Steven M. Raymond
June 2, 2008
Page 2

The submission by your office calls for excavation monitoring that follows the procedures that have been established for subsurface excavations for similar projects in the past at Fort DeRussy. Since the specific procedures have not been depicted in this submission, we request that the excavation (archeological) monitoring be performed by a qualified, trained archeologist. Furthermore, we request the applicant's assurances that should iwi kūpuna or Native Hawaiian cultural or traditional deposits be found during the construction of the project, work will cease, and the appropriate agencies be contacted pursuant to applicable law.

Thank you for the opportunity to comment. If you have further questions, please contact Jason Jeremiah (808) 594-1816 or e-mail him at jasonj@oha.org.

'O wau iho nō me ka 'oia'i'o,



Clyde W. Nāmu'o
Administrator

C: Laura Thielen
State Historic Preservation Officer
Department of Land and Natural Resources
601 Kamokila Boulevard, Room 555
Kapolei, Hawai'i 96707

Appendix A-17: Letter to SHPO re-Opening Consultation for the Schofield to Helemano Trail

DEPARTMENT OF THE ARMY
HEADQUARTERS, UNITED STATES ARMY GARRISON, HAWAII
DIRECTORATE OF PUBLIC WORKS
947 WRIGHT AVENUE, WHEELER ARMY AIRFIELD
SCHOFIELD BARRACKS, HAWAII 96857-5013

REPLY TO
ATTENTION OF:

Office of the Commander
2008

23 December

Ms. Laura H. Thielen

Dear Ms. Thielen:

The U.S. Army Garrison, Hawaii (USAG-HI) is writing to continue Section 106 consultation for construction of a trail from Helemano in Waiialua District to Schofield Barracks in Wahiawa District. This project is in conjunction with the conversion of 2nd Brigade, 25th Infantry Division (Light) to a Stryker Brigade Combat team (SBCT) and is covered by our Section 106 Programmatic Agreement for Army Transformation. The standard corridor width including road bed, shoulders, and rain ditches is 12 meters and will require approximately 6.9 hectares (17 acres) of right-of-way.

USAG-HI consulted previously for Helemano Trail in letters dated 12 July 2004, 04 August 2005, and 28 March 2006. We now wish to re-consult due to proposed changes to the project in three areas. These are a realignment through Dole property between Paalaa `Uka Pūpūkea Road and Kamehameha Highway near Helemano, a geometry change to the existing trail in Poamoho Gulch, and similar slope changes to old road beds near the Wahiawa Reservoir Ditch and Schofield Barracks.

The original alignment was surveyed by Garcia and Associates (GANDA) in 2003 with results included in survey report the following year that included results for other SBCT areas (Buffum et al. 2004). GANDA conducted reconnaissance in a 100 m wide area between Kaukonahua Road and McNair Gate at the south project terminus and a similarly wide area in Poamoho Gulch. In November 2004 USAG-HI staff undertook survey in the 100X500 meter area between Kaukonahua Road and the area surveyed by GANDA in Poamoho Gulch. The report by Directorate of Public Works (DPW) at USAG-HI is included as an appendix in the Monitoring Plan for the Helemano Trail authored by GANDA staff (Desilets and McElroy). Previous surveys by GANDA and DPW include two of the three proposed construction staging areas. DPW conducted survey on the proposed trail realignment and additional easement in Poamoho Gulch on 15 December 2008.

Even though no cultural resources have been reported in the APE, routine monitoring by USAG-HI archaeologists will be conducted weekly at minimum during the

construction. Photographs and stratigraphic profiles of construction trenches/ground disturbance will be recorded during each monitoring event. Photographs of ground disturbance/construction activities will be included in the final monitoring report even if no historically-significant sites are documented.

In the event of inadvertent discovery of archaeologically sensitive findings, an established USAG-HI protocol will be followed and work will cease in areas of concern until inadvertent discoveries can be properly addressed by USAG-HI staff and interested parties.

Therefore, the Army has determined that the proposed work, with archaeological monitoring as described in this letter, can be carried out with “no **adverse** effect” to archaeological and cultural resources. We ask for your concurrence with our determination of effect. We are also consulting with the individuals/groups shown on the attached distribution list (Enclosure 6). If you have any further questions, please contact Dr. Laurie Lucking, Cultural Resources Manager, Environmental Division at 808-656-6790.

Sincerely,

Matthew T. Margotta
Colonel, U.S. Army
Commanding

Appendix A-18: Department of the Interior's Office of Hawaiian Relations Announcement of the establishing of a Native Hawaiian Organization Notification List.



NEWS

U.S. Department of the Interior

Office of the Secretary
September 25, 2007
0712

Contact: Frank Quimby (202) 208-6416
Ka'i'ini K. Kaloi (202) 513-0712

Notification List will Help Federal Agencies Carry Out Their Responsibilities for Native Hawaiian Affairs

WASHINGTON – The Department of the Interior's Office of Hawaiian Relations has established a Native Hawaiian Organization Notification List to help federal officials more effectively carry out their responsibilities for Native Hawaiian affairs.

The list will assist Interior and other federal agencies in identifying and working with Native Hawaiian groups to address mandated federal duties, ranging from reburying Native Hawaiian remains and cleaning up contaminated lands to conducting environmental studies and protecting historic properties. The list will be activated 60 days after it appears in the Federal Register, which will publish it this week.

“It is our hope that this list will provide Native Hawaiian communities with greater notice of proposed federal actions in Hawaii,” said Interior Deputy Assistant Secretary Chris Kearney. “The better we are able to provide advance notice of a federal action, the better communities will be able to participate in the decision making process.”

To be placed on the Notification List, a Native Hawaiian organization must certify in writing to the Office of Hawaiian Relations that the group: 1) serves and represents the interests of Native Hawaiians; 2) provides services to Native Hawaiians as a primary and stated purpose; 3) has expertise in Native Hawaiian affairs; and 4) would like to be placed on the Notification List.

The Native Hawaiian group may also specify topical and geographic areas of interest. The request should include a contact name, phone number and e-mail address. The certification must be signed and dated by the Native Hawaiian

organization's governing body and must include a valid U.S. mailing address where notifications can be sent.

"Determining who to consult with has been a particularly difficult problem for federal agencies," said Ka'i'ini Kimo Kaloi, director of Interior's Office of Hawaiian Relations. "Having a Notification List in place will facilitate interaction with Native Hawaiian groups. It will help to create positive long term relationships between federal agencies and Native Hawaiian groups and allow federal officials to minimize the cost of consultation and devote more resources to their primary missions."

The criteria for the list were developed based on information received during four public meetings in Hawaii and a 90-day public comment period. Several federal agencies also provided information, including the National Park Service, U.S. Fish and Wildlife Service, Advisory Council on Historic Preservation and the departments of Defense, Agriculture, Transportation, Health and Human Services and Education.

The notification list will allow federal officials to more rapidly satisfy statutory notification and consultation obligations under U.S. laws, such as the National Environmental Policy Act, National Historic Preservation Act, and the Native American Graves Protection and Repatriation Act.

The Office of Hawaiian Relations will make the list available to Interior and other federal agencies to assist them with their reasonable and good faith efforts to identify Native Hawaiian organizations that are to be notified and/or consulted with as required by law. It is anticipated that federal agencies will rely on the list to locate and communicate with Native Hawaiian organizations when statutory, regulatory or other issues arise that trigger a need to contact or consult with Native Hawaiians.

The list will be maintained and periodically updated by the Department of the Interior. The Office of Hawaiian Relations will publish the names and contact information of the listed Native Hawaiian organizations. Placement on the list will be valid for five years, after which Native Hawaiian groups must renew their participation. The purpose of the renewal requirement is to ensure that contact information is current and the list participants who no longer wish to be contacted are not burdened with federal notices.

For more information, please contact Ka'i'ini K. Kaloi, director, Office of Hawaiian Relations, U.S. Department of the Interior, 1849 C Street, N.W., MS 3543, Washington, D.C. 20240. Telephone (202) 513-0712 or (202) 208-7462. Fax: (202) 208-3698.

-- www.doi.gov --

Appendix B: ARTICLES AND OTHER REPORTS

Appendix B – 1

Roads in Context

Christophe Descantes, PhD
Cultural Resources Specialist
DPW-ENV Cultural Resources Section
United States Army Garrison, Hawaii
572 Santos Dumont Avenue
Bldg 105, Wheeler Army Airfield
Schofield Barracks, HI 96857-5013

No synthesis exists on the extensive history of road and bridge building in the Hawaiian Islands. This section attempts to begin putting together information from the many technical reports and newspaper articles about road and bridge building on the island of O'ahu and the other Hawaiian Islands associated with military activities, in particular those associated with Schofield Barracks (e.g., Henney 1936; Moore 1946; Spencer Mason Architects [SMA] 1996; Thompson 1983). Traditionally, Kuykendall (1953:23) notes that the Hawaiian Islands lacked a comprehensive system of interior roads and bridges for overland travel. While it seems doubtful that ancient Hawaiians did not have an interior trail network to reach the many island communities, there is a lack of information about such a system, therefore this contextual work starts with the nineteenth century.

It was not until the introduction of horses and wagons in the mid-nineteenth century that a road and bridge system was developed (Alvarez 1987:4). Road-building was the most extensive on O'ahu, but intensive development on O'ahu led to the destruction and reconstruction of the earliest roads and bridges (SMA 1996:IV-2). The Kingdom of Hawai'i established an Interior Department with a Superintendent of Internal Improvements (later Public Works) in 1846 to oversee the construction and maintenance of roads and bridges (SMA:IV-4). Roads and bridges were typically built and maintained by prisoners and male Hawaiians, who were taxed to work on the Kingdom's road or bridge projects or paid a commutation fee of 12½ cents per day (Alvarez 1987:8). According to Kuykendall (1953:26), road crews did little more than clear a right-of-way and roughly grade the road surfaces or construct wooden and stone bridges made of basalt and lava rock. After 1887, King David Kalākaua transferred responsibility for the

maintenance of the roads to local Road Boards, who were financed by a road tax (SMA 1996:IV-5).

After the annexation of Hawai'i to the United States, the Office of the Superintendent of Public Works (SPW) had the responsibility for bridge and road construction. County governments five years later were also charged with maintaining the roads. Private business contributed to road and bridge building in order to keep up with the rapid economic development in the islands. Bridges and roads gradually widened to accommodate automobiles, trucks, and buses. Spencer Mason Architects (1996:IV-8) note that bridges started out being 16 feet wide; in the 1920s bridges were expanded to 20 feet. The addition of sidewalks in the 1930s widened bridges even more.

The rapid economic and population growth due to the growing industries of sugar, pineapple and tourism put large demands on the existing road system. In the beginning of the sugar industry, roads were used to haul the sugar cane from the fields to the mills with oxen and mules pulling carts. Railroads later replaced the oxen and mules. In the mid-twentieth century, a private cane-haul road system replaced the railroad system (Dorrance and Morgan 2000:6). The military also had its own rail system with government locomotives and rolling stock (Best 1978:71). In a similar fashion to the sugar and pineapple industries, the military converted their railroad system into a road system for gasoline-operated vehicles. Figure 1 depicts World War I servicemen transported by an Eva Plantation Co. train.

Spencer and Mason Architects (1996:IV-8) comment that architectural and cultural developments (e.g., the City Beautiful Movement and the Neo-Classical Revival) in Hawai'i paralleled those of the continental United States, albeit somewhat later in

time. Following US annexation, roads and bridges were improved and updated. For example, weak timber bridges were replaced with steel truss and reinforced concrete spans (SMA 1996:IV-9). Roads on federal properties, such as military bases in the State of Hawai'i, benefited from the appropriation of funds by the United States Congress to develop transportation networks in 1916. "By 1940, approximately 65% of Hawai'i's roads had been built with federal funds" (SMA 1996:IV-10).

Schofield Barracks

The development of U.S. Army installations and accompanying bridge and road building on O'ahu began when President Theodore Roosevelt designated Hawai'i as "the most important point in the Pacific to fortify in order to conserve the interests of this country" in his address to Congress in 1905 (Office of the Deputy Installation Commander of the Fort Shafter Area [ODICFSA]1974:1). Construction at the Schofield Barracks Military Reservation began on December 8, 1908. At the time, the Wahiawa community had the responsibility of building bridges (Alvarez 1982:21). Captain Joseph C. Castner, Construction Quartermaster, began work on the temporary barracks, mess halls, stables, etc. for the new post in the Leilehua plains near the old Dowsett ranch house and on the road to the important Kolekole Pass (Addleman 1939:6). In 1909, O'ahu Railway extended track to Schofield Barracks for freight and passenger service (Chiddix and Simpson 2004:248). Chiddix and Simpson (2004:248) note, "[b]y 1922, OR&L's tracks snaked through the warehouse district and were extended to run past each of the barracks".

Specific references to road and bridge building projects are rare before 1929, however, Addleman (1939:43) states that the 3rd Battalion of Engineers constructed a bridge at Schofield Barracks for rail and vehicular traffic in 1925. Living conditions at Schofield Barracks were challenging and navigable roads there and beyond were sparse. Father Fealy described the roads as “bumpy dirt roads that slid down gulches and wound over rickety bridges on the way to town (Honolulu)” (*Star Bulletin*, cited in Alvarez (1982:30). Addleman (1939:7) remarks that completion of a railroad into camp in May 1909 was welcomed because the three-mile ride by wagon from Wahiawa depot to camp was something to be avoided. A 1909 photograph of Schofield Barracks depicts white washed boulders as outlining the post’s early roads (Alvarez 1982:Photo 4). A photo from 1917 shows that Schofield roads were not yet paved (see Figure 2 below) with the following caption: “The rainy season turned them [roads] into quagmires” (Alvarez 1982:Photo 5).

Most of the construction at Schofield Barracks halted with the declaration of war on April 6, 1917 (Alvarez 1982:42). Only after the end of World War I did road-building resume. Addleman (1939:48) records several road-building projects between the year 1929 and 1937 by the 3rd Battalion of Engineers: a rear road from Carter Gate to the Railroad Station; Reilly Avenue; Hospital road; a 1000 block road, and; the Bakery and Laundry road. In 1930, road projects comprise Capron Avenue, 13th FA lateral, Kolekole road (repair); 1000 block connection, and; 11th FA outlet (Addleman 1939:49). “During 1931 the 3rd Engineers constructed the Stockade road, target range road, Division Review Field road and curbing, and roads on the Koolau Machine Gun Range” (Addleman 1939:51). Roads of the QM warehouse area; FA Gas area; Lewis Street;

Trimble Road; Ordnance Warehouse area were constructed in 1933 (Addleman 1939:53). Bridges in the Koolau area were also built in 1933, along with sidewalks and curbing to several areas and Heard Avenue (Addleman 1939:53). A road through Kolekole Pass, Schofield Barracks' most famous natural landmark, was built in 1937 by the 3rd Battalion of Engineers. The battalion was stationed at Fort Shafter and had arrived to O'ahu sometime prior to August 1913 (ODICFSA 1974:4). In 1916, Companies C and D of the 3rd Battalion were engaged in extensive survey projects of O'ahu military reservations, including the location of principal roads (Addleman 1939:14). In 1936, Addleman (1939:57) notes the construction of several road projects in various strategic points in 1936 when ERA (Emergency Relief Act) roads and trails project funds were turned over to the 3rd Battalion of Engineers. Street names commemorated outstanding military leaders, such as Generals John Heard and Charles Menoher and Brig. General Morris Foote (Alvarez 1982:57).

Kolekole Pass Road

Major General Hugh A. Drum (Figure 3) convinced authorities in Washington, D.C. to appropriate \$530,000 of Works Progress Administration (WPA) funds (Henney 1936:1) to build Kolekole Pass Road to connect Schofield Barracks with the Naval Reservation at Lualualei. The funds were allotted for the "Extension of Highways in Hawaiian Islands (Oahu)" with a stated purpose of facilitating the transportation of materials and providing adequate highway communication (Hastert 1936:1). The ERA project built by the 3rd Battalion of Engineers involved widening the preexisting road and reducing the road grade from 33% in some places to no more than 8.5% for an 18-foot

wide six-mile road. Blasting at the summit was necessary to reduce the grade of the road (Figure 4). The official opening of the project in May 1936 included government officials and a *kahuna* (Hawaiian priest) who blessed the event. The new road was not built over any of the pre-existing trail that was used to cross from the central plateau to the leeward side of the island (see Figure 5).

Drum Road (Wahiawa–Pupukea Trail)

Drum Road, formerly called the Wahiawa–Pupukea Trail (Figures 6 and 7), was built at the same time as the Kolekole Pass Road, and cost \$60,000 less to build. The 20-mile long, 15-foot wide road connects Schofield Barracks to the U.S. Army's training grounds in Kahuku and winds through eleven gulches and four watersheds of Helemano, Opaepa, Kawaioloa, and Waimea. Typical cross-sections of Drum Road are in Figure 8. Unlike the Kolekole Pass Road, a particular type of coral, which through experimentation was found to lock and bind itself to form a smooth and hard surface, was used on Drum Road (Hastert 1936:1). Similar to the Kolekole Pass Road, the road building involved reconstructing old trails and carving entirely new pathways (see Figure 9). Relocation of sections of Drum Road avoided portions of the original trail that had poor natural drainage. Henney (1936:1, 15) notes that constructing the road was a constant struggle against nature because incessant rains washed out everything almost as soon as it was made. Seventy-three concrete pipe culverts were constructed to carry water across the road (Hastert 1936:37). The eighteen turnouts for the trail measured 400 feet long and 18 feet wide (Hastert 1936:37).

One of the primary reasons for the allotment of funds was to create jobs for the unemployed. "For that reason, in many instances where the job could have progressed more quickly and more cheaply by the use of machinery, the mandates required that hand labor be used" (Henney 1936:1). Excavation was performed by hand and bulldozer (Figure 10). Hastert (1936:68) predicted 1,095,380 man-hours of employment for both roads.

World War II

The United States embarked on major road building projects after entering World War II. In *Hawaii's War Years*, Gwenfread Allen (1999:222) states:

[o]n Oahu, the military built many roads to remote gun outposts and radio and radar installations in upland plantation areas and forest reserves. Forty miles of road gave access to the top of the Koolau Range, and 22 miles of trails and roads opened new areas on the south end of the Waianae Range

During the Second World War, a number of organizations mobilized for the emergency construction of vital roads and highways (Moore 1946:1). Major organizations included: the United States Engineers (civilian workers); Engineer troops; 24th and 25th Infantry Division charged with emergency maintenance and repair; City and County of Honolulu Road Maintenance and Construction Division; Territorial Public Works Department (Road Maintenance Section on O'ahu only); Civilian Conservation Corps; General Contractors, and; plantation labor under contracts with plantation owners (Moore 1946:1). The U. S. Army constructed or improved approximately 240 miles of roads in the Territory of Hawaii during World War II. More than 90 miles of these roads were surfaced with all weather paving while the Army maintained 300 miles of roads

during the war (Moore 1946:1). Moore (1946:2-8) describes the construction of five road networks and the maintenance and repair of roads for O'ahu (see Figure 11). Engineer troops also built access roads to radio and radar installations and connected and improved plantation roads to provide alternate routes to military bases.

During World War II the Wahiawa – Pupukea Road (or Drum Road) network received continuous improvement in the form of asphaltic concrete paving, coral resurfacing, grading, road widening at a dollar cost of at least \$462,000 (this figure excludes Army troop labor and troop equipment costs). Connections from the Wahiawa – Pupukea network to the coast eventually became Highways 131, 132, 133, and 134 (Figure 12).

Summary

This section attempted to contextualize the history of road and bridge building in the Hawaiian Islands by synthesizing various technical reports and newspaper articles. Road and bridge building developed in concurrence with the introduction of horses and wagons on the islands in the nineteenth century. Throughout the years, several government entities were entrusted with the construction and maintenance of roads. Rapid economic development in the sugar, pineapple, and tourism industries caused major changes in the road infrastructure of O'ahu and the remaining islands of the state. The site of the earliest Schofield Barracks buildings was built near the important Kolekole Road. Military roads at this time were nothing more than dirt roads. The Kolekole Pass and Drum Road projects were completed before the Second World War by the 3rd Battalion of Engineers with Works Progress Administration funds. Major road

building on O'ahu followed the American entry into the Second World War to better defend the island from invasion.

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Figures

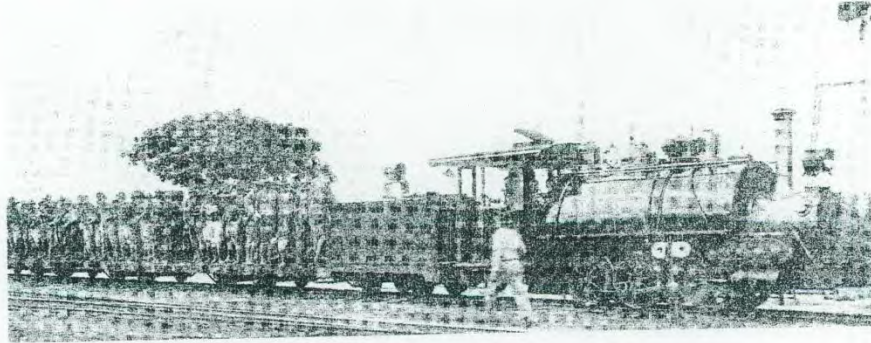


Figure 1. Ewa Plantation Co. #5 NANAKULI in wartime service, 1918, with troops on military maneuvers. US Signal Corps.

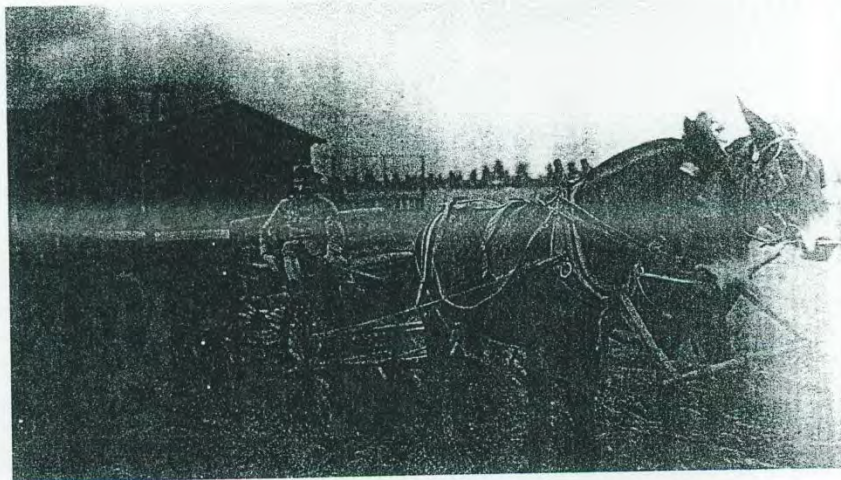


Figure 2. Unpaved roads at Schofield Barracks (Alvarez 1982: Photo 5; Source: Tropic Lightning Museum).



Figure 3. General Hugh A. Drum (Conn *et al.* 2000:19; Source: www.army.mil/cmh-pg/books/wwii/Guard-US/ch2.htm).

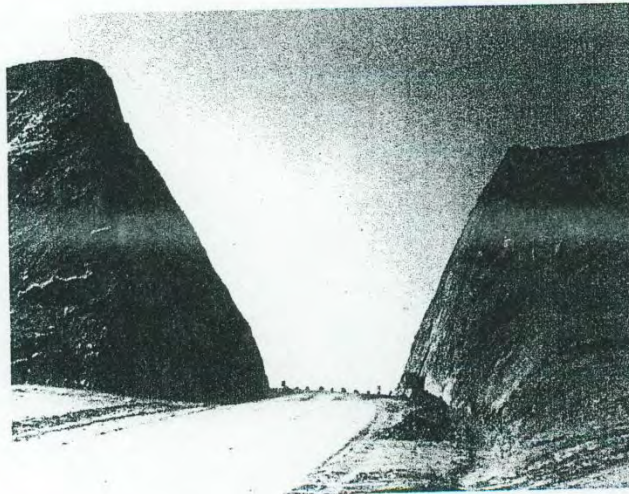


Figure 4. Summit of Kolekole Pass Road with 86-foot cut (Source: Tropic Lightning Museum).

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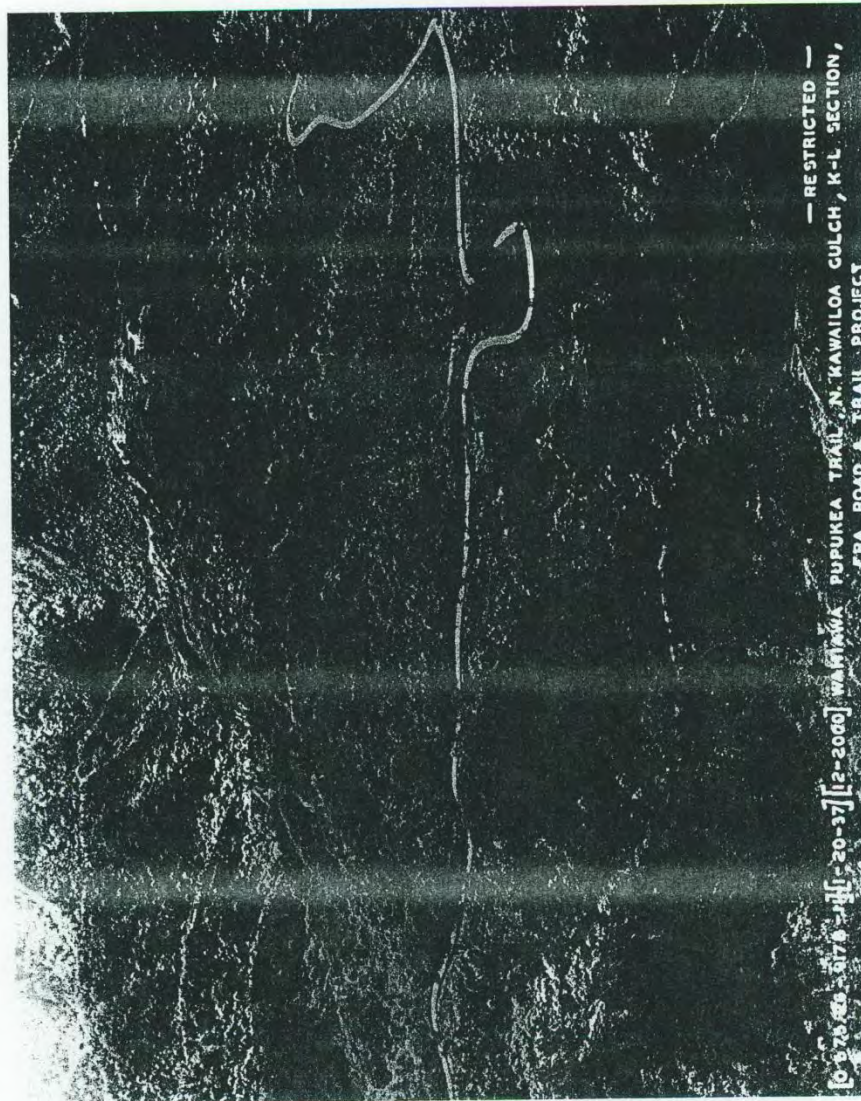


Figure 6. Wahiawa – Pupukea Trail (Drum Road; Source: Tropic Lightening Museum).



Figure 7. Wahiawa – Pupukea Trail in 1937 (Drum Road; Source: Tropic Lightening Museum).

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