EXHIBIT 8

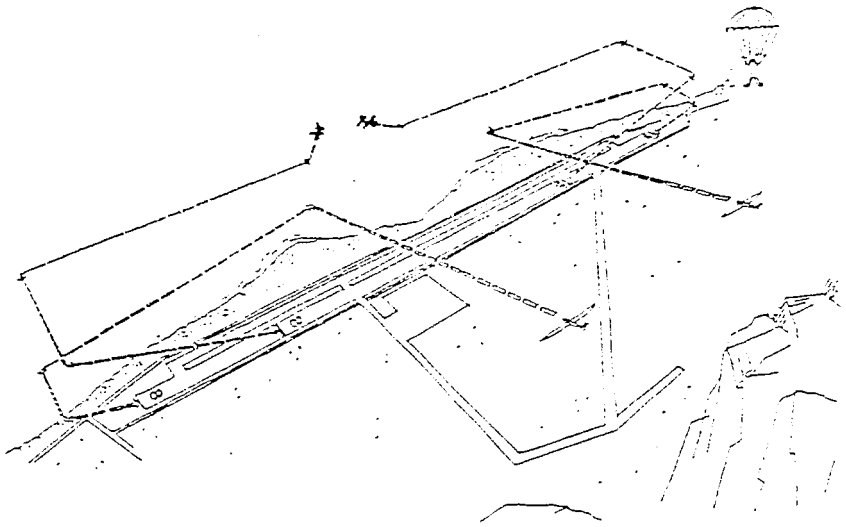
DILLINGHAM AIRFIELD

MASTER PLAN AND PART 150 NOISE COMPATIBILITY PROGRAM

VOLUME I
MASTER PLAN

JOHN WAIHEE, GOVERNOR

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
AIRPORTS DIVISION



Edward K. Noda
and Associates, Inc.

AUGUST, 1993

DILLINGHAM AIRFIELD MASTER PLAN AND NOISE COMPATIBILITY PROGRAM

State Project No. AO2011-01

Volume I

MASTER PLAN

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ADDENDUM

October 13, 1993

DILLINGHAM AIRFIELD
MASTER PLAN AND
NOISE COMPATIBILITY PROGRAM

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MASTER PLAN

Addendum to be inserted before summary

UPDATE:

Page 1-4, Planning Assumption No. 3.

The recent announcement pertaining to the closure of Barbers Point Naval Air Station (BPNAS) may change planning assumption no. 3. The possible availability for use of BPNAS as a public airport will allow future general aviation activity to operate at three airports, namely Honolulu International Airport, Dillingham Airfield and Barbers Point Naval Air Station.

The extent of the impacts associated with BPNAS becoming a public airport to both Dillingham Airfield and Honolulu International Airport aircraft operations is not fully known at this time. The State of Hawaii, Department of Transportation, Airports Division will address these impacts at the proper time and implement the appropriate development plans. Dillingham Airfield will continue to operate as a general aviation airfield with aviation activities similar to those presently occurring at the airfield.

SUMMARY

SUMMARY

The plan for development of Dillingham Airfield during the period of 1992-2010 as proposed in this Master Plan is based on a number of assumptions about the future. The future of general aviation in the State of Hawaii, and on the island of Oahu in particular, is uncertain for a number of reasons that are discussed in detail in the report. If any of the assumptions prove to be incorrect, a major change in the development plans could be required, and for this reason the Master Plan is structured to add new facilities in increments rather than all at once. Incremental development is also consistent with the availability of improvement funds for the State's airports which is itself incremental in nature, as well as capital improvement budget allocations which are normally made on a biennial basis. The Master Plan recommends facility improvements in increments that are sized to minimize financial investments by the State in the event major changes are needed, or for postponement or cancellation of proposed developments if demand does not increase as forecast.

This Summary briefly describes the plan for the development of Dillingham Airfield to the year 2010 and includes estimated costs on a time-phased basis for accomplishing the work in three increments. The forecast of aircraft operations, which is the primary indicator of the need for new facilities, governs the recommendations for improvements included in each increment. Improvements to Dillingham Airfield are based on the accommodation of Design Group I and II (small, general aviation) aircraft.

MASTER PLAN

The first phase of development is planned to take place in the 1992-1997 time period. Facility improvements in the first increment are listed below and shown on Figure 8-1. Proposed facilities will support a forecast level of 129,000 annual aircraft operations.

- Acquire land for all planned developments to the year 2010.

- o Add extended runway safety areas and paved blast pads at both ends of the runway.
- o Improve airfield pavement strength and surfaces.
- o Add a full length parallel taxiway at a separation of 240 feet from the runway centerline.
- o Relocate parachute drop zone.
- o Provide a helipad.
- o Improve existing hangars.
- o Add apron space, hangars and improved sites for commercial aviation/Fixed Base Operators.
- o Provide space for Air Museum.
- o Improve/relocate internal roads.
- o Improve utilities.

The second increment of development is planned to take place in the 1998-2002 time period. Facility improvements in the second phase, which are in addition to first phase improvements, are listed below and shown on Figure 8-2. Proposed facilities will support a forecast level of 190,000 annual aircraft operations.

- o Construct an Air Traffic Control Tower.
- o Improve Aircraft Rescue and Firefighting (ARFF) Equipment.
- o Add additional apron space, hangars and space for commercial aviation/Fixed Base Operators.

- o Further improve internal roads.
- o Further improve utilities.

The third phase of development is planned to take place in the 2003-2010 time period. Facility improvements in the third phase, which are in addition to improvements in the first and second phases, are listed below and shown on Figure 8-3. Proposed facilities will support a forecast level of 226,000 annual aircraft operations.

- o Add a northern parallel runway with a separation of 300 feet from the centerline of the existing runway.
- o Add navigational aids (NAVAIDS).
- o Add additional apron space, hangars and space for commercial aviation/Fixed Base Operators.
- o Further improve internal roads.
- o Further improve utilities.

SCHEDULE AND COST

The costs for all three increments of development are listed below and show the time phasing for each. Both schedule and costs are discussed in detail in Section 8, Priority Action Program. Costs are in mid-1991 dollars.

DEVELOPMENT COSTS - SUMMARY
By Phase (1992-2010)

	Cost ($ Millions)		
Improvements	1992-1997	1998-2002	2003-2010
Near Term Improvements	0.98	0.00	0.00
Runways/Taxiways/Helipad	2.93	0.00	2.56
Aprons	1.09	1.38	0.91
Hangars	0.66	3.30	2.75
Roadways and Parking	2.42	0.07	0.04
Commercial Aviation/Fixed Base Operator	0.41	0.16	0.16
Air Traffic Control Tower	0.00	0.58	0.00
Navigation Aids	0.00	0.00	0.33
Utilities	0.00	0.28	4.95
Subtotal	8.49	5.77	11.70
A & E Fees (15%)*	1.27	0.87	1.76
Land Acquisition	2.40	0.00	0.00
TOTAL	12.16	6.64	13.46

GRAND TOTAL: $ 32,260,000

* A & E Fees Include: Planning, Design and Construction Management

Chapter 1

INTRODUCTION

1.0 INTRODUCTION

The Dillingham Airfield Master Plan and FAR Part 150 Noise Compatibility Program was prepared for the State of Hawaii, Department of Transportation, Airports Division under State Contract No. 26985, State Project No. AO2011-01. This is Volume I, Master Plan. The FAR Part 150 Noise Compatibility Program is documented in Volume II. Funding for this program was provided through the State of Hawaii and a planning grant from the Federal Aviation Administration (FAA).

1.1 BACKGROUND

For nearly three decades, Dillingham Airfield has been a joint-use military/civil general aviation airfield. The airfield, which began as a World War II military base known as the Dillingham Military Reservation, is currently leased by the State of Hawaii, Department of Transportation (DOT) for civil general aviation (GA) use. The State is a tenant of the Dillingham Military Reservation which is owned and operated by the U. S. Army. Throughout this thirty year period of civil general aviation use, consideration has been given to designating Dillingham as a reliever airport for Honolulu International Airport (HIA), however, numerous studies and State of Hawaii legislative initiatives (see Appendix F) have never resulted in such action.

During 1977, Dillingham and other existing airfields and potential sites for new airfields were studied as possible locations for a general aviation reliever airport under the Oahu General Aviation Master Planning Study (OGAMPS). As part of the OGAMPS study (Appendix B, Reference 4), an Environmental Impact Assessment (EIA) for Dillingham Airfield was prepared, which evaluated possible impacts and facilities needed for the expansion of Dillingham to accommodate forecast general aviation demands.

In 1983, the State of Hawaii, Department of Transportation, Airports Division (DOT-A) signed the current 25 year lease for Dillingham Airfield with the Department of the Army (see Appendix G). The terms of the lease limit civil operations to the daytime hours

(sunrise to sunset), and reserves evening and nighttime hours for military operations. Also, with prior notification to the DOT-A, the military can close Dillingham for military training activities during the day.

Civil aircraft operations at Dillingham Airfield are limited to general aviation aircraft with gross weights less than 12,500 pounds and approach speeds less than 121 knots. The airfield is operated under Visual Flight Rules (VFR) and has no navigational aids (NAVAIDS) except for wind cones.

This is the first official Master Plan prepared for Dillingham Airfield. The Airport Layout Plan (ALP), Terminal Area Plan (TAP), and Approach and Clear Zone Plan (ACZP) were initially approved by the Federal Aviation Administration (FAA) in September, 1980, updated by the DOT-A in May, 1983, and again approved by the FAA in June, 1983.

1.2 PURPOSE, SCOPE AND OBJECTIVES OF THE MASTER PLAN

The purpose of the Dillingham Airfield Master Plan and Noise Compatibility Program is to provide the DOT-A with a comprehensive plan for the orderly development of the Airfield through the year 2010 and to satisfy the needs of general aviation on the island of Oahu in concert with Honolulu International Airport (HIA) and any other general aviation facility that might become available during that period. While initiatives for new general aviation facilities on Oahu are still in progress, HIA and Dillingham are presently the only two airport facilities that accommodate civil general aviation aircraft except for training operations at Ford Island ALF. There are military general aviation aircraft that operate from military airfields on Oahu and use facilities at HIA, Dillingham Airfield and Ford Island.

The scope of the master plan study is limited by the potential growth capability of the airfield site and assumptions that must be made about future development on Oahu; joint civil/military airfield use; and other intangibles that are discussed in detail in the following subsections.

A major objective of the study is to produce a plan for development that is flexible enough to accommodate substantial changes in aviation demand, as well as the nature of aviation services required, without the over-commitment of funds or other resources. Another major objective is to maintain the essential character of Dillingham Airfield with respect to its surrounding natural beauty, accommodate a wide range of general aviation activities, and maintain the friendly and informal atmosphere that prevails there at the present time.

1.3 PLANNING ASSUMPTIONS

Planning the long term development of Dillingham Airfield has been done in an environment of uncertainty that is, in some ways, more extreme than is ordinarily encountered in planning air transportation facilities. The general aviation industry in the United States has been in decline for a number of years for many reasons and the future of recreational flying is uncertain. On the other hand, the demand for commercial aviation pilots is growing as airline deregulation and other factors result in greatly increased air travel by the public. Simultaneously, defense budgets are shrinking, therefore, a traditional source of commercial pilot training, namely the military air services, is also shrinking leaving general aviation as the major potential source of future commercial pilots.

In addition to uncertainties in the general aviation industry, there is a also a great deal of uncertainty about the economic development of Hawaii in general and Oahu in particular. While much of the prospective future tourism growth seems to be destined for the neighbor islands, other commercial growth will probably continue to be concentrated on Oahu. There are indications that there might be future restrictions on general growth in Hawaii commensurate with its limited size and a desire to preserve its natural beauty. On the other hand, the growth of aviation activity at Honolulu International Airport is forecast to be vigorous for the next 20 years (see Statewide Airport Systems Plan, Appendix B, Reference 2). Also, the expansion of housing and other facilities for an increasing population potentially conflicts with new general aviation airfield development

unless there are significant changes in land ownership, land zoning policies and military missions.

In order to have a basis for planning, it was necessary to make a number of assumptions about the future. If any of them are incorrect, the course of the planned development of Dillingham will be changed. The major planning assumptions are described below.

1. It will be possible to negotiate a new lease for the civil use of Dillingham Airfield that will be less restrictive in terms of making facility improvements and with fewer operational constraints than the present one (see Appendix G for terms of the present lease), and that additional land can be acquired by the State for general aviation use.

2. Ford Island ALF will be closed to general aviation use sometime in the 1995-2000 time period.

3. Dillingham will be the only other general aviation airport on Oahu during the planning period other than Honolulu International Airport because public pressure will prevent the development of a new site by the State, and the military will reject attempts to establish joint civil/military use of their existing facilities.

4. The north shore of Oahu, and particularly the Haleiwa/Mokuleia area, will not be economically developed to the point where air carrier/commuter airline service is needed to serve the area.

1.4 KEY ISSUES

There are four key issues of development that are addressed in the Master Plan; they are briefly described as follows.

- **Provision for More Airfield Capacity**. The forecasts of the Statewide Airport System Plan (SASP) (Appendix B, Reference 2) and the prospect of closing Ford Island ALF to general aviation traffic indicate the need for more airfield capacity which will take the form of an additional runway, taxiways, and aprons as well as revised operating procedures.

- **Provision for More Aviation Service Facilities**. The addition of more based aircraft and itinerant operations indicates the need for more and varied aviation services including hangars, aircraft tiedowns, commercial aviation/Fixed Base Operators, and aircraft fuel.

- **Provision for More Airport Infrastructure**. The addition of more facilities indicates the need for new and improved roadways, ground vehicle parking, and utilities.

- **Improvement of Airport Safety**. Increased aviation activity indicates the need for measures to improve safety including a parachute drop zone separated from aircraft operations on the runway, an Aircraft Traffic Control Tower, improved ARFF equipment, and additional land for airport use.

1.5 APPROACH TO PLANNING

At the beginning of the planning process, assumptions about the future were made as described in subsection 1.3.

The approach taken to resolve the key issues was to first forecast and analyze air traffic demand to the year 2010. Aviation demand was then converted into facility requirements, and alternative siting and design concepts were developed to satisfy them. Alternatives were evaluated on the basis of cost and performance and in light of the environmental effects they might have.

Preferred concepts were integrated into an overall Master Plan for the Airfield, giving consideration to all relevant interfaces and interrelationships. Development costs were estimated and distributed on a time-phased basis. Finally, the economic and financial implications of the overall Master Plan were determined.

1.6 COMMUNITY AND AGENCY COORDINATION

One of the elements of a FAA and DOT-A Master Plan is public involvement in the planning process. For this study, public involvement and community interaction were achieved through a series of Technical Advisory Committee and Public Informational meetings. The Technical Advisory Committee (TAC) consisted of representatives from a broad spectrum of interests, ranging from airport management to concerned citizens groups. A list of the Technical Advisory Committee members is presented in Appendix D. The committee expressed their ideas, and reviewed and discussed the Master Plan alternatives for Dillingham Airfield. Specific concerns of individuals or groups were addressed by the DOT-A and its consultants in separate meetings or telephone conversations.

Inputs from the general public where obtained through a series of Public Informational meetings that were held throughout the planning period. Inputs were recorded or received in writing and individually responded to by the DOT-A and the planners.

1.7 ORGANIZATION OF THE REPORT

The Dillingham Airfield Master Plan and FAR Part 150 Noise Compatibility Program is reported in three technical volumes:

Volume I, Master Plan
Volume II, FAR Part 150, Noise Exposure Maps and Noise Compatibility Program
Volume III, Environmental Assessment

In addition, there is an Executive Summary for the Master Plan.

The organization of this volume, Volume I, Master Plan, is as follows: Chapter 1 is a brief introduction to Dillingham Airfield and the Master Planning process. Chapter 2 presents an inventory of existing facilities, and summarizes existing conditions, limitations, opportunities and concerns. Chapter 3 presents a forecast of aviation demand for the twenty year planning period and an analysis of airfield capacity. Chapter 4 develops facility requirements to meet the forecast demand and alleviate existing deficiencies at the Airfield. Chapter 5 presents and evaluates alternative design concepts which satisfy the facility requirements. Chapter 6 shows the Recommended Master Plan for the Airfield as derived from the evaluation of alternative development concepts. Chapter 7 lists the environmental parameters to be considered and discusses potential impacts of the proposed project. Chapter 8 presents a time phased development and estimated project cost. Chapter 9 assesses the financial feasibility of the Recommended Master Plan. The report is prefaced by a Summary that presents conclusions and recommendations in a concise form.

The material in the Appendices includes a Glossary, list of References, a list of preparers of the Plan, a list of Members on the Technical Advisory Committee, the present Dillingham Airfield lease, an evaluation of the Dillingham water supply situation, a description of City and County zoning and State land use regulations, a concise history of the General Aviation Reliever Airport situation on the island of Oahu, flood hazard information about Dillingham Airfield, and the existing parachute activities procedures.

Chapter 2

INVENTORY

2.0 INVENTORY

This chapter presents airport history and reliever airport background; an inventory of demographics and socio-economic data; air traffic activity; airport facilities and land use; airport access and parking; airspace, associated air traffic control and noise abatement; environmental conditions and concerns; airport management and financial policy; existing airport development proposals; surrounding off-airport land use; and existing conditions, limitations, opportunities and concerns.

2.1 AIRPORT HISTORY AND HIA RELIEVER AIRPORT BACKGROUND

This section describes the history of Dillingham Airfield and gives the background of the search for a reliever airport for Honolulu International Airport.

2.1.1 Airport History. Dillingham Airfield had its beginnings as a World War II military base and later became a joint use military/civil airport; it has been in use by general aviation (GA) for nearly three decades. Dillingham Airfield is part of Dillingham Military Reservation, and is located on the North Shore of Oahu. The land was acquired in the mid-1920's by the United States government from the Dillingham family and the Territory of Hawaii through direct purchase and land transfer. At that time, a portion of the present-day Dillingham Airfield was known as the Kawaihapai Military Reservation.

During World War II, the U. S. Air Corps constructed a military airfield suitable for use by bomber aircraft that included two runways, associated taxiways and aprons, revetments for parking aircraft, munitions storage areas, and various other facilities required for military operations such as administrative facilities and personnel quarters. These facilities were fully utilized by the military until the cessation of hostilities in the Pacific in late 1945.

Following World War II, the Hawaii Air National Guard utilized the airfield for training operations and made a number of improvements to the facilities at Dillingham.

In 1962, the State of Hawaii Department of Transportation (DOT) initiated a series of short term leases with the U. S. Air Force for use of the facilities by civil general aviation operations. In 1974, Dillingham Airfield was transferred from the U. S. Air Force to the U. S. Army. The Army began using the facility on a joint use basis with general aviation and at the same time, the Hawaii Air National Guard moved its operations to Honolulu International Airport. In 1977 an Environmental Assessment was prepared for the Airfield and in 1981 the Airports Division of the State Department of Transportation (DOT-A) constructed a number of facility improvements at Dillingham in support of civilian general aviation activities. These facilities included the present aircraft hangars and a Universal Communications (UNICOM) tower.

In 1983, the DOT-A signed the current 25 year lease of Dillingham Airfield with the U. S. Department of the Army (see Appendix G). The terms of the lease limit civil operations to daytime hours and reserve the right for the military to perform training at night on an unlimited basis and unrestricted daylight training upon prior notification to DOT-A.

2.1.2 HIA Reliever Airport Background. The following is a brief overview of the administrative, legislative, community and general public actions that have occurred regarding the Oahu General Aviation Reliever Airport, and its relationship to Dillingham Airfield. Additional information on this subject is presented in Appendix F. The FAA definition of a reliever airport is contained in the *National Plan of Integrated Airport Systems* (NPIAS) and is as follows:

Reliever Airports - The reliever criteria are as follows: The reliever airport must provide substantial capacity or instrument training relief as evidenced by:

a. A current activity level for, in the case of a new airport or an airport that is slated for major improvements, a forecast activity level of at least 50 based aircraft or 25,000 annual itinerant operations, or 35,000 annual local operations (a heliport may qualify as a reliever if it has one-half of this activity level, or,

b. the FAA Regional Director has determined that the airport is a desirable location for instrument training activity.

The relieved airport:

a. is a commercial service airport that serves a standard metropolitan statistical area (SMSA) with a population of at least 250,000 persons or has at least 250,000 annual enplaned passengers, and,

b. operates at 60 percent of its capacity, or would be operated at such a level before being relieved by one or more reliever airports, or is subject to restrictions that limit activity that would otherwise reach 60 percent of capacity.

Although FAA criteria do not include a specific distance parameter (in terms of travel time or miles) for a reliever airport, the closer the reliever airport is to the primary airport and the metropolitan area being served, the greater the reliever potential that can be provided. Dillingham Airfield meets the FAA criteria to be a reliever airport.

The majority of the administrative and legislative actions regarding Dillingham Airfield, in the past 15 to 20 years, have been taken as part of, or in response to, the selection of an Oahu General Aviation Reliever Airport. The most decisive of these occurred during 1977 and 1978, following many years of discussion, and numerous site selection and requirement studies.

The need for a separate general aviation airport was recognized as early as 1962. In that year, as well as in 1971, several studies were completed to determine the need for, and location of additional airport facilities. Overall, between 1962 and 1975, a total of 15 studies were completed, each addressing the need for airport facilities designed to serve general aviation and relieve air traffic congestion at Honolulu International Airport (HIA).

In August 1975, the DOT-A initiated a general aviation site selection study, which culminated in the publishing of the Oahu General Aviation Master Plan Study (OGAMPS) in 1977 and 1978 (Appendix B, Reference 4). During the course of the study, eighteen possible sites and joint use arrangements were examined for their potential as a reliever airport. After a considerable amount of legislative and public review and comment on OGAMPS, environmental impact assessments for two potential sites (Dillingham Airfield and Kunia) were prepared and published (OGAMPS Volumes III and IV, respectively).

In general, OGAMPS concluded that only Barbers Point Naval Air Station (BPNAS) had the capacity to accommodate increased GA traffic, and a new site would be required to accommodate forecast growth of GA activity. Of the sites investigated, OGAMPS concluded that the Kunia "A" and Poamoho sites represented the best alternatives from the standpoint of general acceptability and ultimate implementation. However, subsequent community and legislative concerns resulted in the rejection of these two sites.

Since 1978 and the publication of the OGAMPS, general aviation and the topic of a reliever airport have been considered in the HIA Master Plan and Statewide Airport System Plan, both of which have been currently updated (Appendix B, References 6 and 2, respectively). The GA reliever airport is viewed as a feasible solution to alleviating HIA's aircraft mix and demand/capacity problems.

Of the resolutions and bills, only two; Act 218 SLH, 1974 and HR 0246, 1984, requesting the Legislative Reference Bureau to study general aviation's contribution to the State's economy, have been adopted by the respective legislatures. Others have been tabled in committee or included as items in the DOT-A budget, thereby losing their identity as resolutions or bills. However, general aviation activities continue to be centered at HIA with a significant number of training (touch-and-go landings and takeoffs) operations being conducted at Ford Island ALF and at Dillingham Airfield.

The U.S. Navy has indicated that operations at Ford Island ALF will cease in the near future to allow the Navy to better utilize Ford Island for naval housing and mission related activities. The loss of Ford Island ALF will seriously impact general aviation training operations and require relocation of those activities to Dillingham Airfield or HIA. When combined with the forecast increase of HIA's commercial operations, the latter action could result in serious capacity and operational problems, due to the mix of large and small aircraft at HIA.

2.2 INVENTORY OF DEMOGRAPHIC AND SOCIO-ECONOMIC DATA RELATING TO THE AIRPORT SERVICE AREA

This section describes the social and economic (socio-economic) factors which influence the use and growth of the Airport. The key factors include the airport service area, population, economic base, residential development, and existing and projected land use.

2.2.1 Airport Service Area. Dillingham Airfield is located near Oahu's northwestern tip in the district of Waialua. Most of the land surrounding the Airport is under the jurisdiction of the State of Hawaii and the City and County of Honolulu. The Airport proper is managed by the State of Hawaii, Department of Transportation, Airports Division and is leased from the United States, Department of Defense, Department of the Army. The Airport is located approximately four miles west of Waialua town along Farrington Highway and is approximately 35 road miles from Honolulu International Airport and the Honolulu Metropolitan Center. Figure 2-1 shows the location of Dillingham Airfield on the north coast of Oahu.

Dillingham Airfield serves as a training and recreational airport for Oahu's general aviation community as well as a night training field for military operations. The runway is restricted to civil aircraft of up to 12,500 pounds gross weight under Visual Flight Rules (VFR). Larger aircraft may use the airfield with prior permission from the State DOT. It serves as a base for 42 general aviation aircraft, including 21 fixed-wing

aircraft, 20 gliders and one helicopter. Military aircraft which utilize the airfield are primarily helicopters and C-130 cargo aircraft.

Due to the nature of aviation activity at Dillingham, the service area of the airport potentially includes the entire general aviation community on Oahu. Also, under the terms of the lease agreement, it must serve military air and ground operations as well.

2.2.2 Population. Resident civilian and military population of the State has increased from 769,913 in 1970 to 1,134,800 in 1991. Within the time period of 1970 to 1990, the population on Oahu increased from 636,658 to 839,300. Table 2-1 presents a summary of the State's population, from 1970 to 1991, and a breakdown of civilian and military residents.

Table 2-1

POPULATION OF THE STATE OF HAWAII
1970-1991

Year	Civilian Resident	Military Residents	Total Resident Population	Oahu
1970	714,771	55,142	769,913	636,658
1975	827,400	58,800	886,200	718,600
1980	907,635	57,056	965,691	762,565
1985	983,400	56,400	1,039,800	804,500
1988	1,023,200	56,800	1,080,000	828,300
1989	1,038,200	56,400	1,094,600	832,400
1990	1,058,300	55,200	1,113,500	839,300
1991	1,080,000	54,700	1,134,800	---

Source: State of Hawaii, Department of Business and Economic Development, "The State of Hawaii Data Book 1991", November, 1991

The Waialua district population has increased from 9,171 in 1970 to 11,549 in 1990 as shown in Table 2-2.

Table 2-2

CITY AND COUNTY OF HONOLULU AND WAIALUA DISTRICT
RESIDENT POPULATION
1970-1990

Year	RESIDENT POPULATION Honolulu	Waialua
1970	630,528	9,171
1980	762,565	9,849
1988	838,500	11,400
1990	839,300	11,549
Percent Change		
1970 to 1980	20.9	10.0
1980 to 1990	10.1	17.3

Source: State of Hawaii, Department of Business and Economic Development, "The State of Hawaii Data Book 1991 November, 1991

2.2.3 Economic Activity. Economic activities on the Island of Oahu are diverse, with tourism being the largest industry. The Island economy also depends on military spending, Federal and local government spending, agriculture, construction, utilities, marine activities and sports. At present, the State is trying to establish "high-tech" and other non-polluting industries in order to increase the diversity of the State's economy. The major industries in the Waialua area are based on agricultural crops such as sugarcane, pineapple and diversified agriculture. Generally, the economy of the area is affected by its geographic isolation from Honolulu and the lack of labor intensive industries.

As of 1990, the civilian labor force on Oahu averaged 381,400 persons with an average unemployment rate of 2.6 percent. The per capita income level for Oahu in 1990 was $19,171. The 1990 census reported that the average household size in Waialua was 3.33 persons.

2.2.4 Residential Development. There are a few scattered houses located to the north of the Airport, *makai* of Farrington Highway. The nearest residential development is the Mokuleia Beach Community which is located approximately 2,500 feet to the east of the end of Runway 26. There are approximately 50 house lots in this area. Two miles east, along Farrington Highway lies Mokuleia, and Waialua town is approximately two miles further east.

At present, there are no formal plans (accepted by the City and County of Honolulu or State of Hawaii) for new residential developments in the area, although land has been purchased by developers, ostensibly for that future purpose.

2.2.5 Present and Projected Development. The total land area in the Waialua district is 22,302 acres with 13,543 acres available as developable lands.

At present, the land use to the north and west of the Airport is designated for preservation, public facilities and park land, with a few exceptions for residential use. To the east of the Airport there is a small residential community, however, most of the land east of Dillingham Airfield is zoned for agricultural use.

Adjoining the Airport to the south are Federal lands that are predominantly governed by the U.S. Department of Defense. The remaining land to the south of the Airport is owned by Waialua Sugar Company's Mokuleia Ranch, zoned by the City and County of Honolulu for agricultural use and public facilities.

The State of Hawaii's Land Use designation for the lands east and south of the Airport is agricultural except for those lands which are designated for public use

and as military lands. Included in Appendix H is a brief description of the City and County of Honolulu Zoning and the State of Hawaii's Land Use Regulations. A more detailed presentation of off-Airport land use is presented in subsection 2.10.

According to the City and County of Honolulu's Development Plan for the North Shore, the use of the lands surrounding Dillingham Airfield will remain unchanged in the near future. However, informal meetings with the Mokuleia Land Co. indicate that it is their intent to develop their lands at some future date. The Mokuleia Land Company has applied for a change in the development plan to build two golf courses on their land. Recently, these changes were rejected by the City and County of Honolulu.

2.3 INVENTORY OF AIR TRAFFIC ACTIVITY

This section reviews historical data concerning aviation activity at the Airport. Dillingham Airfield is Oahu's principal general aviation airport, accommodating civilian and military aircraft operations. Dillingham is also the primary facility in the State that regularly accommodates glider and parachute operations. There is no recorded passenger, air cargo or air mail activity at the Airport. Commercial activities include glider rides, parachute jumping, and various types of aviation training instruction.

2.3.1 Aircraft Operations. A summary of aircraft operations, by type, at Dillingham Airfield is presented in Table 2-3. Total aircraft operations at the Airport have declined 34 percent from 139,764 in 1975 to 97,278 in 1992; a low of 85,644 was recorded in 1983. Aircraft operations, by powered aircraft, declined from 91,453 in 1975 to a low of 55,078 in 1983, then increased to 61,979 in 1992, for an overall decline of 32 percent. Operations by gliders have fluctuated from 31,650 in 1975 to a low of 17,086 in 1982, and increased to 30,393 in 1992 for a decline of 4 percent.

Using FAA aircraft operations categories, there were 31,586 general aviation operations in 1992, compared to 59,803 operations in 1974, and a peak of 64,792 operations in 1978.

Table 2-3

HISTORICAL AIRCRAFT OPERATIONS BY TYPE
Dillingham Airfield
1975-1992

Year	Powered	Glider	Military	Total
1975	91,453	31,650	16,661	139,764
1976	83,172	27,324	18,031	128,527
1977	81,366	25,852	24,562	131,780
1978	94,130	29,338	27,162	140,630
1979	91,356	32,288	21,930	145,574
1980	82,604	31,757	16,820	130,989
1981	71,004	33,967	15,946	120,917
1982	56,365	17,086	17,274	90,725
1983	55,078	20,754	9,812	85,644
1984	55,582	24,420	9,228	89,230
1985	60,494	29,590	5,065	95,149
1986	62,976	32,138	4,852	99,966
1987	65,756	32,695	6,202	104,653
1988	70,836	38,494	6,034	115,364
1989	73,382	37,904	5,850	117,136
1990	62,666	31,020	4,294	97,980
1991	66,348	33,980	3,025	103,353
1992	61,979	30,393	4,906	97,278

Source: State of Hawaii, Department of Transportation

Using FAA aircraft operations categories, there were 60,786 air taxi operations in 1992 by the glider operators compared to 63,300 operations in 1975, and a high of 77,808 operations in 1988. These air taxi operations have not been reported to the State until recently as the State Department of Transportation landing reports accounted for only 254 air taxi operations in 1989.

2.3.2 Based Aircraft. There are 44 based aircraft at the Airport. These include 22 single-engine aircraft, one multi-engine aircraft, one helicopter and 20 gliders. According to the FAA "State and County Listing of Aircraft Registrants" there were 638 aircraft registered on Oahu as of July 1989. The geographic distribution of these owners, by Oahu location, is presented in Table 2-4.

Table 2-4

CITY AND COUNTY OF HONOLULU LISTING OF AIRCRAFT REGISTRANTS
1989

County	Number
Honolulu	487
Kailua	28
Kaneohe	27
Hickam AFB	20
Waialua	14
Pearl City	10
Aiea	9
Waipahu	9
Waianae	6
Hauula	5
Makakilo City	5
Mililani Town	5
Ewa Beach	3
Wahiawa	3
Haleiwa	2
Kahuku	1
Kaneohe MCAS	1
NAS Barbers Point	1
Waimanalo	1
Wheeler AFB	1
Total	638

Source: FAA State and County Listing of Aircraft Registrants, July, 1989.

2.3.3 Pilots. According to the July 1989 FAA Airmen Directory, there are 2,113 pilots on Oahu which includes airline transport, commercial, private and student pilots. The geographic distribution of these pilots by Oahu location is presented in Table 2-5.

2.4 INVENTORY OF AIRPORT FACILITIES AND ON-AIRPORT LAND USE

2.4.1 Airfield. This section provides a summary of the airfield facilities and detailed information about them is shown on the existing Airport Layout Plan (Figure 2-2). Dillingham Airfield is comprised of a single runway 9,000 feet in length and 75 feet wide, with an elevation of 15 feet Mean Sea Level (MSL) at the Airport Reference Point (ARP). The runway's centerline has a true azimuth of 270° 39' 09" which converts to a magnetic orientation of approximately 79° - 259° (8-26). At each end of the runway, there is a 2,000 foot displaced threshold, which is used for sailplane (glider) operations only, leaving a usable runway length of 5,000 feet for powered aircraft. The runway has an effective gradient of 0.04 percent and a 93 percent crosswind coverage for wind speeds of less than 12 miles per hour. The runway pavement strength is listed on the Airport Layout Plan (ALP) as 40,000 pounds, 152,000 pounds and 180,000 pounds for "single", "dual" and "dual tandem" landing gears, respectively. However, the airfield is only open to civil general aviation aircraft of 12,500 pounds maximum gross weight for daytime VFR operations.

There is a 40 foot wide taxiway running parallel and south of the 5,000 foot runway, and extending west to the powered aircraft hangars and apron. The strength of the taxiway pavement is not listed on the ALP, but conversations with the UNICOM staff indicate that the pavement is only two inches thick. Both runway and taxiway pavements are showing signs of age and fatigue, with cracks and vegetation growth through the cracks. Also, tow-cables used for sailplane operations cause an accumulation of rocks and debris on the ends of the runway pavement.

Table 2-5

CITY AND COUNTY OF HONOLULU LISTING AIRMEN
1989

County	Number
Honolulu	1,029
Aiea	144
Barbers Point	10
Camp Smith	4
Ewa Beach	89
Fort Shafter	2
Haleiwa	30
Hauula	4
Hickam AFB	21
Kaawa	2
Kahuku	2
Kailua	237
Kaneohe	140
Kaneohe Bay MCAS	9
Laie	4
Makakilo	24
Mililani Town	147
Mokuelia	7
Pearl City	59
Pearl Harbor	6
Punaluu	1
Schofield Barracks	18
Sunset Beach	2
Wahiawa	47
Waialua	20
Waianae	16
Waimanalo	4
Waipahu	62
Wheeler AFB	3
Total	2,143

Source: FAA Airmens Directory, July, 1989

A Parachute drop zone is designated for use in the runway protection zone of Runway 26. It is usable only under tradewind conditions when aircraft operations occur at the other end of the runway. Recently, the DOT-A has approved parachute jumping into the Runway Protection Zone of Runway 8 during Kona wind conditions.

There are no navigational aids, except for wind cones at the ends and mid-point of the runway, and only basic runway markings. All aircraft operations are conducted under Visual Flight Rules (VFR) and aircraft must contact the Dillingham UNICOM when flying within Dillingham's airspace. DOT-A has plans to install a wind direction tetrahedron device at Dillingham in the near future.

2.4.2 Terminal Area. The terminal area shown on Figure 2-3, is located on the west end (Runway 8) of Dillingham Airfield and was developed by the State of Hawaii, DOT-A. There are no passenger terminal facilities at Dillingham. The sailplane area is located on the north side of the runway where a kiosk (20 ft. x 50 ft.) is located for sailplane ride sales. A paved automobile parking area, the sailplane hangar and sailplane tiedown area are located to the north and east of the kiosk. The hangar structure has a rectangular ground footprint of 945 feet by 31 feet and is constructed of precast concrete. It accommodates fifteen sailplanes in sixty-five foot wide bays and has no dividing partitions or hangar doors. The paved apron fronting the sailplane facility has dimensions of 7,200 feet by 105 feet and accommodates an additional fourteen sailplanes with tiedowns. Connecting the sailplane apron and hangars to the runway is a short stub taxiway.

Located to the south of the runway is the UNICOM Tower for Dillingham Airfield. The UNICOM Tower is a three story wooden structure which houses emergency vehicles and airport maintenance on the first floor, an open conference area and restrooms on the second floor, and the control cab on the third floor. The nominal dimension of the tower's ground footprint is 32 feet by 34 feet.

Two rows of hangars (365 feet by 30 feet) are located to the east of the UNICOM tower that accommodate a total of 20 powered aircraft. They are constructed of concrete and incorporate restroom facilities. As with the sailplane facilities, these hangars have no doors or dividers between parking spaces.

On the west side of the tower, is a paved apron (120 feet by 520 feet) and accommodations for 21 powered aircraft tiedowns. An automated fueling facility was recently installed at the west end of the apron with a tank capacity of 12,000 gallons.

Adjacent to the powered aircraft apron and to the south is an old concrete structure currently being used as an aircraft maintenance/repair area by a Fixed Base Operator (FBO). Also, a prefabricated metal hangar (labeled "Fightertown") is located next to the apron.

2.4.3 Miscellaneous Facilities. Other facilities located on the south side of the runway include a residence for the UNICOM manager, an automobile parking area, a maintenance building and six overnight sleeping quarters. All of the buildings are wooden frame structures. Located approximately at mid-field, is a small paved aircraft storage area which houses approximately five aircraft in makeshift hangars.

Several makeshift club houses for the parachutists are situated near the east end of the runway (Runway 26). These spartan facilities are used mainly as rest and meeting places for the various parachute clubs.

2.4.4 Utilities. Utilities include potable water, wastewater, electric power, communications and drainage.

2.4.4.1 Water System. The Airfield is served by a State of Hawaii owned water supply and distribution system. This system was originally operated by the U.S. Army for the Dillingham Military Reservation and includes a well and pumping station, a chlorinator and a 100,000 gallon concrete storage tank. The well and pump are located

south of the maintenance facility with the storage tank located on the hillside nearby at a higher elevation. This allows for a gravity feed system to supply the Airfield and surrounding community with potable water.

2.4.4.2 Wastewater System. Currently, the wastewater from the various facilities is routed into on-site cesspools.

2.4.4.3 Electric Power. Electricity is supplied by the Hawaiian Electric Company (HECO) from its Waialua Substation. An overhead pole system carries power along the mountainside south of the Airport to the UNICOM tower. From there, power is distributed on the Airport in underground ducts.

2.4.4.4 Communication Systems. Telephone lines are provided by Hawaiian Telephone Company from its Waialua switching station. Similar to the electric lines, the telephone lines run overhead along Farrington Highway to the Airport and in underground ducts on the site.

2.4.4.5 Drainage System. At both ends of the runway, drainage culverts route water from a series of seasonal streams south of the Airfield, across the Airfield and Farrington Highway, to the ocean. Also, a series of drainage ditches empty into the wetland area approximately 1,500 feet south of mid-field. There are several dry-wells located on the Airfield, some of which are in need of maintenance.

2.4.5 On-Airport Land Use. The Airfield is located on land owned by the Federal Government and administered by the U.S. Department of the Army. The DOT-A has a 25 year lease which was signed in 1983, a copy of which is included in Appendix G. The lease limits the development of the Airfield to the "construction, operation, repair and maintenance of a public airport." The use priorities specified in the lease are as follows:

No. 1 Military aviation operations

No. 2 Civilian aviation operations and parachute operations

No. 3 Military ground maneuvers

The majority of the Airfield's land use is classified into two categories: 1) the Aircraft Operating Area (AOA), and 2) the Terminal Area. The AOA includes the area within the Obstacle Free Zone and the Runway Protection Zones at the ends of the runway. It encompasses the runway, displaced thresholds and the taxiways. The terminal area includes the aircraft parking aprons, hangars, the UNICOM tower, maintenance facilities, roadways and automobile parking.

Other minor land uses on Dillingham include the UNICOM operator's residence, the six overnight quarters, and the parachutist "club houses" as previously noted.

2.5 INVENTORY OF ACCESS, TRAFFIC CIRCULATION AND PARKING

2.5.1 Access Roadway. Presently, surface transportation access to Dillingham Airfield is through three entrances off Farrington Highway (State Highway 930). The circulation roadway which allows access to the south side of the Airfield has two entrances from Farrington Highway, one at each end of the property. The roadway has a low level-of-service and the pavement does not show obvious signs of fatigue.

The third entrance is located just west of the sailplane hangars and leads directly into the automobile parking area neighboring the sailplane area. This entrance is used mainly by the sailplane operators and passengers associated with commercial sailplane rides.

All three entrances have gates and are open to the public during operating hours. The west entrance to the Airport service roadway and the entrance to the sailplane parking lot is closed during non-operating hours by gates abutting Farrington

Highway. The gate on the east entrance is set back along the roadway about 3,500 feet from the highway entrance.

2.5.2 Traffic. The access road experiences a low level-of-traffic during the day and virtually no civilian traffic after sunset.

2.5.3 Circulation and Parking. The parking lot adjacent to the glider hangar is directly accessible from Farrington Highway and has 44 parking spaces. Parking on the south side of the runway is provided by a parking lot next to the UNICOM tower which has 47 spaces.

Passengers for the commercial sailplanes are escorted to the aircraft from the parking lot.

2.6 INVENTORY OF AIRSPACE, AIR TRAFFIC CONTROL AND NOISE ABATEMENT PROCEDURES

This section describes the airspace, air traffic control (ATC) facilities, and operational procedures at Dillingham Airfield. It describes navigational aids at the Airport and identifies existing obstructions within the Airport approach and departure areas. The operations at Dillingham Airfield are performed under Visual Flying Rules (VFR), which are discussed in this section.

2.6.1 Runway Protection Zones, Approach Areas, and Obstructions. The runway protection zone (formerly called clear zone) for Runway 26 lies almost entirely inside the Airport property line. A portion of the runway protection zone for Runway 8 is outside the Airport property line.

Runway protection zone dimensions are based on Federal Aviation Regulations (FAR) Part 77 (Appendix B, Reference 16) approach surface dimensions out to where the approach is 50 feet above the runway threshold. The inner width is

determined by the most precise approach for either end of the runway. Runways 8 and 26 have a visual approach requiring an inner width of 250 feet and outer width of 450 feet. The lengths of the runway protection zones are 1,000 feet. Both the FAA Airport Master Record (Form 5010-1) and the existing Airport Layout Plan (which was approved in June, 1983) were reviewed to identify obstructions as defined by FAR Part 77. The data in Table 2-6 shows the FAR Part 77 approach slopes, compared with existing obstacle/obstruction controlled approach slopes.

Table 2-6

ACTUAL AND FAR PART 77 APPROACH SLOPES

Runway		Approach Slope		Controlling Obstacle/Obstruction Location from Runway threshold, related to extended Runway Centerline		
		FAR		Obstacle		
No.	Elevation	Part 77	Actual	Type	Elevation	Location
8	14	20:1	30:1	Sign	26	600 feet along and 20 feet north of runway centerline
26	10	20:1	17:1	Trees	85	1,500 feet along and 100 feet north of runway centerline

2.6.2 Air Traffic Control. Air traffic control (ATC) for air traffic over Dillingham Airfield is provided by the Honolulu Air Route Traffic Control Center (ARTCC) and the Honolulu Terminal Radar Approach Control (TRACON). Dillingham is an uncontrolled airport and does not have a federal Air Traffic Control Tower (ATCT). There is, however, a Common Traffic Advisory Frequency (CTAF) that is the published Universal Communication (UNICOM) frequency.

The UNICOM is manned by State Air Traffic Advisory personnel from 8:30 a.m. to 5:30 p.m. daily. Pilots must contact Dillingham UNICOM before entering the traffic pattern and maintain contact while operating in the Dillingham area. During hours when the UNICOM is not manned, pilots are encouraged to use the CTAF to advise each other of their intentions and position while operating at, and in the vicinity of the Airport. Civil aircraft operations are restricted to daylight hours only. The U.S. Army retains control of the Airport during nighttime hours.

There are no published instrument approach procedures for Dillingham Airfield, however, instrument departures can be conducted from Dillingham.

Air Route Traffic Control Center Airspace. The airspace over the United States has been divided by the Federal Aviation Administration (FAA) into approximately 25 areas for ATC service to aircraft operating on Instrument Flight Rules (IFR) flight plans. Air traffic control in these areas is provided by the personnel and equipment of FAA - ARTCCs, commonly known as Centers. Dillingham Airfield is within the Honolulu Center's jurisdictional area.

Terminal Area Airspace. Terminal area airspace is designated for the maneuvering of IFR aircraft approaching and departing airports. Approach and departure control of IFR aircraft may be exercised by the Center, or the Center may delegate terminal area airspace to a local ATC facility for IFR approach and departure control. The airspace overlying Dillingham, from 1,200 feet above the surface up to 16,000 feet above mean sea level, has been delegated to the Honolulu TRACON.

Special Use Airspace. Areas in the vicinity of Dillingham Airfield that have been designated as special use airspace for the military are shown on Figure 2-4. They are Restricted Areas R-3110 A, B and C immediately south of the Airport, R-3109 A, B and C approximately 3 nautical miles (NM) southeast of the Airport, Alert Area A-311 approximately 8 NM east of the Airport; and Warning Area W-189 approximately 3 NM north of the Airport.

Restricted Areas (R) contain airspace identified by an area on the surface of the earth within which the flight of aircraft, while not wholly prohibited, is subject to restrictions. Restricted Areas denote the existence of unusual, often invisible, hazards to aircraft such as artillery firing, aerial gunnery, or guided missilery. Penetration of Restricted Areas without authorization from the using or controlling agency may be extremely hazardous to the aircraft and its occupants.

R-3109 A, B and C and R-3110 A, B and C are for use by the U.S. Army and are effective from the ground up to approximately 19,000 feet above mean sea level (MSL).

Alert Areas (A) are depicted on aeronautical charts to inform nonparticipating pilots of areas that may contain a high volume of pilot training or an unusual type of aerial activity. Pilots should be particularly alert when flying in these areas.

A-311 is for use by the U.S. Army and Air Force and is effective up to a 500 foot altitude.

Warning Areas (W) are areas which may contain hazards to nonparticipating aircraft in international airspace. Warning Areas are established beyond the 3-mile limit. Although the activities conducted within Warning Areas may be as hazardous as those in Restricted Areas, Warning Areas cannot be legally designated as

Restricted Areas because they are over international waters. Penetration of Warning Areas during periods of activity may be hazardous to the aircraft and its occupants.

W-189 is for the use of the U.S. Navy, U. S. Marines and other military services and is effective from the surface to an unlimited altitude.

2.6.3 Navigational and Landing Aids. At present the Airport is open to civil aircraft for daylight VFR operations only. There are no navigational facilities and lighting at the Airport. Runway 8-26 is painted with basic runway markings for the center 5,000 feet of runway with displaced threshold markings for 2,000 feet at each runway end. The Airport has wind cones near both ends of the runway and one wind cone near the touchdown zone for Runway 8.

2.6.4 Airways and Air Traffic Patterns. Figure 2-4 shows Dillingham Airfield in relation to the location of major navigational aids (NAVAIDS) serving low altitude airways, IFR approaches, and other airports. It can be seen from Figure 2-4 that existing navigational aids do not serve the Airport, nor are there any airways in the immediate vicinity of Dillingham Airfield.

The majority of the traffic patterns for Dillingham are flown on the north side of the Airport due to the proximity of the cliffs to the south. The traffic pattern is at 800 feet above MSL for small powered aircraft and 700 feet above MSL for sailplanes. The Runway 8 traffic pattern requires a left turn after takeoff to avoid the parachute drop zone off the end of Runway 26. Glider flights are generally flown to the south of the airfield to use the wind conditions along the cliffs.

Powered aircraft usually keep their base leg close to the runway and cross the Airport boundary fences at or above 600 feet above MSL in order to insure safe separation from sailplanes using the first 2,000 feet of the runway (i.e., short of the displaced thresholds at each end of the runway).

2.6.5 Airspace Usage. The airspace in the vicinity of Dillingham Airfield serves a wide range of civil and military aircraft types and activities both IFR and VFR. The main difference between IFR and VFR is that the pilot maintains spatial orientation of the aircraft by reference to instruments for IFR operations and by visual reference to the ground for VFR operations. VFR activity requires good visibility whereas IFR activity can be accomplished in conditions of poor visibility. Meteorological conditions that permit flight under VFR rules are prescribed in the FAR Part 91 "General Operating and Flight Rules", Paragraph 155, in terms of visibility and distance from clouds.

IFR Operations. As noted earlier there are no IFR approach operations and very few IFR departures at Dillingham.

VFR Operations. VFR flights at Dillingham Airfield are not controlled by the ATC system. All airports contribute to VFR aircraft operations that may transit the Island of Oahu en route to other airports in the State. Most of this VFR en route traffic takes place along the south shore of Oahu and therefore does not present a conflict with operations at Dillingham Airfield.

Some commuter/air taxi sightseeing aircraft, helicopters and training aircraft overfly the north shore of Oahu, in the vicinity of Dillingham. Most of these aircraft contact the UNICOM to receive advisories from the State Air Traffic Advisory personnel.

There are extensive glider operations and some ultralight activity in the vicinity of the Airport. Parachute jumping takes place on a daily basis from up to 13,000 feet above MSL with the drop zone at the east end of the Airport. Recently, the DOT-A has approved parachute jumping into the Runway 8 runway protection zone during Kona wind conditions.

Acrobatic training takes place offshore above 1,500 feet MSL and over the downwind traffic pattern leg of the Airport.

2.6.6. Existing Noise Abatement Procedures. Existing noise abatement procedures at Dillingham Airfield are not formalized but aircraft using the Airport attempt to avoid the noise sensitive area to the northeast adjacent to the Airport. This area is depicted on the Airport Directory and Flying Safety Manual published by the State of Hawaii Department of Transportation.

2.7 INVENTORY OF THE ENVIRONMENTAL CONDITIONS AND CONCERNS IN THE DILLINGHAM AIRFIELD ENVIRONS

This section identifies potential environmental impacts and issues relative to improvements of Dillingham Airfield.

The purpose of this assessment, as a guide to the planning process, is to identify potential areas of impact associated with future airport development and operations. Should the recommendations of the Master Plan be adopted, a full assessment of existing environmental conditions and potential impacts resulting from proposed airport improvements would be detailed in an environmental assessment (EA) or environmental impact statement (EIS), as required.

The specific environmental topics covered in this section include:

- vegetation, wildlife and marine life
- historical and archaeological features
- air quality
- aircraft noise
- topographic, geologic and soil features
- hydrologic, drainage, flooding and tsunami characteristics
- socioeconomic concerns

2.7.1 Inventory of Existing Environmental Documents. The following list of reference materials has been prepared specifically to address the above noted subject

items. This list is not considered to be all inclusive or an exhaustive list of reference materials regarding the natural or man-made environment in and around Dillingham Airfield. Rather, it includes the major source reference materials that have been relied upon during the preliminary analysis of potential environmental concerns related to proposed airfield improvements.

- **Botanical Surveys**

Kentron Hawaii, Inc. 1977. Oahu General Aviation Master Planning Study, Vol. III. Environmental Impact Assessment for Dillingham Airfield General Aviation Facilities Project. Report Prepared for State of Hawaii, Department of Transportation, Air Transportation Facilities Division.

Tabata, R. 1972. Kaena Point, Oahu - Shoreline Wilderness in Transition. Honolulu, Hawaii.

Belt Collins & Associates, Ltd. 1976. Mokuleia Sealodge, Final Environmental Impact Statement. Prepared for Oceanic Properties, Ltd.

Carlquist, S. 1980. Hawaii, A Natural History: Geology, Climate, Native Flora and Fauna Above the Shoreline. 2nd. ed. Lawai, Kauai, Hawaii: Pacific Tropical Botanical Garden.

Ripperton, J. C. and E. Y. Hosaka. 1942. Vegetation Zones of Hawaii. Univ. of Hawaii Ag. Exper. Sta. Bull. No. 89.

St. John, H. 1973. List and Summary of the Flowering Plants in the Hawaiian Islands. Lawai, Kauai, Hawaii: Pacific Tropical Botanical Garden.

- **Avifauna and Feral Mammal Surveys**

Kentron Hawaii, Inc. 1977. Oahu General Aviation Master Planning Study, Vol. III. Environmental Impact Assessment for Dillingham Airfield General Aviation Facilities Project. Report Prepared for State of Hawaii, Department of Transportation, Air Transportation Facilities Division.

Belt Collins & Associates, Ltd. 1976. Mokuleia Sealodge, Final Environmental Impact Statement. Prepared for Oceanic Properties, Ltd.

Carlquist, S. 1980. Hawaii, A Natural History: Geology, Climate, Native Flora and Fauna Above the Shoreline. 2nd. Ed. Lawai, Kauai, Hawaii: Pacific Tropical Botanical Garden.

Pratt, H. D., P. L. Bruner and D. G. Barrett. 1987. A Field Guide To The Birds of Hawaii and the Tropical Pacific. Princeton University Press.

Berger, A. J. 1981. Hawaiian Birdlife. 2nd ed. The University Press of Hawaii.

Hawaii Audubon Society. 1978. Hawaii's Birds. 2nd ed. Honolulu. The Hawaii Audubon Society.

Tomich, P. Q. 1971. Mammals in Hawaii. B.P. Bishop Museum Publication.

- **Archaeological Surveys**:

Sterling, E. P. (Compiler). 1962. Sites of Oahu "A hiki i ukeia la," Book III, Vol. 1. Districts of Waialua and Wahiawa.

- **Geology, Physiography, Soils and Agricultural Potential**:

Hawaii State Department of Agriculture. 1977. Agricultural Lands of Importance to the State of Hawaii (ALISH) Revised.

Land Study Bureau, University of Hawaii. 1972. Detailed Land Classification, Island of Oahu.

U. S. Department of Agriculture, Soil Conservation Service. 1972. Soil Survey of Islands of Kauai, Oahu, Maui, Molokai and Lanai, State of Hawaii.

University of Hawaii, Department of Geography. 1983. Atlas of Hawaii. Honolulu, Hawaii.

Macdonald, Gordon A. and Agatin T. Abbott. 1970. Volcanoes in the Sea: The Geology of Hawaii. The University Press of Hawaii, Honolulu.

o **Natural Hazards**:

Mullineaux, D.R., D.W. Peterson and D.R. Crandell. 1987. "Volcanic Hazards in the Hawaiian Islands", in Volcanism in Hawaii, R. W. Decker, T.L. Wright and P.H. Stauffer, Eds., US Geological Survey Prof. Paper 1350, pp. 599-621.

Flood Insurance Rate Map (FIRM), City and County of Honolulu, Hawaii. Panel 35 of 135, Community Panel No. 150001 0035B, Revised Sept. 4, 1987. Federal Emergency Management Agency.

2.7.2 Identification of Potential Environmental Impacts and Issues. The direct and indirect environmental contacts that could result from the proposed airport improvements and/or continued operations of the airport, are described in the following paragraphs. Potential environmental impacts and issues fall into six categories as follows:

2.7.2.1 Vegetation, Wildlife and Marine Life. The vegetation of the airfield and immediately surrounding areas is typical of flat, relatively dry coastal areas on Oahu and, except for the airfield and areas graded for military operational purposes, is heavily vegetated. The vegetation is mostly introduced species consisting of various grasses, koa haole (*Leucaena leucocephala*), kiawe (*Prosopis pallida*), scattered kukui trees (*Aleurites molucanna*), milo (*Thespesia populuea*), passion fruit (*Passiflora foetida* and *P. edulus*), Christmas berry (*Schinus terrebithifolius*), coconut trees (*Cocos nucifera*), Chinese banyans (*Ficus retusa*) and several other introduced species generally used for landscaping purposes. A complete list of plants commonly found within the airfield boundaries is given in the Oahu General Aviation Master Planning Study, Volume III, Environmental Impact Assessment for Dillingham Airfield General Aviation Facilities Project (Appendix B, Reference 4).

Indirect contacts between the airfield and surrounding plant communities are primarily limited to the potential for the introduction of additional species in the airfield area. At this time, proposed airfield improvements are not expected to adversely impact the vegetation of the Airport area. New construction, including grading operations, would remove some vegetation. As indicated previously, the majority of the vegetation in the immediate airfield area consists of introduced species that are found in

similar environmental conditions in Hawaii. There are no plant species found within the airfield area that are listed by the U.S. Fish and Wildlife Service as endangered or threatened species nor are any others considered candidate species.

The terrestrial wildlife in direct contact with the Airport includes introduced and native species of land and seabirds, mongoose, and possibly feral cats and dogs. The principal species of birds inhabiting or frequenting the Airport area include the following:

Resident Endemic (Native) Birds. None. The Short-eared Owl (*Asio flammeus sandichensis*) might occasionally be found in the airfield vicinity as they forage over open lowlands as well as at higher elevation.

Migratory Indigenous (Native) Birds. Pacific Golden Plover (*Pluvialis fulva*) is fairly common within the airfield boundaries and it is likely that Ruddy Turnstone (*Arenaria interpres*) and Wandering Tattler (*Heteroscelus incanus*) also visit the airfield given its close proximity to the coastline and sandy beach areas. Two other species, Sanderling (*Calidris alba*) and Bristle-thighed Curlew (*Numenius tahitiensis*) may at times occur in the airfield, but none were recorded during a survey conducted for the Oahu General Aviation Master Planning Study (Kentron Hawaii, Ltd., 1977).

Seabirds. No seabirds were observed on the ground during the above noted survey, but three species, Great Frigatebird (*Fregata minor*), Red-footed Booby (*Sula sula*) and Wedge-tailed Shearwater (*Puffinus pacificus*), also probably visit the airfield. Albatross (*Diomedea immutabilis*) and White-tailed Tropicbird (*Phaethon lepturus*) have also been reported as occurring in the Airport area.

Resident Indigenous (Native) Birds. None. Black-crowned night Heron (*Nycticorax nycticorax*) might occasionally forage in and around the Airport area.

Exotic (Introduced) Birds. A total of 7 species of exotic birds are commonly sighted in and around the airfield. These include the Common Myna (*Acridotheres tristis*), Japanese White-eye (*Zosterops japonicus*), Red-crested Cardinal (*Paroaria coronata*), Northern Cardinal (*Cardinalis cardinalis*), House Finch (*Carpodacus mexicanus*), Zebra Dove (*Geopelia striata*) and Spotted Dove (*Streptopelia chinensis*).

It is believed that mongooses, rats, mice, and feral cats and dogs are also in direct contact with the Airport. All of these species are commonly found throughout Hawaii. There are no known endangered or threatened wildlife species inhabiting or frequenting the Airport area. An avifaunal survey has been prepared for this Master Plan that will be published in the Environmental Assessment.

The airfield is separated from the coastal strand and shoreline by Farrington Highway and a narrow strip of sand. As such, there is no direct contact of the airfield with marine communities.

2.7.2.2 Historical and Archaeological Features. Given that the airfield area has been graded and heavily used for the past forty or more years, it is unlikely that surface archaeological sites would be found within the airfield boundaries. Off-site, within the adjacent coastal strand area, it is possible that subsurface features may be found. These features would not be affected by any improvements to the present airfield. Similarly, historical features within the airfield boundaries are relatively recent (World War II era) and have been modified over the years by the U.S. Army. An archaeological survey has been conducted for this Master Plan that will be published in the Environmental Assessment.

2.7.2.3 Air Quality. In general, airport operations result in the emission of air pollutants as a result of aircraft operations, motor vehicles, fuel storage and handling and aircraft maintenance operations. Aircraft fueling and maintenance operations conducted at Dillingham Airfield are relatively minor at present. Fueling is accomplished using an automated fueling facility with an underground fuel tank and fuel trucks supplement this facility. Similarly, aircraft and surface vehicle (automobile) operations are relatively low, thereby resulting in very little, if any, significant degradation of regional or local air quality. Given the location of the airfield, the relatively steady and strong tradewind influence and the present and forecast low number of aircraft and vehicle operations, it is believed that all federal and state ambient air quality standards are being met and will continue to be met following any proposed airfield improvements. An

air quality analysis will be conducted as part of the Master Plan Environmental Assessment.

2.7.2.4 Noise. Present noise sources influencing noise exposures in the airfield area include natural surf; wind and birds; motor vehicle traffic on Farrington Highway; and aircraft. As part of the Oahu General Aviation Master Planning Study (Appendix B, Reference 4) measurements of then existing noise exposure levels in the Dillingham Airfield area were made over a two-month period. The typical diurnal noise level variation in the area had an equivalent sound level (Leq) of 47 dBA at night and a maximum Leq of 65 dBA during the day. Further, it was found that surf noise generally masked aircraft noise by 10 dB at a beachfront location directly under the departing flightpath. The average total day-night sound level (Ldn) was 61 dBA over a 21-day period. Based on the analyses conducted in the 1977 Kentron study, in beachfront populated areas, background Ldn will generally be higher than sound levels caused by civilian general aviation aircraft.

Increased operations and changes in the types of aircraft operating at Dillingham Airfield could impact the noise regime. Military aircraft, primarily helicopters, cause noise annoyances. A FAR Part 150 Noise Compatibility Study is being conducted concurrently with the Master Plan.

2.7.2.5 Topographic, Geologic and Soil Features. Located on the northern coast of Oahu, Dillingham Airfield is situated on the Waialua Plain, bounded on the north by the Pacific Ocean and on the south by the northeastern face of the Waianae Range. From about 2,000 to 3,000 feet inland of the runway, an 800 to 1,000 feet high pali (cliff) rises to a deeply dissected upland area. Beyond this, the slopes rise to elevations over 2,000 feet at the ridgeline, effectively isolating the Kaena-Mokuleia region from the Waianae Coast, the Schofield Plateau and distant urban Honolulu. The rugged terrain and steep pali face are the products of stream, wind and marine erosion of the Waianae volcanic surface.

The Waialua Plain, extending from Kaena Point to the Waimea River, varies in width, becoming narrower just west of Dillingham Airfield. The plain consists of alluvium and marine sediments of sand and coral deposited when the sea stood higher in mid-Pleistocene time.

The shoreline along the Waialua Plain has little or no cliff development and consists of detrital sediments. In the vicinity of the airfield, the elevation ranges from 10 to 14 feet above mean sea level (MSL) and reaches 20 feet at the base of the Waianae Mountains. The terrain is generally rough, except on the airfield proper and those areas that have been graded for military operational purposes. As indicated previously, most of the airfield area is heavily vegetated.

There are several types of soils within the boundary of Dillingham Airfield. The existing runway, taxiways and support areas are constructed on fill material. Surrounding these filled areas, Jaucas sand extends from the shoreline to areas lying inland of the runway. Beyond this, Lualualei clay extends eastward between sandy areas and the lower Waianae slopes. A strip of Mokuleia clay loam parallels the eastern end of the existing runway.

Any proposed improvements to the existing airfield would not significantly impact the general topographic, geologic or soils characteristics of the airfield area or site.

Several wetland areas have been identified in the environs of the existing Dillingham Airfield property by the U.S. Army Corps of Engineers. One site neighbors the airfield to the south and is presently within the Dillingham Military Reservation (DMR).

2.7.2.6 Hydrology, Drainage, Flooding and Tsunami Characteristics. Dillingham Airfield is located in the western portion of the Honolulu Board of Water Supply's Service Area 5. This service area of 112 square miles has been characterized

as being part of the last largely undeveloped groundwater supply on Oahu. The water resources of the region vary widely between subregions.

The airfield is located on caprock consisting of marine and alluvial sediments. This caprock retards the flow of fresh waters originating as rainfall and, to some extent as irrigation water, at higher elevations. Rain and irrigation water percolate through the ancient lava flows into the basal groundwater lens and generate a head of fresh water of from 9 to 17 feet. Groundwater is generally good in the airfield area, with little seawater encroachment. Wells along the foot of the mountains can generally be expected to produce water with a chloride content less than 125 parts per million.

There are no perennial streams or surface waters in the vicinity of the airfield, but Makalena Stream, over one mile to the west of the airfield flows steadily during the wet seasons. Four seasonal streams discharge through the airfield area. During rainy periods there is considerable short-term flow from these streams, which drain about 2,800 acres to the south of the airfield. These intermittent waters are channeled through the airfield area via a series of ditches that empty into the ocean. During extended periods of intense heavy rainfall, the east end of the runway can flood to a depth of several inches, requiring a day or more to drain. Airfield operations can sometimes be interrupted because of this flooding.

Based on the latest Flood Insurance Rate Map (FIRM) (Appendix B, Reference 7) and Appendix I, about 2,000 feet of the east end of the Dillingham Airfield runway is within the 100-year flood hazard Zone A. No base flood elevation has been determined for this zone, but areas immediately makai of the runway are within Zones AE or VE in which base flood elevations of 11 feet have been determined. The remainder of the airfield is located in Zones D and X, for which flood hazards are undetermined (Zone D) or areas determined to be outside the 500-year flood plain (Zone X). Because the eastern portion of the runway is within the 100-year flood plain, precautions would have to be taken in the design of any structures that might be planned. Similarly, during heavy storms, some portion of the east end of the runway might be closed to operations.

2.7.2.7 Socio-economic Concerns. Dillingham Airfield is located in the Waialua District, which is comprised of census tracts 99.01, 99.02 and 100. These three tracts have a combined total area of 70,534 acres. Based on the 1990 census, census tract 99.01 (in which Dillingham Airfield is located) had a population of 5,792 persons. The average household size for the area is 3.33 persons and the 1980 (latest date for which statistics are available) household median income was $15,426. It is likely that the household income has increased significantly over the past 10 years.

The economy of the Mokuleia-Waialua-Haleiwa area historically has been centered around agricultural activities (sugar, pineapple and diversified agriculture). In general, the economy of the area is affected by three main factors: (1) the area is geographically isolated from the rest of Oahu; (2) residences are generally relatively distant from major Oahu employment centers; and (3) there are few labor-intensive industries in the area.

The known socioeconomic concerns affecting the use and potentially increased usage of Dillingham Airfield can be divided into those that affect users of the airfield and those that affect residents in the vicinity of the airfield. Those that affect users of the airfield include (1) the distance of the Airport from the urban Honolulu area; (2) potential use conflicts between increased general aviation traffic, sport parachutists and sailplane enthusiasts; and (3) the lack of support services. The socioeconomic concerns affecting residents in the vicinity of the Airport include (1) potential increased aircraft noise exposure; (2) increased numbers of visitors to the area; and (3) a general diminishing of the rural character of the Mokuleia area due to potential residential and resort growth in the vicinity of the Airport.

The extent of any proposed improvements to Dillingham Airfield would, in part, determine the degree of positive and negative impacts on the project area's socio-economic environment. It is possible that if large scale improvements are planned, a detailed socio-economic study would be required to determine measures necessary to minimize potential adverse impacts.

2.7.2.8 Other Environmental Concerns. Other environmental concerns, such as visual attributes; infrastructure and public services; and climate and meteorology, do not appear to be a significant issue with regard to any proposed airport improvements. Alternative wastewater collection, treatment and disposal, and water distributions are studied in the master plan. As noted previously, all of these issues would be described and discussed in the environmental documentation which would be prepared for any proposed airfield improvements.

2.8 INVENTORY OF AIRPORT MANAGEMENT, FINANCIAL, POLICY, LEGAL AND REGULATORY INFORMATION

Dillingham Airfield is part of the Statewide system which includes all of the major air carrier and general aviation airports in the Hawaiian Islands. The Airport is a part of the Oahu District which also includes the Honolulu International Airport and Ford Island ALF.

2.8.1 Airport Management. The Airports District Manager at Honolulu International Airport oversees all operations at Dillingham Airfield. The Airport currently has two authorized staff positions. The office of the Airport Maintenance Supervisor is located in the State DOT Maintenance building at Dillingham Airfield.

Aircraft rescue and firefighting (ARFF) operations are handled by a volunteer crew between 7:30 a.m. and 5:30 p.m. The ARFF vehicle and equipment is located in the administration/maintenance building (UNICOM building) located on the south side of the runway.

Maintenance functions are administered by the Maintenance Supervisor who oversees the maintenance, janitorial and groundskeeping operations. There is space for maintenance equipment in the administrative/maintenance/ARFF building.

2.8.2 Financial Operations.

Revenues and Expenditures. In Fiscal Year 1991-92, Dillingham Airfield generated $67,474.00 in revenue from Airport user fees, as shown in Table 2-7.

For Fiscal Year 1991-92 the cost of operating the Dillingham Airfield was $272,382.00 as shown in Table 2-7. Cost items included wages, other current expenses, and capital expenditures.

Table 2-7

REVENUE AND EXPENDITURES
Fiscal Year 1991-1992
Dillingham Airfield

REVENUE	
1. Aeronautical Revenue	$ 40,464.00
2. User Fees	3,236.00
3. Ancillary Revenue	122.00
4. Non-aeronautical Revenue	2,196.00
5. Other Income	21,456.00
Total Revenue	$ 67,474.00
EXPENDITURES	
1. Personal Services	$ 118,369.00
2. Other Current Expenditures	154,013.00
3. Major Maintenance	0.00
Total Expenditures	$ 272,382.00
Profit/(Deficit)	$ (204,908.00)

Source: State of Hawaii, Department of Transportation

The balance between revenue and expenditures indicates a deficit for FY 1991-92 of $204,908.00. The State of Hawaii Airports Division has a guideline which encourages the generation of revenue to meet operating expenses, but Dillingham Airfield, and the Neighbor Island airports, have not yet achieved this goal. Surpluses generated at Honolulu International Airport are used to subsidize the Dillingham Airfield losses, consistent with the State's policy of providing equal air transport access throughout the state.

Lease Space. Land and building areas at the Airport are leased on a space available basis under short-term or long-term agreements. Short-term leases are on a month-to-month basis and are for hangar, aircraft tiedown areas, and other temporary airport users.

Short-term leases are also available for airport space that is planned for a different future use. The rent charged is usually fixed, based on the number of square feet of space that is leased.

2.8.3 Airport Policy and Regulations. Dillingham Airfield is governed by the provisions of Chapters 261, 262 and 263 of the Hawaii Revised Statutes. The State of Hawaii Department of Transportation has compiled and published "Administrative Rules for Public Airports" (Title 19), promulgating rules and regulations for operation of the Airports Division and the individual airports throughout the State.

2.9 REVIEW OF EXISTING AIRPORT DEVELOPMENT PROPOSALS

There have been two proposals for the development of facilities at Dillingham Airfield since 1978.

The most recent development plan is presented on the Airport Layout Plan (ALP) which was developed in June, 1983 (Figure 2-2). Proposed new facilities include:

- o A development of Fixed Base Operator (FBO) hangars south of the powered aircraft apron.
- o A segmented circle and wind cone at approximately mid-field.

Another proposed development was presented during the "Oahu General Aviation Master Planning Study", (Appendix B, Reference 4); the proposed plan is presented in Figure 2-5. The improvements and repairs would include (those projects which have been completed are labeled (Done)):

- o A separation of the existing airfield into two runways. A 1,500 foot by 75 foot runway for the sailplanes would be located on the west end of the airfield. A runway, with the dimensions of 4,000 feet by 75 feet, would begin approximately 750 feet to the east.
- o New facilities for both the sailplanes and powered aircraft would be developed accordingly.
- o An area at the east end of the airfield would be designated for parachuting activities. (Done)
- o Resurfacing sailplane and powered aircraft parking aprons. (Done)
- o Constructing approximately 20 T-hangars for powered aircraft. (Done)
- o Constructing a new administration building. (Done)
- o Constructing new fixed-based operator hangars.
- o Resurfacing vehicle parking areas. (Done)
- o Resurfacing taxiways and holding pads. (Done)
- o Resurfacing the existing access road. (Done)
- o Painting the existing runway to designate sailplane and powered aircraft operating areas. (Done)
- o Outlining and marking existing parachute landing zones.
- o Repairing existing and installing new utility lines to serve FBO, administrative, apron and hangar areas. (Done)
- o Installing new security fencing around the airfield's perimeter. (Done)

Note that some of these improvements and others, including the new T-hangars, security fence, and UNICOM were subsequently constructed and are shown on the current Airport Layout Plan (ALP), Figure 2-2.

2.10 INVENTORY OF EXISTING AND PROPOSED OFF-AIRPORT LAND USES

This section presents a summary of the existing off-airport land use and any future developments surrounding the Airfield.

Dillingham Airfield is operated by the State of Hawaii, Department of Transportation, Airports Division (DOT-A). The Airfield is located on leased land which is part of the Dillingham Military Reservation (DMR). The DOTA has a 25 year lease for the Airfield which covers 221.5 acres which was signed in 1983 (see Appendix G). The remaining military land is under the control of the United States, Department of the Army, and is used for military exercises. Figure 2-7 shows the overall military installation and the delineation of those lands leased to the DOT-A and the lands which are currently used for military purposes.

Figure 2-6 presents the State of Hawaii Land Use designations for the land surrounding Dillingham Airfield. The City and County of Honolulu's Zoning and development plan are presented on Figures 2-7 and 2-8, respectively. A summary of the State of Hawaii and City and County of Honolulu land use controls are presented in Appendix H.

According to the City and County of Honolulu, Department of General Planning, there are presently no planned or proposed developments in this area, however, informal discussions with the Mokuleia Land Co. revealed informal plans to develop the area for single family residences and condominiums.

2.11 SUMMARY OF LIMITATIONS, OPPORTUNITIES AND CONCERNS

The following is a brief description of the limitations, opportunities and concerns at Dillingham Airfield.

2.11.1 Limitations. The investigation of existing conditions at Dillingham Airfield has revealed a number of limitations on airport development, the principal ones of which are listed and discussed below.

- The land upon which Dillingham Airfield is located is owned by the federal government and is under the control of the Department of the Army. The terms of the lease under which the State of Hawaii operates the Airport severely limits civil aviation facility development and operational options (see Appendix G).

- The airspace around Dillingham Airfield is constrained by the mountains which border it on the south and special use airspace to the west which is restricted for military use.

- Development of the airfield could be limited by aircraft noise impacts on the surrounding community; a designated wetland area within airport boundaries; and the possibility of the existence of archaeological features along the northern boundary of the Airport.

- The amount of land which is available for development between the mountains and the ocean (land lease limitations notwithstanding) severely limits the ultimate capacity of the airfield.

2.11.2 Opportunities. The investigation of existing conditions at Dillingham Airfield has revealed some opportunities for improvement, the principal ones of which are listed and discussed below.

- Despite limitations on development, facilities can probably be improved to substantially enhance commercial activity at the Airport. Enterprises such as a flight training school and an aeronautical museum, among others, have been proposed for Dillingham.

- Increased commercial activity at the Airport can create jobs and bring money into an area of Oahu that is presently isolated from the major urban areas of the island.

- Improved facilities can attract more general aviation activity to the Airport and relieve pressure on Honolulu International Airport.

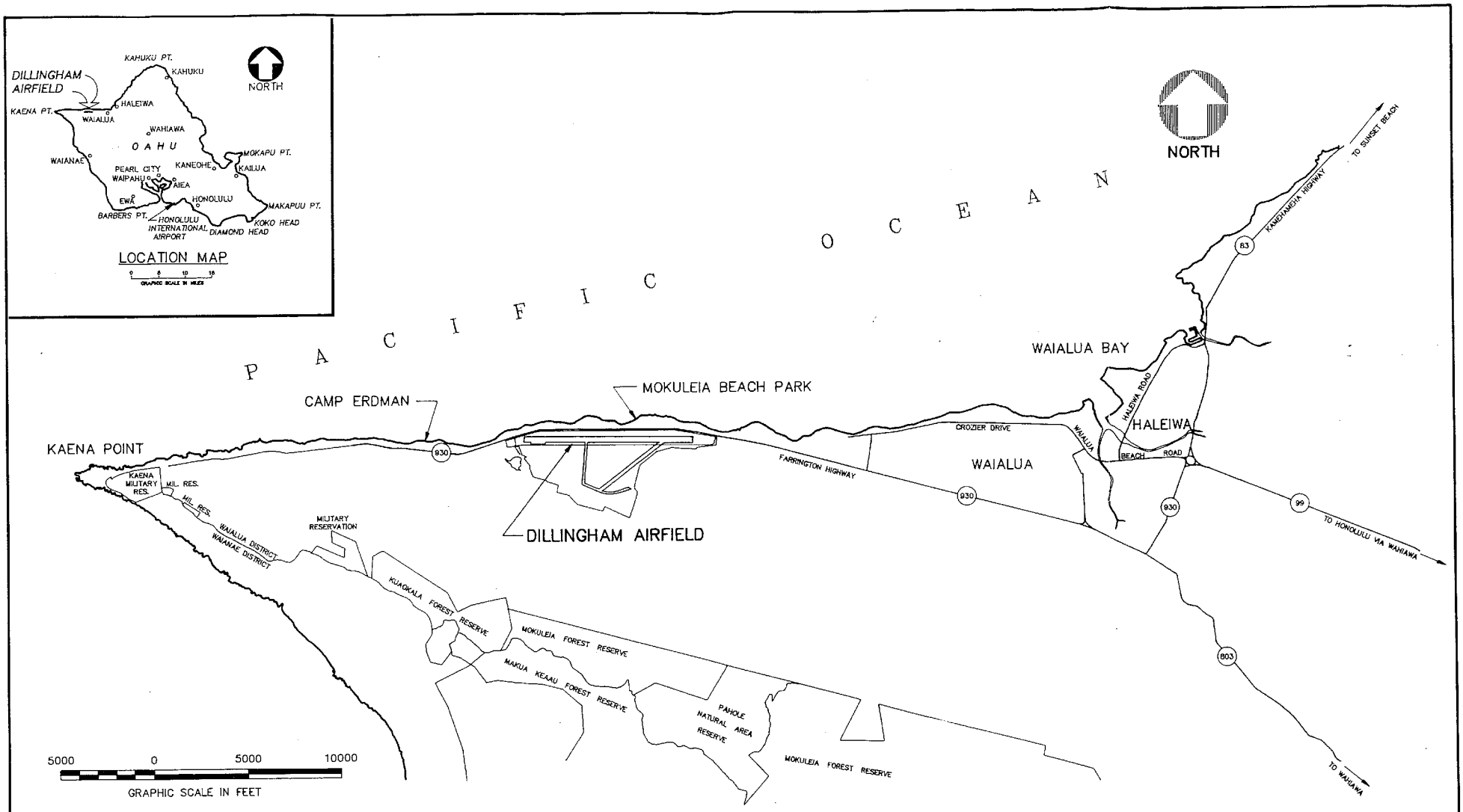
- Improved facilities can improve aeronautical safety at the Airport which hosts a wide variety of activities including sailplane, ultralight, and parachute operations, as well as powered aircraft operations. Improved facilities can also provide better service to present airport tenants, some of whom have spartan facilities and limited airport services.

2.11.3 Concerns. The investigation of existing conditions at Dillingham Airfield has generated some concerns about the effects of development, the principal ones of which are listed below.

- Increased aviation activity at Dillingham Airfield will result in an increase of aircraft noise in the Airport environs. The closing of Ford Island ALF and shifting of general aviation from Honolulu International to Dillingham has a potential for greatly increased operations.

- The purchase of a substantial quantity of land along the eastern boundary of the Airport for future residential development may compromise the long term role of Dillingham as Oahu's general aviation airport.

- Substantial development at Dillingham Airfield could result in significantly increased demand on utility systems.



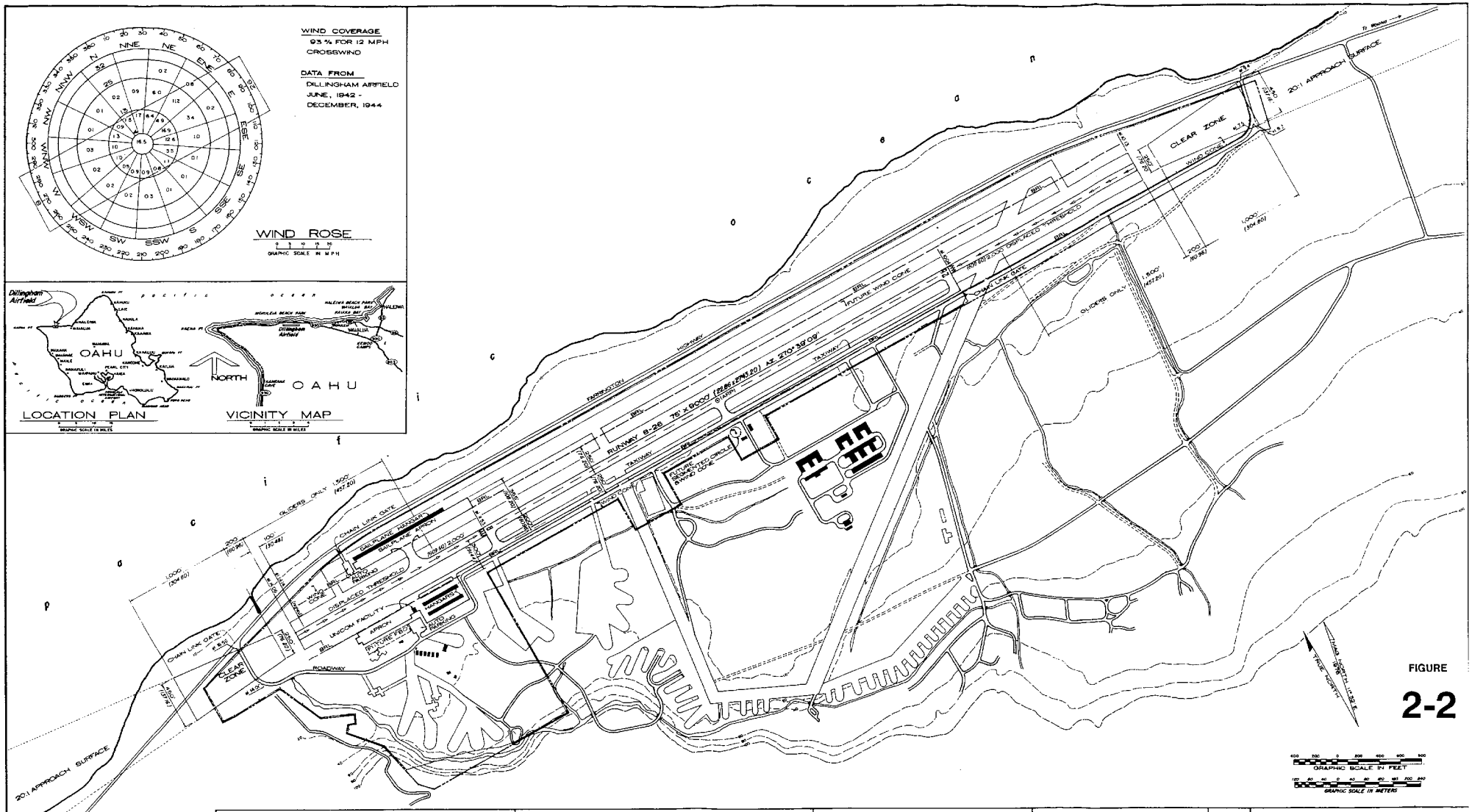
AIRPORTS DIVISION
DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII

DILLINGHAM AIRFIELD MASTER PLAN AND NOISE COMPATIBILITY PROGRAM

Edward K. Noda and Associates, Inc.

LOCATION MAP OF DILLINGHAM AIRFIELD

FIGURE **2-1**



FIGURE

2-2

AIRPORT DATA	EXISTING	ULTIMATE
AIRPORT REFERENCE POINT (ARP) COORDINATES	21°35'00" N. 158° 2'.00" W.	SAME
NORMAL MAX. TEMPERATURE (HOTTEST MONTH)	90° F	SAME
AIRPORT ELEVATION (MSL)	15'	SAME
AIRPORT & TERM. NAV. AIDS	NONE	NONE

RUNWAY DATA	RUNWAY 8-26 EXISTING		ULTIMATE	
EFFECTIVE GRADIENT (%)	.04		SAME	
% WIND COVERAGE (12 MPH)	93		SAME	
	8	26	8	26
NAVIGATIONAL AID	NONE	NONE	NONE	NONE
APPROACH SURFACE	20:1	20:1	SAME	SAME
RUNWAY LIGHTING	NONE		NONE	
RUNWAY MARKING	BASIC		BASIC	
PAVEMENT STRENGTH	40,000(S) 150,000(D) 450,000(DT)		SAME SAME SAME	

LEGEND	EXISTING	ULTIMATE
AIRPORT BOUNDARY		
BUILDING RESTRICTION LINE (BRL)	BRL	
BUILDINGS		
BUILDINGS TO BE REMOVED		
APPROACH SURFACE		
FENCE LINE		
GROUND CONTOURS		
UNPAVED ROADWAY		
RUNWAY, TAXIWAY, APRON & HANGARS		

REVISION	DATE
GENERAL UPDATE	MAY, 1983
FAA APPROVED - REFER TO LETTER DATED SEPT. 17, 1980	

APPROVED:

Nathan K. Shimada — 4-4-80
DIRECTOR, DEPARTMENT OF TRANSPORTATION, STATE OF HAWAII — DATE

Owen Myanto — 9/4/80
CHIEF, AIRPORTS DIVISION, STATE OF HAWAII — DATE

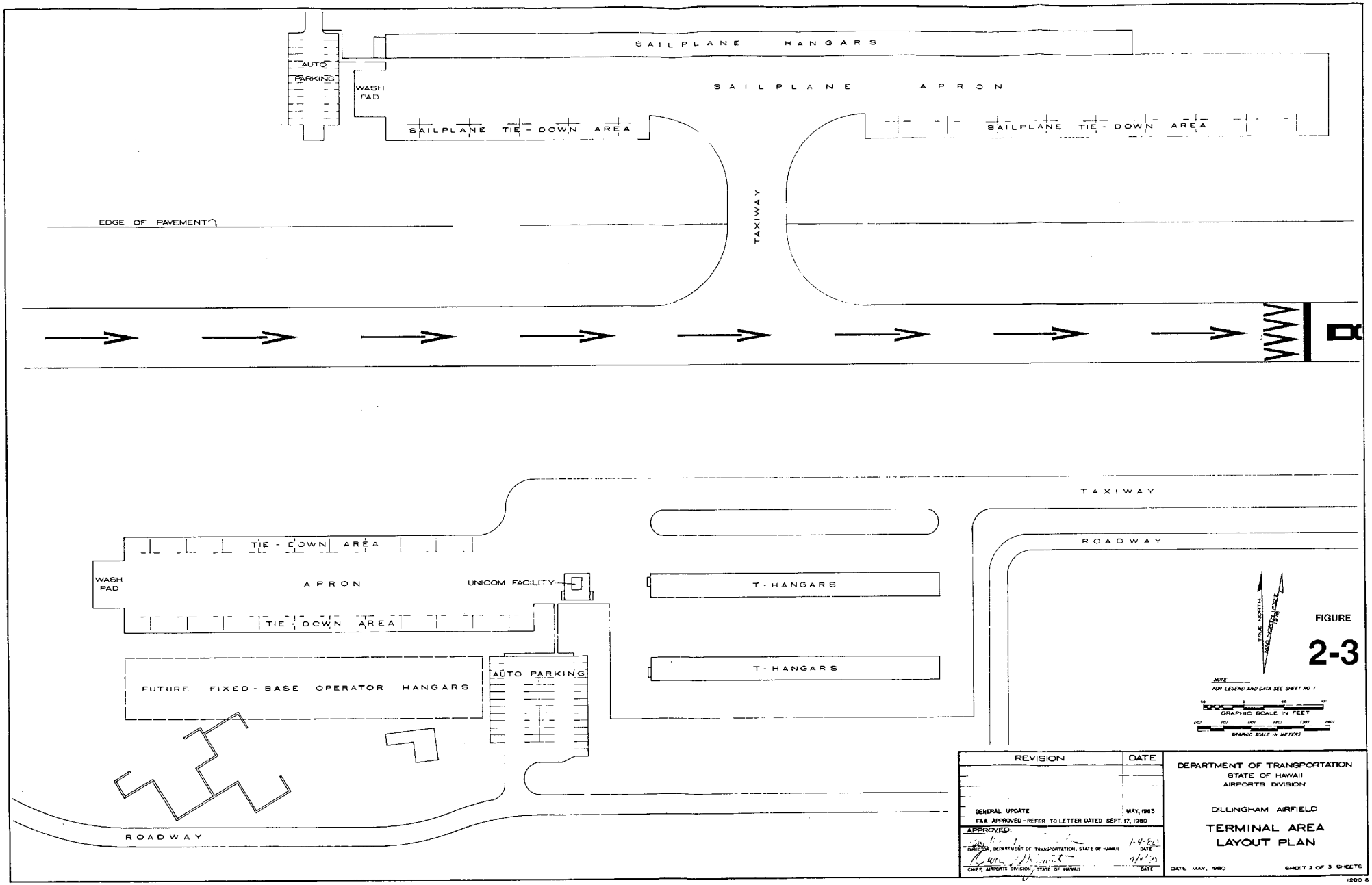
DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII
AIRPORTS DIVISION

DILLINGHAM AIRFIELD

AIRPORT LAYOUT PLAN

DATE: MARCH, 1980 — SHEET 1 OF 3 SHEETS

1280



FIGURE

2-3

REVISION	DATE
GENERAL UPDATE	MAY, 1983
FAA APPROVED - REFER TO LETTER DATED SEPT. 17, 1980	

APPROVED:

DIRECTOR, DEPARTMENT OF TRANSPORTATION, STATE OF HAWAII — DATE 1-4-84

CHIEF, AIRPORTS DIVISION, STATE OF HAWAII — DATE 9/6/83

DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII
AIRPORTS DIVISION

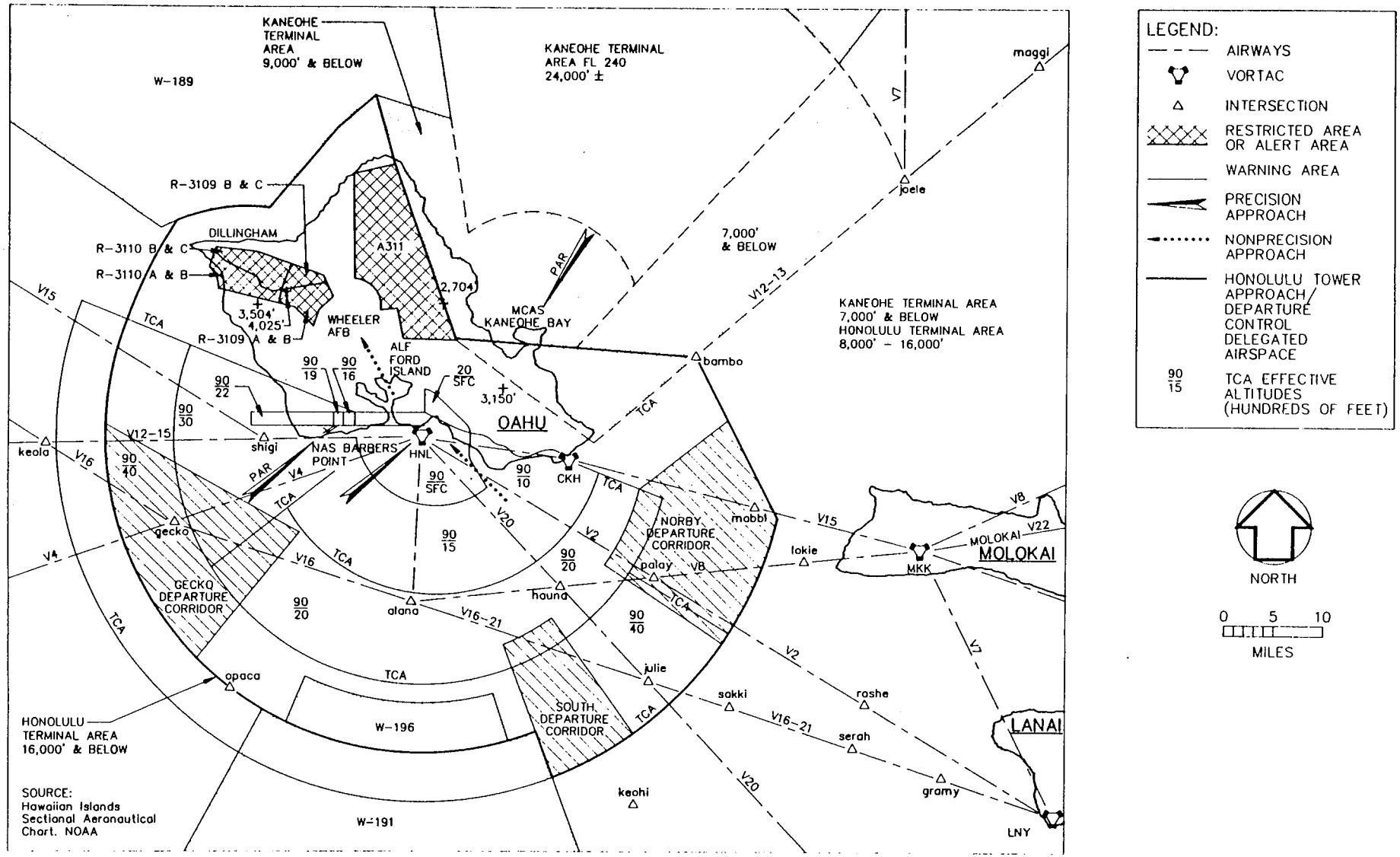
DILLINGHAM AIRFIELD

TERMINAL AREA LAYOUT PLAN

DATE MAY, 1980 — SHEET 2 OF 3 SHEETS

1280 6

DRAW 6



AIRPORTS DIVISION
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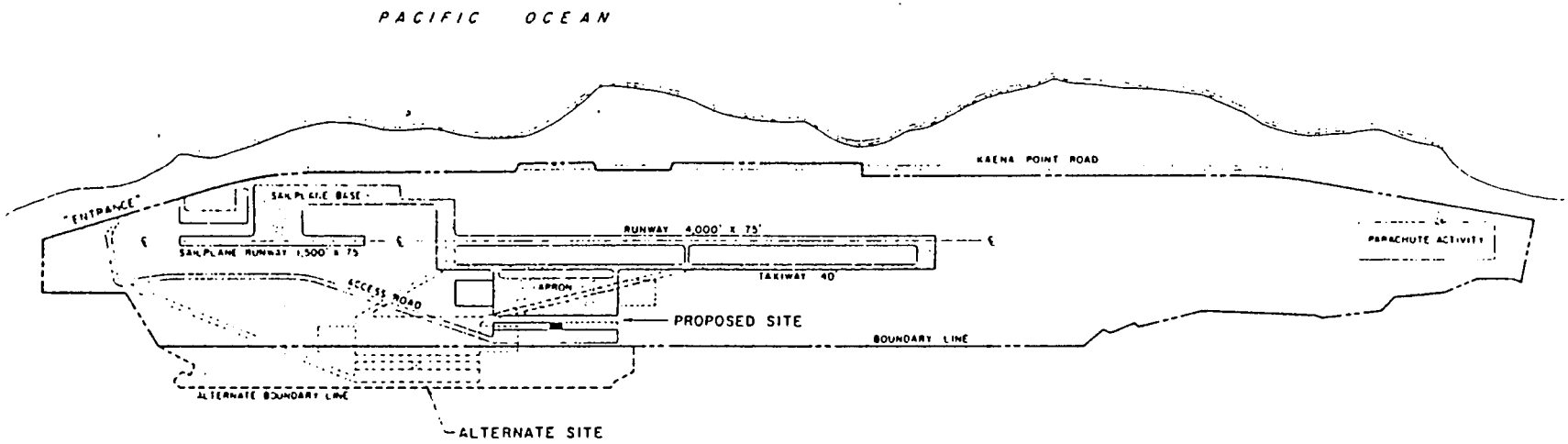
STATE OF HAWAII

DILLINGHAM AIRFIELD MASTER PLAN AND NOISE COMPATIBILITY PROGRAM

Edward K. Noda and Associates, Inc.

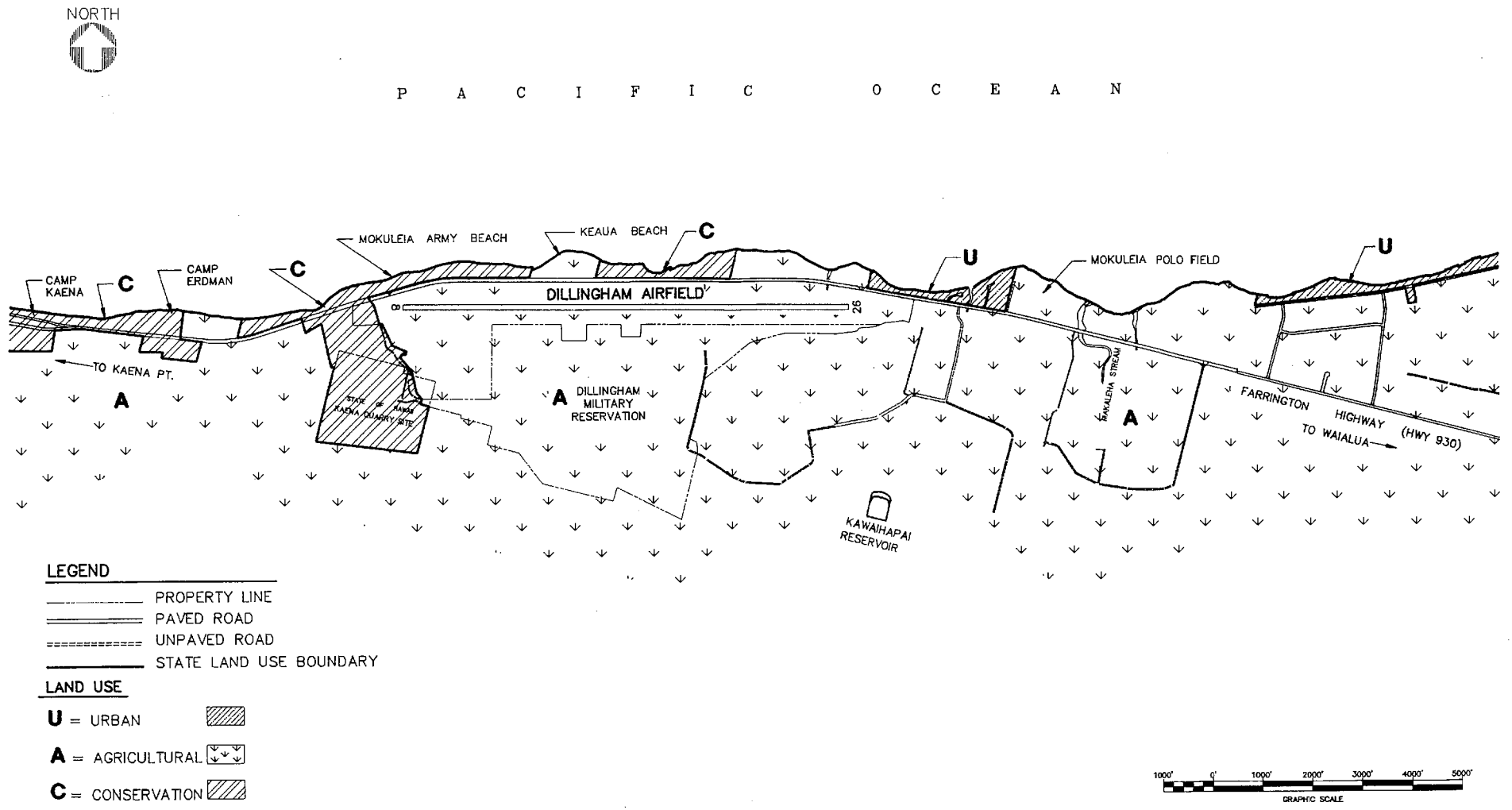
HONOLULU COUNTY AIRSPACE AND NAVIGATIONAL FACILITIES

FIGURE **2-4**



SOURCE : KENTRON, 1977

AIRPORTS DIVISION DEPARTMENT OF TRANSPORTATION STATE OF HAWAII	DILLINGHAM AIRFIELD MASTER PLAN AND NOISE COMPATIBILITY PROGRAM	Edward K. Noda and Associates, Inc.	OGAMPS PROPOSED DEVELOPMENT FOR DILLINGHAM AIRFIELD	FIGURE 2-5



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STATE OF HAWAII

DILLINGHAM AIRFIELD MASTER PLAN AND NOISE COMPATIBILITY PROGRAM

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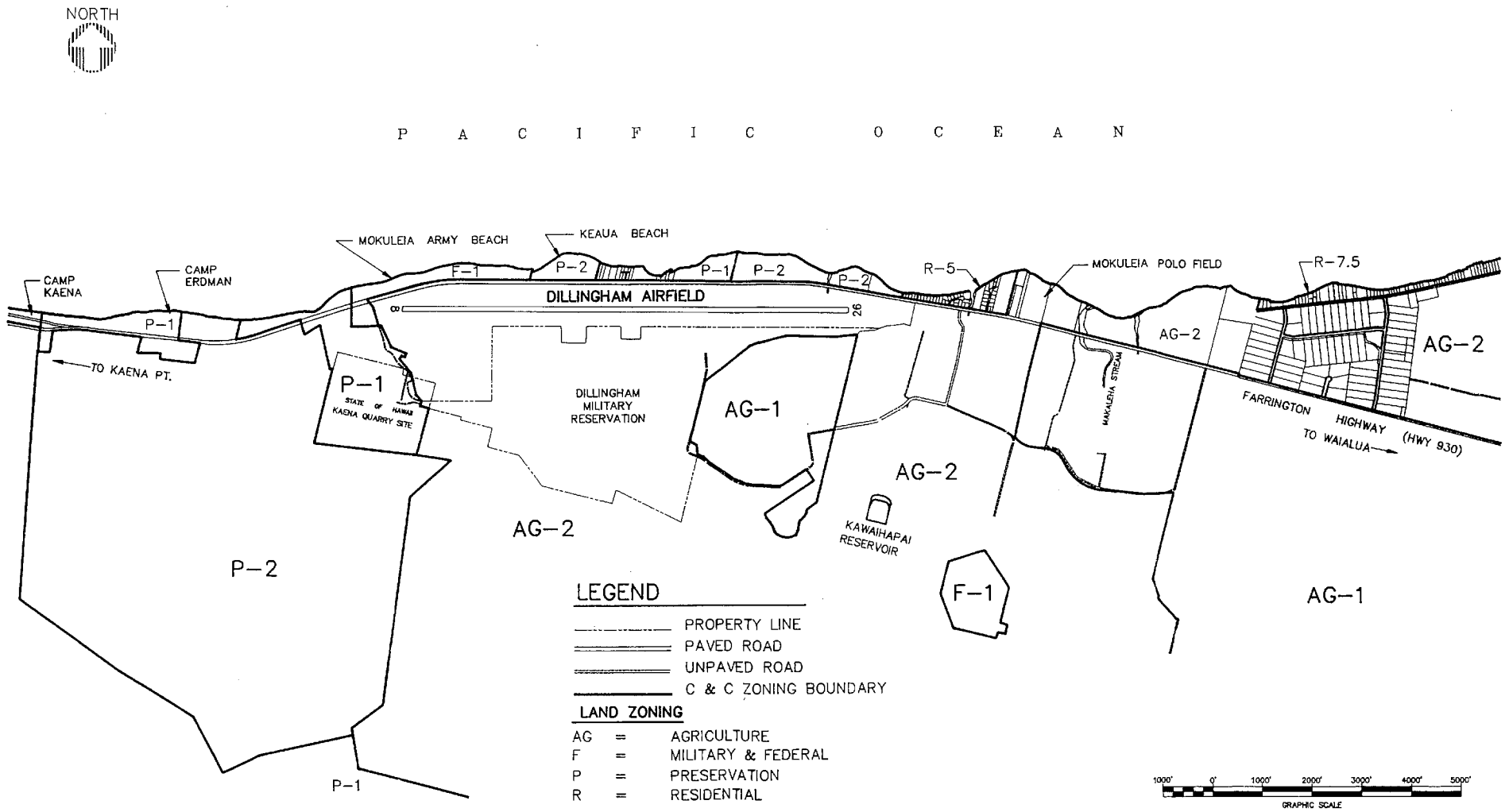
STATE OF HAWAII LAND USE DESIGNATIONS - DILLINGHAM AIRFIELD AND ENVIRONS

FIGURE 2-6



AIRPORTS DIVISION
DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII

DILLINGHAM AIRFIELD MASTER PLAN AND NOISE COMPATIBILITY PROGRAM

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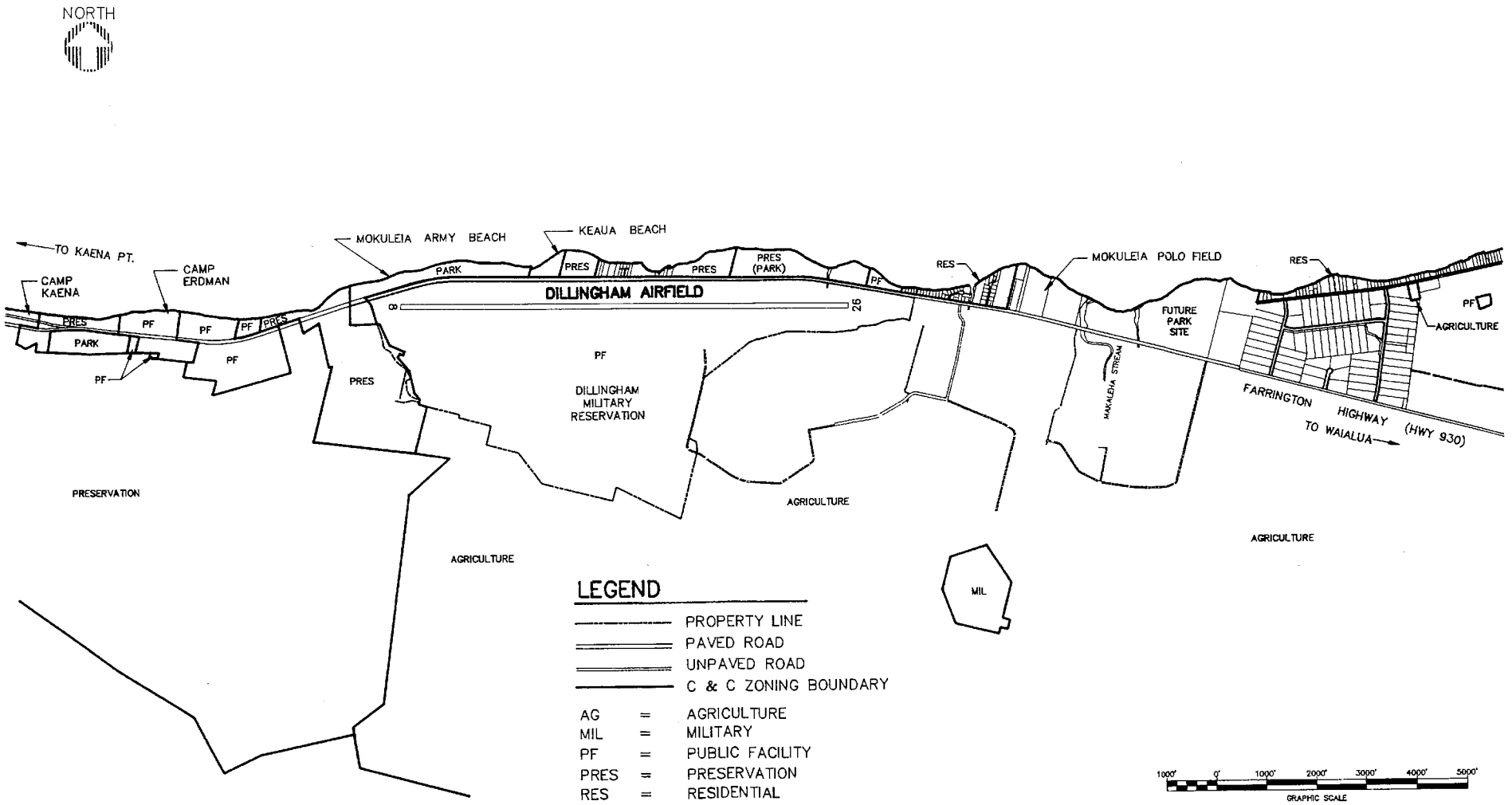
CITY AND COUNTY OF HONOLULU
LAND ZONING - DILLINGHAM AIRFIELD AND ENVIRONS

FIGURE
2-7



AIRPORTS DIVISION
DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII

DILLINGHAM AIRFIELD MASTER PLAN AND NOISE COMPATIBILITY PROGRAM

Edward K. Noda and Associates, Inc.

CITY AND COUNTY OF HONOLULU
DEVELOPMENT PLAN - DILLINGHAM AIRFIELD AND ENVIRONS

FIGURE
2-8

Chapter 3

AVIATION DEMAND FORECAST AND AIRFIELD CAPACITY ANALYSIS

3.0 AVIATION DEMAND FORECAST AND AIRFIELD CAPACITY ANALYSIS

This section contains the data upon which alternative airport development concepts for the proposed facility improvements at Dillingham Airfield are based. The items discussed in this chapter are the aviation demand forecasts and airfield capacity analysis.

The future role of Dillingham Airfield will be assessed in the context of several possibilities. This includes its potential as a general aviation reliever airport for Oahu; the possible development of another airport with joint civil and military use (such as Wheeler Army Airfield; see Appendix B, Reference 17); the possible development of a new site as a general aviation reliever airport; obtaining a closed military airfield; future levels of general aviation activity at Honolulu International Airport; and the continued availability of Ford Island Auxiliary Landing Field (ALF) for general aviation use. For the purpose of this initial forecast, the type of operations are forecast to remain essentially the same as at present since Dillingham continues to be the only airport on Oahu used primarily for general aviation activities.

At this time it is not known how long Ford Island ALF will continue to be available for general aviation activity. For the purpose of the forecasts prepared for the Statewide Airport System Plan (SASP), (Appendix A, Reference 2), it was assumed that Ford Island ALF will continue to be available out to the 2010 planning horizon. Because of the question of its long-term availability, the forecast levels for Ford Island were retained at the 1989 level of 80,000 annual operations in the SASP.

However, in order to establish facility requirements for alternative development concepts at Dillingham, it is assumed that sometime between 1995 and 2000, Ford Island ALF will be closed to civil aviation use and 50 percent of the Ford Island operations will ultimately relocate to Dillingham and the other 50 percent to HIA or elsewhere. Other operations will relocate to Dillingham from HIA as its airfield approaches capacity and it becomes more costly to maintain general aviation aircraft there. These operations will be

in addition to those forecast by the SASP (see Table 3-1 and Figure 3-1).

TABLE 3-1

AVIATION DEMAND FORECASTS
Dillingham Airfield
1989-2010

	Actual[a]	Forecasts			
	1989	1995	2000	2005	2010
Aircraft Operations[b] (SASP)					
Civil	111,286	123,000	135,000	142,000	155,000
Military	5,850	6,000	6,000	6,000	6,000
TOTAL	117,136	129,000	141,000	148,000	161,000
Based Aircraft (Total Gliders and Powered)	44	48	52	56	60
Aircraft Operations[b] (with some relocated from Ford Island ALF and HIA)					
Civil	111,286	123,000	184,000	199,000	220,000
Military	5,850	6,000	6,000	6,000	6,000
TOTAL	117,136	129,000	190,000	205,000	226,000
Based Aircraft (Total Gliders and Powered)	44	48	66	78	90

[a]Data from State of Hawaii, Department of Transportation
[b]Daylight operations only.

Source: Aries Consultants Ltd.

3.1 AIRCRAFT OPERATIONS

Civil aviation aircraft operations, by powered aircraft and gliders (sailplanes), are expected to gradually increase from 111,286 operations in 1989 to 155,000 operations by 2010 according to the SASP. With the addition of relocated operations from Ford Island ALF and HIA, operations at Dillingham could increase to 220,000 by 2010.

The glider and associated tow aircraft should be counted as air taxi operations according to FAA classifications. On this basis, there were 75,808 air taxi operations and 35,478 general aviation operations in 1989. By 2010, the air taxi operations are forecast to increase to 99,000 operations and general aviation operations will increase to 56,000 operations. With the relocated HIA and Ford Island ALF operations, general aviation operations would increase to 121,000 by 2010.

Military aircraft operations are forecast to remain at approximately 6,000 annually throughout the forecast period. These operations do not include nighttime operations (sunset to sunrise) by the military for which statistics are not available.

3.2 BASED AIRCRAFT

General aviation based aircraft are forecast in the SASP to increase from 44 in 1989 to 60 in 2010. At present, gliders account for about 50 percent of the based aircraft, but are expected to account for a declining percentage of the total in the future. Powered aircraft could account for an increasing percentage of the based aircraft depending on whether Dillingham Airfield becomes a more convenient airport for more people to locate their aircraft and also its status as a potential reliever airport for Honolulu International Airport.

In order to establish facility requirements for alternative development concepts, it is assumed that as a result of closing Ford Island ALF to civil aviation use, some general aviation aircraft that are based at HIA will relocate to Dillingham. On the basis of the

assumed number of aircraft operations that will relocate to Dillingham due to closing Ford Island and the capacity problems at HIA, based aircraft will increase to 90 by 2010 compared to 60 as forecast in the SASP. This is partially based on a review of the addresses of aircraft owners on Oahu as listed in Section 2.

3.3 PEAK PERIOD FORECASTS

Peak period aviation forecasts indicate peak levels of aviation-related activities during the average day of the busiest month. The peak number of aircraft operations generated by the forecasts affect airfield, terminal area, ground access, automobile parking, and utility requirements at Dillingham Airfield.

Forecasts of peak hour aircraft operations at Dillingham Airfield, which occur at mid-day on weekends, are presented in Table 3-2. Estimates of peak hour operations for air taxi (powered and glider), general aviation and military aircraft operations were prepared using available data obtained from the State DOT Universal Communications (UNICOM) facility and State DOT Landing Reports. Aircraft operations in the peak month of June are approximately 10 percent of the annual operations based on 1989 State DOT UNICOM data for the Airport. It is assumed that approximately 10 percent of the annual operations will occur in the peak month through the year 2010 planning period at Dillingham Airfield.

It is noted that there is significantly more activity at the Airport on weekends than on weekdays. Daily aircraft operations are typically 50 percent greater on weekends than on weekdays based on 1989 DOT surveys.

Based on discussions with State DOT UNICOM operators, approximately 15 percent of the daily aircraft operations occur during the peak hour. It is assumed that this relationship will continue through the year 2010 planning period.

TABLE 3-2

FORECAST OF PEAK HOUR ACTIVITY
Dillingham Airfield
1989-2010

	Actual[a]	Forecasts			
	1989	1995	2000	2005	2010
PEAK HOUR ACTIVITY					
Aircraft Operations[b] (SASP)					
Air taxi - powered	28	31	33	35	37
- gliders	28	31	33	35	37
General aviation	27	31	35	36	42
Military	5	5	5	5	5
TOTAL	88	98	106	111	121
Aircraft Operations[b] (with some relocated from Ford Island ALF and HIA)					
Air taxi - powered	28	31	33	35	37
- gliders	28	31	33	35	37
General aviation	27	31	72	79	91
Military	5	5	5	5	5
TOTAL	88	98	143	154	170

[a]Based on CY 1989 State DOT UNICOM Data and Landing Reports
[b]Daylight operations only.

Source: Aries Consultants Ltd.

On weekends, total peak hour aircraft operations are forecast to increase from 88 operations in 1989 to 121 operations by 2010 based on the SASP forecasts and 170 operations in 2010 with relocated Ford Island ALF and HIA traffic. Peak hour air taxi aircraft operations (which include both gliders and tow operations) are forecast to increase from about 50 operations in 1989 to 74 operations by 2010. Peak hour general aviation aircraft operations are estimated to increase from 27 to 42 operations between 1989 and 2010 based on the SASP forecasts and to 91 operations in 2010 with the relocated Ford Island ALF and HIA traffic. Military operations are forecast to remain at approximately five (5) operations during the peak hour.

3.4 AIRFIELD CAPACITY METHODOLOGY

The procedure described in FAA Advisory Circular 150/5060-5 (Appendix B, Reference 8), was used to compute hourly capacity and annual service volumes for both the existing airfield and potential improvements evaluated during preparation of the Master Plan. The results of this analysis are outlined below.

The hourly capacity of an airfield is defined as a measure of the maximum number of aircraft operations (landings and take-offs) that can be accommodated on the airfield in one hour. This definition contains no assumptions regarding "acceptable" levels of delay to aircraft; it simply expresses the maximum physical capability of an airfield or any of its components under a set of specified conditions.

The hourly capacity of an airfield depends on a number of conditions including ceiling and visibility, runway use, aircraft mix, percent arrivals, percent touch-and-go operations, and exit taxiway location. These conditions were determined on the basis of State and military aircraft operations statistics, meteorological records, and conversations with Airport personnel.

3.4.1 Ceiling and Visibility. Based on discussions with employees and tenants of the Airport who are knowledgeable of weather conditions there, IFR (Instrument

Flight Rules) ceiling and visibility conditions below 1,000 feet and/or three miles at Dillingham Airfield occur about five (5) percent of the time.

3.4.2 Runway Use. The number, location, and orientation of active runways, and the directions and types of operations on each runway define runway use. Wind data obtained from June, 1942 to December, 1944 (as shown on the wind rose of the current Airport Layout Plan), indicate that Runway 8-26 provides 93 percent wind coverage assuming a maximum allowable crosswind component of 12 miles per hour. Discussions with Airport personnel indicate that the runway is seldom closed due to crosswind conditions. The discussions also revealed the following estimated runway usage percentages:

Runway	Percent of operations
8	90
26	10

3.4.3 Aircraft Mix. For the purpose of determining runway capacity, aircraft are divided into four classes:

Class A: Small single-engine aircraft whose maximum certificated take-off weight is 12,500 pounds or less.

Class B: Small twin-engine aircraft whose maximum certificated takeoff weight is 12,500 pounds or less (includes Learjets).

Class C: Large aircraft whose maximum certificated takeoff weight is more than 12,500 pounds and up to 300,000 pounds (includes C-130 military aircraft and a few business jets).

Class D: Heavy aircraft whose maximum certificated takeoff weight is more than 300,000 pounds (includes DC-8, DC-10, L-1011, B-747, C-141 and C-5A aircraft).

Based on an analysis conducted as part of this study, the following aircraft mix is estimated for current (1991) and forecast (2010) conditions:

	Percent of Total Aircraft Operations	
Aircraft Class	1991	2010
Small Aircraft (Class A & B)	99	99
Large Aircraft (Class C)	1	1
Heavy Aircraft (Class D)	0	0

3.4.4 Arrivals and Touch-and-Go Operations. Hourly runway capacity is influenced by the percentage of total operations represented by arrivals. This analysis assumes equal numbers of arrivals and departures at the Airport.

Touch-and-go operations by general aviation and military aircraft affects airfield capacity. At present, touch-and-go operations and low approaches are estimated to account for about 25 percent of the total operations according to State DOT UNICOM data. The forecast percentage of touch-and-go operations and low approaches at the Airport is assumed to remain at approximately 25 percent of the total operations through 2010 based on the SASP forecasts. However, with the addition of traffic from Ford Island ALF and HIA, this percentage could increase to 40 percent.

3.4.5 Taxiway Location. The number and location of exit taxiways affect the hourly capacity of a runway because their location affects runway occupancy times. At present there are two exits on the south side of Runway 8-26. In addition, the gliders exit the 2,000 foot section set aside for them at each end of the runway.

3.5 HOURLY CAPACITY AND ANNUAL SERVICE VOLUME

3.5.1 Hourly Capacity. The analysis indicates that the hourly capacity of the single runway airfield during visual flight rule (VFR) conditions is about 135 operations for the current mix of aircraft and airfield facilities and 141 operations for the forecast 2010 mix of aircraft, with more large aircraft in the mix, and assuming additional exit taxiways. Hourly capacity during instrument flight rule (IFR) conditions is assumed to be zero operations for both the current and forecast 2010 mix of aircraft. However, if an IFR procedure is determined to be feasible, its capacity would be approximately 6 to 8 operations per hour. Peak hour demand is forecast to increase from about 88 operations in 1989 to 121 operations by 2010 based on the SASP forecasts, and 170 in 2010 with relocated Ford Island ALF and HIA traffic. Therefore, during peak hours on weekends, forecast hourly operations could reach the estimated hourly capacity by 2010 assuming the continuation of current operational conditions and more traffic from Ford Island ALF and HIA.

3.5.2 Annual Service Volume. Annual Service Volume (ASV) is often used as a reference point in airport planning. It is an estimate of the number of aircraft operations that can be accommodated at a given facility over the course of a year with an average annual aircraft delay on the order of 1 to 4 minutes. If the number of annual operations exceeds the annual service volume, moderate or severe congestion may occur.

The Annual Service Volume of the existing single runway airfield (assuming that runway use patterns remain the same as at present) is about 300,000 operations for the current mix of aircraft and airfield facilities. An ASV of approximately 305,000 operations is estimated for the forecast 2010 mix of aircraft, which includes more large aircraft and assumes additional exit taxiways. These annual service volumes assume the continued absence of both radar coverage and an instrument approach to the Airport.

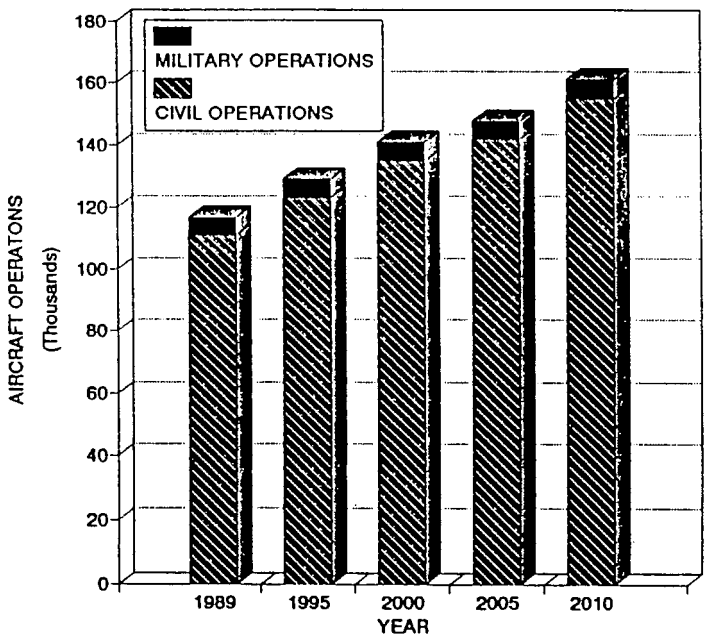
A comparison of these volumes with the forecasts presented in Table 3-1, indicate that the 161,000 operations per year forecast by 2010 based on the SASP will amount to about 53 percent of the airfield capacity. With 226,000 operations in 2010 due to relocated Ford Island ALF and HIA traffic, this will amount to 74 percent of the airfield capacity. Therefore, the existing single runway system, with taxiway improvements as necessary, can provide adequate capacity to accommodate forecast demand through the 2010 planning period based on the SASP forecasts. Assuming, however, the potential increase in operations after Ford Island ALF closes and as HIA gets close to capacity, the forecast level of operations will exceed the 60 percent level that the FAA uses as a criterion to signal the need to begin planning for additional airfield facilities. Therefore, consideration should be given to evaluating the potential for developing additional capacity, within the constraints of the airport site.

3.6 AIRCRAFT DELAYS

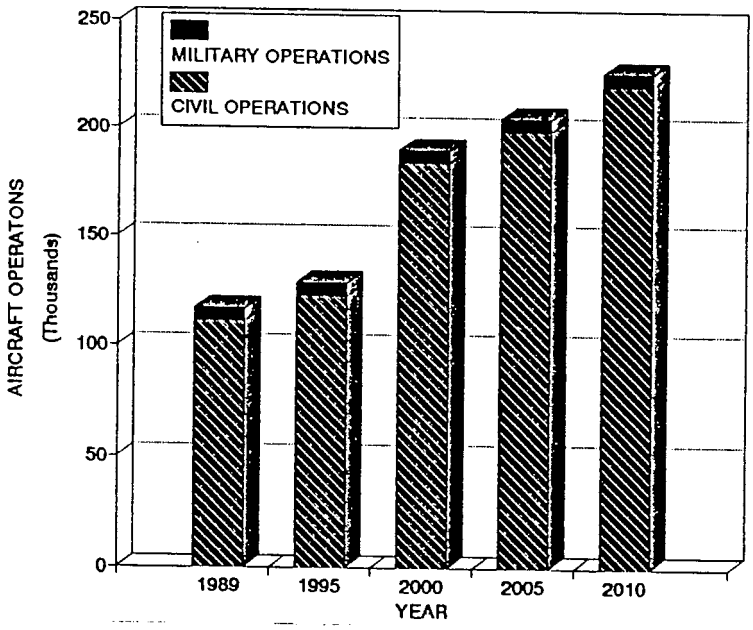
Aircraft delays are sometimes important for analyses of airfield operations at levels of annual aircraft operations below the Annual Service Volume. As annual aircraft operations approach ASV, the average aircraft delay tends to increase rapidly with relatively small increases in airport operations, thereby causing levels of service on the airfield to deteriorate. Therefore, delays to aircraft must also be considered in planning and evaluating airfield operations at annual operations levels less than the Annual Service Volume.

Estimates for average aircraft delays for Dillingham Airfield were obtained using the long-range planning technique developed by FAA Advisory Circular 150/5060-5. For the 117,136 total annual operations occurring at the Airport in 1989, the average delay to each aircraft was estimated to be 0.3 minute. Results of the analysis indicated that the average delay will increase to about 0.5 minute per aircraft through 2010 based on the SASP forecasts and increase to 1.0 minute with the additional Ford Island ALF and HIA traffic.

SASP FORECASTS



FORECAST WITH HIA AND FORD ISLAND OPERATIONS



AIRPORTS DIVISION DEPARTMENT OF TRANSPORTATION STATE OF HAWAII	DILLINGHAM AIRFIELD MASTER PLAN AND NOISE COMPATIBILITY PROGRAM	AVIATION DEMAND FORECASTS DILLINGHAM AIRFIELD (1990-2010)	Edward K. Noda and Associates, Inc.	FIGURE 3-1

Chapter 4

FACILITY REQUIREMENTS

4.0 FACILITY REQUIREMENTS

Facilities at Dillingham Airfield are grouped into four major categories: airfield; terminal area; ground transportation; and utilities and drainage. Existing facilities are shown on Figures 2-2 and 2-3.

This chapter evaluates the ability of the existing facilities at Dillingham Airfield to accommodate the forecast level of aviation demand described in Chapter 3. Based on this evaluation, it establishes a set of facility requirements that must be addressed in the Master Plan. These facility requirements were determined using planning criteria established by the Federal Aviation Administration, other recognized references on airport planning, and engineering practices as governed by the codes and regulations of the State of Hawaii and City and County of Honolulu. The facility requirements will form the basis for alternative airport development concepts that will lead to the recommended Master Plan for Dillingham Airfield.

There are constraints associated with the existing Dillingham Airfield site that limit development of the Airport. The site is bordered on the south by steep terrain that imposes limitations on aircraft approach and departure paths as well as for the construction and operation of a parallel runway. Land availability to the north is limited by the proximity of Farrington Highway and the Pacific Ocean. The Airport is located in a coastal area that is subject to flooding (see Appendix I). In addition, Dillingham is distant from the existing urban areas of Oahu.

The acquisition of additional land for airport use will be necessary to provide adequate clearance on either side of the runway and for future expansion, as well as sufficient acreage so that the runway protection zones (formerly called clear zones) at both ends of Runway 8-26 are within the Airport boundary. If land in the runway protection zones cannot be acquired in fee simple title, then avigation easements should be obtained.

Table 4-1 summarizes airfield and terminal area facility requirements for Dillingham Airfield to the year 2010 with and without traffic relocated from Ford Island ALF and HIA. Utility system requirements are covered in the discussions of the individual utilities.

TABLE 4-1

EXISTING FACILITIES AND FUTURE REQUIREMENTS
Dillingham Airfield
1990-2010

AIRFIELD	Existing 1990	1995	2000	2005	2010
Runway 8R-26L					
Length (feet)	9,000	9,000	9,000	9,000	9,000
Width (feet)	75	75	75	75	100
Runway 8L-26R					
Length (feet)	—	—	—	—	3,000
Width (feet)	—	—	—	—	75
Pavement strength (pounds)					
Single-wheel aircraft	40,000	40,000	40,000	40,000	40,000
Dual-wheel aircraft	152,000	152,000	152,000	152,000	152,000
Dual-wheel tandem aircraft	180,000	180,000	180,000	180,000	180,000
TERMINAL					
Hangar Spaces a)					
Powered Aircraft	20	20	20	22	24
Sailplanes	15	18	18	20	22
Hangar Spaces b)					
Powered Aircraft	20	20	32	38	47
Sailplanes	15	18	18	20	22
Tiedown Spaces a)					
Powered Aircraft	20	20	20	25	28
Sailplanes	14	14	16	18	20
Tiedown Spaces b)					
Powered Aircraft	20	20	32	40	45
Sailplanes	14	14	16	18	20
Terminal Area Parking a)					
Powered Aircraft Area	47	47	47	47	47
Sailplanes Area	44	44	44	44	44
Terminal Area Parking b)					
Powered Aircraft	47	60	75	80	85
Sailplanes	44	44	44	44	44

a) Without Ford Island ALF and HIA Traffic
b) With Ford Island ALF and HIA Traffic

Source: Edward K. Noda and Associates, Inc. and Aries Consultants Ltd.

4.1 AIRFIELD REQUIREMENTS

Airfield facilities include runways, taxiways, aprons, and landing and navigation aids. Existing facilities are described in Chapter 2, Inventory.

The "*National Plan of Integrated Airport Systems*" (NPIAS) classifies Dillingham Airfield as a "Joint-Use General Aviation Airport". The FAA service level category for Dillingham Airfield is a "General Utility Airport" because it accommodates (and is expected to continue to accommodate) aircraft in Aircraft Approach Categories A or B (i.e., aircraft with approach speeds of less than 121 knots). Examples of Category A and B aircraft include the Cessna 182, Piper Navajo and Cessna 310 aircraft.

Dillingham Airfield is now used primarily by aircraft in Airplane Design Group I with wingspans of less than 49 feet (e.g., Cessna 182, Cessna 206 and Piper Navajo) and occasionally by aircraft in Airplane Design Group II with wingspans of less than 79 feet (e.g., Beech 18, Beech King Air). It is also used on occasion by military aircraft in Airplane Design Group IV (e.g., C-130) with a 133-foot wingspan. The airfield will be designed for Group I and II aircraft; not for occasional use by larger aircraft.

4.1.1. Runway 8-26. Runway 8-26 should be planned to satisfy the criteria for Airplane Design Group II (i.e., aircraft with wingspans of less than 79 feet such as the Beech King Air). Its ability to accommodate the types of aircraft forecast in Chapter 3 is discussed below.

4.1.1.1 General Aviation/Commuter/Air Taxis. According to FAA Advisory Circular 150/5325-4A, "Runway Length Requirements for Airport Design" (Appendix A, Reference 9), a runway length of 3,700 feet is required to satisfy General Utility - Stage I airport design criteria at Dillingham Airfield. This runway length accommodates all small aircraft of 12,500 pounds or less (maximum certificated take-off weight) typically used for personal and business flying, and for commuter and air taxi operations. For larger commuter aircraft (e.g., Metroliners, Beech King Air) a runway

length of 4,300 feet is required at Dillingham Airfield. Since Runway 8-26 is 9,000 feet long, it can accommodate these aircraft, including Cessna 402, Piper Navajo, DHC-6, Beech King Air, and smaller single and multi-engine aircraft.

4.1.1.2 Business Jets. FAA Advisory Circular 150/5325-4A indicates that a runway length of 4,700 feet is required to accommodate 75 percent of the turbojet powered aircraft fleet of 60,000 pounds or less maximum certificated take-off weight, at 60 percent useful load, including business jets likely to use Dillingham Airfield. With respect to runway length, the critical general aviation aircraft which might be expected to use the Airport in the future are small and medium sized executive jets such as Sabreliners, Learjets, Cessna Citations, Falcons, and HS-125s (assuming the current weight restrictions are eliminated).

Runway 8-26 could be used by larger general aviation aircraft having gross takeoff weights in the 12,500 to 60,000 pound range. The recommended runway length curves contained in FAA Advisory Circular 150/5325-4A, indicate that these aircraft have a runway length requirement of up to 8,000 feet under altitude and temperature conditions prevailing at Dillingham Airfield. This length would accommodate 100 percent of the turbojet powered aircraft fleet of 60,000 pounds or less (maximum-certificated take-off weight) at 90 percent of useful load, including larger executive jets such as the Lockheed Jetstar and the Gulfstream II. For 75 percent of the fleet at 90 percent useful load, a runway length of 6,400 feet would be required. Therefore, the existing runway length is adequate for this type of aircraft. Because several dimensional standards are dependent on the type and size of aircraft to be accommodated, this subject will be addressed in the analysis of alternative development concepts for this study (Chapter 5).

4.1.1.3 Military Flights. In 1989 there were nearly 6,000 daytime operations by military aircraft at Dillingham Airfield. The vast majority of these were for training purposes and involved helicopters. Some of the fixed-wing aircraft, such as the

C-130, have short-field capabilities and these aircraft can operate from the 9,000 feet available for the present type of military activity.

4.1.1.4 Runway Safety Areas. Recommended dimensions for runway safety areas are dependent on the type of approach established and the aircraft to be accommodated. The length beyond the end of the runway could vary from 240 feet to 600 feet with the width varying from 120 feet to 300 feet for proper application at Dillingham Airfield.

4.1.1.5 Summary. Runway 8-26's existing 9,000 feet length can accommodate all of the aircraft activity that might be expected during the 1990-2010 planning period. Therefore, it is not recommended that the runway be extended.

The runway's 75 foot width is adequate for all categories of aircraft currently using and expected to use the Airport in the future on a regular basis. A runway width of 100 feet should be provided if there is to be regular use by aircraft in Airplane Design Group III (i.e., wing spans up to 188 feet) as shown in Table 4-1. Distance-to-go markers should be installed along both sides of the runway to bring it up to current design standards.

To satisfy recommended FAA runway safety area criteria a safety area at least 300 feet in length and 150 feet in width should be provided beyond the ends of the runway for Group II type aircraft. Blast pads, 150 feet long, should be provided at both ends of the runway. The blast pads serve to prevent erosion from prop wash and jet blast and to prevent sailplane tow cables from dragging rocks onto the runway as now frequently occurs.

As noted in Section 2, Runway 8-26 presently has two displaced thresholds that are located 2,000 feet from each of its ends. This was done to accommodate sailplane operations which require space for staging for takeoff as well as for landing short of the powered aircraft portion of the runway which occupies the central

5,000 feet. The displaced thresholds are possible because of the 9,000 foot length of the runway which, as previously noted, is considerably longer than is needed for Group II general aviation aircraft operations. Currently, tow planes are landing short of the displaced thresholds in order to make a quick turnoff onto the sailplane apron; this is not a desirable practice.

The displaced thresholds should be retained because, if used properly, they contribute significantly to the increased capacity of the airfield. Relocation of the access road at the west (26) end of the runway and installation of an Air Traffic Control Tower at Dillingham will eliminate any shortcomings of the present arrangement. If a parallel runway is constructed in the future, the use of the present runway for sailplanes is still desirable if training touch-and-go operations of powered aircraft are conducted mainly on the parallel runway.

If a parallel runway is needed to satisfy demand after 1995 when some Ford Island ALF and HIA traffic is assumed to be relocated to Dillingham, its length and separation criteria should meet the requirements of FAA Advisory Circulars 150/5325-4A and 150/5300-13 (Appendix B, References 9 and 10). However, given the site constraints, it might be necessary to apply the parallel separation criteria in FAA Order 7110.65, Air Traffic Control Handbook, in order to operate a parallel runway system. This will require an Air Traffic Control Tower. A parallel runway should have a minimum length of 3,000 feet and a minimum width of 75 feet. Pavement strength should be comparable to existing Runway 8-26. Blast pads are not required for a parallel runway, however, runway safety areas and protection zones for Group II type aircraft should be provided.

4.1.2 Taxiways. For Runway 8-26, the parallel taxiway should be located at least 160 feet centerline to centerline from the runway to satisfy FAA obstacle free zone (OFZ) criteria for Group II aircraft and preferably it should be located at 240 feet from the runway centerline, in accordance with FAA AC 150/5300-13 (Appendix A, Reference 10), to satisfy Aircraft Design Group II criteria. The existing parallel taxiway is located at 200

feet, centerline to centerline, from the runway and satisfies the obstacle free zone criteria for Group II aircraft. To provide a parallel taxiway at 240 feet would require relocation of the present roadway south of the existing taxiway. However, the separation for a parallel taxiway may be adjusted to a smaller distance as long as no part of an aircraft on the taxiway centerline penetrates the runway OFZ.

Exit/entry taxiways should be provided at each end of the runway if the full 9,000 feet is to be used and additional exit taxiways, as necessary, located elsewhere along the runway. Any new taxiways should be at least 35 feet wide, and preferably 50 feet wide.

New taxiways into the terminal area (to serve air taxi/sailplanes and general aviation) will also be required as activity increases and new terminal areas are developed.

4.1.3 Airfield Pavement. The estimated pavement strength for the existing Runway 8-26 is 40,000 pounds for single-wheel aircraft, 152,000 pounds for dual-wheel aircraft and 180,000 pounds for dual tandem-wheel aircraft. These pavement strengths should be adequate to accommodate all of the aircraft expected to regularly use the Airport through the year 2010, however, as noted earlier, civil aircraft are currently limited to 12,500 pounds maximum gross weight unless prior permission for them to operate is granted. The pavement for (parallel) Runway 8L-26R should be designed to accommodate 12,500 pound maximum gross weight aircraft and be compatible with existing runway pavements. Taxiway pavement strengths should be 12,500 pounds to be compatible with civil aircraft expected to use the runway.

4.1.4 Airspace and Air Traffic Control. Avigation considerations include (1) airspace and air traffic control, (2) approach areas and obstructions, and (3) navigational and landing aids. Existing airspace procedures and air traffic control (ATC) provide for safe, orderly, and expeditious flow of existing air traffic levels. There are no existing airspace interactions that cause any serious airspace problems with current and projected

traffic flow demands. Airspace and ATC considerations do not limit VFR aviation activity capacity in the Dillingham area and they are not expected to do so within the 1990-2010 planning period except for the terrain conditions and special use airspace previously noted.

The terrain and special use airspace areas limit the potential for IFR approach procedures, thereby reducing annual service volumes. An offset localizer (LOC) approach is probably feasible at Dillingham Airfield. Factors involved include terrain, particularly the cliff south of the Airport, the Warning Area (W-322) just offshore, the Alert Area (A-3111) at 3.5 NM to the east, and the Restricted Areas (R-3109 A, B and C, and R-3110 A, B and C) adjacent to the Airport on the south side. However, a Localizer Directional Aid (LDA) and Microwave Landing System (MLS) procedures should be thoroughly evaluated for potential application at Dillingham for IFR activity.

4.1.5 Approach Areas and Obstructions. This section describes the runway protection zones and obstructions.

4.1.5.1 Runway Protection Zones. Portions of the minimum required runway protection zone for (existing) Runway 8, and to a lesser degree for Runway 26, are outside the Airport property line.

At the present time the DOT-A has not obtained fee simple title or avigation easements for those areas of the runway protection zones that lie outside of the Airport property line. The DOT-A should at least obtain avigation easements and preferably fee simple title to these areas. See Section 6 for additional information about land acquisition.

Visual runway protection zones with 20:1 approach surfaces are required and should be retained for long-range planning. Visual runway protection zones 1,000 feet long, with an inner width of 250 feet and an outer width of 450 feet should be provided if only small aircraft (12,500 pounds or less) are to be

accommodated. If large aircraft weighing more than 12,500 pounds are to be accommodated on a regular basis, visual runway protection zones 1,000 feet long with an inner width of 500 feet and an outer width of 700 feet should be provided, however, regular use by larger aircraft is not planned.

An offset localizer approach of over 30 degrees from the runway centerline would not have straight-in approach minimums and therefore, visual runway protection zones would be required.

4.1.5.2 Obstructions. Controlling obstructions were identified in Chapter 2.

Runway 8 has no obstruction that penetrates a 20:1 approach surface, however, a sign which is located 600 feet from the threshold would penetrate a 34:1 nonprecision approach surface. If an IFR approach is found to be feasible, this sign should be relocated.

Runway 26 has trees at 1,500 feet from the end of the runway that establish an obstacle free approach surface of 17:1. Although these trees are outside of the runway protection zone and outside the Airport property line, consideration should be given to having these obstructions lowered or removed to provide an unobstructed 20:1 approach surface.

The Building Restriction Line (BRL) parallel to the runway should be set back from the runway to provide building areas that would have clearance below the FAR Part 77 (Appendix B, Reference 6) transition surfaces for a 35-foot high structure. This distance is dependent on the type of approach established and aircraft to be accommodated. This setback dimension for Dillingham Airfield could vary from 370 to 495 feet from the centerline of the runway. The BRL should be no closer than 300 feet which would allow for a taxiway obstacle free area (OFA) that would accommodate all

small aircraft (i.e., 12,500 pounds or less) expected to use the Airport. This dimension should only be used to avoid relocating existing structures.

4.1.5.3 Navigational and Landing Aids. Visual glide slope indicators such as a precision approach path indicator (PAPI) should be planned for both Runways 8 and 26, but recommended siting criteria would have to be waived for existing Runway 8 to allow an offset of 4.3 degrees horizontally to avoid the adjacent cliff.

At present the Airport is only open for daylight civil VFR operations. Nighttime operations would also require a change in the current joint use agreement between the State DOT and the U.S. Army. Nighttime operations may require an aeronautical study by the FAA to determine the requirement for obstruction lighting of terrain in the vicinity of the Airport. If determined to be feasible, medium intensity runway lights (MIRL) should be planned along the runway, and medium intensity taxiway lights (MITL) should be provided along any taxiways. An airport rotating beacon, lighted wind indicator and segmented circle should also be planned for the Airport for nighttime operations.

Although it may be difficult, it would be desirable to establish an IFR approach capability at Dillingham Airfield. As mentioned previously, this might be accomplished by installation of either a localizer or MLS equipment. If an IFR approach is found to be feasible, a medium intensity approach lighting system with runway alignment indicator lights (MALSR) should also be installed.

Overhead telephone and electrical lines that run along Farrington Highway and along the mountainside south of the Airfield should be marked for visual recognition by pilots.

4.1.5.4 Parachute Drop Zone. The present parachute drop zone is located in the runway protection zones. Because of the length of the runway, parachute

operations do not currently interfere with aircraft operations. It is desirable to relocate the parachute drop zone so as to permit simultaneous aircraft operations and parachute jumping irrespective of the wind direction. Operational safety can also be enhanced by establishing requirements for communication between parachutists and the UNICOM or ATCT at the time of jumping operations.

Relocation of the parachute drop zone will require that new rules and regulations for parachuting at Dillingham Airfield be prepared and published in compliance with Federal Aviation Regulations (FAR) Part 105, "Parachute Jumping". Restrictions placed on parachute jumping should provide reasonable operating conditions for parachutists while protecting the airspace assigned to powered aircraft and sailplanes from intrusion. The existing *Parachute Activity Procedures* are presented in Appendix J.

4.2 TERMINAL AREA REQUIREMENTS

The terminal area is divided into two major parts: the powered aircraft area and the sailplane area. There is no passenger terminal at Dillingham Airfield. A parachute drop zone is located at the end of Runway 26 and a few temporary facilities for parachute jump clubs are located nearby on the south side of the runway.

Relatively small increases in hangar and apron tiedown spaces will be required in the 2001-2010 time period and none in the 1996-2000 period for the SASP forecasts as shown in Table 4-1, except for a few additional sailplane hangar spaces. With the addition of relocated Ford Island and HIA traffic in the 2001-2010 period, general aviation facility requirements will increase significantly.

Hangar and tiedown space must be provided for based aircraft and tiedown space should be provided for itinerant powered aircraft. It is unlikely that there will be any itinerant sailplanes. If Ford Island traffic does not relocate to Dillingham, it will be necessary to build only four additional hangar spaces and eight tiedown spaces by 2010.

If Ford Island and HIA traffic moves to Dillingham, additional hangar spaces for 27 powered aircraft and seven (7) sailplanes will be required, and tiedowns for 25 powered aircraft and six (6) sailplanes will have to be provided. Expansion of the aprons in both the powered and sailplane areas to accommodate these facilities will be necessary and additional space should be set aside for expansion beyond 2010.

With additional Ford Island and HIA traffic, more fuel storage capacity will be required for AVGAS in the powered aircraft area; tanks for an additional 12,000 gallons will be needed. Also, as traffic increases, more emergency (ARFF) vehicles may be required at Dillingham and appropriate facilities to house them must be provided.

Space should be set aside in the powered aircraft area for two acre FBO/ commercial aviation lots in accordance with the Airport Division's property development standards. Traffic from Ford Island and HIA and the growth of based aircraft training operations will create a demand for increased aircraft maintenance and other services provided by FBO's. One lot will be required initially and room for two more should be set aside.

4.3 GROUND TRANSPORTATION REQUIREMENTS

Existing ground transportation facilities at Dillingham Airfield consist of access roads, airport service roads and parking facilities.

4.3.1 Roadways. Farrington Highway (State Highway 930) connects Dillingham Airfield with the town of Waialua and the rest of the highway system of the island of Oahu. It is a two lane asphalt road with a low level of service having three connections to the airport service roads on Dillingham Airfield.

The service road at the east end of the airfield serves the parachute drop zone at the end of Runway 26 and runs the entire length of the runway on its south side

to connect with the powered aircraft area near Runway 8. It also has a number of connections to the old military roadway system, parts of which are within the airfield boundary.

At the west end of the airfield, two separate service roads connect Farrington Highway with the sailplane and powered aircraft areas.

4.3.2 Parking. There are two paved automobile parking lots located on the airfield, one at the sailplane area with 44 parking spaces, and one at the powered aircraft area with 47 spaces. Automobiles are parked on unpaved areas near the temporary parachute jump facilities at the eastern end of the airfield.

4.3.3 Future Facility Requirements. Even with the relocation of a substantial amount of Ford Island and HIA general aviation traffic to Dillingham, the ground traffic generated can be accommodated by two lane roads for access to the Airport and for service within its boundaries. The capacity of the Farrington Highway two-lane paved road will be adequate through 2010.

Existing parking for ground vehicles at both powered aircraft and sailplane areas will be adequate for the SASP forecast increases in activity. Relocation of operations from Ford Island ALF and HIA will require an increase of 38 parking spaces at the powered aircraft area but none at the sailplane area. Additional space for expansion of ground vehicle parking beyond 2010 should be set aside at both powered aircraft and sailplane areas. Improved facilities should be provided for parachute jump clubs at the relocated drop zone.

4.4 UTILITIES AND DRAINAGE REQUIREMENTS

Existing utility systems consist of water, wastewater, electric power and communications.

4.4.1 Water. It is an objective of the Airports Division to get out of the water supply business, accordingly, a study just completed investigated two major and one minor alternatives (see Appendix E). In all scenarios being examined, the end result of the programmed improvements is meant to be the turnover of the water system at Dillingham to the Board of Water Supply (BWS) of the City and County of Honolulu.

The first (major) alternative involves a supply pipe from the BWS supply line at Waialua to a storage tank at Dillingham and distribution from the tank to the Airport and other consumers in the area.

The second (minor) alternative also involves a supply pipe from the BWS supply system at Waialua but it would terminate at Camp Erdman and distribution would be made directly from the supply line.

The third (major) alternative would be an overhaul and upgrade of the existing system before turnover to the BWS.

4.4.2 Wastewater. It will be necessary to replace the existing cesspool system with a system of septic tanks and leach fields or other Department of Health (DOH) approved system. Studies indicate that a sewage treatment plant for Dillingham and vicinity is not justified on the basis of cost anytime in the foreseeable future.

4.4.3 Solid Waste. Solid waste can continue to be handled by private subcontractors.

4.4.4 Electric Power and Communications. Requirements for electric power and communications will not be significantly increased by additional aircraft operations including those transferred from Ford Island and HIA. The proposed air museum or substantial growth of based aircraft training activities could result in an increase in feeder voltage and additional telephone lines. In this event, changes in electrical transformers and additional PVC underground ducts may be required but no fundamental change to

either system is foreseen. The telephone lines on poles along Farrington Highway would probably still be acceptable, however, it will be necessary to mark the lines for ease of visual identification by pilots.

4.4.5 Drainage. Improvements to the existing drainage system are required to eliminate shallow flooding of the east end of the runway and along the airport service roadway during heavy rains and additional drains and culverts must be added to the system to drain any newly acquired land. As previously noted, a portion of the airport site is in a flood zone and facility designs should take this into consideration (see Appendix I).

Chapter 5

ALTERNATIVE CONCEPT PLANS

5.0 ALTERNATIVE CONCEPT PLANS

This chapter formulates and evaluates alternative concept plans which will meet the facility requirements that were specified in the preceding chapter and selects a preferred concept for the Recommended Master Plan described in the following chapter.

5.1 PLANNING ASSUMPTIONS

The planning assumptions for the Master Plan, which are listed in Chapter 1, were followed in formulating alternative concepts. The most significant ones are as follows:

- Ford Island ALF will be closed to civil general aviation use sometime in the 1995-2000 time period,

- Only Honolulu International Airport (HIA) and Dillingham Airfield (HDH) will be available for general aviation use on Oahu within the planning horizon (to 2010).

- Improvements to Dillingham Airfield will be planned in increments (phases).

5.2 NEAR TERM IMPROVEMENTS

There are a number of improvements to Dillingham Airfield associated with operations, maintenance and safety that should be made in the 1990-1995 time period. These improvements were identified as a result of site inspections and public meetings and are considered apart from the alternatives described in this chapter; they are required whether or not the Recommended Master Plan is implemented in whole or in part and are as follows:

- Relocate the parachute drop zone to provide separation of parachuting activities from aircraft operations on the runway and relocate parachute club facilities as necessary.

- Acquire additional land for airport use to bring runway protection zones within the airport boundary and for a parachute drop zone. Obtain avigation easements where land acquisition is not possible.

- Improve airfield pavements where they are under strength or require upgrading for other reasons.

- Improve existing hangars to add doors, operable windows and removable walls between individual hangar spaces.

- Improve substandard utilities such as the cesspool sewerage system.

5.3 DESCRIPTION OF ALTERNATIVES

Three alternative design concepts were formulated to meet facility requirements. Alternative No. 1 is considered to be a BASELINE concept because, given the planning assumptions, it will be the first step in the development of either of the other two alternatives. If the planning assumptions change, it may be necessary to either immediately go to one of the other alternatives or make no improvements beyond what is needed in the near term. Near term improvements will either precede Alternative No. 1, or be a part of it if currently unforeseen events require its early implementation.

In the process of formulating the alternatives, aircraft flight tracks were considered from the viewpoint of establishing the workability of the concepts. The flight tracks that are included with the alternatives described in this chapter show existing patterns for a single runway configuration and possible new patterns for a parallel runway configuration.

Each alternative includes a brief description of proposed improvements, a rough order of magnitude cost estimate for making the improvements, graphics to show airfield and terminal area changes, and graphics to show possible flight tracks. Common improvements to all three alternatives include a full length taxiway for existing Runway 8-

26, extended runway safety areas and blast pads for the existing runway, and improved internal airport service roads.

Rough order of magnitude cost estimates in this chapter are made *for the purpose of comparing alternatives only* and do not equate with the cost phasing recommended in Chapter 8. Cost phasing is based on the program objective of making improvements on an incremental basis to be affordable, and minimize investment expenditures due to unforeseeable changes in events.

5.3.1 Alternative No. 1 (BASELINE). This alternative is a first step toward accommodating increased operations and additional based aircraft that might be relocated from Ford Island and HIA (see Figure 5-1). Aside from providing more apron and hangar facilities, it offers some operational flexibility in making better use of the full 9,000 feet of runway and a full length parallel taxiway. Increases in runway capacity would be achieved by a combination of changes in taxiway facilities and operating procedures. The following improvements are included in Alternative No. 1.

- Acquire additional land for airport use beyond what is acquired for near term improvements, unless all land acquisition takes place concurrent with the near term improvements.

- Add extended runway safety areas and blast pads at both ends of the existing runway in accordance with FAA Advisory Circular AC 150/5300-13 (Appendix B, Reference 10).

- Add a full length parallel taxiway separated from the existing runway by 240 feet. Add apron space and more tiedowns to accommodate additional based aircraft and new apron area for sailplane staging at the existing sailplane site.

- Add more exit taxiways.

- o Improve internal airport roads, particularly the service road that runs parallel to the runway. Add ground vehicle parking as required.

- o Add sailplane hangar spaces.

- o Improve utilities and drainage as necessary to support new facilities and remedy existing rain-flooding situations.

- o Add improved space for commercial aviation/Fixed Base Operators (FBO's) if demand develops for their services, and set aside land for the Air Museum.

- o Add a helipad.

The estimated cost of constructing the improvements for Alternative No. 1 is $5.7 million (in mid-1991 dollars) exclusive of near term improvements, A&E fees and land acquisition.

Figures 5-1A and 5-1B show the existing flight tracks at Dillingham which would remain in use for Alternative No. 1 with possible minor modifications as needed.

The principal advantages and disadvantages of Alternative No. 1 can be summarized as follows.

ADVANTAGES

- o There is a potential improvement in airfield capacity over the existing airfield with taxiway and operational changes.

- There is no need to relocate existing facilities from their present locations where short term expansion can take place.

- The initial financial commitment required of the State is smaller than for the other alternatives and it allows improvements to be made incrementally as justified by demand and events.

- Preserves the present low cost, nearly silent (alternate) means for sailplane ground launch capability on the presently abandoned north taxiway.

DISADVANTAGES

- Sailplane and powered aircraft operations continue to be mixed on a single runway resulting in limited airfield capacity when compared with a two runway configuration.

- The airport remains usable only under visual flight rule (VFR) conditions, limiting the scope of service to users, including pilot training activities.

- Lack of an Air Traffic Control Tower (ATCT) results in less control over aircraft operations. An ATCT could direct aircraft use of flight tracks that would limit the impact of aircraft noise on inhabited areas and better coordinate aircraft and parachute operations.

5.3.2 Alternative No. 2. This alternative provides for separation of sailplane from powered aircraft operations by adding a 3,000 foot long parallel runway north of the existing runway (see Figure 5-2). A parachute drop zone is located to the south of the existing runway. A mid-field apron is provided for powered aircraft for convenient taxiway

access to the parallel runway. An IFR approach and an ATCT are provided to support more sophisticated operations and afford greater control over increased operations at the Airport. The following improvements are included in Alternative No. 2.

- All of the improvements included in Alternative No. 1.
- Add a northern parallel runway to separate sailplane from powered aircraft operations, set apart from the existing runway by 300 feet. There is sufficient clearance between the proposed runway and the airport boundary/Farrington Highway to meet FAA requirements.
- Add localizer directional aid (LDA), MALSR, MIRL, MITL, airport rotating beacon, lighted wind indicator, segmented circle and PAPI.
- Add an ATCT.
- Add apron space and more hangars and tiedowns to accommodate additional based aircraft.
- Add more improved space for commercial aviation/FBO activities, if needed.
- Make additional improvements to airport roads and add ground vehicle parking, if needed.
- Improve utilities as needed to support new facilities. Consider connecting to the nearest Board of Water Supply system and City and County sewerage system if they are extended into the vicinity of the Airfield.

The estimated cost of constructing the improvements for Alternative No. 2 is $ 25.0 million (in mid-1991) dollars exclusive of near term improvements, A&E fees and land acquisition.

Figures 5-2A and 5-2B show possible flight tracks for this parallel runway configuration.

The principal advantages and disadvantages of Alternative No. 2 can be summarized as follows.

ADVANTAGES

- The airfield has more capacity than Alternative No. 1 because sailplanes and powered aircraft operations can be separated at busy periods.

- The parallel runway is located so that, when an ATCT is in operation, it can be used for touch-and-go training operations with a close-in flight pattern over the ocean or for glider operations in tradewind conditions.

- Because of its proximity to the sailplane apron, the parallel runway also provides for the convenient ground launch of sailplanes.

- The parallel runway uses land within the present airport boundary and requires little site preparation for construction.

- The parallel runway is farther from the cliffs on the south than the existing runway, simplifying adjustments to existing flight tracks.

- Sailplane facilities can remain in their present location and be expanded as necessary.

DISADVANTAGES

- The parallel runway is not separated from the existing runway by enough distance to permit simultaneous operations on the two runways without an ATCT.

- Location of the parallel runway north of the existing one might cause an additional noise impact on residences in the Airport environs from powered aircraft during tradewind conditions.

- In order to meet minimum FAA ATC separation standards of 300 feet for the parallel runway, it will be necessary to trim, remove or relocate some of the trees along the south side of Farrington Highway.

5.3.3 Alternative No. 3. This alternative, like Alternative No. 2, provides for separation of sailplane and powered aircraft operations by adding a 3,000 foot long parallel runway to the south of the existing runway (see Figure 5-3). The parachute drop zone is located to the south of the runway but farther to the west than in Alternative No. 2. A mid-field apron is provided for powered aircraft and another for sailplanes is located south of the parallel runway. An IFR approach and an ATCT are installed at the Airport and the other basic improvements listed in Alternative No. 2 are proposed in Alternative No. 3. The following improvements are included in Alternative No. 3.

- All of the improvements included in Alternative No. 1.

- Add a southern parallel runway to separate sailplane from

powered aircraft operations, set apart from the existing runway by at least 700 feet.

- Relocate the sailplanes to an apron fronting the parallel runway on the south and convert the existing sailplane apron and facilities to powered aircraft use. Connect the new sailplane apron to both ends of the parallel runway.

- Add localizer directional aid (LDA), MALSR, MIRL, MITL, airport rotating beacon, lighted wind indicator, segmented circle and PAPI.

- Add an ATCT.

- Add apron space and more hangars and tiedowns to accommodate additional based aircraft.

- Add more improved space for commercial aviation/FBO activities, if needed.

- Make additional improvements to airport roads and add ground vehicle parking, if needed.

- Improve utilities as needed to support new facilities. As in Alternative No. 2, consider connecting to area utility systems.

- Relocate parachute drop zone from its BASELINE site to a site farther to the west.

The estimated cost of constructing the improvements for Alternative No.

3 is $30.4 million (in mid-1991 dollars) exclusive of near term improvements, A&E fees and land acquisition.

Figures 5-3A and 5-3B show possible flight tracks for this parallel runway configuration.

The principal advantages and disadvantages of Alternative No. 3 can be summarized as follows.

ADVANTAGES

- The airfield has the greatest capacity of the three alternatives because it has a parallel runway that is separated from the existing runway by enough distance to permit simultaneous operations on both runways by all types of aircraft expected to use the Airport and without a *requirement* for an ATCT.

- The location of the parallel runway to the south of the existing runway minimizes the potential noise impact of sailplane tow aircraft on existing residential areas in the Airport environs.

- The southern runway location does not pose as many possible separation problems with existing facilities such as hangars, roadways or airport boundaries as does the northern runway.

DISADVANTAGES

- The parallel runway is closer to the cliffs on the south side of the Airport and there is less flexibility in the adjustment of flight tracks than is afforded by Alternative No. 2. It also does not

have the potential for flight training touch-and-go use that the northern parallel runway has.

- o Sailplane and parachute facilities must be moved from their present location.
- o A large number of trees must be removed from the area between runways.
- o It is the most expensive of the three alternatives.
- o It requires that more land be acquired than is necessary for Alternative No. 2
- o The relocated parachute drop zone is in a more congested area and less desirable from an operational viewpoint.

5.4 EVALUATION OF ALTERNATIVES

Given the aviation demand forecasts of the Statewide Airport System Plan (SASP), Alternative No. 1 is the first step in the development of Dillingham Airfield beyond the near term improvements. If there is greater demand than forecast by SASP for the reasons given in the assumptions (or for other, unanticipated reasons), Alternative No. 2 should be the second step in airport development for the following reasons. (It should also be the first step in development if demand supports a greater first step).

1. The northern parallel runway can probably provide as much airfield capacity as the inherent limitations of the Dillingham site can practically support. The southern parallel runway has a potential for handling more operations, but there are many complications relative to airspace and safety considerations connected with the mix of

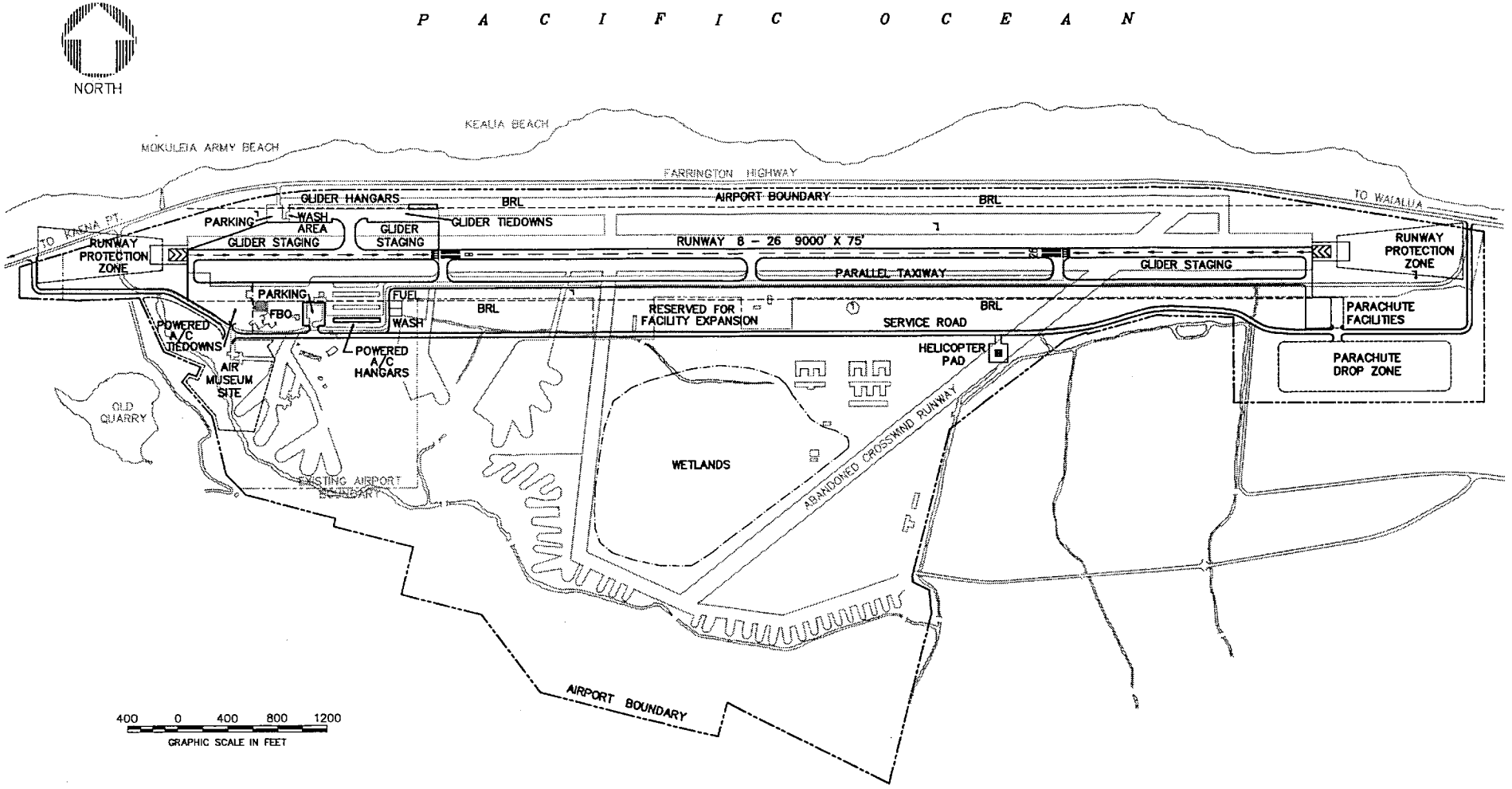
aviation activities that are accommodated at Dillingham that might ultimately limit that potential.

2. The layout of the southern parallel runway eliminates the southeastern parachute drop zone and forces the use of an on-airport southwestern parachute drop zone that will be difficult to operate satisfactorily under some wind conditions, or causes the drop zone to be moved off-airport altogether.

3. The northern parallel runway provides a desirable operational option that the southern location does not, namely, touch-and-go training on the parallel runway with sailplanes operating on the main runway. If Alternative No. 3 is adopted, the parallel runway is essentially devoted to sailplane operations with little opportunity to use it for powered aircraft.

4. The northern parallel runway would have to have an ATCT for simultaneous operations because it would be less than 700 feet from the centerline of the existing runway. The southern parallel runway does not require an ATCT even though one is desirable for operation of the runway and general control of airfield operations.

5. Alternative No. 2 is a financially more conservative increment of development, and it does not rule out a southern parallel runway in the distant future if demand and operational experience should ever justify it.



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DILLINGHAM AIRFIELD MASTER PLAN AND NOISE COMPATIBILITY PROGRAM

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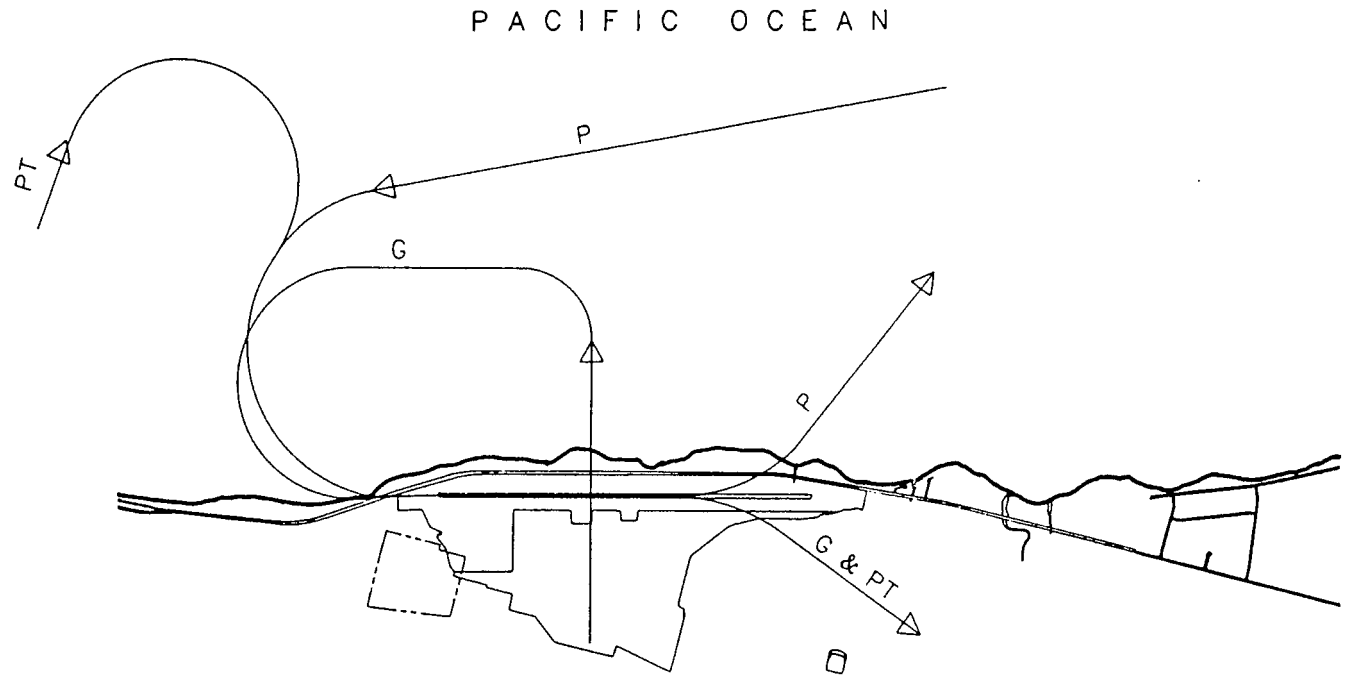
ALTERNATIVE NO. 1 - BASELINE

FIGURE
5-1



TRADEWIND CONDITIONS
NOT TO SCALE

NOTES:

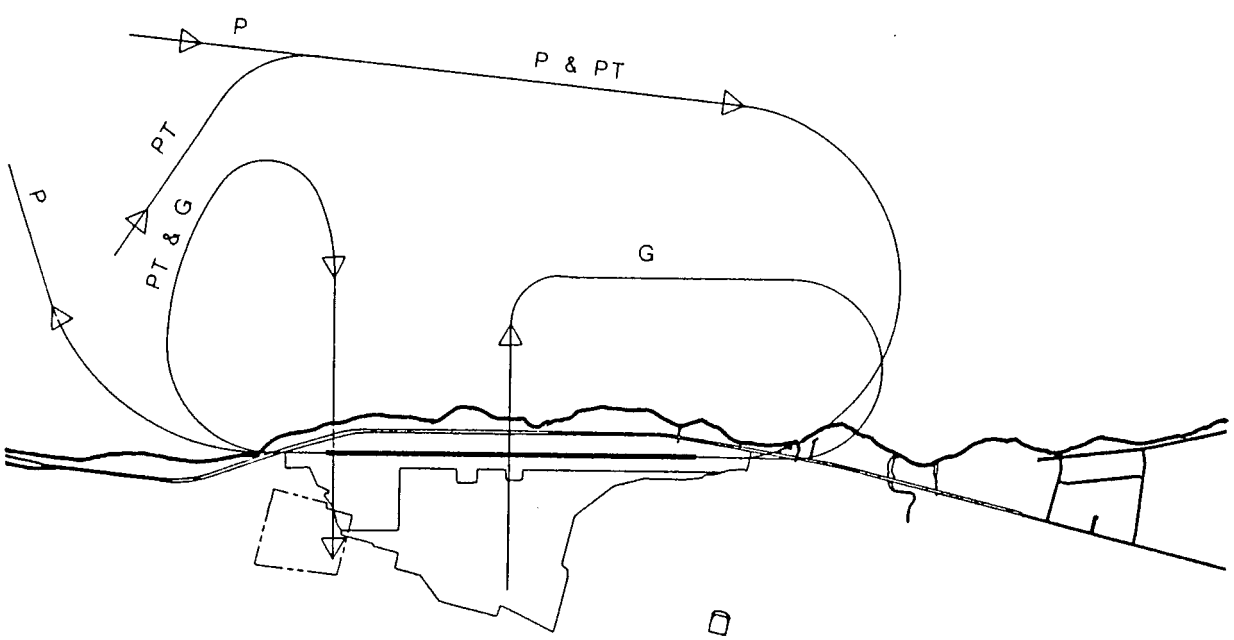
The flight tracks depicted in this figure are for presentation purposes only and should not be construed as actual flight tracks. These flight tracks represent one "alternative" for the use of HDH.

Flight patterns at HDH will remain as at present until formal notification is presented by the State of Hawaii, Department of Transportation or the Federal Aviation Adminstration.

LEGEND

P -POWERED AIRCRAFT
PT-POWERED TOW
G -GLIDER

AIRPORTS DIVISION DEPARTMENT OF TRANSPORTATION STATE OF HAWAII	**DILLINGHAM AIRFIELD MASTER PLAN AND NOISE COMPATIBILITY PROGRAM**	Edward K. Noda and Associates, Inc.	ALTERNATIVE NO. 1 - FLIGHT TRACKS - TRADEWIND	FIGURE 5-1A



KONA WIND CONDITIONS
NOT TO SCALE

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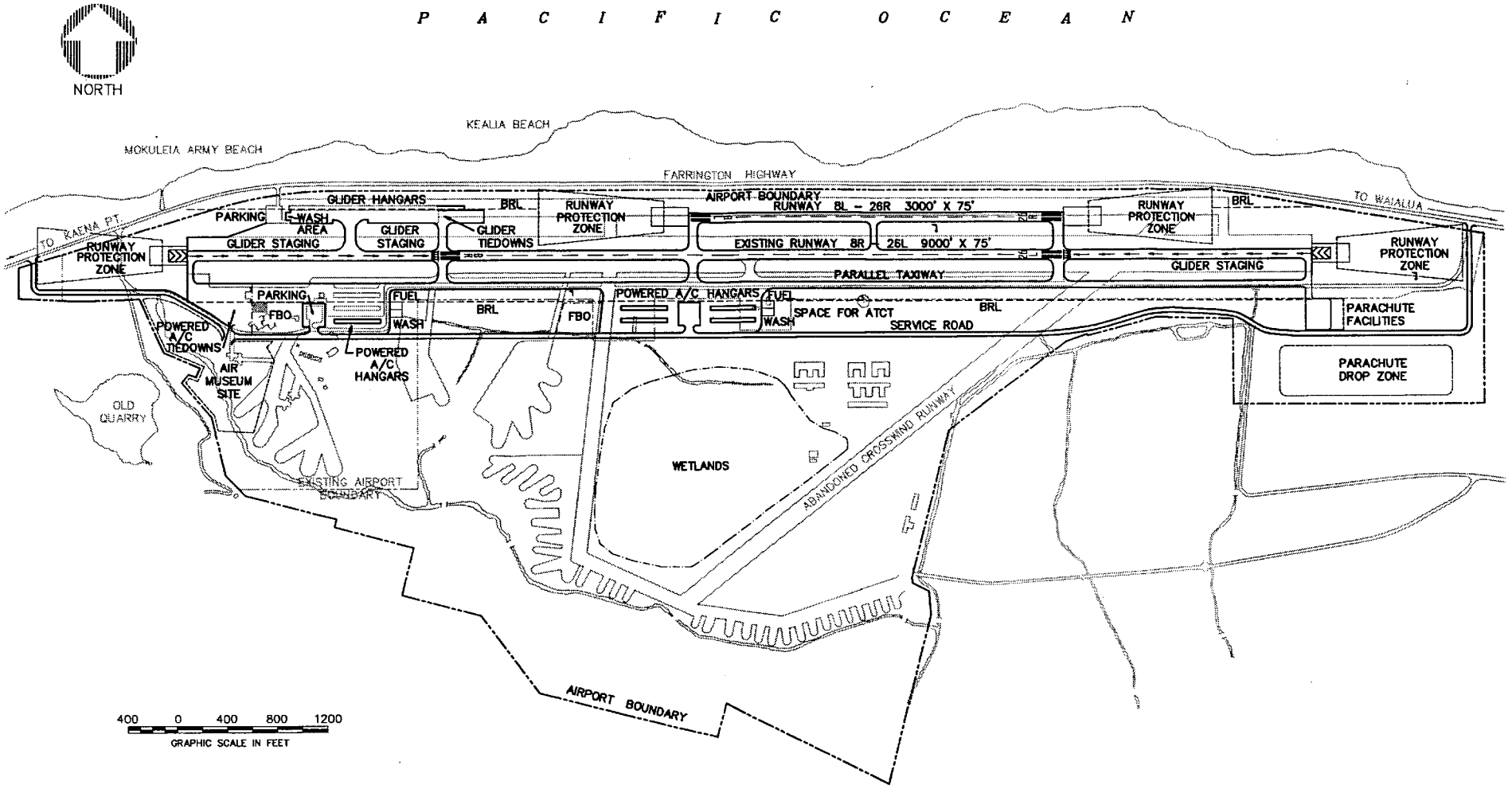
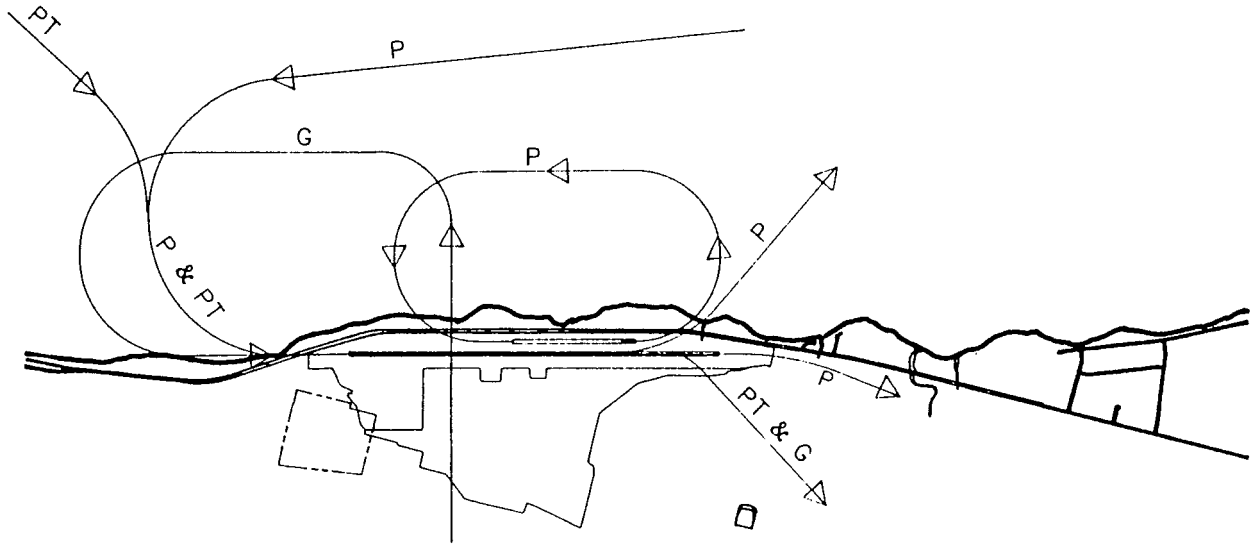
AIRPORTS DIVISION DEPARTMENT OF TRANSPORTATION STATE OF HAWAII	DILLINGHAM AIRFIELD MASTER PLAN AND NOISE COMPATIBILITY PROGRAM	Edward K. Noda and Associates, Inc.	ALTERNATIVE NO. 1 - FLIGHT TRACKS - KONA	FIGURE 5-1B



AIRPORTS DIVISION DEPARTMENT OF TRANSPORTATION STATE OF HAWAII	DILLINGHAM AIRFIELD MASTER PLAN AND NOISE COMPATIBILITY PROGRAM	Edward K. Noda and Associates, Inc.	ALTERNATIVE NO.2 - NORTHERN PARALLEL RUNWAY	FIGURE 5-2

PACIFIC OCEAN



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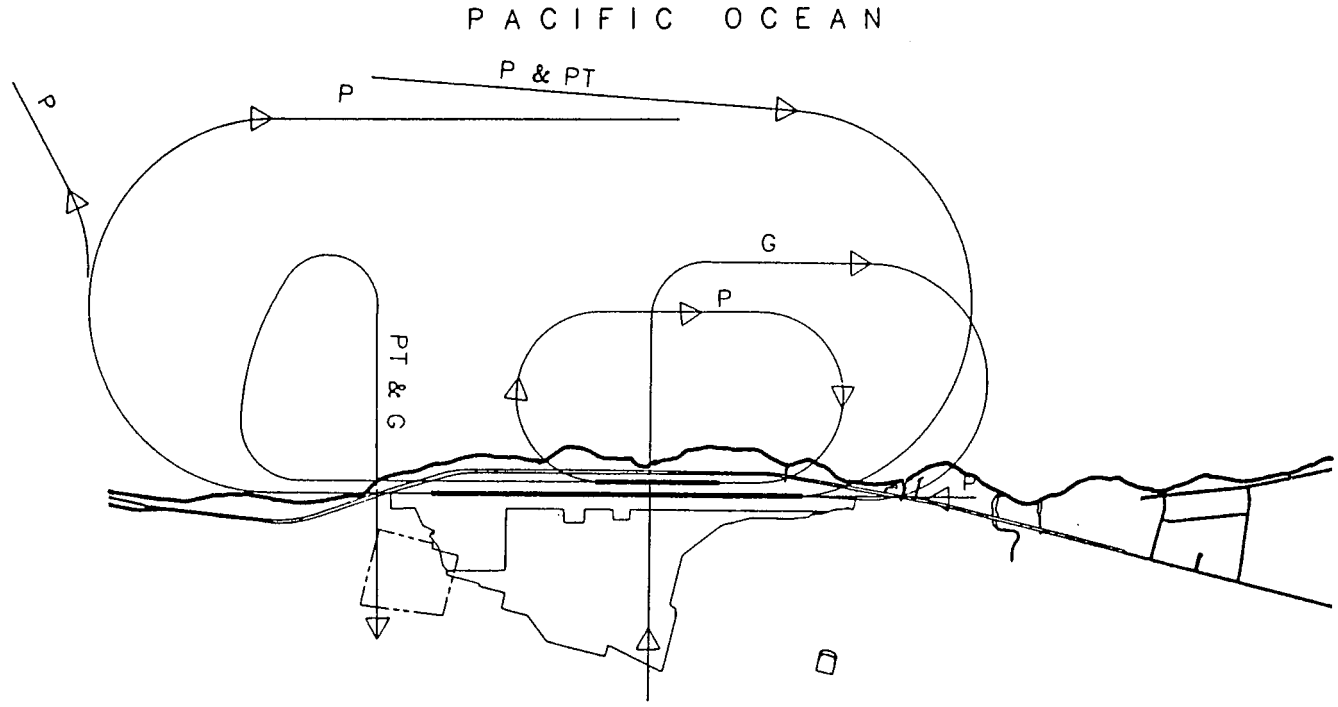
AIRPORTS DIVISION DEPARTMENT OF TRANSPORTATION STATE OF HAWAII	DILLINGHAM AIRFIELD MASTER PLAN AND NOISE COMPATIBILITY PROGRAM	Edward K. Noda and Associates, Inc.	ALTERNATIVE NO. 2 - FLIGHT TRACKS - TRADEWIND	FIGURE 5-2A



KONA WIND CONDITIONS
NOT TO SCALE

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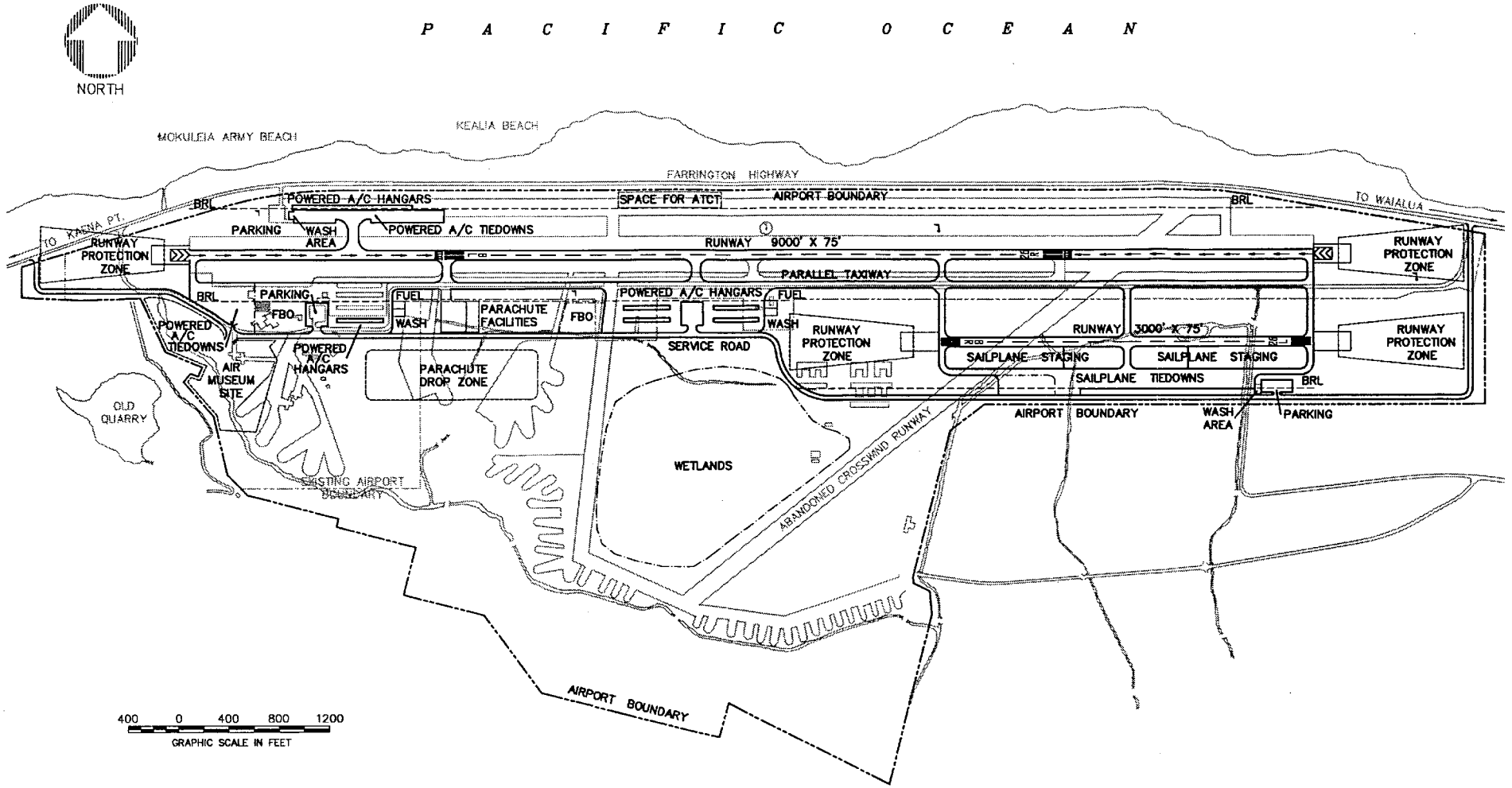
AIRPORTS DIVISION DEPARTMENT OF TRANSPORTATION STATE OF HAWAII	DILLINGHAM AIRFIELD MASTER PLAN AND NOISE COMPATIBILITY PROGRAM	Edward K. Noda and Associates, Inc.	ALTERNATIVE NO. 2 - FLIGHT TRACKS - KONA	FIGURE 5-2B



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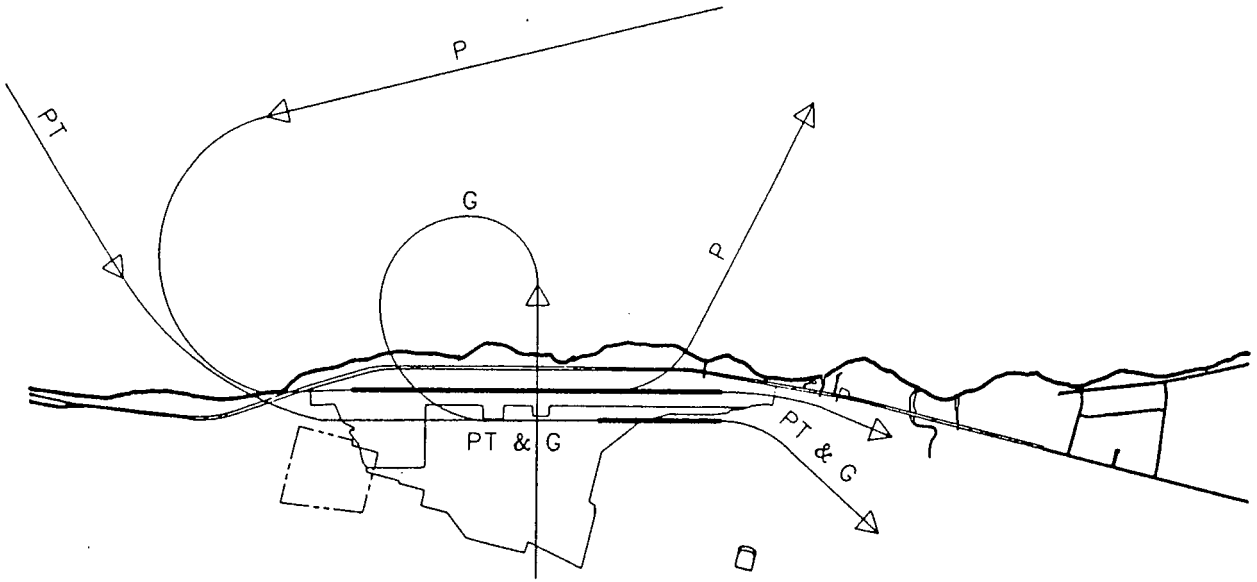
ALTERNATIVE NO. 3 - SOUTHERN PARALLEL RUNWAY

FIGURE **5-3**

PACIFIC OCEAN



TRADEWIND CONDITIONS
NOT TO SCALE

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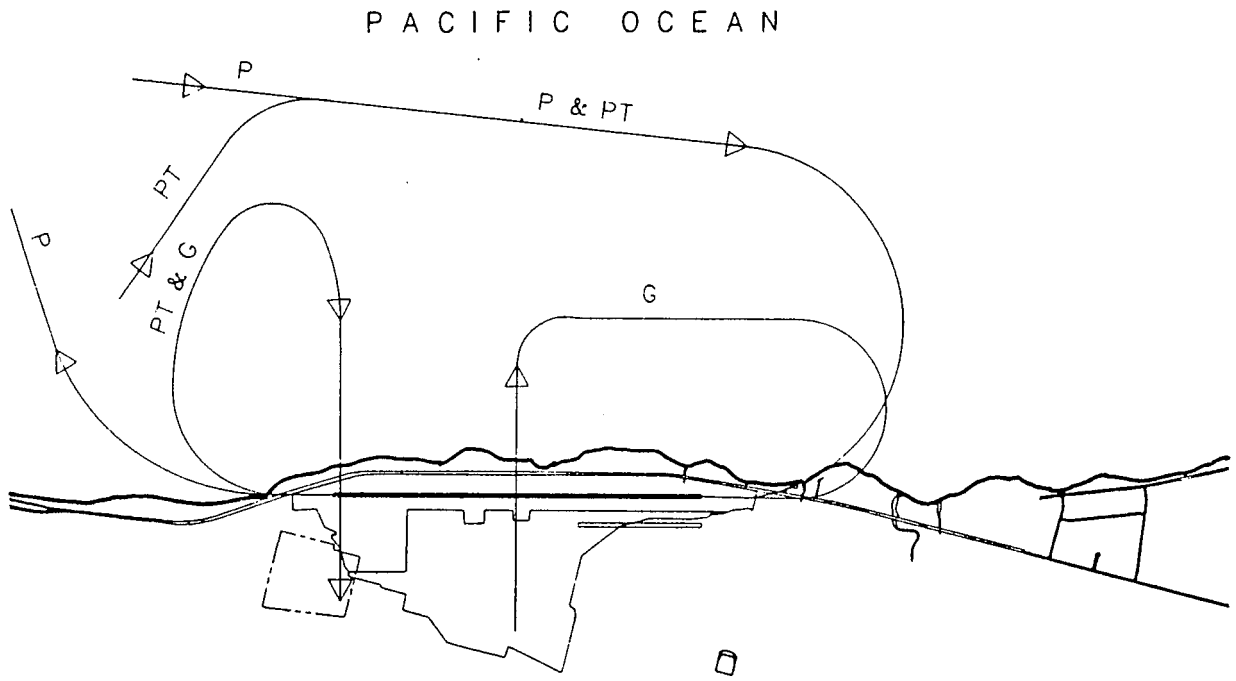
G -GLIDER

AIRPORTS DIVISION DEPARTMENT OF TRANSPORTATION STATE OF HAWAII	**DILLINGHAM AIRFIELD MASTER PLAN AND NOISE COMPATIBILITY PROGRAM**	Edward K. Noda and Associates, Inc.	ALTERNATIVE NO. 3 - FLIGHT TRACKS TRADEWIND	FIGURE 5-3A



KONA WIND CONDITIONS
NOT TO SCALE

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AIRPORTS DIVISION DEPARTMENT OF TRANSPORTATION STATE OF HAWAII	DILLINGHAM AIRFIELD MASTER PLAN AND NOISE COMPATIBILITY PROGRAM	Edward K. Noda and Associates, Inc.	ALTERNATIVE NO. 3 - FLIGHT TRACKS - KONA	FIGURE 5-3B

Chapter 6

RECOMMENDED MASTER PLAN

6.0 RECOMMENDED MASTER PLAN

This chapter presents the recommended overall plan for developing Dillingham Airfield to the year 2010 and contains revised versions of officially required Federal Aviation Administration (FAA) planning documents. The revised Airport Layout Plan (ALP) will be submitted to the FAA for approval in accordance with standard procedures.

6.1 OVERVIEW

Preceding chapters have presented forecasts of aviation demand, facility requirements to meet forecast demand, and alternative concepts to satisfy facility requirements. This chapter describes the recommended plan that has emerged from the above process in terms of land use, airfield, terminal, access, and utility requirements. The plan outlined in this chapter and depicted on Figure 6-1 shows how Dillingham Airfield would look in the year 2010 if the assumptions that were made about demand and other factors are correct and development proceeds accordingly.

6.2 LAND USE PLAN

Figure 6-2 shows proposed land use within the boundary and in the environs of Dillingham Airfield in the year 2010.

6.2.1 Existing Land Use. Table 6-1 shows existing land use within the airport boundary as established by the present Army Lease of Property on Dillingham Military Reservation (see Appendix G).

6.2.2 Proposed Acquired Land. In order to develop Dillingham Airfield to become Oahu's general aviation airport and meet the aviation demand for the year 2010, the State of Hawaii proposes to acquire all of the land within the boundary of Dillingham

Military Reservation (DMR) and miscellaneous parcels outside of the boundary that are both Federally and privately owned. A joint use agreement will be negotiated between the State and the Army to make provisions for continuing the military training activities that are presently carried out on DMR. Figure 6-3 shows land to be acquired including privately owned land as well as ceded and government land within DMR.

Table 6-1

EXISTING ON-SITE LAND USE
DILLINGHAM AIRFIELD

	Land Use Category	Quantity (Acres)
1.	Aircraft Operating Area	128.4
2.	Terminal Area	24.5
3.	Aviation Commercial Area	25.1
4.	Aviation Reserve/Buffer Area	43.5
	TOTAL	221.5

The following definitions apply to the above land use categories.

1. **Aircraft Operating Area:** area set aside for the operation of aircraft, including areas reserved for protection from obstructions or facilities.

2. **Terminal Area:** area set aside for terminal buildings, hangars, airport support facilities, parking and roadways.

3. **Aviation Commercial Area:** area set aside for aviation services including aircraft maintenance, aircraft servicing, aircraft fuel and lubricants, and the sale of aircraft accessories.

4. **Aviation Reserve-Buffer Area:** areas to be held in reserve for future facility expansion, airport support activities, and noise and activity buffers including areas not suitable for development because of size, shape or topography.

Land within DMR falls into two categories: ceded land that was given to the Federal Government by the State of Hawaii for military use, and fee simple land that

was purchased by the government from private owners. There are approximately 87.0 acres of ceded land to be acquired and 522.4 acres of fee simple land. Included in the land within DMR is 55.0 acres that are classified as "wetlands" by the U.S. Army Corps of Engineers.

Land recommended for acquisition outside of the boundary of DMR consists principally of a 40.0 acre parcel of privately owned land that is in agricultural use; the land owner is Castle and Cooke.

The total quantity of land to be acquired by the State for Dillingham Airfield is approximately 649.4 acres, of which, 609.4 acres are Federal land and 40.0 acres are private land. Included in the 609.4 acres of Federal land are the 221.5 acres presently leased from the Army by the State for general aviation use.

Although it is the State's long term intent to acquire all of the property within the boundary of DMR and do so in a single transaction during Phase I of the development program, an alternative approach has been considered.

The land that is of most importance to the State as far as operation of the Airport is concerned, lies to the north of the newly aligned service road that runs east and west across the site and parallel to existing Runway 8-26. Land to the south of the road extending to the DMR boundary along the cliffs, is used for military training exercises and is expected to continue to be so used in the foreseeable future. Land acquisition could take place in two steps rather than one, with roughly everything north of the service road being acquired in the first step. Approximately 380.0 acres would be involved, including all of the land presently under lease from the Army and all ceded land. That would leave 229.4 acres of fee simple military land to be acquired in step two.

Consideration has also been given to acquiring the 40.0 acres of private land that is owned by Castle and Cooke through a land trade rather than a direct land

purchase. The State owns other parcels of land that could be considered to be of comparable value by the private owners and a negotiated land deal is a possible alternative to outright purchase of the land.

6.2.3 Proposed On-Site Land Use. From the viewpoint of flight operations, land use within the Airport boundary is divided between the north ramp where sailplanes are based and the south ramp where powered aircraft are based. The south ramp area also contains all airport support facilities including Fixed Base Operators, fuel storage, Aircraft Rescue and Firefighting (ARFF) facilities, airport maintenance facilities, and the existing UNICOM tower. The two ramp areas are separated by existing Runway 8-26 and both areas are connected to it by the system of taxiways. The recommended new parallel runway occupies the eastern end of the north ramp area.

At the two ends of the south ramp are the air museum site and the parachute drop zone and its associated facilities; the helipad is located near the center of the south ramp area on the old crosswind runway which is now inactive. Bordering these facilities along the southern boundary of the civil airport are areas used by the Army for training purposes. The boundary between civil and military activities is generally marked by the east/west airport service road which runs parallel to existing Runway 8-26 on its south side.

On-site land use for the Recommended Master Plan is shown in Table 6-2. Land use category definitions are the same as in subsection 6.2.1.

6.2.4 Existing and Potential Land Use in the Airport Environs. Land in the airport environs located to the north of Farrington Highway in a narrow strip between the highway and ocean is military and public beach except for the Mokuleia Beach residential development and several small, privately owned plots. No additional development is expected to occur in this area.

Table 6-2

PROPOSED ON-SITE LAND USE
DILLINGHAM AIRFIELD

	Land Use Category	Quantity (Acres)
1.	Aircraft Operating Area	174.3
2.	Terminal Area	81.6
3.	Aviation Commercial Area	60.4
4.	Aviation Reserve/Buffer Area	278.1
5.	Wetlands (Protected)	55.0
	TOTAL	649.4

A quantity of land bordering the Airport on the east has been acquired by a developer. The land acquired by the developer is now zoned for agricultural use and although the owner has made informal inquiries, there have been no requests to rezone it for development. If, however, that should occur in the future, it could pose an incompatible land use (noise) problem for the airport because overflights of the area are now made by both civil and military aircraft and there would be even more in the future. This subject is addressed in more detail in the FAR Part 150 Noise Compatibility study.

Land to the west and south of the Airport is used principally for military purposes and the abrupt rise of the pali (cliffs) along the southern border of the Dillingham Military Reservation make any future incompatible land use there highly unlikely.

6.2.5 Required State and County Land Use Changes. Chapter 2 and Appendix H describe existing land use in and around Dillingham Airfield according to present State of Hawaii and City and County of Honolulu zoning regulations. In the process of acquiring the land described in subsection 6.2.2, it will be necessary to change the State land use classification from "Agriculture" to "Urban" and the County land use

zoning from " Agriculture" and "Military & Federal" to "Industrial and Public Facility," respectively. The approval of a Plan Review Use (PRU) is also required.

6.3 AIRFIELD PLAN

Plans for the development of the airfield at Dillingham are shown in Figure 6-1 and on the revised Airspace Plan (Figure 6-5) contained in this section. The Master Plan is based on accommodating small aircraft of less than 12,500 pounds maximum gross weight in aircraft design group B-II. Figure 6-1 shows that by 2010 the existing runway pavement will be improved but its length will be the same as at present because it is adequate for any foreseeable general aviation use. Airfield capacity requirements indicate the need to protect space for a new parallel runway in the long term. Taxiways are improved and added to support operations on the two runways. Navigational Aids and an Air Traffic Control Tower or air traffic advisory facility are proposed to handle the growth of aircraft operations and support training activities. Expanded and improved airfield facilities will accommodate over 300,000 aircraft operations annually under VFR conditions which is more than enough capacity to satisfy the maximum forecast of 226,000 operations in 2010. The addition of a parallel runway would allow the Airfield to accommodate over 400,000 aircraft operations per year.

As described in Chapter 4, a Precision Approach Path Indicator (PAPI) should be planned for both Runway 8R and 26L. Additional study has also indicated that an offset localizer approach (LDA) of approximately 40 degrees is probably feasible. Further study and coordination with the FAA, beyond the scope of this Master Plan, would be required to determine the exact configuration of the LDA procedure.

If nighttime civil operation is determined to be feasible, airfield lighting as described in Chapter 4 is required. However, there are no plans for nighttime civil operation at Dillingham Airfield at this time.

6.3.1 Airport Layout Plan (ALP). Figure 6-4 shows the revised Airport Layout Plan for Dillingham Airfield. The ALP is prepared in accordance with FAA Advisory Circular 150/5070-6A and is a public document that is submitted for official approval by the FAA.

6.3.2 Airspace Plan. Figure 6-5 shows the revised Airspace Plan for Dillingham Airfield. It deals principally with the imaginary surfaces of FAR Part 77, *Objects Affecting Navigable Airspace* (Appendix B, Reference 16). The Airspace Plan shows obstructions to aircraft operations including terrain and other natural as well as man made objects.

6.4 TERMINAL AREA PLAN

Figure 6-1 shows terminal area development to the year 2010. Major facility improvements include expansion of both existing sailplane and powered aircraft terminal areas and the addition of a new powered aircraft area at mid-field on the southern side of existing Runway 8-26. These improvements include additional hangars, aircraft and airport support facilities, and space for commercial aviation/FBO activities.

Figure 6-6 shows the revised Terminal Area Plan for Dillingham Airfield. The Terminal Area Plan, prepared in accordance with FAA Advisory Circular 150/5070-6A, (Appendix B, Reference 12), shows facilities such as hangars, aircraft and auto parking areas, and airport support facilities in conceptual and schematic form. The drawing delineates the basic size of facilities and locates them with respect to one another.

6.5 AIRPORT ACCESS PLAN

Figure 6-7 shows the Airport Access Plan for Dillingham Airfield. Because Dillingham Airfield is located at the end of Farrington Highway that approaches from one direction and ends just beyond the Airfield, access to the Airfield is uncongested and expected to remain so in the future. There are three entrances and exits from the Airfield

to Farrington Highway, one at each end of the Airfield and one at the sailplane area. Traffic volumes are expected to remain low to the year 2010.

6.6 AIRPORT UTILITY PLAN

Figures 6-8 through 6-10 show the existing Utility Plans for Dillingham Airfield. Future utility requirements in terms of specific system improvements are difficult to determine, but general requirements can be described as follows.

6.6.1 Water System. A separate study of the water system for Dillingham Airfield was performed and is contained in Appendix E. The study considered two major alternatives for a future water system.

1. Connection of the Airfield to the Board of Water Supply system. This would involve installation of approximately 7,000 feet of water mains.

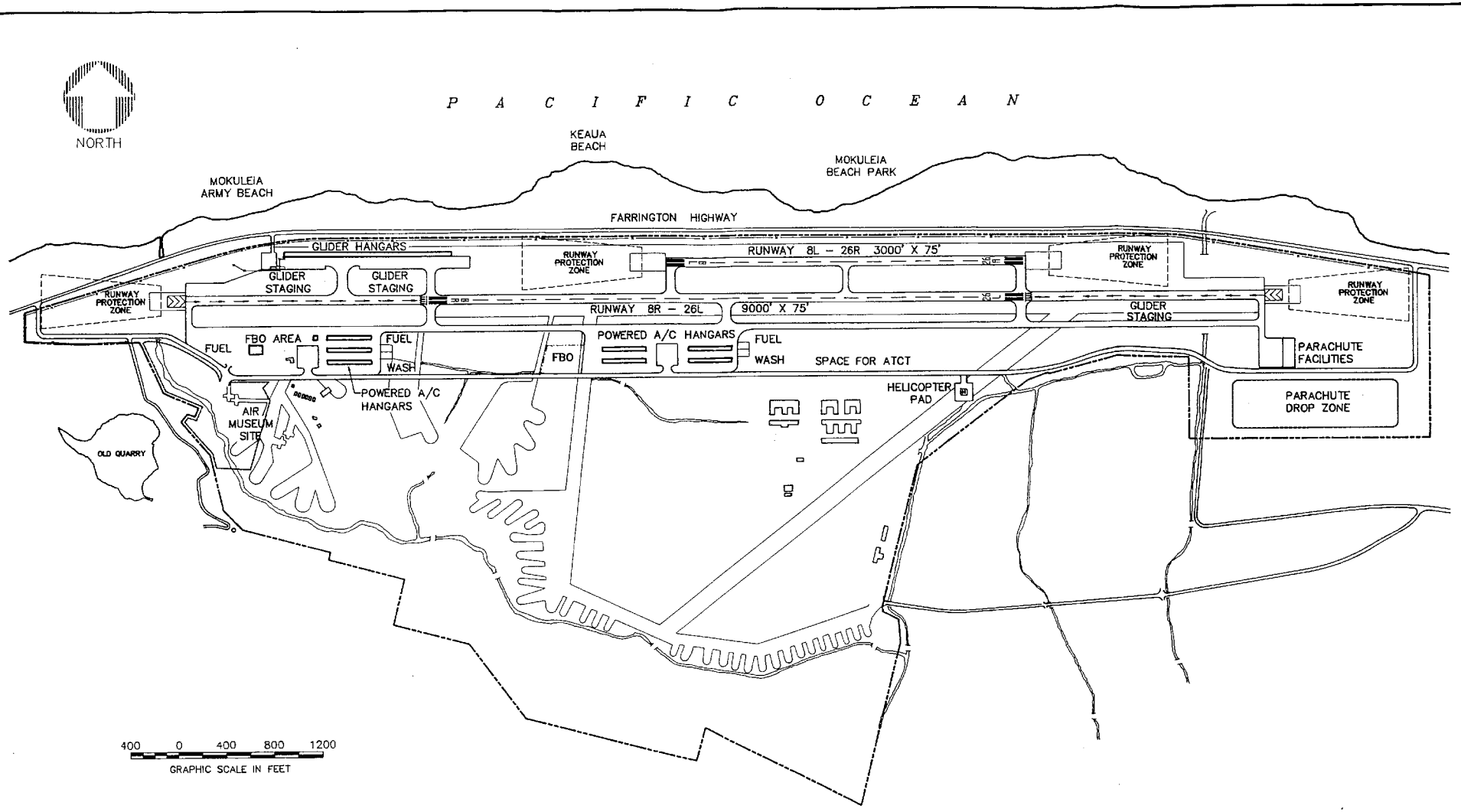
2. Transfer of the existing water system to the Board of Water Supply. This would involve refurbishing the system to bring it up to Board of Water Supply standards.

6.6.2 Wastewater System. The present system of cesspools will be replaced with septic systems or other DOH approved system. These will be sized and located to service the major terminal areas:

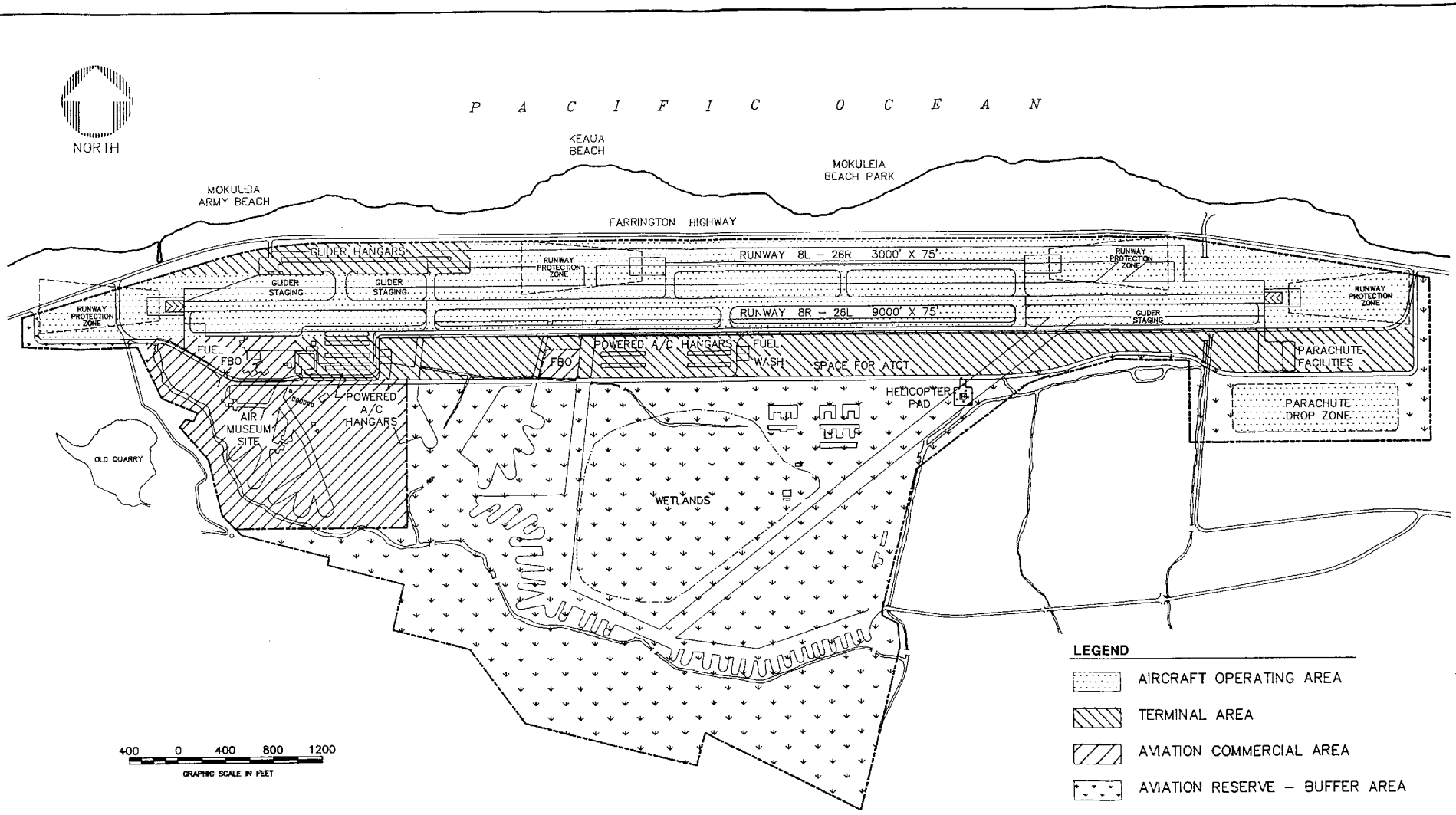
- o Glider area.
- o Western powered aircraft area.
- o Mid-field powered aircraft area.
- o Parachute facilities.

6.6.3 Electrical and Communication System. The present electrical power and telephone supply systems will require additional capacity. Service will be supplied to new terminal areas and facilities such as the Air Traffic Control Tower by additional underground ducts.

6.6.4 Drainage System. It will be necessary to refurbish and otherwise improve existing drainage facilities, some of which are substandard. In addition, drainage for the mid-field facilities will require more drain pits or new drains across the airfield to the north of Farrington Highway.



AIRPORTS DIVISION DEPARTMENT OF TRANSPORTATION STATE OF HAWAII	DILLINGHAM AIRFIELD MASTER PLAN AND NOISE COMPATIBILITY PROGRAM	Edward K. Noda and Associates, Inc.	RECOMMENDED MASTER PLAN	FIGURE 6-1



AIRPORTS DIVISION
DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII

DILLINGHAM AIRFIELD MASTER PLAN AND NOISE COMPATIBILITY PROGRAM

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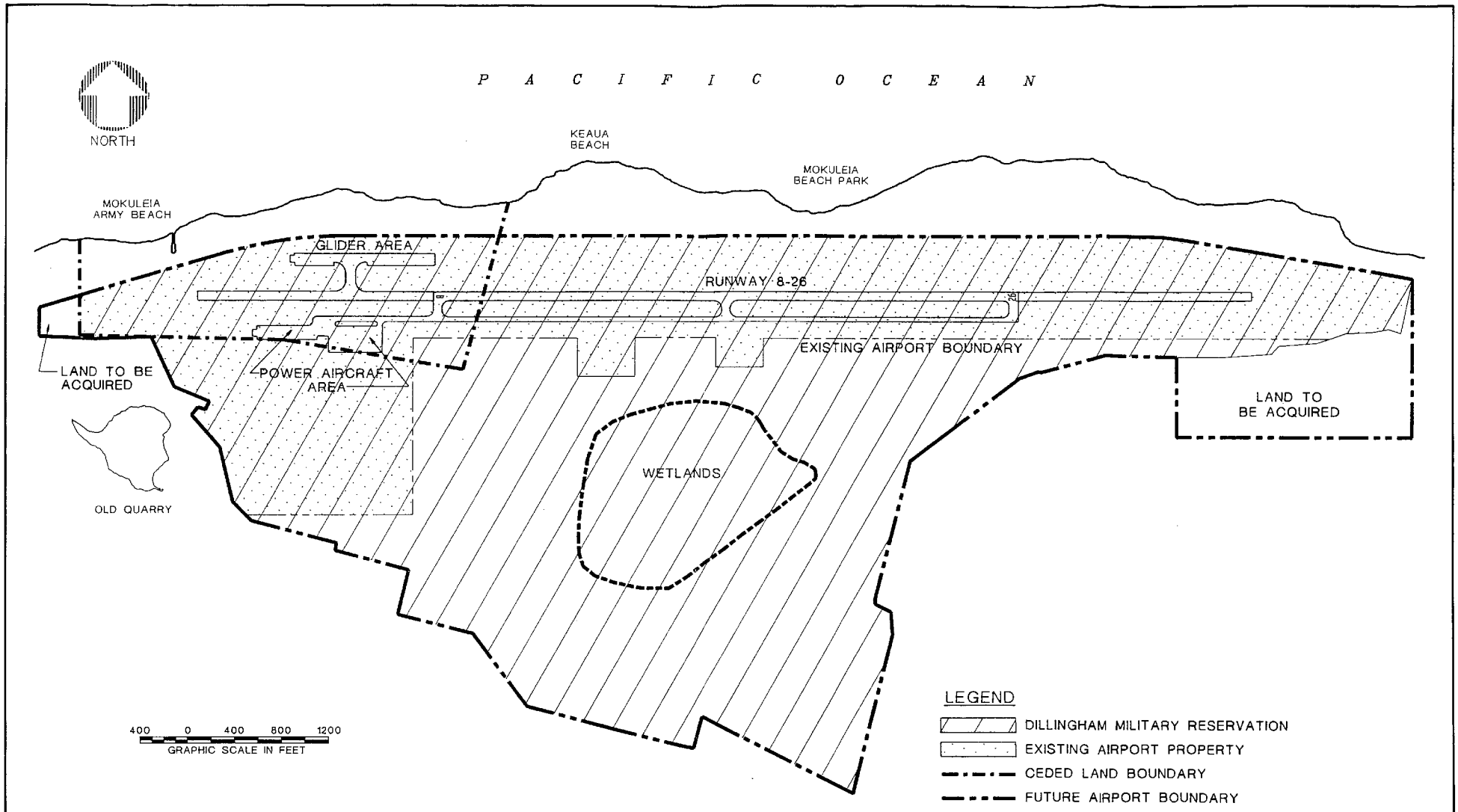
LAND USE PLAN

FIGURE **6-2**



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DILLINGHAM AIRFIELD MASTER PLAN AND NOISE COMPATIBILITY PROGRAM

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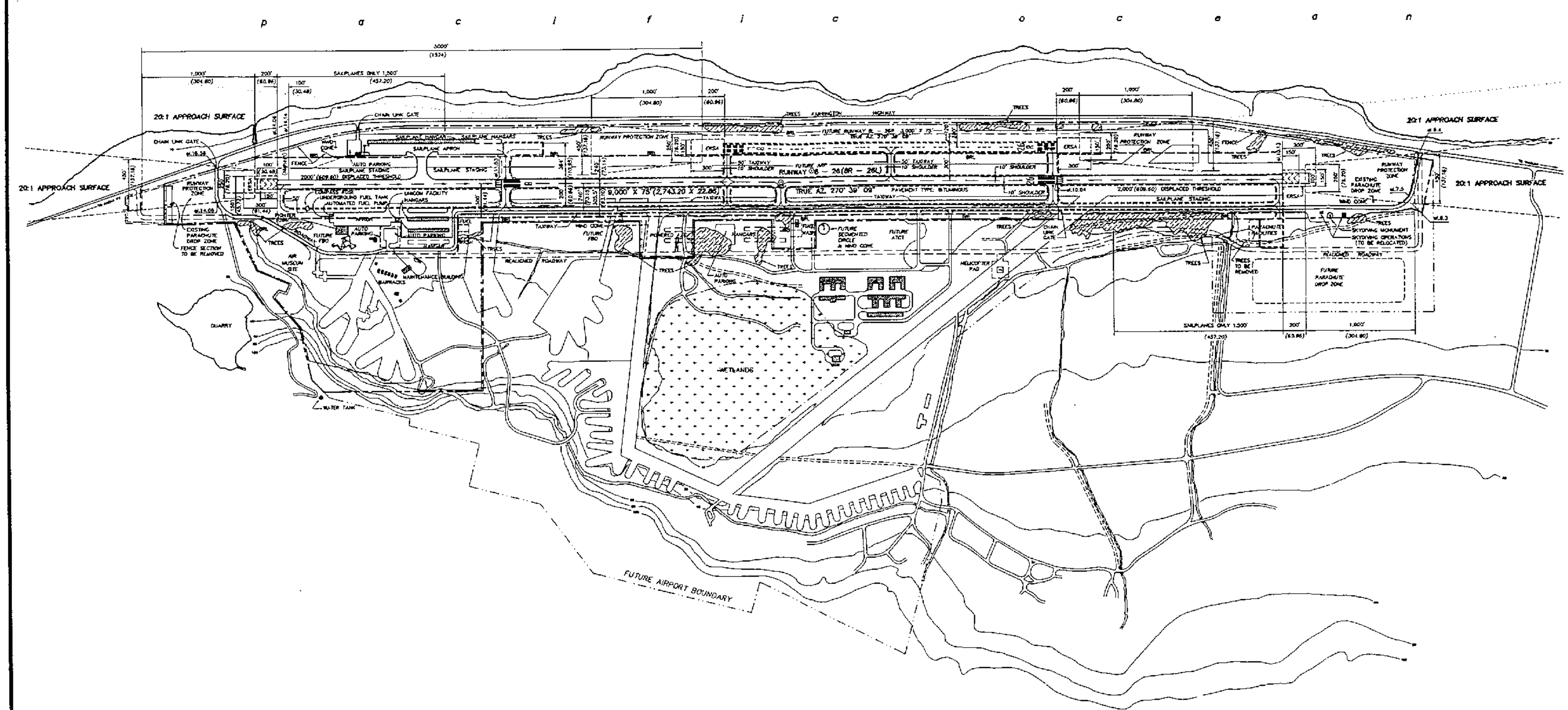
LAND ACQUISITION

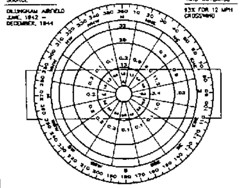
FIGURE
6-3



WIND ROSE

SOURCE
DILLINGHAM AIRFIELD
JUNE, 1942 –
DECEMBER, 1944

WIND COVERAGE
93% FOR 12 MPH CROSSWIND



GRAPHIC SCALE IN M. P. H.

LEGEND

	EXISTING	ULTIMATE
AIRPORT BOUNDARY		
BUILDING RESTRICTION LINE (BRL)	BRL	BRL
BUILDINGS		
BUILDINGS TO BE REMOVED		
APPROACH SURFACE		
FENCE LINE		
GROUND CONTOURS		
RUNWAY, TAXIWAY, APRON & HANGARS		
PAVED ROADWAYS		
UNPAVED ROADWAYS		
TREES		
WETLANDS		
EXTENDED RUNWAY SAFETY AREA	ERSA	
BLAST PAD		

AIRPORT DATA

	EXISTING	ULTIMATE
AIRPORT REFERENCE POINT (ARP) COORDINATES	21°35'00" N 158°12'00" W	21°35'01" N 158°11'57" W
NORMAL MAX. TEMPERATURE (HOTTEST MONTH)	90° F	SAME
AIRPORT ELEVATION (MSL)	15'	SAME
AIRPORT & TERMINAL NAVIGATIONAL AIDS	NONE	NONE
AIRPORT TYPE	GA/GU	SAME
% WIND COVERAGE	93	SAME
AIRPORT REFERENCE CODE	—	B – I

RUNWAY DATA

	RUNWAY 8 – 26 (8R – 26L) EXISTING		RUNWAY 8 – 26 (8R – 26L) ULTIMATE		RUNWAY 8L – 26R EXISTING		RUNWAY 8L – 26R ULTIMATE	
RUNWAY IDENTIFICATION	8	26	8R	26L	NOT APPLICABLE		8L	26R
APPROACH SURFACE	20 : 1	20 : 1	SAME	SAME			20 : 1	20 : 1
APPROACH LIGHTING AIDS	NONE	NONE	NONE	NONE			NONE	NONE
EXTENDED SAFETY AREA	NONE	NONE	YES	YES			YES	YES
NAVIGATIONAL AND VISUAL AIDS	NONE	NONE	NONE	NONE			NONE	NONE
RUNWAY LENGTH AND WIDTH	9,000' X 75'		SAME				3,007' X 75'	
EFFECTIVE GRADIENT (%)	.04		SAME				N.A.	
% WIND COVERAGE (12MPH/10.5 KNOTS)	93		SAME				92	
INSTRUMENT RUNWAY	NONE		NONE				NONE	
RUNWAY LIGHTING	NONE		NONE				NONE	
RUNWAY MARKING	BASIC		BASIC				BASIC	
PAVEMENT STRENGTH	40,000(S) 152,000(D) 180,000(DT)		SAME SAME SAME				12,500(S)	
DESIGN GROUP	I		I				I	
MAXIMUM ELEVATION (MSL)	14.14		SAME				N.A.	
RUNWAY AND FAR PART 77 CATEGORY	GU, VISUAL		SAME				GU, VISUAL	

TRUE NORTH
MAGNETIC NORTH 10° 27' E 1993
ANNUAL CHANGE 1' DECREASE

GRAPHIC SCALE IN FEET

GRAPHIC SCALE IN METERS

THE PREPARATION OF THIS EXHIBIT WAS FINANCED IN PART THROUGH AN AIRPORT IMPROVEMENT PROGRAM GRANT FROM THE FEDERAL AVIATION ADMINISTRATION UNDER THE PROVISIONS OF SECTION 505 OF THE AIRPORT AND AIRWAY IMPROVEMENT ACT OF 1982.

NOTES

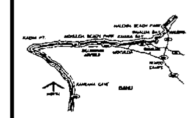
1. COORDINATES AND AZIMUTHS REFERENCED TO HAWAII STATE DATUM PLANE, ZONE 3.
2. AZIMUTHS TURNED CLOCKWISE FROM TRUE SOUTH.
3. ELEVATIONS REFERENCED TO MEAN SEA LEVEL IN FEET.
4. THIS DRAWING IS FOR PLANNING PURPOSES ONLY AND IS NOT INTENDED FOR CONSTRUCTION AND NAVIGATIONAL PURPOSES.

DEPARTMENT OF TRANSPORTATION • STATE OF HAWAII
Airports Division

DSGN	DRWN	CHKD	APPD

KEY PLAN / NOTES :

LOCATION MAP



VICINITY MAP

NO	DATE	REVISIONS

DIRECTOR DEPARTMENT OF TRANSPORTATION STATE OF HAWAII DATE

PROJECT TITLE :
DILLINGHAM AIRFIELD
AIRPORT LAYOUT PLAN

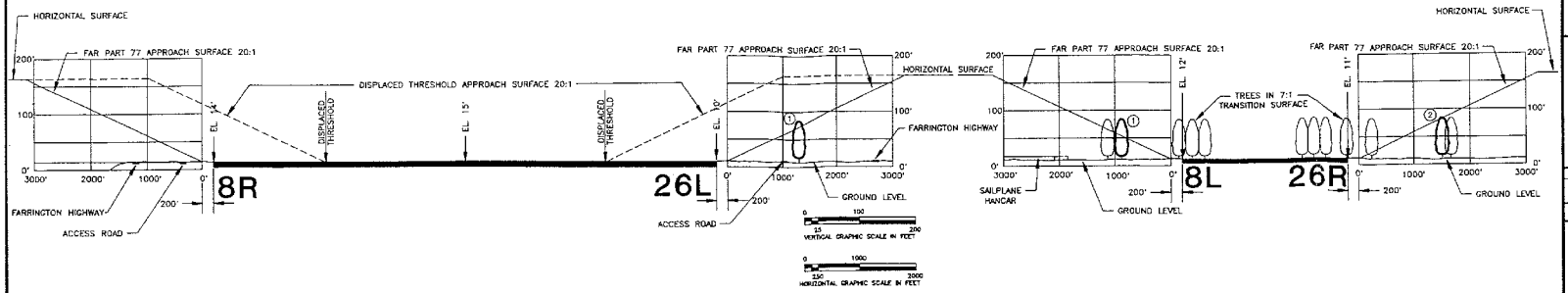
PROJECT NO. :

SHEET TITLE :
AIRFIELD PLAN

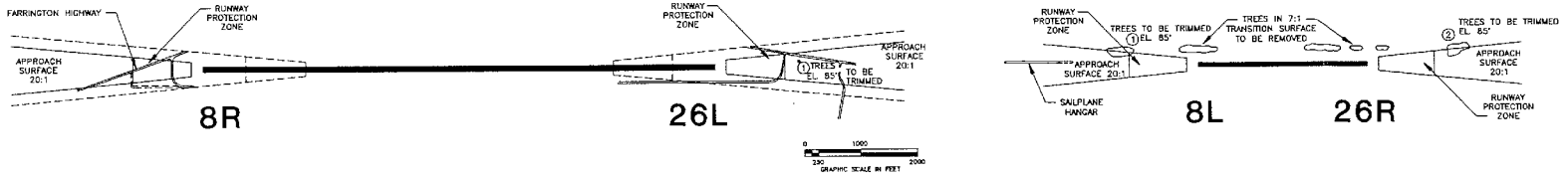
DATE : AUGUST 12, 1993
DWG NO. :

FIGURE 6–4

AIRFIELD PLAN 1 OF 3 SHEETS



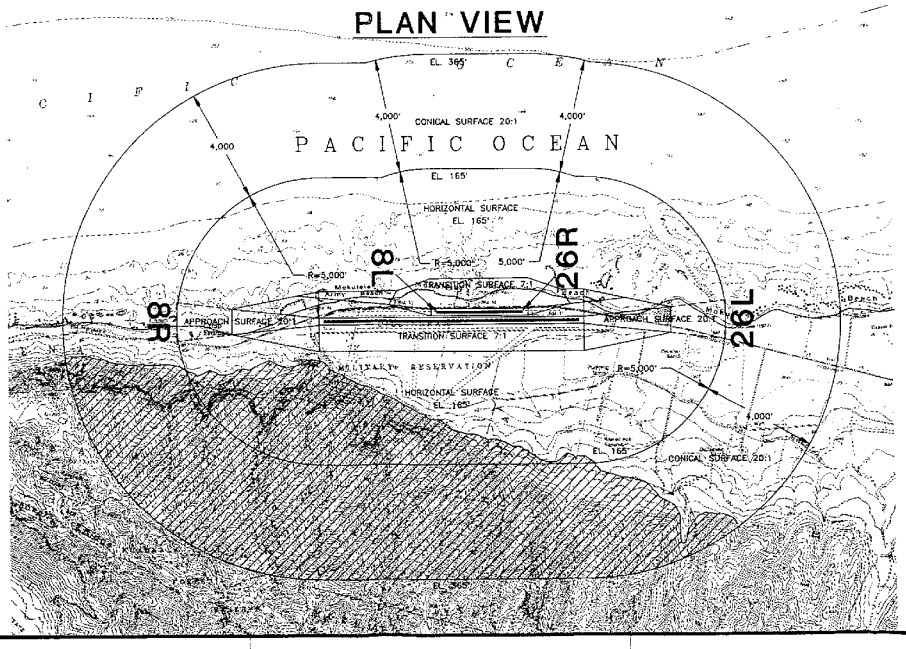
PROFILE VIEW

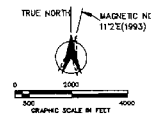


RUNWAY PROTECTION ZONE OBSTRUCTIONS

RUNWAY NUMBER	8R	26L	8L	26R	
8L-26R TRANSITION SURFACE					TRANSITION SURFACE
OBSTRUCTION NUMBER	NONE	1	1	2	3
DESCRIPTION OF OBSTRUCTION		TREES	TREES	TREES	TREES
ELEVATION		85±	85±	85±	85±
PENETRATION IN FEET	0	10	29	1	52±
PROPOSED ACTION		SHORTEN	SHORTEN	SHORTEN	REMOVE

PLAN VIEW





NOTE:

THIS DRAWING IS FOR PLANNING PURPOSES ONLY AND IS NOT INTENDED FOR CONSTRUCTION OR NAVIGATIONAL PURPOSES.

THE PREPARATION OF THIS EXHIBIT WAS FINANCED IN PART THROUGH AN AIRPORT IMPROVEMENT PROGRAM GRANT FROM THE FEDERAL AVIATION ADMINISTRATION UNDER THE PROVISION OF SECTION 505 OF THE AIRPORT AND AIRWAY IMPROVEMENT ACT OF 1982 AS AMENDED.

Airports Division

DSGN.	DRWN.	CHKD.	APPD.

KEY PLAN / NOTES :

NO.	DATE	REVISIONS

PROJECT TITLE :

DILLINGHAM AIRFIELD AIRPORT LAYOUT PLAN

PROJECT NO. :

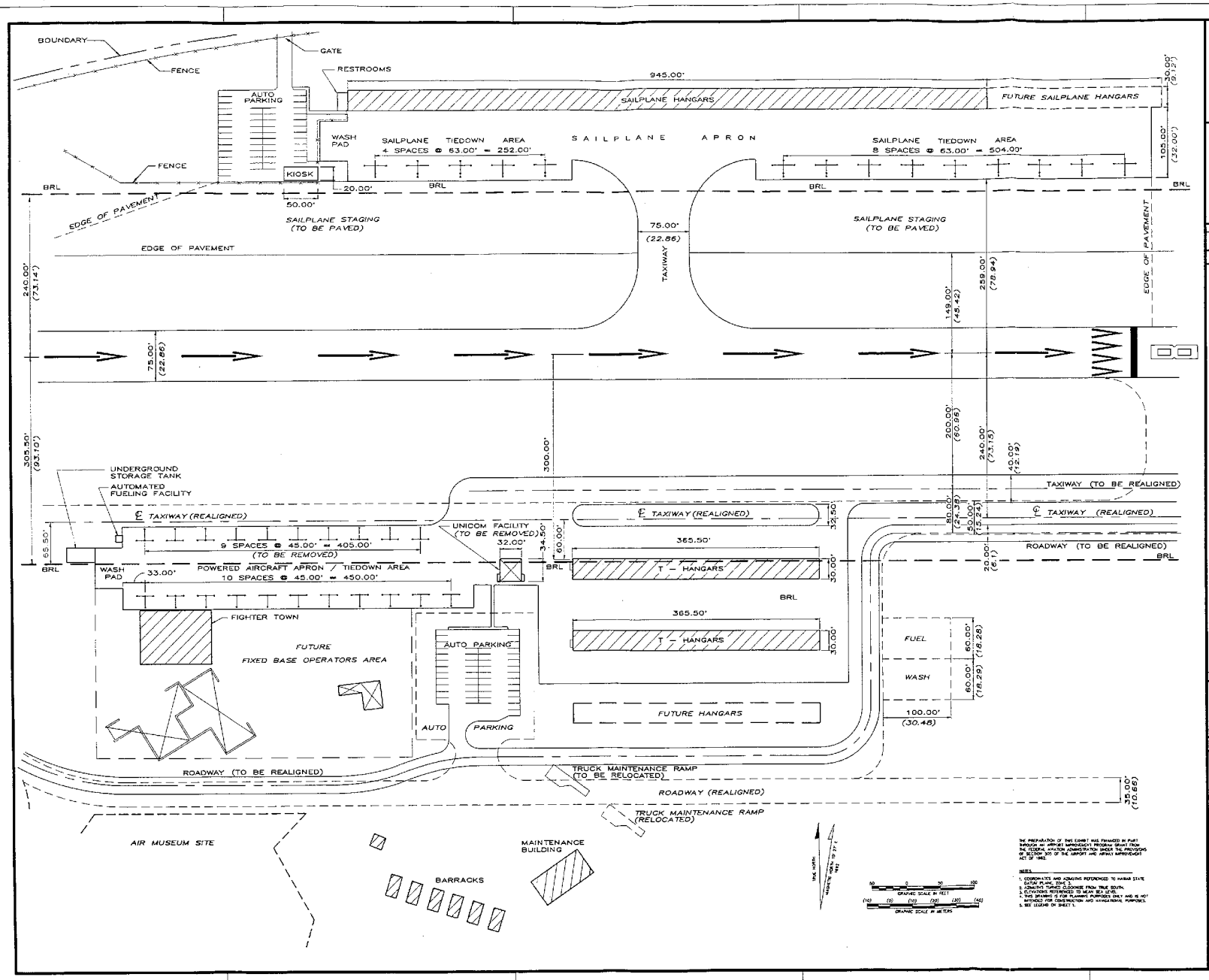
SHEET TITLE :

AIRSPACE PLAN

DATE :

DWG. NO. :

FIGURE 6-5

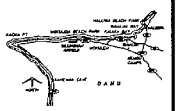


Airports Division

DSGN	DRWN	CHKD	APPD

KEY PLAN / NOTES :

LOCATION MAP



VICINITY MAP

NO	DATE	REVISIONS

DIRECTOR, DEPARTMENT OF TRANSPORTATION, STATE OF HAWAII — DATE

PROJECT TITLE :

DILLINGHAM AIRFIELD

AIRPORT LAYOUT PLAN

PROJECT NO. :

SHEET TITLE :

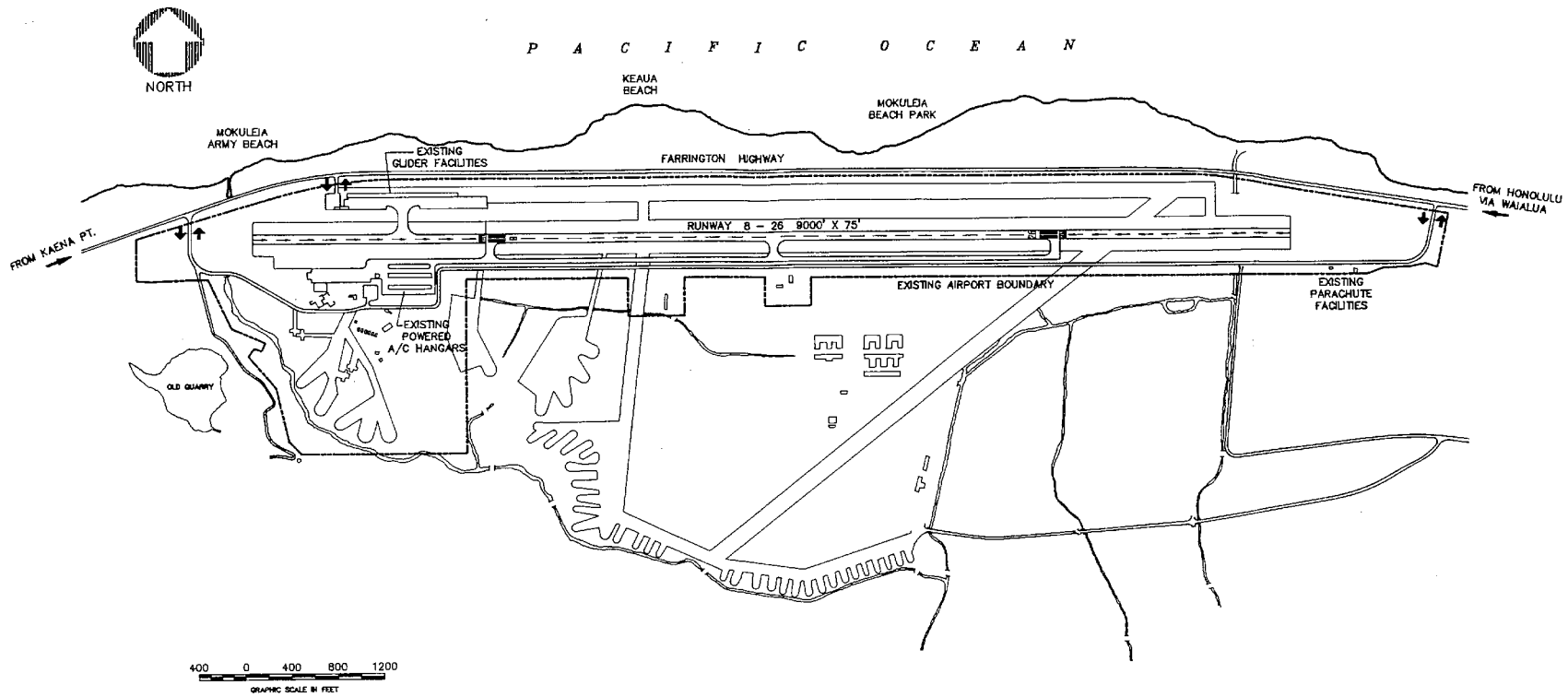
TERMINAL AREA LAYOUT PLAN

DATE : AUGUST 12, 1983

DWG NO

FIGURE 6-6

TERMINAL PLAN 2 OF 3 SHEETS



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DILLINGHAM AIRFIELD MASTER PLAN AND NOISE COMPATIBILITY PROGRAM

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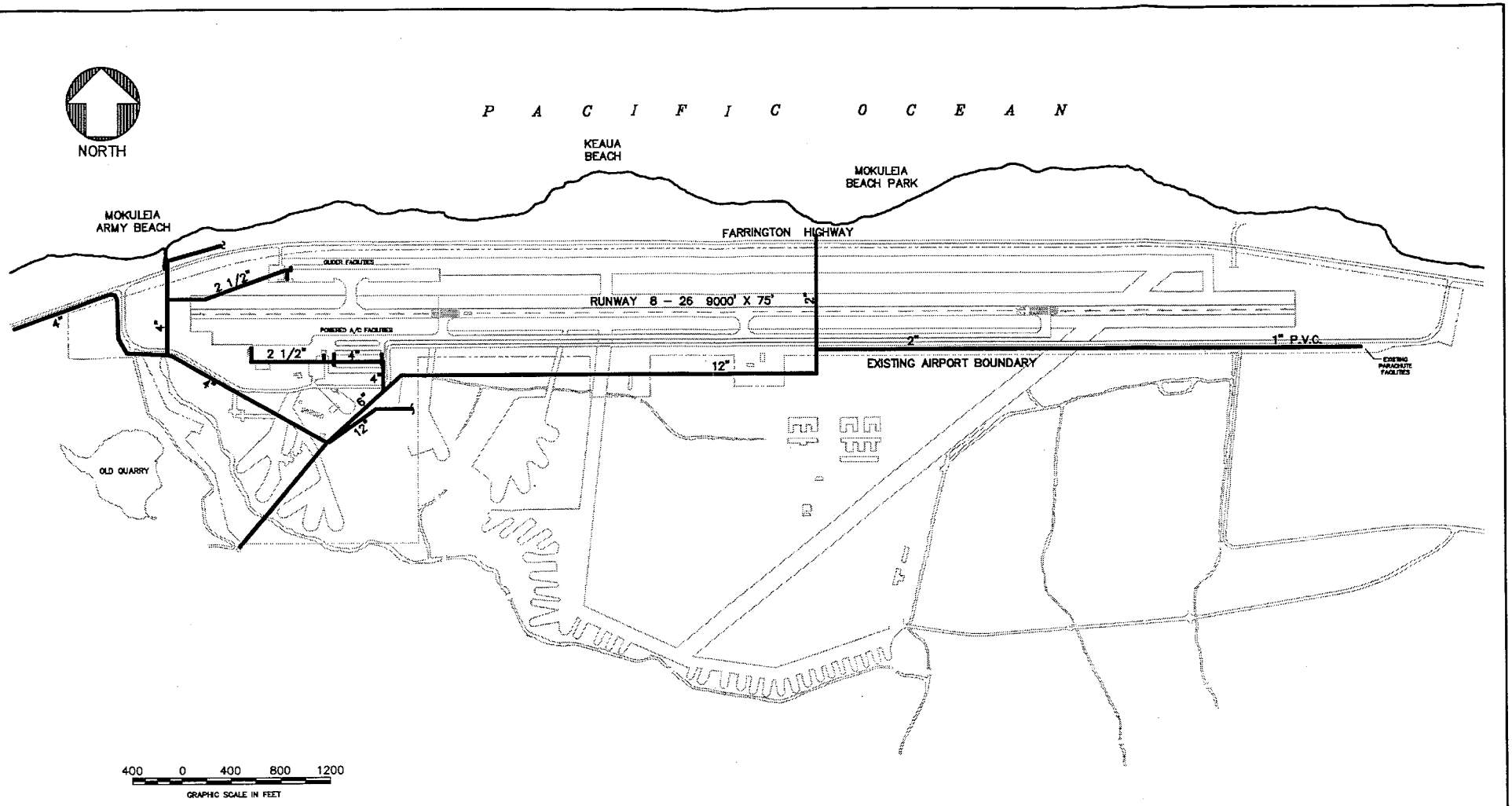
EXISTING AIRPORT ACCESS PLAN

FIGURE **6-7**



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STATE OF HAWAII

DILLINGHAM AIRFIELD MASTER PLAN AND NOISE COMPATIBILITY PROGRAM

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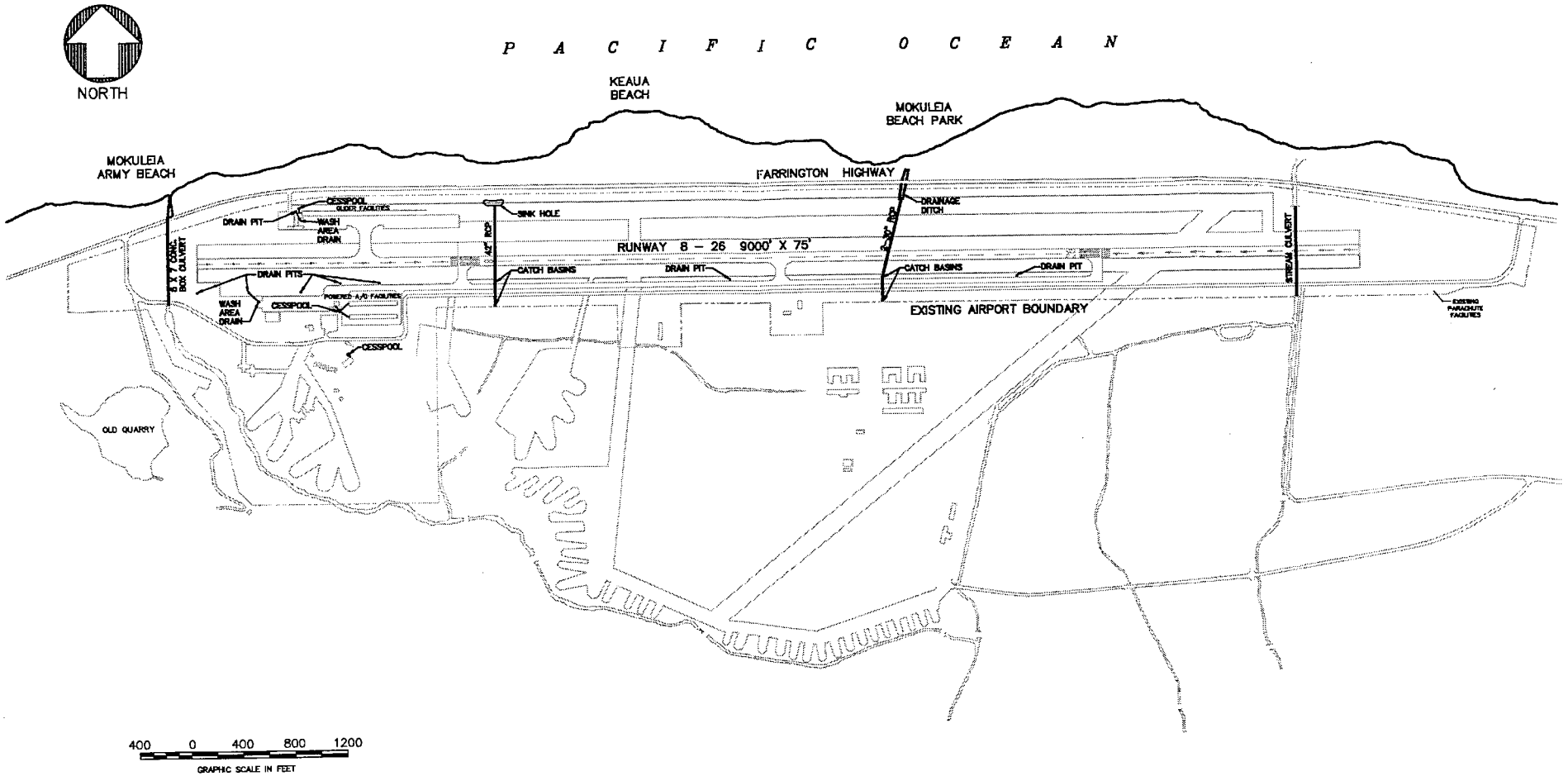
EXISTING WATER SYSTEM

FIGURE **6-8**



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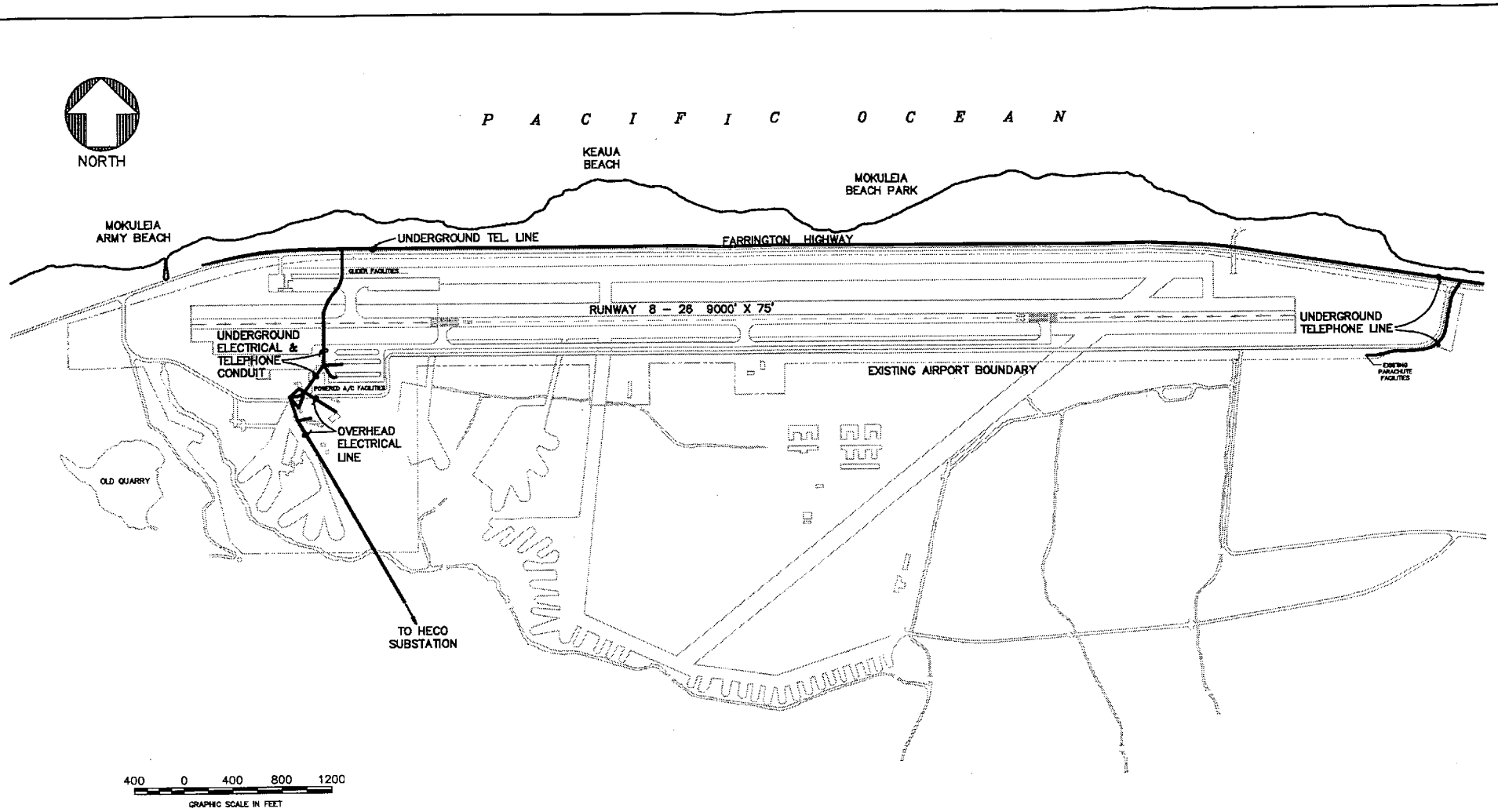
DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII

DILLINGHAM AIRFIELD MASTER PLAN AND NOISE COMPATIBILITY PROGRAM

Edward K. Noda and Associates, Inc.

EXISTING WASTEWATER AND DRAINAGE SYSTEM

FIGURE
6-9



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STATE OF HAWAII

DILLINGHAM AIRFIELD MASTER PLAN AND NOISE COMPATIBILITY PROGRAM

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EXISTING ELECTRIC POWER AND COMMUNICATION SYSTEMS

FIGURE 6-10

Chapter 7

ENVIRONMENTAL CONSIDERATIONS

7.0 ENVIRONMENTAL CONSIDERATIONS

This section identifies and documents the potential environmental impacts which may be associated with the recommended development of Dillingham Airfield. As part of the planning process, these issues were considered in the preparation of the Master Plan. A full assessment of the environmental impacts will be provided in the companion document to this Master Plan; Environmental Assessment (EA), Volume III. The EA will be an environmental analysis of the impacts due to the proposed project in accordance with federal and state environmental rules and regulations [National Environmental Policy Act (NEPA), FAA Order 5050.4A, Hawaii Revised Statutes, Chapter 343 and Title 11, Chapter 200]. Also, the EA will determine the significance of the impacts and the need for an Environmental Impact Statement (EIS). This section should not be construed, in any way, as an Environmental Assessment or Environmental Impact Statement, however, pending further study, the impacts of the proposed development are not considered to be significant.

An inventory of existing environmental studies of Dillingham Airfield has been presented in Chapter 2, Section 2.7.1. The description of the present environment is provided in Chapter 2, Section 2.7.2

The following environmental categories may be potentially impacted by the developments recommended in this Master Plan:

- noise
- air quality
- hydrology, drainage, flooding and tsunami characteristics
- wetlands
- vegetation, wildlife and marine life
- historical and archeological resources
- social concerns

- o visual attributes
- o infrastructure and public services

7.1 NOISE

Concurrent with the Master Plan, a FAR Part 150, Noise Compatibility Program is being completed which will assess the impact of aircraft noise on the Airport environs. As part of the Noise Compatibility Program, a field measurement study of aircraft noise was completed in June 1991. The field study indicates that ambient daytime noise levels in the residential areas average about 53 dBA, with average ambient nighttime noise levels about 10 dBA less (43 dBA). The noise in the area is predominately generated by insects, fowl, fauna, wind, rain and ocean waves. Day-Night Sound Levels (Ldn) were approximately 55 dBA at the noise measurement sites. Single event noise measurements in the residential areas showed single engine general aviation aircraft producing noise levels which were 6 dBA above the ambient noise level. Twin engine general aviation aircraft produced noise levels about 16 dBA above the ambient noise level.

There is an impact on residential areas in proximity to the Airport with noise complaints expressed at both the Technical Committee and Public Informational Meetings. The majority of the complaints were directed at night and evening military helicopter operations. As stated earlier, the severity of the aircraft noise impacts and mitigation measures are being studied in the FAR Part 150, Noise Compatibility Program which will be reported in Volume II of this series.

7.2 AIR QUALITY

An air quality study will be performed for this Master Plan and the results will be published in the Environmental Assessment.

7.3 HYDROLOGY, DRAINAGE, FLOODING AND TSUNAMI CHARACTERISTICS

The Master Plan includes an upgrading of the drainage system to alleviate the flooding which occurs on the east end of the runway and along the service roadway during heavy rainfalls, resulting in a positive impact on the drainage of this area.

All structures built within the flood hazard zones will be required to meet applicable flood rules and regulations. Flood Zone information for Dillingham Airfield is contained in Appendix I.

7.4 WETLANDS

The wetlands found within the vicinity of the Airfield will not be impacted by the proposed developments. The wetland south of the Airfield is proposed to be acquired from the military by the DOT-A and environmentally protected. The acquisition and management of the wetlands will be in compliance with all applicable federal and state regulations, rules and guidelines.

7.5 VEGETATION, WILDLIFE AND MARINE LIFE

If the recommended master plan is implemented, it will be necessary to impact a few of the Ironwood trees which line Farrington Highway and are within the Dillingham Airfield boundary. Some of the trees may have to be removed or relocated while others may have to be trimmed to meet FAA obstruction regulations.

A survey for terrestrial avifauna and terrestrial mammals was performed as part of this Master Plan. The conclusions of this short term survey are limited in perspective, but offer the following information:

- The present environment provides a moderate range of habitats which are utilized by the typical array of exotic birds one would expect at this elevation

and in this type of environment on Oahu. Population sizes of these species were within the limits of expectation for this area. Some species normally found in this environment were not recorded, which may have been due to the brief length of the survey.

- Migratory shorebirds such as the Pacific Golden Plover and Ruddy Turnstone were observed during the survey. Both Plover and Turnstone are common on open grass fields and old airstrips on Oahu during the months of August through April.

- No native endemic birds were recorded in the survey. The ephemeral wetlands in the lowlying areas mauka (south) of the airfield provide temporary foraging opportunities for native waterbirds.

- Laysan Albatross have only recently begun to reoccupy the main Hawaiian Islands. The challenges of predators (including humans) makes this re-establishment a difficult task. Dillingham Airfield is apparently an attractive site for albatross based on the number of birds seen in this area during the last few years. In order to prevent an increase in numbers of the albatross to the point where air safety is endangered, the State of Hawaii has entered into an agreement with the U.S. Department of Agriculture (USDA) to control the Albatross population at Dillingham Airfield.

- In order to obtain more data on mammals, a trapping program would be required. The brief observations of this survey did not reveal any unusual mammal activity.

- Except for the ephemeral wetlands which occasionally occur in the lowlying areas mauka (south) of the Airfield, the majority of the property is composed of second growth exotic vegetation that can be found throughout the lowlands of Oahu. The most important waterbird habitat occurs to the

east of Crowbar Ranch Pond. The Dillingham Quarry Pond provides habitat for coot and night heron, but is presently being used for commercial aquaculture. The effect of this aquaculture operation on the waterbirds is unknown.

7.6 HISTORICAL AND ARCHAEOLOGICAL RESOURCES

There are no historical structures in the Dillingham Airfield boundaries. An archaeological survey was prepared for this Master Plan and the following recommendations were made.

- The inland, southwestern projection of the surveyed area should be surveyed in detail. Stone structures were found within this area. The nature of these archaeological features and their relationship to the registered site 50-80-03-416 needs to be determined; an assessment of their significance should to be made.

- Areas along Polipoli river and Kawaihapai Stream should be surveyed for subsurface cultural deposits. Historical settlements are known to have existed along these streams; there is a potential for prehistoric habitation and irrigated pondfields sites as well.

- Beach sand areas along the present runway should be surveyed for burials. The proximity of the beach and previous identification of prehistoric burials in the vicinity warrant such testing.

At present, the proposed developments of the Master Plan will not impact any of the known archaeological sites referred to in the archaeological survey. The design and construction of the proposed developments will be in compliance with all applicable Federal and State rules and regulations.

7.7 SOCIAL CONCERNS

Primarily, the social concerns regarding the development of Dillingham Airfield are 1) to provide safe operation of the Airport for both the users and the surrounding community; and 2) to provide adequate facilities for the Oahu general aviation community.

Forecast increases in air traffic will probably increase the potential for noise complaints and impacts. This matter is being studied in the on-going FAR Part 150 Noise Compatibility Program.

The Airport is located in an area zoned and planned for rural development. The aviation use and function of the proposed Dillingham Airfield Master Plan will remain similar to that which presently exists and will maintain the rural character of the area.

7.8 VISUAL ATTRIBUTES

The area from Crozier Drive to Kaena Point is described in the "Coastal View Study," (Chu, 1987) as "*highly intact, consisting of Ironwood trees and other natural vegetation.*" The viewshed demonstrates the expansiveness of the area, with the primary views from the highway including significant landscaped/open areas, Ironwood forests and the Waianae Mountains. "*Although no particular reference is made in the DP's* (City and County of Honolulu-Development Plans) *concerning visual importance of this section, the overall intactness of the area is unique to Oahu.*"

The majority of the proposed developments would not impact the visual characteristics of the area. However, if a few of the Ironwood trees have to be removed, relocated or trimmed, it would be performed in such away as to minimize the impact on this portion of the viewshed in order to maintain this unique feature.

7.9 INFRASTRUCTURE AND PUBLIC SERVICES

The proposed plans for upgrading utilities will have a beneficial impact on the airfield and nearby communities. The new utilities will meet all current Board of Water Supply and Department of Health requirements and create more dependable service to the Airport and adjacent residents. The new water system and the upgrading of the Airport's Rescue and Fire Fighting equipment should provide better fire protection at the Airport and in its environs.

There should be no significant negative impact to public service.

7.10 OTHER ENVIRONMENTAL CONCERNS

Other environmental concerns such as hydrology, climate and meteorology, do not appear to be an issue with regard to the proposed Airport developments.

As noted earlier, all of the impact categories will be discussed and studied in the environmental analysis which will be reported in Volume III of the Dillingham Airfield Master Plan and Noise Compatibility Program.

Chapter 8

PRIORITY ACTION PROGRAM

8.0 PRIORITY ACTION PROGRAM

This chapter contains a phasing schedule for the recommended Airport development projects and cost estimates for all proposed improvements. Development is divided into five and ten year stages with emphasis on the first five years.

8.1 OVERVIEW

The priority action program is designed to take into consideration uncertainties that are described in detail in other parts of the report and allow development to take place in increments (phases) that are responsive to change. Of particular concern with regard to outstanding uncertainties are the potential loss of Ford Island ALF to civil use, the possible joint civil/military use of Wheeler Army Airfield (or any other military airfields on Oahu) and possible future designation of Dillingham Airfield as a general aviation reliever airport for Honolulu International Airport (HIA).

Development of Dillingham Airfield depends not only on aviation demand as affected by future events, but on the availability of capital improvement funds as well. All eligible improvements proposed for Dillingham can be funded by the Airport Improvement Program (AIP) under general aviation and/or discretionary funding provisions.

8.2 DEVELOPMENT PHASING

It is recommended that development take place in three phases with Phase 1 to be completed by 1997, Phase 2 by 2002 and Phase 3 by 2010. The phasing of construction within the indicated time periods will be determined by the State DOT-A.

8.2.1 Phase 1 Development. Figure 8-1 shows improvements that are planned to be in place by 1997. This first phase of development contains near term improvements that should be made for operational and safety reasons including relocation of the parachute drop zone, overlaying pavements and improving existing hangars and

utilities. Near term improvements are in addition to others currently being investigated or implemented by DOT-A such as a sailplane sales kiosk (now completed) and tetrahedron wind indicator.

In addition to the near term improvements, extended runway safety areas and paved blast pads are added to the existing runway; a new full length parallel taxiway is constructed; a helipad is provided; sailplane hangar spaces are added; a rerouted and improved internal roadway is built; additional apron space is provided at both powered aircraft and sailplane areas; an air museum site and an improved area for commercial aviation/Fixed Base Operator (FBO) use is made available for private development.

8.2.2 Phase 2 Development. Figure 8-2 shows improvements that are planned to be in place by 2002. Because Ford Island ALF might be closed to civil use by this time, more apron space and hangars for based aircraft will be constructed, additional FBO space and ground vehicle parking will be built, and utilities will be provided as necessary to support facility growth.

Two new facilities will also be added to the airfield during this period. An Air Traffic Control Tower will be provided in order that better control can be exercised over the growing number of aircraft operations at Dillingham and the existing UNICOM facility will be remodeled into an administrative, maintenance and operations facility that will also support more Aircraft Rescue and Firefighting (ARFF) equipment as may be required.

8.2.3 Phase 3 Development. Figure 8-3 shows improvements that are planned to be in place by 2010. The final phase of development will support a further increase in aircraft operations and more based aircraft as HIA becomes more crowded and expensive for general aviation. The major facility to be added during this period is a 3,000 foot long parallel runway with supporting taxiways and navigational aids

(NAVAIDS). As in prior stages, additional apron space, hangars, ground vehicle parking and improved FBO space will be provided.

Also at this stage of development, the potable water supply for the Airport would be connected to the City and County Board of Water Supply (BWS) system with a supply main within the right-of-way of Farrington Highway if it is financially feasible to do so. Deactivation of the independent well system now operated by the Department of Transportation (DOT), or alternatively upgrading the facility for turnover to the BWS, would meet the Department's objective of getting out of the water supply business.

8.3 COST ESTIMATES

Costs for planned improvements have been estimated based on gross unit prices obtained from standard cost references and compared with construction bid costs for recent and similar projects at Hawaii airports. Estimates are in mid-1991 dollars (not escalated) and are exclusive of taxes, and other non-construction costs such as furniture, fixtures and equipment, interior finishing or moving expenses. A ten percent contingency fee has been added to all construction estimates.

Table 8-1 contains a breakdown of costs for the three phases of development with near term improvements included in Phase 1 (1992-1997). Table 8-2 summarizes development costs by phase in major improvement categories.

Table 8-1

DEVELOPMENT COSTS

IMPROVEMENTS	COSTS $ MILLION
Near Term Improvements (1992-1997)	
Relocate Parachute Drop Zone	0.05
Improve Airfield Pavements	0.43
Improve Existing Hangars	0.28
Improve Utilities	0.22
Subtotal	0.98
Other Phase 1 Improvements (1992-1997)	
Extended Runway Safety Areas	0.20
Blast Pads	0.10
Parallel Taxiway	2.37
Powered Aircraft Apron	0.90
Sailplane Apron	0.19
Sailplane Hangar	0.66
Improve Internal Roadways	2.42
Improve FBO Space	0.41
Helipad	0.26
Subtotal	7.51
Land Acquisition	2.40
TOTAL COST - PHASE 1 (1992-1997)	10.89
Phase 2 Improvements (1998-2002)	
Air Traffic Control Tower	0.58
Powered Aircraft Apron	0.78
Powered Aircraft Hangars	3.30
Sailplane Apron	0.60
Ground Vehicle Parking	0.07
Improve FBO Space	0.16
Improve Utilities	0.28
TOTAL COST - PHASE 2 (1998-2002)	5.77
Phase 3 Improvements (2003-2010)	
Parallel Runway	2.20
Taxiway to Sailplane Apron	0.36
Navigation Aids	0.33
Powered Aircraft Apron	0.73
Powered Aircraft Hangars	2.20
Sailplane Apron	0.18
Sailplane Hangars	0.55
Ground Vehicle Parking	0.04
Improve FBO Space	0.16
Improve Utilities	4.95
TOTAL COST - PHASE 3 (2003-2010)	11.70

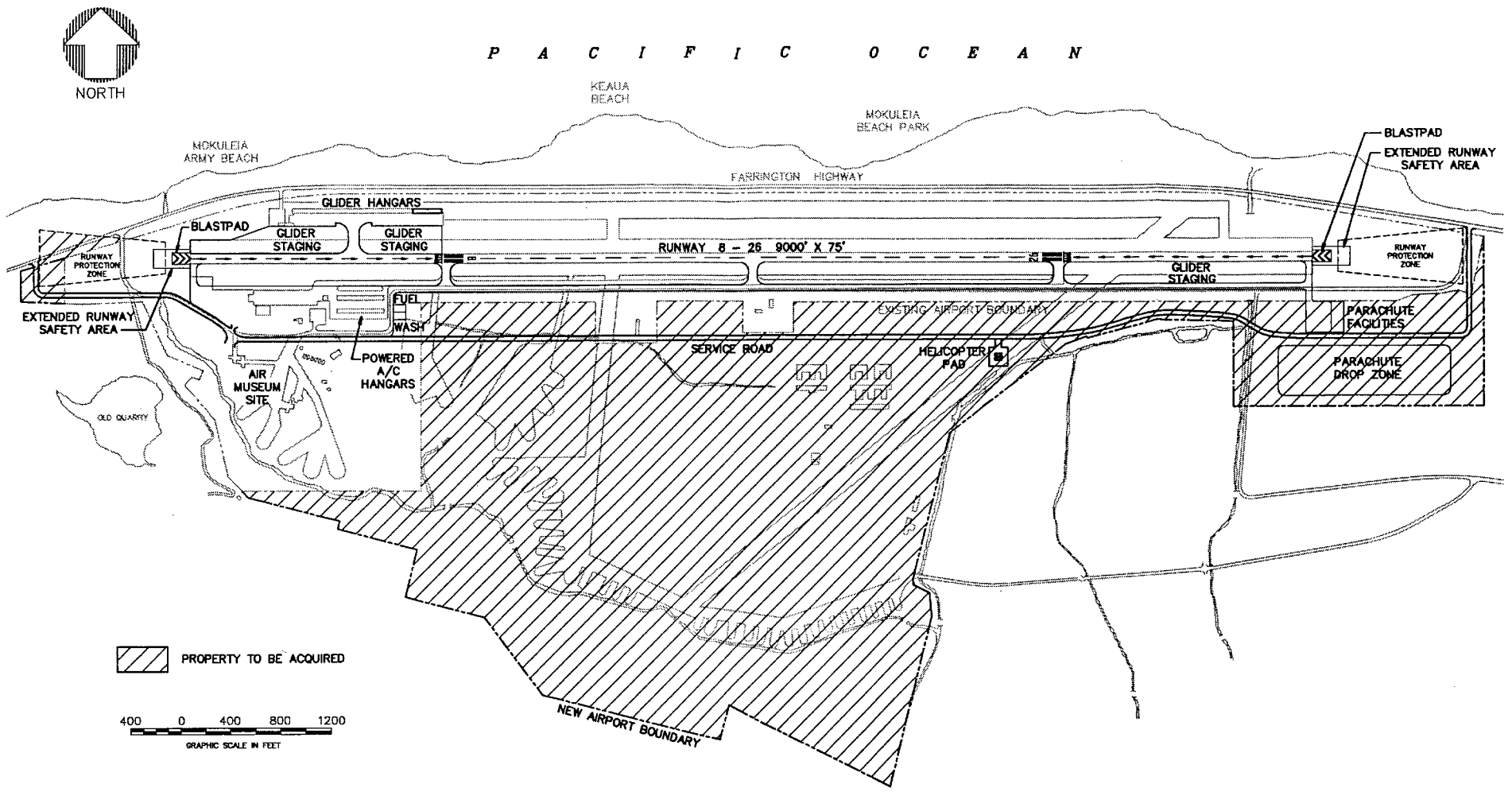
Table 8-2

DEVELOPMENT COSTS - SUMMARY
By Phase (1992-2010)

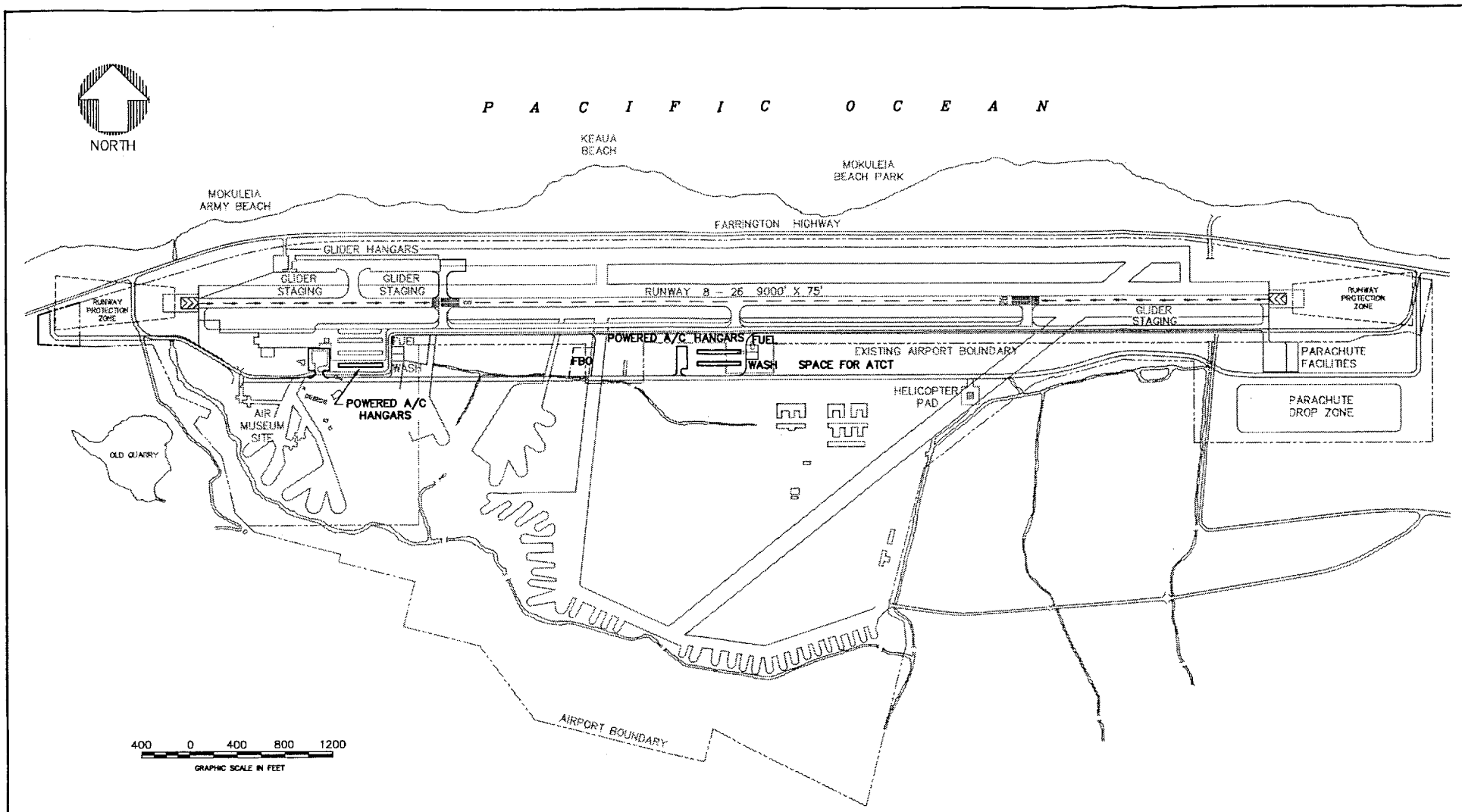
	Cost ($ Millions)		
Improvements	1992-1997	1998-2002	2003-2010
Near Term Improvements	0.98	0.00	0.00
Runways/Taxiways/Helipad	2.93	0.00	2.56
Aprons	1.09	1.38	0.91
Hangars	0.66	3.30	2.75
Roadways and Parking	2.42	0.07	0.04
Commercial Aviation/Fixed Base Operator	0.41	0.16	0.16
Air Traffic Control Tower	0.00	0.58	0.00
Navigation Aids	0.00	0.00	0.33
Utilities	0.00	0.28	4.95
Subtotal	8.49	5.77	11.70
A&E Fees (15%) *	1.27	0.87	1.76
Land Acquisition	2.40	0.00	0.00
TOTAL	12.16	6.44	13.46

GRAND TOTAL: $ 32,260,000

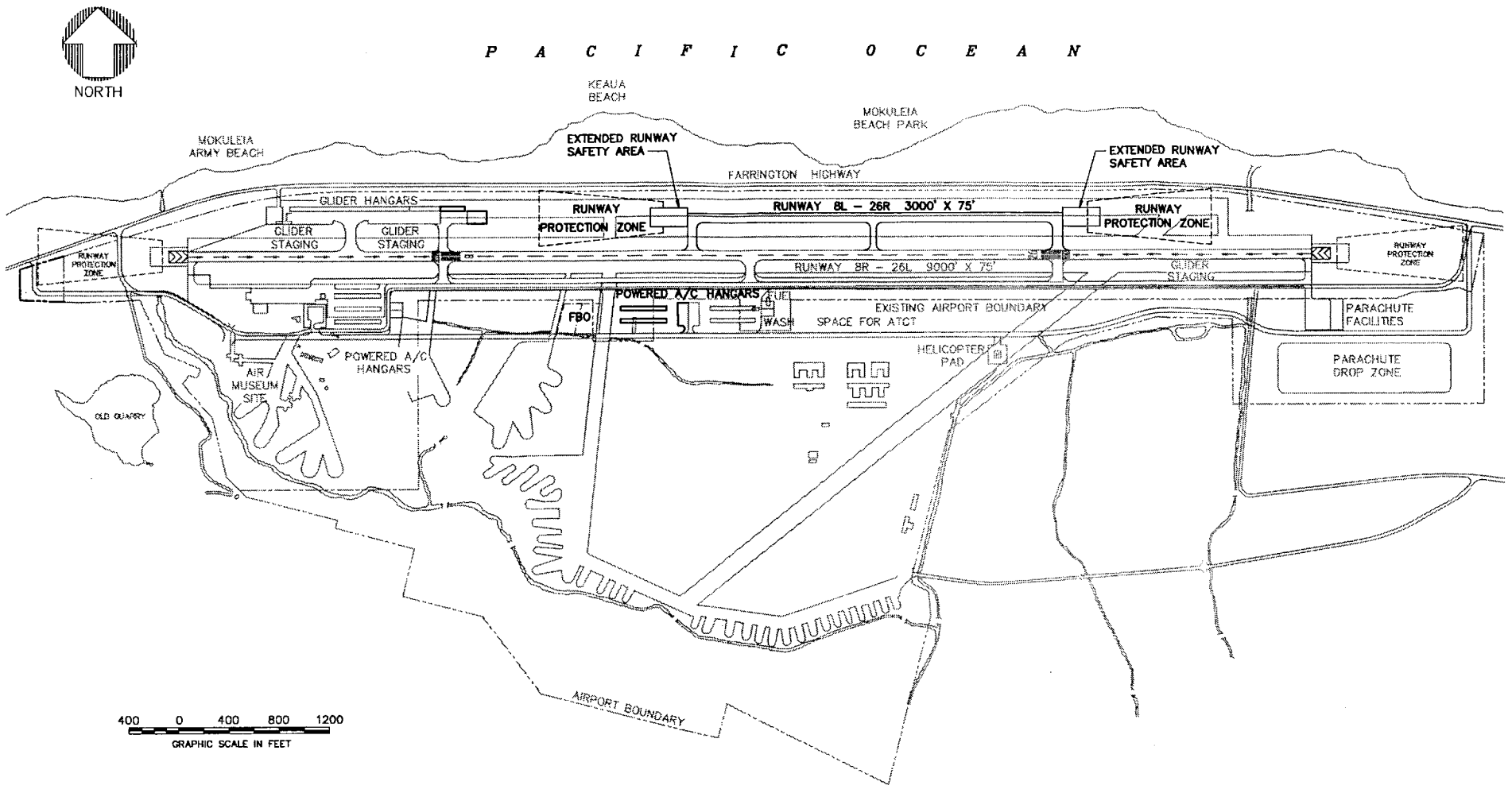
* A&E Fees Include: Planning, Design and Construction Management



AIRPORTS DIVISION DEPARTMENT OF TRANSPORTATION STATE OF HAWAII	DILLINGHAM AIRFIELD MASTER PLAN AND NOISE COMPATIBILITY PROGRAM	Edward K. Noda and Associates, Inc.	PHASE 1 IMPROVEMENTS (1992-1997)	FIGURE 8-1



AIRPORTS DIVISION DEPARTMENT OF TRANSPORTATION STATE OF HAWAII	DILLINGHAM AIRFIELD MASTER PLAN AND NOISE COMPATIBILITY PROGRAM	Edward K. Noda and Associates, Inc.	PHASE 2 IMPROVEMENTS (1998-2002)	FIGURE 8-2



AIRPORTS DIVISION DEPARTMENT OF TRANSPORTATION STATE OF HAWAII	DILLINGHAM AIRFIELD MASTER PLAN AND NOISE COMPATIBILITY PROGRAM	Edward K. Noda and Associates, Inc.	PHASE 3 IMPROVEMENTS (2003-2010)	FIGURE 8-3

Chapter 9

FINANCIAL FEASIBILITY

9.0 FINANCIAL FEASIBILITY

This chapter describes the economic and financial implications of the recommended Master Plan for Dillingham Airfield. The historical financing of capital improvement programs and the principal documents that provide the framework for the financial operations of the State of Hawaii Airport System are discussed.

Base year cost estimates for the capital improvement program recommended for Dillingham Airfield through the long-range planning period are summarized, and the economic and financial implications of implementation are discussed. The status of available funding of the various projects is also reviewed.

9.1 BACKGROUND FOR AIRPORT FINANCING

The State of Hawaii has a unique airport system that requires substantial, recurring capital funds for expansion and improvement of a system that is integral to the continued economic well-being of the State. The State Airport System consists of Honolulu International Airport and fourteen other airports located throughout Hawaii; it is administered by the Airports Division of the State of Hawaii Department of Transportation. The State has established a relationship through lease agreements with the airlines that essentially guarantees its ability to finance the airport system and provides the stability that promotes investor confidence. This section discusses the historical financing of major capital improvement programs and the key documents that provide the framework for the financial operation of the Airport System. The State of Hawaii Airport System provides direct economic benefits to the people of Hawaii.

The Airport System is operated as a self-sustaining enterprise of the State. The primary source of revenue is user-related fees. No State General Fund monies are used to support the operation of the Airport System.

Capital improvements to the Airport System are financed largely through three primary sources as follows:

- o Airport System revenue bonds.
- o Federal grants-in-aid.
- o Internally generated cash flow, obtained largely by the funding of "coverage" (in the amount of 135% of annual revenue bond debt service) through Airport Use Charges

9.2 AIRPORT SYSTEM REVENUE BONDS

Since 1969, the State has issued 22 series of Airport System Revenue Bonds in the total principal amount of $1,696,450,000 under the 1969 Certificate. As of January 1, 1993, $1,385,220,000 of these bonds remained outstanding.

These revenue bonds are payable solely from and secured by the revenues generated by the Airport System, including all aviation fuel taxes levied by the State. The Certificate established the following order of priority for the application of these revenues.

1. To pay interest and principal requirements on all bonds when due.

2. To pay or provide for the payment of the costs of operation, maintenance and repair of Airport properties.

3. To fund the major maintenance, renewal and replacement account.

4. To reimburse the General Fund of the State of Hawaii for general obligation bond requirements (issued for Airport System purposes).

5. To provide for betterments and improvements to the Airports.

6. To provide such special reserve funds and other special funds as created by law.

7. To provide for any other purpose connected with or pertaining to the bonds or the Airports authorized by law.

The certificate requires that the Airports impose, prescribe and collect revenues that will yield Net Revenues and Taxes (as defined by the certificate) at least equal to 1.35 times the total annual interest, principal, and sinking fund requirements on Airport System Revenue Bonds.

9.2.1 Federal Grants-in-Aid. The extent to which Federal grants-in-aid might be available for future capital improvement projects at Dillingham Airfield and other State airports is not known. Historically, Federal grants-in-aid to the State of Hawaii have averaged about $15 million per year for the past five years with approximately $500,000 designated for projects at general aviation airports. The Federal Airport Improvement Program (AIP) was renewed by Congress on September 30, 1987.

9.2.2 Airport/Airline Lease Agreements. The Airports Division has entered into Airport/Airline Lease Agreements (the Agreements) with 23 major air carriers, which expired on July 31, 1992. The Agreements provide the Signatory Airlines with the nonexclusive right to use the Airport System facilities, equipment, improvements, and services, in addition to occupying certain premises and facilities.

Section 261-5, Hawaii Revised Statutes, requires that *the Department . . . generate sufficient revenues from its airport properties to meet all of the expenditures of the statewide system of airports. . .* This mandate that the Airport System operate on a self-sufficient basis is the underlying principle in the Agreements.

The Signatory Airlines pay an Airport Use Charge based on a computed rate per 1,000-pound unit of approved maximum landing weight for each aircraft used in

revenue landings. The rate is calculated by dividing the excess of estimated airport expenses (as defined in the Agreements) over estimated airport revenues (also as defined in the Agreements) by the estimated aggregate approved maximum landing weight for all the Signatory Airlines for the fiscal year.

Negotiations between the State and the Airlines Committee of Hawaii (ACH) for new Airport/Airline leases are in progress. The State is proposing to continue a residual cost rate-making approach under the new leases. However, the State is contemplating changing the basis for determining aeronautical rentals from a fair market value to a compensatory rate-making structure. The State also proposes to establish a landing fee and an Airport System Support Charge to replace the Airport Use Charge imposed under the previous lease.

The outcome of the lease negotiations with the airlines, the terms of the leases, or when the leases will be executed are unknown at this time. The State intends to apply most of its internally generated cash flow from the Airport System operations to ongoing capital improvement program requirements and future capital projects.

Allowable airport expenses to be used in calculating the Airport Use Charge include the following:

- Maintenance and Operating Expenses at Honolulu and Hilo International Airports.

- Administrative expenses relating to the operation of the Airport System.

- Bond Debt Service and Coverage for all revenue bonds applicable to the Airport System, including any reserves required. Coverage is defined to be 0.35 times the principal and interest due on all Airport Revenue Bonds issued subsequent to January 1, 1969.

- Write-offs in lieu of depreciation.

- Any payments necessary to bring the balance of the Major Maintenance, Renewal, and Replacement Fund up to $6,000,000.

- Central Service Charges required by Section 36-28.5 of the Hawaii Revised Statutes.

- Incurred or projected deficits at the other airports in the Airport System.

For the purpose of computing the Airport Use Charge, airport revenues consist of all rents, fees, interest income, aviation fuel taxes (less any credit or rebates), and other charges received during the fiscal year, excluding the following:

- Airport Use Charges, landing fees, and Airport Use Charge deficiencies paid by Signatory Airlines.

- Revenues generated at airports other than Honolulu and Hilo International Airports.

- Grants-in-aid or similar payments from public agencies that are restricted to a specific purpose or are reimbursements for prior expenditures or transfers.

- Net rental lease payments.

9.3 PROJECT COSTS AND AVAILABLE FUNDING

This section presents cost estimates for each project in the recommended Master Plan for Dillingham Airfield through the planning period (1992-2010).

9.3.1 Master Plan Project Costs. Chapter 8.0 presents brief descriptions and estimated base-year costs for the projects in the recommended long-range Master Plan for Dillingham Airfield. The improvements for Dillingham Airfield proposed within the 20 year horizon of the Master Plan are estimated to be about $32.26 million in mid-1991 dollars, as follows.

COST
(Million Dollars)

Project	1992-2010
Airfield	$ 5.96
Navigational Aids	0.33
Terminal Area Complex	11.11
Airport Support and Infrastructure	8.56
Total Construction Cost	25.96
A&E Fees (15%)	3.90
Land Acquisition	2.40
Total Project Cost	$ 32.26

9.3.2 FAA Airport Improvement Program Funding. Dillingham Airfield is eligible for 90 percent FAA Airport Improvement Program (AIP) grant funds for those projects eligible for FAA funding. Based on the Capital Improvement Program presented in Chapter 8.0, projects eligible for FAA AIP grants include airfield improvements, runway, taxiways and aprons, utility improvements, navigation aids and ground access requirements. Projects not eligible for FAA AIP funds include improvements to fixed base operator spaces, provisions for sailplanes, ground vehicle parking and hangars.

9.3.3 Available Share Funding for Capital Improvement Projects. The Airports Division currently has significant amounts of funds potentially available for new capital improvement projects. As of July 1, 1992, the State has approximately $164 million of unrestricted funds including cash, investments, and receivables. In addition, about $408 million of cash and investments were on deposit in the Revenue Bond Construction Fund.

9.4 ECONOMIC AND FINANCING IMPLICATIONS

It is likely that, in order for the State to carry out the improvements recommended by the Dillingham Airfield Master Plan, together with other planned Airport System Capital Improvement Program projects, the State would have to: utilize unrestricted funds; incur new revenue bond debt; dedicate a substantial portion of its coverage funds; or substantially increase building space and use charges to be paid by the airlines. Therefore, the State will carefully consider the economic and financial implications of each individual project before proceeding.

9.4.1 Economic Implications. The economic aspects of a proposed project are usually considered in terms of costs and benefits. The potential financial costs associated with the proposed Dillingham Airfield Master Plan have been documented herein. Most of the benefits to be derived from such projects, however, are subjective, and not readily quantified in dollar terms. Such benefits include the following.

- Benefits to the pilots, residents and visitors to Oahu.
- Land acquisition to meet FAA design standards.
- Airfield improvements to accommodate forecast demand.
- Expanded general aviation facilities.
- Expanded commercial aviation facilities.
- New and expanded airport support facilities.
- Improved vehicle circulation and parking operations.

Thus, consideration of the costs and benefits of a given project depends on the perception of need for the project by the primary users, the traveling public, the airlines and other Airport users. The State of Hawaii Department of Transportation has, over the years, consistently pursued a thorough and vigorous planning program for the Airport System. The airlines have been involved in, and have made significant contributions to, these planning programs. Future discussions will be particularly important in establishing a reasonable consensus as to the need for the specific projects now being proposed in the Master Plan.

9.4.2 Financing Implications. In any major program of airport capital improvements, it is important to consider the potential effect of the program on the future financial operations of the Airport System and, in particular, its effect on future user fees and charges.

The existing mechanism for financing Airport System capital improvements (Airport System Revenue Bonds issued pursuant to the certificate and secured, in part, by the Agreements) has been successful and should serve the needs of the State in the future. The funding of 35 percent debt service coverage through Airport Use Charges and other Airport System revenues provides the State with a substantial pay-as-you-go financing capability. This capability should be preserved in the future.

9.4.3 Basis for Establishing Rentals and Use Charges. In general, the current method of determining total Signatory Airline financial obligations and establishing rentals and Airport Use Charges is reasonable and its fundamental concepts should be maintained. However, the State is considering establishing a more fully compensatory terminal rental rate structure at Honolulu International Airport based on recovery of fully allocated terminal building costs rather than setting rental rates through an appraisal basis. Further, the ratio between overseas and interisland airport use rates is being studied on the same basis of full compensatory cost recovery.

Further, the State is giving particular attention at this time to rate policies and revenue development at the Neighbor Island airports. Because of current procedures for establishing Airport Use Charges and terminal building rental rates at the Neighbor Island airports, increases in costs at these airports do not necessarily result in corresponding increases in revenues. Consequently, as significant development continues at the Neighbor Island airports, these airports will probably have to rely to a greater extent on subsidies provided by revenues generated at Honolulu International Airport. This situation necessitates that the State preserve its current financial policy of subsidizing the total Airport System through concession revenues and Airport Use Charges at Honolulu International Airport.

The willingness and ability of the Signatory Airlines to support a major program of new capital projects and pay increased rentals and user charges will depend, in turn, on their perceived need for such projects.

Appendix A

GLOSSARY AND ABBREVIATIONS

APPENDIX A

GLOSSARY AND ABBREVIATIONS

Air Navigational Facility (NAVAID) - Any facility used for guiding or controlling flight in the air or during the landing or takeoff of aircraft.

Aircraft Operating Area (AOA) - An AOA is the area on an airport set aside or used for the operation of aircraft including areas to be reserved for protection from encroaching obstructions or facilities.

Airport - An area of land or other hard surface, excluding water, that is used or intended to be used for the landing and takeoff of aircraft, and includes its buildings and facilities, if any.

Airport Master Plan - Long-range plan for identifying airport development requirements.

Airport Reference Point (ARP) - An ARP is a point having equal relationship to all existing and proposed landing and takeoff areas which is used to locate the airport geographically.

Airspace - The space lying above the earth or above a certain area of land or water which is necessary to conduct aeronautical operations.

ALP - Airport Layout Plan

Approach Control Service - Air traffic control service provided by a terminal area traffic control facility for arriving and departing IFR aircraft and, on occasion, VFR aircraft.

Approach End of Runway - The approach end of runway is the near end of the runway as viewed from the cockpit of a landing aircraft.

Apron - A paved area on the airfield usually immediately adjacent to the terminal area or hangars on which aircraft are parked.

ARFF - Aircraft Rescue & Firefighting (formerly Crash Fire Rescue).

ARTCC - Air Route Traffic Control Center.

ATA - Air Traffic Area.

ATC - Air Traffic Control.

ATCT - Air Traffic Control Tower

Aviation Forecast - Estimates of aircraft operations, passenger traffic, cargo and mail, based aircraft, mix of aircraft and other activities that affect airport facilities and operations.

Based Aircraft - An aircraft permanently stationed at an airport, usually by some form of agreement between the aircraft owner and airport management.

Building Restriction Line (BRL) - A BRL is a line on the airfield surface, on the groundside of which buildings can be constructed.

BWS - Board of Water Supply, City and County of Honolulu.

CZ - Control Zone.

dBA - A weighted sound level filtered or weighted to reduce the influence of low and high frequency noise.

Displaced Threshold - A displaced threshold is a threshold not located at the extremity (physical end) of a runway.

DOT-A - State of Hawaii, Department of Transportation, Airports Division.

Environmental Impact Statement (EIS) or Environmental Assessment (EA) - A Study performed to determine the effect proposed changes will have on the physical and socioeconomic environment of a development project.

FAA - Federal Aviation Administration

FAR - Federal Aviation Regulation

FBO - Fixed Base Operator

ft. - foot, feet

General Aviation (GA) - Refers to all civil aircraft and operations which are not classified as air carrier, commuter, air taxi or military.

Heliport or Helipad - An airport, or area of an airport, used or intended to be used for the landing and takeoff of helicopters.

Instrument Flight Rules (IFR) - Rules that govern flight procedures under IFR conditions (limited visibility or other operational constraints).

Itinerant Operation - All aircraft arrivals and departures other than local operations.

Kona Wind - A wind blowing from the southwest.

Ldn - Day - Night Sound Level

lb. - pound/pounds

MSL - Mean Sea Level

Military Operation - An operation (takeoff or landing) by military aircraft.

NA - Not Applicable

NAVAID - See Air Navigation Facility.

NM - Nautical Mile

Noise - Noise is any undesired signal or, in acoustics, any undesired sound.

Noise Abatement - A procedure for the operation of aircraft at an airport which minimizes the impact of noise on the environs of the airport.

Noise Mitigation - Activities that make aircraft noise less intense or severe for the noise receivers.

Obstacle Free Line - A line on the airfield surface delineating the boundary of an Obstacle Free Zone.

Obstacle Free Zone (OFZ) - An OFZ is an area free of all objects, except frangible air navigational aids (NAVAIDs) and clear of vehicles as well as parked, holding, or taxiing aircraft in the proximity of an airplane conducting an approach, missed approach, landing, takeoff, or departure.

Obstruction to Air Navigation - An object of greater height than any of the heights or surfaces presented in FAR Part 77.

Operation - An aircraft arrival at (landing) or departure from (takeoff) an airport.

PAPI - Precision Approach Path Indicator.

RW & R/W - Runway

Rotorcraft - Referring to helicopters

Runway - A runway is a defined rectangular area on an airport prepared for the landing or takeoff of aircraft.

Runway Blast Pad - A surface adjacent to the ends of runways provided to reduce the erosive effect of jet blast and propeller wash.

Runway Clear Zone or Runway Protection Zone - A runway clear zone, renamed runway protection zone, is a trapezoidal area at ground level, under the control of the airport authorities, for the purpose of protecting the safety of approaches and keeping the area clear of the congregation of people. The runway clear zone begins at the end of each primary surface and is centered upon the extended runway centerline. The term "clear zone" has been replaced by "protection zone".

Runway Safety Area - A runway safety area is a rectangular area, centered on the runway centerline, which includes the runway (and stopway, if present) and the runway shoulders. The portion abutting the edge of the runway shoulders, runway ends, and stopways is cleared, drained, graded, and usually turfed. Under normal conditions, the runway safety area is capable of supporting snow removal, fire fighting and rescue equipment, and accommodating the occasional passage of aircraft without causing major damage to the aircraft.

Sailplane (Glider) - A non-powered aircraft that uses winds and air currents to remain aloft. Some gliders have small engines that are used intermittently for various reasons.

Segmented Circle - A 100 foot diameter circle marked on the ground with at least 18 segments constructed around the airport's wind indicator.

Stop End of Runway - The stop end of a runway is the far end of the runway as viewed from the cockpit of a landing aircraft.

T-Hangar - A T-shaped aircraft hangar which provides shelter for a single airplane, or generically, hangars for general aviation aircraft.

TAP - Terminal Area Plan.

TW & T/W - Taxiway

Taxilane - A taxilane is the portion of the aircraft parking area used for access from a taxiway to aircraft parking positions.

Taxiway - A taxiway is a defined path, from one part of an airport to another, selected or prepared for the taxiing of aircraft.

Terminal - A building or group of buildings on an Airport used for processing enplaning and deplaning passengers or air cargo. At general aviation airports, a terminal area is a center for hangars, FBO operations, flight operations and like activities and facilities.

Threshold - The threshold is the beginning of the portion of the runway available and suitable for the landing of airplanes. Usually the physical end of runway pavement.

Tradewind - A wind blowing from the northeast.

Transient Operations - That portion of itinerant operations performed by aircraft other than those based at the airport in question.

UNICOM - Universal Communications Facility

Visual Flight Rules (VFR) - Rules that govern flight procedures in good weather.

Wind Coverage - Wind coverage is the percent of time for which aeronautical operations are considered safe due to acceptable crosswind components.

Appendix B

REFERENCES

APPENDIX B

REFERENCES

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9. "Runway Length Requirements", Advisory Circular 150/5325-4A, Federal Aviation Administration, April, 1990.

10. "Airport Design", Advisory Circular 150/5300-13 Federal Aviation Administration, September, 1989.

11. "Dillingham Airfield Master Plan and Noise Compatibility Program, Working Paper No. 1, Summary of Existing Conditions, Limitations Opportunities and Concerns", Edward K. Noda and Associates, Inc., and Aries Consultants Ltd., November, 1990.

12. "Airport Master Plans," Advisory Circular 150/5070-6A, Federal Aviation Administration, June, 1985.

13. "Comprehensive Zoning Code", Ordinance 3234, City and County of Honolulu, January 2, 1969.

14. "Land Use Ordinance", Ordinance No. 86-96, City and County of Honolulu, October 22, 1982.

15. "Dillingham Airfield Master Plan and Noise Compatibility Program, Working Paper No. 2, Aviation Demand Forecasts, Airfield Capacity Analysis and Facility Requirements", Edward K. Noda and Associates, Inc., and Aries Consultants Ltd., May, 1991.

16. "Objects Affecting Navigable Airspace", Federal Aviation Regulations, Federal Aviation Administration, January, 1975.

17. "Wheeler Army Airfield, Study of Joint Civilian - Military Use", Edward K. Noda and Associates, Inc., and Aries Consultants Ltd., March, 1992.

Appendix C

LIST OF PREPARERS

APPENDIX C

LIST OF PREPARERS

The Dillingham Airfield Master Plan and Noise Compatibility Program was prepared for the State of Hawaii, Department of Transportation, Airports Division, by the following consultants.

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Appendix D

MEMBERS OF TECHNICAL ADVISORY COMMITTEE

APPENDIX D

MEMBERS OF TECHNICAL ADVISORY COMMITTEE

In order to maintain formal coordination between the State of Hawaii, Department of Transportation, Airports Division, and affected parties during conduct of the Dillingham Airfield Master Plan and Noise Compatibility Program, a Technical Advisory Committee was formed. The committee, consisting of representatives of the FAA and other Federal, State and local government agencies; airport users and tenants; the local community; and other interested entities, received periodic progress reports from the consultants preparing the program and participated in public informational meetings. The Technical Advisory Committee is composed of the following members.

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Appendix E

DILLINGHAM AIRFIELD WATER SUPPLY STUDY

APPENDIX E

DILLINGHAM AIRFIELD WATER SUPPLY STUDY

Because the State of Hawaii, Department of Transportation would prefer not to operate the water supply system for Dillingham Airfield, a study was performed by Engineers Surveyors Hawaii, Inc. to investigate alternatives. The results of the study are contained in this Appendix.

DILLINGHAM AIRFIELD MASTER PLAN

WATER SUPPLY STUDY

I. EXISTING CONDITIONS

A. **Maintenance.** The operations and maintenance of the Dillingham Military Reservation (DMR) water system is presently being done by R. I. Namba Construction, Inc. under contract to the Airports Division, State of Hawaii, Department of Transportation.

B. **Water System.** The facilities comprising the water works consist of a shallow well (U.S.G.S. No. 3-3412-03), pumping station, and 100,000 gallon reinforced concrete storage tank. The majority of the water system was constructed prior to World War II. A system of distribution lines and appurtenances are shown in Exhibit B.

1. **Shallow Well.** Data from US Geological Survey, Honolulu, dated 19 January 1965:[1]

   Well Yield = 500 gpm
   Chloride content = 134 ppm

   (Note: US Public Health Service standard for drinking water is 250 ppm and below)

2. **Water Tank.** The system is served by a 100,000 gallon reinforced concrete storage tank. It is located at elevation 160 feet above MSL.

3. **Pump Station.** One 500 gpm pump draws water from the well. Chlorine solution is injected into the system whenever the pump is running. The pump is started and stopped by a float switch installed at the 100,000 gallon storage tank. The maximum allowable pumping time/day is 16 hours.[2] The maintenance contractor, Richard Namba, said the average time the pump runs is approximately 2 hours/day. He said the biggest problem with the system is that there have been water shortages during power failures with the pump subsequently losing its prime.

C. Users of this system are as follows:

The following is a list of the Department of Transportation facilities currently being serviced:

1. Makai Hangar
2. Mauka Hangar and Tower

3. Toilet and Maintenance
4. Soares Lot
5. Fire Standpipes and Various Site
6. Irrigation by Control Tower

The following is a list of the customers who are currently connected to this system:

1. C&C of Honolulu, Department of Parks & Recreation
2. Donald Chung
3. F.T. Opperman Co.
4. Jim Titcomb
5. Philo Owens
6. Skydive Hawaii - Bonair
7. USAF - Kaena Pt. Tracking Station
8. US Army - Directorate Facilities Engineering
9. YMCA of Honolulu - Camp Erdman

D. **Consumption.** From Airports Division, the Annual Water Consumption at Dillingham Airfield is as follows:

1988:	18,762,730 gallons
1987:	16,613,570 gallons
1986:	17,072,330 gallons
1985:	17,688,150 gallons (Estimated amount)
1984:	16,842,950 gallons (Estimated amount)

II. PROPOSED CONNECTION TO BOARD OF WATER SUPPLY SYSTEM

A. **General.** The project site is within the City and County of Honolulu Board of Water Supply (BWS), Waialua-Kahuku water use district, Waialua area. It is also within the Department of Land and Natural Resources (DLNR), State of Hawaii, Waialua Ground Water Control Area.

The Waialua area is served by the BWS Haleiwa and Waialua Wells. The actual use in 1985 was 3.13 mgd; the sustainable capacity is 5.30 mgd.[3] The sustainable capacity is the rate which water can be withdrawn from a specific source without unduly impairing source utility.

The sustainable yield for the Waialua Water Management Area is 90 mgd. Pumpages in 1988 amounted to 41.6 mgd.[4] Currently excess water from the Mokuleia aquifer discharges into the ocean unused.[5]

B. **Proposed Connection.** To replace the present DMR water well supply system by connecting it to a BWS source, mains, connections to some private consumers, special stream crossings, and fire protection need to be

considered. A preliminary cost estimate is $4,603,000 (See Exhibit A). This would include construction of a 100,000 gallon concrete reservoir and appurtenances within DMR, and installing a 12-inch waterline within the Farrington Highway right-of-way. The nearest Board of Water Supply waterline connecting point is at Mahinaai Street, which is approximately 7,000 feet east of DMR.

III. DEDICATION OF WATER SYSTEM TO THE BOARD OF WATER SUPPLY (BWS)

A. **General.** The BWS will accept pipelines, sources of supply, and facilities for the storage of water constructed by others for perpetual maintenance and operations. BWS acceptance of the facilities requires that the construction be in conformance with their standards. The BWS standards not only involve physical specifications of material and workmanship, but also encompass the City's requirements for fire protection.

B. **Reservoirs.** The existing reservoir at Dillingham has already been described under Section I-B-2. The BWS standard for the primary urban center is 180 feet for the spillway elevation (overflow). However, the Waialua system is currently at 225 feet. This difference might require reconstruction of the reservoir with the upper limit of costs to be around $650,000 to $850,000 depending upon the complexity of grading and access.

C. **Pipelines.** The pipelines are generally sized according to demand and fire flow. Further, the quality of the materials are predicated upon the characteristics of the soil. The existing pipelines, both in size and quality do not meet the BWS standards. The extent of replacement needs to be negotiated and presently is indeterminate. The worse case scenario is that the pipes would need to be replaced with 12 inch pipes of suitable material from the reservoir to the meters serving other consumers for an estimated cost of $1,850,000 (See Exhibit C).

D. **Source.** The present source is a single pump in a shallow dug well. The BWS will need a well that is protected from contaminants, like a drilled well, to a depth to be safe from surface contaminants.

Further, the BWS might request an additional standby pump and well since this facility is so remote, together with the well house, chlorinator, and motor control building. All must be to the standards and requirements of the BWS and Department of Health. As an alternate, the Board might request the State share in the cost of a well in another location. All of this is negotiable, depending on timing and circumstance.

E. **Fire Protection.** The issue of fire protection needs be addressed. There are presently no standard fire hydrants within the project site or in the vicinity. If city standards for fire protection were to be applied, line sizes, reservoir capacity and fire hydrants need be determined. This will also add to the overall cost of the system.

REFERENCES

[1] Evaluation of the Air Force Water System Dillingham AFB, Mokuleia, Oahu, Engineer USARHAW, November 1969.

[2] Report on the Dillingham Military Reservation Water Distribution System, August 1975.

[3] Waialua-Kahuku Regional Water System Improvements Draft Environmental Impact Statement, Wilson Okamoto and Associates, Inc., prepared for Board of Water Supply City and County of Honolulu, 1987.

[4] Oahu Water Management Plan, Technical Reference Document, Wilson Okamoto and Associates, Inc., prepared for Department of General Planning City and County of Honolulu, March 1990.

[5] Mokuleia Development Proposal Draft Environmental Impact Statement, Barry R. Okuda, Inc., February 1987.

EXHIBIT A

PRELIMINARY ESTIMATES OF QUANTITY AND COST FOR CONNECTION OF DILLINGHAM AIRFIELD TO BOARD OF WATER SUPPLY SYSTEM

December 27, 1990

ITEM NO.	ESTIMATED QUANTITIES	DESCRIPTION	UNIT PRICE	TOTAL AMOUNT
1	7,000 L.F.	12-inch waterline within Farrington Highway, including trenching, cushion and backfill, road restoration, valves and fittings and traffic control and provide lateral to existing lots along project site	$ 300.00	$2,100,000.00
2	11 ea.	Fire hydrants, including valves, fittings, concrete curb guards	2,000.00	22,000.00
3	3 ea.	Stream crossings, including reinforcing concrete jackets, sheathing, shoring and dewatering	75,000.00	225,000.00
4	9,000 L.F.	12-inch waterline within Dillingham Airfield	145.00	1,305,000.00
5	1 ea.	100,000 gallon concrete reservoir, including grading, access road, fencing, appurtenances and landscaping	350,000.00	350,000.00
		Subtotal		$4,002,000.00
		Engineering & Contingency		601,000.00
		TOTAL		$4,603,000.00

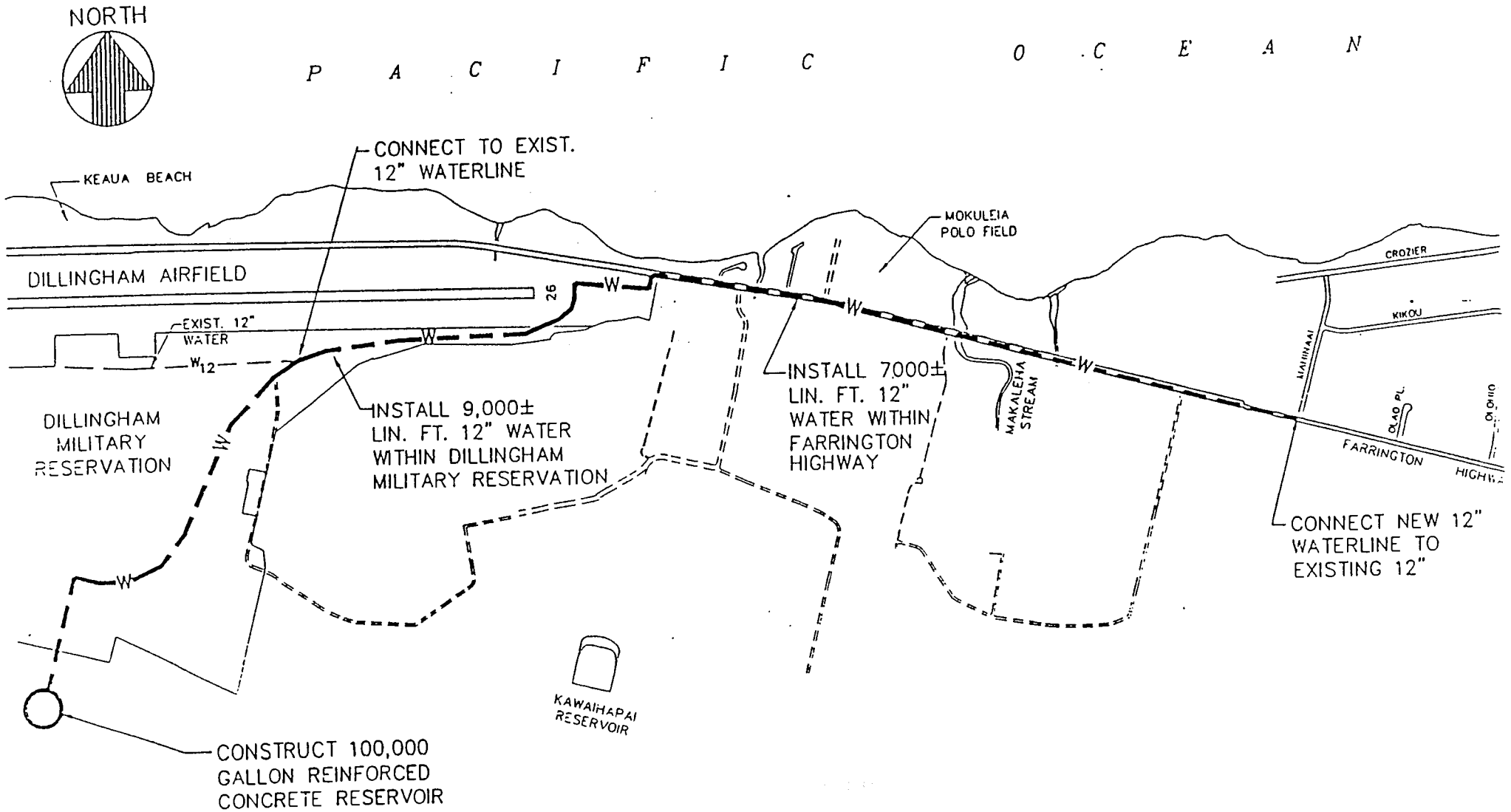


EXHIBIT 'B'

LEGEND

PROPERTY LINE

PAVED ROAD

UNPAVED ROAD

1000' 0' 1000' 2000'

GRAPHIC SCALE

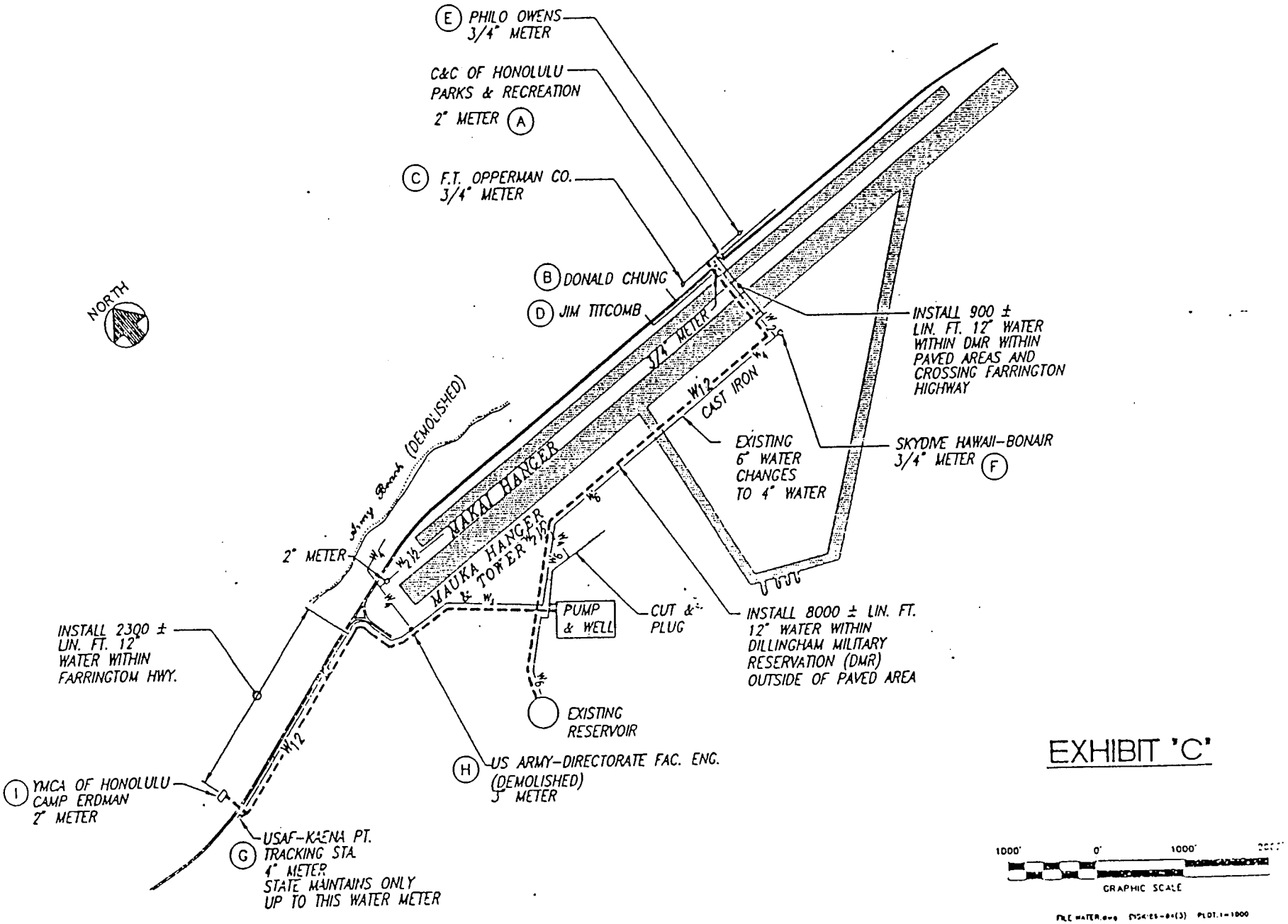

E PHILO OWENS 3/4" METER
C&C OF HONOLULU PARKS & RECREATION 2" METER A
C F.T. OPPERMAN CO. 3/4" METER
B DONALD CHUNG
D JIM TITCOMB
NORTH
3/4" METER
W12 CAST IRON
INSTALL 900 ± LIN. FT. 12" WATER WITHIN DMR WITHIN PAVED AREAS AND CROSSING FARRINGTON HIGHWAY
EXISTING 6" WATER CHANGES TO 4" WATER
SKYDIVE HAWAII-BONAIR 3/4" METER F
Army Branch (DEMOLISHED)
2" METER
MAKAI HANGER
HAUKA HANGER TOWER
PUMP & WELL
CUT & PLUG
INSTALL 8000 ± LIN. FT. 12" WATER WITHIN DILLINGHAM MILITARY RESERVATION (DMR) OUTSIDE OF PAVED AREA
INSTALL 2300 ± LIN. FT. 12" WATER WITHIN FARRINGTOM HWY.
EXISTING RESERVOIR
H US ARMY-DIRECTORATE FAC. ENG. (DEMOLISHED) 3" METER
I YMCA OF HONOLULU CAMP ERDMAN 2" METER
G USAF-KAENA PT. TRACKING STA. 4" METER STATE MAINTAINS ONLY UP TO THIS WATER METER
1000' 0' 1000'
GRAPHIC SCALE

EXHIBIT "C"

Appendix F

HIA RELIEVER AIRPORT BACKGROUND

APPENDIX F

HIA RELIEVER AIRPORT BACKGROUND

The following identifies the community, legislative and administrative actions that have taken place regarding Dillingham Airfield in particular and an Oahu general aviation (GA) reliever airport in general.

A. **Administrative and Legislative Actions.** The majority of the administrative and legislative actions regarding Dillingham Airfield in the past 15 to 20 years have been taken as part of, or in response to, the selection of an Oahu general aviation reliever airport. The most decisive of these occurred during 1977 and 1978, following many years of discussion and numerous site selection and requirements studies.

The need for separate general aviation airport facilities was recognized as early as 1971. In that year, as well as in 1962, three studies were completed to determine the need for, and location of, additional facilities. Between 1962 and 1975, a total of 15 studies were completed, each treating the need for airport facilities designed to serve general aviation and relieve air traffic congestion at Honolulu International Airport (HIA).

In August 1975, the State Department of Transportation, Airports Division (DOT-A) initiated a general aviation site selection study. The results of that study were published in 1977 and 1978 as the Oahu General Aviation Master Plan Study (OGAMPS) Appendix B, Reference 4. During the course of the study, some 18 possible sites and/or joint use arrangements were examined as potential reliever airport sites. As a result of considerable legislative and public review and comment on OGAMPS, environmental assessments for two potential sites (Dillingham Airfield and Kunia) were prepared and published as part of OGAMPS (Volumes III and IV, respectively). In general, the OGAMPS concluded that only Barbers Point Naval Air Station (BPNAS) had the capacity to

accommodate increased GA traffic and that a new site would be required to accommodate future growth of GA activity. Of the sites investigated, OGAMPS concluded that the Kunia "A" and Poamoho sites represented the best alternatives from the standpoint of general acceptability and ultimate implementation, however, subsequent community and legislative concerns have also resulted in the rejection of these two sites. Joint civilian/military use airports also lack military acceptance and until 1989, were considered to be not available. World events since 1989 indicate a downscaling of military activities which may lead to joint use as a possible future course of action. In 1990, the Congress directed the Department of Defense to negotiate with the State of Hawaii about the possible joint civil/military use of Wheeler Army Airfield (Appendix B, Reference 17). Dillingham Airfield has not been considered an acceptable GA reliever airport to the Federal Aviation Administration in the past due to its proximity to the Waianae Mountains, distance from central Honolulu and presumed availability of superior sites.

Since 1978 and publication of the OGAMPS, general aviation and the topic of a reliever airport have been considered in updates of the HIA Master Plan and Statewide Airport System Plan, both of which are currently being updated (Appendix B, References 2 and 6). The GA reliever airport is viewed as a feasible solution to alleviating HIA's aircraft mix and demand/capacity problems.

1. **Administrative Actions.** The following identifies the major administrative actions that have been taken since 1975 with regard to general aviation and an Oahu Reliever Airport.

- o 1975, DOTA contracts for preparation of OGAMPS;
- o 1977, DOT Director proposed development and use of the Kunia "B" site and the opening of Bellows Air Force Base (AFB) for glider use;

- 1977, State initiated a formal request to the U. S. Navy for joint use of Barbers Point NAS for GA operations. This request was denied based on several grounds, primarily relating to safety and public access. As a result of this denial, the State prepared an Environmental Impact Assessment Report (EIAR) for the Kunia "B" site and a March 1978 public hearing date was set;

- January 1978, the Director of the State of Hawaii Department of Transportation announced that the State would make a second request to the U. S. Navy for use of Barbers Point NAS and the public hearing for the Kunia "B" site was canceled;

- February 1978, the State House Energy and Transportation Committee conducted a hearing on HB Nos. 2066 and 1290, at which time residents of Mililani Town were unanimous in their opposition to a GA airport at Kunia "B". HB No. 2066 also stipulated that as a matter of State policy, joint use of military airfields, excluding Bellows AFB, should be sought. HB No. 1290 directed the State to establish two GA airports, at unnamed sites, one on the windward side of Oahu and one in the south central valley. SB No. 2578, 1978, which was essentially the same bill as HB 1290, named Wheeler AFB or Waipio Peninsula as the two central valley sites. Neither bill passed and DOT continued pursuing a second attempt to use Barbers Point NAS;

- 1978, the DOTA renegotiated the continued use of Ford Island ALF and Dillingham Airfield for limited GA activities. Subsequently, the State has expended over $3 million in the construction of an administration building, UNICOM tower, T-hangars, aircraft tiedowns, and other facilities at Dillingham Airfield;

- 1982, the DOT Director designated Dillingham Airfield as a GA reliever airport. However, the FAA did not concur in that designation and, for safety reasons, continues to oppose Dillingham as a GA reliever airport;

- In addition to the above listed specific actions, and as a result of each HIA Master Plan update, it has been noted that general aviation aircraft operations are an incompatible mix with commercial air carriers and military jet operations and that a separate general aviation reliever airport on Oahu is required to improve margins of safety.

2. **Legislative Actions.** The following lists some of the legislative actions pursued at the request of DOTA, legislators and private groups and individuals relative to general aviation and an Oahu general aviation reliever airport since 1974.

- Act 218 Session Laws of Hawaii (SLH), 1974, providing for the preparation of OGAMPS;

- House Resolution (HR) 473, 1975, requesting that OGAMPS only study sites in Oahu's less populated

areas and seek free private use of Dillingham Airfield from the federal government;

- House Bill (HB) No. 1546 in 1975 redesignating all past State GA appropriations such that they could only be expended for the purpose of obtaining Dillingham Airfield and constructing facilities thereon;

- Senate Bill (SB) No. 2266, 1976, calling for the establishment of two GA airports, one on the windward side of Oahu, preferably Bellows Air Force Base (AFB), and one in Leeward Oahu, preferably at Waipio Peninsula;

- HR No. 397, 1976, requesting the prohibition of a light aircraft airport at Bellows AFB;

- HR No. 449, 1976, limiting the number of small planes because of associated environmental pollution problems;

- HB No. 458, 1976, limiting the use of HIA by private small aircraft in the interest of common safety.

- SB No. 1407, 1977, directing the State Department of Transportation (DOT) to (1) establish a suburban GA airport in the south central valley at a site designated Kunia "B", (2) renegotiate with the U. S. Navy for continued use of the Ford Island Auxiliary Landing Field (ALF) facilities and (3) request for joint use of Barbers Point NAS for GA operations;

- HB No. 160, 1977, redesignated prior State GA appropriations for the purpose of establishing a self-supporting GA airport at Barbers Point NAS;

- HB No. 1745, 1977, requesting two GA sites, one on windward Oahu and one in Oahu's central valley at Wheeler AFB, Waipio Peninsula or Kunia "B" site;

- HR No. 0383, 1983, requesting the Department of Transportation to review the need for a general aviation registration system;

- HR No. 0061, 1983, requesting the Department of Transportation to forecast aircraft operations demand and determine the need for the establishment of a general aviation reliever airport and requesting the update of the OGAMPS and if it is determined that a reliever airport is needed, to analyze alternative sites and make recommendations as to site location;

- SB No. 1792, 1984, established and appropriated funds for an airport commission within the Department of Transportation to address, among other airport and aviation related questions, to select and establish sites and criteria for selection of facilities at any general aviation reliever airport;

- SB No. 1837, 1984, similar to SB 1792 above;

- SB No. 2174, 1984, called for a feasibility study regarding the use of Helemano general aviation airport

(military airfield) for use as a new suburban general aviation facility;

- HB No. 2384, 1984, companion House Bill to SB 1792 and SB 1837;

- SR No. 0157, 1984, requesting the Department of Transportation to provide immediate improvements to general aviation facilities in Hawaii;

- HR No. 0366, 1984, requesting that the Department of Transportation establish a special commission to recommend a site for a reliever airport for general aviation aircraft;

- HR No. 0246, 1984, requesting the Legislative Reference Bureau (LRB), in consultation with the Experimental Aircraft Association and the General Aviation Council of Hawaii, to conduct a study to define general aviation's contribution to the State's economy and that if the results of the study indicate that general aviation does contribute to the State's economy, the Department of Transportation is to encourage the growth of the general aviation industry at HIA until such time as an adequate reliever airport is constructed. This resolution was adopted by the House in April 1984;

- SB No. 1360, 1985, a bill introduced that would make an appropriation from special funds and federal grants

for design and construction of a general aviation reliever airport on Oahu at Dillingham Airfield;

- HB No. 1550, 1985, an amendment to designate Waipio Peninsula on Oahu as the site of a general aviation reliever airport;

- HB No. 1390, 1985, an amendment to the income tax law to promote the general aviation industry;

- HB No. 0285, 1985, a bill allowing the Department of Transportation to acquire excess federal lands for civilian needs (reliever airport);

- SB No. 0127, 1985, the Senate version of HB 0285; The combination of these two bills (HB 0285 and SB 0127) was approved by the Governor as Act 41, SLH 1985;

- SB No. 1978, 1986, a bill introduced that would make an appropriation from special funds and federal grants for design and construction of a general aviation reliever airport on Oahu at Waipio Peninsula;

- SB No. 1360, 1986, a bill introduced appropriating special funds and federal grant monies for design and construction of a general aviation reliever airport at Dillingham Airfield, Oahu;

- HB No. 0160, 1987, an appropriation for design and construction of a general aviation reliever airport;

- HB No. 1785, 1987, an amendment to HB 0160, relating to the establishment of a general aviation reliever airport;

- SB No. 1664, 1987, a bill requiring the Department of Transportation to seek to acquire joint military/civilian use of Bellows AFB to be used as a general aviation reliever airport and required the Department of Education to establish aeronautical courses in the windward high schools to be taught at Bellows AFB;

- SCR (Senate Concurrent Resolution) No. 037, 1987, requesting that the Department of Transportation explore the possibility of joint military/civilian use of Kaneohe Marine Corps Air Station (MCAS) for a general aviation reliever airport so that general aviation aircraft operations may be diverted from HIA;

- SCR No. 038, 1987, resolves that the Department of Transportation explore the possibility of joint military/civilian use of Bellows AFB so that general aviation operations may be diverted from HIA;

- SR No. 0043, 1988, resolves that the Department of Transportation explore the possibility of joint military/civilian use of Kaneohe MCAS so that general aviation aircraft operations may be diverted from HIA;

- SR No. 044, 1988, resolves that the Department of Transportation explore the possibility of joint

military/civilian use of Bellows so that general aviation aircraft operations may be diverted from HIA.

Of the above listed resolutions and bills, only two; Act 218 SLH, 1974 and HR 0246, 1984, requesting the LRB to study general aviation's contribution to the State's economy, have been adopted by the legislature. Others have been tabled in committee or included as items in the DOTA budget, thereby losing their identity as resolutions or bills. However, general aviation activities continue to be centered at HIA with significant training (touch-and-go landings/takeoffs) operations being conducted at Ford Island ALF and minor training activities at Dillingham Airfield.

The U.S. Navy has indicated that operations at Ford Island ALF will cease in the future (1995-2000 time period) to allow the Navy to better utilize Ford Island for naval housing and mission related activities. The loss of Ford Island ALF will seriously curtail general aviation training operations and require relocating those activities to Dillingham Airfield, or result in those operations being conducted at HIA. The latter result could cause serious safety and/or capacity/delay problems given the forecast increase in use of HIA by commercial aircraft.

B. Community and General Public Actions

1. **Community Actions.** The following identifies some of the community involvement in the planning and selection of a GA airport:

- In 1976, the DOTA held three meetings with Waimanalo residents, resulting in unanimous opposition to a GA airport at Bellows AFB;

- In 1977 public information meetings were also held in conjunction with the previously noted legislative actions and OGAMPS. As a result of these meetings and

testimony presented to the legislature, GA operations at HIA were continued.

2. **General Public Actions**

- o General public and general aviation interest groups, such as glider enthusiasts, have presented testimony at all of the general aviation related legislative hearings, public informational and public hearings since the early 1970's. As a result, the DOTA has consistently attempted to address and solve general aviation related problems while maintaining appropriate safety measures at HIA.

- o The general public has, since the early 1970's indicated that Bellows AFB, Waipio Peninsula and Kunia are improper sites for a general aviation airport due to the proximity of residential areas, i.e., noise and safety concerns relative to general aviation activities.

Appendix G

DEPARTMENT OF THE ARMY LEASE OF PROPERTY ON DILLINGHAM MILITARY RESERVATION

APPENDIX G

DEPARTMENT OF THE ARMY LEASE OF PROPERTY ON DILLINGHAM MILITARY RESERVATION

This appendix contains a copy of the lease of Dillingham Airfield that is currently in effect between the U. S. Department of the Army and the State of Hawaii Board of Land and Natural Resources (for the State of Hawaii, Department of Transportation, Airports Division). The lease became effective in 1983 and extends for a period of 25 years to 2008.

DEPARTMENT OF THE ARMY
LEASE
OF PROPERTY ON DILLINGHAM MILITARY RESERVATION

Contract No. DACA84-1-81-27

THIS LEASE, made between the United States Government, by its Secretary of the Army hereinafter called the Government, and the State of Hawaii, by its Board of Land and Natural Resources (for the use and under the control and management of the Department of Transportation), hereinafter called the lessee,

WITNESSETH:

THAT the Secretary of the Army, by virtue of the authority contained in Title 10, United States Code, Section 2667, and for the consideration as hereinafter set forth, hereby leases to the lessee, for a term of twenty-five (25) years, beginning on the date of execution hereof by the Government, but revocable at will by the Secretary of the Army during a national emergency declared by the President or the Congress of the United States, or in the event the lessee violates any of the terms and conditions of this lease, certain parcels of land comprising parallel runways, taxiways, parking areas and various buildings and improvements for use as a joint Department of Defense/Civil Airport, being a portion of Dillingham Military Reservation (for the purpose of this lease identified as Dillingham Airfield), asdelineated in red on Exhibit "A" and more particularly described on Exhibit "B", both exhibits attached hereto and made parts hereof, TOGETHER WITH other pertinent aviation facilities located thereon, including the entire water system as shown in red on Exhibit "C", also attached hereto and made a part hereof, and the nonexclusive right to use as a means of ingress and egress, such existing roads within Dillingham Military Reservation as may be designated by the officer having immediate jurisdiction over said property, hereinafter referred to as "said officer";

RESERVING unto the United States the right to use, and to authorize others to use jointly with the lessee, all existing roads located within the aforesaid demised premises;

SUBJECT also to any existing easements for electric power transmission lines, telephone or telegraph lines, gas, gasoline, oil or sewer pipelines, or other facilities located on the leased premises such as but not limited to the following:

A. Easement granted to Hawaiian Telephone Company for underground communication cables within the northern boundary alongside of Farrington Highway.

B. License granted to Castle & Cooke for use of roadway located at the east end of the runway for ingress to and egress from the adjoining agricultural lands.

THIS LEASE is granted subject to the following conditions:

1. That the consideration for this grant of lease shall be the maintenance, protection, repair, or restoration by the lessee of the property leased. During the continuance of this lease, the lessee shall, without expense to the Government maintain, protect, restore and repair the leased area and all improvements thereon in its present state of equality, and shall protect against and promptly repair any damage to the existing roads as means of ingress and egress arising out of or in connection with this lease. The lessee shall also pay to the United States on demand any reasonable sum which may have to be expended after the expiration, or termination of this lease in restoring the premises to the condition required by Condition No. 26 hereof. Compensation shall be made payable to the Treasurer of the United States and forwarded by the lessee direct to the Division Engineer, U.S. Army Engineer Division, Pacific Ocean, Corps of Engineers, Building 230, Fort Shafter, Hawaii 96858.

2. That the lessee's use of Dillingham Airfield shall be limited to the construction, operation, repair, and maintenance of a public airport facility. The use authorized herein includes the construction, operation, and maintenance of runways, taxiways, lighting, access road, aircraft parking and tie-down areas, administration and terminal buildings, hangars, and related appurtenances and facilities, including the construction, operation and maintenance of retail sales and retail service facilities normally associated with public airport facilities.

3. That, as of the commencement date of this lease, an inventory and condition report of all personal property and improvements of the Government included in this lease shall be made by representatives of the Government and the lessee to reflect the then present condition of said property. A copy of said inventory and condition report shall be attached hereto and become a part hereof, as fully as if originally incorporated herein. At the expiration, revocation, or termination of this lease a similar inventory and condition report shall be prepared and submitted to the Division Engineer, U.S. Army Engineer Division, Pacific Ocean, Corps of Engineers, Building 230, Fort Shafter, Hawaii 96858, said inventory and condition report to constitute the basis for settlement by the lessee with the government for leased property shown to be lost, damaged, or destroyed, any such property to be either replaced or restored to the condition required by Condition No. 26 hereof, or at the election of the Government reimbursement made thereto by the lessee at the then current market value thereof.

4. That the lessee has inspected and knows the condition of the leased property, and it is understood that the same is hereby leased without any representation or warranty by the Government whatsoever, and without obligation on the part of the Government to make any alterations, repairs, or additions thereto.

5. That the lessee shall neither transfer nor assign this lease or any property on the demised premises, nor sublet the demised premises or any part thereof or any property thereon, nor conduct any vehicle speed contests or grant any interest, privilege, or license whatsoever in connection with this lease except for the purposes provided herein under Condition No. 6 hereof.

6. That the use of Dillingham Airfield is subject to the following operational provisions:

(a) That the primary purpose of the land and improvements within the leased area is for the operation of a joint-use-airport.

(b) The priorities for use of Dillingham Airfield shall be:

(1) military flight operations, (2) civil aviation and sport parachute operations; and (3) military ground maneuvers. Notwithstanding the foregoing, military ground units will be permitted access to the leased area when engaged in air mobile/aviation missions.

(c) The lessee may sublet portions of the leased area for hangar uses, parking and storage of aircraft, retail sales and service facilities associated with public aviation activities. The operation of the airfield facilities and supervision of the subleases will be under the lessee's management, not by contract.

(d) That Dillingham Airfield shall be used by and under the authority of the lessee for the sole purpose of operating an airport, all as contained in this lease. No other use of the said joint use area shall be made by or under the authority of the lessee except as authorized in writing by the said officer.

(e) (b) That the Government shall be under no obligation to operate or maintain the Government-owned airport facilities within the leased area, including but not limited to the runways, taxiways, navigational aids and tower at Dillingham Airfield.

(f) That prior to commencing activities under this lease, the lessee shall secure any required concurrences and/or approvals of the Federal Aviation Administration (FAA) and other federal and state agencies having jurisdiction over the conduct of public airport facilities.

(g) That, as specified in paragraph 6(b), Dillingham Airfield shall be subject to military flight operations and ground maneuvers for limited periods. Those operations or maneuvers may be inconsistent with, or create a hazard to civil aircraft operations. Prior to commencing such operations or maneuvers, the Government shall give reasonable advance notice to the lessee who will be responsible for notifying civil aviation users.

7. That the lessee shall, in advance, coordinate with and obtain the written approval of the said officer before installing or adding any external lighting, electronics and communication equipment at Dillingham Airfield. Furthermore, upon request of the said officer or his representative, both outside and inside lighting that may have adverse impact on military flight operations conducted at night will be turned off or adequately subdued.

8. (a) That unless otherwise agreed in writing by said officer, lessee will provide aircraft advisory services at Dillingham Airfield on frequency 123.0 (UNICOM).

(b) It is understood by the parties that the Government is not obligated to provide any services to persons utilizing Dillingham Airfield. Specifically, the Government is not obligated to provide emergency, weather, communications, air traffic, or similar services.

9. That the lessee shall prepare and submit to said officer for review a General Development Plan for the leased area and such adjacent lands which the lessee anticipates will be ultimately required during the term of this lease. The actual development of the airfield by and under the authority of the lessee shall be in accordance with the plan as approved by the Army command. The lessee may submit requests to amend the approved General Development Plan as it deems necessary from time to time following the same procedures as the original plan.

10. That the right is hereby reserved to the United States, its officers, agents, and employees to enter upon the said premises at all reasonable times for the purpose of inspection and inventory, and when otherwise deemed necessary for the protection of the interests of the Government, and the lessee shall have no claim of any character on account thereof against the United States or any officer, agent, or employee thereof while acting on official business and in an official capacity.

11. (a) That the Government will not be responsible for any loss, liability, claim or demand for property damage, property loss, or personal injury, including but not limited to death, arising out of any injury or damage caused by or resulting from any act or omission of the lessee in connection with the lessee's use of the premises described herein.

(b) That the lessee will pay or settle claims for injury, loss or damage to personnel or property of, or under the control of, the United States arising out of, or in conjunction with, the lessee's occupancy under this lease, excepting such injuries, losses or damages as a result solely from the negligence or wilful misconduct of any Government personnel, or, if required

by the said officer, will, in the case of property loss or damage, promptly repair or replace the same to the satisfaction of such officer.

(c) That the Government, its agencies and personnel, shall not be liable, by virtue of any custodial or bailment relationship with the lessee, for any loss of, or damage to, any private aircraft, cargo or other property placed upon Dillingham Airfield if such liability would not attach in the absence of such custodial or bailment relationship.

12. That the lessee shall at all times exercise due diligence in the protection of the demised premises against damage or destruction by fire and other causes.

13. That for such period as the lessee is in possession of the leased property pursuant to the provisions and conditions of this lease the lessee shall procure and maintain at its cost a standard fire and extended coverage insurance policy or policies on the leased property to the full insurable value thereof. The lessee shall procure such insurance from any responsible company or companies, and furnish either the original policy or policies or certificate of insurance or certificates of insurance to the Division Engineer. The policy or policies evidencing such insurance shall provide that in the event of loss thereunder the proceeds of the policy or policies, at the election of the Government, shall be payable to the lessee to be used solely for the repair, restoration or replacement of the property damaged or destroyed, any balance of the proceeds not required for the repair, restoration, or replacement of the property damaged or destroyed to be paid to the Government, and that in the event the Government does not elect by notice in writing to the insurer within 60 days after the damage or destruction occurs to have the proceeds paid to the lessee for the purposes hereinabove set forth, then such proceeds shall be paid to the Government, provided, however, that the insurer, after payment of any proceeds to the lessee in accordance with the provisions of the policy or policies shall have no obligation or liability with respect to the use or disposition of the proceeds by the lessee. Nothing herein contained shall be construed as an obligation upon the Government to repair, restore or replace the leased property, or any part thereof.

14. That the lessee shall cut no timber, conduct no mining or drilling operations, remove no sand, gravel, or kindred substances from the ground, except in the exercise of mineral rights heretofore reserved to the record owner thereof, commit no waste of any kind, or in any manner substantially change the contour or condition of the property hereby leased, except changes required in carrying out soil and water conservation measures or reasonably necessary to discharge the lessee's obligation pursuant to Condition No. 1 hereof.

15. The Government agrees that it will not construct or permit construction of any obstruction which would constitute a hazard as determined under Part 77 of the Federal Aviation Regulations, The Government agrees that lessee has the authority to take appropriate action to control any obstruction (including vegetation) which would constitute an obstruction under Part 77 of the Federal Aviation Regulation.

16. That the lessee shall comply with all applicable laws, ordinances, and regulations of the State, county, and municipality wherein the said demised premises are located, with regard to construction, sanitation, licenses or permits to do business and all other matters.

17. That in the use of the leased property, the lessee shall, at its own expense, comply with the National Environmental Policy Act of 1969, the Federal Insecticide, Fungicide and Rodenticide Act, as amended by the Federal Environmental Pesticide Control Act of 1972 (7 U.S.C. 136), and all applicable rules and regulations promulgated by the Environmental Protection Agency and other competent federal, state and local pollution authorities.

18. That except as herein authorized, the lessee shall not construct any permanent structure on the said demised premises, and shall not construct any temporary structure or advertising sign thereon without the prior written consent of the said officer.

19. That the lessee shall pay to the proper authority, when and as the same becomes due and payable, all taxes, assessments, and similar charges, which at any time during the term of this lease, may be taxed, assessed or imposed upon the Government or upon the lessee with respect to or upon the leased premises.

20. (a) That, except as otherwise provided in this lease, any dispute concerning a question of fact arising under this lease which is not disposed of by agreement shall be decided by the Division Engineer, who shall reduce his decision to writing and mail or otherwise furnish a copy thereof to the lessee. The decision of the Division Engineer shall be final and conslusive unless, within 30 days from the date of receipt of such copy, the lessee mails or otherwise furnishes to the Division Engineer a written appeal addressed to the Secretary of the Army. The decision of the Secretary or his duly authorized representative for the determination of such appeals shall be final and conclusive unless determined by a court of competent jurisdiction to have been fraudulent, or capricious, or arbitrary, or so grossly erroneous as necessarily to imply bad faith, or not supported by substantial evidence. In connection with any appeal proceeding under this condition, the lessee shall be afforded an opportunity to be heard and to offer evidence in support of its appeal. Pending final decision of a dispute hereunder, the lessee shall proceed diligently with the performance of this lease and in accordance with the Division Engineer's decision.

(b) This Conditian does not preclude consideration of law question in connection with decisions provided for in paragraph (a) above: Provided, that nothing in this Condition shall be construed as making final the decision of any administrative official, representative, or board on a question of law.

21. That this lease may be terminated by the lessee at any time by giving to the Secretary of the Army, through the Division Engineer, at least ten (10) days' notice thereof in writing.

22. That the use and occupation of the premises leased hereby shall be subject to the general supervision and approval of the said officer and to such rules and regulations as may be prescribed by him from time to time. Such rules and regulations shall not be inconsistent with Federal Aviation Regulations and assurances made by lessee under the Airport and Airway Improvement Act of 1982.

23. That the lessee shall pay the cost, as determined by the said officer, of producing and/or supplying any utilities and other services furnished by the Government or through Government-owned facilities for the use of the lessee, including the lessee's proportionate share of the cost of operation and maintenance of the Government-owned facilities by which such

utilities or services are produced or supplied. The Government shall be under no obligation to furnish utilities or services. Payment shall be made in the method prescribed by the said officer, upon bills rendered monthly.

24. That no member of or delegate to Congress or resident commissioner shall be admitted to any share or part of this lease or to any benefit to arise therefrom. Nothing, however, herein contained shall be construed to extend to any incorporated company, if the lease be for the general benefit of such corporation or company.

25. At the expiration or termination of this lease, any improvements constructed by the lessee in the joint use area shall, at the option of the Secretary of the Army, either (1) become the property of the Government without compensation therefor, or (2) fall within provisions of Condition No. 26 hereof.

26. That, on or before the date of expiration of this lease, or its termination by the lessee, the lessee shall at its cost vacate the leased property, remove the property of the lessee therefrom, and restore the leased property to as good order and condition as that existing upon the date of commencement of the term of this lease, less ordinary wear and tear and damage to the leased property covered by insurance and for which the Government shall receive or has received insurance funds in lieu of having the damaged property repaired, replaced, or restored. If, however, this lease is revoked, the lessee shall vacate the leased property, remove the property of the lessee therefrom, and restore the leased property to the condition aforesaid within such time as the Secretary of the Army may designate. In either event, if the lessee shall fail or neglect to remove the property of the lessee and so restore the leased property, then, at the option of the Secretary of the Army, the property of the lessee shall either become the property of the United States without compensation therefor, or the Secretary of the Army may cause it to be removed and the leased property to be so restored at the expense of the lessee, and no claim for damages against the United States or its officers or agents shall be created by or made on account of such removal and restoration work.

27. That, except as otherwise specifically provided, any reference herein to "Division Engineer" shall include his duly appointed successors and his authorized representatives.

28. That all notices to be given pursuant to this lease shall be addressed, if to the lessee to Director, Department of Transportation, State of Hawaii, 869 Punchbowl Street, Honolulu, Hawaii 96813; if to the Government to the Division Engineer, U.S. Army Engineer Division, Pacific Ocean, Corps of Engineers, Building 230, Fort Shafter, Hawaii 96858, or as may from time to time otherwise be directed by the parties. Notice shall be deemed to have been duly given if and when inclosed in a properly sealed envelope, or wrapper, addressed as aforesaid and deposited postage prepaid (or, if mailed by the Government, deposited under its franking privilege) in a post office or branch post office regularly maintained by the United States Government.

29. The lessee warrants that no person or selling agency has been employed or retained to solicit or secure this lease upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, excepting bona fide employees or bona fide established commercial or selling agencies maintained by the lessee for the purpose of securing business. For breach or

violation of this warranty the Government shall have the right to annul this lease without liability or in its discretion to require the lessee to pay, in addition to the lease rental or consideration, the full amount of such commission, percentage, brokerage, or contingent fee.

30. The lessee agrees to operate Dillingham Airfield in a nondiscriminatory manner to the end that no person, on the ground of race, color, religion, sex or national origin, be excluded from using the facilities or obtaining the services provided thereon or otherwise be subjected to discrimination under any program or activities provided thereon.

31. There is no property of historical significance included in this lease which falls within the provisions of Presidential Executive Order No. 11593.

32. This lease supersedes Department of the Army lease on Property on Dillingham Military Reservation, Contract No. DACA84-1-76-153.

33. This lease is not subject to Title 10, United States Code, Section 2662.

IN WITNESS WHEREOF, I have hereunto set my hand this 16th day of FEBRUARY 1983 by direction of the Assistant Secretary of the Army (IL&FM).

Gordon L. Hall
Assistant for Real Property
OASA(IL&FM)

THIS LEASE is also executed by the lessee as of the 11th day of May 1983.

APPROVED
DEPARTMENT OF TRANSPORTATION

By: Ryokichi Higashionna
Ryokichi Higashionna
Its Director of Transportation

STATE OF HAWAII
BOARD OF LAND AND NATURAL RESOURCES

By: S. Ono
Chairman and Member

By: Susumu Kealoha
Member

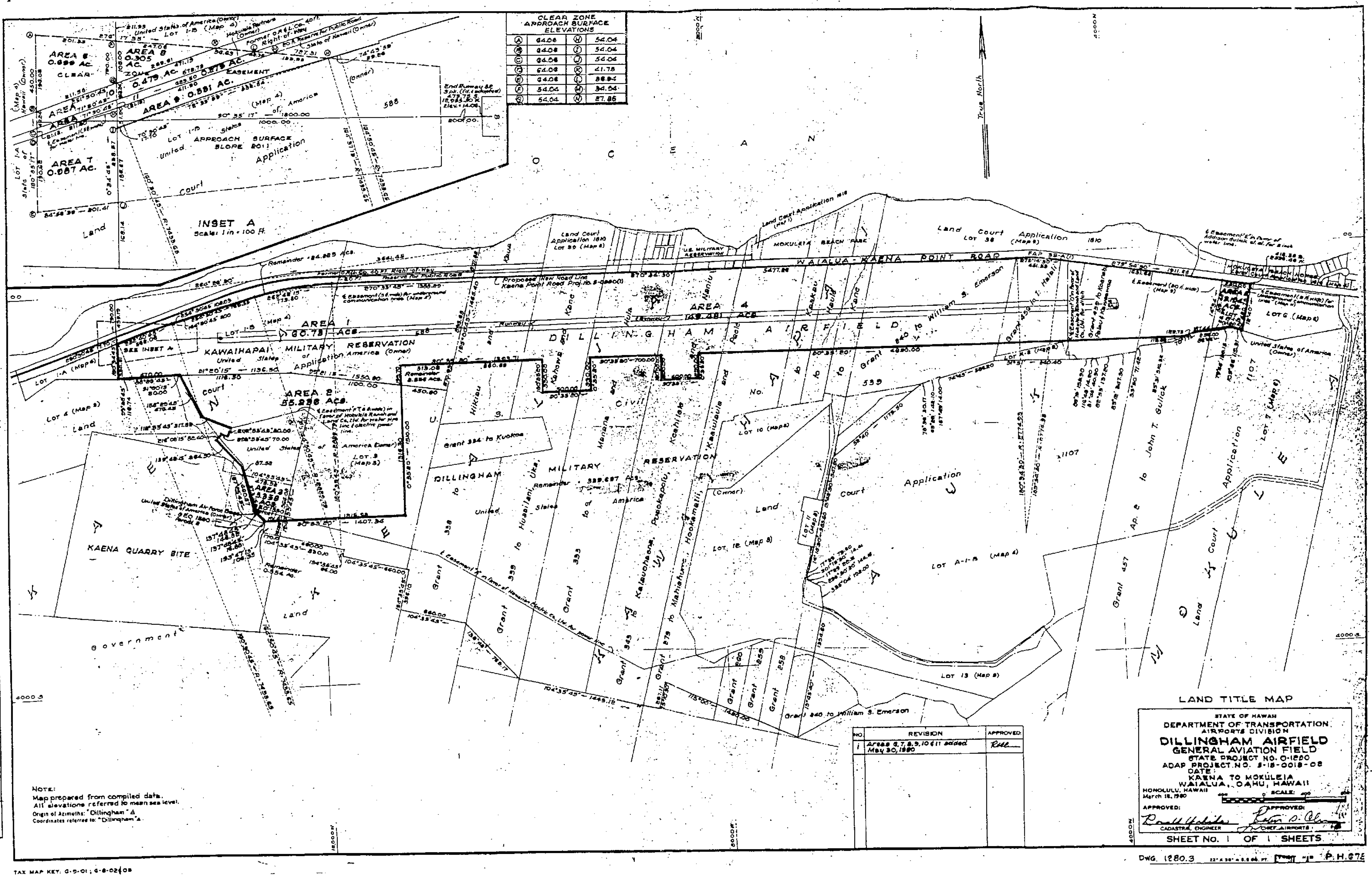
APPROVED AS TO FORM

Deputy Attorney General

APPROVED BY THE BOARD OF LAND AND NATURAL RESOURCES AT ITS MEETING HELD ON

SEP 11 1981

APPROVED AS TO FORM
Deputy Attorney General, State of Hawaii


LAND TITLE MAP
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
AIRPORTS DIVISION
DILLINGHAM AIRFIELD
GENERAL AVIATION FIELD
STATE PROJECT NO. O-1280
ADAP PROJECT NO. 3-15-0018-08
KAENA TO MOKULEIA
WAIALUA, OAHU, HAWAII
HONOLULU, HAWAII
March 18, 1980
SHEET NO. 1 OF 1 SHEETS
DWG. 1280.3
NOTE:
Map prepared from compiled data.
All elevations referred to mean sea level.
Origin of Azimuths: "Dillingham" Δ
Coordinates referred to: "Dillingham" Δ
CLEAR ZONE APPROACH SURFACE ELEVATIONS
INSET A
Scale: 1 in. = 100 ft.
WAIALUA - KAENA POINT ROAD
DILLINGHAM AIRFIELD
AREA 1 60.73 Acs.
AREA 2 55.256 Acs.
AREA 4 149.481 Acs.
KAWAIHAPAI MILITARY RESERVATION
DILLINGHAM MILITARY RESERVATION
KAENA QUARRY SITE
MOKULEIA BEACH PARK
True North
TAX MAP KEY: 6-9-01; 6-8-02/03

DILLINGHAM AIRFIELD
General Aviation Field
State Project No. 0-1290
ADAP Project No. 5-15-0018-02

DILLINGHAM AIRFIELD

Being portions of Dillingham and Kawaihapai Military Reservations and Dillingham Air Force Base (Parcel 1 of Governor's Executive Order No. 1530)

Being also a portion of U.S. Civil No. 539

Being also the land titles listed as follows:

Being a portion of Lot 1-B, as shown on Map 4 of Land Court Application 588 to be designated as Lot 1-B-3, covered by Owner's Certificate of Title No. 3633, filed in the Office of the Assistant Registrar of the Land Court

Being a portion of Lot 3, as shown on Map 3 of Land Court Application 588 to be designated as Lot 3-B, covered by Owner's Certificate of Title No. 71,234, filed in the Office of the Assistant Registrar of the Land Court

Being a portion of Grant 338 to Hikiau and Kaua

Being a portion of Grant 339 to Huaailani, Uka, Kahewa and Kane

Being a portion of Grant 333 to Manana and Hula

Being a portion of Grant 343 to Kalauohaena, Puaokapolu, Keahilele and Naniu

Being a portion of Grant 279 to Mahiahume, Hookamalii, Kaaiulaula and Paele

Being a portion of Grant 260 to Kaakau

Being a portion of Grant 259 to Haule

Being a portion of Grant 258 to Kane

Being a portion of Grant 240 to William S. Emerson

Being a portion of Grant 456 to I. Halali

Being a portion of Grant 459 to Koanaku, Palau and Kaweawea

EXHIBIT "B"

Being a portion of Grant 457 Apana 2 to John T. Gulick

Being all of Lot B-1-B, as shown on Map 4 of Land Court Application 1107, covered by Owner's Certificate of Title No. 53,047, filed in the Office of the Assistant Registrar of the Land Court

Being a portion of the Government Land of Kaena

Land situated at Kaena to Mokuleia, Waialua, Oahu Hawaii

Beginning at the Northeast corner of this piece of land, at the Northwest corner of Lot 6, Map 6 of Land Court Application 1107 and on the South side of Waialua-Kaena Point Road, Federal Aid Project No. FAP 35-A (1), the coordinates of said point of beginning referred to Government Survey Triangulation Station "Dillingham" being 418.38 feet South and 2,596.46 feet West, thence running by azimuths measured clockwise from true South:

1.	12°	40'		480.75	feet along Lot 6, Map 6 of Land Court Application 1107;
2.	109°	36'		119.31	feet along Lot 7, Map 6 of Land Court Application 1107;
3.	79°	46'		122.15	feet along same;
4.	86°	46'		256.00	feet along Lot 7, Map 6 of Land Court Application 1107 and along the remainder of Grant 457 Apana 2 to John T. Gulick;
5.	70°	17'		122.73	feet along the remainder of Grant 457 Apana 2 to John Gulick;
6.	90°	35'	20"	4850.00	feet along the remainder of Dillingham Military Reservation;
7.	0°	35'	20"	250.00	feet along same;
8.	90°	35'	20"	400.00	feet along same;
9.	180°	35'	20"	250.00	feet along same;
10.	90°	35'	20"	700.00	feet along same;
11.	0°	35'	20"	330.00	feet along same;
12.	90°	35'	20"	500.00	feet along same;

13.	180°	35'	20"	330.00	feet along same;
14.	90°	35'	20"	1393.71	feet along the remainder of Dillingham Military Reservation and along the remainder of Lot 1-B, Map 4 of Land Court Application 588;
15.	0°	35'	20"	1510.00	feet along the remainders of Lot 1-B, Map 4 and Lot 3, Map 3 of Land Court Application 588;
16.	90°	35'	20"	1407.34	feet along the remainders of Lot 3, Map 3 of Land Court Application 588 and Dillingham Air Force Base (Parcel 1 of Governor's Executive Order No. 1530);
17.	137°	48'	45"	146.82	feet along Kaena Quarry Site;
18.	167°	25'	45"	460.67	feet along Kaena Quarry Site and along Lot 4, Map 3 of Land Court Application 588;
19.	139°	42'	15"	364.50	feet along Lot 4, Map 3 of Land Court Application 588;
20.	216°	08'	15"	82.40	feet along same;
21.	292°	53'	45"	70.00	feet along same;
22.	202°	53'	45"	80.00	feet along same;
23.	112°	53'	45"	317.82	feet along same;
24.	155°	29'	45"	476.45	feet along same;
25.	91°	20'	15"	20.00	feet along same;
26.	88°	26'	45"	470.00	feet along same;
27.	93°	22'	45"	116.74	feet along same;
28.	180°	34'	45"	354.81	feet along Lot 1-A, Map 4 of Land Court Application 588;
29.	250°	30'	45"	17.70	feet along the South side of Proposed Kaena Point Road, Project No. S-0990 (1);

30. Thence along same on a curve to the right with a radius of 7433.65 feet, the chord azimuth and distance being 252° 40' 45" 562.08 feet;

31. 254° 50' 45" 102.03 feet along the South side of Proposed Kaena Point Road, Project No. S-0990 (1);

32. 164° 50' 45" 5.00 feet along same;

33. 254° 50' 45" 769.55 feet along same;

34. Thence along same on a curve to the right with a radius of 2829.79 feet, the chord azimuth and distance being 262° 42' 15" 773.80 feet;

35. 270° 33' 45" 1388.29 feet along the South side of Proposed Kaena Point Road, Project No. S-0990 (1);

36. 270° 34' 30" 5477.26 feet along the South side of Proposed Kaena Point Road, Project No. S-0990 (1) and Waialua-Kaena Point Road, Project No. FAP 35-A (1);

37. Thence along the South side of Waialua-Kaena Point Road, Project No. FAP 35-A (1), on a curve to the right with a radius of 2774.93 feet, the chord azimuth and distance being 275° 14' 30" 451.53 feet;

38. 279° 54' 30" 1911.68 feet along the South side of Waialua-Kaena Point Road, Project No. FAP 35-A (1) to the point of beginning and containing an area of 272.000 acres.

Subject, however, to an easement for underground communication lines, over, along, under and across the parcel of land designated and shown as Easement "F" on Map 5 of Land Court Application 588;

Subject, also, to Easement "A" for power line, over, along, under and across the parcel of land designated and shown as Easements "A" and "B" on Map 3 of Land Court Application 588.

Subject, also, to an easement, over, along, under and across the parcel of land designated and shown as Easement 20 on Map 9 of Land Court Application 1107.

Subject, also, to an easement, over, along, under and across the parcel of land designated and shown as Easement 26 on Map 11 of Land Court Application 1107.

Subject, also, to Easement "A" for power line, Easement "D" for ditch and Easement "E" for water line, said easements being fully described and delineated in that certain eminent domain proceedings docketed in the United States District Court for the District of Hawaii as Civil No. 539.

Subject, also, to Easement "F" for water pipe line and electric power line, over, along, under and across Lot 3 of Land Court Application 588 and described in Document No. 133,409, filed in the Office of the Assistant Registrar of the Land Court.

Together with Areas 8 and 9 for Clear Zone Easement as shown on the LAND TITLE MAP and as described as follows:

AREA 8

Beginning at the Southwest corner of this piece of land, on the North side of former Oahu Railway & land Company 40 Ft. Right-of-Way, the true azimuth and distance to the end of Course 28 of the above described Dillingham Airfield being 0° 34' 45" 115.26 feet, thence running by azimuths measured clockwise from true South:

1.	180°	34'	45"	108.00 feet along Lot 1-A, Map 4 of Land Court Application 588;
2.	276°	17'	55"	247.08 feet along the remainder of Lot 1-B, Map 4 of Land Court Application 588;
3.	71°	50'	45"	259.61 feet along the former Oahu Railway & Land Company 40 Ft. Right-of-Way to the point of beginning and containing an area of 0.305 acre.

AREA 9

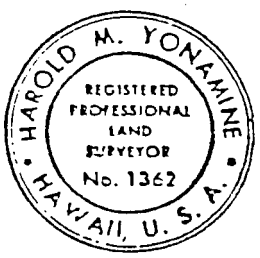
Beginning at the Southwest corner of this piece of land, at the end of Course 28 of the above described Dillingham Airfield, thence running by azimuths measured clockwise from true South:

1.	180°	34'	45"	51.90 feet along Lot 1-A, Map 4 of Land Court Application 588;
2.	251°	50'	45"	411.90 feet along 20 Ft. Reserve for Public Road;

3. 276° 17' 55" 133.93 feet along the remainder of Lot 1-B, Map 4 of Land Court Application 588;

4. Thence along same on a curve to the left with a radius of 7433.65 feet, the chord azimuth and distance being 72° 33' 59" 532.84 feet;

5. 70° 30' 45" 17.70 feet along the remainder of Lot 1-B, Map 4 of Land Court Application 588 to the point of beginning and containing an area of 0.531 acre.



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
Highways Division

Honolulu, Hawaii
June 18, 1980

By Harold M. Yonamine
Cadastral Engineer

Tax Map Keys: 6-8-02, 03 and 6-9-01

(Calc. Folder 533 Page 28)
(Coords. Calc. F 533, Page 28)

Appendix H

CITY AND COUNTY ZONING AND STATE OF HAWAII LAND USE REGULATIONS

APPENDIX H

CITY AND COUNTY ZONING AND STATE OF HAWAII LAND USE REGULATIONS

Land Use on Oahu is controlled both by the State of Hawaii, through the State Land Use Commission, and the City and County of Honolulu, through the Department of General Planning and the Department of Land Utilization. This appendix describes zoning and land use regulations for land in the environs of Dillingham Airfield.

State Land Use Commission

The State Land Use Commission was established by Hawaii Revised Statutes, Chapter 105. The State Land Use Commission is composed of nine members, one appointed from each of the counties and the remainder appointed at large. Pursuant to the authority granted to it by this Chapter, the Land Use Commission has classified all land in the State as within one of four land districts. The four districts, with the corresponding permissible uses, are as follows.

Agricultural District. "Shall include activities or uses as characterized by the cultivation of crops, orchards, forage, and forestry; farming activities or uses related to animal husbandry, and game and fish propagation; services and uses accessory to the above activities including, but not limited to, living quarters or dwellings, mills, storage facilities, processing facilities, and roadside stands for the sale of products grown on the premises; agricultural parts and open area recreational facilities."

In no event shall the minimum lot size for any agricultural use be less than one acre.

The County Planning commissions may permit certain unusual and reasonable uses within the agricultural district when the use will promote the effectiveness and

objectives of HRS Ch. 105. The issuance of such a "special permit" is subject to the approval of the Land Use Commission.

Rural District. "Shall include activities or uses as characterized by low density residential lots of not more than one dwelling house per one-half acre in areas where "city-like" concentrations of people, structures, streets, and urban level of services are absent and where small farms are intermixed with the low density residential lots. These districts may include contiguous areas which are not suited to low density residential lots or small farms by reasons of topography, soils and related characteristics."

Unless authorized by special permit only the following uses shall be permitted.

1. Low density residential uses;
2. Agricultural uses; and
3. Public, quasi-public, and public utility facilities, [S205-5(c)].

The County planning commission may permit certain unusual and reasonable uses within the rural district when the use will promote the effectiveness and objectives of HRS Ch. 205. The issuance of a "special permit" is subject to approval by the Land Use Commission and presently there are no rural classified districts in the City and County of Honolulu.

Urban District. "Shall include activities and uses as provided by ordinances or regulations of the County within which the urban district is situated." Section 205-16 goes on to require that amendments to the land use districts and other land use commission action must be in compliance with the State Plan once that is enacted.

Conservation District. "Shall include areas necessary for protecting watersheds and water sources; preserving scenic and historic areas; providing park lands, wilderness, and beach; conserving endemic plants, fish, and wildlife; preventing floods and soil

erosion; forestry; open space areas whose existing openness, natural condition, or present state of use if retained, would enhance the present or potential value of abutting or surrounding communities, or would maintain or enhance the conservation of natural or scenic resources; areas of value for recreational purposes, and other activities, and other permitted uses not detrimental to a multiple use conservation concept."

Zoning and land use within the conservation district is controlled solely by the State Department of Land and Natural Resources.

Further land use within the agricultural, rural and urban districts is regulated at the County level through the County general plan and comprehensive zoning ordinance.

Procedures for Amending District Boundaries

The Commission has the power to amend district boundaries through a petition and quasi-judicial hearing process. A landowner or lessee may petition for a change in district boundary for his own land or for land in which he has a property interest. State and County agencies, including the Commission itself, may also petition for a change anywhere within the County or State.

It is the petitioner's responsibility to serve the copies of the petition on the Counties, and the County planning commissions then submit their comments and recommendations to the Land Use Commission. Notice by publication is all that is required but the Commission does maintain a mailing list for interested persons.

Between 60 and 180 days after a petition has been filed, a public hearing must be held in the County where the land is located. Between 45 and 180 days after the public hearing, the Commission meets publicly to make its decision. The time, place, and agenda of public hearings must be published in the newspaper. Approval of a district boundary change requires six affirmative votes.

City and County of Honolulu Land Use Controls

Vested with the responsibility for the planning of the urban and agricultural classified districts as prescribed by the State Land Use Law, the City and County of Honolulu has the entire island of Oahu to consider. The Charter of the City and County of Honolulu as revised by the Charter Commission and approved by a majority of the voters has established two departments to accomplish this task.

The land use policy is the primary responsibility of the Department of General Planning (DGP) while the land use implementation is the responsibility of the Department of Land Utilization (DLU).

Headed by the Chief Planning Officer, DGP is responsible for producing the General Plan and Development Plans. Input into the makings of the General Plan and Development Plans are the responsibility of the Executive Planning Committee. The review of both plans are the responsibility of the Planning Commission.

Purpose of the General Plan

The General Plan for the City and County of Honolulu, a requirement of the City Charter, is a written commitment by the City and County government to a future for the island of Oahu which it considers desirable and attainable. The Plan is a two-fold document. First, it is a statement of the long-range social, economic, environmental, and design objectives for the general welfare and prosperity of the people of Oahu. These objectives contain both statements of desirable conditions to be sought over the long run and statements of desirable conditions which can be achieved within an approximate 10-year time horizon. Second, the General Plan is a statement of broad policies which facilitate the attainment of the objectives of the Plan.

The General Plan is a guide for all level of government, private enterprise, neighborhood and citizen groups, organization, and individual citizens in eleven areas of

concern: (1) population; (2) economic activity; (3) the natural environment; (4) housing; (5) transportation and utilities; (6) energy; (7) physical development and urban design; (8) public safety; (9) health and education; (10) culture and recreation; and (11) government operations and fiscal management.

Content of the General Plan

The eleven subject areas provide the framework for the City's expression on public policy concerning the needs of the people and the functions of government. The objectives and policies reflect the comprehensive planning process of the City and County which addresses all aspects of the health, safety, and welfare of the people of Oahu.

In preparing the statement of objectives and policies, the fair distribution of social benefits was held to be of paramount importance. It shall continue to be of paramount importance in the pursuit and implementation of these objectives and policies.

Population. The population objectives and policies encompass three distinct thrusts. First, to control population growth to the extent possible to avoid social, economic, and environmental disruptions. Second, to plan for anticipated future population growth. And, finally, to maintain a pattern of population distribution that will allow people to live and work in harmony.

Economic Activity. The objectives and policies for economic activity attempt to address the need for an adequate standard of living for residents and future generations. Issues of employment opportunities, viability of major industries, diversification of the economic base, and the location of jobs are addressed in terms of what government can do to provide, encourage, and promote economic opportunities for our people.

Natural Environment. The natural environment of our island, next to our people, is our greatest asset. The pleasures of a year-round mild and amiable climate, beautiful mountains, attractive beaches, scenic vistas, and natural drinking water are enjoyed by

those of use who reside in the community as well as those who visit here. The City's policies seek to protect and enhance our natural attributes by increasing public awareness and appreciation of them and by mitigating against the degradation of these assets.

Housing. Obtaining decent, reasonably priced homes in safe and attractive neighborhoods has been a perennial problem for the residents of Oahu, and is a primary concern of the General Plan.

The objectives and policies for housing seek to provide a choice of living environments, affordable housing, and a reduction of inflationary speculation.

Transportation and Utilities. An efficient transportation system is essential to the life and economic productivity of a community. The cost of building and maintaining the system is a major public investment. Coordinated planning of accessibility and circulation requirements and the transportation system is important in the management of urban growth. The transportation objectives and policies address the need for a balanced system for the pedestrian, bikeway, public transportation, and the automobile.

Population growth results in increased demands for water, sewerage, and solid waste disposal services provided by government, as well as the communication, electricity, and gas systems provided by the private sector. Not only must such needs be met, but the social, economic, and environmental consequences of meeting these needs must be carefully considered.

Energy. There is no more salient example of the impact of world events on our island community than in the provision of energy. Energy development, utilization, and conservation are addressed with the stress on the reduction in dependence on outside sources.

Physical Development and Urban Design. Physical development and urban design is concerned with the quality of growth that occurs within the various parts of the

Island. The objectives and policies in this area of concern deal with the coordination of public facilities and land development, compatibility of land uses, and specification of certain land uses at particular locations. Urban design emphasis is contained in objectives to create and maintain attractive, meaningful, and stimulating environments and to promote and enhance the social and physical character of Oahu's older towns and neighborhoods.

Public Safety. Many of the City's services derive from the concern for the safety of the people. The prevention and control of crime and maintenance of public order are one aspect of public safety. The City's policies reflect the roles of the citizen, Honolulu Police Department, and City Prosecutor in providing for the safety of residents and visitors to our island. Another aspect deals with the protection of people and property from natural diasters and other emergencies, traffic and fire hazards, and other unsafe conditions.

Health and Education. The provision of health care services for the individual and Oahu is largely a function of the private sector. The City's concern concentrates on the accessibility of health facilities through planning and land use controls, and on the protection of environmental health through health codes and other regulations which mitigates against disease and pollution.

Objectives and policies for education call for a wide range of educational opportunities, development of employable skills, efficient use of facilities, appropriate location, and the promotion of Honolulu as a center for higher education in the Pacific.

Culture and Recreation. Preservation and enhancement of Hawaii's multi-ethnic culture will be achieved through policies directed toward people, our most important resource, and cultural, historic and archaeological sites, buildings, and artifacts.

The use of leisure time is addressed through objectives and policies encouraging visual and performing arts and the provision of a wide range of recreational facilities and services that are readily available to all our residents.

Government Operations and Fiscal Management. The objectives and policies in the above ten areas of concern represent an ambitious agenda which will stretch the resources of City government to the limit. Increased efficiency, effectiveness, responsiveness, and fiscal integrity in carrying out the functions of City government will be crucial to whatever degree of success is achieved.

Role of the City and County Government. The City and County government will implement the policies contained in the General Plan through ordinances and resolutions as well as through rules and regulations. Also essential to policy implementation are the City's annual budget and six-year capital improvement program, both of which should be consistent with the objectives and policies of the Plan, especially with regard to long-term commitments of money. It is necessary to remember, however, that the City and County government is not alone in determining the general welfare of the people of Oahu. The State and Federal governments, too, have an important influence on the life of the community. The City and County recognizes the need for close cooperation among the various levels of government and, in striving to meet the objectives of the General Plan, pledges not to lose sight of this very great need.

Citizen Participation. Individual citizens and citizens' groups should participate freely to help bring about the success of the General Plan. Indeed, in a democratic society they have a responsibility to express their concerns to the City and County government and to work constantly for more effective government action. To provide the residents of the City and County of Honolulu with the opportunity to democratically and meaningfully participate in the determination of the direction and quality of future growth on Oahu, a citizen participation process which focuses on citizen advisory boards as called for in the City Charter has been established.

These boards represent a valuable means of encouraging and formally maintaining strong citizen participation in all parts of the Island. It is hoped that their members, along with members of the Island's many community organizations, will actively participate in the City planning process. Members of the adivsory boards can provide valuable assistance by soliciting the input of other neighborhood groups and residents and identifying the concerns of the areas they represent. By monitoring conditions, they can also help to make sure that the policies of the General Plan are implemented.

Most planning issues have impacts which extend beyond the boundaries of neighborhoods. Regular planning forums for the discussion of regional and island-wide issues are an important part of the citizen participation process.

Implementation. By itself, the General Plan cannot bring about all of the changes and improvements which the City and County government considers to be desirable and attainable. It is, by design, a very general document, and one of its purposes is to establish a coherent set of broad guidelines which can be used in developing plans, programs and legislation for guiding Oahu's future.

Development Plans, according to the City Charter, are relatively detailed guidelines for the physical development of the Island. They are intermediate means of implementing the objectives and policies of the General Plan in the various parts of the Island. The Development Plans provide for land use and public facilities planning as well as indicate the sequence in which development will occur. They must implement and accomplish the objectives and policies of the General Plan.

Development Plans contain 'statements of standards and principles' with respect to land uses and 'statements of urban-design principles and controls.' The City Council adopts Development Plans and amendments thereto by ordinance. These Plans should not, however, be confused with zoning ordinances. Zoning ordinances will continue to regulate the use of land within clearly demarcated zones and set detailed standards for the height, bulk, and location of the buildings.

In addition to zoning ordinances, the functional plans and programs of the City and County agencies must conform to the General Plan and implement the Development Plans. This will ensure that the provision of the City services is in accord with the General Plan's objectives and policies and provisions contained in the Development Plans.

Implementaiton of the General Plan also occurs through the budgetary responsibilities of government. The budget process or function is closely entwined with the planning process of the City. It involves developing the yearly operating budget and the projected capital improvement program budget. Both documents represent the final step in the comprehensive planning process relating the long-range objectives and policies of the City's General Plan to the specific uses of public revenues. To ensure the implementation of the General Plan, the City budget and programs must comply with the purposes of the General Plan and implement applicable provisions of the Development Plans.

Amendments. For the General Plan to fulfill its purpose of providing overall guidance to the action of government, private enterprise, and individual citizens across a broad spectrum of concerns, it must become neither a rigid nor an obsolete document. To keep the Plan flexible and up-to-date, its objectives and policies must be subject to change over time in response to changes in the concerns of the people of Oahu, new approaches and opportunities for addressing those concerns, and changes in the basic assumptions underlying the objectives and policies. One means of accomplishing this is provided by the City Charter which directs the Chief Planning Officer to prepare revisions to the General Plan at least every five years for Council consideration. More importantly, however, the City Council may amend or revise the General Plan whenever it deems necessary.

Emphasis should be placed on re-evaluating and amending selected General Plan objectives and policies as problems and issues arise. The City and County government should develop means for identifying emerging problems and issues and evaluating their effective on the concerns of the people of Oahu as expressed in the General Plan. Such

an ongoing process would provide a basis for the Chief Planning Officer to initiate timely proposals to amend the General Plan in response to changing public concerns.

One of the key assumptions underlying many of the General Plan objectives and policies is anticipated future population growth for the Island of Oahu as projected by the State Department of Business, Economic Development & Tourism (DBED). Consequently, whenever DBED revises its population projections for Oahu, the objectives and policies of the Plan will be re-evaluated in light of the new projections and amendments will be proposed as may be appropriate. Also, whenever revised population projections include an extended time horizon, the General Plan will be amended to maintain a planning horizon of approximately 20 years.

City and County Zoning Permitted Uses and Special Districts. The City and County General Plan is the regulation of land's long-term use while zoning is the regulation of its immediate allowed use. Existing zoning does not necessarily coincide with the general plan for the same area or parcel because:

1. Some zoning was created before the original General Plan was adopted.

2. The General Plan reflects future needs which may be different from those of the present.

3. State infrastructure may not be available to support the zoning at that time.

The implementation of the City and County General Plan is effectuated through zoning. The Department of Land Utilization prepares the zoning districts, ordinances, maps, rules and regulations which follow the policies established by the General Plan and Development Plans. Zoning specifies the allowed use of a parcel of land by designating the categories of land and the specific standards for development within each category. Generally speaking, the zoning categories are:

1. Preservation

    Restricted
    Military and Federal
    General

2. Agricultural

    Restricted
    General

3. Country

4. Residential

5. Apartment

    Low Density
    Medium Density
    High Density

6. Apartment Mixed Use

    Low Density
    Medium Density
    High Density

7. Resort

8. Business

    Neighborhood
    Community

9. Business Mixed Use

    Community
    Central

10. Industrial

    Limited
    Intensive
    Waterfront

11. Industrial-Commercial Mixed Use

12. Special Design

The standards and regulations for development under each zoning category are defined in each County's legal zoning document, Land Use Ordinance (LUO).

The standards include among others:

1. Allowed uses (restaurants, homes, airports, parks, etc.)
2. Density (number of units per acre)
3. Height limitations
4. Minimum parcel sizes for difference use
5. Yard space standards (distance from buildings to the street and adjoining lot)
6. Off street parking requirements
7. Application requirements
8. General requirements

If the proposed use is not allowed on the land as presently classified, the developer may exercise one of several options. The developer may either apply for a zoning classification change or seek a variance or exception to the current permitted use. If the zoning change requested does not conform to the General Plan, the General Plan must be amended before the zoning change will be considered.

In addition to the Land Use Ordinances, various special design districts have been established. These special districts include the:

- Flood Hazard District
- Hawaii Capital District
- Diamond Head District
- Punchbowl District
- Chinatown District

- o Thomas Square/Honolulu Academy of Arts District
- o Waikiki District
- o Haleiwa District

These districts have unique regulations to preserve special characteristics of the area. The regulations are based on flooding, cultural, scenic and/or historical considerations.

Other agencies having jurisdiction over land use within the City and County of Honolulu:

City and County of Honolulu	Responsibility
1. Board of Water Supply	Wells
2. Building Department	Building, Electrical and Plumbing Codes
3. Department of Parks & Recreation	Parks & Public Access
4. Department of Public Works	Drainage, Dewatering, Grading, Wastewater Discharge, Sewers
5. Department of Transportation Services	Street Usage

Federal Government	Responsibility
1. Corps of Engineers	Waterways
2. Oahu Consolidated Family Housing Office (OCFHO)	Military Housing

State of Hawaii	Responsibility
1. Environmental Quality Control	Envrionmental Impact Statement
2. Department of Health	Pollution Control

3.	Board of Land and Natural Resources	Conservation, Groundwater, and Historic Sites
4.	Department of Transportation	State Highways, Harbors, Airports, Shores and Shorewaters

Subdivision Procedures. As in zoning, subdivision control is a means of regulating private development to conform with the County General Plan. HRS Section 46-6(f)(6) defines subdivision as: the division of improved or unimproved land into two or more lots, parcels, sites, or other divisions of land and for the purpose, whether immediate or future, of sale, lease, rental, transfer of title to, or interest in, any or all such lots, parcels, sites, or division of land subdivided. The term also includes a building or group of buildings, other than a hotel, containing or divided into three or more dwelling units or lodging units.

The main concern in subdivision regulation is with the layout and standards for the development. Although these regulations differ between jurisdications, several characteristics are common to most. These include standards for street design, lot size, required improvements, utilities, endorsement of health officials and a review procedure.

Parks and Playgrounds for Subdivision [HRS 46-6]. Pursuant to HRS 46-6, the Counties are mandated to adopt ordinances requiring any person who subdivides land or who constructs a building or group of buildings containing or divided into three or more dwelling units or lodging units to either:

1. dedicate land, together with facilities, to the county, for park and playground purposes; or

2. pay to the County an amount equal to the value to the land which would otherwise have been dedicated.

Section 46-6 requires that the dedication and/or payment be a condition precedent to approval of the subdivision.

Public Access [HRS 46-6]. Hawaii Revised Statutes Section 46-6.5 Public Access, provides that: Each County shall adopt ordinances which shall require a subdivider or developer, as a condition precedent to final approval of a subdivision, in cases where public access is not already provided, to dedicate land for public access by right-of-way or easement for pedistrial travel from a public highway or public streets to the land below the high-water mark on any coastal shoreline, and to dedicate land for public access by right-of-way from a public highway to areas in the mountains where there are existing facilities for hiking, hunting, fruit-picking, ti-leaf sliding, and other recreational purposes, and where there are existing mountain trails. [HRS 46-6.5(2)]

The statute goes on to define subdivision for the purpose of this section: any land which is divided or is proposed to be divided for the purpose of disposition into six or more lots, parcels, units, or interest and also includes any land whether contiguous or not, if six or more lots are offered as part of a common promotional plan of advertising and sale. [HRS 46-6.5(d)]

Building Permit. After the developer has ensured that the proposed land use is consistent with both the County General Plan and the Land Use Ordinance, he must determine whether a building permit is required. Building permit approval is regulated solely by the City and County. While procedures are adopted by ordinance, the standards must be in compliance with national codes and regulations. A building permit is required:

1. to erect, construct, enlarge, alter, repair, move, improve, remove, convert, or demolish any building or structure (including fences, fence wall, retaining walls and swimming pools);

2. for any electrical work;

3. to install, remove, alter, repair or replace any plumbing, gas or drainage piping work or any fixture gas applicance or water heating or treating equipment;

4. to construct, reconstruct, or improve any sidewalk, curb or driveway in public rights-of-way.

The Building Department issues other types of permits as well. A permit may be required to:

1. remove an existing building from one tax map parcel to another;
2. install, construct, alter, relocate or reconstruct certain types of signs; or
3. erect any tent or similar structure for religious or commercial purposes.

References

1. City and County of Honolulu, "Comprehensive Zoning Code," Ordinance 3234, January 2, 1969.

2. City and County of Honolulu, "General Plan, Objectives and Policies," Resolution No. 82-188, December 8, 1982.

3. City and County of Honolulu, "Land Use Ordinance," Ordinance No. 86-96, October 22, 1982.

Appendix I

FLOOD HAZARD INFORMATION DILLINGHAM AIRFIELD

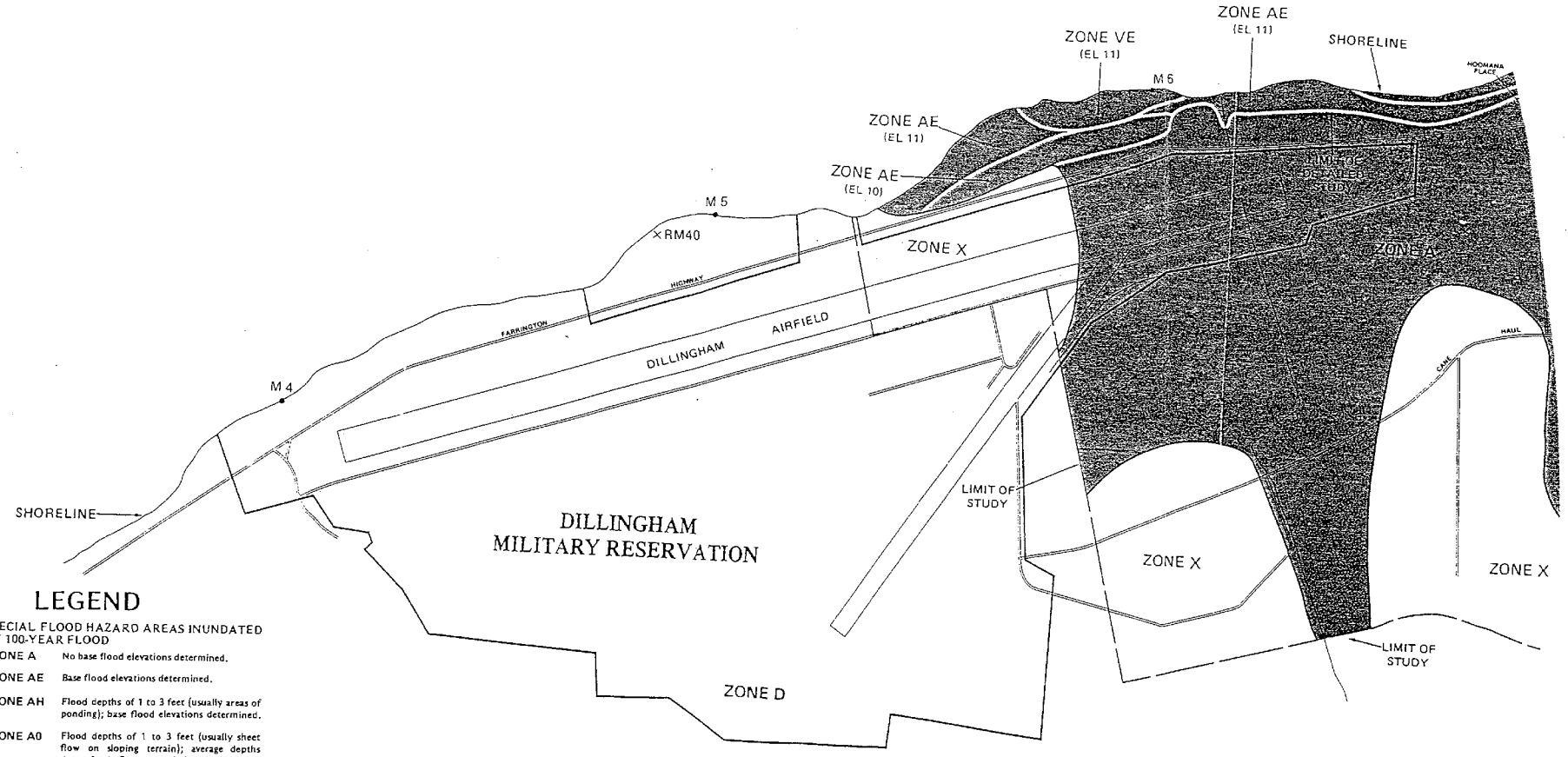
APPENDIX I

FLOOD HAZARD INFORMATION - DILLINGHAM AIRFIELD

A portion of Dillingham Airfield is located in a coastal area that is subject to flooding. Facilities constructed in the area of potential inundation, particularly inhabited structures, must be designed to survive floods and area utility systems should be designed accordingly.

The Federal Emergency Management Agency's current Flood Information Rate Map (FIRM), Panel 15001-0035-B, dated September 4, 1987, delineates zones where flooding might occur on Dillingham Airfield. Figure I-1 presents the FIRM information for Dillingham Airfield.

Planned facilities that could be affected by flooding include airfield pavements at the east end of the airport and parachute jump club facilities that are adjacent to the relocated drop zone. All of these facilities are located in zone "A" which is subject to 100 year floods. Much of the rest of the airport is in an area for which flood hazards are undetermined.



LEGEND

SPECIAL FLOOD HAZARD AREAS INUNDATED BY 100-YEAR FLOOD

- ZONE A — No base flood elevations determined.
- ZONE AE — Base flood elevations determined.
- ZONE AH — Flood depths of 1 to 3 feet (usually areas of ponding); base flood elevations determined.
- ZONE AO — Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- ZONE A99 — To be protected from 100-year flood by Federal flood protection system under construction; no base elevations determined.
- ZONE V — Coastal flood with velocity hazard (wave action); no base flood elevations determined.
- ZONE VE — Coastal flood with velocity hazard (wave action); base flood elevations determined.

FLOODWAY AREAS IN ZONE AE

OTHER FLOOD AREAS

- ZONE X — Areas of 500-year flood; areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 100-year flood.

OTHER AREAS

- ZONE X — Areas determined to be outside 500-year flood plain.
- ZONE D — Areas in which flood hazards are undetermined.

Flood Boundary

Floodway Boundary

Zone D Boundary

Boundary Dividing Special Flood Hazard Zones, and Boundary Dividing Areas of Different Coastal Base Flood Elevations Within Special Flood Hazard Zones.

AIRPORTS DIVISION DEPARTMENT OF TRANSPORTATION STATE OF HAWAII	DILLINGHAM AIRFIELD MASTER PLAN AND NOISE COMPATIBILITY PROGRAM	Edward K. Noda and Associates, Inc.	FLOOD HAZARD MAP	FIGURE I–1

Appendix J

PARACHUTE ACTIVITY PROCEDURES

DILLINGHAM FIELD
PARACHUTE ACTIVITY PROCEDURES

1. Parachute activity will be conducted in accordance with all applicable Federal Aviation Regulations (FAR).

2. The pilot-in-command will contact Honolulu Flight Service (FSS) prior to each jumping activity and similarly when jumping activity is ended for the flight when the last parachute jumper from the aircraft reaches the ground.

3. The pilot-in-command shall obtain approval from airport management (Airport Services Supervisor, DHF UNICOM) prior to allowing and before each and every jump. During the hours of DHF UNICOM operation, airport management approval shall be obtained from the UNICOM operator. Approval will be based on air traffic activity only. Approval granted to the pilot-in-command shall constitute extension of approval to each person jumping from that particular flight.

   a. When DHF UNICOM is not in operation, the pilot-in-command shall obtain approval from the duty Airport Services Supervisor for the planned jump activity prior to taking off. The duty Airport Services Supervisor may be contacted by phone at Honolulu International Airport (HIA), at 836-6434, or through HIA Ramp Control at 836-6603, or HIA Communications at 836-6411.

   b. The pilot-in-command shall provide his name to airport management and the number of persons scheduled to jump on the flight for which approval is being sought.

   c. Airport management shall not unreasonably withhold approval of jumping activity except where such activity is deemed to affect air traffic operational safety at the airfield, or is in violation of the procedures contained herein.

4. The pilot-in-command shall announce twice in the blind on DHF UNICOM frequency, 123.0 MHZ, "5 MINUTES TO JUMPERS AWAY" and "JUMPERS AWAY" for each jump. After the 5-minute jump warning, UNICOM will issue recommendations to aircraft on the ground or in the pattern regarding hold on the ground, avoiding jump area, or to go around, and will obtain the pilot's acknowledgment of the recommendation.

5. If during any flight the required radio communications system is or becomes inoperative, any jumping activity from the aircraft shall be abandoned; however, if the communications system becomes inoperative in flight after receipt of airport management authorization and FSS notification, the jumping activity from that flight may be continued. No subsequent jumping can be conducted until aircraft radio communications can be re-established.

6. The individual or organization conducting parachute operations shall maintain a log of all jump activity occurring under their jurisdiction, to include, at a minimum, the following information:

   a. Date of jump

   b. Time of approval

   c. Name of person approving jump

   d. "N" number identification of aircraft used for jump

   e. Name of pilot-in-command

   f. Each jumper's name

   Log information shall be made available to the FAA or State upon request.

7. No parachute jumping shall be performed at or into the drop zone located off the departure end of Runway 8 anytime a Runway 26 traffic pattern is being observed.

   a. Determination of Runway 26 shall be based upon the existence of sustained prevailing winds in excess of _____ knots as derived from wind speed and direction at the UNICOM tower.

   b. UNICOM will advise HNL-FSS anytime a Runway 26 direction is in effect at Dillingham Field.

8. Jumpers will inform UNICOM of all parachuting activity incidents as soon as practical but not more than 15 minutes after the incident occurs. When the UNICOM is not operational, the duty Airport Services Supervisor will be notified of the incidents within the same time period.

AiR-E

JOHN WAIHEE
GOVERNOR

REX D. JOHNSON
DIRECTOR

DEPUTY DIRECTORS
JOYCE T. OMINE
AL PANG
JEANNE K. SCHULT
CALVIN M. TSUDA

IN REPLY REFER TO

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
AIRPORTS DIVISION
HONOLULU INTERNATIONAL AIRPORT • HONOLULU HAWAII 96819-1898

April 14, 1993

AIRPORT NOTICE #93-016

TO: ALL CONCERNED

SUBJECT: ESTABLISHMENT OF WEST END, PARACHUTE DROP ZONE DURING RUNWAY 26 OPERATIONS, DILLINGHAM FIELD

The Federal Aviation Administration airspace analysis on the proposed installation of a parachute drop zone at the west end of the Dillingham Airfield has determined the change to be acceptable from an airspace utilization standpoint.

Based on this assessment, effective Saturday, May 1, 1993, parachute jumping during Runway 26 operation at Dillingham Field will be permitted, subject to the observance of the following procedures and requirements:

1. Airfield operations must be in a Runway 26 configuration.

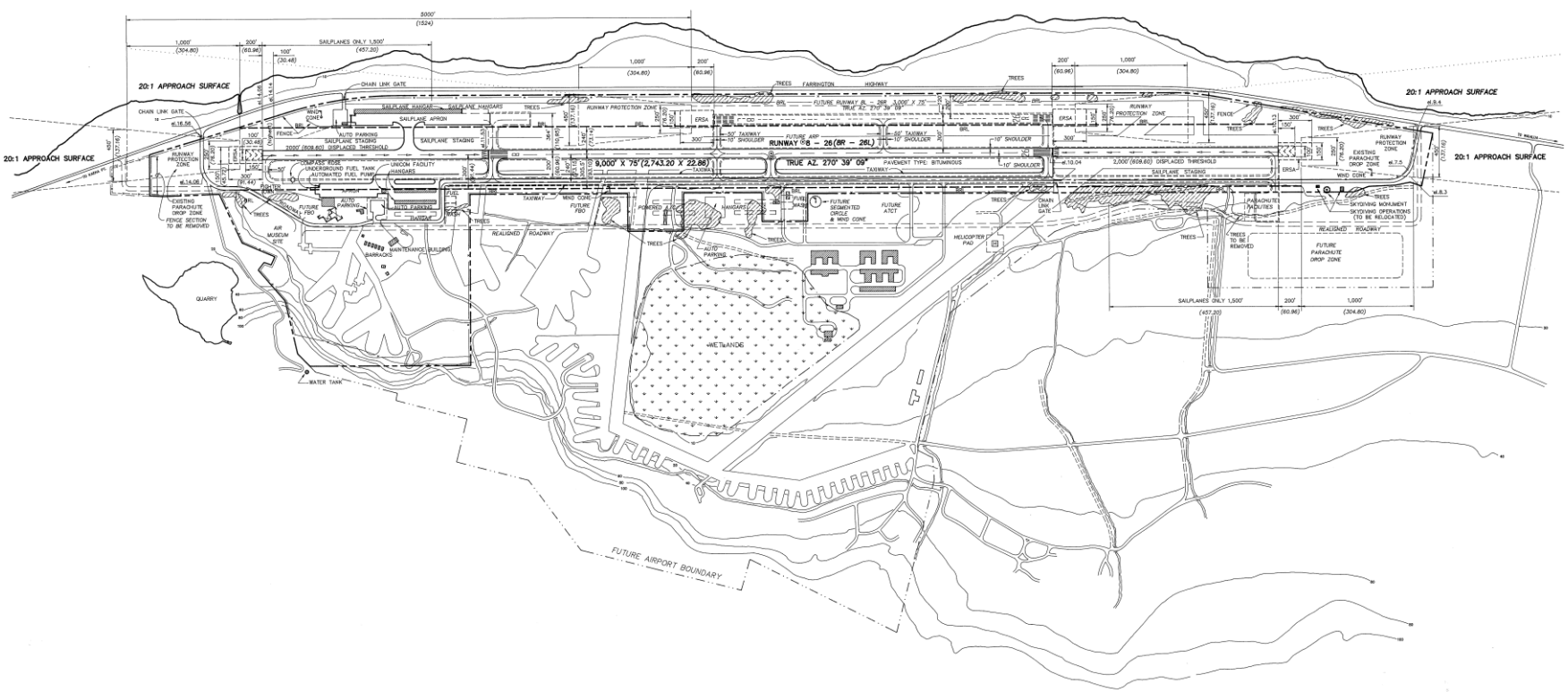
2. Only parachutist Class B, C, and D license holders will be permitted to use the west end drop zone.

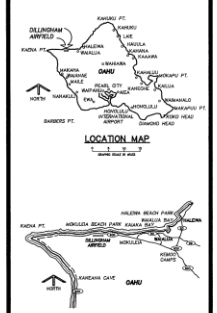
3. Jumping into the west end drop zone will be permitted only during those times when the Dillingham Field UNICOM is in operation.

BARRY FUKUNAGA
Manager
Honolulu International Airport

Attachment

EXHIBIT 9





NO.	DATE	REVISIONS
1	OCT 13,93	FAA LETTER APPROVED

DIRECTOR, DEPARTMENT OF TRANSPORTATION, STATE OF HAWAII — DATE: 9/14/93

PROJECT TITLE :

DILLINGHAM AIRFIELD

AIRPORT LAYOUT PLAN

PROJECT NO. :

SHEET TITLE :

AIRFIELD PLAN

DATE : AUGUST 12, 1993

DWG. NO. :

SHEET 1 OF 3 SHEETS

DEPARTMENT OF TRANSPORTATION, STATE OF HAWAII — Airports Division

DSGN.	DRWN.	CHKD.	APPD.

KEY PLAN / NOTES :

WIND ROSE

SOURCE: DILLINGHAM AIRFIELD JUNE, 1942 – DECEMBER, 1944

WIND COVERAGE: 93% FOR 12 MPH CROSSWIND

LEGEND

	EXISTING	ULTIMATE
AIRPORT BOUNDARY		
BUILDING RESTRICTION LINE (BRL)	BRL	BRL
BUILDINGS		
BUILDINGS TO BE REMOVED		
APPROACH SURFACE		
FENCE LINE		
GROUND CONTOURS		
RUNWAY, TAXIWAY, APRON & HANGARS		
PAVED ROADWAYS		
UNPAVED ROADWAYS		
TREES		
WETLANDS		
EXTENDED RUNWAY SAFETY AREA	ERSA	
BLAST PAD		

AIRPORT DATA

	EXISTING	ULTIMATE
AIRPORT REFERENCE POINT (ARP) COORDINATES	21°35'00" N 158°13'00" W	21°35'00" N 158°13'00" W
NORMAL MAX. TEMPERATURE (HOTTEST MONTH)	90° F	SAME
AIRPORT ELEVATION (MSL)	13'	SAME
AIRPORT & TERMINAL NAVIGATIONAL AIDS	NONE	NONE
AIRPORT TYPE	GA/GU	SAME
% WIND COVERAGE	93	SAME
AIRPORT REFERENCE CODE	B – II	SAME

RUNWAY DATA

	RUNWAY 8 – 26 (8R – 26L) EXISTING		RUNWAY 8 – 26 (8R – 26L) ULTIMATE		RUNWAY 8L – 26R EXISTING		RUNWAY 8L – 26R ULTIMATE	
RUNWAY IDENTIFICATION	8	26	8R	26L	NOT APPLICABLE		8L	26R
APPROACH SURFACE	20 : 1	20 : 1	SAME	SAME			20 : 1	20 : 1
APPROACH LIGHTING AIDS	NONE	NONE	NONE	NONE			NONE	NONE
EXTENDED SAFETY AREA	NONE	NONE	YES	YES			YES	YES
NAVIGATIONAL AND VISUAL AIDS	NONE	NONE	NONE	NONE			NONE	NONE
RUNWAY LENGTH AND WIDTH	9,000' X 75'		SAME				3,000' X 75'	
EFFECTIVE GRADIENT (%)	.04		SAME				N.A.	
% WIND COVERAGE (12MPH/10.5 KNOTS)	93		SAME				93	
INSTRUMENT RUNWAY	NONE		NONE				NONE	
RUNWAY LIGHTING	NONE		NONE				NONE	
RUNWAY MARKING	BASIC		BASIC				BASIC	
PAVEMENT STRENGTH	40,000(S) 150,000(D) 180,000(DT)		SAME SAME SAME				12,500(S)	
DESIGN GROUP	I		II				I	
MAXIMUM ELEVATION (MSL)	14.14		SAME				N.A.	
RUNWAY AND FAR PART 77 CATEGORY	GU, VISUAL		SAME.				GU, VISUAL	

TRUE NORTH
MAGNETIC NORTH 10° 27' E.
ANNUAL CHANGE 8' DECREASE

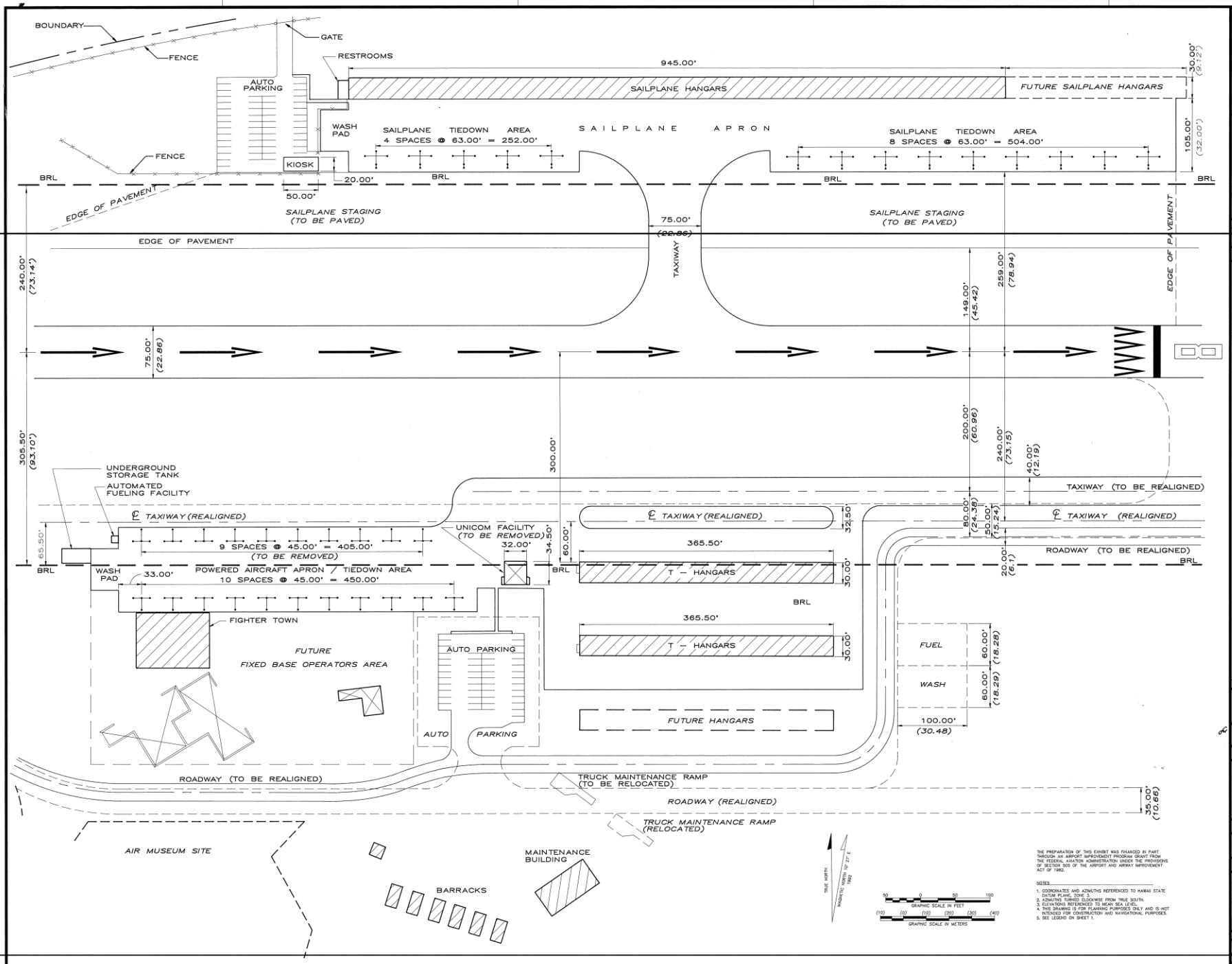
GRAPHIC SCALE IN FEET

GRAPHIC SCALE IN METERS

THE PREPARATION OF THIS EXHIBIT WAS FINANCED IN PART THROUGH AN AIRPORT IMPROVEMENT PROGRAM GRANT FROM THE FEDERAL AVIATION ADMINISTRATION UNDER THE PROVISIONS OF SECTION 505 OF THE AIRPORT AND AIRWAY IMPROVEMENT ACT OF 1982.

NOTES

1. COORDINATES AND AZIMUTHS REFERENCED TO HAWAII STATE DATUM PLANE, ZONE 3.
2. AZIMUTHS TURNED CLOCKWISE FROM TRUE SOUTH.
3. ELEVATIONS REFERRED TO MEAN SEA LEVEL IN FEET.
4. THIS DRAWING IS FOR PLANNING PURPOSES ONLY AND IS NOT INTENDED FOR CONSTRUCTION AND NAVIGATIONAL PURPOSES.



THE PREPARATION OF THIS EXHIBIT WAS FINANCED IN PART THROUGH AN AIRPORT IMPROVEMENT PROGRAM GRANT FROM THE FEDERAL AVIATION ADMINISTRATION UNDER THE PROVISIONS OF SECTION 505 OF THE AIRPORT AND AIRWAY IMPROVEMENT ACT OF 1982.

NOTES:
1. COORDINATES AND AZIMUTHS REFERENCED TO HAWAII STATE DATUM PLANE, ZONE 3.
2. AZIMUTHS TURNED CLOCKWISE FROM TRUE SOUTH.
3. ELEVATIONS REFERENCED TO MEAN SEA LEVEL.
4. THIS DRAWING IS FOR PLANNING PURPOSES ONLY AND IS NOT INTENDED FOR CONSTRUCTION AND NAVIGATIONAL PURPOSES.
5. SEE LEGEND ON SHEET 1.

DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII
Airports Division

DSGN.	DRWN.	CHKD.	APPD.

KEY PLAN / NOTES :

LOCATION MAP

VICINITY MAP

NO.	DATE	REVISIONS
1	OCT 15, 93	FAA LETTER APPROVED

Director, Department of Transportation — 9/14/93
DIRECTOR, DEPARTMENT OF TRANSPORTATION, STATE OF HAWAII — DATE

PROJECT TITLE :

DILLINGHAM AIRFIELD

AIRPORT LAYOUT PLAN

PROJECT NO. :

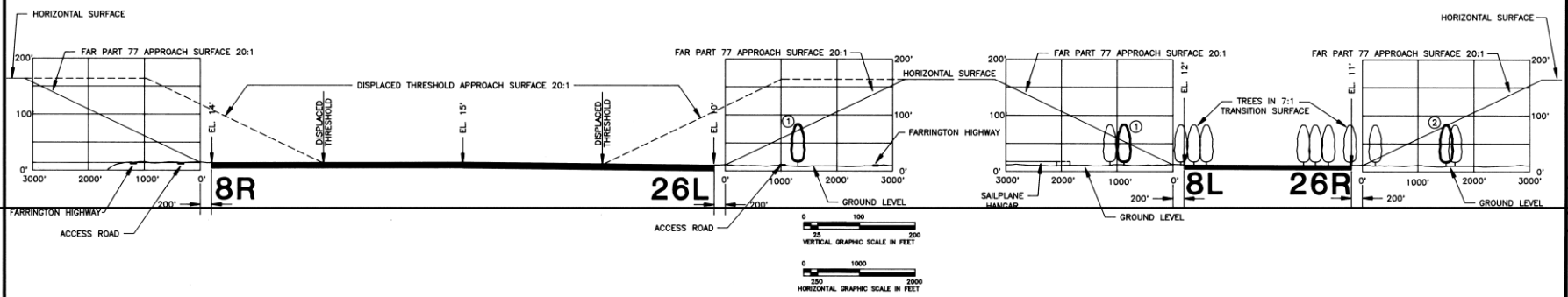
SHEET TITLE :

TERMINAL AREA LAYOUT PLAN

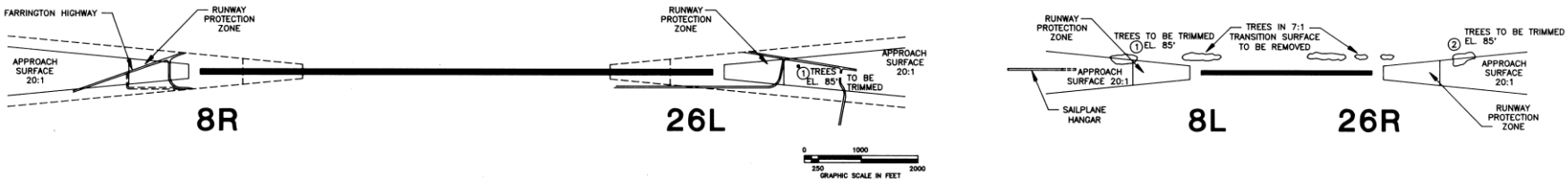
DATE : AUGUST 12, 1993

DWG. NO. :

SHEET 2 OF 3 SHEETS



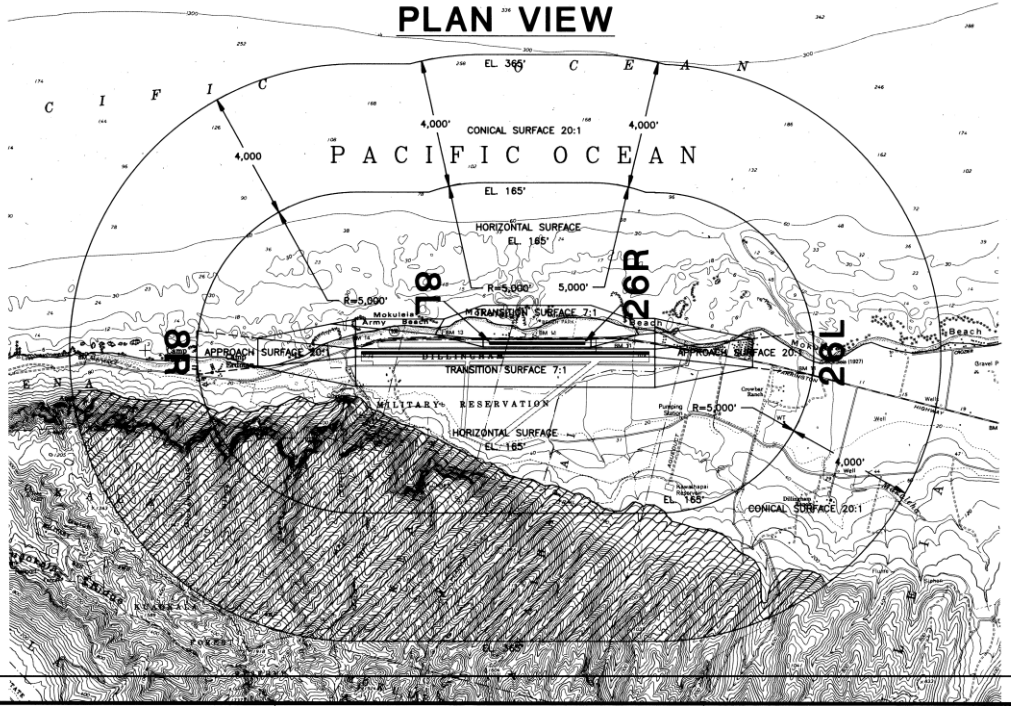
PROFILE VIEW

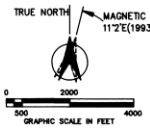


RUNWAY PROTECTION ZONE OBSTRUCTIONS

RUNWAY NUMBER	8R	26L	8L	26R	
8L-26R TRANSITION SURFACE					TRANSITION SURFACE
OBSTRUCTION NUMBER	NONE	1	1	2	3
DESCRIPTION OF OBSTRUCTION		TREES	TREES	TREES	TREES
ELEVATION		85±	85±	85±	85±
PENETRATION IN FEET	0	10	29	1	52±
PROPOSED ACTION		SHORTEN	SHORTEN	SHORTEN	REMOVE

PLAN VIEW





NOTE:

THIS DRAWING IS FOR PLANNING PURPOSES ONLY AND IS NOT INTENDED FOR CONSTRUCTION OR NAVIGATIONAL PURPOSES.

THE PREPARATION OF THIS EXHIBIT WAS FINANCED IN PART THROUGH AN AIRPORT IMPROVEMENT PROGRAM GRANT FROM THE FEDERAL AVIATION ADMINISTRATION UNDER THE PROVISION OF SECTION 505 OF THE AIRPORT AND AIRWAY IMPROVEMENT ACT OF 1982 AS AMENDED.

DEPARTMENT OF TRANSPORTATION STATE OF HAWAII

Airports Division

DSGN.	DRWN.	CHKD.	APPD.

KEY PLAN / NOTES :

NO.	DATE	REVISIONS
1	OCT 13,93	FAA LETTER APPROVED

Owen Miyamoto 9/14/93
DIRECTOR, DEPARTMENT OF TRANSPORTATION DATE
STATE OF HAWAII

PROJECT TITLE :

DILLINGHAM AIRFIELD AIRPORT LAYOUT PLAN

PROJECT NO. :

SHEET TITLE :

AIRSPACE PLAN

DATE :

DWG. NO. :

SHEET 3 OF 3 SHEETS

EXHIBIT 10

Procedure No. 4.9 MINIMUM STANDARDS FOR COMMERCIAL AERONAUTICAL ACTIVITIES AT PUBLIC AIRPORTS

Approved by Owen Miyamoto **Effective Date: 05/03/1990**

4.9.01 PURPOSE

The purpose of this procedure is to establish minimum standards for conducting commercial aeronautical activities at public airports.

4.9.02 POLICY

It is the policy of the Airports Division to:

A. Require all commercial aeronautical activities to be conducted in accordance with the terms and conditions of a lease that includes the minimum standards established by this procedure.

B. Operate airports and their facilities for the benefit of the public.

C. Make airports available for commercial aeronautical activities on a fair and reasonable basis without unjust discrimination as long as the activities are conducted in a safe, legal and responsible manner consistent with applicable federal, state and county laws, rules and regulations.

4.9.03 APPLICABILITY

This procedure shall apply to commercial aviation operators, Districts and Property Management Staff. Air carriers are exempt from this procedure.

4.9.04 PROCEDURES

A. Definitions

Unless the context clearly indicates otherwise, as used in this procedure:

1. "Air carrier" means a scheduled air carrier which is a lessee of the department under an airport-airline lease.

2. "Aeronautical activity" means any activity which involves, makes possible or is required for the operations of aircraft, or which contributes to or is required for the safety of such operations.

   a. The following are examples of aeronautical activities:

      (1) Pilot training
      (2) Aircraft rental and sightseeing
      (3) Aerial photography
      (4) Crop dusting
      (5) Aerial surveying
      (6) Aircraft sales and services
      (7) Sale of aviation petroleum products
      (8) Repair and maintenance of aircraft
      (9) Sale of aircraft parts.

   b. The following examples are not considered to be aeronautical activities:

(1) Ground transportation (taxis, car rentals)
(2) Restaurants
(3) Barber shops
(4) Auto parking lots.

3. "Airport" means an area of land or water which is used or intended to be used for aircraft landing and takeoff, including facilities on it. (As used in this procedure, the term "airport" refers to public airports owned or operated by the State of Hawaii).

4. "Commercial aeronautical activity" means an aeronautical activity conducted for the purpose of securing earnings, income, compensation or profit.

5. Commercial aviation operator" means a person engaging in a commercial aeronautical activity at an airport.

6. "Department" means the State Department of Transportation.

7. "Lease" means a written agreement which conveys real property from the department to a commercial aviation operator, for a specified term and for a specified rent. (As used in this procedure, the term "lease" also includes other written agreements such as permits).

8. "Minimum standards" means the qualifications established by the department as the minimum requirements to be met as a condition for the right to conduct commercial aeronautical activities at airports.

9. "Person" means any individual, firm, partnership, corporation, trust, association, company, joint venture, or any other legal entity.

I0. "State" means the State of Hawaii.

B. Commercial Aviation Operator

1. The services provided by commercial aviation operators (hereinafter referred to as "operator") at airports include, but are not limited to, the following:

a. Aircraft line services:

(1) Fueling, lubricating and miscellaneous service
(2) Ramp parking and tie down
(3) Crew and passenger lounge facilities
(4) Public restrooms, telephone and automobile parking
(5) Loading, unloading and towing
(6) Hangar storage
(7) Cargo handling, receiving and storage facilities; and
(8) Flight kitchens.

b. Flight instruction and training.

c. General aircraft airframe and engine repair, maintenance and overhaul (may also include sale of aircraft parts).

d. New and used aircraft sales or rental.

e. Specialized aircraft flying services.

f. Specialized commercial flying services.

2. The department reserves the right to restrict any operator activitiy which is not in the best interest of the airport.

3. If written permission is obtained from the department, a prospective operator may become a tenant of an operator under a sublease arrangement approved by the department.

C. Prequalification Requirements

The prospective operator shall submit, in written form, to the department, at the time of his application, the following information and, thereafter, such additional information as may be requested by the department.

1. Intended Scope of Activities

As a prerequisite to the granting of a lease for operating at the airport, the prospective operator shall submit a detailed description of the scope of the intended operation, and the means and methods to be employed to accomplish the contemplated operating standards and requirements, in order to provide high-quality service to the aviation and general public at the airport, including, but not limited to, the following:

a. The name, address and telephone number of the applicant.

b. The requested or proposed date for commencement of the activity and the term of conducting, the same.

c. The services to be offered.

d. The amount, size and location of land to be leased.

e. The size and position of the building space to be constructed or leased.

f. The number of aircraft to be provided (as applicable).

g. The number of persons to be employed (including the names and qualifications of each person).

h. The hours of proposed operation.

i. The type of insurance coverages to be maintained.

2. Financial Responsibility and Capability

The prospective operator must provide a statement, satisfactory to the department, in evidence of his financial responsibility, from an area bank or trust company or from such other source that may be acceptable to the department and readily verified through normal banking channels. The prospective operator must also demonstrate financial capability to initiate operations and for the construction of improvements and appurtenances that may be required commensurate with the concept of the proposed operation, and shall also indicate his ability to provide working capital to start and maintain the contemplated operations.

3. Experience

The prospective operator shall furnish the department with a verifiable statement of his past experience in the specified aviation services to be supplied by him on the airport, together with an operating plan detailing how he will provide the specified services.

4. Bond

The prospective operator shall post a performance bond in the amount equal to the annual rental established and agreed upon, for conducting the services to be provided. Cash may be posted in lieu of performance bond.

D. Lease Requirements

Prior to the commencement of operations, the prospective operator shall be required to enter into a lease with the department. The lease will recite the terms and conditions under which he will operate his business on the airport, including, but not limited to, the following: the term of the lease; fees and charges; the rights, privileges and obligations of the respective parties; and other relevant covenants. It should be understood,

therefore, that neither the conditions therein contained nor those set forth in these minimum standards and requirements represent a complete recitation of the provisions to be included in the lease. Such contract provisions, however, will neither change nor modify the minimum standards and requirements, not be inconsistent therewith.

1. Rates and Charges

Minimum rental rates shall be established by the department and approved by the state Board of Land and Natural Resources.

2. Site Development Standards

All improvements to airport property by the lessee shall be accomplished in accordance with Airports Division Procedure No. 7.6 "Development Standards for Leased Airport Property" (hereinafter referred to as "Procedure No. 7.6").

3. Personnel

a. The operator shall have in his employ, and on duty during operating hours, trained personnel in such numbers as are required to meet the minimum standards and requirements set forth, in an efficient manner, for each commercial aeronautical activity being performed. The operator shall also provide a responsible person in the office to supervise the operations in authority to represent and act for and on behalf of, the operator during all business hours.

b. All personnel hereinafter required to hold Federal Aviation Administration (FAA) certificates and rating shall maintain such certificates and ratings.

4. Maintenance

a. The department shall have responsibility for :

(1) Maintenance of pavement constructed by the department outside the leased area.

(2) Utility line maintenance outside the operator's leased area.

b. The operator shall be responsible for:

(1) Maintenance of pavement constructed by the operator.

(2) Maintenance of the operator's building and utility costs.

(3) Removal of the operator's trash

(4) Grass mowing and landscape maintenance within the operator's leased area.

5. Insurance

a. The operator shall have all the types of insurance (with the specified minimum liability limits) set forth below that apply to the commercial aeronautical activity or activities conducted by the operator.

(1) Aircraft liability

(a) Bodily injury

(i) $100,000 each person

(ii) $300,000 each accident

(b) Passenger liability (each passenger, each accident): $300,000

(c) Property damage (each accident): $100,000

(2) Comprehensive general liability

(a) Bodily injury

(i) $100,000 each person

(ii) $500,000 each accident

(b) Property damage (each accident): $250,000

(3) Hangar keeper's liability (each accident): $500,000.

(4) Student and renter's liability (each accident).: $300,000.

(5) Comprehensive automobile liability (each accident)

Bodily injury and property damage

(a) $5,000,000 at Honolulu International Airport.

(b) $1,000,000 at other airports.

(6) Worker's compensation as required by applicable law and employer's liability of $10,000.

b. All insurance which the operator is required to carry and keep in force shall include the state as additional-named insured. The operator shall furnish evidence of his compliance with this requirement to the department with proper certification that such insurance is in force and will furnish additional certification as evidence of changes in insurance not less than thirty days prior to any such change. The applicable insurance coverages shall be in force during the period of any construction of the operator's facilities and/or prior to his entry upon the airport for the conduct of his business.

c. The operator shall also furnish evidence of his compliance with Hawaii Revised Statutes with respect to Worker's Compensation and Unemployment Insurance as applicable.

d. The operator shall also at his expense procure .and maintain such fire, extended coverage, vandalism and malicious mischief insurance upon the leasehold improvements, trade fixtures, equipment, furniture and furnishings of the operator in or on the premises as would be procured and maintained by a reasonable and prudent owner thereof.

e. The operator shall furnish to the department upon the commencement of the lease and prior to occupancy of the premises, a certificate showing said insurance policies being issued to the operator and to be then in force, and shall furnish a like certificate upon each renewal thereof.

f. Any of the indemnity or casualty insurance coverages provided for herein may include provision for a deductible amount of $1,000 per loss or such higher deductible amount as may be agreed upon, in writing, by the department and the operator.

g. Any operator who is self-insured shall furnish evidence of such self-insurance from the state Department of Commerce and Consumer Affairs, Insurance Division and shall hold the department and assigns harmless in the event of any claims or litigation arising out of its operation on the airport.

6. Motor Vehicles on the Airport

The operator will control to a reasonable extent the transportation of pilots and passengers of transient aircraft (using operator's facilities and services and in the conduct of the operator's

business) to and from the operator's office to the operator's aircraft apron tie-down areas. The operator performing this service with motor vehicles driven on the Airport Operations Area shall do so only in strict accordance with applicable Hawaii Administrative Rules, Airports Division procedures, and federal, state and county laws, ordinances, codes, or other similar regulatory measures now in existence or as may be hereinafter modified or amended. The operator shall procure and maintain, for any motor vehicle operated on his leased airport property, all required insurance.

7. General Lease Clauses

No operator may conduct any commercial activity on the airport without a fully executed lease. All lease agreements shall contain the following assurances:

a. Non-discrimination

The lessee, for itself, its personal representatives, successors in interest, and assigns, as a part of the consideration hereof, does hereby covenant and agree (in the case of deeds and leases add "as a covenant running with the land") to operate the premises leased for the benefit of the public, and:

(1) No person on the grounds of race, color, or national origin shall be excluded from participation in, denied the benefits of, or be otherwise subjected to discrimination in the use of said facilities.

(2) That in the construction of any improvements on, over, or under such land and the furnishing of services thereon, no person on the grounds of race, color, or national origin shall be excluded from participation in, denied the benefits of, or otherwise be subjected to discrimination.

(3) That the lessee shall use the premises in compliance with all other requirements imposed by or pursuant to Title 49, Code of Federal Regulations, Department of Transportation, Subtitle A, Office of the Secretary, Part 21, "Nondiscrimination in Federally assisted programs of the Department of Transportation--Effectuation of Title VI of the Civil Rights Act of 1964", as said Regulations may be amended.

(4) That said service will be furnished on a fair, equal, and not unjustly discriminatory basis to all users thereof.

(5) That fair, reasonable, and not unjustly discriminatory prices for each unit or service will be charged; provided, that the contractor may be allowed to make reasonable and nondiscriminatory discounts, rebates, or other similar types of price reductions to volume purchasers.

b. Quality of Service

The lessee shall provide airport patrons safe, responsible and adequate service in a prompt and courteous manner.

c. Aircraft service by owner or operator or aircraft.

It is clearly understood and agreed by the lessee that no right or privilege has been granted which would operate to prevent any person, firm or corporation operating aircraft on the airport from performing any services on its own aircraft with its own regular employees (including, but not limited to, maintenance and repair) that it may choose to perform.

d. Non-exclusive rights.

It is understood and agreed that nothing herein contained shall be construed to grant or authorize the granting of an exclusive right.

e. Subordination.

The lease shall be subordinate to the provisions of any existing or future agreement between the lessor and the United States, relative to the operation or maintenance of the airport, the execution of which has been or may be required as a condition precedent to the expenditure of federal funds for the development of the airport. This subordination includes, but is not limited to, the right of the lessor, during times of war or national emergency, to lease the landing area, or any part thereof, to the United States Government for military or naval use, and if any such lease is executed, the provisions of this instrument, insofar as they are inconsistent with the provisions of the lease to the Government, shall be suspended.

f. Airport obstructions.

(1) The lessor reserves the right to take any action it considers necessary to protect the aerial approaches of the airport against obstructions, together with the right to prevent the lessee from erecting or permitting to be erected, any building or other structure on or adjacent to the airport which, in the opinion of the lessor, would limit the usefulness of the airport or constitute a hazard to aircraft.

(2) The lessee shall, upon approval by the lessor and prior to any construction of any nature within the boundaries of the airport, prepare and submit to the appropriate office of the Federal Aviation Administration, one executed set (four copies) of FAA Form 7460-1, "Notice of Proposed Construction or Alteration", as required by Federal Aviation Regulation Part 77. This notice must be submitted at least thirty days prior to the date of the proposed construction or the date that an application for a construction permit is filed, whichever is earlier. A copy will be supplied to the Airports Administrator, State of Hawaii, Department of Transportation, Airports Division, Honolulu International Airport, Honolulu, Hawaii 96819.

g. Lessor's rights

(1) The lessor reserves the right, but shall not be obligated to the lessee, to maintain and keep in repair the landing area of the airport and all publicly-owned facilities of the airport, together with the right to direct and control all activities of the lessee in this regard.

(2) In the event of breach of any of the above nondiscrimination convenants, the lessor shall have the right to terminate the lease and to re-enter and repossess said land and the facilities thereon, and hold the same as if said lease had never been made or issued.

(3) The lessor reserves the right to further develop or improve the landing area of the airport as it sees fit, and without unreasonable interference or hindrance. If the physical development of the airport requires the relocation of lessee-owned facilities, the lessor agrees to provide a comparable location without any unreasonable interruption to the lessee's activities, and agrees to relocate all lessee-owned buildings or provide similar facilities for the lessee at no cost to the operator.

h. Compliance with laws, etc.

The lessee shall at all times comply with the applicable Hawaii Administrative Rules, Airports Division Procedures, and federal state, and county laws, ordinances, codes, and other regulatory measures now in existence or, as may be hereafter modified or amended, applicable to the specific type of operation contemplated by him. The lessee shall procure and maintain during the term of the agreement all licenses, permits, and other similar authorizations required for the conduct of his business operations.

i. Idemnity

The lessee shall hold the State, the Airports District Manager and all other airport personnel, and the officers, agents and employees of the lessor harmless from any and all suits, claims, demands, actions, and/or causes of action of any kind or nature in any way arising out of, or resulting from his tenancy and activities, and shall pay all expenses in defending any claims against the State and the lessor.

j. Right of entry

The lessor may enter upon the premises leased to the lessee at any reasonable time, and for any purpose necessary, incidental to, or connected with, the performance of the lessee's obligations under the agreement or in the exercise of its legitimate functions.

k. No-sham affidavit

All terms and conditions with respect to the lease are expressly contained herein, and the lessee agrees that no representative or agent of the lessor has made any representation or promise with respect to this lease not expressly contained herein.

l. Termination

Upon the expiration or other termination of any agreement, the lessee's rights to the premises, facilities, other rights, licensed services and privileges granted in the agreement shall cease, and the lessor shall, upon such expiration or termination, immediately and peacefully surrender such.

m. Assignment

All covenants, stipulations and provisions in the agreement to be entered into shall extend to and bind the legal representatives, successors and assigns.

8. Subleases

No lessee shall be afforded the right to sublease or assign an agreement or any portion thereof, between himself and the lessor except upon the express written permission of the lesssor. Regarding this permission, the overriding concern of the lessor shall be that the commercial aeronautical activities performed by the lessee, seeking the permission to assign his agreement, will not conceivably be interrupted, abrogated, compromised or diminished in order that good quality services be maintained in the public interest.

9. Airport Security

The lessee shall be responsible for maintaining security of the Airport Operations Area by controlling access through the leased premises where such access would allow entry to the AOA. The lessee shall comply with all applicable provisions of the Federal Aviation Regulations and Hawaii Administrative Rules concerning airport security.

10. Disposal of Waste

The lessee shall provide for the adequate and sanitary handling and disposal, away from the airport of his trash, waste and other materials, including but not limited to used oil, solvents and other waste. The stacking or storage of crates, boxes, barrels, pallets and other materials, equipment or vehicles, shall not be permitted within the leased premises. Aircraft washing shall be permitted only at locations designated by the department.

E. Commercial Aviation Operator Guidelines

The following guidelines are for determining the minimum level of services that shall be provided by operators holding a lease with the department.

1. Aircraft line services

a. Fueling and lubricating oil sales and service:

(1) The operator shall demonstrate, to the satisfaction of the department, that satisfactory arrangements or agreements have been made, with a reputable aviation fuel and lubricant distributor who will provide the operator with an enforceable agreement to purchase fuel and oil in such quantities as are necessary to meet the requirements set forth herein.

(a) The operator shall:

(i) Provide a minimum-sized facility which as suitable space and a convenient location and which meets the applicable standards and requirements specified in Procedure No. 7.6.

(ii) Provide fueling and lubricating sale, and into-plane delivery of aviation fuels, lubricants, and other related petroleum products seven days a week.

(iii) Maintain an adequate inventory of generally accepted grades of aviation fuel, engine oil and lubricants.

(iv) Provide a mobile fuel dispensing equipment with reliable metering devices which are subject to inspection by the State Department of Agriculture, Measurement Standards Division.

(v) Be capable of servicing in an efficient and safe manner all types of general aviation aircraft.

(b) The operator shall have metered filter-equipped dispensers, fixed or mobile, for dispensing aviation fuel from storage tanks having a minimum capacity of 2,000 gallons each. Mobile dispensing trucks shall have a total of 300 gallons capacity for each grade or type of fuel. Separate dispensing pumps for each grade or type of fuel are required.

(c) In conducting refueling operations, the operator shall install and use adequate electrical grounding facilities at fueling locations to eliminate the hazards of static electricity and shall provide approved types of fire extinguishers or other equipment commensurate with the hazard involved with fueling, defueling, and servicing aircraft.

All operator fueling services and systems shall be subject to inspection for fire and other hazards by the Airports District Manager and the appropriate state and local fire agencies. The operator shall meet all applicable fire codes and federal, state, and local laws, statutes, ordinances, rules and regulations pertaining to fire safety. All stationary fuel storage tanks shall be installed underground.

(d) Only non-contaminated fuel shall be pumped into the aircraft serviced. Fuel delivered shall be free of microscopic organisms, water or other contaminants. Quality control of the fuel is the responsibility of the operator. The operator shall maintain current fuel reports on file and available for auditing at any time by the department or the Federal Aviation Administration. Fueling service by the operator shall be in full compliance with good safety practices, including proper fire protection and electrical grounding of aircraft during fueling operations.

(2) The operator shall provide for servicing of aircraft, such as cleaning of the interior and exterior of aircraft, repairing and inflating aircraft tires, servicing oleo struts, changing engine oil, washing aircraft and aircraft windows and recharging or energizing discharged aircraft batteries and starters.

b. Ramp parking and tie-down: operator ramp assistance, including the parking, tie-down and storage of only functioning aircraft within the operator's leased area.

(1) Adequate tie-down facilities and equipment, including ropes, or other types of restraining devices and wheel chocks for a minimum of 10 typical aircraft will be provided.

(2) The operator shall provide properly trained line personnel on duty during daylight hours of every calendar day.

(3) Equipment for starting and towing aircraft and fire extinguishers shall be provided by the operator.

c. Crew and passenger lounge facilities: conveniently located, lounge, or waiting rooms, for passengers and crews shall be provided.

d. Public restrooms and a telephone: restrooms will be conveniently located, and ventilated and accessible to the passengers and crews, and will be maintained in a clean and sanitary manner. At least one working telephone will be provided for public use.

e. Loading, unloading and towing: the operator shall provide adequate loading, unloading and towing equipment to safely and efficiently move aircraft and store them in times of all reasonably expected weather conditions.

f. Hangar storage: the operator shall provide, or lease from the department, suitable hard-surfaced hangar storage facilities.

2. Flight instruction and training

A flight training operator is a person engaged in instructing student pilots in dual and solo flight training, in fixed and/or rotary wing aircraft, and provides such related ground school instruction as is necessary preparatory to taking a written examination and flight check ride; services and facilities which shall be provided include:

a. A minimum-sized facility which has sufficient classroom space to adequately conduct flight instruction and training, and which meets the applicable standards and requirements specified in Procedure No. 7.6.

b. At least one FAA certified flight instructor to instruct student pilots in dual and solo flight in fixed and/or rotary wing aircraft.

c. Such related ground school instruction as is necessary, preparatory to a student taking a written examination and flight check ride for a private pilot's license or appropriate rating from the FAA.

d. The ability for such training to meet the continuing requirements for certification by the FAA to conduct such training in a manner that meets all Federal Aviation Regulations, and amendments thereto, for basic ground schools and for primary flying school.

e. The flight training operator shall have on a full-time basis, currently FAA certified pilots and instructors in sufficient numbers (never less than one) to meet the demands of the number of students expected to be engaged in such flight training. An operator must be able to satisfactorily demonstrate that he has had experience in flight training.

f. The operator shall own or have on lease, in writing, at least one certified aircraft equipped for flight instruction.

g. Adequate facilities for storing, parking, servicing and repairing the aircraft in flight training.

3. General aircraft airframe and engine repair, maintenance and overhaul

An aircraft airframe and engine maintenance and repair operator is a person engaged in a business capable of providing one or a combination of FAA approved airframe, power plant and accessory overhaul and repair services on general aviation aircraft; the operation must be an FAA certified repair station meeting the requirements of Federal Aviation Regulations Part 145. This

category of commercial aeronautical activities may also include the sale of aircraft parts and accessories.

Activities which shall be provided include:

a. A facility that meets the applicable standards and requirements specified in Procedure No. 7.6.
b. Sufficient hangar space to house any aircraft upon which airframe or engine repairs are being performed.

c. Suitable inside and outside storage space for aircraft before and after repair and maintenance have been accomplished.

d. Adequate shop space to house the equipment and adequate equipment and machine tools, jacks, lifts and testing equipment to perform overhauls as required for FAA certification and repair of parts not needing replacement on general aviation aircraft.

e. At least one FAA certified airframe and power plant mechanic available during eight hours of the day, five days per week; all mechanics shall be certified in accordance with Federal Aviation Regulations Part 65.

4. New and used aircraft sales or rental

An aircraft sales operator is a person engaged in the sale of new and/or used aircraft through franchises, or licenses dealership or distributorship (either on a retail or wholesale basis) of an aircraft manufacturer or otherwise; and provides such repair, services, and parts as necessary to meet any guarantee or warranty on new and/or used aircraft sold or rented by him.

Services and facilities which shall be provided include:

a. Suitable sales and office facilities for conducting sale and rental activities; these and other required facilities must meet the applicable standards and requirements specified in Procedure No. 7.6.

b. Hangar storage space for at least one aircraft to be used for sales or rentals.

c. For rental, at least on airworthy aircraft properly maintained and certificated.

d. For sales activity of a new aircraft, a sales or distributorship franchise from a recognized aircraft manufacturer of new aircraft and at least one demonstrator model of such aircraft.

e. Adequate facilities for servicing and repairing the aircraft.

f. An FAA certified pilot capable of demonstrating new aircraft for sale or for checking out other pilots in rental aircraft. He shall be available for eight hours during the working day.

g. The minimum stock of readily expendable spare parts, or adequate arrangements for securing spare parts required for the type of aircraft and models sold.

h. Current up-to-date specifications and price lists for types and models of new aircraft sold.

i.. Proper checklists and operating manuals on all aircraft rented and aircraft sold.

5. Specialized aircraft repair service

A specialized aircraft repair services operator is a person engaged in a business capable of providing a shop, or a combination of FAA certificated shops for the repair of aircraft radios, propellers, instuments, and accessories for general aviation aircraft. This category shall include the sale of new and/or used aircraft radios, propellers, instruments and accessories, and the painting of aircraft but such are not exclusive rights.

6. Specialized commercial flying services

a. A specialized commercial flying services operator is a person engaged in air transportation for hire for the purpose of providing the use of aircraft for the activities listed below:

(1) Nonstop sightseeing flights that begin and end at the same airport within a 25-mile radius of the airport.

(2) Crop-dusting, seeding, spraying, bird chasing, fish spotting, etc.

(3) Aerial photography or survey.

(4) Fire fighting.

(5) Power line or pipeline patrol.

(6) Any other operations specifically excluded from Part 135 of the Federal Aviation Regulations.

b. In the case of crop-dusting or aerial application, the operator shall demonstrate that he will make suitable arrangements to have such space available in his leased area for safe loading and unloading and storage and contaminant of noxious chemical materials. The operator shall provide a paged area having a single drainage outlet for all aircraft loading or unloading. This area must be built and operated in full compliance with the Environmental Protection Agency regulations governing such activities. The operator shall also provide for the safe storage and contaminant of all chemical materials. Such facilities will be in a location on the airport which will provide the greatest safeguard to the public.

Aircraft washing and spray tank flushing must be accomplished on a 50' x 50' washdown pad which drains into a 25' x 30' PVC lined evaporation pond located no closer than 450' from the nearest well with no overflow into drainage ditches. The pond will be fenced with a man-proof fence. Tank service water hydrants will be equipped with a check valve to prevent possible "back-siphonage."

F. Responsibilities

1. The Districts shall be responsible for:

a. Receiving, reviewing and processing applications for leases.

b. Negotiating leases with assistance from AIR-PM.

c. Ensuring operators are in compliance with terms and conditions of their leases.

2. The Property Management (AIR-PM) staff shall be responsible for preparing and processing lease documents in accordance with the provisions of this procedure and other applicable Airports Division procedures.

EXHIBIT 11

LINDA LINGLE
GOVERNOR

RODNEY K. HARAGA
DIRECTOR

Deputy Director
BRUCE Y. MATSUI

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
869 PUNCHBOWL STREET
Honolulu, Hawaii 96813-5097

IN REPLY REFER TO:

AIR-EC
03.0388

August 26, 2003

Mr. Ronnie V. Simpson
Manager, Airports District Office
Federal Aviation Administration
Western-Pacific Region
P. O. Box 50244
Honolulu, Hawaii 96850-0001

Dear Mr. Simpson:

Subject: Extend Taxiway "A"
Dillingham Airfield
AIP Project No. 3-15-0018-02

Returned for your files are the original and two fully executed copies of the approved Grant Agreement for the subject project.

Please have your staff contact Mr. Jeffrey Chang, Project Manager, at 838-8825, to clarify any questions you may have.

Very truly yours,

for RODNEY K. HARAGA
Director of Transportation

Enclosures: Grant Agreement

bc: AIR-EPC

DOT 2-266 (AIR 12/01)

State of Hawaii
DEPARTMENT OF TRANSPORTATION
AIRPORTS DIVISION

FROM FAA DATE AUG 25 2003 20___

TO:

___ DIR	___ BUS-O	___ AIR-AB	2 AIR-EC	___ AIR-LC	___ AIR-O
___ DEP-P	___ BUS-F	___ AIR-AF	___ AIR-EM	___ AIR-LD	___ AIR-OAM
___ DEP-S	___ CON	___ AIR-AF/P	___ AIR-EG	___ AIR-LF	___ AIR-OCF
___ DIR-P	___ CSS	___ AIR-AM	___ AIR-P	___ AIR-LG	___ AIR-OM
___ DIR-C	___ PER	___ AIR-AP	___ AIR-PA	___	___ AIR-OO
___ HAR	___ PMN	___ AIR-PM	___ AIR-PC	___ AIR-I	___ AIR-OME
___ HWY	___ PPB	___ STENO	___ AIR-PD	___ AIR-H	___ AIR-OAS
___ LEG	___ STP	I AIR-E	___ AIR-PE	___ AIR-HL	
___ VIP	___ AIR	___ AIR-EPC	___ AIR-PS	___ AIR-K	
___ BUS	___ AIR-A	___ AIR-ED	___ AIR-L	___ AIR-M	

FOR:

___ INITIAL ___ INFORMATION ___ SIGNATURE
___ APPROPRIATE ATTENTION & ACTION ___ COPY FOR ___
___ COMMENTS & RECOMMENDATIONS ___ APPROVAL
___ DRAFT REPLY FOR ___ SIGNATURE
___ FAX ___ MAIL ___ DELIVER ___ DISTRIBUTE ___ POST ___ FILE
___ AS REQUESTED ___ PLEASE SEE ME

SUBJECT Grant App. Dillingham Airfield (3-15-0018-02)
CORRESP. NO. ___ SUSPENSE DATE 08-26-03

COMMENTS:

E962

Hana Like No Ke Ala Aloha
Working Together To Provide Gateways Of Aloha

8/25

U.S. Department
of Transportation
**Federal Aviation
Administration**

Western-Pacific Region
Airports District Office

300 Ala Moana Blvd., Rm. 7-128
Honolulu, HI 96813
MAIL: Box 50244
Honolulu, HI 96850-0001
Telephone: (808) 541-1232
FAX: (808) 541-3566

August 21, 2003

Mr. Rodney K. Haraga
Director of Transportation
State of Hawaii
869 Punchbowl Street
Honolulu, Hawaii 96813

Dear Mr. Haraga:

Dillingham Airfield, Mokuleia, Hawaii
Airport Improvement Program (AIP) Project No. 3-15-0018-02
Grant Offer

Enclosed are the original and three copies of the approved Grant Offer for the above project.

Acceptance of the Grant Offer will obligate the Sponsor to accomplish the described improvement project. The United States commits itself to participate in the allowable cost of the project not to exceed the amount shown on Page 2 of the Grant Offer. The offer must be accepted on or before the date specified in Condition 6, Page 2 of the Grant Offer.

Basic considerations are that members of the Sponsor's governing body know the full content of the Grant Offer and that the method of acceptance conforms to local law.

The official of the Sponsor authorized to accept the enclosed Grant Offer shall accept same by signing said offer and inserting the date in the space provided under Part II - Acceptance. The Sponsor's attorney shall certify that the acceptance complies with all applicable laws and constitutes a legal and binding obligation of the Sponsor by executing the "Certificate of Sponsor's Attorney." The date of said certificate shall be the same as, or later than the date of execution.

When the document is fully executed, certified, attested and appropriate seals are impressed, please return the original and two (2) originally signed and dated copies of the executed Grant Agreement to this office. Retain the remaining copy for your files.

Your cooperation on this project is greatly appreciated.

Sincerely,

Ronnie V. Simpson
Manager, Airports District Office

Enclosure

cc: (w/o encl.)
Mr. Davis Yogi

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

GRANT AGREEMENT

Part I - Offer

Date of Offer: August 21, 2003

Dillingham Airfield

Project No. 3-15-0018-02

Contract No. DTFA08-03-C-50398

TO: The State of Hawaii, acting by and through its Department of Transportation (herein called the "Sponsor")

FROM: The United States of America (acting through the Federal Aviation Administration, herein called the "FAA")

WHEREAS, the Sponsor has submitted to the FAA a Project Application dated July 15, 2003, for a grant of Federal funds for a project at or associated with the Dillingham Airfield which Project Application, as approved by the FAA, is hereby incorporated herein and made a part hereof; and

WHEREAS, the FAA has approved a project for the Airport or Planning Area (herein called the "Project") consisting of the following:

Extend Taxiway "A"

all as more particularly described in the Project Application.

NOW THEREFORE, pursuant to and for the purpose of carrying out the provisions of Title 49, United States Code, as amended, herein called the "Act", and in consideration of (a) the Sponsor's adoption and ratification of the representations and assurances contained in said Project Application and its acceptance of this Offer as hereinafter provided, and (b) the benefits to accrue to the United States and the public from the accomplishment of the Project and compliance with the assurances and conditions as herein provided, **THE FEDERAL AVIATION ADMINISTRATION, FOR AND ON BEHALF OF THE UNITED STATES, HEREBY OFFERS AND AGREES** to pay, as the United States share of the allowable costs incurred in accomplishing the Project, ninety per centum (90%) thereof.

The Offer is made on and **SUBJECT TO THE FOLLOWING TERMS AND CONDITIONS:**

Conditions

1. The maximum obligation of the United States payable under this offer shall be **$450,000.00.** For the purposes of any future grant amendments which may increase the foregoing maximum obligation of the United States under the provisions of Section 47108(b) of the Act, the following amounts are being specified for this purpose:

   $0.00 for planning
   $450,000.00 for airport development or noise program implementation.

2. The allowable costs of the project shall not include any costs determined by the FAA to be ineligible for consideration as to allowability under the Act.

3. Payment of the United States' share of the allowable project costs will be made pursuant to and in accordance with the provisions of such regulations and procedures as the Secretary shall prescribe. Final determination of the United States' share will be based upon the final audit of the total amount of allowable project costs and settlement will be made for any upward or downward adjustments to the Federal share of costs.

4. The Sponsor shall carry out and complete the Project without undue delays and in accordance with the terms hereof, and such regulations and procedures as the Secretary shall prescribe, and agrees to comply with the assurances which were made part of the project application.

5. The FAA reserves the right to amend or withdraw this offer at any time prior to its acceptance by the Sponsor.

6. This offer shall expire and the United States shall not be obligated to pay any part of the costs of the project unless this offer has been accepted by the Sponsor on or before **August 29, 2003,** or such subsequent date as may be prescribed in writing by the FAA.

7. The Sponsor shall take all steps, including litigation if necessary, to recover Federal funds spent fraudulently, wastefully, or in violation of Federal antitrust statutes, or misused in any other manner in any project upon which Federal funds have been expended. For the purposes of this grant agreement, the term "Federal funds" means funds however used or disbursed by the Sponsor that were originally paid pursuant to this or any other Federal grant agreement. It shall obtain the approval of the Secretary as to any determination of the amount of the Federal share of such funds. It shall return the recovered Federal share, including funds recovered by settlement, order or judgment, to the Secretary. It shall furnish to the Secretary, upon request, all documents and records pertaining to the determination of the amount of the Federal share or to any settlement, litigation, negotiation, or other efforts taken to recover such funds. All settlements or other final positions of the Sponsor, in court or otherwise, involving the recovery of such Federal share shall be approved in advance by the Secretary.

8. The United States shall not be responsible or liable for damage to property or injury to persons which may arise from, or be incident to, compliance with this grant agreement.

9. Unless otherwise approved by the FAA, the Sponsor will not acquire or permit any contractor or subcontractor to acquire any steel or manufactured products produced outside the United States to be used for any project for airport development or noise compatibility for which funds are provided under this grant. The Sponsor will include in every contract a provision implementing this special condition.

10. The Sponsor shall comply with the Part V, Assurances dated 9/99, which are attached to and made a part of the Grant Agreement in lieu of the Assurances which accompanied the Project Application dated July 15, 2003.

11. It is understood and agreed by and between the parties hereto that this Grant Offer is made and accepted upon the basis of preliminary plans and specifications; and the parties agree that within 180 days from the date of acceptance of this Grant Offer, the Sponsor shall furnish final plans and specifications to the FAA, that no construction work will be commenced hereunder, and that no contract will be awarded for the accomplishment of such work until the said final plans and specifications have been approved by the FAA; and the parties do further agree that any reference made in this Grant Offer or in the aforesaid Application to plans and specifications shall be considered as having reference to said final plans and specifications as approved.

12. The Sponsor agrees to request cash drawdowns on the letter of credit only when actually needed for its disbursements and to timely reporting of such disbursements as required. It is understood that failure to adhere to this provision may cause the letter of credit to be revoked.

13. It is mutually understood and agreed that if, during the life of the project, the FAA determines that the maximum grant obligation of the United States exceeds the expected needs of the Sponsor by $25,000.00 or five percent (5%), whichever is greater, the maximum obligation of the United States can be unilaterally reduced by letter from the FAA advising of the budget change. Conversely, if there is an overrun in the total actual eligible and allowable project costs, FAA may increase the maximum grant obligation of the United States to cover the amount of the overrun not to exceed the statutory percent limitation and will advise the Sponsor by letter of the increase. It is further understood and agreed that if, during the life of the project, the FAA determines that a change in the grant description is advantageous and in the best interests of the United States, the change in grant description will be unilaterally amended by letter from the FAA. Upon issuance of the aforementioned letter, either the grant obligation of the United States is adjusted to the amount specified or the grant description is amended to the description specified.

14. Approval of the project included in this agreement is conditioned on the Sponsor's compliance with applicable air and water quality standards in accomplishing project construction. Failure to comply with this requirement may result in suspension, cancellation, or termination of Federal assistance under this agreement.

15. In accordance with Section 47108(b) of the Act, as amended, the maximum obligation of the United States, as stated in Condition No. 1 of this Grant Offer:

a. may not be increased for a planning project;
b. may be increased by not more than 15 percent for development projects;
c. may be increased by not more than 15 percent for land projects.

16. The sponsor agrees to perform the following:

a. Furnish a construction management program to the FAA prior to the start of construction which shall detail the measures and procedures to be used to comply with the quality control provisions of the construction contract, including, but not limited to, all quality control provisions and tests required by the Federal specifications. The program shall include as a minimum:

1) The name of the person representing the sponsor who has overall responsibility for contract administration for the project and the authority to take necessary actions to comply with the contract.

2) Names of testing laboratories and consulting engineer firms with quality control responsibilities on the project, together with a description of the services to be provided.

3) Procedures for determining that testing laboratories meet the requirements of the American Society of Testing and Materials standards on laboratory evaluation, referenced in the contract specifications (D 3666, C 1077).

4) Submit qualifications of engineering supervision, and construction inspection personnel.

5) A listing of all test required by the contract specifications, including the type and frequency of test to be taken, the method of sampling, the applicable test standard, and the acceptance criteria or tolerances permitted for each type of test.

6) Procedures for ensuring that the tests are taken in accordance with the program, that they are documented daily, and that the proper corrective actions, where necessary, are undertaken.

b. Submit at completion of the project, a final test and quality control report documenting the results of all tests performed, highlighting those tests that failed or did not meet the applicable test standard. The report shall include the pay reductions applied and reasons for accepting any out-of-tolerance material. An interim test and quality control report shall be submitted, if requested by the FAA.

c. Failure to provide a complete report as described in paragraph 2, or failure to perform such tests, shall, absent any compelling justification, result in a reduction in Federal participation for costs incurred in connection with construction of the applicable pavement. Such reduction shall be at the discretion of the FAA and will be based on the type or types of required tests not performed or not documented and will be commensurate with the proportion of applicable pavement with respect to the total pavement constructed under the grant agreement.

d. The FAA, at its discretion, reserves the right to conduct independent tests and to reduce grant payments accordingly if such independent tests determine that sponsor test results are inaccurate.

17. For a project to replace or reconstruct pavement at the airport, the Sponsor shall implement an effective airport pavement maintenance management program as is required by Airport Sponsor Assurance Number C-11. The Sponsor shall use such program for the useful life of any pavement constructed, reconstructed, or repaired with Federal financial assistance at the airport. As a minimum, the program must conform with the provisions outlined below:

Pavement Maintenance Management Program

An effective pavement maintenance management program is one that details the procedures to be followed to assure that proper pavement maintenance, both preventive and repair, is performed. An airport sponsor may use any form of inspection program it deems appropriate. The program must, as a minimum, include the following:

a. Pavement Inventory. The following must be depicted in an appropriate form and level of detail:
   (1) location of all runways, taxiways, and aprons;
   (2) dimensions;
   (3) type of pavement, and;
   (4) year of construction or most recent major rehabilitation.

For compliance with the Airport Improvement Program (AIP) assurances, pavements that have been constructed, reconstructed, or repaired with Federal financial assistance shall be so depicted.

b. Inspection Schedule.
   (1) Detailed Inspection. A detailed inspection must be performed at least once a year. If a history of recorded pavement deterioration is available, i.e, Pavement Condition Index (PCI) survey as set forth in Advisory Circular 150/5380-6, "Guidelines and Procedures for Maintenance of Airport Pavements," the frequency of inspections may be extended to three years.
   (2) Drive-By Inspection. A drive-by inspection must be performed a minimum of once per month to detect unexpected changes in the pavement condition.

c. Record Keeping. Complete information on the findings of all detailed inspections and on the maintenance performed must be recorded and kept on file for a minimum of five years. The types of distress, their locations, and remedial action, scheduled or performed, must be documented. The minimum information to be recorded is listed below:
   (1) inspection date,
   (2) location,
   (3) distress types, and
   (4) maintenance scheduled or performed.

For drive-by inspections, the date of inspection and any maintenance performed must be recorded.

d. Information Retrieval. An airport sponsor may use any form of record keeping it deems appropriate, so long as the information and records produced by the pavement survey can be retrieved to provide a report to the FAA as may be required.

e. Reference. Refer to Advisory Circular 150/5380-6, "Guidelines and Procedures for Maintenance or Airport Pavements," for specific guidelines and procedures for maintaining airport pavements and establishing an effective maintenance program. Specific types of distress, their probable causes, inspection guidelines, and recommended methods of repair are presented.

The Sponsor's acceptance of this Offer and ratification and adoption of the Project Application incorporated herein shall be evidenced by execution of this instrument by the Sponsor, as hereinafter provided, and this Offer and Acceptance shall comprise a Grant Agreement, as provided by the Act, constituting the contractual obligations and rights of the United States and the Sponsor with respect to the accomplishment of the Project and compliance with the assurances and conditions as provided herein. Such Grant Agreement shall become effective upon the Sponsor's acceptance of this Offer.

UNITED STATES OF AMERICA
FEDERAL AVIATION ADMINISTRATION
WESTERN-PACIFIC REGION

Ronnie V. Simpson
Manager, Airports District Office

Part II - Acceptance

The Sponsor does hereby ratify and adopt all assurances, statements, representations, warranties, covenants, and agreements contained in the Project Application and incorporated materials referred to in the foregoing Offer and does hereby accept this Offer and by such acceptance agrees to comply with all of the terms and conditions in this Offer and in the Project Application.

Executed this 26th day of August, 2003.

AMY T MOTOOKA NOTARY PUBLIC STATE OF HAWAII

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION

By: Bruce Y. Matsui
(Sponsor's Designated Official Representative)
BRUCE Y. MATSUI
Title: Acting Director of Transportation

Attest: Amy T. Motooka
Amy T. Motooka
Title: Notary Public
My Commission Expires: 11-14-03

CERTIFICATE OF SPONSOR'S ATTORNEY

I, Jefferry Kato, acting as Attorney for the Sponsor do hereby certify:

That in my opinion the Sponsor is empowered to enter into the foregoing Grant Agreement under the laws of the **State of Hawaii**. Further, I have examined the foregoing Grant Agreement and the actions taken by said Sponsor and Sponsor's official representative has been duly authorized and that the execution thereof is in all respects due and proper and in accordance with the laws of the said State and the Act. In addition, for grants involving projects to be carried out on property not owned by the Sponsor, there are no legal impediments that will prevent full performance by the Sponsor. Further, it is my opinion that the said Grant Agreement constitutes a legal and binding obligation of the Sponsor in accordance with the terms hereof.

Dated at Honolulu, Hi. this 27th day of August, 2003.

Jefferry Kato
(Signature of Sponsor's Attorney)

EXHIBIT 12

3-15-0018-03
10/20/05

LINDA LINGLE
GOVERNOR

RODNEY K. HARAGA
DIRECTOR

Deputy Directors
BRUCE Y. MATSUI
BARRY FUKUNAGA
BRENNON T. MORIOKA
BRIAN H. SEKIGUCHI

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
869 PUNCHBOWL STREET
HONOLULU, HAWAII 96813-5097

IN REPLY REFER TO:

AIR-EC
05.0469

August 30, 2005

Mr. Ronnie V. Simpson
Manager, Airports District Office
Federal Aviation Administration
Western-Pacific Region
P. O. Box 50244
Honolulu, Hawaii 96850-0001

Dear Mr. Simpson:

Subject: Extend Taxiway "A", Phase II
Dillingham Airfield
State Project No. CO2501-63
AIP Project No. 3-15-0018-03

Returned for your files are the original and two fully executed copies of the approved Grant Agreement for the subject project.

Please have your staff contact Mr. Jeffrey Chang, Construction Engineer, at 838-8825 to clarify any questions you may have.

Very truly yours,

RODNEY K. HARAGA
Director of Transportation

Enclosures: Grant Agreement

bc: AIR-AF
AIR-EPC

SEP - 6 2005

U.S. Department
of Transportation
**Federal Aviation
Administration**

Western-Pacific Region
Airports District Office

300 Ala Moana Blvd., Rm. 7-128
Honolulu, HI 96813
MAIL: Box 50244
Honolulu, HI 96850-0001
Telephone: (808) 541-1232
FAX: (808) 541-3566

August 25, 2005

Mr. Rodney K. Haraga
Director of Transportation
State of Hawaii
869 Punchbowl Street
Honolulu, Hawaii 96813

Dear Mr. Haraga:

Dillingham Airfield, Mokuleia, Hawaii
Airport Improvement Program (AIP) Project No. 3-15-0018-03
Grant Offer

Enclosed are the original and three copies of the approved Grant Offer for the above project.

Acceptance of the Grant Offer will obligate the Sponsor to accomplish the described improvement project. The United States commits itself to participate in the allowable cost of the project not to exceed the amount shown on Page 2 of the Grant Offer. The offer must be accepted on or before the date specified in Condition 6, Page 2 of the Grant Offer.

Basic considerations are that members of the Sponsor's governing body know the full content of the Grant Offer and that the method of acceptance conforms to local law.

The official of the Sponsor authorized to accept the enclosed Grant Offer shall accept same by signing said offer and inserting the date in the space provided under Part II - Acceptance. The Sponsor's attorney shall certify that the acceptance complies with all applicable laws and constitutes a legal and binding obligation of the Sponsor by executing the "Certificate of Sponsor's Attorney." The date of said certificate shall be the same as, or later than the date of execution.

When the document is fully executed, certified, attested and appropriate seals are impressed, please return the original and two (2) originally signed and dated copies of the executed Grant Agreement to this office. Retain the remaining copy for your files.

Your cooperation on this project is greatly appreciated.

Sincerely,

Ronnie V. Simpson
Manager, Airports District Office

Enclosure

cc: (w/o encl.)
Mr. Brian Sekiguchi

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

GRANT AGREEMENT

Part I - Offer

Date of Offer: August 25, 2005

Dillingham Airfield

Project No. 3-15-0018-03

Contract No. DTFA08-05-C-50523

TO: The State of Hawaii, acting by and through its Department of Transportation (herein called the "Sponsor")

FROM: The United States of America (acting through the Federal Aviation Administration, herein called the "FAA")

WHEREAS, the Sponsor has submitted to the FAA a Project Application dated July 15, 2003, for a grant of Federal funds for a project at or associated with the Dillingham Airfield which Project Application, as approved by the FAA, is hereby incorporated herein and made a part hereof; and

WHEREAS, the FAA has approved a project for the Airport or Planning Area (herein called the "Project") consisting of the following:

Extend Taxiway "A" – Phase II

all as more particularly described in the Project Application.

NOW THEREFORE, pursuant to and for the purpose of carrying out the provisions of Title 49, United States Code, as amended, herein called the "Act", and in consideration of (a) the Sponsor's adoption and ratification of the representations and assurances contained in said Project Application and its acceptance of this Offer as hereinafter provided, and (b) the benefits to accrue to the United States and the public from the accomplishment of the Project and compliance with the assurances and conditions as herein provided, **THE FEDERAL AVIATION ADMINISTRATION, FOR AND ON BEHALF OF THE UNITED STATES, HEREBY OFFERS AND AGREES** to pay, as the United States share of the allowable costs incurred in accomplishing the Project, ninety-five per centum (95%) thereof.

The Offer is made on and **SUBJECT TO THE FOLLOWING TERMS AND CONDITIONS:**

Conditions

1. The maximum obligation of the United States payable under this offer shall be **$735,810.00.** For the purposes of any future grant amendments which may increase the foregoing maximum obligation of the United States under the provisions of Section 47108(b) of the Act, the following amounts are being specified for this purpose:

   $0.00 for planning
   $735,810.00 for airport development or noise program implementation.

2. The allowable costs of the project shall not include any costs determined by the FAA to be ineligible for consideration as to allowability under the Act.

3. Payment of the United States' share of the allowable project costs will be made pursuant to and in accordance with the provisions of such regulations and procedures as the Secretary shall prescribe. Final determination of the United States' share will be based upon the final audit of the total amount of allowable project costs and settlement will be made for any upward or downward adjustments to the Federal share of costs.

4. The Sponsor shall carry out and complete the Project without undue delays and in accordance with the terms hereof, and such regulations and procedures as the Secretary shall prescribe, and agrees to comply with the assurances which were made part of the project application.

5. The FAA reserves the right to amend or withdraw this offer at any time prior to its acceptance by the Sponsor.

6. This offer shall expire and the United States shall not be obligated to pay any part of the costs of the project unless this offer has been accepted by the Sponsor on or before **August 31, 2005,** or such subsequent date as may be prescribed in writing by the FAA.

7. The Sponsor shall take all steps, including litigation if necessary, to recover Federal funds spent fraudulently, wastefully, or in violation of Federal antitrust statutes, or misused in any other manner in any project upon which Federal funds have been expended. For the purposes of this grant agreement, the term "Federal funds" means funds however used or disbursed by the Sponsor that were originally paid pursuant to this or any other Federal grant agreement. It shall obtain the approval of the Secretary as to any determination of the amount of the Federal share of such funds. It shall return the recovered Federal share, including funds recovered by settlement, order or judgment, to the Secretary. It shall furnish to the Secretary, upon request, all documents and records pertaining to the determination of the amount of the Federal share or to any settlement, litigation, negotiation, or other efforts taken to recover such funds. All settlements or other final positions of the Sponsor, in court or otherwise, involving the recovery of such Federal share shall be approved in advance by the Secretary.

8. The United States shall not be responsible or liable for damage to property or injury to persons which may arise from, or be incident to, compliance with this grant agreement.

9. Unless otherwise approved by the FAA, the Sponsor will not acquire or permit any contractor or subcontractor to acquire any steel or manufactured products produced outside the United States to be used for any project for airport development or noise compatibility for which funds are provided under this grant. The Sponsor will include in every contract a provision implementing this special condition.

10. The Sponsor shall comply with the Part V, Assurances dated 3/2005, which are attached to and made a part of the Grant Agreement in lieu of the Assurances which accompanied the Project Application dated July 15, 2003.

11. The Sponsor agrees to request cash drawdowns on the letter of credit only when actually needed for its disbursements and to timely reporting of such disbursements as required. It is understood that failure to adhere to this provision may cause the letter of credit to be revoked.

12. It is mutually understood and agreed that if, during the life of the project, the FAA determines that the maximum grant obligation of the United States exceeds the expected needs of the Sponsor by $25,000.00 or five percent (5%), whichever is greater, the maximum obligation of the United States can be unilaterally reduced by letter from the FAA advising of the budget change. Conversely, if there is an overrun in the total actual eligible and allowable project costs, FAA may increase the maximum grant obligation of the United States to cover the amount of the overrun not to exceed the statutory percent limitation and will advise the Sponsor by letter of the increase. It is further understood and agreed that if, during the life of the project, the FAA determines that a change in the grant description is advantageous and in the best interests of the United States, the change in grant description will be unilaterally amended by letter from the FAA. Upon issuance of the aforementioned letter, either the grant obligation of the United States is adjusted to the amount specified or the grant description is amended to the description specified.

13. Approval of the project included in this agreement is conditioned on the Sponsor's compliance with applicable air and water quality standards in accomplishing project construction. Failure to comply with this requirement may result in suspension, cancellation, or termination of Federal assistance under this agreement.

14. In accordance with Section 47108(b) of the Act, as amended, the maximum obligation of the United States, as stated in Condition No. 1 of this Grant Offer:

    a. may not be increased for a planning project;
    b. may be increased by not more than 15 percent for development projects;
    c. may be increased by not more than 15 percent or by an amount not to exceed 25 percent of the total increase in allowable costs attributable to the acquisition of land or interests in land, whichever is greater, based on current credible appraisals or a court award in a condemnation proceeding.

15. The sponsor agrees to perform the following:

a. Furnish a construction management program to the FAA prior to the start of construction which shall detail the measures and procedures to be used to comply with the quality control provisions of the construction contract, including, but not limited to, all quality control provisions and tests required by the Federal specifications. The program shall include as a minimum:

1) The name of the person representing the sponsor who has overall responsibility for contract administration for the project and the authority to take necessary actions to comply with the contract.

2) Names of testing laboratories and consulting engineer firms with quality control responsibilities on the project, together with a description of the services to be provided.

3) Procedures for determining that testing laboratories meet the requirements of the American Society of Testing and Materials standards on laboratory evaluation, referenced in the contract specifications (D 3666, C 1077).

4) Submit qualifications of engineering supervision, and construction inspection personnel.

5) A listing of all test required by the contract specifications, including the type and frequency of test to be taken, the method of sampling, the applicable test standard, and the acceptance criteria or tolerances permitted for each type of test.

6) Procedures for ensuring that the tests are taken in accordance with the program, that they are documented daily, and that the proper corrective actions, where necessary, are undertaken.

b. Submit at completion of the project, a final test and quality control report documenting the results of all tests performed, highlighting those tests that failed or did not meet the applicable test standard. The report shall include the pay reductions applied and reasons for accepting any out-of-tolerance material. An interim test and quality control report shall be submitted, if requested by the FAA.

c. Failure to provide a complete report as described in paragraph 2, or failure to perform such tests, shall, absent any compelling justification, result in a reduction in Federal participation for costs incurred in connection with construction of the applicable pavement. Such reduction shall be at the discretion of the FAA and will be based on the type or types of required tests not performed or not documented and will be commensurate with the proportion of applicable pavement with respect to the total pavement constructed under the grant agreement.

d. The FAA, at its discretion, reserves the right to conduct independent tests and to reduce grant payments accordingly if such independent tests determine that sponsor test results are inaccurate.

16. For a project to replace or reconstruct pavement at the airport, the Sponsor shall implement an effective airport pavement maintenance management program as is required by Airport Sponsor Assurance Number C-11. The Sponsor shall use such program for the useful life of any pavement constructed, reconstructed, or repaired with Federal financial assistance at the airport. As a minimum, the program must conform with the provisions outlined below:

Pavement Maintenance Management Program

An effective pavement maintenance management program is one that details the procedures to be followed to assure that proper pavement maintenance, both preventive and repair, is performed. An airport sponsor may use any form of inspection program it deems appropriate. The program must, as a minimum, include the following:

a. Pavement Inventory. The following must be depicted in an appropriate form and level of detail:
   (1) location of all runways, taxiways, and aprons;
   (2) dimensions;
   (3) type of pavement, and;
   (4) year of construction or most recent major rehabilitation.

For compliance with the Airport Improvement Program (AIP) assurances, pavements that have been constructed, reconstructed, or repaired with Federal financial assistance shall be so depicted.

b. Inspection Schedule.
   (1) Detailed Inspection. A detailed inspection must be performed at least once a year. If a history of recorded pavement deterioration is available, i.e, Pavement Condition Index (PCI) survey as set forth in Advisory Circular 150/5380-6, "Guidelines and Procedures for Maintenance of Airport Pavements," the frequency of inspections may be extended to three years.
   (2) Drive-By Inspection. A drive-by inspection must be performed a minimum of once per month to detect unexpected changes in the pavement condition.

c. Record Keeping. Complete information on the findings of all detailed inspections and on the maintenance performed must be recorded and kept on file for a minimum of five years. The types of distress, their locations, and remedial action, scheduled or performed, must be documented. The minimum information to be recorded is listed below:
   (1) inspection date,
   (2) location,
   (3) distress types, and
   (4) maintenance scheduled or performed.

For drive-by inspections, the date of inspection and any maintenance performed must be recorded.

d. Information Retrieval. An airport sponsor may use any form of record keeping it deems appropriate, so long as the information and records produced by the pavement survey can be retrieved to provide a report to the FAA as may be required.

e. Reference. Refer to Advisory Circular 150/5380-6, "Guidelines and Procedures for Maintenance or Airport Pavements," for specific guidelines and procedures for maintaining airport pavements and establishing an effective maintenance program. Specific types of distress, their probable causes, inspection guidelines, and recommended methods of repair are presented.

17. The Sponsor agrees to take the following actions to maintain and/or acquire a property interest, satisfactory to the FAA, in the Runway Protection Zones:

a. Existing Fee Title Interest in the Runway Protection Zone: The Sponsor agrees to prevent the erection or creation of any structure or place of public assembly in the Runway Protection Zone, except for NAVAIDS that are fixed by their functional purposes or any other structure approved by the FAA. Any existing structures or uses within the Runway Protection Zone will be cleared or discontinued unless approved by the FAA.
b. Existing Easement Interest in the Runway Protection Zone: The Sponsor agrees to take any and all steps necessary to ensure that the owner of the land within the designated Runway Protection Zone will not build any structure in the Runway Protection Zone that is a hazard to air navigation or which might create glare or misleading lights or lead to the construction of residences, fuel handling and storage facilities, smoke generating activities, or places of public assembly, such as churches, schools, office buildings, shopping centers, and stadiums.
c. Future Interest in the Runway Protection Zone: The Sponsor agrees that it will acquire fee title or less-than-fee interest in the Runway Protection Zones for runways that presently are not under its control within ten years of this Grant Agreement. Said interest shall provide the protection noted in the above Subparagraphs a and b.

The Sponsor's acceptance of this Offer and ratification and adoption of the Project Application incorporated herein shall be evidenced by execution of this instrument by the Sponsor, as hereinafter provided, and this Offer and Acceptance shall comprise a Grant Agreement, as provided by the Act, constituting the contractual obligations and rights of the United States and the Sponsor with respect to the accomplishment of the Project and compliance with the assurances and conditions as provided herein. Such Grant Agreement shall become effective upon the Sponsor's acceptance of this Offer.

UNITED STATES OF AMERICA
FEDERAL AVIATION ADMINISTRATION
WESTERN-PACIFIC REGION

Ronnie V. Simpson
Manager, Airports District Office

Part II - Acceptance

The Sponsor does hereby ratify and adopt all assurances, statements, representations, warranties, covenants, and agreements contained in the Project Application and incorporated materials referred to in the foregoing Offer and does hereby accept this Offer and by such acceptance agrees to comply with all of the terms and conditions in this Offer and in the Project Application.

Executed this 29 day of August, 2005.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION

By: _____
(Sponsor's Designated Official Representative)
RODNEY K. HARAGA

Title: Director of Transportation

Attest: _____

Title: _____

CERTIFICATE OF SPONSOR'S ATTORNEY

I, Stella Kam, acting as Attorney for the Sponsor do hereby certify:

That in my opinion the Sponsor is empowered to enter into the foregoing Grant Agreement under the laws of the **State of Hawaii**. Further, I have examined the foregoing Grant Agreement and the actions taken by said Sponsor and Sponsor's official representative has been duly authorized and that the execution thereof is in all respects due and proper and in accordance with the laws of the said State and the Act. In addition, for grants involving projects to be carried out on property not owned by the Sponsor, there are no legal impediments that will prevent full performance by the Sponsor. Further, it is my opinion that the said Grant Agreement constitutes a legal and binding obligation of the Sponsor in accordance with the terms hereof.

Dated at Honolulu, Hawaii this 31st day of August, 2005.

_____
(Signature of Sponsor's Attorney)

ASSURANCES
Airport Sponsors

A. General.

1. These assurances shall be complied with in the performance of grant agreements for airport development, airport planning, and noise compatibility program grants for airport sponsors.
2. These assurances are required to be submitted as part of the project application by sponsors requesting funds under the provisions of Title 49, U.S.C., subtitle VII, as amended. As used herein, the term "public agency sponsor" means a public agency with control of a public-use airport; the term "private sponsor" means a private owner of a public-use airport; and the term "sponsor" includes both public agency sponsors and private sponsors.
3. Upon acceptance of the grant offer by the sponsor, these assurances are incorporated in and become part of the grant agreement.

B. Duration and Applicability.

1. **Airport development or Noise Compatibility Program Projects Undertaken by a Public Agency Sponsor.** The terms, conditions and assurances of the grant agreement shall remain in full force and effect throughout the useful life of the facilities developed or equipment acquired for an airport development or noise compatibility program project, or throughout the useful life of the project items installed within a facility under a noise compatibility program project, but in any event not to exceed twenty (20) years from the date of acceptance of a grant offer of Federal funds for the project. However, there shall be no limit on the duration of the assurances regarding Exclusive Rights and Airport Revenue so long as the airport is used as an airport. There shall be no limit on the duration of the terms, conditions, and assurances with respect to real property acquired with federal funds. Furthermore, the duration of the Civil Rights assurance shall be specified in the assurances.

2. **Airport Development or Noise Compatibility Projects Undertaken by a Private Sponsor.** The preceding paragraph 1 also applies to a private sponsor except that the useful life of project items installed within a facility or the useful life of the facilities developed or equipment acquired under an airport development or noise compatibility program project shall be no less than ten (10) years from the date of acceptance of Federal aid for the project.

3. **Airport Planning Undertaken by a Sponsor.** Unless otherwise specified in the grant agreement, only Assurances 1, 2, 3, 5, 6, 13, 18, 30, 32, 33, and 34 in section C apply to planning projects. The terms, conditions, and assurances of the grant agreement shall remain in full force and effect during the life of the project.

C. Sponsor Certification. The sponsor hereby assures and certifies, with respect to this grant that:

1. **General Federal Requirements.** It will comply with all applicable Federal laws, regulations, executive orders, policies, guidelines, and requirements as they relate to the application, acceptance and use of Federal funds for this project including but not limited to the following:

Federal Legislation

a. Title 49, U.S.C., subtitle VII, as amended.
b. Davis-Bacon Act - 40 U.S.C. 276(a), et seq.[1]
c. Federal Fair Labor Standards Act - 29 U.S.C. 201, et seq.
d. Hatch Act - 5 U.S.C. 1501, et seq.[2]
e. Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 Title 42 U.S.C. 4601, et seq.[1,2]

f. National Historic Preservation Act of 1966 - Section 106 - 16 U.S.C. 470(f).[1]
g. Archeological and Historic Preservation Act of 1974 - 16 U.S.C. 469 through 469c.[1]
h. Native Americans Grave Repatriation Act - 25 U.S.C. Section 3001, et seq.
i. Clean Air Act, P.L. 90-148, as amended.
j. Coastal Zone Management Act, P.L. 93-205, as amended.
k. Flood Disaster Protection Act of 1973 - Section 102(a) - 42 U.S.C. 4012a.[1]
l. Title 49 ,U.S.C., Section 303, (formerly known as Section 4(f))
m. Rehabilitation Act of 1973 - 29 U.S.C. 794.
n. Civil Rights Act of 1964 - Title VI - 42 U.S.C. 2000d through d-4.
o. Age Discrimination Act of 1975 - 42 U.S.C. 6101, et seq.
p. American Indian Religious Freedom Act, P.L. 95-341, as amended.
q Architectural Barriers Act of 1968 -42 U.S.C. 4151, et seq.[1]
r. Power plant and Industrial Fuel Use Act of 1978 - Section 403- 2 U.S.C. 8373.[1]
s. Contract Work Hours and Safety Standards Act - 40 U.S.C. 327, et seq.[1]
t. Copeland Anti kickback Act - 18 U.S.C. 874.[1]
u. National Environmental Policy Act of 1969 - 42 U.S.C. 4321, et seq.[1]
v. Wild and Scenic Rivers Act, P.L. 90-542, as amended.
w. Single Audit Act of 1984 - 31 U.S.C. 7501, et seq.[2]
x. Drug-Free Workplace Act of 1988 - 41 U.S.C. 702 through 706.

Executive Orders

Executive Order 11246 - Equal Employment Opportunity[1]
Executive Order 11990 - Protection of Wetlands
Executive Order 11998 – Flood Plain Management
Executive Order 12372 - Intergovernmental Review of Federal Programs.
Executive Order 12699 - Seismic Safety of Federal and Federally Assisted New Building Construction[1]
Executive Order 12898 - Environmental Justice

Federal Regulations

a. 14 CFR Part 13 - Investigative and Enforcement Procedures.
b. 14 CFR Part 16 - Rules of Practice For Federally Assisted Airport Enforcement Proceedings.
c. 14 CFR Part 150 - Airport noise compatibility planning.
d. 29 CFR Part 1 - Procedures for predetermination of wage rates.[1]
e. 29 CFR Part 3 - Contractors and subcontractors on public building or public work financed in whole or part by loans or grants from the United States.[1]
f. 29 CFR Part 5 - Labor standards provisions applicable to contracts covering federally financed and assisted construction (also labor standards provisions applicable to non-construction contracts subject to the Contract Work Hours and Safety Standards Act).[1]
g. 41 CFR Part 60 - Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor (Federal and federally assisted contracting requirements).[1]
h. 49 CFR Part 18 - Uniform administrative requirements for grants and cooperative agreements to state and local governments.[3]
i. 49 CFR Part 20 - New restrictions on lobbying.

j. 49 CFR Part 21 - Nondiscrimination in federally-assisted programs of the Department of Transportation - effectuation of Title VI of the Civil Rights Act of 1964.

k. 49 CFR Part 23 - Participation by Disadvantage Business Enterprise in Airport Concessions.

l. 49 CFR Part 24 - Uniform relocation assistance and real property acquisition for Federal and federally assisted programs.[1] [2]

m. 49 CFR Part 26 – Participation By Disadvantaged Business Enterprises in Department of Transportation Programs.

n. 49 CFR Part 27 - Nondiscrimination on the basis of handicap in programs and activities receiving or benefiting from Federal financial assistance.[1]

o. 49 CFR Part 29 – Government wide debarment and suspension (non-procurement) and government wide requirements for drug-free workplace (grants).

p. 49 CFR Part 30 - Denial of public works contracts to suppliers of goods and services of countries that deny procurement market access to U.S. contractors.

q. 49 CFR Part 41 - Seismic safety of Federal and federally assisted or regulated new building construction.[1]

Office of Management and Budget Circulars

a. A-87 - Cost Principles Applicable to Grants and Contracts with State and Local Governments.

b A-133 - Audits of States, Local Governments, and Non-Profit Organizations

[1] These laws do not apply to airport planning sponsors.
[2] These laws do not apply to private sponsors.
[3] 49 CFR Part 18 and OMB Circular A-87 contain requirements for State and Local Governments receiving Federal assistance. Any requirement levied upon State and Local Governments by this regulation and circular shall also be applicable to private sponsors receiving Federal assistance under Title 49, United States Code.

Specific assurances required to be included in grant agreements by any of the above laws, regulations or circulars are incorporated by reference in the grant agreement.

2. Responsibility and Authority of the Sponsor.

a. **Public Agency Sponsor:** It has legal authority to apply for the grant, and to finance and carry out the proposed project; that a resolution, motion or similar action has been duly adopted or passed as an official act of the applicant's governing body authorizing the filing of the application, including all understandings and assurances contained therein, and directing and authorizing the person identified as the official representative of the applicant to act in connection with the application and to provide such additional information as may be required.

b. **Private Sponsor:** It has legal authority to apply for the grant and to finance and carry out the proposed project and comply with all terms, conditions, and assurances of this grant agreement. It shall designate an official representative and shall in writing direct and authorize that person to file this application, including all understandings and assurances contained therein; to act in connection with this application; and to provide such additional information as may be required.

3. **Sponsor Fund Availability.** It has sufficient funds available for that portion of the project costs which are not to be paid by the United States. It has sufficient funds available to assure operation and maintenance of items funded under the grant agreement which it will own or control.

4. **Good Title.**

   a. It, a public agency or the Federal government, holds good title, satisfactory to the Secretary, to the landing area of the airport or site thereof, or will give assurance satisfactory to the Secretary that good title will be acquired.

   b. For noise compatibility program projects to be carried out on the property of the sponsor, it holds good title satisfactory to the Secretary to that portion of the property upon which Federal funds will be expended or will give assurance to the Secretary that good title will be obtained.

5. **Preserving Rights and Powers.**

   a. It will not take or permit any action which would operate to deprive it of any of the rights and powers necessary to perform any or all of the terms, conditions, and assurances in the grant agreement without the written approval of the Secretary, and will act promptly to acquire, extinguish or modify any outstanding rights or claims of right of others which would interfere with such performance by the sponsor. This shall be done in a manner acceptable to the Secretary.

   b. It will not sell, lease, encumber, or otherwise transfer or dispose of any part of its title or other interests in the property shown on Exhibit A to this application or, for a noise compatibility program project, that portion of the property upon which Federal funds have been expended, for the duration of the terms, conditions, and assurances in the grant agreement without approval by the Secretary. If the transferee is found by the Secretary to be eligible under Title 49, United States Code, to assume the obligations of the grant agreement and to have the power, authority, and financial resources to carry out all such obligations, the sponsor shall insert in the contract or document transferring or disposing of the sponsor's interest, and make binding upon the transferee all of the terms, conditions, and assurances contained in this grant agreement.

   c. For all noise compatibility program projects which are to be carried out by another unit of local government or are on property owned by a unit of local government other than the sponsor, it will enter into an agreement with that government. Except as otherwise specified by the Secretary, that agreement shall obligate that government to the same terms, conditions, and assurances that would be applicable to it if it applied directly to the FAA for a grant to undertake the noise compatibility program project. That agreement and changes thereto must be satisfactory to the Secretary. It will take steps to enforce this agreement against the local government if there is substantial non-compliance with the terms of the agreement.

   d. For noise compatibility program projects to be carried out on privately owned property, it will enter into an agreement with the owner of that property which includes provisions specified by the Secretary. It will take steps to enforce this agreement against the property owner whenever there is substantial non-compliance with the terms of the agreement.

e. If the sponsor is a private sponsor, it will take steps satisfactory to the Secretary to ensure that the airport will continue to function as a public-use airport in accordance with these assurances for the duration of these assurances.

f. If an arrangement is made for management and operation of the airport by any agency or person other than the sponsor or an employee of the sponsor, the sponsor will reserve sufficient rights and authority to insure that the airport will be operated and maintained in accordance Title 49, United States Code, the regulations and the terms, conditions and assurances in the grant agreement and shall insure that such arrangement also requires compliance therewith.

6. **Consistency with Local Plans.** The project is reasonably consistent with plans (existing at the time of submission of this application) of public agencies that are authorized by the State in which the project is located to plan for the development of the area surrounding the airport.

7. **Consideration of Local Interest.** It has given fair consideration to the interest of communities in or near where the project may be located.

8. **Consultation with Users.** In making a decision to undertake any airport development project under Title 49, United States Code, it has undertaken reasonable consultations with affected parties using the airport at which project is proposed.

9. **Public Hearings.** In projects involving the location of an airport, an airport runway, or a major runway extension, it has afforded the opportunity for public hearings for the purpose of considering the economic, social, and environmental effects of the airport or runway location and its consistency with goals and objectives of such planning as has been carried out by the community and it shall, when requested by the Secretary, submit a copy of the transcript of such hearings to the Secretary. Further, for such projects, it has on its management board either voting representation from the communities where the project is located or has advised the communities that they have the right to petition the Secretary concerning a proposed project.

10. **Air and Water Quality Standards.** In projects involving airport location, a major runway extension, or runway location it will provide for the Governor of the state in which the project is located to certify in writing to the Secretary that the project will be located, designed, constructed, and operated so as to comply with applicable air and water quality standards. In any case where such standards have not been approved and where applicable air and water quality standards have been promulgated by the Administrator of the Environmental Protection Agency, certification shall be obtained from such Administrator. Notice of certification or refusal to certify shall be provided within sixty days after the project application has been received by the Secretary.

11. **Pavement Preventive Maintenance.** With respect to a project approved after January 1, 1995, for the replacement or reconstruction of pavement at the airport, it assures or certifies that it has implemented an effective airport pavement maintenance-management program and it assures that it will use such program for the useful life of any pavement constructed, reconstructed or repaired with Federal financial assistance at the airport. It will provide such reports on pavement condition and pavement management programs as the Secretary determines may be useful.

12. **Terminal Development Prerequisites.** For projects which include terminal development at a public use airport, as defined in Title 49, it has, on the date of submittal of the project grant application, all the safety equipment required for certification of such airport under section 44706 of Title 49, United States Code, and all the security equipment required by rule or regulation, and has provided for access to the passenger enplaning and deplaning area of such airport to passengers enplaning and deplaning from aircraft other than air carrier aircraft.

13. **Accounting System, Audit, and Record Keeping Requirements.**

a. It shall keep all project accounts and records which fully disclose the amount and disposition by the recipient of the proceeds of the grant, the total cost of the project in connection with which the grant is given or used, and the amount or nature of that portion of the cost of the project supplied by other sources, and such other financial records pertinent to the project. The accounts and records shall be kept in accordance with an accounting system that will facilitate an effective audit in accordance with the Single Audit Act of 1984.

b. It shall make available to the Secretary and the Comptroller General of the United States, or any of their duly authorized representatives, for the purpose of audit and examination, any books, documents, papers, and records of the recipient that are pertinent to the grant. The Secretary may require that an appropriate audit be conducted by a recipient. In any case in which an independent audit is made of the accounts of a sponsor relating to the disposition of the proceeds of a grant or relating to the project in connection with which the grant was given or used, it shall file a certified copy of such audit with the Comptroller General of the United States not later than six (6) months following the close of the fiscal year for which the audit was made.

14. **Minimum Wage Rates.** It shall include, in all contracts in excess of $2,000 for work on any projects funded under the grant agreement which involve labor, provisions establishing minimum rates of wages, to be predetermined by the Secretary of Labor, in accordance with the Davis-Bacon Act, as amended (40 U.S.C. 276a-276a-5), which contractors shall pay to skilled and unskilled labor, and such minimum rates shall be stated in the invitation for bids and shall be included in proposals or bids for the work.

15. **Veteran's Preference.** It shall include in all contracts for work on any project funded under the grant agreement which involve labor, such provisions as are necessary to insure that, in the employment of labor (except in executive, administrative, and supervisory positions), preference shall be given to Veterans of the Vietnam era and disabled veterans as defined in Section 47112 of Title 49, United States Code. However, this preference shall apply only where the individuals are available and qualified to perform the work to which the employment relates.

16. **Conformity to Plans and Specifications.** It will execute the project subject to plans, specifications, and schedules approved by the Secretary. Such plans, specifications, and schedules shall be submitted to the Secretary prior to commencement of site preparation, construction, or other performance under this grant agreement, and, upon approval of the Secretary, shall be incorporated into this grant agreement. Any modification to the approved plans, specifications, and schedules shall also be subject to approval of the Secretary, and incorporated into the grant agreement.

17. **Construction Inspection and Approval.** It will provide and maintain competent technical supervision at the construction site throughout the project to assure that the work conforms to the plans, specifications, and schedules approved by the Secretary for the project. It shall subject the construction work on any project contained in an approved project application to inspection and approval by the Secretary and such work shall be in accordance with regulations and procedures prescribed by the Secretary. Such regulations and procedures shall require such cost and progress reporting by the sponsor or sponsors of such project as the Secretary shall deem necessary.

18. **Planning Projects.** In carrying out planning projects:

a. It will execute the project in accordance with the approved program narrative contained in the project application or with the modifications similarly approved.

b. It will furnish the Secretary with such periodic reports as required pertaining to the planning project and planning work activities.

c. It will include in all published material prepared in connection with the planning project a notice that the material was prepared under a grant provided by the United States.

d. It will make such material available for examination by the public, and agrees that no material prepared with funds under this project shall be subject to copyright in the United States or any other country.

e. It will give the Secretary unrestricted authority to publish, disclose, distribute, and otherwise use any of the material prepared in connection with this grant.

f. It will grant the Secretary the right to disapprove the sponsor's employment of specific consultants and their subcontractors to do all or any part of this project as well as the right to disapprove the proposed scope and cost of professional services.

g. It will grant the Secretary the right to disapprove the use of the sponsor's employees to do all or any part of the project.

h. It understands and agrees that the Secretary's approval of this project grant or the Secretary's approval of any planning material developed as part of this grant does not constitute or imply any assurance or commitment on the part of the Secretary to approve any pending or future application for a Federal airport grant.

19. **Operation and Maintenance.**

a. The airport and all facilities which are necessary to serve the aeronautical users of the airport, other than facilities owned or controlled by the United States, shall be operated at all times in a safe and serviceable condition and in accordance with the minimum standards as may be required or prescribed by applicable Federal, state and local agencies for maintenance and operation. It will not cause or permit any activity or action thereon which would interfere with its use for airport purposes. It will suitably operate and maintain the airport and all facilities thereon or connected therewith, with due regard to climatic and flood conditions. Any proposal to temporarily close the airport for non-aeronautical purposes must first be approved by the Secretary.

In furtherance of this assurance, the sponsor will have in effect arrangements for-

(1) Operating the airport's aeronautical facilities whenever required;

(2) Promptly marking and lighting hazards resulting from airport conditions, including temporary conditions; and

(3) Promptly notifying airmen of any condition affecting aeronautical use of the airport.

Nothing contained herein shall be construed to require that the airport be operated for aeronautical use during temporary periods when snow, flood or other climatic conditions interfere with such operation and maintenance. Further, nothing herein shall be construed as requiring the maintenance, repair, restoration, or replacement of any structure or facility which is substantially damaged or destroyed due to an act of God or other condition or circumstance beyond the control of the sponsor.

b. It will suitably operate and maintain noise compatibility program items that it owns or controls upon which Federal funds have been expended.

20. **Hazard Removal and Mitigation.** It will take appropriate action to assure that such terminal airspace as is required to protect instrument and visual operations to the airport (including established minimum flight altitudes) will be adequately cleared and protected by removing, lowering, relocating, marking, or lighting or otherwise mitigating existing airport hazards and by preventing the establishment or creation of future airport hazards.

21. **Compatible Land Use.** It will take appropriate action, to the extent reasonable, including the adoption of zoning laws, to restrict the use of land adjacent to or in the immediate vicinity of the airport to activities and purposes compatible with normal airport operations, including landing and takeoff of aircraft. In addition, if the project is for noise compatibility program implementation, it will not cause or permit any change in land use, within its jurisdiction, that will reduce its compatibility, with respect to the airport, of the noise compatibility program measures upon which Federal funds have been expended.

22. **Economic Nondiscrimination.**

a. It will make the airport available as an airport for public use on reasonable terms and without unjust discrimination to all types, kinds and classes of aeronautical activities, including commercial aeronautical activities offering services to the public at the airport.

b. In any agreement, contract, lease, or other arrangement under which a right or privilege at the airport is granted to any person, firm, or corporation to conduct or to engage in any aeronautical activity for furnishing services to the public at the airport, the sponsor will insert and enforce provisions requiring the contractor to-

(1) furnish said services on a reasonable, and not unjustly discriminatory, basis to all users thereof, and

(2) charge reasonable, and not unjustly discriminatory, prices for each unit or service, provided that the contractor may be allowed to make reasonable and nondiscriminatory discounts, rebates, or other similar types of price reductions to volume purchasers.

c. Each fixed-based operator at the airport shall be subject to the same rates, fees, rentals, and other charges as are uniformly applicable to all other fixed-based operators making the same or similar uses of such airport and utilizing the same or similar facilities.

d. Each air carrier using such airport shall have the right to service itself or to use any fixed-based operator that is authorized or permitted by the airport to serve any air carrier at such airport.

e. Each air carrier using such airport (whether as a tenant, non tenant, or subtenant of another air carrier tenant) shall be subject to such nondiscriminatory and substantially comparable rules, regulations, conditions, rates, fees, rentals, and other charges with respect to facilities directly and substantially related to providing air transportation as are applicable to all such air carriers which make similar use of such airport and utilize similar facilities, subject to reasonable classifications such as tenants or non tenants and signatory carriers and non signatory carriers. Classification or status as tenant or signatory shall not be unreasonably withheld by any airport provided an air carrier assumes obligations substantially similar to those already imposed on air carriers in such classification or status.

f. It will not exercise or grant any right or privilege which operates to prevent any person, firm, or corporation operating aircraft on the airport from performing any services on its own aircraft with its own employees [including, but not limited to maintenance, repair, and fueling] that it may choose to perform.

g. In the event the sponsor itself exercises any of the rights and privileges referred to in this assurance, the services involved will be provided on the same conditions as would apply to the furnishing of such services by commercial aeronautical service providers authorized by the sponsor under these provisions.

h. The sponsor may establish such reasonable, and not unjustly discriminatory, conditions to be met by all users of the airport as may be necessary for the safe and efficient operation of the airport.

i. The sponsor may prohibit or limit any given type, kind or class of aeronautical use of the airport if such action is necessary for the safe operation of the airport or necessary to serve the civil aviation needs of the public.

23. **Exclusive Rights.** It will permit no exclusive right for the use of the airport by any person providing, or intending to provide, aeronautical services to the public. For purposes of this paragraph, the providing of the services at an airport by a single fixed-based operator shall not be construed as an exclusive right if both of the following apply:

a. It would be unreasonably costly, burdensome, or impractical for more than one fixed-based operator to provide such services, and

b. If allowing more than one fixed-based operator to provide such services would require the reduction of space leased pursuant to an existing agreement between such single fixed-based operator and such airport.

It further agrees that it will not, either directly or indirectly, grant or permit any person, firm, or corporation, the exclusive right at the airport to conduct any aeronautical activities, including, but not limited to charter flights, pilot training, aircraft rental and sightseeing, aerial photography, crop dusting, aerial advertising and surveying, air carrier operations, aircraft sales and services, sale of aviation petroleum products whether or not conducted in conjunction with other aeronautical activity, repair and maintenance of aircraft, sale of aircraft parts, and any other activities which because of their direct relationship to the operation of aircraft can be regarded as an aeronautical activity, and that it will terminate any

exclusive right to conduct an aeronautical activity now existing at such an airport before the grant of any assistance under Title 49, United States Code.

24. **Fee and Rental Structure.** It will maintain a fee and rental structure for the facilities and services at the airport which will make the airport as self-sustaining as possible under the circumstances existing at the particular airport, taking into account such factors as the volume of traffic and economy of collection. No part of the Federal share of an airport development, airport planning or noise compatibility project for which a grant is made under Title 49, United States Code, the Airport and Airway Improvement Act of 1982, the Federal Airport Act or the Airport and Airway Development Act of 1970 shall be included in the rate basis in establishing fees, rates, and charges for users of that airport.

25. **Airport Revenues.**

    a. All revenues generated by the airport and any local taxes on aviation fuel established after December 30, 1987, will be expended by it for the capital or operating costs of the airport; the local airport system; or other local facilities which are owned or operated by the owner or operator of the airport and which are directly and substantially related to the actual air transportation of passengers or property; or for noise mitigation purposes on or off the airport. Provided, however, that if covenants or assurances in debt obligations issued before September 3, 1982, by the owner or operator of the airport, or provisions enacted before September 3, 1982, in governing statutes controlling the owner or operator's financing, provide for the use of the revenues from any of the airport owner or operator's facilities, including the airport, to support not only the airport but also the airport owner or operator's general debt obligations or other facilities, then this limitation on the use of all revenues generated by the airport (and, in the case of a public airport, local taxes on aviation fuel) shall not apply.

    b. As part of the annual audit required under the Single Audit Act of 1984, the sponsor will direct that the audit will review, and the resulting audit report will provide an opinion concerning, the use of airport revenue and taxes in paragraph (a), and indicating whether funds paid or transferred to the owner or operator are paid or transferred in a manner consistent with Title 49, United States Code and any other applicable provision of law, including any regulation promulgated by the Secretary or Administrator.

    c. Any civil penalties or other sanctions will be imposed for violation of this assurance in accordance with the provisions of Section 47107 of Title 49, United States Code.

26. **Reports and Inspections.** It will:

    a. submit to the Secretary such annual or special financial and operations reports as the Secretary may reasonably request and make such reports available to the public; make available to the public at reasonable times and places a report of the airport budget in a format prescribed by the Secretary;

    b. for airport development projects, make the airport and all airport records and documents affecting the airport, including deeds, leases, operation and use agreements, regulations and other instruments, available for inspection by any duly authorized agent of the Secretary upon reasonable request;

c. for noise compatibility program projects, make records and documents relating to the project and continued compliance with the terms, conditions, and assurances of the grant agreement including deeds, leases, agreements, regulations, and other instruments, available for inspection by any duly authorized agent of the Secretary upon reasonable request; and

d. in a format and time prescribed by the Secretary, provide to the Secretary and make available to the public following each of its fiscal years, an annual report listing in detail:
(i) all amounts paid by the airport to any other unit of government and the purposes for which each such payment was made; and
(ii) all services and property provided by the airport to other units of government and the amount of compensation received for provision of each such service and property.

27. **Use by Government Aircraft.** It will make available all of the facilities of the airport developed with Federal financial assistance and all those usable for landing and takeoff of aircraft to the United States for use by Government aircraft in common with other aircraft at all times without charge, except, if the use by Government aircraft is substantial, charge may be made for a reasonable share, proportional to such use, for the cost of operating and maintaining the facilities used. Unless otherwise determined by the Secretary, or otherwise agreed to by the sponsor and the using agency, substantial use of an airport by Government aircraft will be considered to exist when operations of such aircraft are in excess of those which, in the opinion of the Secretary, would unduly interfere with use of the landing areas by other authorized aircraft, or during any calendar month that-

a. Five (5) or more Government aircraft are regularly based at the airport or on land adjacent thereto; or

c. The total number of movements (counting each landing as a movement) of Government aircraft is 300 or more, or the gross accumulative weight of Government aircraft using the airport (the total movement of Government aircraft multiplied by gross weights of such aircraft) is in excess of five million pounds.

28. **Land for Federal Facilities.** It will furnish without cost to the Federal Government for use in connection with any air traffic control or air navigation activities, or weather-reporting and communication activities related to air traffic control, any areas of land or water, or estate therein, or rights in buildings of the sponsor as the Secretary considers necessary or desirable for construction, operation, and maintenance at Federal expense of space or facilities for such purposes. Such areas or any portion thereof will be made available as provided herein within four months after receipt of a written request from the Secretary.

29. **Airport Layout Plan.**

a. It will keep up to date at all times an airport layout plan of the airport showing (1) boundaries of the airport and all proposed additions thereto, together with the boundaries of all offsite areas owned or controlled by the sponsor for airport purposes and proposed additions thereto; (2) the location and nature of all existing and proposed airport facilities and structures (such as runways, taxiways, aprons, terminal buildings, hangars and roads), including all proposed extensions and reductions of existing airport facilities; and (3) the location of all existing and proposed nonaviation areas and of all existing improvements thereon. Such airport layout plans and each amendment, revision, or modification thereof, shall be subject to the approval of the Secretary which approval shall be evidenced by the signature of a duly authorized representative of the Secretary on the face of the airport layout plan. The sponsor will not make

or permit any changes or alterations in the airport or any of its facilities which are not in conformity with the airport layout plan as approved by the Secretary and which might, in the opinion of the Secretary, adversely affect the safety, utility or efficiency of the airport.

b. If a change or alteration in the airport or the facilities is made which the Secretary determines adversely affects the safety, utility, or efficiency of any federally owned, leased, or funded property on or off the airport and which is not in conformity with the airport layout plan as approved by the Secretary, the owner or operator will, if requested, by the Secretary (1) eliminate such adverse effect in a manner approved by the Secretary; or (2) bear all costs of relocating such property (or replacement thereof) to a site acceptable to the Secretary and all costs of restoring such property (or replacement thereof) to the level of safety, utility, efficiency, and cost of operation existing before the unapproved change in the airport or its facilities.

30. **Civil Rights.** It will comply with such rules as are promulgated to assure that no person shall, on the grounds of race, creed, color, national origin, sex, age, or handicap be excluded from participating in any activity conducted with or benefiting from funds received from this grant. This assurance obligates the sponsor for the period during which Federal financial assistance is extended to the program, except where Federal financial assistance is to provide, or is in the form of personal property or real property or interest therein or structures or improvements thereon in which case the assurance obligates the sponsor or any transferee for the longer of the following periods: (a) the period during which the property is used for a purpose for which Federal financial assistance is extended, or for another purpose involving the provision of similar services or benefits, or (b) the period during which the sponsor retains ownership or possession of the property.

31. **Disposal of Land.**

a. For land purchased under a grant for airport noise compatibility purposes, it will dispose of the land, when the land is no longer needed for such purposes, at fair market value, at the earliest practicable time. That portion of the proceeds of such disposition which is proportionate to the United States' share of acquisition of such land will, at the discretion of the Secretary, (1) be paid to the Secretary for deposit in the Trust Fund, or (2) be reinvested in an approved noise compatibility project as prescribed by the Secretary, including the purchase of nonresidential buildings or property in the vicinity of residential buildings or property previously purchased by the airport as part of a noise compatibility program.

b. For land purchased under a grant for airport development purposes (other than noise compatibility), it will, when the land is no longer needed for airport purposes, dispose of such land at fair market value or make available to the Secretary an amount equal to the United States' proportionate share of the fair market value of the land. That portion of the proceeds of such disposition which is proportionate to the United States' share of the cost of acquisition of such land will, (1) upon application to the Secretary, be reinvested in another eligible airport improvement project or projects approved by the Secretary at that airport or within the national airport system, or (2) be paid to the Secretary for deposit in the Trust Fund if no eligible project exists.

c. Land shall be considered to be needed for airport purposes under this assurance if (1) it may be needed for aeronautical purposes (including runway protection zones) or serve as noise buffer land, and (2) the revenue from interim uses of such land contributes to the financial self-sufficiency of the airport. Further, land purchased with a grant received by an airport operator or owner before December 31, 1987, will be considered to be needed for airport purposes if the Secretary or Federal agency making such grant before December 31, 1987, was notified by the operator or owner of the uses of such land, did not object to such use, and the land continues to be used for that purpose, such use having commenced no later than December 15, 1989.

d. Disposition of such land under (a) (b) or (c) will be subject to the retention or reservation of any interest or right therein necessary to ensure that such land will only be used for purposes which are compatible with noise levels associated with operation of the airport.

32. **Engineering and Design Services.** It will award each contract, or sub-contract for program management, construction management, planning studies, feasibility studies, architectural services, preliminary engineering, design, engineering, surveying, mapping or related services with respect to the project in the same manner as a contract for architectural and engineering services is negotiated under Title IX of the Federal Property and Administrative Services Act of 1949 or an equivalent qualifications-based requirement **prescribed** for or by the sponsor of the airport.

33. **Foreign Market Restrictions.** It will not allow funds provided under this grant to be used to fund any project which uses any product or service of a foreign country during the period in which such foreign country is listed by the United States Trade Representative as denying fair and equitable market opportunities for products and suppliers of the United States in procurement and construction.

34. **Policies, Standards, and Specifications.** It will carry out the project in accordance with policies, standards, and specifications approved by the Secretary including but not limited to the advisory circulars listed in the Current FAA Advisory Circulars for AIP projects, dated 7/1/05 and included in this grant, and in accordance with applicable state policies, standards, and specifications approved by the Secretary.

35. **Relocation and Real Property Acquisition.** (1) It will be guided in acquiring real property, to the greatest extent practicable under State law, by the land acquisition policies in Subpart B of 49 CFR Part 24 and will pay or reimburse property owners for necessary expenses as specified in Subpart B. (2) It will provide a relocation assistance program offering the services described in Subpart C and fair and reasonable relocation payments and assistance to displaced persons as required in Subpart D and E of 49 CFR Part 24. (3) It will make available within a reasonable period of time prior to displacement, comparable replacement dwellings to displaced persons in accordance with Subpart E of 49 CFR Part 24.

36. **Access By Intercity Buses.** The airport owner or operator will permit, to the maximum extent practicable, intercity buses or other modes of transportation to have access to the airport, however, it has no obligation to fund special facilities for intercity buses or for other modes of transportation.

37. **Disadvantaged Business Enterprises.** The recipient shall not discriminate on the basis of race, color, national origin or sex in the award and performance of any DOT-assisted contract or in the administration of its DBE program or the requirements of 49 CFR Part 26. The Recipient shall take all necessary and reasonable steps under 49 CFR Part 26 to ensure non discrimination in the award and administration of DOT-assisted contracts. The recipient's DBE program, as required by 49 CFR Part 26, and as approved by DOT, is incorporated by reference in this agreement. Implementation of this program is a legal obligation and failure to carry out its terms shall be treated as a violation of this agreement. Upon notification to the recipient of its failure to carry out its approved program, the Department may impose sanctions as provided for under Part 26 and may, in appropriate cases, refer the matter for enforcement under 18 U.S.C. 1001 and/or the Program Fraud Civil Remedies Act of 1986 (31 U.S.C. 3801).

38. **Hangar Construction.** If the airport owner or operator and a person who owns an aircraft agree that a hangar is to be constructed at the airport for the aircraft at the aircraft owner's expense, the airport owner or operator will grant to the aircraft owner for the hangar a long term lease that is subject to such terms and conditions on the hangar as the airport owner or operator may impose.

39. **Competitive Access.**

a. If the airport owner or operator of a medium or large hub airport (as defined in section 47102 of title 49, U.S.C.) has been unable to accommodate one or more requests by an air carrier for access to gates or other facilities at that airport in order to allow the air carrier to provide service to the airport or to expand service at the airport, the airport owner or operator shall transmit a report to the Secretary that-

1. Describes the requests;
2. Provides an explanation as to why the requests could not be accommodated; and
3. Provides a time frame within which, if any, the airport will be able to accommodate the requests.

b. Such report shall be due on either February 1 or August 1 of each year if the airport has been unable to accommodate the request(s) in the six month period prior to the applicable due date

CURRENT FAA ADVISORY CIRCULARS FOR BOTH AIP and PFC PROJECTS
Dated: 7/1/05

NUMBER	TITLE
70/7460-1and Change 1	Obstruction Marking and Lighting
150/5000-13	Announcement of Availability--RTCA Inc., Document RTCA-221, Guidance and Recommended Requirements for Airport Surface Movement Sensors
150/5100-15A	Civil Rights Requirements For The Airport Improvement Program
150/5070-6A	Airport Master Plans
150/5190-5 and Change 1	Exclusive Rights and Minimum Standards for Commercial Aeronautical Activities
150/5200-28B	Notices to Airmen (NOTAMS) for Airport Operators
150/5210-5B	Painting, Marking and Lighting of Vehicles Used on an Airport
150/5210-7C	Aircraft Fire and Rescue Communications
150/5210-13B	Water Rescue Plans, Facilities, and Equipment
150/5210-14A	Airport Fire and Rescue Personnel Protective Clothing
150/5210-15	Airport Rescue & Firefighting Station Building Design
150/5210-18	Systems for Interactive Training of Airport Personnel
150/5210-19	Driver's Enhanced Vision System (DEVS)
150/5220-4B	Water Supply Systems for Aircraft Fire and Rescue Protection
150/5220-10C	Guide Specification for Water/Foam Type Aircraft Rescue and Firefighting Vehicles
150/5220-13B	Runway Surface Condition Sensor Specification Guide
150/5220-16C	Automated Weather Observing Systems for Nonfederal Applications
150/5220-17A and Change 1	Design Standards for Aircraft Rescue Firefighting Training Facilities
150/5220-18	Buildings for Storage and Maintenance of Airport Snow and Ice Control Equipment and Materials
150/5220-19	Guide Specification for Small, Dual-Agent Aircraft Rescue and Firefighting Vehicles
150/5220-20 and Change 1	Airport Snow and Ice Control Equipment
150/5220-21B	Guide Specification for Lifts Used to Board Airline Passengers With Mobility Impairments
150/5220-22 and Change 1	Engineered Materials Arresting Systems (EMAS) for Aircraft Overruns
150/5300-13 and Changes 1 through 8	Airport Design
150/5300-14 and Changes 1 and 2	Design of Aircraft Deicing Facilities
150/5320-5B	Airport Drainage
150/5320-6D and Changes 1 through 3	Airport Pavement Design and Evaluation
150/5320-12C and Changes 1 through 6	Measurement, Construction, and Maintenance of Skid Resistant Airport Pavement Surfaces

NUMBER	TITLE
150/5320-14	Airport Landscaping for Noise Control Purposes
150/5320-15 and Change 1	Management of Airport Industrial Waste
150/5320-17	Airfield Pavement Surface Evaluation and Rating (PASER) Manuals
150/5325-4A and Change 1	Runway Length Requirements for Airport Design
150/5335-5 and Change 1	Standardized Method of Reporting Pavement Strength PCN
150/5340-1J	Standards for Airport Markings
150/5340-5B and Change 1	Segmented Circle Airport Marker System
150/5340-18D	Standards for Airport Sign Systems
150/5340-19	Taxiway Centerline Lighting System
150/5345-3E	Specification for L821 Panels for Remote Control of Airport Lighting
150/5345-5A	Circuit Selector Switch
150/5345-7E	Specification for L824 Underground Electrical Cable for Airport Lighting Circuits
150/5345-10E	Specification for Constant Current Regulators Regulator Monitors
150/5345-12C	Specification for Airport and Heliport Beacon
150/5345-13A	Specification for L841 Auxiliary Relay Cabinet Assembly for Pilot Control of Airport Lighting Circuits
150/5345-26C	Specification for L823 Plug and Receptacle, Cable Connectors
150/5345-27D	Specification for Wind Cone Assemblies
150/5345-28F	Precision Approach Path Indicator (PAPI) Systems
150/5345-39B and Change 1	FAA Specification L853, Runway and Taxiway Centerline Retroreflective Markers
150/5345-42D	Specification for Airport Light Bases, Transformer Housings, Junction Boxes and Accessories
150/5345-43E	Specification for Obstruction Lighting Equipment
150/5345-44G	Specification for Taxiway and Runway Signs
150/5345-45A	Lightweight Approach Light Structure
150/5345-46B	Specification for Runway and Taxiway Light Fixtures
150/5345-47A	Isolation Transformers for Airport Lighting Systems
150/5345-49A	Specification L854, Radio Control Equipment
150/5345-50 and Change 1	Specification for Portable Runway Lights
150/5345-51 and Change 1	Specification for Discharge-Type Flasher Equipment
150/5345-52	Generic Visual Glideslope Indicators (GVGI)
150/5345-53B	Airport Lighting Equipment Certification Program
150/5345-54A and Change 1	Specification for L-1884 Power and Control Unit for Land and Hold Short
150/5345-55	Lighted Visual Aid to Indicate Temporary Runway Closure
150/5360-9	Planning and Design of Airport Terminal Facilities at NonHub Locations
150/5360-11	Energy Conservation for Airport Buildings

THE FOLLOWING ADDITIONAL APPLY to AIP PROJECTS ONLY
Dated: 7/1/05

2. NUMBER	TITLE
150/5100-14C	Architectural, Engineering, and Planning Consultant Services for Airport Grant Projects
150/5100-15A	Civil Rights Requirements For The Airport Improvement Program
150/5100-17 and Changes 1 through 4	Land Acquisition and Relocation Assistance for Airport Improvement Program Assisted Projects
150/5190-5 and Change 1	Exclusive Rights and Minimum Standards for Commercial Aeronautical Activities
150/5200-30A and Changes 1 through 8	Airport Winter Safety and Operations
150/5200-33A	Hazardous Wildlife Attractants on or Near Airports
150/5300-15	Use of Value Engineering for Engineering Design of Airports Grant Projects
150/5320-17	Airfield Pavement Surface Evaluation and Rating (PASER) Manuals
150/5360-11	Energy Conservation for Airport Buildings
150/5370-6B	Construction Progress and Inspection Report—Airport Grant Program
150/5370-11A	Use on Nondestructive Testing Devices in the Evaluation of Airport Pavements
150/5370-12	Quality Control of Construction for Airport Grant Projects
150/5370-13	Offpeak Construction of Airport Pavements Using Hot-Mix Asphalt
150/5380-7	Pavement Management System
150/5380-8	Handbook for Identification of Alkali-Silica Reactivity in Airfield Pavements

THE FOLLOWING ADDITIONAL APPLY to PFC PROJECTS ONLY
Dated: 7/1/05

3. NUMBER	TITLE
150/5000-12	Announcement of Availability—Passenger Facility Charge (PFC) Application (FAA Form 5500-1)

NUMBER	TITLE
150/5360-12D	Airport Signing & Graphics
150/5360-13 and Change 1	Planning and Design Guidance for Airport Terminal Facilities
150/5370-2E	Operational Safety on Airports During Construction
150/5370-10B	Standards for Specifying Construction of Airports
150/5370-13	Offpeak Construction of Airport Pavements Using Hot-Mix Asphalt
150/5380-6A	Guidelines and Procedures for Maintenance of Airport Pavements
150/5380-7	Pavement Management System
150/5380-8	Handbook for Identification of Alkali-Silica Reactivity in Airfield Pavements
150/5390-2B	Heliport Design
150/5390-3	Vertiport Design
150/5395-1	Seaplane Bases
150/5200-30	Airport Winter Safety and Operations
150/5200-33	Hazardous Wildlife Attractants On or Near Airports
150/5300-15	Use of Value Engineering for Engineering Design of Airport Grant Projects
150/5370-11	Use of Nondestructive Testing Devices in the Evaluation of Airport Pavements
150/5370-12	Quality Control of Construction for Airport Grant Projects
150/5370-6	Construction Progress and Inspection Report-Airport Grant Program

EXHIBIT 13

DEVELOPMENT PLAN

DILLINGHAM AIRFIELD, OAHU, HAWAII

By

Oahu Airports District
Airports Division
Hawaii Department of Transportation

October, 2007

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Background:

Dillingham Airfield is located on the western portion of the north shore of Oahu, some 27 road miles northwest of Honolulu International Airport. It is a general aviation airport operated by the Hawaii Department of Transportation under a 25 year lease from the U.S. Army. The State leases 272 acres of the 650 acre Dillingham Military Reservation and operates the single 5,000 foot runway primarily for commercial glider and skydiving operations. HDH is a joint-use airfield with the Army having first priority for air-land operations and helicopter night-vision training. The airfield is not lighted for night operations by general aviation. The State Department of Transportation operates and maintains the airfield and utilities systems. The original military runway was 9,000' x 75' and all of the pavement is still useable.

Army use of this area of Mokuleia began with establishment of Camp Kawaihapai in 1922 as a communications station. Sixty-seven acres of land just south of the OR&L railway was acquired and in the twenties and thirties was also a deployment site for mobile coast artillery which was transported by railroad.

By December 7, 1941, a fighter airstrip had been established on additional leased land and Mokuleia Airstrip had been established. P-40 aircraft were deployed at North Shore airstrips at Kahuku, Haleiwa and Mokuleia when the Pearl Harbor attack took place. U.S. Army Air Corps' aircraft taking off from Haleiwa destroyed several attacking aircraft. Mokuleia Airfield was improved to a 9,000' x 75' paved runway, a cross wind runway and many aircraft revetments from 1942-45. By the end of WW II, Mokuleia Airfield could handle B-29 bombers.

In 1946, the U.S. Army acquired the additional 583 acres of leased land by condemnation with compensation. In late 1946, the U.S. Army Air Force became the U.S. Air Force by order of President Truman so Mokuleia Airfield became an Air Force Installation. In 1948, the airfield was inactivated and renamed Dillingham Air Force Base in memory of Captain Henry Gaylord Dillingham, a B-29 pilot who was killed in action over Kawasaki, Japan on July 25, 1945. Captain Dillingham was the son of Walter H. Dillingham who was a noted pilot on Oahu in the 1930s and Henry was also the grandson of Benjamin F. Dillingham who founded the Oahu Railway and Land Co. (OR&L) which evolved into Hawaiian Dredging Company and the Dillingham Corporation.

In the 1950s, a Nike Air Defense site was added near Mokuleia Beach Park but was obsolete by 1970.

In 1962, the State leased HDH from the Air Force for general aviation use on a short-term basis. In about 1974, the Air Force transferred the base to the Army. By 1974, the State had acquired a longer term lease from the Army and in 1983 signed a 25 year lease. Hangars for fixed wind aircraft and gliders, bathrooms and a Unicom Tower/fire station were added in 1985-86. Master Plans for HDH were accomplished in 1980 and 1993 along with an environmental assessment in 2000. In 1990, the Defense

Authorization Act provided that the 67 acres of ceded land of old Camp Kawaihapai be transferred to the State after an agreement on future joint-use of the airfield was reached. These documents have been prepared and are pending approval in Washington, D.C.

In 2004, there were 68,503 air operations at HDH and the airfield was not available for general aviation use for only 4 hours because of priority military need. When all Army and Marine units are present on Oahu, HDH is used nightly for night vision goggle training for helicopter pilots.

Future improvements and initiatives include a new 35 year lease from the Army and Joint-Use Agreement (MOA), taxiway extension, water system upgrade and additional hangars for gliders and powered aircraft. Sites for private hangar construction will be made available after the new long-term lease is received. We expect that HDH will serve general aviation for decades into the future. The glider port and hangar areas will be named Kawaihapai, which means lifted water because of a past artesian spring, the original Hawaiian name of the immediate vicinity. Kawaihapai Glider port and skydiving facilities at HDH are a part of the Hawaii Tourism Industry.

Situation:

The State of Hawaii has operated a general aviation airport on land leased from the Army and Air Force for 45 years. The airfield has been utilized primarily by glider and parachutist enthusiasts.

In return for the lease of 272 acres of the airfield and supporting areas HDOTA operates and maintains the airfield and particularly the water system.

In 1985 HDOTA invested significantly in hangars, a tower building and maintenance facilities. Over the years the runway was repaved and more than $20M has been spent on capital improvements and major repairs.

There are six major State buildings at the airfield and other facilities which were built by tenants. There are 15 glider spaces in the hangar at 1,890 square feet per space. There are 10 fixed wing hangar spaces in two buildings at 1,100 square feet each and 30 aircraft tie-downs at 1,890 square feet each. There are 15 people on the T-Hangar waiting list and 6 persons on the glider hangar waiting list.

In 2003 electrical repairs were made including replacing transformers. In 2002, all cesspools were converted to septic tanks. The water system of wells to elevated storage tank to a small diameter distribution system has had lots of maintenance but is in need of complete replacement and eventually connection to the County water system. DOTA owns one 10,000 gallon underground fuel storage tank which is operated by Honolulu Soaring Club, Inc. to provide AvGas 100 to tenants. The fueler also has two 3,000 gallon above-ground tanks for providing Jet-A to aircraft. The Oahu Airports District maintains a Maintenance Baseyard with diesel and gasoline storage.

The major maintenance endeavor is vegetation control with more than 100 acres of grass to cut. Much of DMR is covered with Koa Haole brush and fire potential is considerable in dry conditions. There is only one small fire truck at HDH and use of it is voluntary.

Air Operations at HDH are uncontrolled but under the guidance of a Unicom operator during daylight hours who provides weather data and information on airspace activity.

The runway is 9,000 feet long by 75 feet wide of asphaltic concrete on a magnetic azimuth of 80° – 260° (8-26) and slopes from 15' elevation on the west end to 8' elevation on the east end. A 2,000 foot displaced threshold on each end allows room for parachuting and glider operations. The Trade Winds dominate so that 90% of the time takeoffs are at 80° with an 800' altitude counterclockwise traffic pattern and 10% of the time the 260° takeoff with a clockwise 800' air traffic pattern.

The operational data from the Hawaii Airports Guide and Flying Safety Guide for HDH is shown in Appendix A.

One contract security person is present at HDH on a 24/7 basis.

Master Plan of 1993:

This planning effort estimated that by 2010 air operations at HDH would have risen to 129,000, that additional land could be acquired and that the airport might be the only reliever airport for Honolulu, thus it recommended investment of $32M. A special study on connection of the water supply estimated $4.6M required to extend a 12 inch waterline 7,000 feet west on Farrington Highway and 9,000 feet of 12" line within HDH. The recommended plan is shown in Appendix B.

Environmental Assessment of 2000:

This document concluded no significant environmental impact from minor land acquisition, a few more hangars and a Taxiway extension. The Mokuleia Community Association was briefed and had no objections. The proposed improvements are shown in Appendix C.

Aviation Demand for 2032:

Based Aircraft	-	60
Glider Air Operations	-	33,813
Powered Aircraft Operations	-	67,756
Military	-	1,260
Total Air Ops 2032	-	102,829

Peak Hour Activity

Air Taxi, Powered	-	24
Glider	-	15
General Aviation Fixed Wing, Helicopter, Ultra Light	-	15
Military	-	2
		57

Development on State Ceded Land:
(West end, 67 ac & beach)

1. Realigned two-lane access road (800')
2. Glider Hangar Extension (5 bays)
3. Glider Administrative Facilities Extension (40')
4. Three Fixed Base Operator Hangars (150' x 80')
5. Civil Air Patrol Shelter (50' x 40')
6. Utilities Improvements, Electrical, Water, Drainage
7. Access Taxiway to FBO Hangars (150')

Development on Army Leased Land:

1. 4 Hangar sites (75' x 75') and 4 Bay T-Hangars (30' x 150')
2. Additional Maintenance Building (25' x 40')
3. Taxiway Extension (2,000'). Already approved and under construction.
4. Utilities Improvement, particularly water line replacement
5. Preservation of old fire station site near mid-field as reburial area.
6. Parachutist Tenant lots (7 maximum)
7. Maintain and cultivate 3,000' x 75' parallel sod runway.
8. Remove revetment and brush

9. Realign Access Road (250')

10. Future connection to BWS water line

Building Codes and Permits:

All proposed structures will be designed to comply with the International Building Code of 2003 as adopted by the City and County of Honolulu with supplement.

While the county Special Management Area (SMA) line which is related to the Coastal Zone Management Act of 1977 was placed around nearly the entire leased airfield but was intended to apply inland 300' or to the first major road and thus should end at Farrington Highway.

There is a County Tax Map for Dillingham Airfield which is shown in Appendix F.

Conclusion:

Aviation activity at HDH in 2006 was less than half what it was in 1989 but the parachuting and glider experiences continue to be popular with tourists and these specialty aviation activities are expected to grow at least 2% per year. Kalaeloa Airport is well established as Honolulu's reliever airport. Thus major expansion at HDH will not be needed. The new lease of the airfield from the Army will continue the requirement that the field must be unlighted to facilitate Army training which will be light in intensity. Upgrade of utilities and addition of a few more aircraft hangars will satisfy most tenant needs. The State Department of Transportation, Airports Division intends to continue a healthy operations and maintenance budget and expenditure plan with added capital improvements at perhaps 5 year intervals.

References:

1. Dillingham Airfield Master Plan and Part 150 Noise Compatibility Program, 2 Volumes, August 1993, E.K. Noda & Associates.

2. Final Environmental Assessment, Dillingham Airfield Improvements, July 2000, E.K. Noda & Associates.

3. Airport Layout Plan, Dillingham Airfield, July 1998, HDOTA.

4. Pacific Chart Supplement, FAA, 30 August 2007, page 81.

DILLINGHAM AIRFIELD, PHDH (HDH), Mokuleia, Oahu

Attendant ..... Telephone Honolulu 637-4188 (0700-1530L)
Latitude/Longitude ..... 21 34.8 N / 158 11.8 W
From City..... 5.25 miles W of Haleiwa
Airport Area..... 134 Acres

Airfield:
Elevation..... 15' MSL
Runways ..... 8-26 (9,007' x 75', asphalt)
Rwy 8 displaced threshold 1,993'
Rwy 26 displaced threshold 1,995'
Lights..... None

Communications and Navigational Aids:
Control Tower ..... State operated Unicom
0900-1700L daily
Frequency ..... Unicom 123.0
RCO (HNL FSS) 122.6

Airspace: Class G

Traffic Pattern Altitude:
800' MSL

Remarks:
Services — Toilet facilities, public telephone, picnic table, fuel 100LL, Jet-A

Fuel:
Honolulu Soaring (808) 677-3404 (Jet-A, 100LL)

Meals & Transportation..... None

Crash/Fire ..... One vehicle 100 gal light water and dcp hand extinguishers – manning variable

Maximum Authorized Landing Weight: S-40, D-152, DT-180.

Extensive glider operations. Give gliders right of way.

Extensive parachute operations. Give parachutists right of way.

Limitations:
- Open to civil aircraft for DAY VFR ONLY.
- Walking on or across the runway is prohibited.

(continued on next page)

Procedures:

All aircraft must contact Dillingham Unicom prior to entering the traffic pattern and maintain contact when operating in the Dillingham area. All traffic north of runway. No landing without unicom contact during hours of unicom operation. It is common practice to call unicom on base leg in addition to the call when entering the pattern. A 5,000' by 75' runway for powered aircraft is identified by standard airport pavement markings. The powered aircraft thresholds have been displaced 2,000' to provide runway for sailplane operations. Powered aircraft shall keep base leg in close, and cross the airport boundary fence on final approach at or above 600' MSL in order to assure safe separation from sailplanes using the first 2,000' (short of the displaced threshold). Standard pattern entry is illustrated.

CAUTION: Extensive glider operations and parachute jumping off Rwy 8 and Rwy 26. Aerobatic training area off-shore above the downwind leg 1,500' MSL and above. When transiting the area, cross the field above 2,000' MSL.

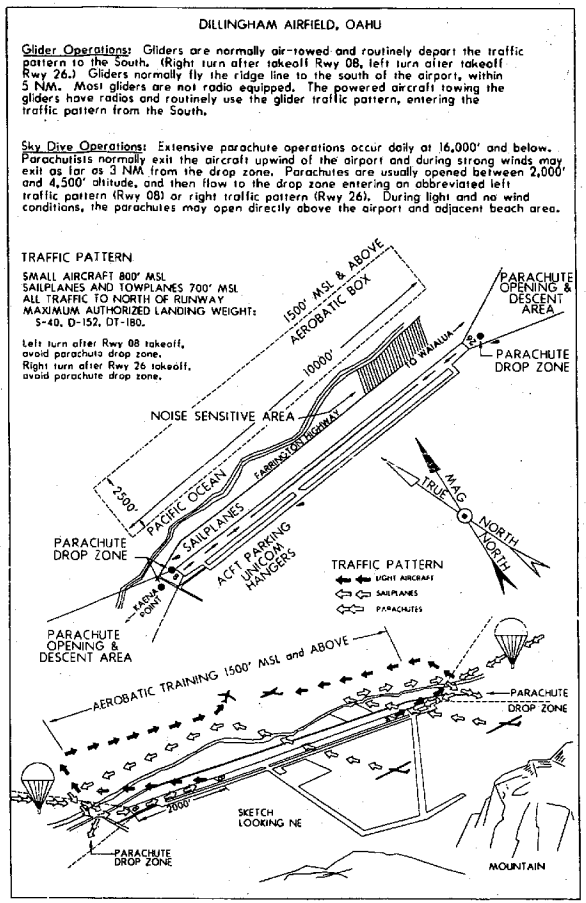
No civil operations between sunset and sunrise. Extensive night operations by military helicopters.

Glider Operations:

Gliders are normally air-towed and routinely depart the traffic pattern to the South. (Right turn after takeoff Rwy 8; Left turn after takeoff Rwy 26). Gliders normally fly the ridge line to the South or the airport, within 5nm. Most gliders are not radio equipped. The powered aircraft towing the gliders have radios and routinely use the glider traffic pattern, entering the traffic pattern from the South.

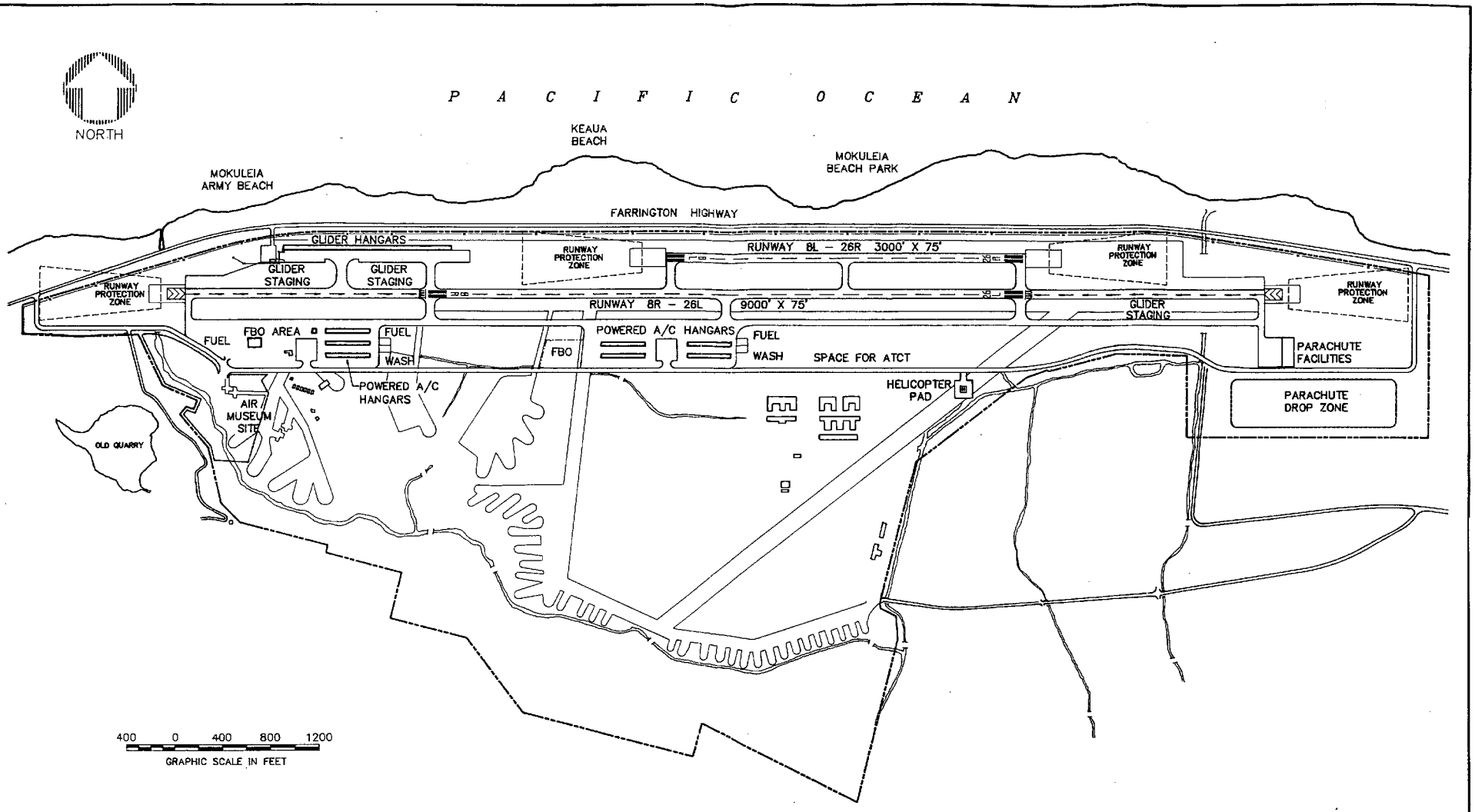
Sky Dive Operations:

Extensive parachute operations occur daily at 16,000' and below. Parachutists normally exit the aircraft upwind of the airport and during strong winds may exit as far as 2 nautical miles from the drop zone. Parachutes are usually opened between 2,000' and 4,500' altitude, and then flow to the drop zone entering an abbreviated left traffic pattern (Rwy 8) or right traffic pattern (Rwy 26). During light and no wind conditions, the parachutes may open directly above the airport



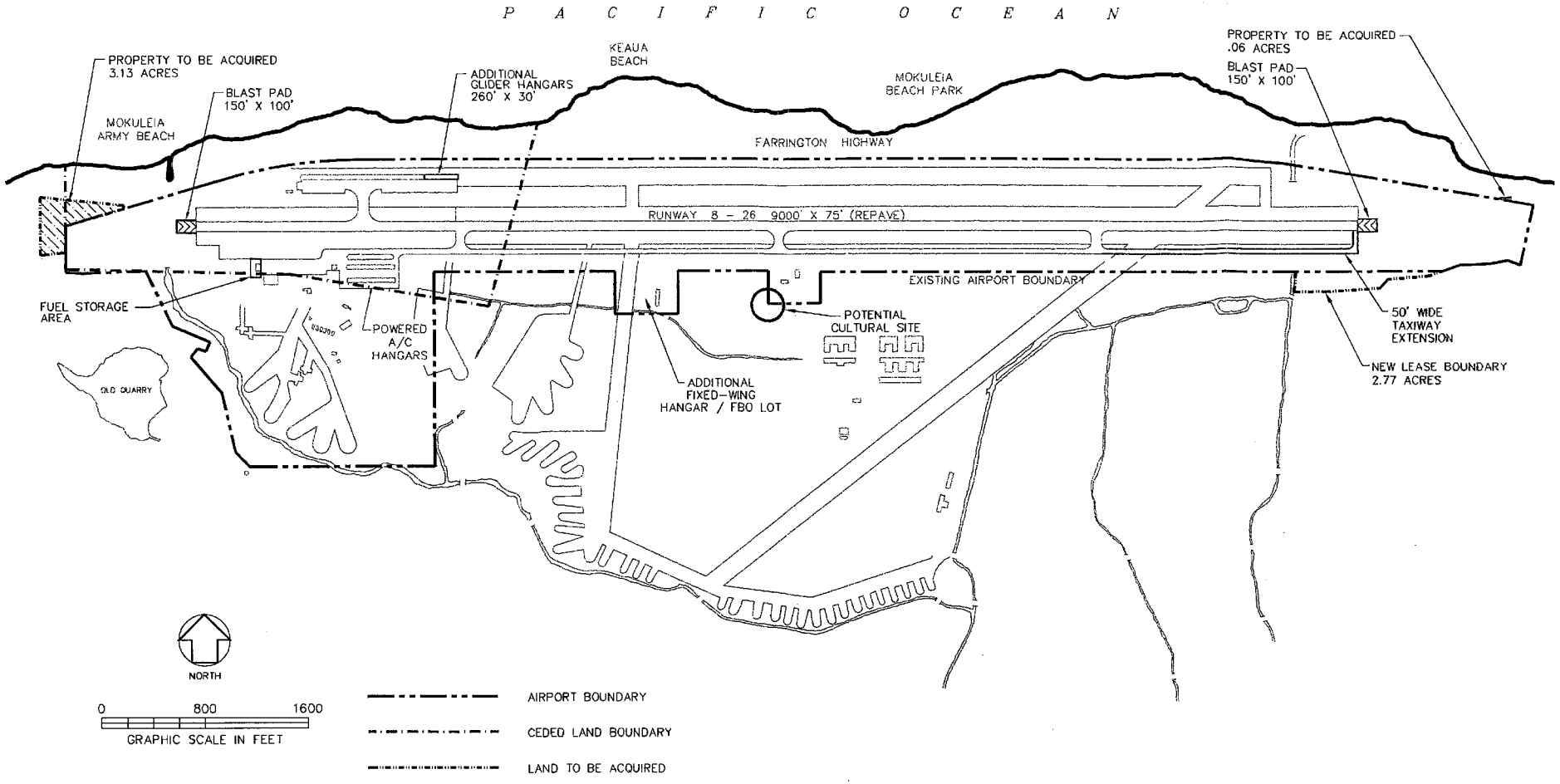
DILLINGHAM AIRFIELD
OAHU

APPENDIX A



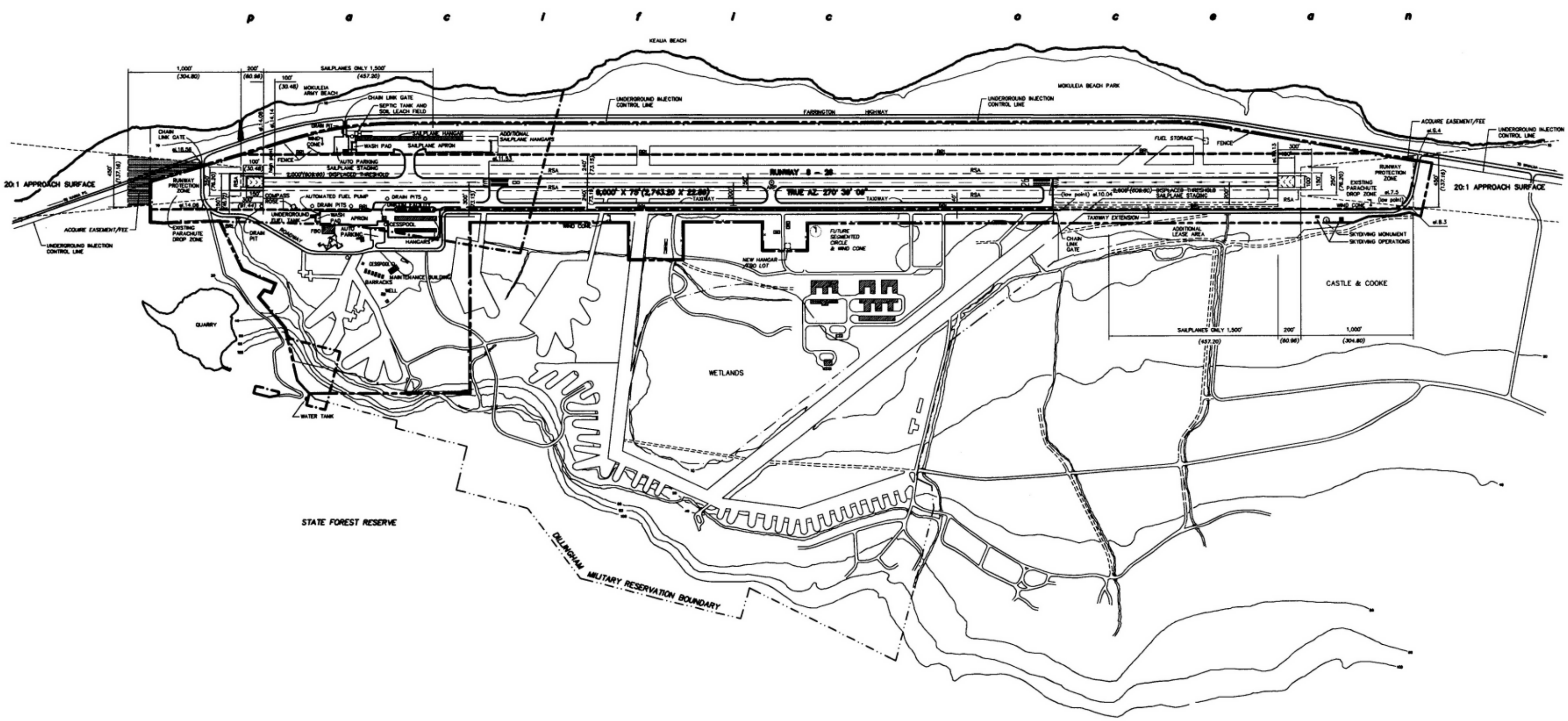
AIRPORTS DIVISION DEPARTMENT OF TRANSPORTATION STATE OF HAWAII	DILLINGHAM AIRFIELD MASTER PLAN AND NOISE COMPATIBILITY PROGRAM	Edward K. Noda and Associates, Inc.	RECOMMENDED MASTER PLAN August, 1993	FIGURE 6-1

APPENDIX B



AIRPORTS DIVISION DEPARTMENT OF TRANSPORTATION STATE OF HAWAII	DILLINGHAM AIRFIELD MASTER PLAN AND NOISE COMPATIBILITY PROGRAM	Edward K. Noda and Associates, Inc.	PROPOSED IMPROVEMENTS	FIGURE 4 JULY, 2000

APPENDIX C



TRUE NORTH
MAGNETIC NORTH 10° 32' E
1990
ANNUAL CHANGE 5' DECREASE

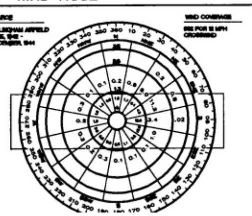
GRAPHIC SCALE IN FEET

GRAPHIC SCALE IN METERS

WIND ROSE

SOURCE
DILLINGHAM AIRFIELD
JUNE, 1942 -
DECEMBER, 1944

WIND COVERAGE
93% FOR 12 MPH CROSSWIND



LEGEND

	EXISTING	ULTIMATE
AIRPORT BOUNDARY		
BUILDING RESTRICTION LINE (BRL)	BRL	BRL
BUILDINGS		
BUILDINGS TO BE REMOVED		
APPROACH SURFACE		
FENCE LINE		
GROUND CONTOURS		
RUNWAY, TAXIWAY, APRON		
PAVED ROADWAYS		
UNPAVED ROADWAYS		
RUNWAY SAFETY AREA		
BLAST PAD		
STATE OF HAWAII PROPERTY BOUNDARY		
ACREAGE	272	285.1

AIRPORT DATA

	EXISTING	ULTIMATE
AIRPORT REFERENCE POINT (ARP) COORDINATES	21°34'46.1" N 158°11'30.2" W	SAME
NORMAL MAX. TEMPERATURE (HOTTEST MONTH)	90° F	SAME
AIRPORT ELEVATION (MSL)	15'	SAME
AIRPORT & TERMINAL NAVIGATIONAL AIDS	NONE	NONE
AIRPORT TYPE	GA/GU	SAME
% WIND COVERAGE	93	SAME
AIRPORT REFERENCE CODE	——	B - II

RUNWAY DATA

	RUNWAY 8 - 26			
	EXISTING		ULTIMATE	
RUNWAY IDENTIFICATION	8	26	8	26
RUNWAY ENDPOINTS LATITUDE (NAD 83)	21°34'46.5"	21°34'45.8"	SAME	SAME
LONGITUDE (NAD 83)	158°12'37.9"	158°11'02.5"	SAME	SAME
DISPLACED THREHOLD LATITUDE (NAD 83)	21°34'46.3"	21°34'45.8"	SAME	SAME
LONGITUDE (NAD 83)	158°12'16.7"	158°11'23.7"	SAME	SAME
APPROACH SURFACE	20 : 1	20 : 1	SAME	SAME
APPROACH LIGHTING AIDS	NONE	NONE	NONE	NONE
RUNWAY SAFETY AREA (WIDTH X LENGTH BEYOND RUNWAY END)	150' X 300'	150' X 300'	SAME	SAME
NAVIGATIONAL AND VISUAL AIDS	NONE	NONE	NONE	NONE
RUNWAY LENGTH AND WIDTH	9,000' X 75'		SAME	
EFFECTIVE GRADIENT (%)	.04		SAME	
% WIND COVERAGE (12MPH/10.5 KNOTS)	93		SAME	
INSTRUMENT RUNWAY	NONE		NONE	
RUNWAY LIGHTING	NONE		NONE	
RUNWAY MARKING	BASIC		BASIC	
[illegible]	40,000(S)		SAME	

THE PREPARATION OF THIS EXHIBIT WAS FINANCED IN PART THROUGH AN AIRPORT IMPROVEMENT PROGRAM GRANT FROM THE FEDERAL AVIATION ADMINISTRATION UNDER THE PROVISIONS OF SECTION 505 OF THE AIRPORT AND AIRWAY IMPROVEMENT ACT OF 1982.

NOTES

1. COORDINATES AND AZIMUTHS REFERENCED TO HAWAII STATE DATUM PLANE, ZONE 3.
2. AZIMUTHS TURNED CLOCKWISE FROM TRUE SOUTH.

Airports Division
DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII

DSGN.	DRWN.	CHKD.	APPD.

NO.	DATE	REVISIONS
1	JUNE 29, 98	EXTENDED TAXIWAY, CEDED LAND

FAA APPROVED:
REFER TO LETTER DATED

DIRECTOR, DEPARTMENT OF TRANSPORTATION, STATE OF HAWAII — DATE

PROJECT TITLE :

DILLINGHAM AIRFIELD

AIRPORT LAYOUT PLAN

PROJECT NO. :

SHEET TITLE :

AIRFIELD PLAN

DATE : [illegible]

SHEET

APPENDIX E

AIR OPERATIONS AT DILLINGHAM AIRFIELD (HDH)

	1989	2000	2001	2004	2006
Civil	111,286				
Military	5,850				
TOTAL:	117,136	84,791	81,023	68,553	51,104

Based Aircraft – 44

Peak Hour Activity in 1989

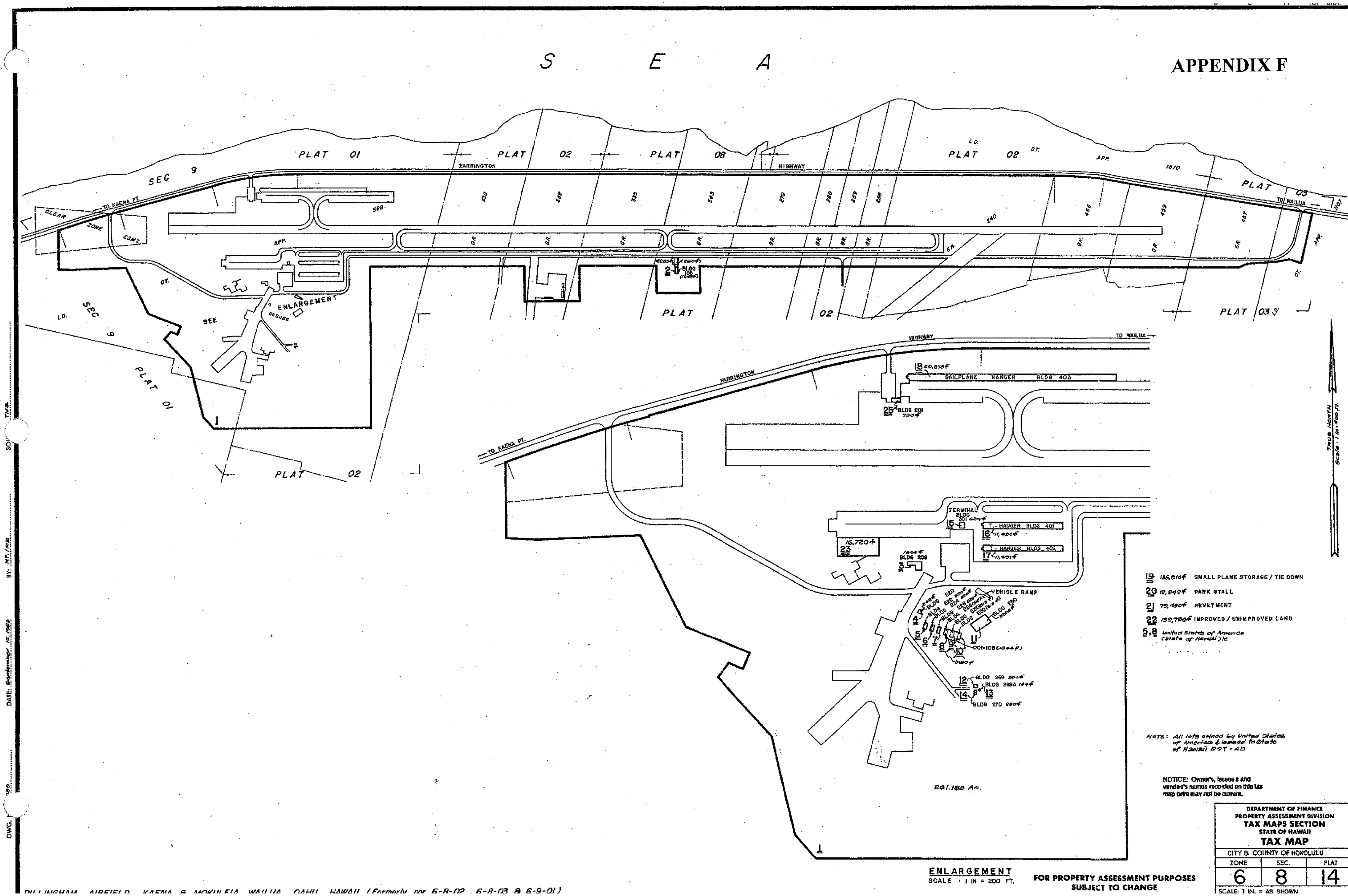
Air Taxi Powered	-	28
Glider	-	28
General Aviation	-	27
Military	-	5
		88

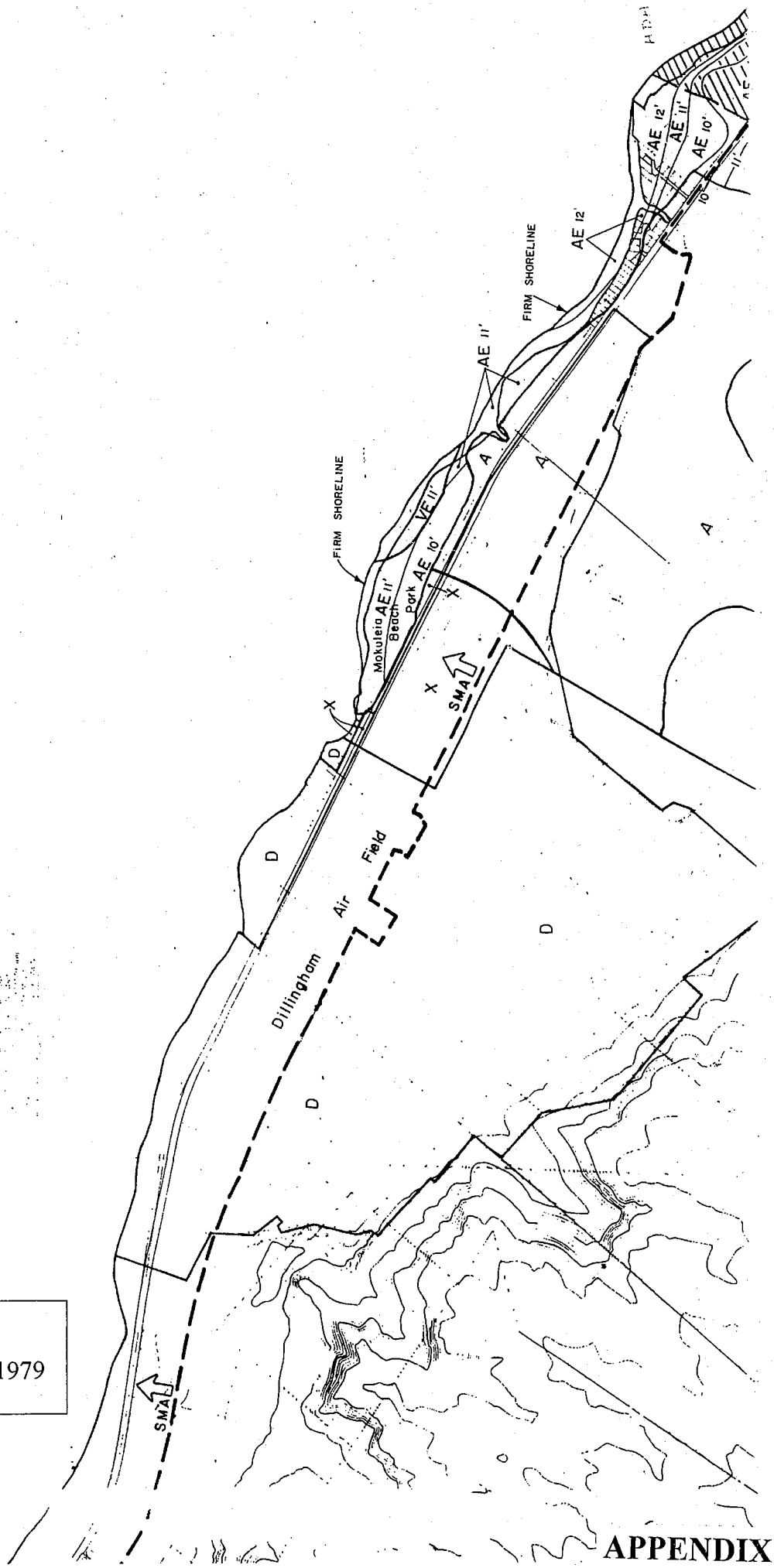
Runway 8	-	90%
Runway 26	-	10%
Below 1000' and or 3 mi	-	5%

2005

Civil Powered	-	45,171	- 66%
Glider	-	22,542	- 33%
Military	-	840	- 1%
		68,553	

APPENDIX F


S E A
PLAT 01
PLAT 02
PLAT 08
PLAT 03
SEC 9
FARRINGTON
HIGHWAY
TO KAENA PT.
TO WAIALUA
CLEAR ZONE
ENLARGEMENT
SEE
TERMINAL BLDG
SAILPLANE HANGER BLDG 403
T-HANGER BLDG 401
T-HANGER BLDG 402
VEHICLE RAMP
19 SMALL PLANE STORAGE / TIE DOWN
20 PARK STALL
21 REVETMENT
22 IMPROVED / UNIMPROVED LAND
NOTE: All lots owned by United States of America & leased to State of Hawaii DOT - AD
NOTICE: Owner's, lessees and vendee's names recorded on this tax map print may not be current.
DEPARTMENT OF FINANCE
PROPERTY ASSESSMENT DIVISION
TAX MAPS SECTION
STATE OF HAWAII
TAX MAP
CITY & COUNTY OF HONOLULU
ZONE 6
SEC. 8
PLAT 14
SCALE: 1 IN. = AS SHOWN
ENLARGEMENT
SCALE: 1 IN = 200 FT.
FOR PROPERTY ASSESSMENT PURPOSES
SUBJECT TO CHANGE
DILLINGHAM AIRFIELD, KAENA & MOKULEIA, WAIALUA, OAHU, HAWAII (Formerly por 6-8-02, 6-8-03 & 6-9-01)



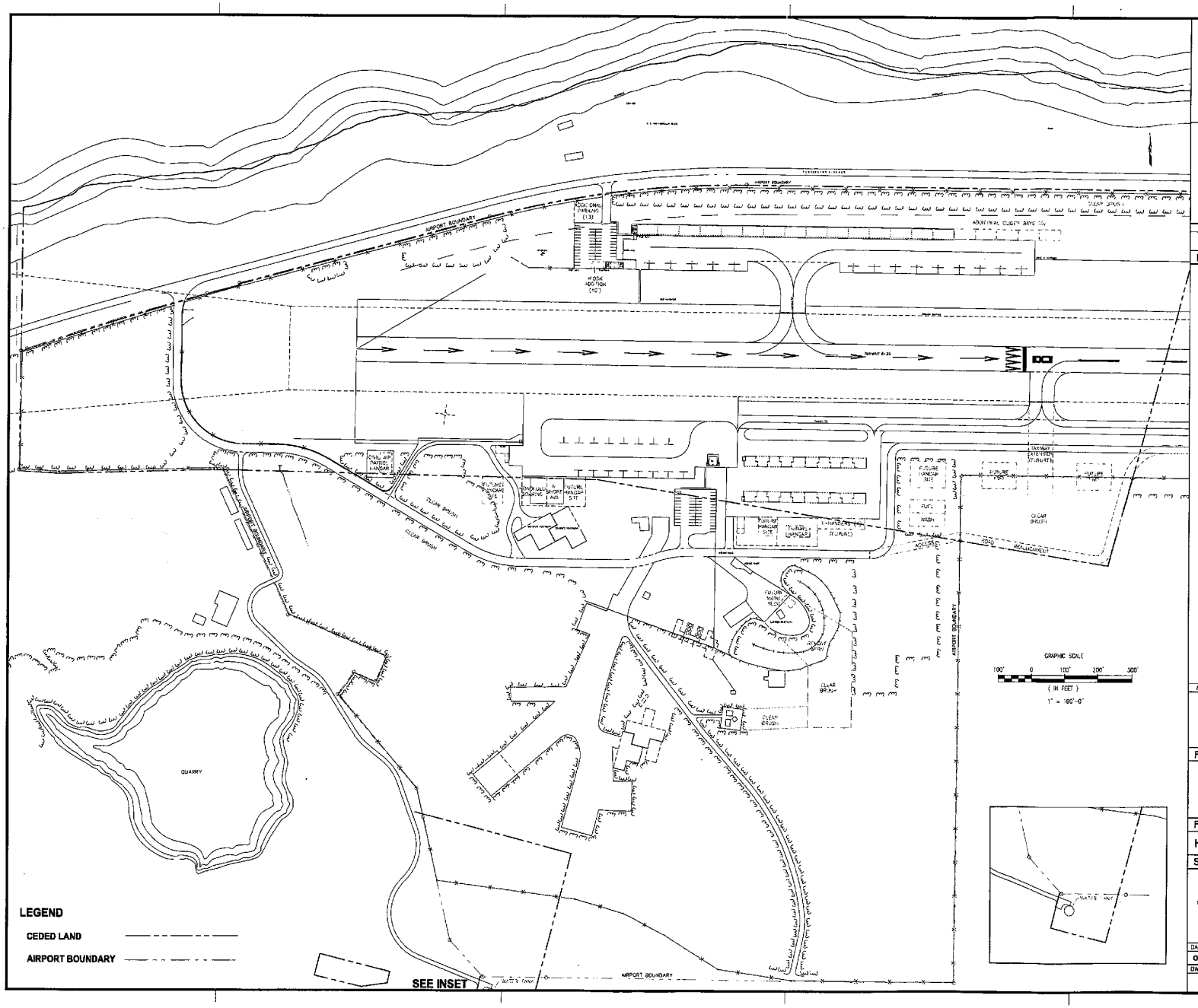
Special Management Area
City & County of Honolulu ~ 1979

APPENDIX G

APPENDIX H-1

APPENDIX H-2

HDH 3 JAN. 06



Airports Division

DSGN.	DRWN.	CHKD.	APPD.

KEY PLAN / NOTES :

NO.	DATE	REVISIONS

PROJECT TITLE :

DEVELOPMENT PLAN

AT
DILLINGHAM AIRFIELD
KAHUKU, OAHU, HAWAII

PROJECT NO. : HDH-01-07

HDOTA - OAHU DISTRICT

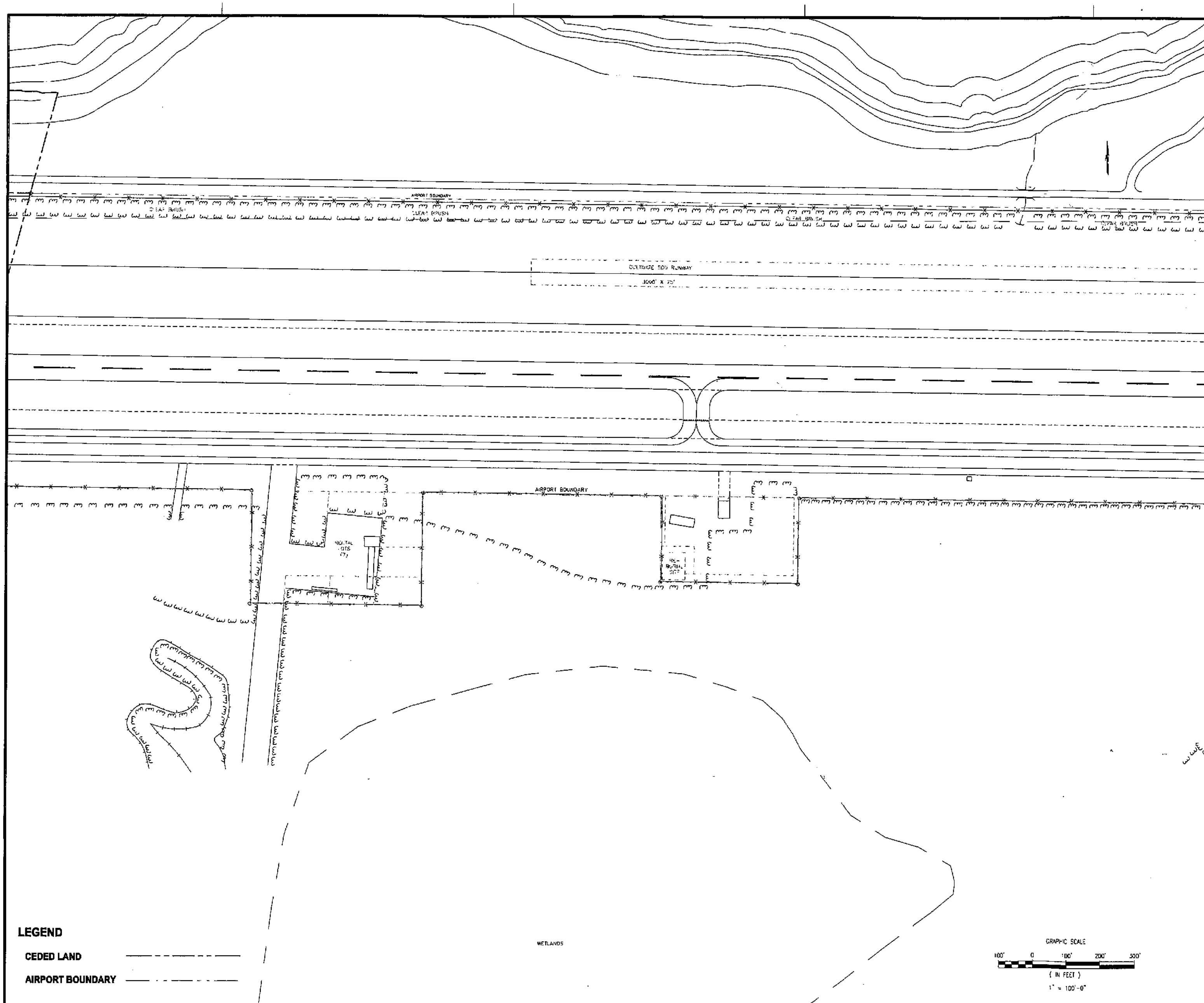
SHEET TITLE :

WESTERN (EWA) THIRD

DATE :
OCTOBER 2007

DWG. NO. :

SHEET 1 OF 3 SHEETS



LEGEND

CEDED LAND

AIRPORT BOUNDARY

Airports Division

DSGN.	DRWN.	CHKD.	APPD.

KEY PLAN / NOTES :

NO.	DATE	REVISIONS

PROJECT TITLE :

DEVELOPMENT PLAN

AT DILLINGHAM AIRFIELD KAWAIHAPAI, OAHU, HAWAII

PROJECT NO. : HDH-01-07

HDOTA - OAHU DISTRICT

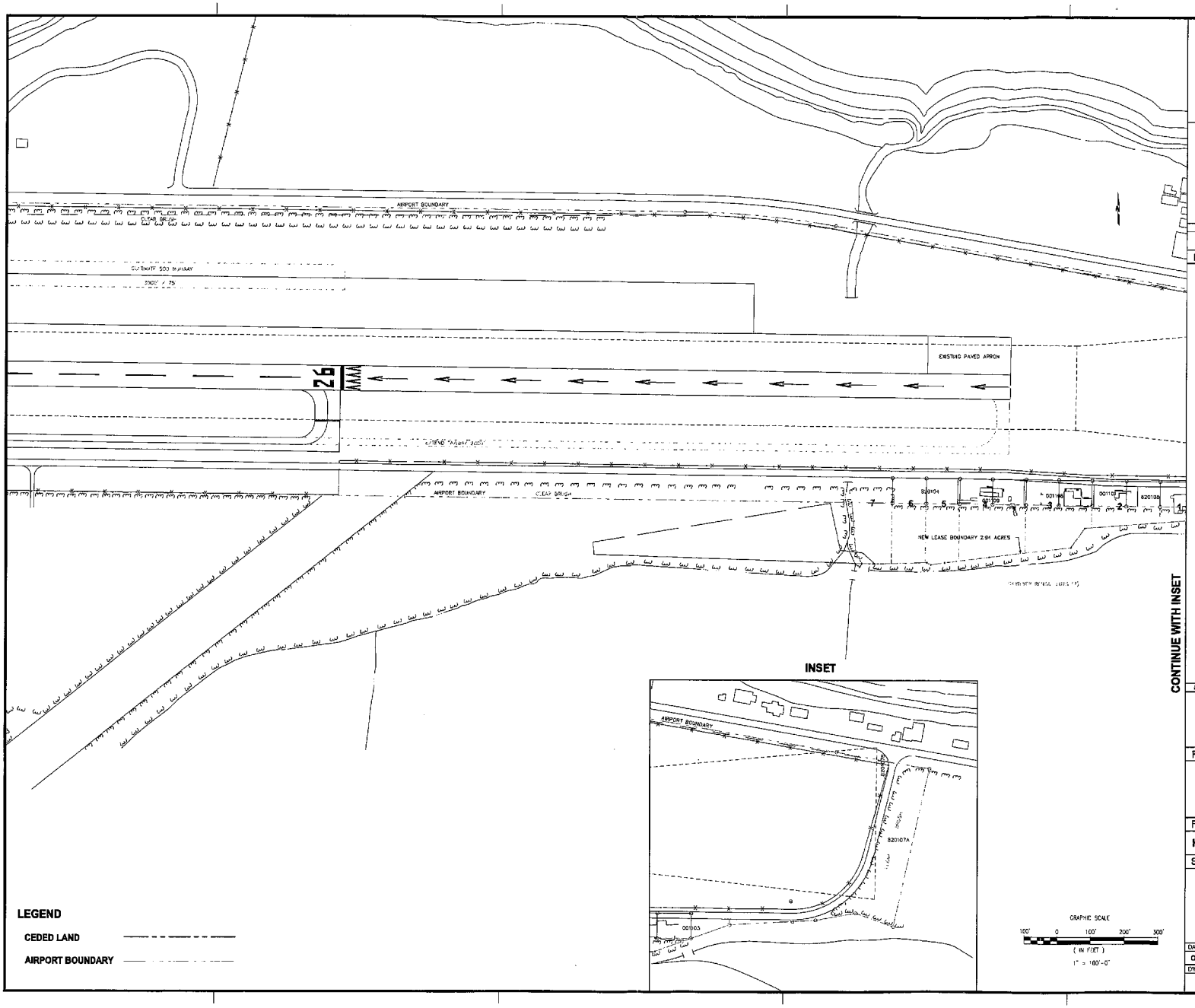
SHEET TITLE :

CENTRAL THIRD

DATE : OCTOBER 2007

DWG. NO. :

SHEET 2 OF 3 SHEETS



Airports Division

DSGN.	DRWN.	CHKD.	APPD.

KEY PLAN / NOTES :

NO.	DATE	REVISIONS

PROJECT TITLE :

DEVELOPMENT PLAN

AT
DILLINGHAM AIRFIELD
KAWAILOA-PUPUKEA, OAHU, HAWAII

PROJECT NO. : HDH-01-07

HDOTA - OAHU DISTRICT

SHEET TITLE :

EASTERN THIRD

DATE :
OCTOBER 2007

DWG. NO. :

SHEET 3 OF 3 SHEETS

EXHIBIT 14

DILLINGHAM AIRFIELD
CONDITION REPORT
July 3, 2002

Hutments :	**Condition:**
T 208 (Caretaker's cottage)	Fair to poor condition, with lead-based paint and asbestos possibly located in and around the residence. Additions to the cottage occurred five-to-six years ago and were: Back porch enclosure (15 X 15 ft.) at an approximate cost of $500.00; back stairs rebuilt at an approximate cost of $100.00; and eight window frames and glass slats reinstalled at an approximate cost $300.00. The State can retain or demolish the structure, as it deems fit and proper, and at its own expense. The State is accepting the property "as is".
T 220 (Toilet/shower)	Old. The building is to be demolished.
T 222	Old. The building is to be demolished.
T 224	Old. The building is to be demolished.
T 226	Old. The building is to be demolished.
T 228	Old. The building is to be demolished.
T 230	Old. The building is to be demolished.
T 232	Old. The building is to be demolished.

Buildings 220, 222, 224, 226, 228, 230 and 232 are to be demolished by the Army (possibly in FY03) at no cost to the State of Hawaii. The State of Hawaii is not required to repair any of the seven buildings.

Buildings:	**Condition:**
P 250 (Metal maintenance and storage building)	Excellent. The State will maintain.
P 265 (Water pump)	Good. The State will maintain.
P 269-A / T 270 (Water supply treatment / Chlorinator facility)	Good. The State will maintain.

EXHIBIT D

EXHIBIT 15

PWS 338 DILLINGHAM AIRFIELD
History and Background

Prepared for:
State of Hawaii
Department of Transportation
Airports Deputy Director
Ford Fuchigami

Prepared by:
State of Hawaii
Department of Transportation
Airport Division, Oahu District
Oahu District Engineer
Gaudencio Lopez, P.E.

Executive Summary

This report was assigned to Contract Maintenance AIR-OME, by Interim Oahu District Airport Manager Roy Sakata and through Oahu District Maintenance Superintendent Alex Tamoria for the purpose of compiling a background of the Dillingham Airfield Water System to be used in future negotiations with the Army and FAA regarding DOTA's lease of Dillingham Airfield (HDH).

The DOTA operates the Dillingham water system for the US Army under the provisions of their lease agreement for Dillingham Airfield. Dillingham Water System is a public water system identified as PWS No. 338 Dillingham Airfield by the Safe Drinking Water Branch, Dept. of Health. As a result the DOTA is a water purveyor as the agency pumps, treats and distributes potable water between Mokulaiea Beach Park to Kaena Point Tracking Station. The DOTA is subject to monthly, annual, biannual and triennial testing as required by the EPA, and must report violations and an annual consumer confidence report in accordance with EPA and State environmental statutes. Potentially thousands of people come in contact or consume the Dillingham Airfield water from commercial facilities at Kaena Point Tracking Station, Dillingham Airfield businesses, Camp Erdman, Mokuleia Beach Park and Owens Retreat (a bed and breakfast). The liability of the DOTA is high and as of 2005, the DOTA has been operating at an operational loss and in violation of the DLNR water use permit with the cessation of water billing. The current operational contract for the Dillingham water system is $150,000 per year. This does not include electrical cost for the pumphouse.

The following narrative discusses the primary concerns with the Dillingham Airfield water system mainly:

- Who granted access to water off military property
- How did the residents across Farrington Hwy obtain water
- Excessive water use and over pumping

This report does not address the operation of Ron Weidenbach and his fish hatchery on DOTA leased property and their use of a well adjacent to the active DOTA well. The narrative is written based on the author's experience operating the system between 2005 and 2012, written notes, e-mail correspondence and reports from former Airport Manager Ben Schlapak, P.E., information from Airport Assistant Bobby Ramos, and meter information compiled by Doonwood Engineering and Keith Ishinaga, P.E. Due to time constraints a more indebt analysis was deferred in favor of highlighting major issues with the system. It is the intent that one concludes after reading this narrative that:

- The access of water to off-property customers was initiated by the military
- The military has passed that burden to the DOTA
- The DOTA in has allowed additional off property customers to the system
- The system is dilapidated and water use is out of control

History of the Dillingham Airfield Water System

Mokuleia Army Airfield and Military Reservation was established in 1925 from a portion of the Kawaihapai Ahupuaa Hawaiian land division just south of the former Oahu Railway and Land Company main line in Mokuleia. In 1947 the installation became a United States Air Force Base and in 1948 the airfield was redesignated as Dillingham Air Force Base. After WWII the Hawaii Air National Guard utilized the airfield and subsequently the facility included a Nike-Hercules Missile Launching site in the 1960's. In 1971, the Air Force proceeded to transfer Dillingham Air Force Base which includes Dillingham Military Reservation, Dillingham Airfield and Camp Kawaihapai to the Army. This transaction was completed in 1975 had has been Army owned since that time.

History of Water Agreements for Water Outside Dillingham Air Force Base

It is not known when off-base water arrangements were first made, who authorized water use outside military property and if there was any legal instrument associated with the agreement. **However, what is clear is that evidence through various water consumption and system reports indicates customer usage from private and county arrangements tracing back to the Air Force's ownership of Dillingham**. It appears that some arrangement was made between these parties and the Air Force which was later assumed by the Army and subsequently transferred to the DOTA through lease of the airfield although no mention of outside customers were mentioned in the lease. What once was a simple issue of granting water access to the surrounding community by the Air Force has now become a tremendous legal and financial liability for the DOTA as evolving environmental regulations has required the DOTA to be a water purveyor (pump, treat and distribute potable water) in operation of public water system no. 338 Dillingham Airfield. The following narrative provides a description of how the access has grown over the years.

An engineering report titled "Evaluation of the Air Force Water System, Dillingham AFB, Mokuleia, Oahu" was prepared in November of 1969. This report was prepared by the Army for the purpose of determining if the USAF's refusal for access to potable water for a proposed Army Mokuleia Beach Facility was justified. Of particular note in this report is that it provides the earliest record of water agreements made by the USAF with private and government entities for the Dillingham AFB water. The following list represents the consumers from 1969:

- Hawaiian Rock & Supply Co
- Hawaiian Bitumuls & Paving Co
- Mr Philo Owen (Owens Retreat)
- Mr Genro Kashiwa (West of Owen's retreat)
- Camp Erdman (YMCA)
- Mokuleia Beach Park (City and County of Honolulu)
- Hawaii National Guard

- Nike Site #1
- USAF Kaena Point

As early as 1971, the USAF deemed Dillingham AFB in excess to their requirements. The USAF requested transfer of the installation to the Army and this transfer was complete in 1975. A contingent item of the transfer was that the USAF reserves their right to "*take and use water from the well located on the base through existing pipelines extending to Kaena Point Satellite Tracking Station.*"

In August of 1975, the US Army report titled "*Report on the Dillingham Military Reservation Water Distribution System,*" was prepared to determine capacity and condition of the system as well as recommend corrective actions. As in the Army's 1969 report, a list of customers were identified:

- Hawaiian Rock & Supply Co. (Mokuleia Quarry)
- Hawaiian Bitumuls & Paving Co.
- Philo Owen (Owen's Retreat)
- Dan's Lumber (Former Genro Kashiwa)
- Camp Erdman
- Dillingham Air Field (State of Hawaii DOTA)
- C&C of Honolulu (Mokuleia Park)
- Army Beach
- Kaena Point Satellite Tracking Station (USAF)

The Nike Site had been closed sometime between 1969 and 1975, and the Hawaii National Guard was no longer operating at Dillingham Military Reservation as of the 1975 report. Genro Kashiwa was not listed and was possibly replaced by Dan's Lumber. Based on the list, it appears that the Army had accepted the legacy agreements established by the USAF in addition to their own Army Beach facility and the DOTA operation at Dillingham Airfield which wasadded since the above referenced 1969 report. The report noted an informal verbal agreement between Mokuleia Ranch and the Dillingham Airfield Water System for shared use of water in the event of an emergency between the two systems. The distribution point is through a two way valve located on the south east end of the Dillingham Airfield distribution line. As of 2012, this valve has not been located and there is no formal agreement established between the DOTA, US Army and Dillingham Ranch (Former Mokuleia Ranch).

A review of the historical information identified water agreements originated by the USAF, and maintained by the US Army. An account of the DOTA's involvement with the Dillingham Water System is presented in proceeding sections of this report. Those discussions will include the customer arrangements transferred to the DOTA as well as new arrangements made by the DOTA.

DOTA Lease Agreement with Dept of Army

Dillingham Airfield, and Kawaihapai Military Reservation is currently leased by the State of Hawaii Department of Transportation Airport Division (DOTA) for civil general aviation (GA). This interest will be referred to as Dillingham Airfield for this report and has a FAA location identifier of "HDH." The DOTA has been leasing Dillingham Airfield since 1972. In 1983, the DOTA signed a 25 year lease agreement for Dillingham Airfield with the Department of Army under Contract No. DACA84-1-81-27. Under this lease, the HDH water system was defined as:

> *Together with other pertinent aviation facilities located thereon, including the entire water system as shown in red on Exhibit "C", also attached hereto and made a part hereof. . .*

The "system" stretches from Kaena Point Tracking Station (KPTS) to the west, terminates prior to a drain culvert to the east, and Residential and park areas to the North. The extent of system toward Dillingham Ranch, KPTS and the interest across Farrington Hwy has been the subject of debate. In the Case of KPTS, exhibit C shows two lines terminated with an arrow and designated Kaena Point and Camp Erdman. It is unclear where the DOTA's jurisdiction falls and implies responsibilities outside the leased property. Likewise the hand drawn red line representing the section of the water system to the north which identifies piping within the City park and through private residences. This is not consistent with a 1985 General Water Map plan for Dillingham Military Reservation that terminates the water line within the Army lot formerly used for wastewater treatment. In this case this **section of the system is not only outside the DOTA's leased property but outside Army Property as well.**

Currently, a standing lease is in effect as of July 2009 under Contract No. DACA84-1-09-135. Under this new lease, the language with respect to the water system includes that same reference to an exhibit "C." This exhibit has been modified to exclude the abandoned line sections to the south and east as a result the abandoned Army Air Force base in the South and lines toward Dillingham Ranch were removed from responsibility. However, the ambiguity as to the extent of the Army system remains in both the North (residents and Park) and West (Camp Erdman and KPTS). **The issues with regards to maintaining line sections outside the lease property and in private and other government property have not been resolved. There is no mention in the lease with regards to legacy customers to the water system and requirements for the DOTA to maintain them as a part of the lease agreement.**

DOTA Water Agreements

Contingent to Contract No. DACA84-1-81-27, the DOTA agreed to assume operation and maintenance of the Dillingham Military Reservation Water Distribution System. No mention of the legacy customers nor maintaining their service connections was mentioned in the lease. To date, the DOTA does not have any formal correspondence with the Army regarding honoring water agreements formed by the USAF or the US Army. The water customers at the time of the

lease arrangement excluded Hawaiian Rock & Supply Co. (Mokuleia Quarry) and Hawaiian Bitumuls & Paving Co. who were no longer in operation at Mokuleia. A list of the customers as of 1983 is as follows:

- Philo Owen (Owen's Retreat)
- Ron's Development (Former Dan's Lumber, currently Frank Opperman)
- Camp Erdman
- Dillingham Air Field (State of Hawaii DOTA)
- C&C of Honolulu (Mokuleia Park)
- Army Beach (DPW)
- Kaena Point Satellite Tracking Station (USAF)

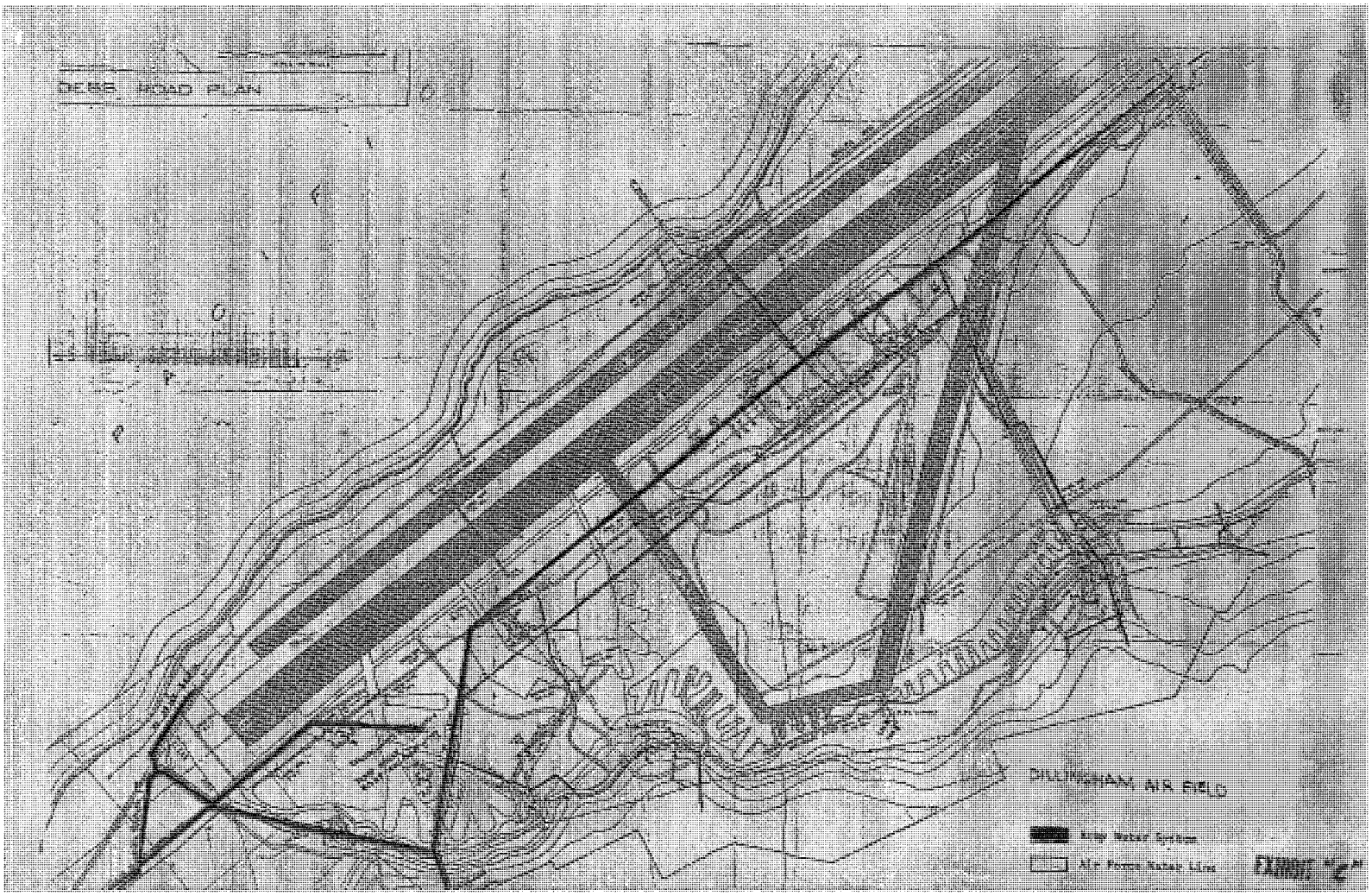
Starting April 1984, The DOTA formulated contractual agreements with each customer. The water agreements included requirements for the following:

- Service Use
- Rates
- Point of Delivery
- Metering and Billing
- Liablity
- Termination

Of particular note is that the agreement is temporary and that the State is not obliged to supply water to the purchaser. Additionally, from the point of connection to an available water main to their use point is the resident's responsibility. Unfortunately none of the tenants have honored this portion of the agreement leaving the DOTA to perform repairs and installation of meters which should have been the responsibility of the customer.

Additional customers have been granted water agreements by the DOTA. Chung and Titcomb installed lines across Farrington highway to access water from the DOTA. Their meters are located just outside the Airfield fenceline. The DLNR was granted access to water for a nursery located above the water tank as part of a native plant initiative with DOT-HWY. Finally, the parachute companies were granted access to water for their leased lots with the DOTA located on the East end of the airfield.

- Donald Chung (Westside Private Resident)
- Frederick Titcomb (Westside Private Resident)
- Dillingham Nursery (DLNR)
- Bon Air (Guy Banal, Jumper Facility)


DEBS ROAD PLAN
BIRMINGHAM AIR FIELD
Army Radar System
Air Force Radar Line
EXHIBIT "E"

A compiled list of the current water agreements are shown on Table 1 on the following page.

There are two unauthorized connection feeding lots between Owens retreat and the US Military Reservation (former wastewater treatment facility). The service connection from the abandoned treatment facility to Owen's Retreat passes through lots 6-8-08:5 and 6-8-08:9. Water for those lots are coming off taps on the Owens service line running through their respective property. It is not known if permission was granted or how long ago the tap occurred. To date, there are no past or present water agreements for those properties. The following list the lot and interest for the unauthorized connections:

- Dean Hanazawa, TMK 6-8-08:09
- Abel Soares, TMK 6-8-08:05

In 2009, OME staff had discussed with Mr. Hanazawa the possibility of a metered connection from the Park lateral which runs fronting his property on the Farrington Hwy right of way. Mr. Hanazawa was very receptive to this and was willing to form a water agreement with the State. However, contact with Mrs. Soares, who lives in the adjacent lot, was not receptive and a requested that we go through her legal counsel. Mrs. Soares had just underwent a long legal battle for custody of the property (against Jeanette Kaipo to be discussed in a later narrative) and admitted to be skeptical at the time. No action for both Hanazawa and Soares have been taken as of 2012.

TABLE 1. ACTIVE DOTA WATER AGREEMENTS AS OF 30 AUG 2012

Service Name	Agreement Date	Purchaser	Address	TMK
Army Beach	04/11/1984	Directorate of Facilities Engineering	Building 200, Wheeler Air Force Base, Wahiawa, Hawaii 96786	
Owen's Retreat	04/23/1984	Philo Owen	2742-A Terrace Dive, Honolulu, Hwaii 96822	6-8-08:01
Titcomb Residence	08/13/1988	Fredrick Titcomb	1111 Alakea Street, 3rd Floor, honolulu, Hawaii 96813	6-8-08:37
Camp Erdman	02/28/1984	Camp Erdman, YMCA of Honolulu	401 Atkinson Drive, Honolulu, HI 96814	
Chung Residence	02/22/1984	Donald H. Chung	1236 Elizabeth Street, Hawii 96816	6-8-08:24
Kaena Point STS	08/15/1984	15th Civil Engineering Squadron	15 ABW/DE, Hickam AFB, hawaii 96853	
Opperman Residence	10/07/1988	Ron Development, Ltd.	3251 Ala Laulani Street, Honolulu, Hawaii 96818	Former Genro Kashiwa/Dan's Lumber
Bon Air, Inc.	12/03/1985	Bon Air Inc, former Sky Dive Hawaii	1717 Ala Wai Boulevard, Suite 2710, Honolulu, HI 96815	Jumpers Facility
Mokuleia Beach Park	06/25/1984	C&C of Honolulu, Dept. of Parks and R	650 South King Street, Honolulu, Hawaii 96813	6-8-02:38
DLNR Nursery	03/20/2003	DLNR, Div of Forestry and Wildlife	1151 Punchbowl Street, Room 325, Honolulu, Hawaii 96813	Above Water Tank

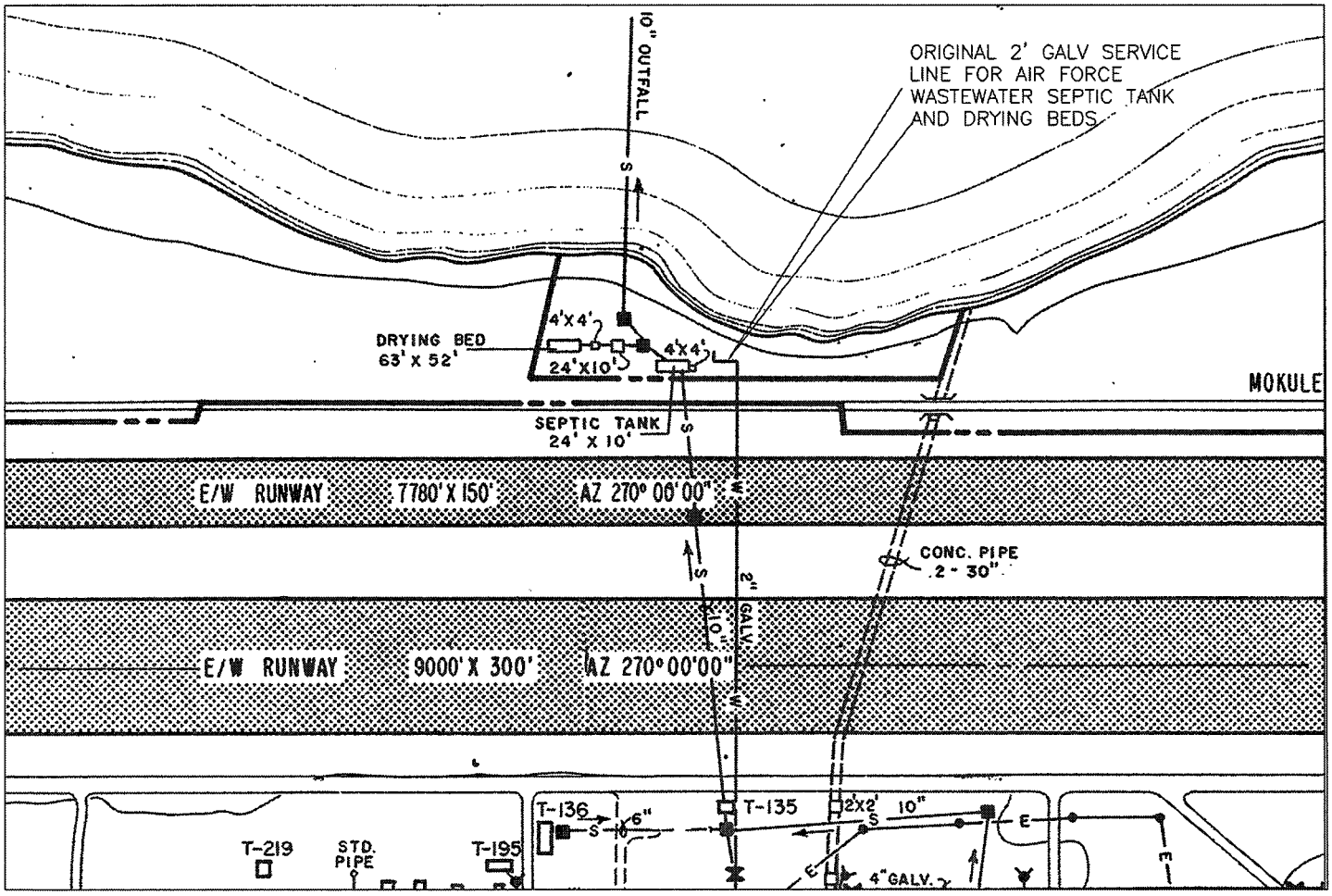
History of Water Service to Private Lots Across Farrington Hwy

A 1958 Dept. of Air Force Basic Layout Plan for Dillingham Air Force Base (Tab No. C-1), shows that wastewater was collected at a lift station identified as building T-135 south of Runway 8. The wastewater is pumped through a 10 asbestos force main under the runway to drying beds located North of the former Mokuleia Road (Farrington Hwy). Along with the sewer force main a 2" galvanized line runs across the airfield to provide service water for the drying beds. This water was used for washdown and other related purposes. Over time, the wastewater system was abandoned, the lift station demolished and the remnants of the concrete beds on the North (makai) side of Farrington remain today. The 2 inch galvanized line remained in service and was tapped for service by Philo Owens, the City and County Parks and Dan's lumber. **This line would be the source for all water customers for the lots between Army Beach and Mokuleia Park.** In the case of Soares and Hanzawa, their water feeds are tapped of the original Philo Owens line. Owens was later moved to the City Park line fronting their lot. Opperman (former Ron's Development) is running off of the former Dan's lumber tap at the adjacent drying beds. Chung, and Titcomb have crossed Farrington with their own lines and have meters located outside the Airfield fenceline. Those meters are tapped into to the 2" galvanized line on the airfield side of the fenceline. The following series of figures shows the chronological development of the water service connection over time.

The original service connection from the Army property to the Owen (Owen's Retreat) lot was constructed of galvanized pipe and placed near surface. In some areas between Owens and Army lots owned by Hanazawa and Soares, the line is exposed and severely corroded. Unauthorized taps were made off of this line for the Hanazawa and Soares property. Of particular note is that the Soares property was once occupied by Janette Kaipo and her husband. Kaipo had "hanai" herself to a partial owner of the lot who lived on the property sometime between 2000 and 2010. Kaipo had claimed ancestral rights to the water and made claims that the water was taken away from them by the Army. Additionally, Kaipo had accused the DOTA that the water they were receiving had too much chlorides and blamed the water for killing her dog. Kaipo had written directly to Army, DOTA, Hawaii's congressional delegate and POTUS (President G. W. Bush) with regards to her perceived water and land rights. Kaipo had threatened to shut off the water to Owens at which point the DOTA intervened allowing the Owens property to access water from the C&C line fronting their property. This was also done to assure better water quality because the original line Owens had installed was heavily corroded and near surface which may have attributed to frequent bacterial hits (Owens lot was designated as a water quality sampling point by the DOH). Kaipo would later be evicted from the property as mentioned previously. To this day both the Hanazawa and Soares property are tapped off the original service connection installed by Philo Owens (judging by the poor construction it is not consistent with what the Air Force would install and is more akin to what a homeowner would do). This line is considered suspect for water water quality and high possibility for leaks which go un-noticed. Additionally, this line is on private and Army property which is fenced out and inaccessible to the DOTA.

The former Genero Kashiwa line was constructed in the same fashion as owens (galvanized line running near surface). This property has exchanged ownership over the years from Dan's Lumber to Ron's Development and now Frank Opperman. Over the years, the line

transitions to copper feeding a copper distribution system for several homes located on the Opperman property. While the copper distribution lines are an upgrade on property, the galvanized line through Army property to the connection point is situated near surface subject to corrosion and potentially compromises water quality and high possibility of leaks that go un-noticed.



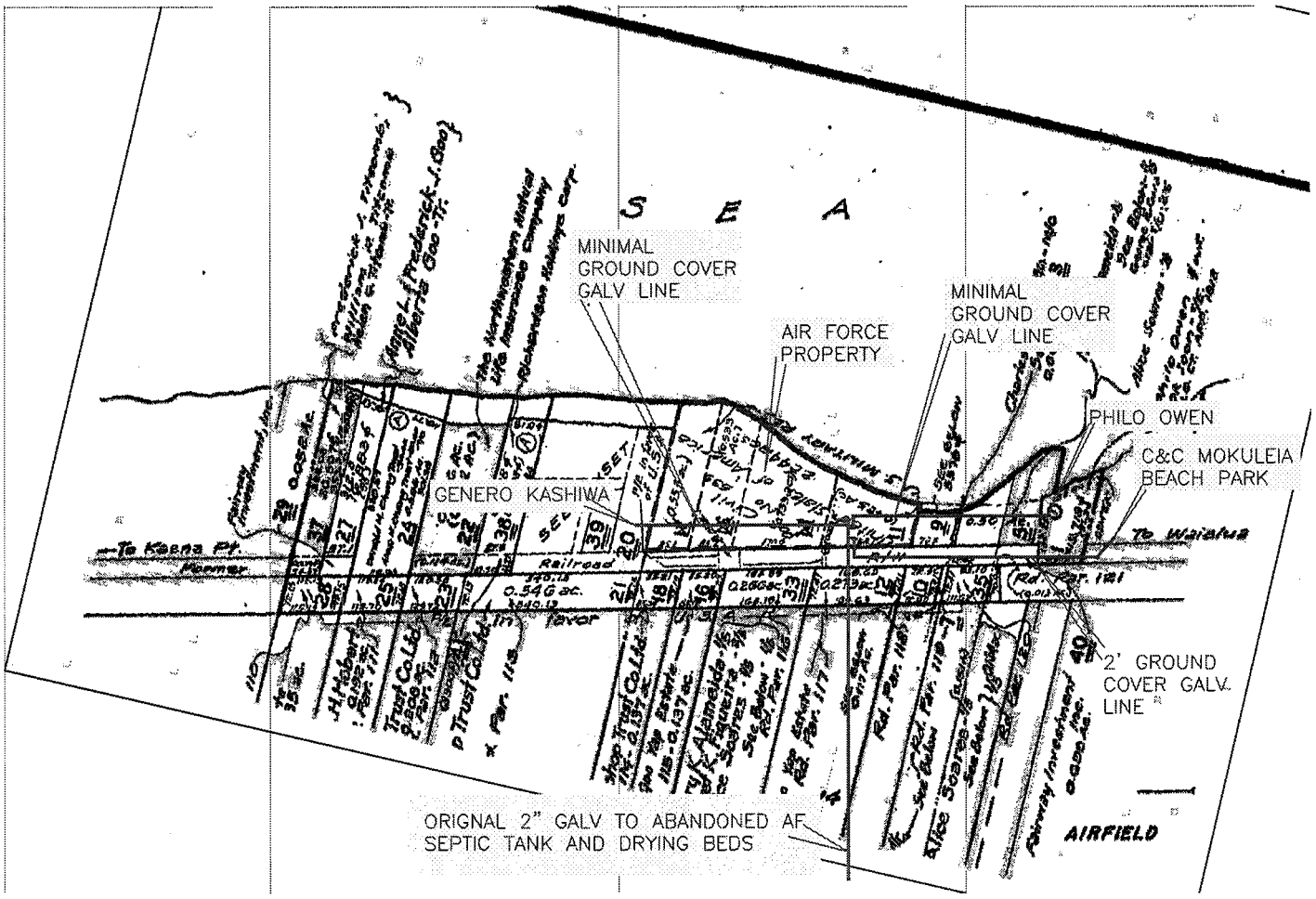
HISTORY OF DILLINGHAM WATER SYSTEM

OAHU DISTRICT · DILLINGHAM AIRFIELD

PRE–SERVICE CONNECTION TO RESIDENTS

DESIGN: OME XX/XX/20XX
APPROVED:
PROJECT NO.: XXXX-73

2



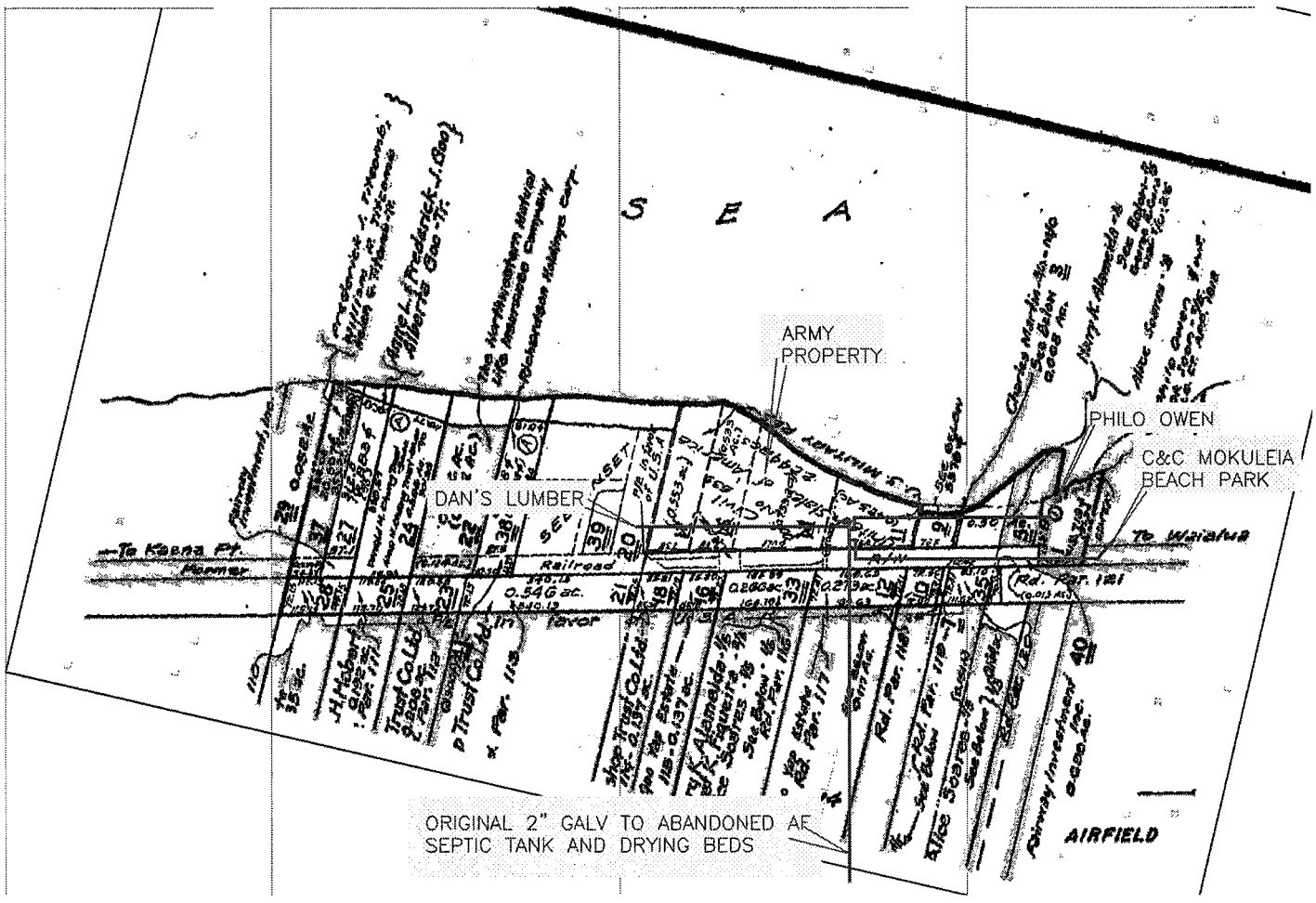
HISTORY OF DILLINGHAM WATER SYSTEM

OAHU DISTRICT · DILLINGHAM AIRFIELD

1969 AIR FORCE CUSTOMER CONNECTION

DESIGN: OME XX/XX/20XX
APPROVED:
PROJECT NO.: XXXX-73

3



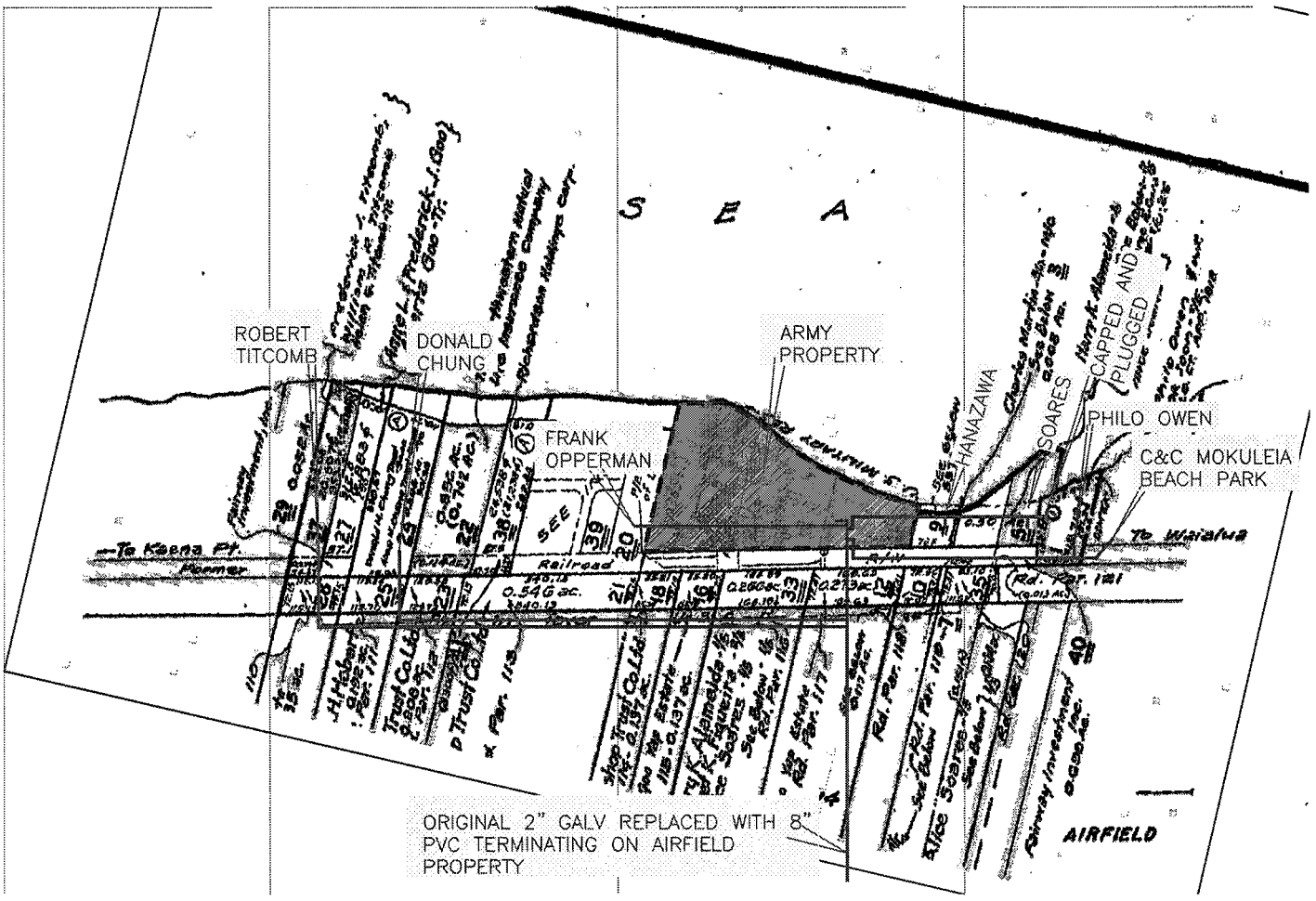
HISTORY OF DILLINGHAM WATER SYSTEM

OAHU DISTRICT • DILLINGHAM AIRFIELD

1975 ARMY CUSTOMER CONNECTION

DESIGN: OME XX/XX/20XX
APPROVED:
PROJECT NO.: XXXX-73

4



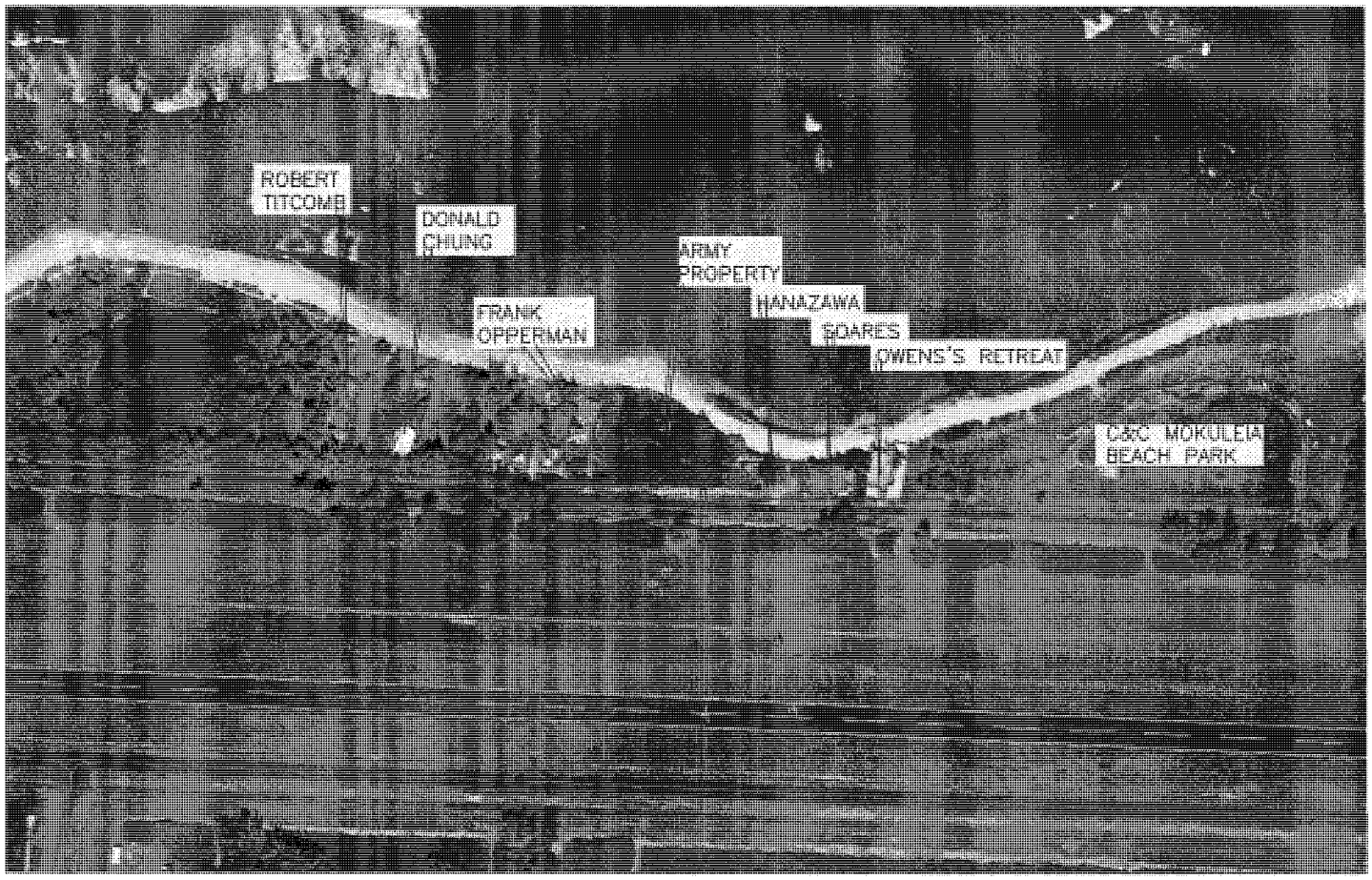
HISTORY OF DILLINGHAM WATER SYSTEM

OAHU DISTRICT • DILLINGHAM AIRFIELD

2012 DOTA CUSTOMER CONNECTION

DESIGN: DME XX/XX/20XX
APPROVED:
PROJECT NO.: XXXX-73

5



HISTORY OF DILLINGHAM WATER SYSTEM

OAHU DISTRICT • DILLINGHAM AIRFIELD

AERIAL PHOTO OF FARRINGTON HWY CUSTOMERS

DESIGN: DME XX/XX/20XX
APPROVED:
PROJECT NO.: XXXX-73

6

Uncontrolled Water Use and Dilapidated Line Conditions

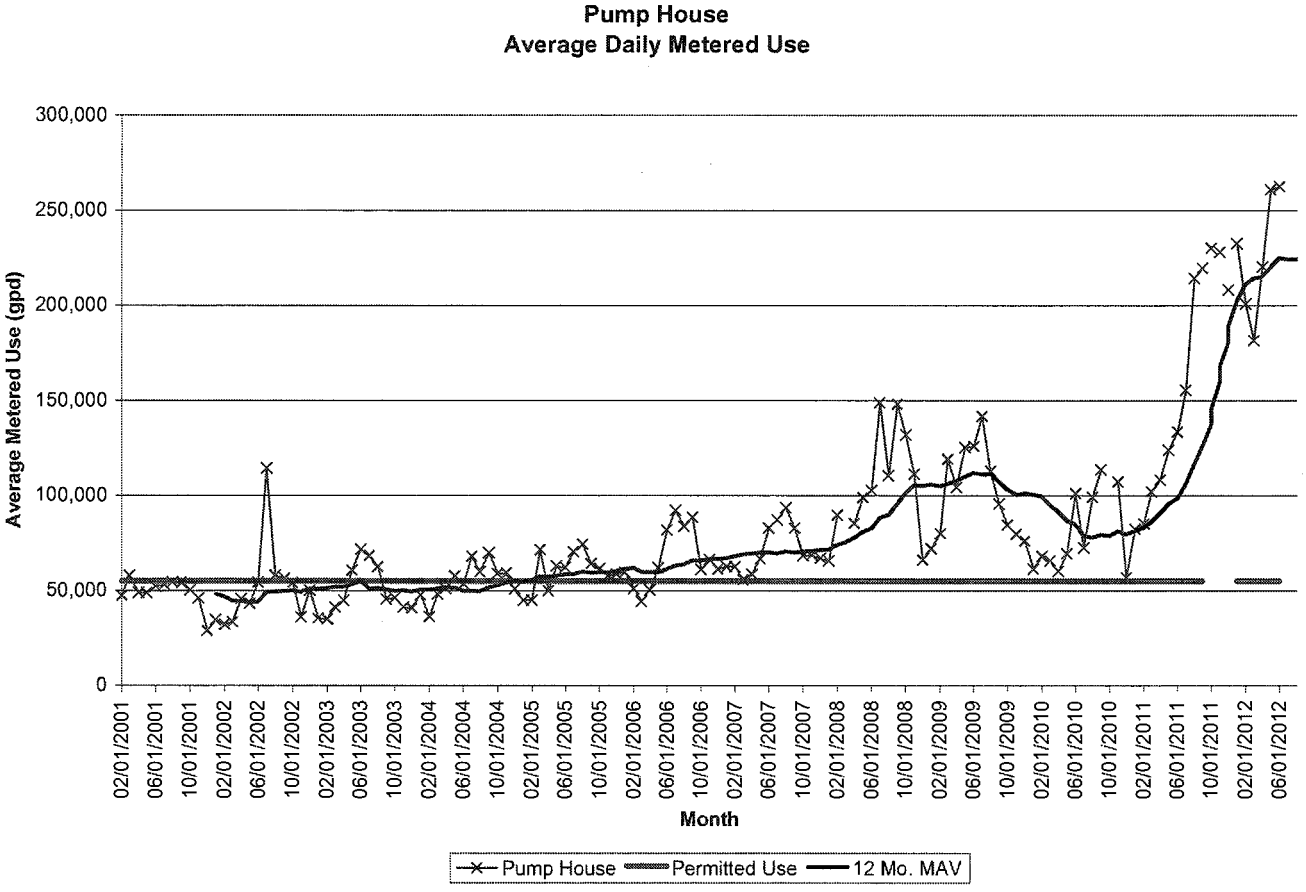
The Dillingham Airfield wells were drilled in 1894 (well no 278 A&B) and filed with the Territory of Hawaii through the US Army Air Force at some later time. The first well permit was signed by the Army under Adolph Hight, the former Directorate of Housing and Planning. Sometime later when the DOTA took over the system Well no. 3412-01 was filled by the DOTA through AIR-EM for the US Army. Well No. 3412-02 was declared capped and closed). Well pump rates are permitted by the Department of Land and Natural Resources Water Commission. The permissible pumping rate is based on a 12 month running average. The DOTA is currently operating well number 3412-02 operating under the Water User Permit number 053. **The permissible well pump rate is 55,000 gallons per day. The problem is that the DOTA is pumping at a rate of 225,000 gallons per day and is currently in violation of the water use permit.**

Chart 1 Pump House Average use Per Day, on the following page, **shows that the DOTA has exceeded the permissible pumping rate since 2005 corresponding with the cessation of monthly water use billings.** Between 2008 and 2010 a pronounced increase in water consumption is attributed to Camp Erdman's continous filling of a leaking swimming pool that was known to them. This is confirmed with Chart 2 Camp Erdman Metered Use that correlates their metered increase resulting from the leaking pool with the bump shown on Chart 1 around the same time period. Erdman eventually repaired the pool several years later thereby decreasing their use, however their overall average consumption remains high Camp Erdman is the second largest consumer and has more than doubled from 12,000 gallons per day in 2001 to 28,000 gallons per day in 2012. By themselves, YMCA half DOTA's 50,0000 gallons per day allocation.

The exponential increase in the daily pump rate observed in Chart 1 since 2011 may be attributed to several factors:

- Increase use by Camp Erdman
- Increased use by Kaena Point Tracking Station
- Increased use by Frank Opperman
- Suspected presence of significant leaks in the distribution line.

Chart 3 Kaena Point Tracking Station Metered Use shows a significant increase in water use around 2010. This is a result of upgrades to their booster house located next to the DOTA pumphouse. The Air Force booster pumps was manually operated in the past. Personnel from KPTS would drive to HDH to turn on the pump on hand every other week. However with the upgrade to their pump and the installation of telemetry, the pumps are now turned on via phone connection from the tracking station at any time. As a result of this convenience, KPTS is now the largest single consumer of water. Their daily consumption rate has increased 10 times from 3,000 gpd in 2001 to 30,000 gpd in 2012. It was thought that KPTS would only use Dillingham Airfield for supplemental purposes. However, since the water wells at KPTS were found to be contaminated, the primary water source has defaulted to Dillingham Airfield. We expect to see continued use of water at their current rate indefinitely. On another note, KPTS' booster pump uses DOTA grid power and the Air Force is not compensated DOTA for their electrical use.


Pump House
Average Daily Metered Use
Average Metered Use (gpd)
300,000
250,000
200,000
150,000
100,000
50,000
0
02/01/2001
06/01/2001
10/01/2001
02/01/2002
06/01/2002
10/01/2002
02/01/2003
06/01/2003
10/01/2003
02/01/2004
06/01/2004
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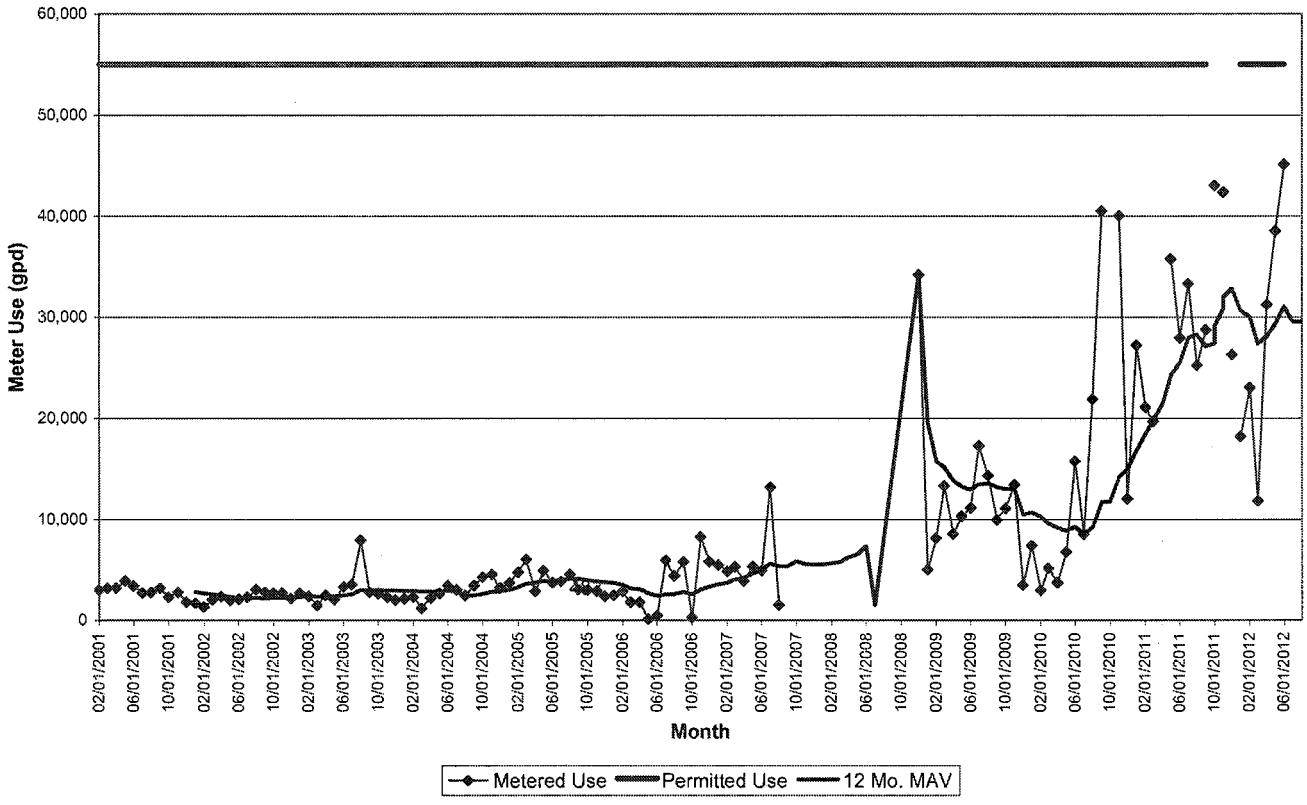
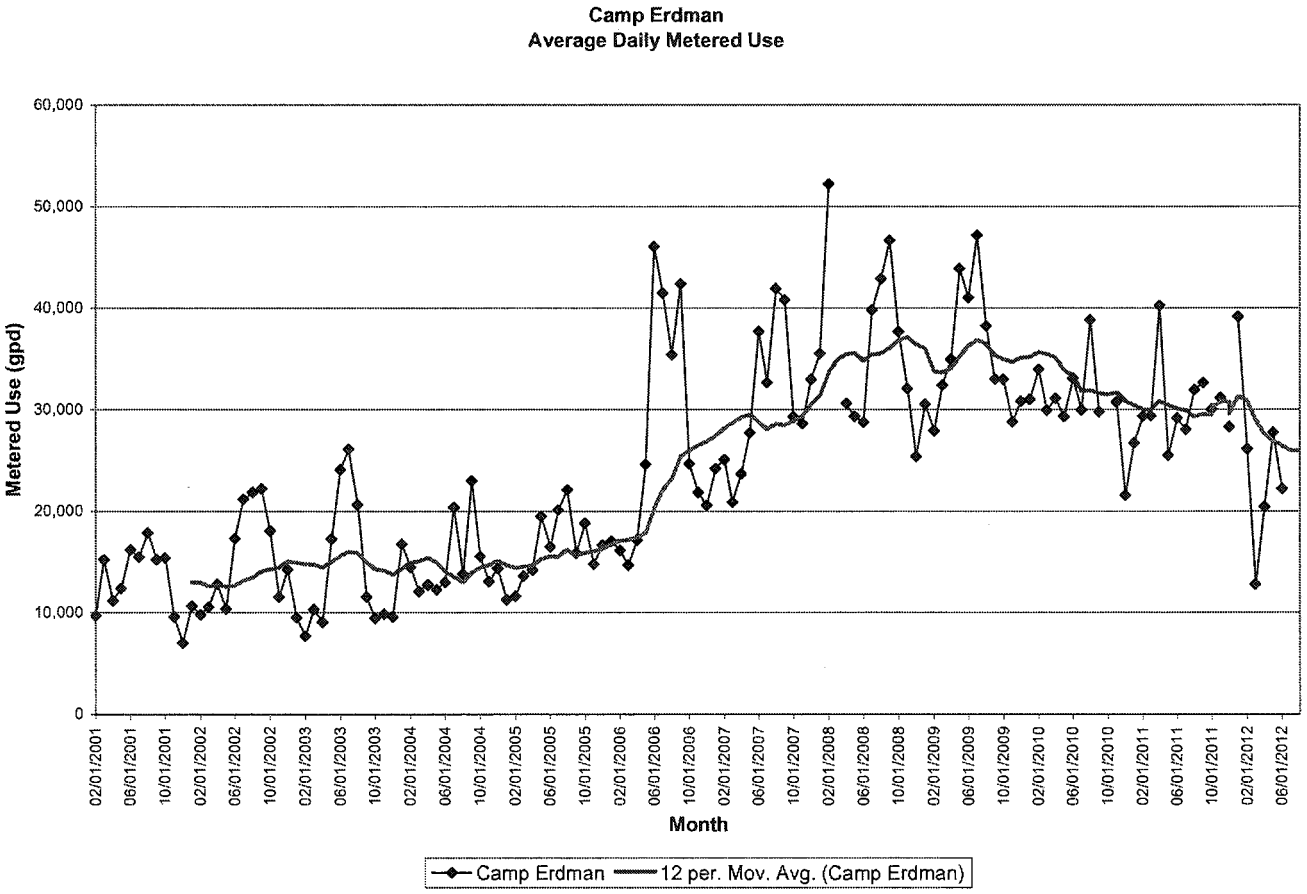
06/01/2008
10/01/2008
02/01/2009
06/01/2009
10/01/2009
02/01/2010
06/01/2010
10/01/2010
02/01/2011
06/01/2011
10/01/2011
02/01/2012
06/01/2012
Month
Pump House
Permitted Use
12 Mo. MAV

Kaena Point Tracking Station
Average Daily Metered Use




Camp Erdman
Average Daily Metered Use
Metered Use (gpd)
60,000
50,000
40,000
30,000
20,000
10,000
0
02/01/2001
06/01/2001
10/01/2001
02/01/2002
06/01/2002
10/01/2002
02/01/2003
06/01/2003
10/01/2003
02/01/2004
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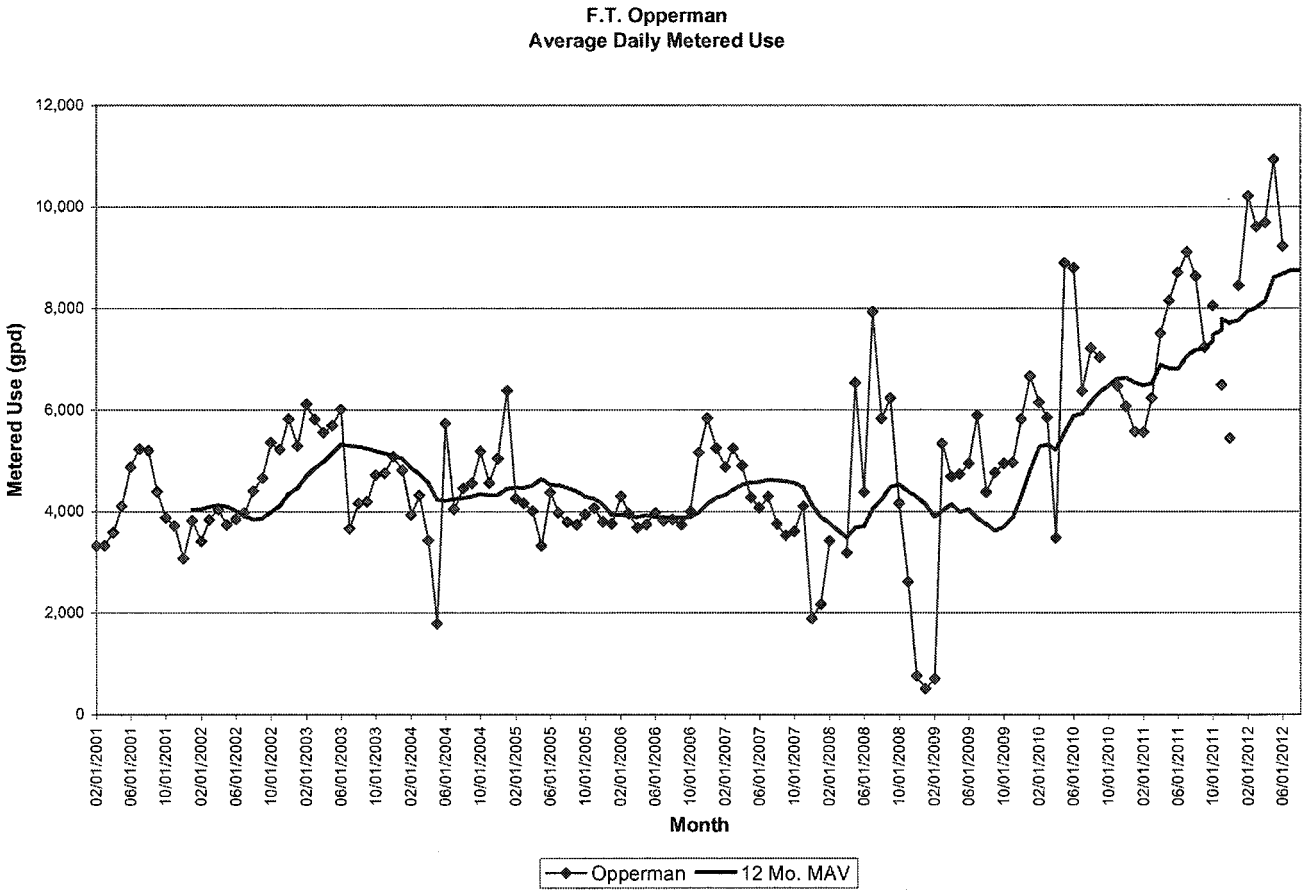
06/01/2009
10/01/2009
02/01/2010
06/01/2010
10/01/2010
02/01/2011
06/01/2011
10/01/2011
02/01/2012
06/01/2012
Month
Camp Erdman
12 per. Mov. Avg. (Camp Erdman)


F.T. Opperman
Average Daily Metered Use
Metered Use (gpd)
12,000
10,000
8,000
6,000
4,000
2,000
0
02/01/2001
06/01/2001
10/01/2001
02/01/2002
06/01/2002
10/01/2002
02/01/2003
06/01/2003
10/01/2003
02/01/2004
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06/01/2009
10/01/2009
02/01/2010
06/01/2010
10/01/2010
02/01/2011
06/01/2011
10/01/2011
02/01/2012
06/01/2012
Month
Opperman
12 Mo. MAV

Frank Opperman is the largest single private consumer of water at Dillingham as shown on chart 5 F.T. Opperman Meter Use on the previous page. There are approximately 4 homes on the property. Their daily consumption has doubled from 4000 gpd to 8000 gpd. A household for a family of 4 as of 2012 consumes on 800 gallons per day. This was in-line with their original consumption attributing additional water use for irrigation. However, the current use is excessive at 8000 gpd which causes pressure and flow problems for the other residents. Since 2011, Opperman has been attempting to secure a land deal. As part of his permit with the County, Opperman needs to secure a guarantee from the private water system he is attached to that there is adequate pressure, flow and fire protection for his property. The DOTA cannot substantiate and as such has not signed the permit for Opperman. Additionally, the DOTA does not have authority to do so as the owner of the system remains the US Army.

The HDH water system was installed in the 1930s and have reached their practical service life. Water leaks is suspected to be significant. Potential leaks are suspected between the Air Force Booster house next to the DOTA pumphouse on HDH and their meter located next to Camp Erdman several miles west of the Airfield. This line is noted on C-1 of the lease as part of the Dillingham water system to be maintained by the DOTA. **The problem is that this line is outside Airport lease property**. In mid 2012 a line break occurred prior to Camp Erdman. The DOTA repaired the line located on the mauka side of Farrington approximately 300 feet from Camp Erdman in the HWY right of way. The line required section replacement and was found to be near surface, galvanized and extremely corroded. We suspect this condition to be common throughout the water main stretch and the potential for failure is high due to the spike in pressure from periodic line boosting which causes line fatigue. **Several miles of lines would need to be replaced**

Another potential leak is on the eastside of Dillingham water system. The line is located on Dillingham Army Reservation and the termination of the line is unknown. The line run is in heavily overgrown jungle that may be subject to tree roots or growth pushing the line out of place over time. The termination of this line is unknown and may still feed a two way valve between Dillingham Ranch and Airfield. Significant waterbreaks leading to the jumper facility have occurred as recent as 2012 and the status of the two way valve is unknown.

Bottom line: The DOTA has been in violation of their permitted pump use since 2005. The following recommendations is advised:

- Establish new water agreements for all customers
- Resume billing for water
- Initiate a progressive bill rate to encourage water conservation.
- Establish revised metering points and make the customer responsible for the maintenance and repair of the line after the metered location

Additionally, the system is in extremely poor condition and is in need of replacement. Because the DOTA does not own the property or the system, line replacements will only occur on the airfield to benefit DOTA operations. The majority of the system lies outside the DOTA's interest is the responsibility of Army or the customer. Regardless of the jurisdictional

responsibilities a full line replacement from Camp Erdman to the jumpers facility would be between 7-10 million (please not that there are archaelogical issues at HDH) and could require an upgrade to the concrete water tank or construction of a fire flow tower on grade level. Such an upgrade would be able to address fire protection issues by increasing both flow and pressure capacity. Currently the Dillingham system is below residential fire flow capabilities.

EXHIBIT 16

RECORD OF ENVIRONMENTAL CONSIDERATION

IMHW-PWE NEPA Office

REC #:

RREC CHECKLIST (Check before submitting)
€ **Detailed Project Description**
€ **Location Map and Plans**
€ **Date of Proposed Action**
€ **Reason for Categorical Exclusion**
€ **Impact Analysis Checklist**

1. DATE:

2. SUBMITTED BY THE PROPONENT:

Ross M. Higashi, DOT-Airports Division
(Name, Organization)

(808) 838-8602
(Phone Number)

(Signature)

3. DESCRIPTION OF PROPOSED ACTION: DMR, State of Hawaii Airports Division Lease

The State of Hawaii, through its Department of Transportation, Airports Division (HDOTA) proposes to lease a portion of Dillingham Military Reservation for the purposes of operating an airfield, parallel runways, taxiways, parking areas and various other buildings and improvements for use as a joint Department of Defense/Civil Airport, hereafter referred to as Kawaihapai Airfield (formerly known as Dillingham Airfield). Kawaihapai Airfield located at, District of Waialua, City and County of Honolulu, State of Hawaii, consists of 278 acres, more or less, and is identified as Tax Map Key No. (1) 6-8-014:001 with the City and County of Honolulu Real Property Assessment Division.

Kawaihapai Airfield is currently leased to HDOTA under Department of the Army Lease No. DACA84-1-09-135, in which Supplemental Agreement No. 3 dated August 23, 2017, extended this lease to July 5, 2019.

The proposed action is to issue a new 35-Year lease to HDOTA.

Per Planning Division, a FEWR is not needed for this undertaking.

4. ESTIMATED START DATE & DURATION OF PROPOSED ACTION: July 6, 2019 – 35 Years

5. THIS ACTION HAS BEEN COORDINATED WITH THE FOLLOWING OFFICES/AGENCIES:

Office/Agency	Name	Concur/Non-Concur

RECORD OF ENVIRONMENTAL CONSIDERATION

ENVIRONMENTAL IMPACT ANALYSIS *(Any "YES" or "MAY" answers need to be explained in the "Discussion" section at the end of this checklist.)*	YES	NO	MAY
1. AIR QUALITY			
a. Will the proposal cause air emissions such as smoke, dust, suspended particles, or air pollutants during construction or operations?	☐	☑	☐
b. Will the proposal involve the removal, modification, or addition of an air emitting device (e.g., boilers, generators, or degreasers)?	☐	☑	☐
2. WATER QUALITY			
a. Is there potential for accidental spills of hazardous or toxic substances?	☐	☑	☐
3. TOPOGRAPHY AND SOILS			
a. Will there be any ground disturbance (e.g., excavating, coring, or fence installation)? ***Please specify acreage below in "Discussion."***	☐	☑	☐
4. NATURAL RESOURCES			
a. Will the proposal affect undeveloped areas, affect endangered or threatened species or their habitat, occur in areas with known invasive species infestations, or affect plant or animal critical habitat?	☐	☑	☐
b. Will the proposal require removal or trimming of trees? ***Please provide map of tree location below in "Discussion."***	☐	☑	☐
c. Does the project involve soil importing/exporting?	☐	☑	☐
5. ARCHAEOLOGICAL/HISTORIC RESOURCES			
a. Will the proposal alter or destroy any archeological sites, landscapes, or buildings that are over 50 years old?	☐	☑	☐
6. LAND USE			
a. Will the proposal result in a change in operations, activities, or land use occurring at the site or facility?	☐	☑	☐
7. NOISE ENVIRONMENT			
a. Will there be any changes to the numbers, types, and operations of aircraft, vehicles, or weapon systems that could affect noise levels?	☐	☑	☐
8. TRAFFIC			
a. Will the proposal generate or increase vehicular traffic?	☐	☑	☐
b. Will there be a requirement to construct, reroute or alter roadways?	☐	☑	☐

RECORD OF ENVIRONMENTAL CONSIDERATION

ENVIRONMENTAL IMPACT ANALYSIS *(Any "YES" or "MAY" answers need to be explained in the "Discussion" section at the end of this checklist.)*	YES	NO	MAY
9. HAZARDOUS MATERIALS/WASTE OR TOXIC SUBSTANCES			
a. Will the proposal result in the disturbance of lead-based paint or asbestos- containing material?	☐	☑	☐
b. Will the proposal result in the use, storage, or disposal of hazardous materials?	☐	☑	☐
c. Will the proposal involve pesticide application (e.g., herbicide or insecticide)?	☐	☑	☐
10. UTILITIES SYSTEMS			
a. Will the proposal require disposal or alterations to existing utility systems or drainage systems (e.g., power, drinking water, waste water, storm water)? ***Please specify type of utility affected in "Discussion."***	☐	☑	☐

DISCUSSION *(Annotate items answered "YES" or "MAY" and provide a brief explanation of the potential impacts and mitigation measures to be implemented. Provide answers to the questions of how much, whom, where, when, and how? Contact the DPW Environmental Division at 656-3075 if assistance is needed.)*

RECORD OF ENVIRONMENTAL CONSIDERATION

Potential impacts on the quality of the environment have been considered and are documented within the attached environmental checklist. It has been concluded that this action is not segmented and no extraordinary circumstances exist that would preclude the use of the applicable categorical exclusion identified in paragraph below. This document does not relieve the proponent from compliance with other applicable federal, state and local environmental laws and regulations.

IT HAS BEEN DETERMINED THAT THIS ACTION:

☐ Is adequately covered in the following EA/EIS:

_____

☑ Is categorically excluded under Appendix B, Section II, paragraph __(f)(1)__ of 32 CFR Part 651 for the following reason ***(See 32 CFR Part 651, Environmental Analysis of Army Actions)***:
(f)(1) Grants or acquisitions of leases, licenses, easements, and permits for use of real property or facilities in which there is no significant change in land or facility use.

REVIEW AND CONCURRENCES ***(For Environmental Division use)***:

	YES	WITH CMNT	NO	
_____ (Natural Resources Program)	☐	☐	☐	_____ (Date)
_____ (Cultural Resources Program)	☐	☐	☐	_____ (Date)
_____ (Installation Restoration Program)	☐	☐	☐	_____ (Date)
_____ (Clean Water Program)	☐	☐	☐	_____ (Date)
_____ (Clean Air/Safe Drinking Water Program)	☐	☐	☐	_____ (Date)
_____ (Recycling Program)	☐	☐	☐	_____ (Date)
_____ (Hazardous Waste Program)	☐	☐	☐	_____ (Date)
_____ (TSCA/SPCC/EMS Programs)	☐	☐	☐	_____ (Date)
_____ (Entomology)	☐	☐	☐	_____ (Date)
_____ (Other ENV Staff as needed)	☐	☐	☐	_____ (Date)

APPROVED BY:

_____ (Environmental Coordinator) _____ (Date)

☐ ***Concurrence is contingent upon compliance with comments provided.***

SECTION B
REPORT OF AVAILABILITY
DOT – AIRPORTS DILLINGHAM AIRFIELD
GENERAL AND OPERATION INFORMATION

SECTION I. OUTGRANT ADMINISTRATION:

1. Name, address and telephone number of applicant or requester's representative(s), if any:
   Mike Auerbach, Land Agent
   Department of Transportation-Airports Division
   400 Rodgers Boulevard, Suite 700, Honolulu, Hawaii 96819
   Phone: (808) 838-8684

2. Proposed use: **Joint Department of Defense/Civil Airport**

3. Proposed type of outgrant:
   [X] Lease
   [ ] For BRAC: _____ Interim Lease
   _____ Lease in Furtherance of Conveyance
   [ ] Easement
   [ ] Permit or license

4. Start date, if applicable: **July 6, 2019.**

5. Recommended term of outgrant: **Thirty-five (35) Years.**

SECTION II. PROPERTY INFORMATION:

1. General property identification. Provide sufficient information to locate the property for environmental reviews and for the USACE District to develop a legal description to include in the outgrant document. Provide legal descriptions, if available. Attach existing maps or aerial photographs. Map(s) should also be attached showing the installation boundary. See attached.

2. Acreage: **278.032 Acres (Area 2 - 55.238 Acres, Area 4 - 149.481 Acres, Area 5 - 3.194 Acres, Area 12 - 2.940 Acres, Ceded land Lot 1-B-3 - 63.267 Acres and Ceded land Parcel 1 - 3.912 Acres)**

3. General character of the property (short description of the uses of the property; i.e. industrial, residential, warehouse, etc.): **Aeronautical/Military**

4. Are government buildings and improvements included in the area?
   [X] No
   [ ] Yes. If yes, identify and describe all buildings, facilities, and improvements, e.g., Identification Nos., square footage outgranted/percentage of building, type of construction, and condition:

5. Existing or preceding property use (Provide a description below for each building, facility, area, etc., in either list or table format. If the overall use is the same, i.e., industrial, then a general description is sufficient.): **Joint Department of Defense/Civil Airport**

6. United States property interest:
   [X] Fee simple title
   [ ] Easement
   [ ] In-lease
   [ ] Other

7. Is the property subject to a reversionary interest that would be violated by the proposed use?
   [X] No
   [ ] Information not known. USACE District should check title documents.
   [ ] Yes. If yes, describe:

8. Army interest:
   [X] Direct control
   [ ] Permit from a Federal agency
   [ ] Withdrawn from the public domain.

9. Type of jurisdiction:
   [ ] Exclusive Federal Jurisdiction. If yes, then are there any revisions or special conditions in the documents creating the jurisdiction, which could affect the proposed use?
   [X] Concurrent Federal Jurisdiction. If yes, then are there any revisions or special conditions in the documents creating the jurisdiction, which could affect the proposed use?
   [ ] Proprietary status

10. If exclusive or concurrent, does jurisdiction need to be retroceded to allow for the proposed use?
    [X] No
    [ ] Yes, Explain. If a retrocession action is pending, identify the status of that effort:

SECTION III. OPERATIONAL FACTORS:

1. Utilities:
   a. Will the proposed use require utilities?
      [ ] No. If no, go to question 2.
      [X] Yes.

   b. Will the Army be providing required utilities or services on a reimbursable basis?
      [X] No.
         i. Are utilities, e.g. electricity, natural gas/propane/heating oil, potable water, wastewater treatment, telephone, etc., available from public utility companies?
            ( ) No
            (X) Yes. If yes, identify the type, quantity, and provider of such services:
            Electricity - HECO; Telephone - Hawaiian Telcom
      [ ] Yes. If yes, identify the type, quantity, and provider of such services:

Identify the instrument to be used to establish the terms under which such services will be provided and the type, quantity, and estimated cost. Note that this instrument should be executed prior to execution of the outgrant.

2. Will the proposed use require destruction, relocation, modification, or replacement of Government facilities?
   [X] No
   [ ] Yes. If yes, please explain:

3. The outgrant of the proposed use:
   [X] Is compatible with the operation of the installation.
   [ ] Is compatible with the BRAC Implementation Plan, if BRAC.
   [ ] Is compatible with contemplated development and other activities as shown in an approved Master Plan, or
   [ ] Is in support of the installation mission.

4. If it is not compatible with any of the above or in support of the installation missions, please explain why the use should be approved or list the site specific limitations, restrictions, or conditions to be included in the outgrant to make proposed use compatible, e.g., security, access, parking, hours of operation:

5. Non-environmental safety issues and concerns, if any:

6. Airfields and airspace:
   a. Will the planned use of the property affect the airspace over or near the property or military installation:
      [X] No.
      [ ] Yes. If yes, the proposed occupancy or modification may be allowed subject to the following restrictions being incorporated in the outgrant:
      [ ] Yes, near the property or military installation but affecting property not owned by the United States. If yes, does the United States have a potential "taking of private property" issue? Explain:

   b. Will the outgrant of the property require the notification of the FAA?
      [X] No
      [ ] Yes. If yes, please explain who will notify the FAA and when:

   c. Will structures be built on the property which will require an airspace study?
      [X] No
      [ ] Yes. If yes, please explain:

7. REMARKS: include any legal, policy, or mission factors you are aware of which may affect the proposed use of the property:

SECTION IV. PRELIMINARY PROCEDURES:

1. Inventory and condition reports. A recent inventory showing the condition of the property is available:
   [ ] No
   [ ] Yes. Give date and location of the document:

2. Consideration:
   [ ] For BRAC, less than fair market value is recommended for this action under authority of 10 USC 2667 (f). Provide justification. Current estimated caretaker or operational costs are __. Provide any specific recommendations:
   [ ] USACE district is requested to determine fair market value for the outgranted interest.
   [ ] Consideration should be collected in cash.
   [X] Consideration should be cash or in-kind as set out in the attached discussion of possible in-kind consideration. **To be determined.**

   [ ] Consideration should be offset for improvement, maintenance, protection, repairs or restoration of the property outgranted, as shown in attached offset plan.

3. Waiver of competition:
   [X] Competition is not required in accordance with AR 405-80.
   [ ] A waiver of competition is not recommended.
   [ ] A waiver of competition is recommended. Provide full justification and proposed grantee, if waiver is recommended.

4. Other applicable laws, regulations, MOA's, etc., requiring consideration for processing this action:

5. Additional information that will assist in processing this application/action: **This new lease is to replace the current Supplemental Agreement No. 3 of lease DACA84-1-09-135, expiring on July 5, 2019.**

6. Stewart B. McKinney Homeless requirements:
   [X] McKinney Act requirements do not apply to this action.
   [ ] McKinney Act requirements apply, necessary screening has been completed, and no interest was expressed. Give dates:

7. Estimated costs to further process the outgrant:
   Funds currently available:
   [X] Yes
   [ ] No. If No, how will costs be funded?

8. I certify that I have reviewed this section on General and Operational Information, that it has been coordinated in accordance with applicable command guidance, and that it is accurate and complete. Based on the information provided above, I recommend that the outgrant be:

[ ] APPROVED [ ] DENIED

_____ _____

Date KENT K. WATASE, PE
Director of Public Works

Enclosures:

EXHIBIT 17

Federal Aviation Administration
Office of Airports Compliance and Management Analysis
Revenue Use Compliance Review

State of Hawaii Department of Transportation
Airports Division

For the Six Year Period of
July 1, 2007 – June 30, 2013

State of Hawaii Department of Transportation – Airports Division
Revenue Use Review of Selected Airports

The Federal Aviation Administration (FAA) Office of Airport Compliance and Management Analysis (ACO) conducted a Revenue Use Compliance Review of the State of Hawaii's Department of Transportation – Airports Division (DOTA) to evaluate compliance with the FAA Policy and Procedures Concerning the Use of Airport Revenue (Revenue Use Policy) for the period July 1, 2007 to June 30, 2013. The FAA and its contractor conducted this review at the DOTA offices in Honolulu, Hawaii and outlying islands.

The State of Hawaii owns, operates, and sponsors the airport system, which consists of fifteen airports operating under the jurisdiction of DOTA. DOTA is composed of five administrative staff offices (Staff Services, Visitor Information Program, Information Technology, Engineering, and Airports Operations) providing services to all of the state airports within four District Offices. The four districts and airports within the assigned district are:

- **Oahu District**
  - Honolulu International Airport (HNL)
  - Kalaeloa Airport (JRF)
  - Dillingham Airfield (HDH)
- **Maui District**
  - Hana Airport (HNM)
  - Kalaupapa Airport (LUP)
  - Kahului Airport (OGG)
  - Kapalua Airport (JHM)
  - Lanai Airport (LNY)
  - Molokai Airport (MKK)
- **Hawaii District**
  - Kona International Airport (KOA)
  - Hilo International Airport (ITO)
  - Upolu Airport (UPP)
  - Waimea-Kohala Airport (MUE)
- **Kauai District**
  - Lihue Airport (LIH)
  - Port Allen Airport (PAK)

ACO selected a sample of five airports for ACO's review of airport compliance with the Revenue Use Policy. These five airports were:

Airport	Hub Size	Enplanements in 2013
Honolulu International Airport (HNL)	Large	9,466,995
Kahului Airport (OGG)	Medium	2,955,304
Hilo International Airport (ITO)	Small	640,411

Kona International Airport (KOA)	Small	1,376,641
Lihue Airport (LIH)	Small	1,315,141

The five airports selected represented the large, medium, and small airports in the State of Hawaii system with 99.14% of the total State of Hawaii enplanements during the 2013 calendar year[1].

Analysis and Field Work

The FAA Office of Airports contracted Ernst & Young, LLP (EY) to perform a financial and compliance review of five Hawaiian airports. Their objective was to support ACO by conducting on-site compliance reviews to assess whether the airports and their sponsor, Hawaii Department of Transportation - Aviation (DOTA), used their revenues in accordance with federal statutes, Airport Improvement Program Grant Assurances, and FAA's Revenue Use Policy. The review covered the period from fiscal year (FY) 2008 to fiscal year (FY) 2013 for the five airports (e.g. Honolulu (HNL), Kahului (OFF), Hilo (ITO), Kona (KOA), and Lihue (LIH)). These airports will be considered within the scope of our compliance review and referred to as "in-scope" throughout this report. EY worked closely with ACO by conducting daily status conference calls to discuss findings and issues as they occurred.

The FAA's State of Hawaii Airports District Office (ADO) assisted EY and ACO in the performance of the land and hangar use inspections. The DOTA provided a two-person liaison to assist ACO and EY in obtaining pertinent supporting documentation and setting up interviews with the appropriate State of Hawaii staff during the on-site work performed by EY.

The supporting administrative service departments for the DOTA are located in Honolulu. For example, such services as accounting, administrative, and legal are located at the DOTA offices at HNL. The EY field team conducted all walk-through meetings and most of the testing while on-site at HNL, except for visually verifying the existence or non-existence of community-use land, noise land, through the fence activity, marketing materials and artwork at each in-scope airport. Grandfathered payments and outstanding issues were tested at the DOTA level as well. The EY team was in daily contact with ACO and the Hawaii ADO for technical support.

The following areas and supporting documentation were preliminarily reviewed at DOTA offices located at HNL:

- Form 126 & 127 Reporting
- Transactions between the airports and other governmental entities
- Noise Land
- Utility Usage
- Fleet Services

[1] FAA. Enplanements at All Airports (Primary, Non-primary Commercial Service, and General Aviation) by State and Airport – Preliminary. (2014, June 23). Retrieved from http://www.faa.gov/airports/planning_capacity/passenger_allcargo_stats/passenger/index.cfm?year=2013

- Police/Security
- Fire Fighting
- Uses of Airport Property
- Marketing/Air Carrier Incentives
- Art in Public Places
- Cost Allocations

FAA Reporting

Section 111 of the Federal Aviation Administration Authorization Act of 1994 established the requirement for commercial service airports to file financial reports with the FAA. These reports are the Financial Government Payment Report, Form 126, and the Operating Financial Summary, Form 127. Form 126 reports the financial transactions between the Airport and other governmental entities, and Form 127 reports Airport financial operating results. Each of the Hawaiian airports included in our review prepared individual Forms 126 and 127 rather than a consolidated state report.

We reviewed the information reported on both forms to determine if the State or other jurisdictions drew this information from its financial accounting system. We found the information reconciles to the State's trial balance and to its Comprehensive Annual Financial Report (CAFR). The State's outside accounting firm reported that the State's CAFR fairly presented the State's financial position.

Grandfathered Payments

The Revenue Use Policy, Section V.D provides that airport revenue may be used for purposes other than capital and operating costs of the airport, the local airport system, or other local facilities owned or operated by the sponsor and directly and substantially related to the air transportation of passengers or property, if the "grandfather" provisions of 49 U.S.C. § 47107(b)(2) are applicable to the sponsor and the particular use.

DOTA is considered a "grandfathered" airport system. Prior to 1982, state legislation required the Hawaiian airports pay a 5% surcharge on airport revenue (less debt service) to the state's general fund. Based on a 1993 Congressional study followed by a Department of Transportation's Office of General Counsel's (OGC) determination, the DOTA is a grandfathered airport system in reference to a 5 percent surcharge on airport revenues (less debt service) to the State's general fund. The grandfathering surcharge is calculated at the overall airport system level, not at the individual airport level, and the amount calculated is transferred to the State on a quarterly basis.

Based on the review procedures performed for the five airports under review, DOTA complied with FAA policy related to their grandfathered payments. The DOTA's exempted payments for the six-year period under review have not exceeded the calculated ceilings determined by the 1995 base year exempted amount being inflated by the Consumer Price Index (CPI) for each year under review.

Summary of Findings and Recommendations

A majority of the findings and recommendations for all five of the in-scope airports have similar FAA responses and recommendations. DOTA did respond to a preliminary draft of our report providing whether they concurred or did not concur with our findings. The DOTA did not respond to many of our findings, and we have interpreted non-responses to be concurrences from DOTA on the finding. For brevity purposes, we will summarize the common findings and recommendations noted during the review process in this section. Airport specific findings will be presented for a specific airport as well. The attachments designated for each airport will discuss the findings, the DOTA response, and recommendations in detail.

Use of Airport Property and Leases.

All leases for the five in-scope airports are processed and filed at the DOTA in Honolulu. Leases are broken down into several categories, including concession agreements, real property leases, revocable permits (RP), and parking permits.

- A concession agreement is a contract entered into by the airport and a company that provides goods and/or services to the public as they transit through the airport system, usually for a fixed sum or percentage of the vendor's revenue. Most of the concessionaires are retail vendors located in the airport terminal. However, some vendors such as rental cars, buses, parking, etc., are not located in the terminal, but maintain space elsewhere on airport property.
- An RP is generally for short-term use, typically 12 months, and then continue on a month-to-month basis. Generally, the rental term for RPs often run longer than 12 months. An RP can usually be cancelled with only a 30-day notice. RPs are typically awarded through direct negotiation between the DOTA and the vendor. RPs can be used for tie-downs, T-hangars, land (i.e., rental car overflow lot), storage, maintenance yards, and other uses.
- Real property leases contain numerous parameters and terms that govern the rights of lessees in the use of airport property. Cargo facility leases and hangar leases are typical examples of real property leases.
- Other general types of leases that are subject to the schedule of rates and charges are parking permits and fixed base operators (FBOs) that provide services for other airport aeronautical users (i.e. fuel and maintenance services, airplane painting and re-upholstering).

Based on the FAA review of samples of leases for all five in-scope airports, the two primary findings noted were that a sample of rental rates was not set at fair market value (FMV) initially, or they are not being re-assessed over the years. For example, a lease agreement in effect at Kahului Airport (OGG) with Alexander & Baldwin for lease of a sugar cane field needs to be re-evaluated at the earliest opportunity to determine a rental rate for agricultural use at FMV. Two of the leases at Kona Airport had clauses increasing the rental rates at a scheduled period, but the rental rates were not increased as set by the lease agreements. DOTA staff was not able to locate several of the requested lease agreements.

While conducting the perimeter tours of the airports, the EY team observed several T-hangars being used for commercial maintenance purposes. Airplanes were lined up awaiting maintenance services at Honolulu International Airport (HNL). We could not find commercial leases for aeronautical maintenance at HNL. We observed commercial maintenance operations at Hilo Airport (ITO) and Kahului Airport (OGG), but we were not able to determine if the maintenance being performed was aeronautical or nonaeronautical. We recommend commercial leases be developed at the appropriate aeronautical or nonaeronautical rental rate.

Another finding noted during the perimeter tours and subsequent walk-through interviews was that some of the rental car agencies were using airport property to park individual cars resulting from inventory overflow for no rental charges or rental collections based on an "honor system" exercised by the rental car agencies. The DOTA has established rental rates for rental car overflow which should be utilized at all airports. We recommend a system be established to provide oversight and control to ensure the rental car agencies are paying for the use of airport property.

During the course of the walk-through interviews, the EY team were told that as a matter of practice, none of the airports is including the costs of utility charges in their leases. The DOTA, when entering into new or revised agreements or otherwise establishing rates, charges and fees, must undertake reasonable efforts to make their particular airports as self-sustaining as possible under the circumstances existing at the airports.[2] We recommend DOTA incorporate rental rates that will recoup the costs of utilities provided to tenants.

Conclusion – Use of Airport Property and Leases:

The Revenue Use Policy at Section VII.C requires airport sponsors to ensure their airports are as self-sustaining as possible under the circumstances at their airports. Accordingly, when a sponsor enters into a new or revised agreement, it should ensure the new rates are compatible with the self-sustainability requirement. In the following Attachments section of this report, we have taken into consideration the DOTA responses. We found in the responses there were copies of lease agreements and other documents that were not provided to the EY team and have requested copies of these documents.

DOTA has provided copies of a majority of the missing RPs or lease agreements. In some cases, DOTA provided a date for the renewal of some of the leases. We are requesting copies of these new agreements. We have provided a listing of final comments and data requests in *Appendix A – Recap of FAA Final Comments and Requests*. Where we have requested a sample copy of RP or lease agreement, the sample should consist of at least one signed lease agreement.

Marketing.

During the review of the airports' financial data, we noted there were no expenditures for marketing. The FAA conducted a walk-through meeting with the DOTA Visitor Information

[2] 49 USC 47107(l) (3). Efforts to be Self-Sustaining.

Program to determine if marketing costs may have been classified in other nominal accounting general ledger accounts. He explained that the Hawaii Tourism Authority (HTA) had entered into a contract for $500,000 with the DOTA to subsidize and enable all five of the in-scope airports to provide live entertainment services to the public that would otherwise be considered marketing or general economic development expenditures. The contract provides native Hawaiian music and dancers to greet arriving tourists and entertainment at the launch of new airlines and new airline routes. Therefore, the HTA contractual agreement subsidizes the full cost of the marketing and entertainment efforts of the Hawaiian airports and no airport revenue is being used for general economic development.

During the terminal tour, it was noted that many of the informational booths located at the airports were stocked with various commercial brochures advertising tourism information. The Kahului Airport manager mentioned that the airport does not charge any of the vendors for allowing them to display their brochures. In fact, all of the airports have instituted a process whereby a company only has to submit an application for screening before it is able to drop off tourism brochures for display at the airport. If the application is approved, the airport will stock these brochures using airport-funded labor at the various travel booths and on airport-owned display racks throughout the terminal.

DOTA did not concur with the FAA finding concerning the airports not charging for vendors displaying marketing brochures. The DOTA considers the revenue generation relating to this area in question to be a de minimis amount. They believe the administrative overhead cost to oversee this concession would exceed revenues generated. The DOTA provided an estimated Monthly Projected Net Loss of $12,172 based on a space rate unique to each airport compared to the costs of labor to administer the program.

Conclusion - Marketing:

Based on FAA Order 5190.6B, FAA Airport Compliance Manual, Chapter 17.2 to 17.5, airports must maintain a fee and rental structure that makes the airport as financially self-sustaining as possible. It is our understanding from the on-site interviews that there is already a Visitor Information Program staff person assigned to processing the vendor applications and distributing the brochures throughout the terminal.[3] The calculation of the de minimis revenue generation provides another example of the necessity of re-evaluating rates to capture the full cost of providing services at the airport. The development of fees and rates should cover the full cost of providing a service to maintain self-sustainability. We recommend that DOTA institute a fee to be charged to the various vendors to recoup the costs of the processing of the application, space used, and the stocking of the various tourist brochures by the Airport staff.

The DOTA responded to our recommendation to notify us of the preparation of a new advertising contract. This new contract will include administration and cost recovery for the placement of tourism brochures. FAA concurs with the new contract and requests of a copy of the signed contract.

[3] Chapter II-9, Visitor Information Program Brochures and Publications, State of Hawaii, Department of Transportation, Visitor Information Program, Standards and Procedures, effective date March 9, 2012.

Art in Public Places.

Under Hawaii statutes, for every new government building, including airports, 1% of the (non-federally funded) construction budget is to be set aside for the purchase of art to be used in the facility. This art could be pictures that hang in the terminal or sculptures that are displayed in places where the public transits inside or outside of the terminal.

According to DOTA, a regular inventory of artwork is conducted at the airports. In addition, the DOTA Project Manager told FAA that theft deterrence mechanisms are employed at all airports to minimize actual theft of the artworks. Theft of artwork in recent years has been negligible.

Conclusion - Art in Public Places:

With regard to FAA Policy Concerning the Use of Airport Revenue, we found no irregularities with the art program at OGG.

Wildlife Hazard.

The Nene Goose is the State bird of Hawaii. Their presence at an airport presents a risk to aviation safety, because of their large body size, flocking behavior, and low, slow flight pattern.

LIH is part of the natural habitat for the Nene geese, and they are frequently observed flying across the runways. On April 14, 2011, the governor of the State of Hawaii signed a proclamation authorizing the Department of Land and Natural Resources (DLNR) and DOT to cooperatively work while relocating four hundred Nene geese that reside at the Kauai Lagoons to the Hawaii Island and Maui. The proclamation declared that the large bird numbers residing adjacent to LIH posed a serious threat to public aviation safety. The proclamation was for a five year period ending April 15, 2016.

According to the plan, successful implementation of the Nene Relocation Project requires the identification of suitable relocation sites on Hawaii Island and Maui; preparation of the sites; habitat management; bio secure quarantine facility; safe capture and handling; veterinary care; predator control; tracking control; and response to any unacceptable movements or behavior detected in the release of the birds for their and the public's safety. In the MOU between the DLNR and the DOT, the DLNR would implement the plan and furnish all personnel, equipment, and supplies necessary and the DOT agreed to fund the program.

The State of Hawaii's relocation program for the Nene Goose has resulted in the Department of Transportation Airports Division funding $2.3 million as of the date of this compliance review. The Department of Land and Natural Resources estimates the relocation program will require another $1 million of the airports funds over the remaining two years of the program.

Conclusion – Wildlife Hazard:

The Nene Goose is not only the state bird of Hawaii, it is also identified as critically endangered by USFWS, the steps taken and funding necessary to mitigate the risk it represents are understandable, justifiable, and laudable. The DOTA and DLNR should be commended for the efforts put forth to move upwards of 400 individual geese. The FAA concern comes from reports of relocated geese becoming a hazard at new airports (Kahului and Maui) near new relocation sites. The preferred separation distance is 5 miles for wildlife hazard attractants, and with the new sightings, an error may have been made in choosing a suitable site thus wasting time and funding. We also read that the plan requires predator control as well as tracking devices on some birds to track and monitor survival and movements necessary for management. There is no mention of a time frame, which could mean the FAA and DOTA funding predator control in perpetuity for the insured or improved survival of the geese.

Airport Improvement Program Grant Assurance 20 requires an airport to take appropriate action to assure that such terminal airspace as is required to protect instrument and visual operations to the airport (including established minimum flight altitudes) will be adequately cleared and protected by removing, lowering, relocating, marking or lighting or otherwise mitigating existing airport hazards and by preventing the establishment or creation of future airport hazards.

The DLNR and the DOTA are seeking an additional $1 million funding beyond the $2.3 million already invested to finish the capture and relocation efforts for the last two years of the project. DOTA should request the FAA to review the relocation sites selected and the monitoring and movement data already collected from trans-located birds to determine whether the relocation sites are suitable. Finally, alternatives must be considered including attractive water impoundments near airports, permanent biologists at each airport to monitor and mitigate wildlife hazards, and the DLNR personnel to provide assistance with predator control activities without the reliance on airport revenues.

In their response to our request, the DOTA did provide a timeline for the mitigation of the wildlife hazard created by the Nene Goose. However, in the July 1, 2016 letter, we are requesting a detailed description of the role of the Deputy Attorney General while providing continuous monitoring and update date action plans.

The FAA would appreciate being an active participant as the DOTA and partners work to resolve the Nene Goose issue.

Security.

DOTA has a $33 million per year contract with Securitas, a security firm that provides all of the airports with traffic control officers, security guards, and armed law enforcement officers (LEOs). The Securitas contract covers all airports in the Hawaii Airport System. The Securitas mission is to protect persons and property located in the Airport area, maintain the security of the Airport, work in coordination and in conjunction with other law enforcement and security personnel, and enforce all applicable laws, ordinances, rules and regulations. The Securitas

airport security officers and traffic control officers will have to rely on the Sheriff's personnel to make arrests and remove the arrestee(s) from the airport.

Honolulu International Airport (HNL) has Memorandums of Understanding (MOU) with the State of Hawaii Attorney General's Office (Attorney General), State of Hawaii Department of Public Safety Sheriff's Department (Sheriff), and Securitas, an independent security contractor, to assist and provide security at HNL.

At HNL, the Securitas contract is supplemented by a MOU with the Sheriff. The Sheriff's mission is similar to Securitas' mission. The Sheriff's Department works to protect all persons and airport property, maintain the security of HNL, and enforce all applicable laws and ordinances. The Sheriff provides 63 deputy sheriffs with arrest authority and 3 administrative positions. The Sheriff's Department LEOs do have arrest powers and the ability to remove suspects from the Airport. The Sheriff's MOU costs the Airport approximately $4 million per year.

The Attorney General's MOU provides three full-time investigators who assist the Airport deputy sheriffs and investigate all felony crimes. It also provides one additional investigator supervisor, who provides on-call response, with standby pay, for a total of $250,000 per year. The Attorney General's MOU also funds a deputy attorney general (DAG) position at a salary of $90,000 per year. The DAG position's "primary duty will be to prosecute airport related felony cases."

DOTA responded to our finding stating that they have developed their airport security system based upon statutes and guidelines as determined by the Department of Homeland Security (DHS) and the Transportation Security Administration (TSA). Specifically, DOTA cites the Code of Federal Regulations (CFR), Title 49 Transportation, Part 1542 Airport Security (49 CFR Part 1542). Whereas the TSA regulates the security and law enforcement at all certificated airports. Each airport prepares and establishes an Airport Security Plan (ASP), which provides for the safety and security of persons and property on an aircraft operating in air transportation or intrastate air transportation against an act of criminal violence, aircraft policy, and the introduction of an unauthorized weapon, explosive, or incendiary onto an aircraft. The TSA reviews and approves all ASPs. DOTA believes the funding of the MOA for contracting Special Agent Investigators and Deputy Attorney General to prepare the prosecution of felony acts committed on the airport and the existing security system is a part of the TSA's approval of the ASP.

Conclusion - Security:

The FAA contacted the TSA's Office of Security Policy and Industry Engagement and the Attorney-Advisors, Pacific Rim, to determine if the TSA was requiring the DOTA fund the prosecution of crimes committed on any of the DOTA airports within the established ASPs. The FAA was informed that there is no language requiring the funding of prosecutions committed on the DOTA airports. Therefore, we stand with our initial recommendation that the DOTA should not be funding the prosecution of individuals committing crimes on the airports. Generally, the

responsibility and prosecution of the criminal should shift to the jurisdiction of the county or state once the booking process is complete.

The FAA's Revenue Use Policy, Section V defines the permitted uses of airport revenue to be the capital or operating costs of the airport, the local airport system, or other local facilities owned or operated by the airport owner or operator and directly and substantially related to the air transportation of passengers or property. The funding of the State of Hawaii Attorney General's Office staff is not a proper use of Airport revenues. The prosecution of criminal violators is not a capital or operating cost of the Airports. The MOU with the State of Hawaii Attorney General's Office should be re-evaluated to determine what legal activities would be determined to be associated with airport capital or operating costs. The costs of investigating and prosecuting criminal violators should be reimbursed to DOTA for the amounts expended during the six years prior to 2013 (July 1, 2007 – June 30, 2013).

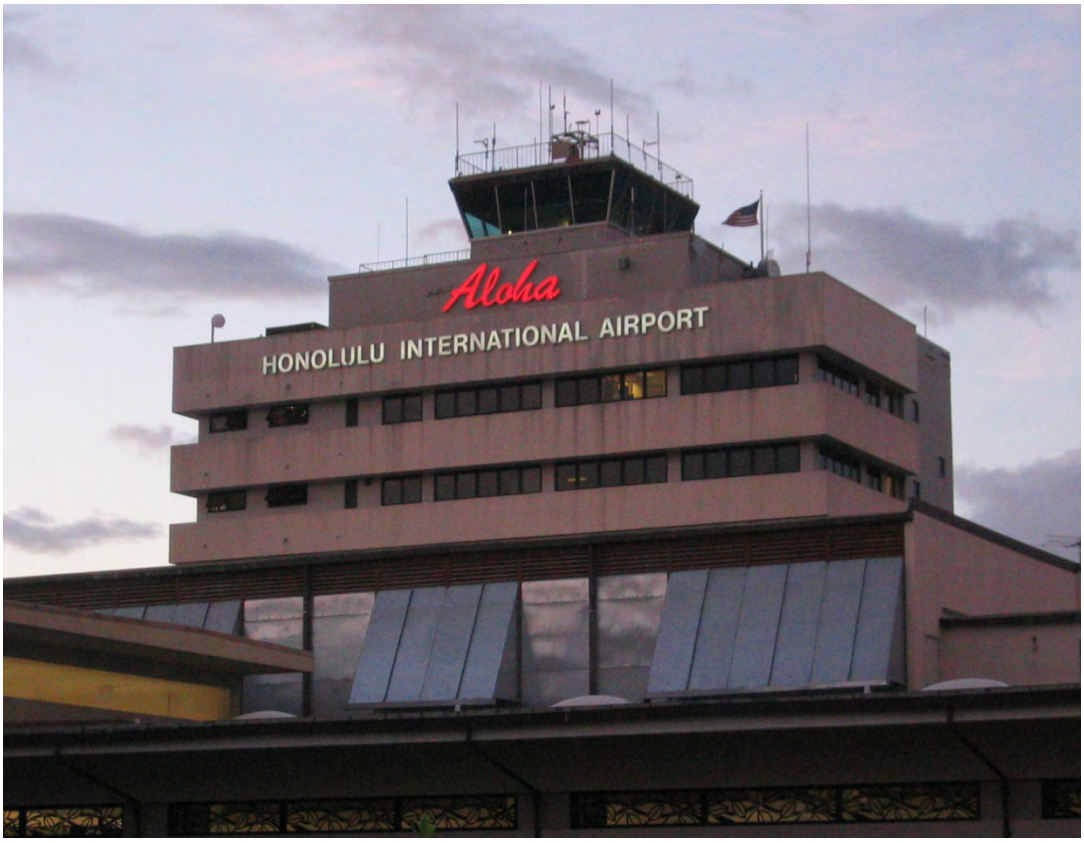
DOTA was awaiting a written response from the City and County of Honolulu Prosecutor to determine if his office will accept felony investigations occurring at the Honolulu International Airport directly from the Sheriffs Airport Detail without any further investigative support from any third party and without any compensation for this service from his office. We are requesting a copy of this letter from the City and County of Honolulu Prosecutor when it becomes available.

Attachments

The following attachments of our report present the findings and FAA recommendations for each airport within scope of the State of Hawaii Revenue Use Review. Our findings explain in detail the circumstance for each finding and an explanation of the remediation of the issue. The overview of each attachment provides the comprehensive areas of our test plan to determine if there were any diversions from the policies set by the Revenue Use Policy. Other areas of interest may have arisen through our analysis process, walk-through interviews, and visual inspections during the perimeter and terminal tours.

We have included a brief response to findings that the DOTA did not concur in the Overview section of each in-scope airport review. In the Summary of Recommendations, we present our conclusion on the findings the DOTA did not concur. If the DOTA did not respond to the finding, we understood this to mean concurrence with the finding.

Attachment 1 – Honolulu International Airport



Honolulu International Airport (HNL)

Overview

Based on our review of HNL, several findings were noted at HNL. The findings at HNL are discussed in more detail below with FAA recommendations. DOTA has responded with their concurrence or non-concurrence, and their reasoning is briefly summarized. The FAA Final Comments are the response to *The Summary of Findings and Recommendations* section listed above, which discusses the final FAA recommendations and DOTA responses.

Use of Airport Property and Leases

Based on FAA's review of 26 HNL lease agreements, two findings were noted: (1) Revocable Permits (RP) were not awarded at fair market value (FMV), and (2) rent increases did not occur in accordance with airport policy or normal practice. These findings were noted for two of the 26 samples.

1. **Budget Rent-A-Car System – HNL (Budget)**. Budget was awarded a ten-year concession lease in 1988. The Minimum Annual Guarantee (MAG) is the greater of 10% of the lessee's gross receipts or the minimum annual guarantee set forth in the lease proposal. In 2004, the gross receipts report showed that the minimum annual guarantee of $1,391,085 was utilized. In verifying the 2013 receipts, the minimum annual guarantee of $1,391,085 was used once more. It appears the MAG is not being reviewed on a consistent or timely basis to protect HNL interests. After the concession lease ended in 1998, the airport has not revised the lease to reflect a current fair market rental value.

   DOTA Response: Non-concurrence. The DOTA held over the concession agreement for Budget at HNL. Such a holdover means the terms and conditions of the agreement will continue. DOTA justifies not re-negotiating the Minimum Annual Guaranteed (MAG) Rental due to the MAG amount of $1,391,085 being exceeded in the years subsequent to the expiration of the 1988 agreement in FY 1998. DOTA believes the revenues in excess of the minimum annual guaranteed amount justified the lack of negotiation or documentation of FMV determination.

2. **National Car Rental (National)**. National was issued a parking permit (PP) in 2007 for the overflow parking lot located on Ualena Street. The lot was rented out at the rate of $3.15 per square foot per annum (psfpa) instead of the airport's published rate of $4.16 psfpa. The published rate would be the FMV established by the DOTA Schedule of Rates and Charges.

   DOTA Response: Non-concurrence. DOTA does not agree with this finding since the appraised rate of $6.20 per square foot per annum (psfpa) on their overflow lot on Ualena Street was implemented effective March 1, 2013, prior to the auditors' fieldwork.

FAA Conclusion for the Two Findings Above: Our analysis of the leases involved only a sample of the complete population of the airport leases due to time and staff restraints. When a finding is discovered using this methodology, it is reasonable to expect more of the same findings to be found throughout the overall population. Each federally assisted airport owner/operator is required by 49 USC 47107(a)(13) and Grant Assurance 24 to have an airport fee and rental structure that will make the airport as self-sustaining as possible under the particular airport circumstances in order to minimize the airport's reliance on Federal funds and local tax revenue.

The field auditors were not able to locate documents substantiating a review of the Budget lease and/or the decision not to increase the minimum annual guarantee. We recommend the sponsor maintain records of negotiations and documentation of the determination of the held-over agreement terms.

DOTA Response to FAA Conclusion:

1. **Budget:** At the time the DOTA decided to "hold over" the Budget contract, there was no written notice given to Budget. There is currently no legal requirement to notify tenants in writing when there is no change in their lease rent. Car rental contracts fall under Chapter 102 of the Hawaii Revised Statutes. Chapter 102 requires, except in certain specific cases that concessions be awarded through a competitive sealed bid process. Since such contracts are awarded through a public offering, substantive changes to the documents cannot be made after the contracts are awarded.

   The contracts were continued in holdover status in anticipation of the project being resurrected when the economy improved. Eventually, that project was replaced with the current consolidated rent-a-car projects.

   The consolidated rental car facilities concession agreements at HNL and OGG were bid in 2014, with an effective date of beneficial occupancy of the Consolidated Facility. At HNL, the RACs will temporarily occupy a portion of the Overseas Parking Structure, while the consolidated rental car facility is being constructed. The OGG RAC contracts will be bid for a four-year term in 2015.

   For concessions, the DOTA prefers to have defined long-term arrangements in place rather than revocable permits.

   The concession agreement and land lease for HNL and OGG were bid in 2014 to take effect as of beneficial occupancy of the facilities.

2. **National:** A copy of the National Car Rental agreement dated March 1, 2013 is included in their response.

FAA Final Comment: Concur. DOTA has demonstrated that the specific circumstances of HNL and the Budget-Rent-A-Car System MAG enhances the assurance for self-sustainability due to the excess revenues received in excess of the MAG. DOTA has provided a revenue history showing lease revenues in excess of the greater of 10% of the lessee's gross receipts or the minimum annual guarantee of $1,391,085. Due to the local economy and circumstances, DOTA held over the concession agreement for Budget at HNL.

We are in receipt of the RP for National Car Rental that was in effect on March 1, 2013 and concur with DOTA on this finding.

Other Property Use Findings

EY, the on-site team, conducted a perimeter tour provided by airport management with the assistance of the Hawaii ADO staff. Based on the perimeter tour, the following additional findings were noted:

T-hangar Usage. Of the 88 T-hangars on the South Ramp at the HNL airport, several tenants were using their spaces for maintenance-type operations. In two instances during the perimeter tour, multiple aircrafts were lined up outside the T-hangars awaiting maintenance. HNL was not able to provide any commercial leases for the T-hangars being used for airplane maintenance. Commercial leases should be charged a higher rate and should not impede a waiting list for T-hangars.

DOTA Response: The DOTA did not respond to the finding made by the FAA.

FAA Conclusion: We will recommend DOTA to review the existing leases or RPs in place for the T-hangars to update terms and fair market rental values. Aviation maintenance providers should be paying commercial rates on their leases.

DOTA Response to FAA Conclusion: DOTA has performed a physical audit to ensure tenants complies with T-Hangar usage. It should also be noted that DOTA began performing continuous compliance inspections and issuing citations in March 2013. The DOTA is in the process of developing appropriate notices and guidelines to be sent to all T-hangar tenants.

To accomplish this, DOTA will follow the action plan shown below.

Action Plan:

HRS § 261-7 (e) provides a mechanism for the DOTA to set airports rates and charges following publication of the rates and charges and conduct of public informational hearings. When airports rates and charges are set in this manner, the DOTA is obligated to report the circumstances and resulting rates and charges to the Legislature.

Since this is a new rate for commercial aeronautical activities from T-Hangars, DOTA will establish 10% of gross receipts as the beginning rate for this activity from T-Hangars and will conduct an assessment on an annual basis to determine if this is a fair and equitable rate and, if appropriate, adjust the rate as necessary.

The DOTA's plan to meet the intent of §261-7 (e) is to do the following:

1. Brief key legislators (Senate President Donna Mercado Kim, Speaker of the House Joseph M. Souki, Senator Clarence K. Nishihara, Chair of the Senate Transportation Committee, and Representative Henry J.C. Aquino, Chair of the House Transportation Committee) on the FAA Findings and Recommendation, the use of §261-7(e) to establish rates for commercial activities from T-Hangars with an effective date of June 1, 2015, proposed

schedule for public informational hearings, and the submission of a final report to the Legislature.

Estimated Completion Date: March 2, 2015.

2. Conduct Public Informational Hearings on each island (Oahu, Hawaii, Kauai, and Maui) for the proposed rates for commercial activities from T-Hangars effective June 1, 2015.

   Estimated Completion Date: March 31, 2015.

3. DOTA will notify President Mercado Kim, Speaker Souki, Senator Nishihara and Representative Aquino via written correspondence of the results of the public informational hearings held on each island to establish rates for commercial activities from T-Hangars, including the effective date of the rates of June 1, 2015.

   Estimated Completion Date: April 10, 2015.

4. Provide written notice to the public and tenants of the airports facility of the rates and effective date for a 30-day period.

   Estimated Completion Date: May 30, 2015.

5. Implement the effective rate by issuing 30 days written notice terminating RP's to tenants conducting commercial activities from T-Hangars with an offer to execute new RP's with the rates for commercial activities from T-Hangars within the 30-day timeframe or when prospective new tenants are interested in acquiring a T-Hangar to conduct commercial activities.

   Estimated Completion Date: June 1, 2015.

6. Submit a report to the Legislature on the use of §261-7 (e) and implementation of the new rates for commercial activities from T-Hangars.

   Estimated Completion Date: June 15, 2015.

7. Renew all T-Hangar RP's based on the rates for commercial aeronautical activities on an annual basis.

DOTA provided a copy of State Memorandum No. AIR-A 15.022 dated February 11, 2015.

FAA Final Comment: Concur. The FAA requests documentation to substantiate implementation.

Utility Costs. Utility costs are not being charged to tenants with RPs, including T-hangars. Airport management does not, as a matter of practice, attempt to recover utility costs (electric, water, sewer, etc.) from its tenants. Electric bills for the three HNL T-hangar buildings totaled about $80,000 in 2013. None of these costs was passed on to the 88 T-hangar tenants.

DOTA Response: The DOTA did not respond to the finding made by the FAA.

FAA Conclusion: DOTA should be including the utility costs into the lease agreements to recover full cost of providing services.

DOTA Response to FAA Conclusion: In April 2014, the DOTA began charging tenants in ITO and LIH. At HNL, OGG and KOA, DOTA is in the process of preparing the required notices to T-Hanger tenants to recover the costs for utilities (electricity and water). The date to begin charging the T-Hangar tenants for utilities was established as July 1, 2015.

FAA Final Comment: Concur. The FAA requests sample copy of active lease with utility charges included in lease terms.

Marketing.

The marketing findings are consistent with the marketing summary disclosed in the Executive Summary on page 6 of this report. There are no findings that are localized to Honolulu.

DOTA Response: The DOTA is preparing to procure a new advertising contract. This new contract will include administration and cost recovery for the placement of tourism brochures.

FAA Conclusion: We request a copy of the new advertising contract when available.

DOTA Response to FAA Conclusion: The DOTA is preparing to procure a new advertising contract. This new contract will include administration and cost recovery for the placement of tourism brochures. The estimated date to have the new contract in place is January 1, 2016.

FAA Final Comment: Concur. The FAA requests a copy of new advertising contract.

Security.

HNL has Memorandums of Understanding (MOU) with the State of Hawaii Attorney General's Office (Attorney General), State of Hawaii Department of Public Safety Sheriff's Department (Sheriff), and Securitas, an independent security contractor, to assist and provide security at HNL.

DOTA has a $33 million per year contract with Securitas, a security firm that provides the Airport with traffic control officers, security guards, and armed law enforcement officers (LEOs). The Securitas contract covers all airports in the Hawaii Airport System. The Securitas mission is to protect persons and property located in the Airport area, maintain the security of the Airport, work in coordination and in conjunction with other law enforcement and security personnel, and enforce all applicable laws, ordinances, rules and regulations. The Securitas airport security officers and traffic control officers will have to rely on the Sheriff's personnel to make arrests and remove the arrestee(s) from the airport.

At HNL, the Securitas contract is supplemented by a MOU with the Sheriff. The Sheriff's mission is similar to Securitas' mission. The Sheriff's Department works to protect all persons and airport property, maintain the security of HNL, and enforce all applicable laws and ordinances. The Sheriff provides 63 deputy sheriffs with arrest authority and 3 administrative positions. The Sheriff's Department LEOs do have arrest powers and the ability to remove suspects from the Airport. The Sheriff's MOU costs HNL approximately $4 million per year.

The Attorney General's MOU provides three full-time investigators who assist the Airport deputy sheriffs and investigate all felony crimes. It also provides one additional investigator supervisor, who provides on-call response, with standby pay, for a total of $250,000 per year. The Attorney General's MOU also funds a deputy attorney general (DAG) position at a salary of $90,000 per year. The DAG position's "primary duty will be to prosecute airport related felony cases."

Per the MOU between the DOTA and the Attorney General, the primary duty of the Attorney General is to assist the Sheriff's staff with handling and prosecuting criminal matters that occur at the Airport. The DOTA is funding three (3) investigators and one investigative supervisor's salaries and reimbursable costs. The DOTA will also fund standby pay for the supervisor and one investigator. The DOTA also funds a Deputy Attorney General at a federal reimbursement rate of $131 per hour rather than the state fully weighted (with benefits) actual rate of $42 per hour within the State of Hawaii. To require the DOTA to fund the State of Hawaii Attorney General's prosecution responsibilities is not a proper use of Airport revenues. The Sheriff and the Airport Security Manager agreed that there was not any reason for the Attorney General's investigators to supplement the skills and abilities already present with the Sheriff and the contract LEOs.

DOTA Response: Non-concurrence. DOTA has developed their airport security system based upon statutes and guidelines as determined by the Department of Homeland Security (DHS) and the Transportation Security Administration (TSA). Specifically, DOTA cites the Code of Federal Regulations (CFR), Title 49 Transportation, Part 1542 Airport Security (49 CFR Part 1542). Whereas the TSA regulates the security and law enforcement at all certificated airports. Each airport prepares and establishes an Airport Security Plan (ASP), which provides for the safety and security of persons and property on an aircraft operating in air transportation or intrastate air transportation against an act of criminal violence, aircraft policy, and the introduction of an unauthorized weapon, explosive, or incendiary onto an aircraft. The TSA reviews and approves all ASPs. DOTA believes the funding of the MOA for contracting Special Agent Investigators and Deputy Attorney General to prepare the prosecution of felony acts

committed on the airport and the existing security system is a part of the TSA's approval of the ASP.

FAA Conclusion: The FAA contacted the TSA's Office of Security Policy and Industry Engagement and the Attorney-Advisors, Pacific Rim, to determine if the TSA was requiring the DOTA fund the prosecution of crimes committed on any of the DOTA airports within the established ASPs. The FAA was informed that there is no language requiring the funding of prosecutions committed on the DOTA airports. Therefore, we stand with the initial recommendation that the DOTA should not be funding the prosecution of individuals committing crimes on the airports. Generally, the responsibility and prosecution of the criminal should shift to the jurisdiction of the county or state once the booking process is complete.

DOTA Response to FAA Conclusion: DOTA has a Memorandum of Understanding (MOU) with the Investigative Division and Criminal Division of the Department of the Attorney General, respectively for investigative and prosecutorial services, on a reimbursable basis to support the felony investigations being conducted by the Sheriffs Airport Detail at the HNL. As a result of the findings and recommendations, HNL is awaiting a written response from the City and County of Honolulu Prosecutor Keith M. Kaneshiro to determine if his office will accept felony investigations occurring at the Honolulu International Airport directly from the Sheriffs Airport Detail without any further investigative support from any third party and without any compensation for this service from his office. We will terminate the MOU with both the Investigative and Criminal Divisions of the Department of the Attorney General if Prosecutor Kaneshiro accepts cases directly from the Sheriffs Airport Detail.

Should the City Prosecutor's Office decline to accept felony investigations occurring at HNL, then DOTA will look into whose responsibility it is to prosecute airport felony cases without additional funding by DOTA.

FAA Final Comment: Concur. The FAA requests an update on City Prosecutor's Office decision.

Attachment 2 – Kahului Airport

Kahului Airport (OGG)

Overview

Several findings were noted at Kahului Airport (OGG). The findings at OGG are discussed in more detail below with FAA recommendations. DOTA has responded with their concurrence or non-concurrence, and their reasoning is briefly summarized. The FAA Final Comments are the response to *The Summary of Findings and Recommendations* section listed above, which discusses the final FAA recommendations and DOTA responses.

Uses of Airport Property and Leases

The Revenue Use Policy at Section VII requires airport sponsors to ensure their airports are as self-sustaining as possible under the circumstances at their airports. Accordingly, when a sponsor enters into a new or revised agreement, it should ensure the new rates are compatible with the self-sustainability requirement. In addition, the airport should refrain from entering into leases where the airport receives little or no compensation.

Based on FAA's review of 15 OGG lease agreements, two findings were noted: (1) Revocable Permits (RPs) were not awarded at fair market value, and (2) rent increases did not occur in accordance with airport policy or normal practice.

1. **Alexander & Baldwin, Inc.** Alexander & Baldwin have agreed to a land lease to grow sugar cane. The tenant currently pays $9,696 per year for 7,132,020 square feet of land, at a rate of $0.00135 per square foot per year. The rate has not been increased since the inception of the lease on July 12, 2007. According to the Schedule of Rates and Charges effective 8/13/2013 for OGG, the airport should be receiving an agricultural rate of $2.04 per square foot per year, which yields a payment of $14,549,320 per year.

   DOTA Response: Non-concurrence. The DOTA response indicated that if Alexander & Baldwin were assessed the $2.04 per square foot operations, they would be forced to cease operations. In 2014, DOTA obtained an appraisal for agricultural use of the property and determined a rate of $.05 up to 9.99 acres, $.02 for 10 to 49 acres, and $.01 for 50 or more acres.

   Alexander & Baldwin's current RP reflects the following:

   A. Lot-No.004-105 – contains an area of approximately 4,865,172 square feet of land (approx. 111-112 acres);
   B. Lot No. 008-130 – contains an area of approximately 363,900 square feet of land (approx. 8 acres).

      Current annual rentals: A. $6,600 and B. $516 for a total annual rental of $7,116.

   The new RP annual rental rates will reflect the 2014 rates as shown below:

   C. Lot-No.004-105 – contains an area of approximately 4,865,172 square feet of land (approx. 111-112 acres);
   D. Lot No. 008-130 – contains an area of approximately 363,900 square feet of land (approx. 8 acres).

      C. $48,652 (or $0.01 psfpa for more than 50 acres);
      D. $18,195 (or $.05 psfpa for up to 9.99 acres).

      The new annual rent will increase to $66,847.

   FAA Conclusion: We concur with the DOTA's corrective action plan. Rental rates will be adjusted to reflect appraised values for agricultural property. Please provide a copy of the 2014 appraisal, new RP, and provide a date when the increase has or will take effect.

   FAA Final Comment: Concur. DOTA has provided a copy of the 2014 appraisal and the new Revocable Permit No. 8243. The effective date of the rate increase is December 1, 2014.

2. **Alamo Rent-A-Car.** Alamo Rent-A-Car's (Alamo) lease agreement is for car rental operations at OGG. Alamo currently pays a monthly rate of $5,599 for approximately 54,188 square feet of improved paved land, which has not changed since the original agreement date of March 6, 2000. The lease contains a provision to increase the monthly

rental at any time upon thirty days advanced written notice. According to the Schedule of Rates and Charges, Alamo should be paying $2.20 per square foot car rental use on improved land, which yields approximately $9,934 per month.

DOTA Response: Non-concurrence. The DOTA response indicated that the $2.20 per square foot car rental use rate proposed by FAA and the Schedule of Rates and Charges is not appropriate for a parcel of unimproved, unpaved land. The lease agreement indicates Space No. 008127 contains an area of 54,188 square feet of improved/paved land. Alamo should be paying a rate of $1.86 per square foot instead of $2.20. Alamo is currently paying $1.76 per square foot per year. A 25% discount was allowed for "uneven surface, lack of water and sewer stub-outs" which yields $1.65 of the base $2.20 rate.

FAA Conclusion: DOTA did not provide enough information to concur or non-concur with the resolution of the finding. How is the 25% calculated and what is was it based on? Are other tenants with similar operations receiving the same discount? Alamo is currently underpaying. When does DOTA plan to increase Alamo's rate?

DOTA Response to FAA Conclusion: The DOTA has begun the process of updating the permit with the appropriate unimproved rental rate from the current schedule of rates and charges. It is anticipated that the process of issuing such a permit will take until June 30, 2015.

The permit did inaccurately characterized the property as improved, paved. However, there is a comment in the "***Purpose(s) section***" of the permit that reads, "… Rental rate is discounted 25% due to uneven surface, lack of water and sewer stub-outs." Therefore, the minimum discount was applied to this permit.

The minimum 25% reduction is based on the Airports Division Procedure 4.5 Rates and Charges. The Airports Division Procedure 4.5 Rates and Charges includes the following instructions with regard to unimproved land, "Unimproved Land is not graded and lacks utilities and paved access road. For unimproved land at all airports, discount improved unpaved rates by 25 to 50 percent depending on distance to utilities and paved access road."

This language has been included in every schedule of rates and charges since August 1, 1987.

Since the Airports Division Procedure 4.5 Rates and Charges talks about distance from utilities and paved access roads, it is difficult to set a standard. Is it 25-feet from paved access road and 25-feet from utilities? Alternatively, are utilities less of a concern, so it could be 25-feet from paved access road and 50- feet from utilities? What if it is only 15 feet from a paved access road, but the ground turns into a mud bog every time it rains? There are excessively many combinations of variables, particularly in the case of ground conditions, to be able to create a table that applies across the board. In this case, the Alamo location is approximately 300

to 600 feet from the nearest paved access road.

FAA Final Comment: Concur. The FAA requests a copy of the new parking permit for Alamo Rent-A-Car.

3. **Overflow Rental Car Space.** OGG allows rental car companies to park their unrented vehicles on airport property for $1.30 per day. However, the process is based on the honor system, with the expectation that the rental car company will report the number of vehicles parked in its designated area per month. The payments are not verified for accuracy by OGG. The lack of oversight and controls does not ensure OGG is generating maximum revenue.

   DOTA Response: The DOTA did not respond to the finding made by the FAA.

   FAA Conclusion: We recommend OGG obtain an appraisal for the designated areas and charge an appropriate FMV rental rate. In addition, OGG should implement an oversight process and controls to verify that the airport is accurately paid.

   DOTA Response to FAA Conclusion: The DOTA is beginning the process of issuing parking permits to cover these areas and charging square footage rent. It is anticipated the issuance of new permits with the new, increased rate will be completed by June 30, 2015.

   Revocable Permit No. 5896, currently at $1.65, will be re-issued new revocable permit at the new rate of $3.00.

   FAA Final Comment: Concur. The FAA requests copies of new parking permit issued.

4. **Utility Costs.** Utility Costs are not being charged to tenants with RPs, including T-hangar tenants. Airport management advised the FAA that OGG does not, as a matter of practice, attempt to recover utility costs (water, electric, or sewer, etc.) from its tenants.

   DOTA Response: The DOTA did not respond to the finding made by the FAA.

   FAA Conclusion: DOTA should be including the utility costs into the lease agreements to recover the full cost of providing leasing services.

   DOTA Response to FAA Conclusion: In April 2014, the DOTA began charging tenants at ITO and LIH. At HNL, OGG and KOA, DOTA is in the process of preparing the required notices to T-Hanger tenants to recover the costs for utilities (electricity and water). The date to begin charging the T-Hangar tenants for utilities is established as July 1, 2015.

   FAA Final Comment: Concur. The FAA requests a copy of a notice to tenants for utility charges.

5. **T-Hangar Space Usage.** During the perimeter tour, the review team noted some tenants were using their T-hangar spaces for maintenance-type operations. It is unclear as to whether this maintenance is for aeronautical or non-aeronautical purposes.

   DOTA Response: The DOTA did not respond to the finding made by the FAA.

   FAA Conclusion: OGG needs to determine whether the rental space is being used for aeronautical or nonaeronautical maintenance and have the vendors/tenants sign the appropriate type of lease agreement. If the maintenance is performed on aircraft solely, OGG should develop aeronautical lease rates for commercial leases for aircraft maintenance. Rental space used for non-aeronautical maintenance should be charged an appropriate FMV rental rate at the earliest legal opportunity.

   DOTA Response to FAA Conclusion: DOTA has performed a physical audit to ensure tenants are in compliance with T-Hangar usage. It should also be noted that DOTA began performing continuous compliance inspections and issuing citations in March 2013. The DOTA is in the process of developing appropriate notices and guidelines to be sent to all T-hangar tenants.

   To accomplish this, DOTA will follow the action plan shown below.

   Action Plan:

   HRS § 261-7(e) provides a mechanism for the DOTA to set airports rates and charges based on commercial aeronautical use following publication of the rates and charges and conduct of public informational hearings. When airports rates and charges are set in this manner, the DOTA is obligated to report the circumstances and resulting rates and charges to the Legislature.

   Since this is a new rate for commercial aeronautical activities for T-Hangars, DOTA will establish 10% of gross receipts as the beginning rate for this activity from T-Hangars and will conduct an assessment on an annual basis to determine if this is a fair and equitable rate and, if appropriate, adjust the rate as necessary.

   The DOTA's plan to meet the intent of §261-7 (e) is to do the following:

   1. Brief key legislators (Senate President Donna Mercado Kim, Speaker of the House Joseph M. Souki, Senator Clarence K. Nishihara, Chair of the Senate Transportation Committee, and Representative Henry J.C. Aquino, Chair of the House Transportation Committee) on the FAA Findings and Recommendation, the use of §261-7(e) to establish rates for commercial activities from T-Hangars with an effective date of June 30, 2015, proposed schedule for public informational hearings, and the submission of a final report to the

Legislature.

Estimated Completion Date: March 2, 2015.

2. Conduct Public Informational Hearings on each island (Oahu, Hawaii, Kauai, and Maui) for the proposed rates for commercial activities from T-Hangars effective June 30, 2015.

   Estimated Completion Date: March 31, 2015.

3. DOTA will notify President Mercado Kim, Speaker Souki, Senator Nishihara and Representative Aquino via written correspondence of the results of the public informational hearings held on each island to establish rates for commercial activities from T-Hangars, including the effective date of the rates of June 1, 2015.

   Estimated Completion Date: April 10, 2015.

4. Provide written notice to the public and tenants of the airports facility of the rates and effective date for a 30-day period.

   Estimated Completion Date: May 30, 2015.

5. Implement the effective rate by issuing 30 days written notice terminating RP's to tenants conducting commercial activities from T-Hangars with an offer to execute new RP's with the rates for commercial activities from T-Hangars within the 30-day timeframe; or when prospective new tenants are interested in acquiring a T-Hangar to conduct commercial activities.

   Estimated Completion Date: June 1, 2015.

6. Submit a report the Legislature on the use of §261-7 (e) and implementation of the new rates for commercial activities from T-Hangars.

   Estimated Completion Date: June 15, 2015.

7. Renew all T-Hangar RP's based on the rates for commercial aeronautical activities on annual basis.

- **FAA Final Comment: Concur.** The FAA requests sample documentation to substantiate implementation of action plan.

6. Free Administrative Space to Federal Government Agencies. USDA Wildlife Services and TSA have offices located on OGG property. The OGG staff advised that TSA and USDA do not pay rental fees for their administrative spaces. It is unclear

whether the amount of space used is more than a desk or small administrative area. If this is the case, then TSA and USDA should be paying a reasonable rate for use of the space.

DOTA Response: Non-concurrence. DOTA's response indicated that TSA pays for space with the only exception at OGG where TSA is temporarily allowed to use space due to ongoing construction activities to expand the checkpoint and other TSA areas. In addition, you indicated that USDA uses the space for airport operational needs. The USDA Wildlife Services, USDA Plant Protection & Quarantine Cooperative Service Agreement states that OGG "will provide ample office and storage space at Kahului Airport to accommodate seven APHIS-WS personnel, seven APHIS-WH vehicles, operational supplies, equipment and one telephone line for APHIS- WS operational activities".

APHIS-WS had made major repairs to the roof of the building to be considered as an offset to rental fees. In consideration for their investment, USDA's rental rate has been forgiven.

FAA Conclusion: We request DOTA provide a schedule of USDA's costs for major repairs to support the in-kind costs of $1.5 million. If FAA determines the schedule of costs to support the repairs, the DOTA needs to provide a plan to ensure that they receive a reasonable rent after the $1.5 million has been offset.

DOTA Response to FAA Conclusion: Copies of a summary schedule showing the offset of rent with capital improvements to building and the USDA property leases were provided by DOTA.

FAA Final Comment: Concur. The capital improvement costs did provide offsets to the appropriate rental charges. We will follow up on the property rent revenues upon the termination of the offsets of the capital improvements.

Marketing.

The marketing findings are consistent with the marketing summary disclosed in the Executive Summary on page 6 of this report. There are no findings localized to Kahului Airport.

Art in Public Places

There were no irregularities noted with the art program at OGG with regard to the Revenue Use Policy.

Attachment 3 – Hilo International Airport

Hilo International Airport (ITO)

Overview

Several findings were noted at Hilo International Airport (ITO). These findings are discussed in more detail below with FAA recommendations and DOTA response. The DOTA has responded with their concurrence or non-concurrence, and their reasoning is briefly summarized. The FAA Final Comments are the response to *The Summary of Findings and Recommendations* section listed above, which discusses the final FAA recommendations and DOTA responses.

Uses of Airport Property and Leases.

The Revenue Use Policy at Section VII requires airport sponsors to ensure their airports are as self-sustaining as possible under the circumstances at their airports. Accordingly, when a sponsor enters into a new or revised agreement, it should ensure the new rates are compatible

with the self-sustainability requirement. In addition, the airport should refrain from entering into leases where the airport receives little or no compensation.

Based on FAA's review of 15 ITO short term leases agreements, three findings were noted: (1) RPs were not awarded at FMV, (2) rent increases did not occur in accordance with airport policy or normal practice, and (3) copies of the lease agreements were not provided to EY. In addition, we suggest ITO consider using a lease agreement rather than an RP for long-term leases (more than 12 months).

Land rental to, or use of land for non-aeronautical purposes at less than fair market value rent, except to the extent permitted by Section VII.D of the Revenue Use Policy, is prohibited.[4]

1. **Hawaii Fuel Facilities**. This lease was awarded in 1999, and the rate has not increased since inception of the agreement. Hawaii Fuel Facilities is paying $3,663 per month for 63,706 square feet, which yields approximately $0.69 per square foot. For this type of aeronautical activity, Hawaii Fueling Facilities should be paying $0.95 per square foot for industrial improved land use based on the DOTA's schedule of rates and charges for ITO.

   DOTA Response: The DOTA did not respond to the finding made by the FAA.

   FAA Conclusion: The Revenue Use Policy requires DOTA to ensure it increases Hawaii Fuel Facilities rental rates to levels that are compatible with other aeronautical users, at the earliest legal opportunity.

   DOTA Response to FAA Conclusion: The DOTA is in the process of issuing a new Revocable Permit. DOTA provided a copy of their correspondence with Hawaii Fueling Facilities Corporation. The new RP will increase the rent to reflect the fair market rental rate and includes recovery of utilities. The new revocable permit and rent increase is scheduled to be in place no later than June 30, 2015.

   FAA Final Comment: Concur. Please provide a copy of the new RP.

2. **Helicopter Consultants of Maui**. We were not provided this lease agreement and could not validate the amount of square footage being used by Helicopter Consultants of Maui (Helicopter Consultants). Without knowing the actual square footage of the lease, we could not confirm whether Helicopter Consultants' current payment is reasonable. Helicopter Consultants should be paying the stated rate in the schedule of rates and charges for this type of aeronautical activity. They are currently paying $222 per month, which seems unusually low compared to other aeronautical users.

   DOTA Response: The DOTA did not respond to the finding made by the FAA.

   FAA Conclusion: We request ITO to provide us a copy of the agreement and certify Helicopter Consultants is paying an appropriate aeronautical rate. If Helicopter

[4] FAA Policy and Procedure Concerning the Use of Airport Revenue, Section VII.D, page 7720.

Consultants is paying a rate less than what is prescribed in the schedule of rates and charges, ITO needs to increase the rate at the earliest legal opportunity.

DOTA Response to FAA Conclusion: The DOTA is beginning the process of issuing new parking permits to cover these areas and charging square footage rent. It is anticipated that the issuance of new permits at the increased rate will be completed by July 1, 2015.

Issuance of new Revocable Permits and Parking Permits requires the following actions:

1. Notification to tenant that a new Revocable Permit will be issued.
2. Filing of all appropriate documents by the tenant with DOTA.
3. Submittal to the Board of Land and Natural Resources (Land Board).
4. Approval by the Land Board
5. Execution of the RP by (in this order) tenant, Director of Transportation, and Land Board Chair.

The earliest the process can be completed is by June 30, 2015.

FAA Final Comment: Concur. The FAA requests a copy of the new RP.

3. **Wesley R. Segawa.** The lease agreement was not provided to the FAA; therefore, we were not able to validate the square footage or other lease terms. Wesley R. Segawa & Associates are civil engineers performing a non-aeronautical activity at ITO.

DOTA Response: Non-concurrence. The DOTA response indicated that since the DOTA provides office space free of charge, the overhead multiplier has been reduced to 2.67 for the duration of the contract to compensate for the office fees not paid.

FAA Conclusion: We request ITO provide us with a copy of the agreement to confirm Wesley R. Segawa & Associates is paying an appropriate non-aeronautical rental rate. If Wesley R. Segawa & Associates is paying a rate less than what is prescribed for non-aeronautical uses in the schedule of rates and charges, ITO needs to increase the rate at the earliest legal opportunity.

DOTA Response to FAA Conclusion: DOTA is not losing revenue by providing free office space to their construction management contractor, Wesley R. Segawa & Associates.

As stated previously, DOTA reduced the contract overhead multiplier of Segawa & Associates for the duration of their contract. Without a reduction in the multiplier from the standard DOTA rate of 3.0 to 2.67, DOTA would have to pay additional overhead costs to the contractor in the amount of $63,407 for the 3-year period (fiscal years 2011-2013).

The amount of rent that DOTA would have charged to Segawa for this space is

$11,495 per year for a total of $34,485 for the 3-year period.

The amount of overhead at the 3.0 rate the DOTA would have to pay to Segawa & Associates is $97,892. This would have resulted in the DOTA paying an additional $63,407 in overhead costs to Segawa.

It is for this reason that the State (DOTA) provides office space at no cost to Segawa for the term of their construction management contract. Upon completion of the State's Project No. AH1061-13 and completion of Contract No. 56673, Wesley R. Segawa & Associates will vacate the space.

DOTA attached a summary sheet showing the difference between the current rental rates for the office space currently occupied by Segawa versus the amount of increased overhead expenses the contractor would be entitled to charge the DOTA based on the normal multiplier of 3.0 allowed by DOTA policy.

DOTA provided copies of the following documents to substantiate their determination of offset to rent:

1. Calculation of Rent Exclusion versus the increased DOTA Overhead Costs.
2. Internal audit of the contract multiplier for Segawa (DOTA Memorandum No. AIR-AF 14.0240 dated October 24, 2014.
3. Revocable Permit No. 8265.
4. Copy of page 1 of Attachment S1 the Scope of Services included in the construction management contracts for Project No. AH1061-13.

FAA Final Comment: Concur.

4. **Overflow Rental Car Space.** ITO allows rental car companies to park their unrented vehicles on airport at no charge. The lack of oversight and controls does not ensure ITO is generating maximum revenue.

   DOTA Response: The DOTA did not respond to the finding made by the FAA.

   FAA Conclusion: ITO should charge fair market value for the use of airport property for parking unrented vehicles. ITO needs to determine the amount of rental space used for the vehicles parked at the airport and charge an appropriate rate at the soonest legal opportunity.

   DOTA Response to FAA Conclusion: The DOTA is beginning the process of issuing parking permits to cover these areas and charging square footage rent. It is anticipated that the issuance of new permits with the increased rate will be completed by June 30, 2015. Parking Permit No. PP-13-S256 currently at $0.83 PSFPA will be increased to $1.10 PSFPA.

FAA Final Comment: Concur. The FAA will follow-up to determine implementation status. Please provide a copy of the new RP.

5. **Utility Costs.** Utility Costs are not being charged to tenants with Revocable Permits, including T-hangar tenants. Airport management advised FAA that ITO does not attempt to recover utility costs (water, electric, or sewer, etc.) from its tenants normally.

   DOTA Response: The DOTA did not respond to the finding made by the FAA.

   FAA Conclusion: ITO needs to recoup the costs for providing utilities to T-hangar and other tenants who currently benefit from these services. Analysis for the new rate should include cost of new meters and monthly charges based on historic usage.

   DOTA Response to FAA Conclusion: In April 2014, the DOTA began charging tenants in ITO and LIH. At HNL, OGG and KOA, DOTA is in the process of preparing the required notices to T-Hanger tenants for the costs of utilities (electricity and water). The date to begin charging the T-Hanger tenants for utilities is established as July 1, 2015.

   FAA Final Comment: Concur. The FAA will follow-up to determine implementation status. Please provide a sample copy of new lease when available.

6. **T-Hangar Space Usage.** During the perimeter tour, the review team noted some tenants were using their T-hangar spaces for maintenance-type operations. It is unclear as to whether this maintenance is for aeronautical or non-aeronautical purposes.

   DOTA Response: The DOTA did not respond to the finding made by the FAA.

   FAA Conclusion: ITO needs to determine whether the rental space is being used for aeronautical or nonaeronautical maintenance and sign the vendors/tenants to the appropriate type of lease agreement. If the maintenance is being performed on aircraft, ITO should develop aeronautical lease rates for commercial leases for aircraft maintenance. Rental space used for non-aeronautical maintenance should be charged the appropriate FMV rental rate at the earliest legal opportunity.

   DOTA Response to FAA Conclusion: DOTA has performed a physical audit to ensure tenants are in compliance with T-Hangar usage policy. It should also be noted that DOTA began performing continuous compliance inspections and issuing citations in March 2013. The DOTA is in the process of developing appropriate notices and guidelines to be sent to all T-hangar tenants.

   To accomplish this, DOTA will follow the action plan shown below.

   Action Plan:

   HRS § 261-7 (e) provides a mechanism for the DOTA to set airports rates and

charges following publication of the rates and charges and conduct of public informational hearings. When airports rates and charges are set in this manner, the DOTA is obligated to report the circumstances and resulting rates and charges to the Legislature.

Since this is a new rate for commercial aeronautical activities from T-Hangars, DOTA will establish 10% of gross receipts as the beginning rate for this activity from T-Hangars and will conduct an assessment on an annual basis to determine if this is a fair and equitable rate and, if appropriate, adjust the rate as necessary.

The DOTA's plan to meet the intent of §261-7 (e) is to do the following:

1. Brief key legislators (Senate President Donna Mercado, Kim, Speaker of the House Joseph M. Souki, Senator Clarence K. Nishihara, Chair of the Senate Transportation Committee, and Representative Henry J.C. Aquino, Chair of the House Transportation Committee) on the FAA Findings and Recommendation, the use of §261-7(e) to establish rates for commercial activities from T-Hangars with an effective date of June 1, 2015, proposed schedule for public informational hearings, and the submission of a final report to the Legislature.

   Estimated Completion Date: March 2, 2015.

2. Conduct Public Informational Hearings on each island (Oahu, Hawaii, Kauai, and Maui) for the proposed rates for commercial activities from T-Hangars effective June 1, 2015.

   Estimated Completion Date: March 31, 2015.

3. DOTA will notify President Mercado Kim, Speaker Souki, Senator Nishihara and Representative Aquino via written correspondence of the results of the public informational hearings held on each island to establish rates for commercial activities from T-Hangars, including the effective date of the rates of June 1, 2015.

   Estimated Completion Date: April 10, 2015.

4. Provide written notice to the public and tenants of the airports facility of the rates and effective date for a 30-day period.

   Estimated Completion Date: May 30, 2015.

5. Implement the effective rate by issuing 30 days written notice terminating RP's to tenants conducting commercial activities from T-Hangars with an offer to execute new RP's with the rates for commercial activities from T-Hangars

within the 30-day timeframe or when prospective new tenants are interested in acquiring a T-Hangar to conduct commercial activities.

Estimated Completion Date: June 1, 2015.

6. Submit a report to the Legislature on the use of §261-7 (e) and implementation of the new rates for commercial activities from T-Hangars.

   Estimated Completion Date: June 15, 2015.

7. Renew all T-Hangar RP's based on the rates for commercial aeronautical activities on an annual basis.

DOTA provided a copy of State Memorandum No. AIR-A 15.022 dated February 11, 2015.

FAA Final Comment: Concur. The FAA will follow-up to determine status of implementation of adjusted rates. Please provide sample documentation to substantiate implementation of the action plan detailed above.

Marketing.

The marketing findings are consistent with the marketing summary disclosed on page 6 of the Executive Summary above. There are no findings that are localized to ITO.

Art in Public Places.

The FAA found no irregularities with the art program at ITO that do not comply the Revenue Use Policy.

Attachment 4 – Kona Airport

Kona International Airport (KOA)

Overview

Several findings were noted at Kona International Airport (KOA) during the review of DOTA. These findings are discussed in more detail below with FAA recommendations and DOTA response. The DOTA has responded with their concurrence or non-concurrence, and their reasoning is briefly summarized. The FAA Final Comments are the response to *The Summary of Findings and Recommendations* section listed above, which discusses the final FAA recommendations and DOTA responses.

Uses of Airport Property and Leases.

The Revenue Use Policy at Section VII requires airport sponsors to ensure their airports are as self-sustaining as possible under the circumstances at their airports. Accordingly, when a sponsor enters into a new or revised agreement, it should ensure the new rates are compatible with the self-sustainability requirement. In addition, the airport should refrain from entering into leases where the airport receives little or no compensation.

Based on our review, three findings, as well as other property related findings, were noted at KOA, and one finding was noted at the DOTA level. (1) Leases were not awarded at FMV, (2) Three leases did not have rent increases in accordance with airport policy and/or normal practice, (2) Three leases were not filed in the lease folder and/or KOA was not able to locate the file. Two leases did not appear to have a formal agreement in place.

1. **Aeko Kula, Inc. /SWFC.** The lease agreement was not provided to the FAA; therefore, we were not able to validate the square footage or the amount of rent paid. Aeko Kula, Inc. /SWFC (Aeko) provides cargo services at the airport and is pays a rental rate of $800 per month.

   DOTA Response: DOTA indicated that the lease agreement was located and certified Aero Kula is being billed $5,511.56 monthly for its space. The rate will be adjusted to the current rate by January 1, 2015.

   FAA Conclusion: We request a copy of the lease agreement between Aeko Kula and DOTA to confirm Aeko Kula is paying an appropriate aeronautical rate. If Aeko Kula is paying a rate less than what is prescribed for aeronautical uses in the schedule of rates and charges, KOA needs to increase the rate as soon as it is legally possible.

   DOTA Response to FAA Conclusion: DOTA was unable to adjust the lease rate by January 1, 2015, due to the change in administration in the State of Hawaii.

   The DOTA is beginning the process to issue a new RP permit with the new, increased rate to be completed by June 1, 2015.

   Issuance of new Revocable Permits and Parking Permits requires the following actions:
   1. Notification to tenant that a new Revocable Permit will be issued.
   2. Filing of all appropriate documents by the tenant with DOTA.
   3. Submittal to the Board of Land and Natural Resources (Land Board).
   4. Approval by the Land Board
   5. Execution of the RP by (in this order) tenant, Director of Transportation, and Land Board Chair.

   The earliest the process can be completed is by June 30, 2015.

   DOTA provided the requested copy of Revocable Permit No. RP-6733**.**

   FAA Final Comment: Concur. FAA will follow-up to determine status of implementation of updated lease rates.

2. **Direct Freight Service Hawaii, Inc.** In 2006, a parking permit was issued for 10,000 square feet of paved surface for storage of container trailers at a rental rate of $587.33/month. The average KOA parking stall is usually 250 square feet, which is equivalent to 40 parking stalls in this case. According to the 2007 Schedule of Rates and Charges, the automobile parking stalls rate for uncovered parking is $70 per month. Therefore, the monthly rate should have been $2,800 per month (40 parking stalls X $70 per month for each parking stall) instead of $587.33 per month. The rate has not been increased since the inception of the lease. We believe Direct Freight was under billed $180,960 for 80 months calculated at the 2007 rate and 7 months calculated at the 2014 rental rate.

DOTA Response: DOTA responded that Direct Freight is charged for bulk land at a rate of $0.70 per square foot. The land is undeveloped because there are no utilities in place. This would revise the calculation to $583.33/month instead of the $587.33/month that they are currently paying. The rate is based on the established Rates and Charges.

FAA Conclusion: We recommended that KOA revise the lease agreement and increase the rate as soon as it is legally possible. The FAA was unable to locate the $0.70 per sq. foot rate on the Schedule of Rates and Charges. The DOTA needs to provide supporting documentation for the rate.

DOTA Response to FAA Conclusion: Since these findings, the tenant was found in default and ordered to vacate effective September 5, 2014. The lease has expired effective October 31, 2014. KOA Airport Assistant Supervisor will confiscate abandoned property and prepare for disposal as allowed by law. As of February 11, 2015, the KOA Airport Assistant Supervisor has been provided instructions by the Attorney General's Office concerning disposition of DFS abandoned property via public auction.

FAA Final Comment: Concur. The FAA will follow-up to determine if the tenant's abandoned property was auctioned and the disposition of revenues received by the DOTA.

3. **Federal Express Corporation-KOAFC.** The lease agreement with Federal Express is for cargo parking spaces at KOA. Federal Express currently pays a rate of $2,360. Documentation received from the State of Hawaii indicates the rate was scheduled to increase to $2,940 per month starting April 2012, but it has not been increased.

   DOTA Response: DOTA did not provide a response to this finding made by the FAA.

   FAA Conclusion: We recommended that KOA revise the rental rate as soon as it is legally possible to reflect fair market value.

   DOTA Response to FAA Conclusion: The DOTA is beginning the process to issue a new RP permit with the new, increased rate to be completed by June 1, 2015.

   Issuance of new Revocable Permits and Parking Permits requires the following actions:
   1. Notification to tenant that a new Revocable Permit will be issued.
   2. Filing of all appropriate documents by the tenant with DOTA.
   3. Submittal to the Board of Land and Natural Resources (Land Board).
   4. Approval by the Land Board
   5. Execution of the RP by (in this order) tenant, Director of Transportation, and Land Board Chair.

   The earliest the process can be completed is by June 30, 2015.

FAA Final Comment: Concur. FAA will follow-up to determine status of implementation of updated lease rates.

4. **Alamo Rental, Inc.** The lease agreement with Alamo-Rent-a-Car is for car rental operations at KOA. Alamo currently pays a monthly rate of $4,281.87 for approximately 65,041 square feet of improved/paved land, which has not changed since the origination of the agreement on July 13, 1998. The lease contains a provision to increase the monthly rental at any time upon thirty days advanced written notice. According to the Schedule of Rates and Charges, Alamo should be paying $1.23 per square foot for car rental use on improved land, which yields approximately $6,666 per month.

   DOTA Response: DOTA did not provide a response to this finding made by the FAA.

   FAA Conclusion: We recommend KOA revise the lease agreement to adjust the rental rate to the appropriate level per the Schedule of Rates and Charges at the earliest legal opportunity.

   DOTA Response to FAA Conclusion: The DOTA is beginning the process to issue a new RP permit with the new, increased rate to be completed by June 1, 2015.

   Issuance of new Revocable Permits and Parking Permits requires the following actions:
   1. Notification to tenant that a new Revocable Permit will be issued.
   2. Filing of all appropriate documents by the tenant with DOTA.
   3. Submittal to the Board of Land and Natural Resources (Land Board).
   4. Approval by the Land Board
   5. Execution of the RP by (in this order) tenant, Director of Transportation, and Land Board Chair.

   The earliest the process can be completed is by June 30, 2015.

   FAA Final Comment: Concur. The FAA will follow-up to determine status of implementation of updated lease rates.

5. **Onizuka Space Center.** This space center museum was established at KOA in the 1990s after native Hawaiian Astronaut Ellison S. Onizuka was killed in the Challenger Space Shuttle disaster. There is no lease agreement for the museum. In addition, the museum pays no rent and the utilities charges are not being recouped by KOA. In addition, no portion of the $1-$3 entry fees is shared with the airport. According to the Deputy Director Airports Division, the airport is in the process of relocating the museum.

   DOTA Response: DOTA did not provide a response to this finding made by the FAA.

FAA Conclusion: The Onizuka Space Center should be charged a non-aeronautical FMV rental rate. If the museum is not relocated, we recommend KOA develop a lease agreement at the earliest legal opportunity.
DOTA Response to FAA Conclusion: The relocation of the Onizuka Space Center has been cancelled. The Onizuka Space Center will be demolished as part of a terminal modernization project. The DOTA will not provide any replacement facility.

The current anticipated start of construction of the KOA Modernization Program is May 2016. The Onizuka Memorial Committee has requested six months of notice to vacate which would set the tenancy end date at October 31, 2015.

FAA Final Comment: Concur. The FAA will follow-up to determine status of the vacated status of the Onizuka Space Center.

6. **National Energy Lab.** We were not provided the lease agreement for the National Energy Lab. A lease agreement with the Hawaii Department of Land and Natural Resources (DLNR) and the National Energy Lab does exist, but KOA was not able to provide a lease agreement between the DOTA and National Energy Lab. Therefore, we could not validate any of the lease terms including the square footage occupied, duration of lease agreement, or the rental rate being charged.

DOTA Response: DOTA did not provide a response to this finding made by the FAA.

FAA Conclusion: We request a copy of the lease agreement between DOTA and National Energy Lab to confirm that a lease agreement does exist and the terms of the agreement for our review. If National Energy Lab is paying a rate less than what is prescribed for non-aeronautical uses in the schedule of rates and charges, KOA needs to increase the rate at the earliest legal opportunity. Title 49 USC 47107(n) includes a statute of limitations that allows the recovery of funds illegally diverted up to six years after the illegal diversion occurs.

DOTA Response to FAA Conclusion: Please note the correct name is "Natural Energy Laboratory of Hawaii Authority (NELHA). There is no lease agreement between the DOTA and NELHA.

As DLNR is the overall land management office for the State of Hawaii, no formal documentation was ever completed to allow DLNR to remove those questioned parcels of land previously assigned to Airports Division. Subsequently DLNR formalized lease agreements with NELHA. At that time, NELHA was a state agency under the direction of DLNR. Under Act 236, Session Laws of Hawaii 1974 established NELHA as a State Agency. A copy of the latest Airport Layout Plan approved by the FAA on December 10, 2012 was provided showing the NELHA property outside of the airport boundary (land west of the airport boundary).

The NELHA site is state land and has always been state land. No federal funds were used for the purchase of, nor any improvements within, those questioned

parcels of land.

The DOTA is awaiting an opinion from the State Attorney General on the intent of the language in the Governor's Executive Order No. 3074 to determine who has control over the those questioned parcels.

Pending the Attorney General's decision, DOTA will pursue a corrective action. Any formal action taken may require the review and approval of the State legislature, which may take as long as one year to obtain the legislative approvals for land release, transfer or Governor's Executive Order.

Our current timeline to accomplish the final resolution of the status of NELHA lands is shown below.

Between February 1 and March 1, 2015, DOTA reviewed all historical documentation related to the Natural Energy Laboratory of Hawaii Authority including all enacted laws, Governor Executive Orders, leases and all related documentation.

On March 12, 2015, a meeting was held with DLNR staff. At the meeting with DLNR, it was disclosed that no revenues have ever been collected by DLNR from NELHA. Moreover, to the best of their knowledge, there is no documentation releasing the NELHA lands from DOTA to DLNR.

FAA Final Comment: The FAA will follow-up to determine the status of rightful ownership of the property occupied by NELHA.

7. **Overflow Rental Car Space.** KOA allows rental car companies to park their unrented vehicles on airport property for less than fair market value.

   DOTA Response: DOTA did not provide a response to this finding made by the FAA.

   FAA Conclusion: KOA should charge FMV for the use of airport property for parking unrented vehicles. In addition, the airport should consider implementing oversight and controls to verify that the airport is being paid accurately.

   DOTA Response to FAA Conclusion: The DOTA is beginning the process of issuing parking permits to cover these areas and charging square footage rent. It is anticipated the issuance of new permits with the new increased rates will be completed by June 30, 2015.

   FAA Final Comment: Concur. FAA will follow-up to determine the status of the issuance of new permits reflecting new rates.

8. **Utility Costs.** Utility Costs were not charged to tenants with RPs including T-hangar tenants. Airport management advised the FAA that KOA does not attempt to recover utility costs (water, electric, or sewer, etc.) from its tenants.

   DOTA Response: DOTA did not provide a response to this finding made by the FAA.

   FAA Conclusion: Unless the airport tenant leases explicitly state that utilities are included in the rental rates, the airport should be recouping the costs for providing utilities to T-hangar and other tenants who currently benefit from these services, but do not pay for them.

   DOTA Response to FAA Conclusion: In April 2014, the DOTA began charging tenants at ITO and LIH for utility costs. At HNL, OGG and KOA, DOTA is in the process of preparing the required notices to T-Hanger tenants to recover the costs for utilities (electricity and water). The date to begin charging the T-Hanger tenants for utilities is established as July 1, 2015.

   FAA Final Comment: Concur. The FAA will follow-up to determine if utility costs are recovered in lease agreements.

9. **Non-aeronautical Use of T-Hangar Space.** Some tenants are using their T-hangar spaces for maintenance-type operations. It is unclear as to whether this maintenance is for aeronautical or non-aeronautical purposes.

   DOTA Response: DOTA did not provide a response to this finding made by the FAA.

   FAA Conclusion: KOA needs to determine the amount of space used for non-aeronautical maintenance and charge an appropriate rental rate as soon as it is legally possible.at the soonest opportunity.

   DOTA Response to FAA Conclusion: DOTA has performed a physical audit to ensure tenants are in compliance with T-Hangar usage. It should also be noted that DOTA began performing continuous compliance inspections and issuing citations in March 2013. The DOTA is in the process of developing appropriate notices and guidelines to be sent to all T-hangar tenants.

   To accomplish this, DOTA will follow the action plan shown below:

   Action Plan:

   HRS § 261-7 (e) provides a mechanism for the DOTA to set airports rates and charges following publication of the rates and charges and conduct of public informational hearings. When airports rates and charges are set in this manner, the DOTA is obligated to report the circumstances and resulting rates and charges to the Legislature.

Since this is a new rate for commercial aeronautical activities from T-Hangars, DOTA will establish 10% of gross receipts as the beginning rate for this activity from T-Hangars and will conduct an assessment on an annual basis to determine if this is a fair and equitable rate and, if appropriate, make adjust the rate as necessary.

The DOTA's plan to meet the intent of §261-7 (e) is to do the following:

1. Brief key legislators (Senate President Donna Mercado, Kim, Speaker of the House Joseph M. Souki, Senator Clarence K. Nishihara, Chair of the Senate Transportation Committee, and Representative Henry J.C. Aquino, Chair of the House Transportation Committee) on the FAA Findings and Recommendation, the use of §261-7(e) to establish rates for commercial activities from T-Hangars with an effective date of June 1, 2015, proposed schedule for public informational hearings, and the submission of a final report to the Legislature.

   Estimated Completion Date: March 2, 2015.

2. Conduct Public Informational Hearings on each island (Oahu, Hawaii, Kauai, and Maui) for the proposed rates for commercial activities from T-Hangars effective June 1, 2015.

   Estimated Completion Date: March 31, 2015.

3. DOTA will notify President Mercado Kim, Speaker Souki, Senator Nishihara and Representative Aquino via written correspondence of the results of the public informational hearings held on each island to establish rates for commercial activities from T-Hangars, including the effective date of the rates of June 1, 2015.

   Estimated Completion Date: April 10, 2015.

4. Provide written notice to the public and tenants of the airports facility of the rates and effective date for a 30-day period.

   Estimated Completion Date: May 30, 2015.

5. Implement the effective rate by issuing 30 days written notice terminating RP's to tenants conducting commercial activities from T-Hangars with an offer to execute new RP's with the rates for commercial activities from T-Hangars within the 30-day timeframe or when prospective new tenants are interested in acquiring a T-Hangar to conduct commercial activities.

   Estimated Completion Date: June 1, 2015.

6. Submit a report to the Legislature on the use of §261-7 (e) and implementation of the new rates for commercial activities from T-Hangars.

   Estimated Completion Date: June 15, 2015.

7. Renew all T-Hangar RP's based on the rates for commercial aeronautical activities on an annual basis.

   DOTA provided a copy of State Memorandum No. AIR-A 15.022 dated February 11, 2015.

FAA Final Comment: Concur. The FAA will follow-up to determine status of implementation of adjusted rates.

10. Free Administrative Space to Federal Government Agencies. TSA has offices located on KOA property. The KOA staff advised the EY team that TSA does not pay rental fees for their administrative spaces. We were not provided a copy of the lease agreement to determine the amount of rental space and rental rates negotiated with TSA.

DOTA Response: DOTA did not provide a response to this finding made by the FAA.

FAA Conclusion: We request a copy of the lease agreement between KOA and TSA to determine the amount of space used and the appropriate rental rate.

DOTA Response to FAA Conclusion: As requested copies of the RPs between DOTA and TSA at KOA were provided as listed below:

a. Revocable Permit No. 8028 dated November 2, 2012 (2 pages)
b. Notice of Termination No. 8409 effective April 30, 2014 for RP 8028 (1 page)
c. Revocable Permit No. 8158 dated May 1, 2014 (2 pages)

There is an additional small office space located on the second floor of the Administration Building at KOA currently in use by TSA without a current RP. The DOTA is beginning the process to issue an RP for this smaller office space, which is scheduled to be completed by July 1, 2015.

Issuance of new Revocable Permits and Parking Permits requires the following actions:

1. Notification to tenant that a new Revocable Permit will be issued.
2. Filing of all appropriate documents by the tenant with DOTA.
3. Submittal to the Board of Land and Natural Resources (Land Board).
4. Approval by the Land Board
5. Execution of the RP by (in this order) tenant, Director of Transportation, and Land Board Chair.

The earliest the process can be completed is by June 30, 2015.

FAA Final Comment: Concur. The FAA will follow-up to secure a copy of RP for the additional space occupied by TSA. Revocable Permit No. 8158 complies with revenue use requirements.

Marketing.

The marketing findings are consistent with the marketing summary disclosed in the Executive Summary on page 6 of this report. There are no findings localized to Kona Airport.

Art in Public Places.

The FAA found no irregularities with the art program at Kona Airport. The art program at Kona Airport complies with the Revenue Use policy.

Attachment 5 – Lihue Airport

Lihue Airport (LIH)

Overview

Several findings were noted at Lihue Airport (LIH) during the review of DOTA. These findings are discussed in more detail below with FAA recommendations and DOTA response. The DOTA has responded with their concurrence or non-concurrence and their reasoning is briefly summarized. The FAA Final Comments are the response to *The Summary of Findings and Recommendations* section listed above, which discusses the final FAA recommendations and DOTA responses.

Use of Airport Property and Leases

Based on FAA's review of 15 Airport lease agreements, two findings were noted: (1) RPs were not awarded at fair market value (FMV), and (2) rent increases did not occur in accordance with airport policy or normal practice. These findings were noted for following five of the 15 samples:

1. **Kevin Britt.** The RP for a hangar lease was initiated in 2004 at a rental rate below FMV and with no escalation in the rental rate since initiation. The original rental rate was set at

$368 per month when FMV at the time was $604 per month. The current rental rate in FY 2014 is set at $815 for a small plane hangar.

DOTA Response: The DOTA did not respond to the observation made by the FAA.

2. **Citizens Utility Company**. This RP is a lease of improved property for the storage of a propane tank at LIH since 1997. The original rental rate was set at $61 per month and has not been increased to the current rental rate of $114 per month.
   DOTA Response: The DOTA did not respond to the observation made by the FAA.

3. **Marriott Resorts**. LIH and Marriott Resorts entered into an RP to provide access between LIH and the Marriott Resort. The RP was set up in 1995 at a rental rate of $1,000 per month increasing to $2,000 after six months. However, the rental rate was decreased to the current rate of $1,000 per month in 2003. The approximate rental rate in 2014 would be $3,000.

   DOTA Response: The DOTA did not respond to the observation made by the FAA.

4. **Kauai Lagoons Golf Course**. The RP was agreed to in 1991 at a rental rate of $0.17 per square foot. There has not been any adjustment in the rental rates since inception of the RP.

   DOTA Response: The DOTA did not respond to the observation made by the FAA.

FAA Conclusion for the Four Findings Above:

Per FAA Order 5190.6B, FAA airport Compliance Manual, Appendix E, Section VI, "Prohibited Uses of Airport Revenue," Subsection 8: land rental to, or use of land for nonaeronautical purposes at less than fair market value rent, except to the extent permitted by Section VII.D of this policy, is prohibited. We recommend that DOTA/LIH at the earliest possible opportunity to renegotiate the leases establishing rental rates at a FMV level and an escalation of the rental rates during the course of the lease. We also recommend that DOTA consider developing long-term lease agreements for airport property that will extend beyond 12 months.

DOTA Response to FAA Conclusion: The DOTA is beginning the process to issue a new RP permit with the new, increased rate to be completed by June 30, 2015.

Issuance of new Revocable Permits and Parking Permits requires the following actions:

1. Notification to tenant that a new Revocable Permit will be issued.
2. Filing of all appropriate documents by the tenant with DOTA.
3. Submittal to the Board of Land and Natural Resources (Land Board).
4. Approval by the Land Board
5. Execution of the RP by (in this order) tenant, Director of Transportation, and Land Board Chair.

The earliest the process can be completed is by June 30, 2015.

DOTA provided a copy of State Letter No. AIR-K 15.020 dated March 11, 2015 establishing the new rates and providing an application for a new revocable permit.

FAA Final Comment: Concur. DOTA did provide a copy of the new RP with Marriott Resorts. The new rental rate of $3,775.15 became effective on November 1, 2014. The FAA requests a copy of the renewed RPs when issued by DOTA to Kevin Britt, Citizens Utility Company and Kauai Lagoon Golf Course.

5. **GSA- Transportation Security Administration (TSA)**. The RP was established in 2003 implementing a rental rate at FMV. There has not been any increase in the rental rate since 2003, and the RP was terminated on December 31, 2011. The TSA is still using the area for administrative purposes at no charge.

   DOTA Response: The DOTA did not respond to the observation made by the FAA.

   FAA Conclusion: We recommend renegotiating a new lease for TSA's administrative functions. LIH should seek reimbursement of FMV rental fees plus utility costs for the period from January 1, 2012 to current date. The amount of unpaid rent would approximate $52,000 as of September 30, 2014 at the terminated RP rental rate.

   DOTA Response to FAA Conclusion: The DOTA issued a new Revocable Permit on July 8, 2014 and included a copy of the RP.

   FAA Final Comment: Concur.

6. **Overflow rental car parking.** Rental car companies located on LIH are using airport property for parking unrented vehicles at no charge.

   DOTA Response: Non-concurrence. The DOTA states that they are charging the rental car companies a monthly rate of $1,267 per month. However, Dollar Car Rental is being charged $1,133 monthly. New permits will be issued effective January 1, 2015 which correct the rates to FMV.

   FAA Conclusion: LIH should be charging FMV for the overflow parking by the rental companies. We recommend LIH should implement an oversight process and controls to verify the number of cars parked and the duration for each vehicle to ensure LIH is receiving the appropriate revenues. We request copies of the parking permits prior to January 1, 2015 and the new parking permits that are now effective for our review.

   DOTA Response to FAA Conclusion: DOTA was unable to adjust the lease rate by January 1, 2015, due to the change in administration for the State of Hawaii. The DOTA is beginning the process of issuing parking permits to cover

these areas and charging square footage rent. It is anticipated the issuance of new permits with the new, increased rate will be completed by June 30, 2015.

Copies of the previous parking permits for Alamo, Avis, Budget, Hertz, National and DTG were provided by DOTA. Parking permits (PP-06-K001 to K005 and K007) for the rental car companies will be revised from the current rate of $0.76 to $0.87 psfpa. The $0.87 rate is being assessed because the area is an open field, not paved or graded. The lot has no utilities and the access road is not within a reasonable distance from the property line. The rate of $0.87 is the rental rate for undeveloped property in the Airports Division Procedures 4.5 Rates and Charges.

FAA Final Comment: Concur. The FAA requests DOTA provide copies of the new parking permits for the rental car companies (Alamo, Avis, Budget, Hertz, National, and DTG) as they are issued.

7. **T-Hangar rental space.** During the perimeter tour of LIH, it was noted that several of the T-Hangar spaces were being used for commercial maintenance of small aircraft. There was no available space for parking any type of aircraft.

DOTA Response: The DOTA did not respond to the finding made by the FAA.

FAA Conclusion: We recommend DOTA develop a separate rental rate for commercial leases of the T-Hangars if the commercial maintenance of small aircraft is the highest and best use of the space.

DOTA Response to FAA Conclusion: DOTA has performed a physical audit to ensure tenants are in compliance with T-Hangar usage. It should also be noted that DOTA began performing continuous compliance inspections and issuing citations in March 2013. The DOTA is in the process of developing appropriate notices and guidelines to be sent to all T-hangar tenants.

To accomplish this, DOTA will follow the action plan shown below:

Action Plan:

HRS § 261-7 (e) provides a mechanism for the DOTA to set airports rates and charges following publication of the rates and charges and conduct of public informational hearings. When airports rates and charges are set in this manner, the DOTA is obligated to report the circumstances and resulting rates and charges to the Legislature.

Since this is a new rate for commercial aeronautical activities from T-Hangars, DOTA will establish 10% of gross receipts as the beginning rate for this activity from T-Hangars and will conduct an assessment on an annual basis to determine if this is a fair and equitable rate and, if appropriate, adjust the rate

as necessary.

The DOTA's plan to meet the intent of §261-7 (e) is to do the following:

1. Brief key legislators (Senate President Donna Mercado, Kim, Speaker of the House Joseph M. Souki, Senator Clarence K. Nishihara, Chair of the Senate Transportation Committee, and Representative Henry J.C. Aquino, Chair of the House Transportation Committee) on the FAA Findings and Recommendation, the use of §261-7(e) to establish rates for commercial activities from T-Hangars with an effective date of June 1, 2015, proposed schedule for public informational hearings, and the submission of a final report to the Legislature.

   Estimated Completion Date: March 2, 2015.

2. Conduct Public Informational Hearings on each island (Oahu, Hawaii, Kauai, and Maui) for the proposed rates for commercial activities from T-Hangars effective June 1, 2015.

   Estimated Completion Date: March 31, 2015.

3. DOTA will notify President Mercado Kim, Speaker Souki, Senator Nishihara and Representative Aquino via written correspondence of the results of the public informational hearings held on each island to establish rates for commercial activities from T-Hangars, including the effective date of the rates of June 1, 2015.

   Estimated Completion Date: April 10, 2015.

4. Provide written notice to the public and tenants of the airports facility of the rates and effective date for a 30-day period.

   Estimated Completion Date: May 30, 2015.

5. Implement the effective rate by issuing 30 days written notice terminating RP's to tenants conducting commercial activities from T-Hangars with an offer to execute new RP's with the rates for commercial activities from T-Hangars within the 30-day timeframe or when prospective new tenants are interested in acquiring a T-Hangar to conduct commercial activities.

   Estimated Completion Date: June 1, 2015.

6. Submit a report the Legislature on the use of §261-7 (e) and implementation of the new rates for commercial activities from T-Hangars.

   Estimated Completion Date: June 15, 2015.

7. Renew all T-Hangar RP's based on the rates for commercial aeronautical activities on an annual basis.

DOTA provided a copy of State Memorandum No. AIR-A 15.022 dated February 11, 2015.

FAA Final Comment: Concur. The FAA will follow-up to determine status of implementation of adjusted rates.

8. **Utility Costs.** Utility costs are not being charged to tenants with RPs including T-Hangars. Airport management advised that they do not recover the utility costs as matter of practice. This practice applies to the commercial use of T-Hangars, which could require utility services.

DOTA Response: The DOTA did not respond to the finding made by the FAA.

FAA Conclusion: We recommend LIH should establish a policy of recouping the costs of utilities from tenants to ensure the self-sustainability of LIH. The tenants rather than LIH bearing these costs should reimburse utility costs not incurred for the operations of LIH.

DOTA Response to FAA Conclusion: In April 2014, the DOTA began charging tenants at ITO and LIH for utility costs. At HNL, OGG and KOA, DOTA is in the process of preparing the required notices to T-Hanger tenants to recover the costs for utilities (electricity and water). The date to begin charging the T-Hanger tenants for utilities is established as July 1, 2015.

FAA Final Comment: Concur. The FAA will follow-up to determine if utility costs are recovered in lease agreements.

Marketing

The marketing findings are consistent with the marketing summary disclosed in the Executive Summary on page 6 of this report. There are no findings that are localized to LIH.

Art in Public Places

The FAA found no irregularities with the art program at Lihue Airport. The art program at Lihue Airport complies with the Revenue Use policy.

Wildlife Hazard – Nene Geese

The Nene Goose is the State bird of Hawaii. Their presence at an airport presents a risk to aviation safety, because of their large body size, flocking behavior, and low, slow flight pattern.

LIH is part of the natural habitat for the Nene geese, and they are frequently observed flying across the runways. On April 14, 2011, the governor of the State of Hawaii signed a proclamation authorizing the Department of Land and Natural Resources (DLNR) and DOT to work collaboratively relocating four hundred Nene geese that reside at the Kauai Lagoons to the Hawaii Island and Maui. The proclamation declared that the large bird numbers residing adjacent to LIH posed a serious threat to public aviation safety. The proclamation was for a five year period ending April 15, 2016.

According to the plan, successful implementation of the Nene Relocation Project requires the identification of suitable relocation sites on Hawaii Island and Maui; preparation of the sites; habitat management; biosecure quarantine facility; safe capture and handling; veterinary care; predator control; tracking control; and response to any unacceptable movements or behavior detected in the release of the birds for their and the public's safety. In the MOU between the DLNR and the DOT, the DLNR would implement the plan as well as furnish all personnel, equipment, and supplies necessary and the DOT agreed to fund the program.

In FY 2013, DOTA has funded $800,000 for the capture, caring, removal, and the reintegration of the Nene Goose away from Lihue Airport. In previous years, the program has cost DOTA $1.5 million with estimates of $1 million required in the final two years of the program.

Response by DOTA: Partial Concurrence. DOTA proposes to include the Nene Goose issue as a part of their Wildlife Hazard Management Plan under Part 139-Certification of Airports, Section 139.337 Wildlife Hazard Management. The DOTA plan going forward will be to negotiate the wildlife hazard managements with the adjacent landholders. Costs will be negotiated and shared with the adjacent landholders.

FAA Conclusion: The Nene Goose is not only the state bird of Hawaii; it is also identified as critically endangered by USFWS. The steps taken and funding necessary to mitigate the risk it represents are understandable, justifiable and laudable. The DOTA and DLNR should be commended for the efforts put forth to move upwards of 400 individual geese. The FAA's concern comes from reports of relocated geese becoming a hazard at new airports (Kahului and Maui) near new relocation sites. The preferred separation distance is 5 miles for wildlife hazard attractants, and with the new sightings, a mistake was made in choosing a suitable site; thus wasting time and funding. We also read that the plan requires predator control as well as tracking devices on some birds to track and monitor survival and movements necessary for management. There is no mention of a time frame, which could mean the FAA and DOTA funding predator control in perpetuity for the insured or improved survival of the geese.

The DLNR and the DOTA are seeking an additional $1 million funding beyond the $2.3 million already invested to finish the capture and relocation efforts for the last two years of the project.

DOTA should request the FAA to review the relocation sites selected and the monitoring and movement data already collected from trans-located birds to determine whether the relocation sites are suitable. Finally, alternatives must be considered including attractive water impoundments near airports, permanent biologists at each airport to monitor and mitigate wildlife hazards, and the DLNR personnel to provide assistance with predator control activities without the reliance on airport revenues.

DOTA Response the FAA Conclusion:

Historical Data: The FAA's Airport District Office directed DOTA to address the Lihue Airport Nene Goose population that created an emergency safety and health issues for aviation. The Governor's Proclamation authorized general funds over a 5-year period to include Federal and State agency mobilization to address the Nene Goose relocation amongst various islands. The FAA's Airports District Office previously reviewed the local planning and funding source.

The DOTA agreement with DLNR for the NENE Relocation Program will end on June 30, 2016. The DOTA currently has another existing contract with USDA for Wildlife Management Hazards which has funding in the FY15 Fourth Quarter for the hazing program to ensure Nene Geese do not enter aircraft flight paths or nest in ground areas bordering airport approaches.

The DLNR has reduced their annual expenditures for FY15 from $800,000 to $630,000. USDA will continue the work functions DLNR is unable to conduct with the residual funds.

The DOTA has no Wildlife Biologist staff to conduct analysis of Nene Goose impacts on the neighboring islands. DOTA accomplishes such activities through a FAA-approved, statewide USDA Wildlife Management Plan contract at Hawaii's 15-Public Airports. It is understood that the wildlife issues will continue with Nene population reductions/increases and continuous statewide monitoring by an approved FAA USDA Wildlife Biologist will be handled as shown in the timeline below.

> **March 1, 2015:** USDA will hire one (1) Wildlife Biologist and (1) Technician to conduct an assessment and implement hazing program.
>
> **April 1, 2015:** USDA and DNLR will implement cost benefit for hazing Nene Geese with available funds from the DNLR contract agreement.
>
> **July 1, 2015:** DOTA to increase funding to USDA through FY16-17 Nene Geese monitoring and hazing with funds available under the DLNR contract agreement.
>
> **June 30, 2016:** Agreement ends between DOTA and DLNR for the Relocation of Nene Geese.

July 1, 2016: USDA will have sufficient qualified staff in-place to work with DLNR Relocation of Nene Geese to include monitoring relocation sites, implementation of hazing program between fiscal years. Deputy Attorney General and Wildlife Biologist will be assigned to provide DOTA continuous monitoring and update date action plans.

FAA Final Comment: FAA requests a detailed description of the role the Deputy Attorney General during the monitoring of the relocation sites and the hazing programs between fiscal years. The FAA would appreciate being an active participant as the DOTA and partners work to resolve the Nene Goose issue.

Appendix A – Recap of FAA Final Comments and Requests

Honolulu International Airport (HNL)

Use of Airport Property and Leases

- **Budget Rent-A-Car System** – Concur.
- **National Car Rental** – Concur.
- **T-Hangar Usage** – Concur. DOTA provided an action plan to update rates and implement new rates as leases were renewed. FAA requests sample documentation to substantiate implementation of action plan.
- **Utility Costs** - Utility costs were not being charged to tenants. FAA requests sample documentation of lease in which Airport is recovering the utility costs.

Marketing – Concur. DOTA has prepared a new advertising contract. FAA requests a copy of new advertising contract.

Security – DOTA was waiting for a written response from the City and County of Honolulu Prosecutor to determine if the City Prosecutor's Office will accept felony investigations occurring at HNL directly from the Sheriff's Airport Detail. FAA requests an update of the status of the City Prosecutor Office's decision.

Kahului Airport (OGG)

Use of Airport Property and Leases

- **Alexander & Baldwin, Inc.** – Concur.
- **Alamo Rent-A-Car** – Concur. FAA requests a copy of the parking permit for Alamo Rent-A-Car.
- **Overflow Rental Car Space** – Concur. FAA requests a copy of the new parking permit issued.
- **Utility Costs** – Concur. FAA requests a copy of a notice to tenants for utility charges.
- **T-Hangar Space Usage** – Concur. DOTA provided an action plan to update and implement new rates as leases were renewed. FAA requests sample documentation to substantiate implementation of action plan.
- **Free Administrative Space to Federal Government Agencies** – Concur.

Hilo International Airport (ITO)

Use of Airport Property and Leases

- **Hawaii Fuel Facilities** – Concur. DOTA issued a new RP with updated rates. FAA requests a copy of the new RP.
- **Helicopter Consultants of Maui** – Concur. FAA requests a copy of the new RP.
- **Wesley R. Segawa** – Concur.
- **Overflow Rental Car Space** – Concur. FAA requests a copy of the new RP.
- **Utility Costs** – Concur. FAA requests a sample copy of a new lease when available.

- **T-Hangar Space Usage –** Concur. DOTA provided an action plan to update and implement new rates as leases were renewed. FAA requests sample documentation to substantiate implementation of action plan.

Kona International Airport (KOA)

Use of Airport Property and Leases

- **Aeko Kula, Inc. /SWFC** – Concur.
- **Direct Freight Service Hawaii, Inc.** – Concur. Please provide substantiation of auction and disposition of funds.
- **Federal Express Corporation – KOAFC** – Concur. Please provide copy of the new RP agreement.
- **Alamo Rental, Inc.** – Concur. Please provide copy of the new RP agreement.
- **Onizuka Space Center** – Concur. Please provide a status of KOA Modernization Program.
- **Natural Energy Laboratory of Hawaii Authority (NELHA)** – FAA requests a status of the rightful ownership of the property occupied by NELHA and the lease agreement, if applicable.
- **Overflow Rental Car Space** – Concur. Please provide a sample copy of a parking permit.
- **Utility Costs** – Concur. FAA requests a sample copy of a new lease when available.
- **Non-aeronautical Use of T-Hangar Space** - Concur. DOTA provided an action plan to update and implement new rates as leases were renewed. FAA requests sample documentation to substantiate implementation of action plan.
- **Free Administrative Space to Federal Government Agencies** – Concur.

Lihue Airport (LIH)

Use of Airport Property and Leases

- **Kevin Britt** – Concur. FAA requests a copy of the RP when available.
- **Citizens Utility Company** – Concur. FAA requests a copy of the RP when available.
- **Marriott Resorts** – Concur.
- **Kauai Lagoons Golf Course** – Concur. FAA requests a copy of the RP when available.
- **GSA – Transportation Security Administration (TSA)** – Concur.
- **Overflow Rental Car Space** – Concur. FAA requests copies of the new parking permits for the rental car companies utilizing the parking spaces.
- **T-Hangar Space Usage –** Concur. DOTA provided an action plan to update and implement new rates as leases were renewed. FAA requests sample documentation to substantiate implementation of action plan.
- **Utility Costs** – Concur. FAA requests a sample copy of a new lease when available.

Wildlife Hazard – Nene Geese

DOTA provided a timeline for a wildlife hazard mitigation program involving the Nene Goose population on the islands. FAA requests a detailed description of the role the Deputy Attorney

General during the monitoring of the relocation sites and the hazing programs between fiscal years. The FAA would appreciate being an active participant as the DOTA and partners work to resolve the Nene Goose issue.

EXHIBIT 18A

DILLINGHAM OPERATIONAL REVENUES AND EXPENDITURES						
REVENUE		**FY19**	**FY18**	**FY17**	**FY16**	**FY15**
SOURCE	**DESCRIPTION**	**DILLINGHAM**	**DILLINGHAM**	**DILLINGHAM**	**DILLINGHAM**	**DILLINGHAM**
	AERONAUTICAL REVENUES					
4140200	RENTAL OF LAND, PAVED AREAS	27,044.60	22,156.38	6,027.48	6,265.48	6,725.68
4140400	RENTAL OF LAND, UNPAVED AREAS	164,224.55	178,753.82	109,777.80	106,116.98	94,953.81
4140600	RENTAL OF SPACE,TERM BLDG	0.00	0.00	0.00	0.00	0.00
						0.00
4140700	RENTAL OF SPACE, COMMUTER TERMINAL	0.00	0.00	0.00	0.00	0.00
4140800	RENTAL OF HANGERS	152,773.18	155,262.96	148,343.55	151,655.94	159,424.68
4141000	RENTAL OF OTHERS BLDG & STRUCT	35,038.70	39,314.70	52,142.76	53,263.66	49,594.27
4141200	RENTAL OF EQUIPMENT	0.00	0.00	0.00	0.00	0.00
4141400	FEES, OPERATIONAL	0.00	0.00	0.00	0.00	500.00
4141600	UNCOVERED STORAGE OF AIRCRAFT	15,439.45	11,295.17	6,576.00	6,770.23	6,301.08
	TOTAL EXCLUSIVE USE CHARGE	**394,520.48**	**406,783.03**	**322,867.59**	**324,072.29**	**317,499.52**
4141800	(OHR) NON-EXCLUSIVE OST HOLDROOM	0.00	0.00	0.00	0.00	0.00
4142000	INTERNATIONAL ARRIVALS B (IAB)	0.00	0.00	0.00	0.00	0.00
4142200	NON-EXCLUSIVE PREMISES USE (NIS)	0.00	0.00	0.00	0.00	0.00
4142400	(TERM 3) NON-EXCLUSIVE PREMISE USE	0.00	0.00	0.00	0.00	0.00
4142600	NON-EXCLUSIVE PREMISES U (ITT)	0.00	0.00	0.00	0.00	0.00
4142800	NON-EXCLUSIVE PREMISES U (OST)	0.00	0.00	0.00	0.00	0.00
4142900	NON-EXCLUSIVE PREMISES USE - PREFERENTIAL	0.00	0.00	0.00	0.00	0.00
	TOTAL NON-EXCLUSIVE USE CHARGE	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
	TOTAL AERONAUTICAL REVENUES	**394,520.48**	**406,783.03**	**322,867.59**	**324,072.29**	**317,499.52**
	USE FEES					
4144200	AIRPORT USE CHARGES	42,635.72	53,465.34	58,963.15	49,641.32	246,207.58
4144400	AVIATION FUEL TAX CREDIT	0.00	(127.65)	(347.08)	(559.20)	(205.48)
		42,635.72	**53,337.69**	**58,616.07**	**49,082.12**	**246,002.10**
4144600	(ASSC) AIRPORTS SYSTEM SUPPORT CHG					31,145.90
	TOTAL AIRPORT USE CHARGES	**42,635.72**	**53,337.69**	**58,616.07**	**49,082.12**	**277,148.00**
	ANCILLARY REVENUE					
4145200	CONCESSION FEES, IN-BOND SALES	0.00	0.00	0.00	0.00	0.00
4145400	CONCESSION FEES, RESTAURANTS	0.00	0.00	0.00	0.00	0.00
4145600	CONCESSION FEES, CONTRACTUAL	0.00	0.00	0.00	0.00	0.00
4145800	CONCESSION FEES, FLORIST	0.00	0.00	0.00	0.00	0.00
4146000	CONCESSION FEES, GRND TRANS	0.00	0.00	0.00	0.00	0.00
4146200	AIRPORT PARKING	0.00	0.00	0.00	0.00	0.00
4146400	CONCESSION FEES, LEI VENDORS	0.00	0.00	0.00	0.00	0.00
4146600	CONCESSION FEES, GIFT SHOP	0.00	0.00	0.00	0.00	0.00
4146800	CONCESSION FEES, RENTAL CARS	0.00	0.00	0.00	0.00	0.00
4147000	CONCESSION FEES, IN FLIGHT CATERING	0.00	0.00	0.00	0.00	0.00
4147200	CONCESSION FEES, RETAIL PRIME	0.00	0.00	0.00	0.00	0.00
4147300	CONCESSION FEES, NON CONTRACTUAL	0.00	0.00	0.00	0.00	0.00
4147303-06	CONCESSION FEES, NON CONTRACTUAL	0.00	0.00	0.00	0.00	0.00
4147313-17	CONCESSION FEES, NON CONTRACTUAL	0.00	0.00	0.00	0.00	0.00
4147400	PERMITTEE FEES, OTHERS	0.00	0.00	0.00	0.00	0.00
4147407-38	PERMITTEE FEES, OTHERS	0.00	0.00	0.00	0.00	0.00
4147447-77	PERMITTEE FEES, OTHERS	0.00	0.00	0.00	0.00	0.00
4147500	PERMITTEE FEES, GROUND TRANS	0.00	0.00	0.00	0.00	0.00
4147507-28	PERMITTEE FEES, GROUND TRANS	0.00	0.00	0.00	0.00	0.00
4147547-49	PERMITTEE FEES, GROUND TRANS	0.00	0.00	0.00	0.00	0.00
4147537-39	PERMITTEE FEES, GROUND TRANS	0.00	0.00	0.00	0.00	0.00
4147600	COIN OPERATED LOCKERS & STORAGE	0.00	0.00	0.00	0.00	0.00
4147800	MISCELLANEOUS RENTALS	0.00	0.00	0.00	0.00	0.00
	TOTAL ANCILLARY REVENUES	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
	NON-AERONAUTICAL REVENUES					
4148200	RENTAL OF LAND,PAVED AREAS	0.00	0.00	0.00	0.00	0.00
4148400	RENTAL OF LAND, UNPAVED AREAS	14,136.92	13,694.58	11,617.56	11,617.56	9,532.80
4148600	RENTAL OF SPACE, TERM BLDG	0.00	0.00	0.00	0.00	0.00
4148800	RENTAL OF OTHER BLDG & STRUCTURES	440.00	300.00	300.00	300.00	125.00
4149000	RENTAL OF EQUIPMENT	0.00	0.00	0.00	0.00	0.00
	TOTAL NON-AERONAUTICAL REVENUES	**14,576.92**	**13,994.58**	**11,917.56**	**11,917.56**	**9,657.80**
	OTHER INCOME					
4149200	SALE OF SERVICES - UTILITIES	0.00	0.00	0.00	0.00	0.00
4149300	SALE OF SALVAGED MATERIAL	0.00	0.00	0.00	0.00	0.00
4149400	INTEREST INCOME	0.00	0.00	0.00	0.00	0.00
4149500	SALE OF SERVICES - OTHER	0.00	0.00	0.00	0.00	0.00
4149600	RECOVERY OF BAD DEBT	0.00	0.00	0.00	0.00	0.00
4149700	MISCELLANEOUS INCOME	75.00	145.00	102.00	218.25	185.00
	TOTAL OTHER INCOME	**75.00**	**145.00**	**102.00**	**218.25**	**185.00**
	GRAND TOTAL REVENUE SOURCE	**451,808.12**	**474,260.30**	**393,503.22**	**385,290.22**	**604,490.32**

DILLINGHAM OPERATIONAL REVENUES AND EXPENDITURES						
	Allocation of Statwide revenues	5,943.80	669.03	495.02	5,931.56	19,995.00
TOTAL OPERATING REVENUES		**$ 457,751.92**	**$ 474,929.33**	**$ 393,998.24**	**$ 391,221.78**	**$ 624,485.32**

DILLINGHAM OPERATIONAL REVENUES AND EXPENDITURES						
EXPENDITURE		FY19	FY18	FY17	FY16	FY15
OBJECT						
CODE	DESCRIPTION	DILLINGHAM	DILLINGHAM	DILLINGHAM	DILLINGHAM	DILLINGHAM
2000	PERSONAL SERVICES	217,428.53	274,064.09	33,977.09	383,182.99	169,827.71
2034	Pension Allocation (GASB 68) - Non Cash	0.00	0.00	0.00	0.00	26,123.12
2055	PAYMENT OF VACATION	3,046.56	5,995.22	(1,007.47)	(10,791.47)	5,020.02
2900	PER SER OTHER DEPT/AGEN	0.00	0.00	0.00	175.00	0.00
3000	MAT'L & SUPPLIES	83,801.48	87,019.87	40,153.12	44,513.44	36,086.12
3500	DUES & SUBSCRIPTION	0.00	0.00	0.00	0.00	0.00
3600	FREIGHT & DELIVERY	0.00	0.00	0.00	0.00	0.00
3700	COMMUNICATION	4,038.39	3,072.30	2,302.82	3,157.87	3,488.74
3900	PRINTING & ADVERTISING	0.00	0.00	0.00	0.00	0.00
4100	TRAVEL & SUBSISTENCE	0.00	0.00	0.00	0.00	0.00
5000	UTILITIES	66,467.37	42,983.77	50,098.73	52,807.77	43,932.20
5500	RENTALS	6,124.93	1,867.28	982.84	-102,513.59	1,321.93
5700	OTHER RENTALS	0.00	0.00	0.00	0.00	0.00
5800	REPAIRS & MAINTENANCE	199,404.51	175,987.24	196,341.93	191,407.34	82,736.50
5900	INSURANCE & BONDS	0.00	0.00	0.00	0.00	0.00
6200	OTHER INTEREST EXPENSE	0.00	0.00	39.26	0.00	666.45
6300	BONDS ISSU & REDEMPT EXP	0.00	0.00	0.00	0.00	0.00
6500	GRANTS, CLAIMS, BENEFITS	9,756.53	0.00	1,149.16	0.00	3,633.45
7298	BAD DEBT EXPENSE	0.00	0.00	0.00	0.00	0.00
7100	PER SERV-OTHERS	470,077.26	388,801.25	387,555.11	359,854.43	374,439.15
7200	OTHER MISCELLANEOUS	0.00	0.00	0.00	20,875.05	25.00
7205	SPECIAL FUND ASS - DEPT CONT	0.00	0.00	0.00	0.00	0.00
	SPECIAL FUND ASS - SURCHARGE	0.00	0.00	0.00	0.00	0.00
8710	INVENTORY-MAT'L & SUPP	0.00	0.00	0.00	0.00	0.00
	Sub-Total	1,060,145.56	979,791.02	711,592.59	942,668.83	747,300.39
9100	**SPECIAL MAINTENANCE**	20,854.65	140,076.40	0.00	21.26	0.00
	Allocation of Statewide Expenses	362,761.70	399,969.04	250,038.38	235,939.38	197,043.28
	ADJUSTED GRAND TOTAL EXPENSES	1,443,761.91	1,519,836.46	961,630.97	1,178,629.47	944,343.67
9110	**MAJOR MAINTENANCE**	0.00	0.00	0.00	0.00	0.00
TOTAL OPERATING EXPENSES		**$ 1,443,761.91**	**$ 1,519,836.46**	**$ 961,630.97**	**$ 1,178,629.47**	**$ 944,343.67**
TOTAL GAIN (LOSS)		**$ (986,009.99)**	**$ (1,044,907.13)**	**$ (567,632.73)**	**$ (787,407.69)**	**$ (319,858.35)**

EXHIBIT 18B

FAMIS - EXPENDITURE: STANDARD DOWNLOAD

402 results (records) for:

Depart	Division	ProgramID	MOF	From FY/F	To FY/FM	Vendor
D	2	ALL	ALL	01/2015	12/2020	86272

Dept	Div	Pgm ID	Appn '	Trans Cod	F-FY-ACC	Obj	CC	Proj No	Ac	Amount	Enc No/Sfx	Vendor No	Vendor Name	Invoice No	Inv Date	Aging Date	Check Date	Check No	Doc Type	Dept No	FY/FM	Proc Date
D	02	TRN104	2	241	S-14-083	5812	2285			5,014.95	30060371-01	0000086272	DOONWOOD ENGINEERING, INC.	1406-107	07/23/2011	07/30/2014	08/13/2014	S0007976	VP	EX0256	201502	08/13/2014
D	02	TRN104	2	241	S-14-083	5812	2285			5,183.20	30060464-01	0000086272	DOONWOOD ENGINEERING, INC.	1407-123	08/12/2014	08/29/2014	09/16/2014	S0015163	VP	EX0460	201503	09/16/2014
D	02	TRN104	2	241	S-14-083	5812	2285			5,104.99	30060464-01	0000086272	DOONWOOD ENGINEERING, INC.	1408-132	09/08/2014	09/25/2014	10/06/2014	S0020417	VP	EX0664	201504	10/06/2014
D	02	TRN104	2	241	S-14-083	5812	2285			4,448.45	30060464-01	0000086272	DOONWOOD ENGINEERING, INC.	1409-100	10/15/2014	10/27/2014	11/14/2014	S0028108	VP	EX0836	201505	11/14/2014
D	02	TRN104	2	241	S-14-083	5812	2285			5,373.14	30060464-01	0000086272	DOONWOOD ENGINEERING, INC.	1410-126	12/15/2014	01/07/2015	01/14/2015	S0040646	VP	EX1309	201507	01/14/2015
D	02	TRN104	2	241	S-14-083	5812	2285			4,063.41	30060464-01	0000086272	DOONWOOD ENGINEERING, INC.	1411-134	12/15/2014	01/07/2015	01/14/2015	S0040646	VP	EX1309	201507	01/14/2015
D	02	TRN104	2	241	S-14-083	5812	2285			21,917.19	30060464-01	0000086272	DOONWOOD ENGINEERING, INC.	1412-103	01/19/2015	01/26/2015	02/09/2015	S0046143	VP	EX1479	201508	02/09/2015
D	02	TRN104	2	241	S-15-083	5812	2285			5,037.28	30060588-01	0000086272	DOONWOOD ENGINEERING, INC.	1501-123	02/23/2015	03/25/2015	04/17/2015	S0060706	VP	EX1978	201510	04/17/2015
D	02	TRN104	2	241	S-15-083	5812	2285			3,932.28	30060588-01	0000086272	DOONWOOD ENGINEERING, INC.	1502-134	03/23/2015	04/01/2015	04/17/2015	S0060704	VP	EX1975	201510	04/17/2015
D	02	TRN104	2	241	S-15-083	5812	2285			4,499.70	30060588-01	0000086272	DOONWOOD ENGINEERING, INC.	1503-101	05/14/2015	05/21/2015	05/29/2015	S0070776	VP	EX2312	201511	05/29/2015
D	02	TRN104	2	241	S-15-083	5812	2285			6,262.65	30060588-01	0000086272	DOONWOOD ENGINEERING, INC.	1504-123	05/22/2015	05/28/2015	06/04/2015	S0071939	VP	EX2355	201512	06/04/2015
D	02	TRN104	2	241	S-15-083	5812	2285			4,909.05	30060588-01	0000086272	DOONWOOD ENGINEERING, INC.	1505-132	06/12/2015	06/18/2015	06/24/2015	S0075700	VP	EX2513	201512	06/24/2015
D	02	TRN104	2	241	S-15-083	5812	2285			6,870.89	30060588-01	0000086272	DOONWOOD ENGINEERING, INC.	1506-104	08/17/2015	09/01/2015	09/10/2015	S0013633	VP	FX0475	201603	09/10/2015
D	02	TRN104	2	241	S-15-083	5812	2285			8,560.04	30060588-01	0000086272	DOONWOOD ENGINEERING, INC.	1507-124	08/19/2015	08/27/2015	09/10/2015	S0013633	VP	FX0475	201603	09/10/2015
D	02	TRN104	2	241	S-15-083	5812	2285			5,659.96	30060588-01	0000086272	DOONWOOD ENGINEERING, INC.	1508-130	09/25/2015	10/05/2015	10/15/2015	S0021851	VP	FX0741	201604	10/15/2015
D	02	TRN104	2	241	S-15-083	5812	2285			6,029.57	30060588-01	0000086272	DOONWOOD ENGINEERING, INC.	1509-097	10/13/2015	10/16/2015	10/30/2015	S0025866	VP	FX0870	201604	10/30/2015
D	02	TRN104	2	241	S-15-083	5812	2285			4,946.04	30060588-01	0000086272	DOONWOOD ENGINEERING, INC.	1510-126	12/08/2015	12/11/2015	12/30/2015	S0038791	VP	FX1331	201606	12/30/2015
D	02	TRN104	2	241	S-15-083	5812	2285			4,317.48	30060588-01	0000086272	DOONWOOD ENGINEERING, INC.	1511-136	12/09/2015	12/14/2015	12/30/2015	S0038791	VP	FX1331	201606	12/30/2015
D	02	TRN104	2	241	S-15-083	5812	2285			6,900.00	30060588-01	0000086272	DOONWOOD ENGINEERING, INC.	94595-1	12/28/2015	12/29/2015	01/14/2016	S0040942	VP	FX1443	201607	01/14/2016
D	02	TRN104	2	241	S-15-083	5812	2285			2,459.50	30060588-01	0000086272	DOONWOOD ENGINEERING, INC.	94595-2	01/18/2016	02/05/2016	02/17/2016	S0047871	VP	FX1683	201608	02/17/2016
D	02	TRN104	2	241	S-15-083	5812	2285			6,394.68	30060588-01	0000086272	DOONWOOD ENGINEERING, INC.	1512-104	02/02/2016	02/05/2016	02/17/2016	S0047871	VP	FX1683	201608	02/17/2016
D	02	TRN104	2	241	S-15-083	5812	2285			23,035.88	30060588-01	0000086272	DOONWOOD ENGINEERING, INC.	1512-104A	03/28/2016	04/14/2016	04/28/2016	S0063893	VP	FX2240	201610	04/28/2016
D	02	TRN104	2	231	S-16-083	5812	2285	BO2620		9,628.07	00064268-01	0000086272	DOONWOOD ENGINEERING, INC.	ME#1_160	02/19/2016	02/25/2016	03/10/2016	S0053141	VP	FX1868	201609	03/10/2016
D	02	TRN104	2	231	S-16-083	5812	2285	BO2620		4,849.36	00064268-01	0000086272	DOONWOOD ENGINEERING, INC.	ME#2_160	02/29/2016	03/15/2016	03/24/2016	S0055580	VP	FX2017	201609	03/24/2016
D	02	TRN104	2	203	S-16-083	5812	2285	BO2620		(242.47)	00064268-01	0000086272	DOONWOOD ENGINEERING, INC.	ME#2_160	02/29/2016	03/15/2016	03/24/2016	S0055580	VP	FX2017	201609	03/24/2016
D	02	TRN104	2	203	S-16-083	5812	2285	BO2620		(481.40)	00064268-01	0000086272	DOONWOOD ENGINEERING, INC.	ME#1_160	02/19/2016	02/25/2016	03/10/2016	S0053141	VP	FX1868	201609	03/10/2016
D	02	TRN104	2	221	S-16-083	5812	2285			1,253.16	30060588-02	0000086272	DOONWOOD ENGINEERING, INC.	1512-104A	03/28/2016	04/14/2016	04/28/2016	S0063893	VP	FX2240	201610	04/28/2016
D	02	TRN104	2	203	S-16-083	5812	2285	BO2620		(362.95)	00064268-01	0000086272	DOONWOOD ENGINEERING, INC.	ME#3_160	04/28/2016	04/28/2016	05/09/2016	S0065405	VP	FX2326	201611	05/09/2016
D	02	TRN104	2	231	S-16-083	5812	2285	BO2620		2,621.40	00064268-01	0000086272	DOONWOOD ENGINEERING, INC.	ME#4_160	05/11/2016	05/11/2016	05/24/2016	S0068409	VP	FX2453	201611	05/24/2016
D	02	TRN104	2	203	S-16-083	5812	2285	BO2620		(131.07)	00064268-01	0000086272	DOONWOOD ENGINEERING, INC.	ME#4_160	05/11/2016	05/11/2016	05/24/2016	S0068409	VP	FX2453	201611	05/24/2016
D	02	TRN104	2	231	S-16-083	5812	2285	BO2620		7,259.00	00064268-01	0000086272	DOONWOOD ENGINEERING, INC.	ME#3_160	04/28/2016	04/28/2016	05/09/2016	S0065405	VP	FX2326	201611	05/09/2016
D	02	TRN104	2	203	S-16-083	5812	2285	BO2620		(260.05)	00064268-01	0000086272	DOONWOOD ENGINEERING, INC.	ME#5_160	06/23/2016	06/23/2016	07/12/2016	S0001753	VP	GX0060	201701	07/12/2016
D	02	TRN104	2	203	S-16-083	5812	2285	BO2620		(421.82)	00064268-01	0000086272	DOONWOOD ENGINEERING, INC.	ME#6_160	07/18/2016	07/18/2016	07/26/2016	S0003591	VP	GX0160	201701	07/26/2016
D	02	TRN104	2	231	S-16-083	5812	2285	BO2620		8,436.37	00064268-01	0000086272	DOONWOOD ENGINEERING, INC.	ME#6_160	07/18/2016	07/18/2016	07/26/2016	S0003591	VP	GX0160	201701	07/26/2016
D	02	TRN104	2	231	S-16-083	5812	2285	BO2620		5,200.90	00064268-01	0000086272	DOONWOOD ENGINEERING, INC.	ME#5_160	06/23/2016	06/23/2016	07/12/2016	S0001753	VP	GX0060	201701	07/12/2016
D	02	TRN104	2	231	S-16-083	5812	2285	BO2620		7,509.40	00064268-01	0000086272	DOONWOOD ENGINEERING, INC.	ME#7_160	08/09/2016	08/09/2016	08/18/2016	S0008344	VP	GX0355	201702	08/18/2016
D	02	TRN104	2	203	S-16-083	5812	2285	BO2620		(245.13)	00064268-01	0000086272	DOONWOOD ENGINEERING, INC.	ME#8_160	09/13/2016	09/13/2016	09/21/2016	S0014832	VP	GX0594	201703	09/21/2016
D	02	TRN104	2	231	S-16-083	5812	2285	BO2620		4,902.58	00064268-01	0000086272	DOONWOOD ENGINEERING, INC.	ME#8_160	09/13/2016	09/13/2016	09/21/2016	S0014832	VP	GX0594	201703	09/21/2016
D	02	TRN104	2	203	S-16-083	5812	2285	BO2620		(249.99)	00064268-01	0000086272	DOONWOOD ENGINEERING, INC.	ME#9_160	09/30/2016	10/11/2016	10/24/2016	S0022023	VP	GX0803	201704	10/24/2016
D	02	TRN104	2	231	S-16-083	5812	2285	BO2620		4,999.84	00064268-01	0000086272	DOONWOOD ENGINEERING, INC.	ME#9_160	09/30/2016	10/11/2016	10/24/2016	S0022023	VP	GX0803	201704	10/24/2016
D	02	TRN104	2	231	S-16-083	5812	2285	BO2620		4,750.67	00064268-01	0000086272	DOONWOOD ENGINEERING, INC.	ME#10_16	11/22/2016	11/22/2016	12/15/2016	S0032704	VP	GX1100	201706	12/15/2016
D	02	TRN104	2	231	S-16-083	5812	2285	BO2620		5,608.73	00064268-01	0000086272	DOONWOOD ENGINEERING, INC.	ME#11_16	12/11/2016	12/21/2016	01/09/2017	S0037769	VP	GX1301	201707	01/09/2017
D	02	TRN104	2	231	S-16-083	5812	2285	BO2620		39,391.66	00064268-01	0000086272	DOONWOOD ENGINEERING, INC.	ME#12_16	01/23/2017	01/20/2017	02/03/2017	S0043335	VP	GX1486	201708	02/03/2017
D	02	TRN104	2	231	S-16-083	5812	2285	BO2620		41,361.24	00064268-01	0000086272	DOONWOOD ENGINEERING, INC.	ME#13_97	02/09/2017	02/09/2017	02/24/2017	S0046654	VP	GX1644	201708	02/24/2017
D	02	TRN104	2	232	S-16-083	5812	2285	BO2620		2,394.88	00064268-01	0000086272	DOONWOOD ENGINEERING, INC.	94604-RY:	10/12/2017	10/25/2017	11/14/2017	S0021991	VP	AX1139	201805	11/14/2017
D	02	TRN104	2	231	S-16-083	5812	2285	BO2620		3,300.78	00064268-01	0000086272	DOONWOOD ENGINEERING, INC.	102752	02/13/2019	02/27/2019	03/15/2019	S0040485	VP	BX1958	201909	03/15/2019
D	02	TRN104	2	231	S-17-083	5812	2285	BO2620		5,753.55	00064268-02	0000086272	DOONWOOD ENGINEERING, INC.	ME#1_170	03/02/2017	03/02/2017	03/17/2017	S0051437	VP	GX1830	201709	03/17/2017

D	02	TRN104	2 231	S-17-083	5812	2285	BO2620	5,800.85	00064268-02	0000086272	DOONWOOD ENGINEERING, INC.	ME #2	03/15/2017	03/16/2017	04/11/2017	S0056616	VP	GX1981	201710	04/11/2017
D	02	TRN104	2 203	S-17-083	5812	2285	BO2620	(307.40)	00064268-02	0000086272	DOONWOOD ENGINEERING, INC.	ME #3	04/11/2017	04/11/2017	05/05/2017	S0062051	VP	GX2199	201711	05/05/2017
D	02	TRN104	2 231	S-17-083	5812	2285	BO2620	6,147.96	00064268-02	0000086272	DOONWOOD ENGINEERING, INC.	ME #3	04/11/2017	04/11/2017	05/05/2017	S0062051	VP	GX2199	201711	05/05/2017
D	02	TRN104	2 203	S-17-083	5812	2285	BO2620	(308.38)	00064268-02	0000086272	DOONWOOD ENGINEERING, INC.	ME #4	05/17/2017	05/17/2017	06/07/2017	S0068930	VP	GX2457	201712	06/07/2017
D	02	TRN104	2 231	S-17-083	5812	2285	BO2620	6,167.68	00064268-02	0000086272	DOONWOOD ENGINEERING, INC.	ME #4	05/17/2017	05/17/2017	06/07/2017	S0068930	VP	GX2457	201712	06/07/2017
D	02	TRN104	2 231	S-17-083	5812	2285	BO2620	5,185.13	00064268-02	0000086272	DOONWOOD ENGINEERING, INC.	ME #5	06/09/2017	06/13/2017	07/11/2017	S0000631	VP	AX0045	201801	07/11/2017
D	02	TRN104	2 231	S-17-083	5812	2285	BO2620	11,921.77	00064268-02	0000086272	DOONWOOD ENGINEERING, INC.	ME #6	07/14/2017	07/14/2017	08/11/2017	S0005837	VP	AX0342	201802	08/11/2017
D	02	TRN104	2 231	S-17-083	5812	2285	BO2620	4,520.17	00064268-02	0000086272	DOONWOOD ENGINEERING, INC.	1707-127	09/05/2017	09/05/2017	09/26/2017	S0013663	VP	AX0729	201803	09/26/2017
D	02	TRN104	2 231	S-17-083	5812	2285	BO2620	33,103.56	00064268-02	0000086272	DOONWOOD ENGINEERING, INC.	#8_1708-1	09/27/2017	09/27/2017	10/17/2017	S0017106	VP	AX0896	201804	10/17/2017
D	02	TRN104	2 231	S-17-083	5812	2285	BO2620	9,991.74	00064268-02	0000086272	DOONWOOD ENGINEERING, INC.	ME #9	10/11/2017	10/11/2017	11/07/2017	S0021062	VP	AX1063	201805	11/07/2017
D	02	TRN104	2 231	S-17-083	5812	2285	BO2620	44,159.07	00064268-02	0000086272	DOONWOOD ENGINEERING, INC.	1710-132	11/22/2017	11/29/2017	12/27/2017	S0028775	VP	AX1398	201806	12/27/2017
D	02	TRN104	2 231	S-17-083	5812	2285	BO2620	4,520.43	00064268-02	0000086272	DOONWOOD ENGINEERING, INC.	1711-135	12/13/2017	02/01/2018	02/27/2018	S0038981	VP	AX1829	201808	02/27/2018
D	02	TRN104	2 231	S-17-083	5812	2285	BO2620	12,503.04	00064268-02	0000086272	DOONWOOD ENGINEERING, INC.	1712-108	02/27/2018	03/20/2018	04/16/2018	S0047248	VP	AX2301	201810	04/16/2018
D	02	TRN104	2 232	S-17-083	5812	2285	BO2620	615.78	00064268-02	0000086272	DOONWOOD ENGINEERING, INC.	94604-RY2	06/22/2018	10/15/2018	11/14/2018	S0020859	VP	BX0946	201905	11/14/2018
D	02	TRN104	2 231	S-18-083	5812	2285	BO2620	7,869.86	00064268-03	0000086272	DOONWOOD ENGINEERING, INC.	1801-129	02/15/2018	04/03/2018	04/25/2018	S0049072	VP	AX2426	201810	04/25/2018
D	02	TRN104	2 231	S-18-083	5812	2285	BO2620	7,930.02	00064268-03	0000086272	DOONWOOD ENGINEERING, INC.	1802-138	02/28/2018	04/10/2018	05/02/2018	S0050467	VP	AX2476	201811	05/02/2018
D	02	TRN104	2 231	S-18-083	5812	2285	BO2620	6,243.35	00064268-03	0000086272	DOONWOOD ENGINEERING, INC.	1803-113	04/13/2018	04/24/2018	05/10/2018	S0051483	VP	AX2550	201811	05/10/2018
D	02	TRN104	2 231	S-18-083	5812	2285	BO2620	10,833.18	00064268-03	0000086272	DOONWOOD ENGINEERING, INC.	1804-131	04/30/2018	06/12/2018	06/29/2018	S0061299	VP	AX2920	201812	06/29/2018
D	02	TRN104	2 231	S-18-083	5812	2285	BO2620	8,869.78	00064268-03	0000086272	DOONWOOD ENGINEERING, INC.	1805-139	06/14/2018	06/26/2018	07/20/2018	S0001518	VP	BX0136	201901	07/20/2018
D	02	TRN104	2 231	S-18-083	5812	2285	BO2620	6,668.42	00064268-03	0000086272	DOONWOOD ENGINEERING, INC.	1806-118	06/30/2018	07/19/2018	08/08/2018	S0003958	VP	BX0278	201902	08/08/2018
D	02	TRN104	2 231	S-18-083	5812	2285	BO2620	6,118.62	00064268-03	0000086272	DOONWOOD ENGINEERING, INC.	1807-131	07/31/2018	08/28/2018	09/20/2018	S0011440	VP	BX0615	201903	09/20/2018
D	02	TRN104	2 231	S-18-083	5812	2285	BO2620	5,910.66	00064268-03	0000086272	DOONWOOD ENGINEERING, INC.	1808-145	09/10/2018	09/28/2018	10/10/2018	S0015316	VP	BX0788	201904	10/10/2018
D	02	TRN104	2 231	S-18-083	5812	2285	BO2620	5,941.62	00064268-03	0000086272	DOONWOOD ENGINEERING, INC.	1809-111	09/30/2018	10/15/2018	11/14/2018	S0020859	VP	BX0946	201905	11/14/2018
D	02	TRN104	2 231	S-18-083	5812	2285	BO2620	8,390.52	00064268-03	0000086272	DOONWOOD ENGINEERING, INC.	1810-133	10/31/2018	11/15/2018	12/03/2018	S0023996	VP	BX1190	201905	12/03/2018
D	02	TRN104	2 231	S-18-083	5812	2285	BO2620	42,641.27	00064268-03	0000086272	DOONWOOD ENGINEERING, INC.	1811-142	11/30/2018	12/19/2018	01/16/2019	S0030992	VP	BX1469	201907	01/16/2019
D	02	TRN104	2 231	S-18-083	5812	2285	BO2620	9,141.46	00064268-03	0000086272	DOONWOOD ENGINEERING, INC.	1812-121	12/31/2018	01/15/2019	02/12/2019	S0035216	VP	BX1676	201908	02/12/2019
D	02	TRN104	2 231	S-18-083	5812	2285	BO2620	20,655.45	00064268-03	0000086272	DOONWOOD ENGINEERING, INC.	102752	02/13/2019	02/27/2019	03/15/2019	S0040485	VP	BX1958	201909	03/15/2019
D	02	TRN104	2 231	S-19-083	5812	2285	BO2901	8,538.16	00067432-01	0000086272	DOONWOOD ENGINEERING, INC.	1901-134	02/01/2019	02/27/2019	03/22/2019	S0041712	VP	BX1998	201909	03/22/2019
D	02	TRN104	2 231	S-19-083	5812	2285	BO2901	5,246.92	00067432-01	0000086272	DOONWOOD ENGINEERING, INC.	1902-145	03/01/2019	03/27/2019	04/17/2019	S0045977	VP	BX2186	201910	04/17/2019
D	02	TRN104	2 231	S-19-083	5812	2285	BO2901	5,553.22	00067432-01	0000086272	DOONWOOD ENGINEERING, INC.	1903-116	03/31/2019	04/18/2019	05/07/2019	S0049153	VP	BX2335	201911	05/07/2019
D	02	TRN104	2 231	S-19-083	5812	2285	BO2901	19,622.14	00067432-01	0000086272	DOONWOOD ENGINEERING, INC.	1905-143	05/31/2019	06/17/2019	06/28/2019	S0057931	VP	BX2781	201912	06/28/2019
D	02	TRN104	2 231	S-19-083	5812	2285	BO2901	9,302.81	00067432-01	0000086272	DOONWOOD ENGINEERING, INC.	1904-136	04/30/2019	06/17/2019	06/28/2019	S0057931	VP	BX2781	201912	06/28/2019
D	02	TRN104	2 231	S-19-083	5812	2285	BO2901	26,217.23	00067432-01	0000086272	DOONWOOD ENGINEERING, INC.	ME #6	07/15/2019	07/19/2019	08/15/2019	S0006935	VP	CX0328	202002	08/15/2019
D	02	TRN104	2 231	S-19-083	5812	2285	BO2901	16,703.77	00067432-01	0000086272	DOONWOOD ENGINEERING, INC.	ME #7_19	07/31/2019	08/20/2019	09/11/2019	S0011447	VP	CX0543	202003	09/11/2019
D	02	TRN104	2 231	S-19-083	5812	2285	BO2901	8,158.85	00067432-01	0000086272	DOONWOOD ENGINEERING, INC.	1908-145	08/31/2019	09/24/2019	10/23/2019	S0018581	VP	CX0782	202004	10/23/2019
D	02	TRN104	2 231	S-19-083	5812	2285	BO2901	4,928.48	00067432-01	0000086272	DOONWOOD ENGINEERING, INC.	1909-123	09/30/2019	10/23/2019	11/13/2019	S0022119	VP	CX0994	202005	11/13/2019
D	02	TRN104	2 231	S-19-083	5812	2285	BO2901	8,389.19	00067432-01	0000086272	DOONWOOD ENGINEERING, INC.	1910-132	10/31/2019	11/25/2019	12/18/2019	S0027643	VP	CX1256	202006	12/18/2019
D	02	TRN104	2 231	S-19-083	5812	2285	BO2901	5,304.11	00067432-01	0000086272	DOONWOOD ENGINEERING, INC.	1911-142	11/30/2019	12/19/2019	01/13/2020	S0030987	VP	CX1398	202007	01/13/2020
D	02	TRN104	2 231	S-19-083	5812	2285	BO2901	8,017.12	00067432-01	0000086272	DOONWOOD ENGINEERING, INC.	1912-127	01/16/2020	01/30/2020	02/19/2020	S0037067	VP	CX1692	202008	02/19/2020
D	02	TRN104	2 231	S-19-083	5812	2285	BO2901	5,866.02	00067432-01	0000086272	DOONWOOD ENGINEERING, INC.	2001-1260	01/31/2020	03/02/2020	03/30/2020	S0043258	VP	CX1928	202009	03/30/2020
D	02	TRN104	2 231	S-20-083	5812	2285	BO2901	5,366.02	00067432-03	0000086272	DOONWOOD ENGINEERING, INC.	2002-142	02/29/2020	03/30/2020	04/27/2020	S0047095	VP	CX2148	202010	04/27/2020
								736,196.69												

EXHIBIT 19

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

AIRPORT MASTER RECORD

PRINT DATE: 12/14/2020
AFD EFF 12/03/2020
FORM APPROVED OMB 2120-0015

> 1 ASSOC CITY:	MOKULEIA	4 STATE: HI	LOC ID: HDH	FAA SITE NR: 52430.*A
> 2 AIRPORT NAME:	DILLINGHAM AIRFIELD		5 COUNTY: HONOLULU, HI	
3 CBD TO AIRPORT (NM): 2 W		6 REGION/ADO: AWP /HNL	7 SECT AERO CHT: HAWAIIAN ISLANDS	

GENERAL

10 OWNERSHIP:	ARMY
> 11 OWNER:	US ARMY
> 12 ADDRESS:	USARPAC HONOLULU, HA AII 9
> 13 PHONE NR:	808-656-1027
> 14 MANAGER:	ROY SAKATA
> 15 ADDRESS:	300 RODGERS BLVD NR 12 HONOLULU, HI 96819-1897
> 16 PHONE NR:	808-836-6533

> 17 ATTENDANCE SCHEDULE:

MONTHS	DAYS	HOURS
ALL	ALL	0700-1530

18 AIRPORT USE:	PUBLIC
19 ARPT LAT:	21-34-46.105N ESTIMATED
20 ARPT LONG:	158-11-50.213W
21 ARPT ELEV:	14.2 SURVEYED
22 ACREAGE:	134
> 23 RIGHT TRAFFIC:	26
> 24 NON-COMM LANDING:	NO
25 NPIAS/FED AGREEMENTS:	NGY
> 26 FAR 139 INDEX:	/

SERVICES

> 70 FUEL:	100 A
> 71 AIRFRAME RPRS:	MAJOR
> 72 PWR PLANT RPRS:	MAJOR
> 73 BOTTLE OXYGEN:	
> 74 BULK OXYGEN:	
75 TSNT STORAGE:	TIE
76 OTHER SERVICES:	GLD,INSTR,PAJA

FACILITIES

> 80 ARPT BCN:	
> 81 ARPT LGT SKED:	
BCN LGT SKED:	
> 82 UNICOM:	123.000
> 83 WIND INDICATOR:	YES
84 SEGMENTED CIRCLE:	NONE
85 CONTROL TWR:	NO
86 FSS:	HONOLULU
87 FSS ON ARPT:	NO
88 FSS PHONE NR:	
89 TOLL FREE NR:	1-800-WX-BRIEF

BASED AIRCRAFT

90 SINGLE ENG:	18
91 MULTI ENG:	0
92 JET:	0
93 HELICOPTERS:	0
TOTAL:	18
94 GLIDERS:	20
95 MILITARY:	0
96 ULTRA-LIGHT:	2

OPERATIONS

100 AIR CARRIER:	0
102 AIR TAXI:	0
103 G A LOCAL:	36,031
104 G A ITNRNT:	0
105 MILITARY:	1,484
TOTAL:	37,515

OPERATIONS FOR 12 MONTHS ENDING 06/30/2015

RUNWAY DATA

> 30 RUNWAY IDENT:		**08/26**
> 31 LENGTH:		9,007
> 32 WIDTH:		75
> 33 SURF TYPE-COND:		ASPH-G
> 34 SURF TREATMENT:		RFSC
35 GROSS WT:	S	40.0
36 (IN THSDS)	D	152.0
37	2D	180.0
38	2D/2DS	
> 39 PCN:		////

LIGHTING/APCH AIDS

> 40 EDGE INTENSITY:	
> 42 RWY MARK TYPE-COND:	BSC- F / BSC- G
> 43 VGSI:	/
44 THR CROSSING HGT:	/
45 VISUAL GLIDE ANGLE:	/
> 46 CNTRLN-TDZ:	N - N / N - N
> 47 RVR-RVV:	- N / - N
> 48 REIL:	N / N
> 49 APCH LIGHTS:	/

OBSTRUCTION DATA

50 FAR 77 CATEGORY:	A(V) / A(V)
> 51 DISPLACED THR:	1993 / 1995
> 52 CTLG OBSTN:	/ TREES
> 53 OBSTN MARKED/LGTD:	/
> 54 HGT ABOVE RWY END:	/ 60
> 55 DIST FROM RWY END:	0 / 1,400
> 56 CNTRLN OFFSET:	/ 100R
57 OBSTN CLNC SLOPE:	50:1 / 20:1
58 CLOSE-IN OBSTN:	N / N

DECLARED DISTANCES

> 60 TAKE OFF RUN AVBL (TORA):	/
> 61 TAKE OFF DIST AVBL (TODA):	/
> 62 ACLT STOP DIST AVBL (ASDA):	/
> 63 LNDG DIST AVBL (LDA):	/

(>) ARPT MGR PLEASE ADVISE FSS IN ITEM 86 WHEN CHANGES OCCUR TO ITEMS PRECEDED BY >

> 110 REMARKS:

A 002	LCTD WITHIN DILLINGHAM MILITARY RESERVATION.
A 012	US ARMY SUPPORT COMMAND HI, FORT SHAFTER HI 96858.
A 014	CUSTODIAN ATTENDANT AT ARPT 0700-1530.
A 016	PHONE AT ARPT 637-8270. FAX 637-8291. UNICOM OPERATOR 637-8271.
A 018	OPEN TO CIVIL USE THRU AGRMT BTN US ARMY & ST OF HAWAII-CHECK NOTAMS PRIOR TO USE-NO ATCT IN OPN.
A 030	RWY 08/26 RWY 08/26 CLSD FOR MILITARY TRAINING 0800-1700Z.
A 057	RWY 26 APCH RATIO 50:1 TO DSPLCD THLD.

111 INSPECTOR: (S) 112 LAST INSP: 11/06/2015 113 LAST INFO REQ:

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

AIRPORT MASTER RECORD

PRINT DATE: 12/14/2020
AFD EFF 12/03/2020
FORM APPROVED OMB 2120-0015

> 1 ASSOC CITY:	MOKULEIA	4 STATE: HI	LOC ID: HDH	FAA SITE NR: 52430.*A
> 2 AIRPORT NAME:	DILLINGHAM AIRFIELD		5 COUNTY: HONOLULU, HI	
3 CBD TO AIRPORT (NM): 2 W		6 REGION/ADO: AWP /HNL	7 SECT AERO CHT: HAWAIIAN ISLANDS	

GENERAL

10 OWNERSHIP:	ARMY
> 11 OWNER:	US ARMY
> 12 ADDRESS:	USARPAC HONOLULU, HA AII 9
> 13 PHONE NR:	808-656-1027
> 14 MANAGER:	ROY SAKATA
> 15 ADDRESS:	300 RODGERS BLVD NR 12 HONOLULU, HI 96819-1897
> 16 PHONE NR:	808-836-6533

> 17 ATTENDANCE SCHEDULE:

MONTHS	DAYS	HOURS
ALL	ALL	0700-1530

18 AIRPORT USE:	PUBLIC
19 ARPT LAT:	21-34-46.105N ESTIMATED
20 ARPT LONG:	158-11-50.213W
21 ARPT ELEV:	14.2 SURVEYED
22 ACREAGE:	134
> 23 RIGHT TRAFFIC:	26
> 24 NON-COMM LANDING:	NO
25 NPIAS/FED AGREEMENTS:	NGY
> 26 FAR 139 INDEX:	/

SERVICES

> 70 FUEL:	100 A
> 71 AIRFRAME RPRS:	MAJOR
> 72 PWR PLANT RPRS:	MAJOR
> 73 BOTTLE OXYGEN:	
> 74 BULK OXYGEN:	
75 TSNT STORAGE:	TIE
76 OTHER SERVICES:	GLD,INSTR,PAJA

FACILITIES

> 80 ARPT BCN:	
> 81 ARPT LGT SKED:	
BCN LGT SKED:	
> 82 UNICOM:	123.000
> 83 WIND INDICATOR:	YES
84 SEGMENTED CIRCLE:	NONE
85 CONTROL TWR:	NO
86 FSS:	HONOLULU
87 FSS ON ARPT:	NO
88 FSS PHONE NR:	
89 TOLL FREE NR:	1-800-WX-BRIEF

BASED AIRCRAFT

90 SINGLE ENG:	18
91 MULTI ENG:	0
92 JET:	0
93 HELICOPTERS:	0
TOTAL:	18
94 GLIDERS:	20
95 MILITARY:	0
96 ULTRA-LIGHT:	2

OPERATIONS

100 AIR CARRIER:	0
102 AIR TAXI:	0
103 G A LOCAL:	36,031
104 G A ITNRNT:	0
105 MILITARY:	1,484
TOTAL:	37,515

OPERATIONS FOR 12 MONTHS ENDING 06/30/2015

RUNWAY DATA

> 30 RUNWAY IDENT:	
> 31 LENGTH:	
> 32 WIDTH:	
> 33 SURF TYPE-COND:	
> 34 SURF TREATMENT:	
35 GROSS WT:	S
36 (IN THSDS)	D
37	2D
38	2D/2DS
> 39 PCN:	

LIGHTING/APCH AIDS

> 40 EDGE INTENSITY:
> 42 RWY MARK TYPE-COND:
> 43 VGSI:
44 THR CROSSING HGT:
45 VISUAL GLIDE ANGLE:
> 46 CNTRLN-TDZ:
> 47 RVR-RVV:
> 48 REIL:
> 49 APCH LIGHTS:

OBSTRUCTION DATA

50 FAR 77 CATEGORY:
> 51 DISPLACED THR:
> 52 CTLG OBSTN:
> 53 OBSTN MARKED/LGTD:
> 54 HGT ABOVE RWY END:
> 55 DIST FROM RWY END:
> 56 CNTRLN OFFSET:
57 OBSTN CLNC SLOPE:
58 CLOSE-IN OBSTN:

DECLARED DISTANCES

> 60 TAKE OFF RUN AVBL (TORA):
> 61 TAKE OFF DIST AVBL (TODA):
> 62 ACLT STOP DIST AVBL (ASDA):
> 63 LNDG DIST AVBL (LDA):

(>) ARPT MGR PLEASE ADVISE FSS IN ITEM 86 WHEN CHANGES OCCUR TO ITEMS PRECEDED BY >

> 110 REMARKS:

A 057	RWY 08 50:1 TO DSPLCD THR.
A 082	UNICOM OPER 0900-1700.
A 110-001	SIMULTANEOUS GLIDER/POWERED ACFT OPNS.
A 110-002	EXTNSV MIL HELICOPTER & GLIDER OPNS DAILY. AEROBATIC TRAINING OFFSHORE N OF AIRFIELD ABV 1500'.
A 110-003	CLSD TO CIVIL ACFT SS-SR.
A 110-005	SKY DIVING ACTIVITY ON AND INVOF ARPT.
A 110-006	CTN: LARGE SEA BIRDS ON AND INVOF ARPT NOVEMBER THROUGH APRIL.

111 INSPECTOR: (S) 112 LAST INSP: 11/06/2015 113 LAST INFO REQ:

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

AIRPORT MASTER RECORD

PRINT DATE: 12/14/2020
AFD EFF 12/03/2020
FORM APPROVED OMB 2120-0015

> 1 ASSOC CITY:	MOKULEIA	4 STATE: HI	LOC ID: HDH	FAA SITE NR: 52430.*A
> 2 AIRPORT NAME:	DILLINGHAM AIRFIELD		5 COUNTY: HONOLULU, HI	
3 CBD TO AIRPORT (NM): 2 W		6 REGION/ADO: AWP /HNL	7 SECT AERO CHT: HAWAIIAN ISLANDS	

GENERAL

10 OWNERSHIP:	ARMY
> 11 OWNER:	US ARMY
> 12 ADDRESS:	USARPAC HONOLULU, HA AII 9
> 13 PHONE NR:	808-656-1027
> 14 MANAGER:	ROY SAKATA
> 15 ADDRESS:	300 RODGERS BLVD NR 12 HONOLULU, HI 96819-1897
> 16 PHONE NR:	808-836-6533

> 17 ATTENDANCE SCHEDULE:

MONTHS	DAYS	HOURS
ALL	ALL	0700-1530

18 AIRPORT USE:	PUBLIC
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> 23 RIGHT TRAFFIC:	26
> 24 NON-COMM LANDING:	NO
25 NPIAS/FED AGREEMENTS:	NGY
> 26 FAR 139 INDEX:	/

SERVICES

> 70 FUEL:	100 A
> 71 AIRFRAME RPRS:	MAJOR
> 72 PWR PLANT RPRS:	MAJOR
> 73 BOTTLE OXYGEN:	
> 74 BULK OXYGEN:	
75 TSNT STORAGE:	TIE
76 OTHER SERVICES:	GLD,INSTR,PAJA

FACILITIES

> 80 ARPT BCN:	
> 81 ARPT LGT SKED:	
BCN LGT SKED:	
> 82 UNICOM:	123.000
> 83 WIND INDICATOR:	YES
84 SEGMENTED CIRCLE:	NONE
85 CONTROL TWR:	NO
86 FSS:	HONOLULU
87 FSS ON ARPT:	NO
88 FSS PHONE NR:	
89 TOLL FREE NR:	1-800-WX-BRIEF

BASED AIRCRAFT

90 SINGLE ENG:	18
91 MULTI ENG:	0
92 JET:	0
93 HELICOPTERS:	0
TOTAL:	18
94 GLIDERS:	20
95 MILITARY:	0
96 ULTRA-LIGHT:	2

OPERATIONS

100 AIR CARRIER:	0
102 AIR TAXI:	0
103 G A LOCAL:	36,031
104 G A ITNRNT:	0
105 MILITARY:	1,484
TOTAL:	37,515

OPERATIONS FOR 12 MONTHS ENDING 06/30/2015

RUNWAY DATA

> 30 RUNWAY IDENT:	
> 31 LENGTH:	
> 32 WIDTH:	
> 33 SURF TYPE-COND:	
> 34 SURF TREATMENT:	
35 GROSS WT:	S
36 (IN THSDS)	D
37	2D
38	2D/2DS
> 39 PCN:	

LIGHTING/APCH AIDS

> 40 EDGE INTENSITY:
> 42 RWY MARK TYPE-COND:
> 43 VGSI:
44 THR CROSSING HGT:
45 VISUAL GLIDE ANGLE:
> 46 CNTRLN-TDZ:
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OBSTRUCTION DATA

50 FAR 77 CATEGORY:
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> 53 OBSTN MARKED/LGTD:
> 54 HGT ABOVE RWY END:
> 55 DIST FROM RWY END:
> 56 CNTRLN OFFSET:
57 OBSTN CLNC SLOPE:
58 CLOSE-IN OBSTN:

DECLARED DISTANCES

> 60 TAKE OFF RUN AVBL (TORA):
> 61 TAKE OFF DIST AVBL (TODA):
> 62 ACLT STOP DIST AVBL (ASDA):
> 63 LNDG DIST AVBL (LDA):

(>) ARPT MGR PLEASE ADVISE FSS IN ITEM 86 WHEN CHANGES OCCUR TO ITEMS PRECEDED BY >

> 110 REMARKS:

A 110-007	NO RUNNING LNDGS WITH SKID TYPE HELICOPTER ON RWY - APVD TWYS ONLY.
A 110-008	A 5000 X 75 FT RWY FOR LGT POWERED ACFT HAS BEEN PAINTED IN THE CENTER OF EXISTING 9007 X 75 FT PAVED AREA FOR CIVIL USE STARTING APPROX 2000 FT FM EACH RWY END.
A 110-009	POWERED ACFT SHALL KEEP BASE LEG IN CLOSE AND CROSS THE ARPT BOUNDARY FENCES AT OR ABOVE 600 FT MSL IN ORDER TO ASSURE SAFE SEPARATION FROM SAILPLANES/TOWPLANES USING THE FIRST 2000 FT (SHORT OF THE DSPLCE THLD).
A 110-011	ULTRALIGHTS ON & INVOF ARPT.
A 110-012	TREE LINE WITH 90 FT TREES NORTH & SOUTH OF RY APRXLY 425 FT FROM CNTRLN.
A 110-013	MARKED DEPRESSION INVOF THE AUTOMATED FUEL PUMP ON SOUTHWESTERN APRON.
A 110-015	PPR FOR CIVIL ACFT 12500 LBS AND OVER, CTC ARPT AIRSIDE OPS MGR AT (808) 836-6428 MON-FRI, 0745-1630.

111 INSPECTOR: (S) 112 LAST INSP: 11/06/2015 113 LAST INFO REQ:

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

AIRPORT MASTER RECORD

PRINT DATE: 12/14/2020
AFD EFF 12/03/2020
FORM APPROVED OMB 2120-0015

> 1 ASSOC CITY:	MOKULEIA	4 STATE: HI	LOC ID: HDH	FAA SITE NR: 52430.*A
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3 CBD TO AIRPORT (NM): 2 W		6 REGION/ADO: AWP /HNL	7 SECT AERO CHT: HAWAIIAN ISLANDS	

GENERAL

10 OWNERSHIP:	ARMY
> 11 OWNER:	US ARMY
> 12 ADDRESS:	USARPAC HONOLULU, HA AII 9
> 13 PHONE NR:	808-656-1027
> 14 MANAGER:	ROY SAKATA
> 15 ADDRESS:	300 RODGERS BLVD NR 12 HONOLULU, HI 96819-1897
> 16 PHONE NR:	808-836-6533

> 17 ATTENDANCE SCHEDULE:

MONTHS	DAYS	HOURS
ALL	ALL	0700-1530

18 AIRPORT USE:	PUBLIC
19 ARPT LAT:	21-34-46.105N ESTIMATED
20 ARPT LONG:	158-11-50.213W
21 ARPT ELEV:	14.2 SURVEYED
22 ACREAGE:	134
> 23 RIGHT TRAFFIC:	26
> 24 NON-COMM LANDING:	NO
25 NPIAS/FED AGREEMENTS:	NGY
> 26 FAR 139 INDEX:	/

SERVICES

> 70 FUEL:	100 A
> 71 AIRFRAME RPRS:	MAJOR
> 72 PWR PLANT RPRS:	MAJOR
> 73 BOTTLE OXYGEN:	
> 74 BULK OXYGEN:	
75 TSNT STORAGE:	TIE
76 OTHER SERVICES:	GLD,INSTR,PAJA

FACILITIES

> 80 ARPT BCN:	
> 81 ARPT LGT SKED:	
BCN LGT SKED:	
> 82 UNICOM:	123.000
> 83 WIND INDICATOR:	YES
84 SEGMENTED CIRCLE:	NONE
85 CONTROL TWR:	NO
86 FSS:	HONOLULU
87 FSS ON ARPT:	NO
88 FSS PHONE NR:	
89 TOLL FREE NR:	1-800-WX-BRIEF

BASED AIRCRAFT

90 SINGLE ENG:	18
91 MULTI ENG:	0
92 JET:	0
93 HELICOPTERS:	0
TOTAL:	18
94 GLIDERS:	20
95 MILITARY:	0
96 ULTRA-LIGHT:	2

OPERATIONS

100 AIR CARRIER:	0
102 AIR TAXI:	0
103 G A LOCAL:	36,031
104 G A ITNRNT:	0
105 MILITARY:	1,484
TOTAL:	37,515

OPERATIONS FOR 12 MONTHS ENDING 06/30/2015

RUNWAY DATA

> 30 RUNWAY IDENT:	
> 31 LENGTH:	
> 32 WIDTH:	
> 33 SURF TYPE-COND:	
> 34 SURF TREATMENT:	
35 GROSS WT:	S
36 (IN THSDS)	D
37	2D
38	2D/2DS
> 39 PCN:	

LIGHTING/APCH AIDS

> 40 EDGE INTENSITY:
> 42 RWY MARK TYPE-COND:
> 43 VGSI:
44 THR CROSSING HGT:
45 VISUAL GLIDE ANGLE:
> 46 CNTRLN-TDZ:
> 47 RVR-RVV:
> 48 REIL:
> 49 APCH LIGHTS:

OBSTRUCTION DATA

50 FAR 77 CATEGORY:
> 51 DISPLACED THR:
> 52 CTLG OBSTN:
> 53 OBSTN MARKED/LGTD:
> 54 HGT ABOVE RWY END:
> 55 DIST FROM RWY END:
> 56 CNTRLN OFFSET:
57 OBSTN CLNC SLOPE:
58 CLOSE-IN OBSTN:

DECLARED DISTANCES

> 60 TAKE OFF RUN AVBL (TORA):
> 61 TAKE OFF DIST AVBL (TODA):
> 62 ACLT STOP DIST AVBL (ASDA):
> 63 LNDG DIST AVBL (LDA):

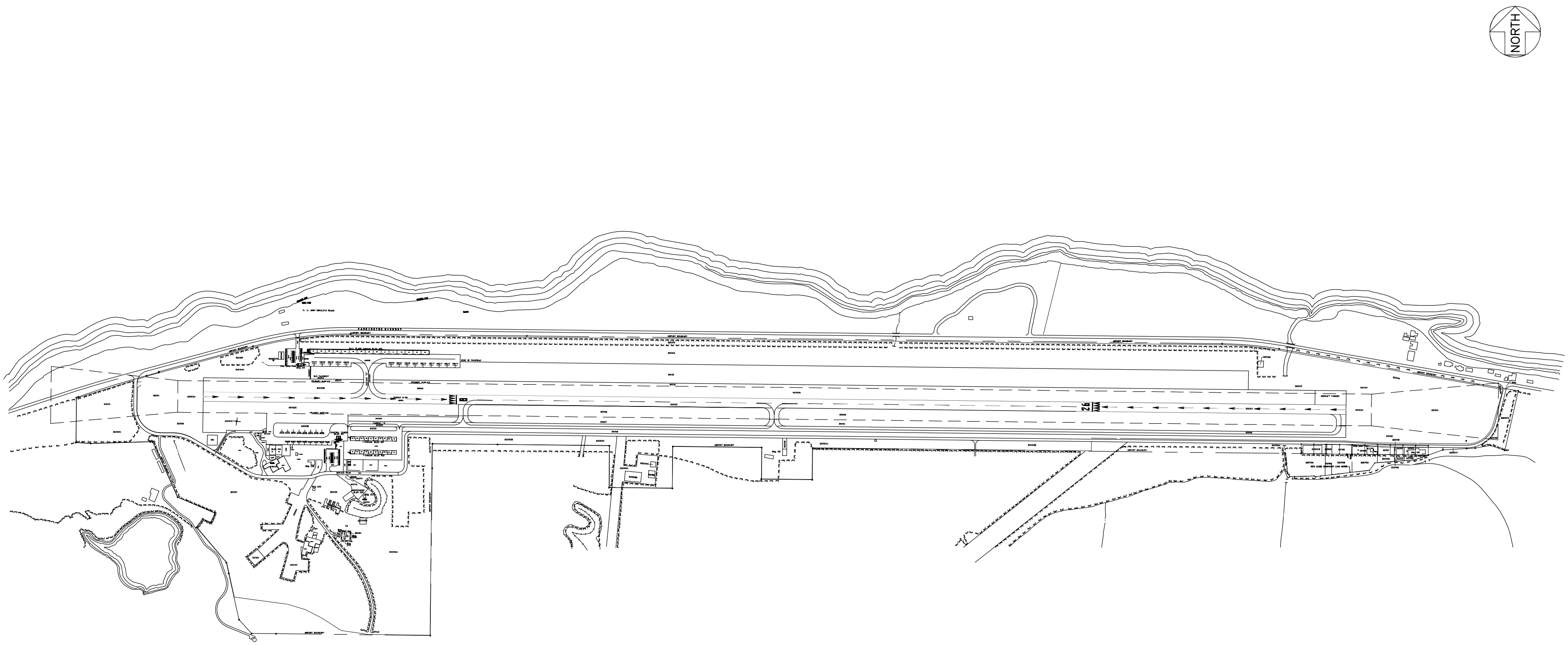
(>) ARPT MGR PLEASE ADVISE FSS IN ITEM 86 WHEN CHANGES OCCUR TO ITEMS PRECEDED BY >

> 110 REMARKS:

A 110-016 RSTD: PPR FOR ALL MILITARY FLT INTO ARPT CTC USA HAWAII RNG C808-655-1429/4892.
A 110-018 FOR CD CTC HONOLULU CONTROL FACILITY AT 808-840-6262.

111 INSPECTOR: (S) 112 LAST INSP: 11/06/2015 113 LAST INFO REQ:

EXHIBIT 20



SCALE: 1" = 800'

AIRPORTS DIVISION

DEPARTMENT OF TRANSPORTATION · STATE OF HAWAII

PROPERTY MAP

AT

DILLINGHAM AIRFIELD

MOKULEIA, OAHU, HAWAII

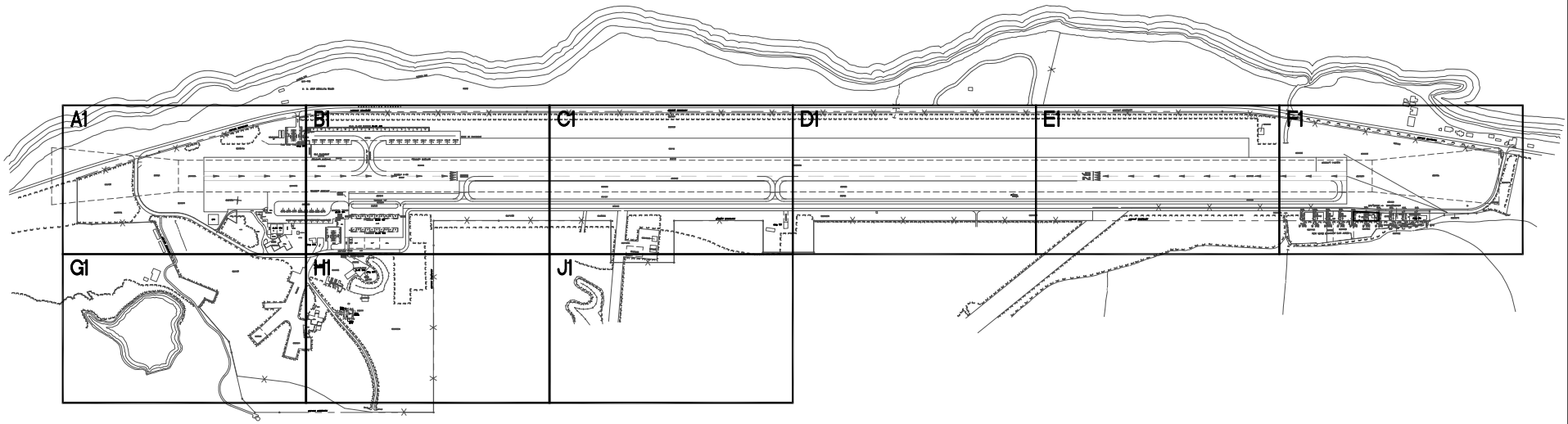
DATE: AUGUST 2020

EXHIBIT: A

SHEET 1 OF 1

N:\EG_SECTION\GIRLIE\MIKE AUERBACH\HDH_LEVEL01_PROPERTYMAP-02.DWG

EXHIBIT 21



HALF SIZE PRINTS

400' 0 400' 800'

GRAPHIC SCALE IN FEET

DEPARTMENT OF TRANSPORTATION · STATE OF HAWAII

AIRPORTS DIVISION

DILLINGHAM AIRFIELD

PROPERTY SPACES INDEX-GROUND LEVEL

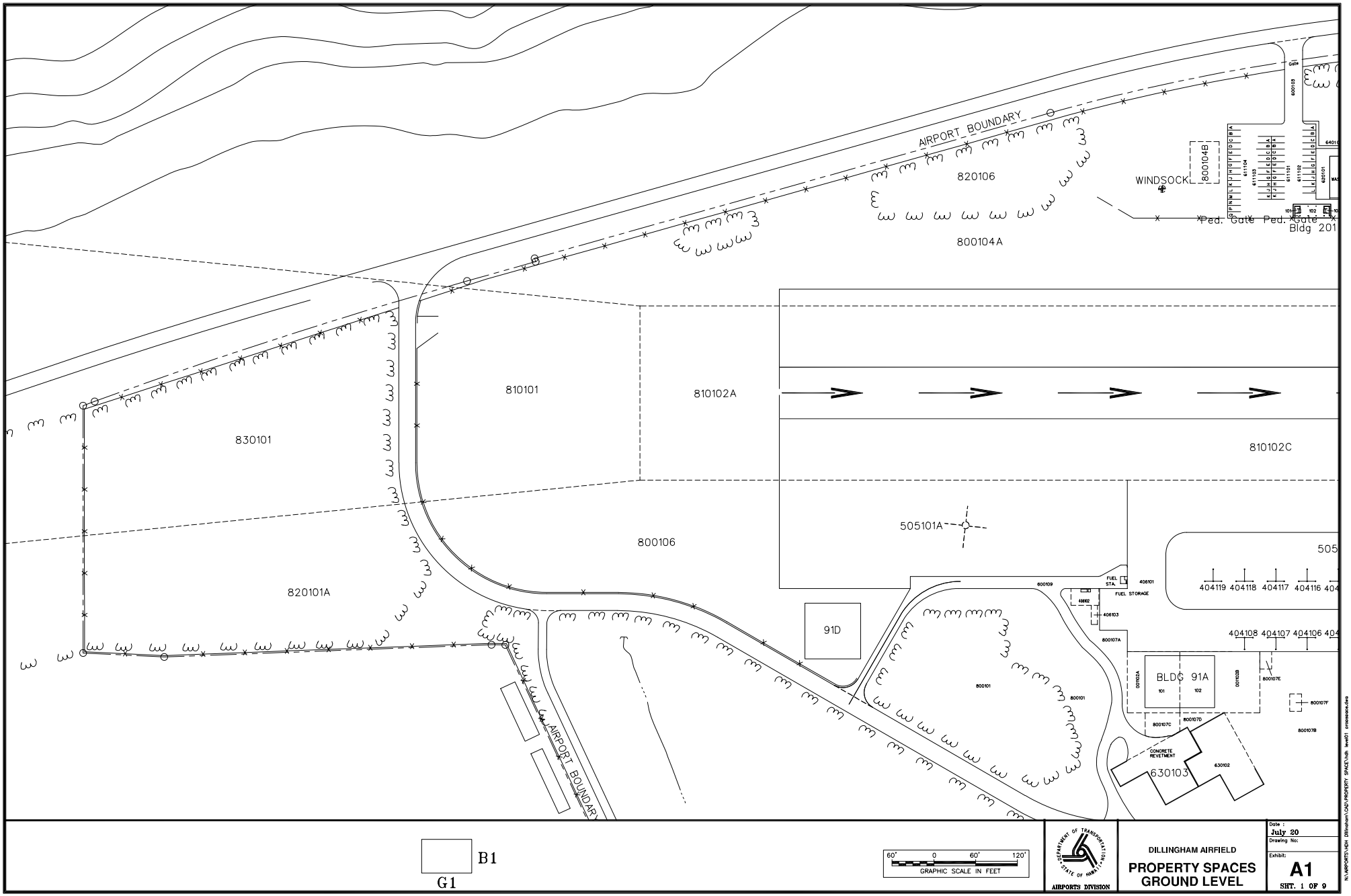
Date : July 20

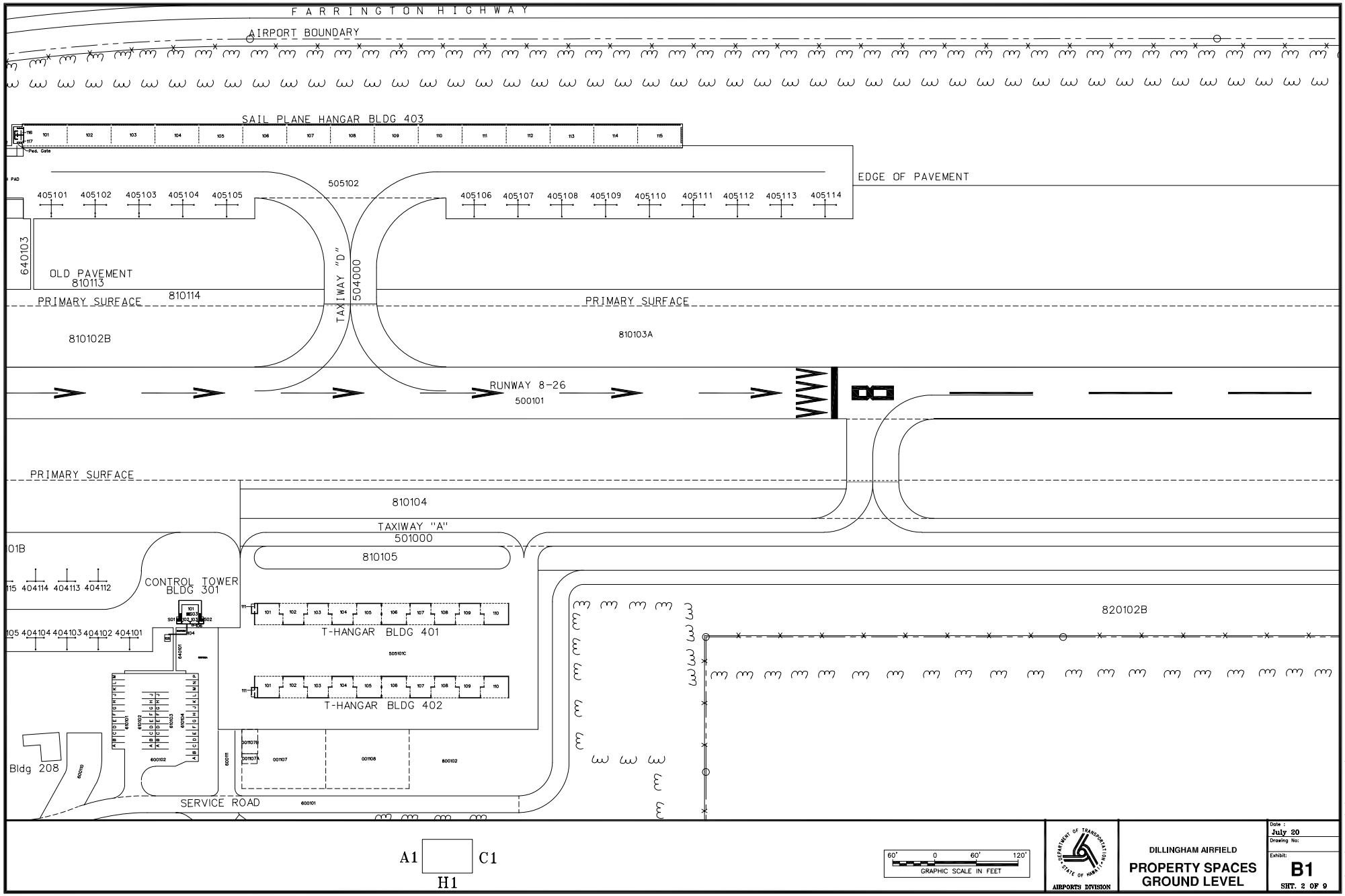
Drawing No:

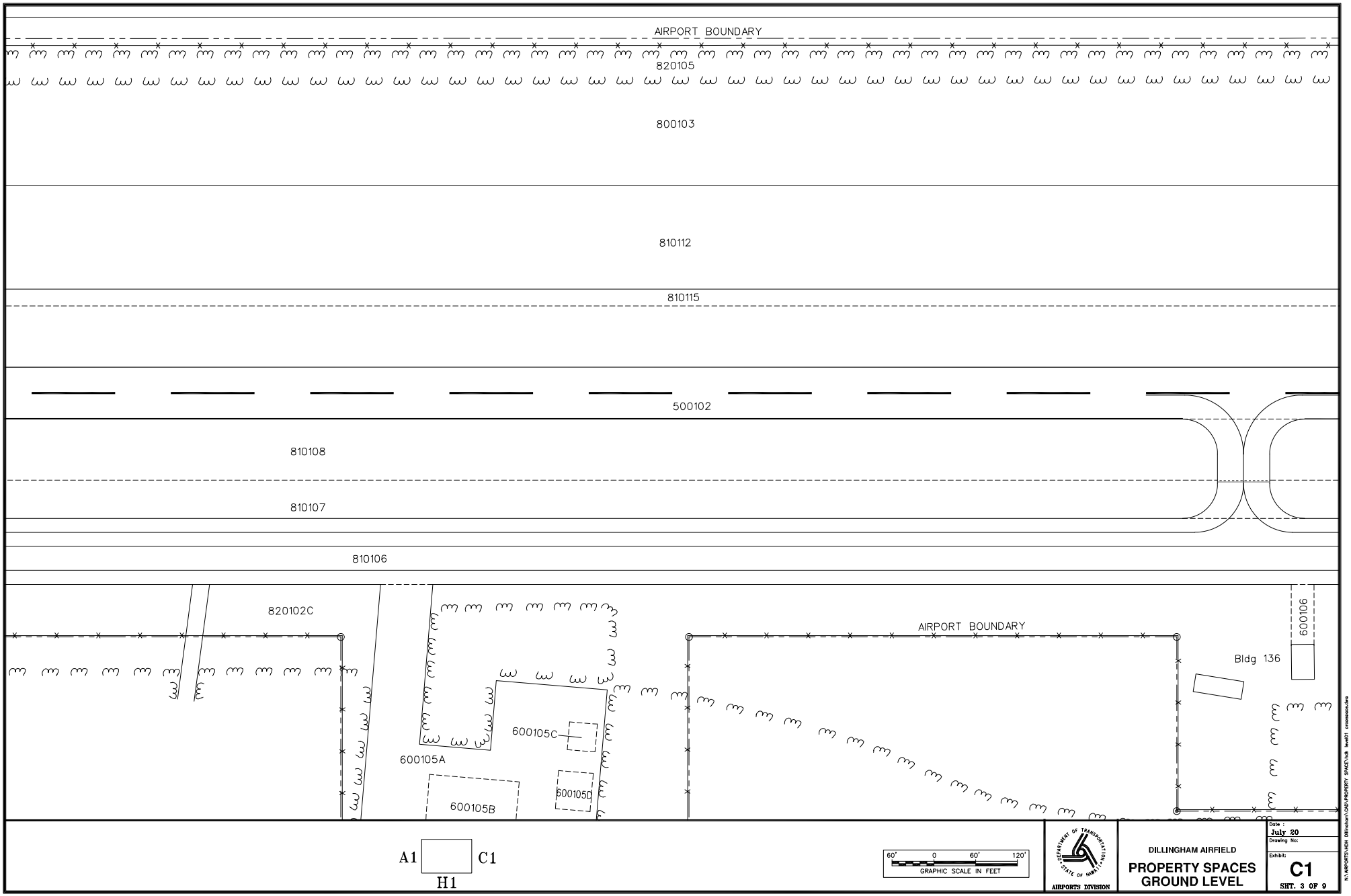
Exhibit:

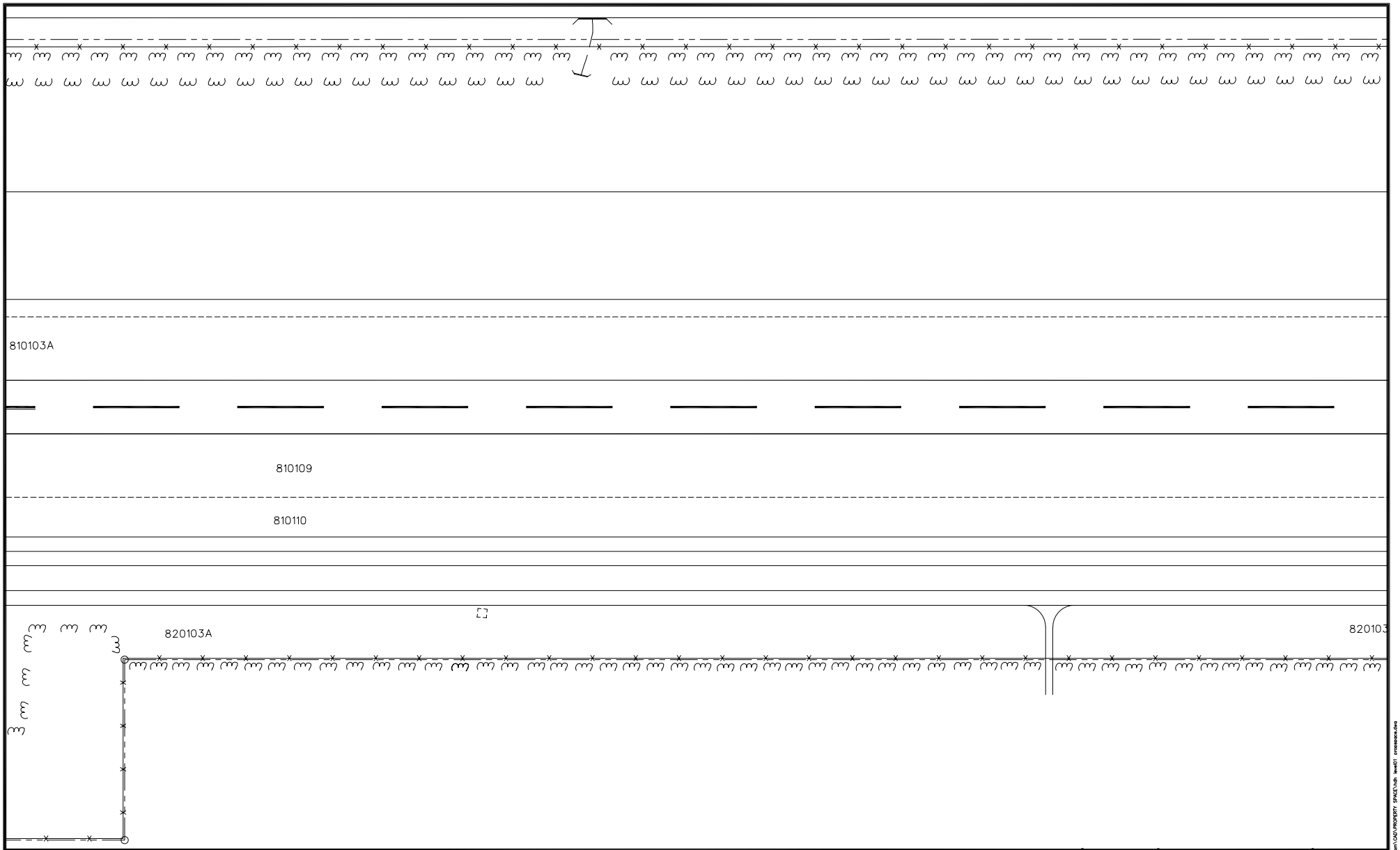
IND-1

N:\AIRPORTS\Vdh_Dillingham\CAD\PROPERTY SPACES\vdh_Index_propspaces.dwg


AIRPORT BOUNDARY
820106
800104A
800104B
WINDSOCK
Ped. Gate
Ped. Gate
Bldg 201
810101
810102A
810102C
830101
800106
505101A
820101A
91D
FUEL STA.
406101
FUEL STORAGE
406102
406103
800107A
404119 404118 404117 404116
404108 404107 404106
BLDG 91A
800107E
800107F
800107C
800107D
800107B
CONCRETE REVETMENT
630102
630103
AIRPORT BOUNDARY
B1
G1
60' 0 60' 120'
GRAPHIC SCALE IN FEET
DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII
AIRPORTS DIVISION
DILLINGHAM AIRFIELD
PROPERTY SPACES
GROUND LEVEL
Date :
July 20
Drawing No:
Exhibit:
A1
SHT. 1 OF 9
N:\AIRPORTS\HDH Dillingham\CAD\PROPERTY SPACE\hdh_level01 crossbook.dwg


FARRINGTON HIGHWAY
AIRPORT BOUNDARY
SAIL PLANE HANGAR BLDG 403
Ped. Gate
EDGE OF PAVEMENT
505102
405101 405102 405103 405104 405105
405106 405107 405108 405109 405110 405111 405112 405113 405114
640103
OLD PAVEMENT
810113
810114
TAXIWAY "D"
504000
PRIMARY SURFACE
PRIMARY SURFACE
810102B
810103A
RUNWAY 8-26
500101
PRIMARY SURFACE
810104
TAXIWAY "A"
501000
810105
CONTROL TOWER
BLDG 301
404114 404113 404112
404104 404103 404102 404101
T-HANGAR BLDG 401
T-HANGAR BLDG 402
820102B
Bldg 208
SERVICE ROAD
600101
001107
001108
800102
A1
C1
H1
60' 0 60' 120'
GRAPHIC SCALE IN FEET
DEPARTMENT OF TRANSPORTATION STATE OF HAWAII
AIRPORTS DIVISION
DILLINGHAM AIRFIELD
PROPERTY SPACES
GROUND LEVEL
Date : July 20
Drawing No:
Exhibit:
B1
SHT. 2 OF 9
N:\AIRPORTS\HDH Dillingham\CAD\PROPERTY SPACE\hdh level01 crossaccess.dwg


AIRPORT BOUNDARY
820105
800103
810112
810115
500102
810108
810107
810106
820102C
600105C
600105A
600105D
600105B
AIRPORT BOUNDARY
600106
Bldg 136
A1
C1
H1
60' 0 60' 120'
GRAPHIC SCALE IN FEET
DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII
AIRPORTS DIVISION
DILLINGHAM AIRFIELD
PROPERTY SPACES
GROUND LEVEL
Date : July 20
Drawing No:
Exhibit:
C1
SHT. 3 OF 9
N:\AIRPORTS\HDH Dillingham\CAD\PROPERTY SPACE\hdh lease01 crossspace.dwg



C1 E1

60' 0 60' 120'
GRAPHIC SCALE IN FEET

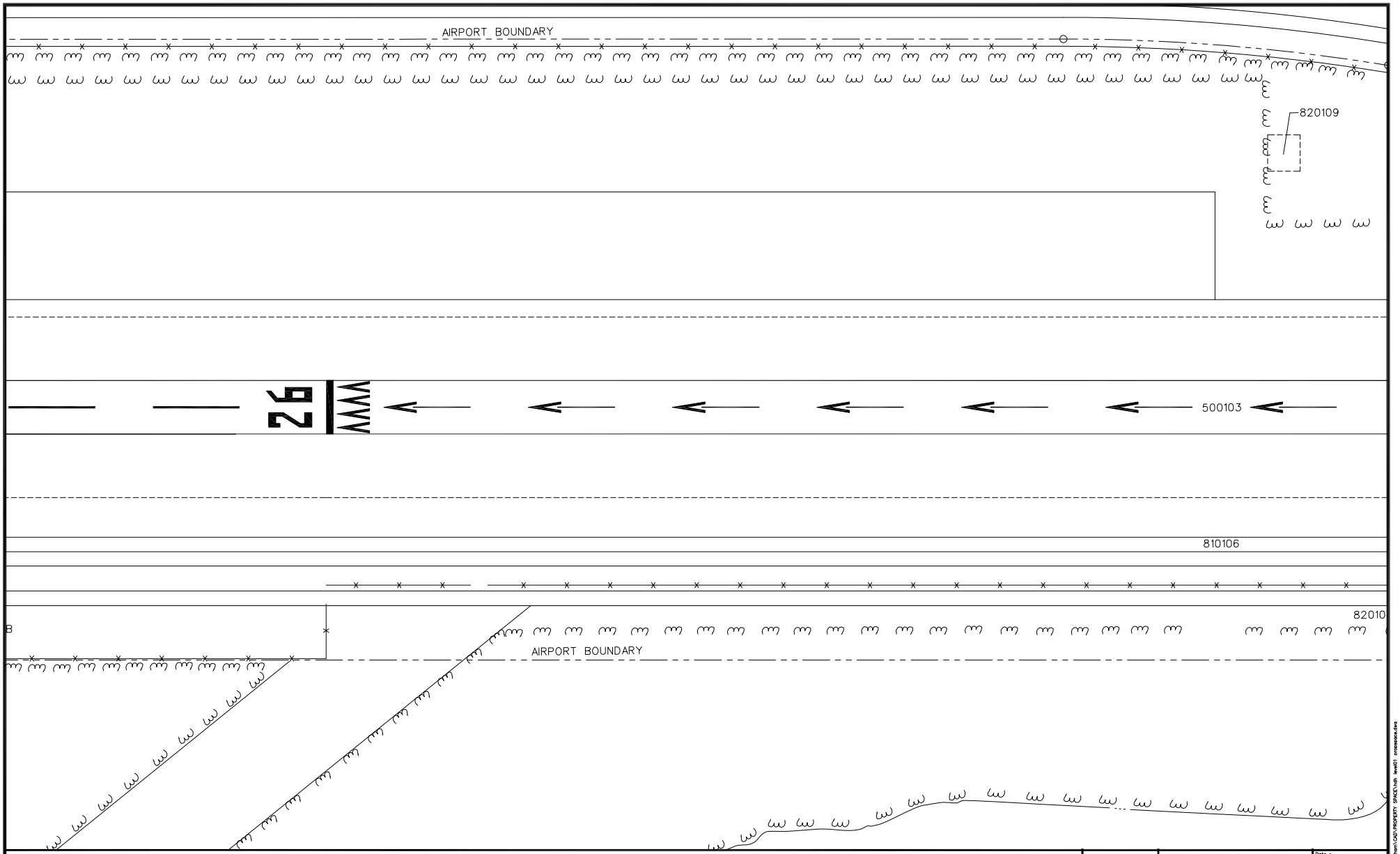
DEPARTMENT OF TRANSPORTATION · STATE OF HAWAII
AIRPORTS DIVISION

DILLINGHAM AIRFIELD

PROPERTY SPACES GROUND LEVEL

Date : July 20
Drawing No:
Exhibit: **D1**
SHT. 4 OF 9

N:\AIRPORTS\HDH Dillingham\CAD\PROPERTY SPACE\hdh level01 crossecxx.dwg



D1 F1

60' 0 60' 120'
GRAPHIC SCALE IN FEET

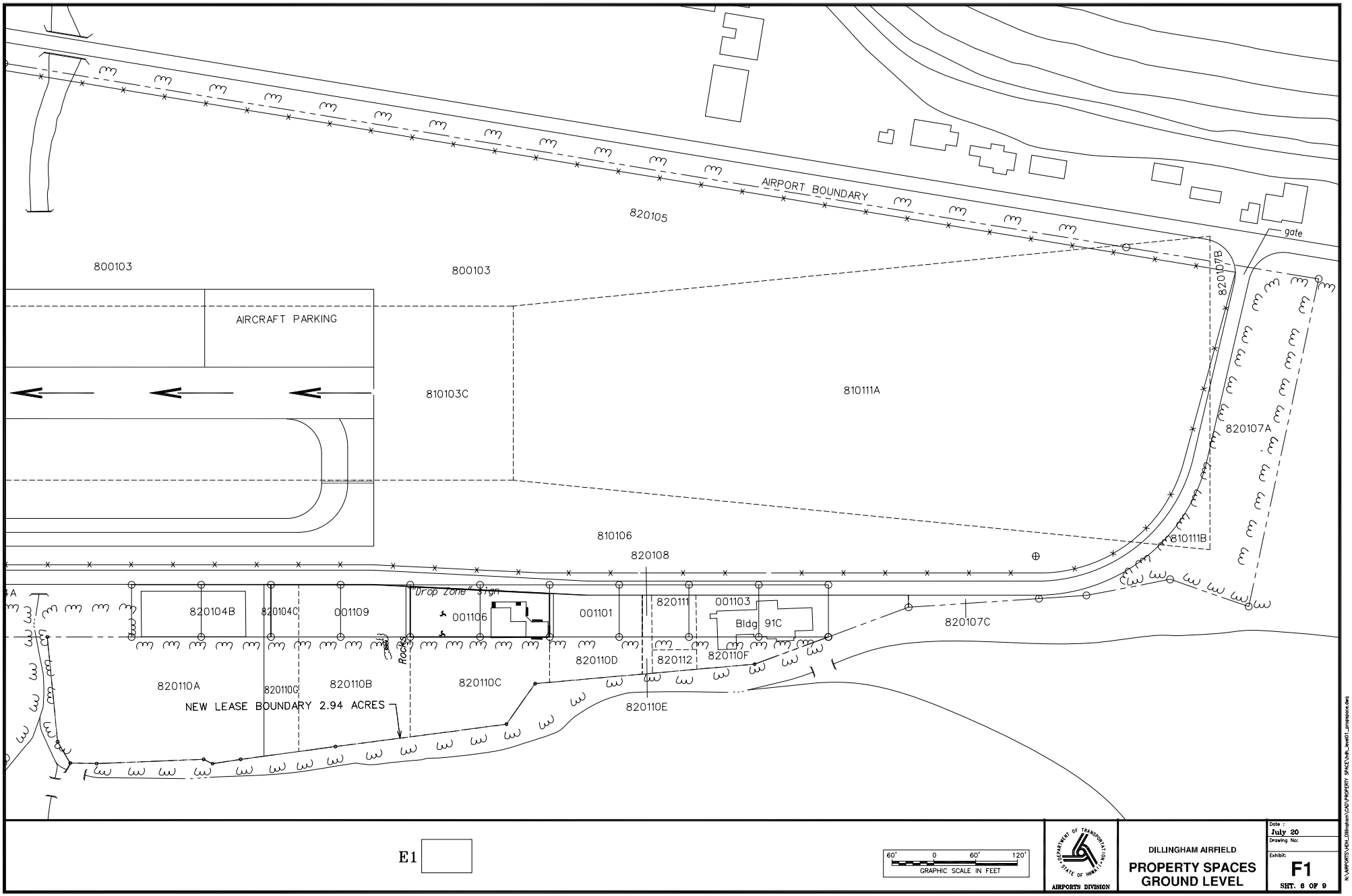
DEPARTMENT OF TRANSPORTATION · STATE OF HAWAII
AIRPORTS DIVISION

DILLINGHAM AIRFIELD

PROPERTY SPACES
GROUND LEVEL

Date : July 20
Drawing No:
Exhibit: **E1**
SHT. 5 OF 9

N:\AIRPORTS\HDH Dillingham\CAD\PROPERTY SPACE\hdh level01 crossspace.dwg



E1

60' 0 60' 120'
GRAPHIC SCALE IN FEET

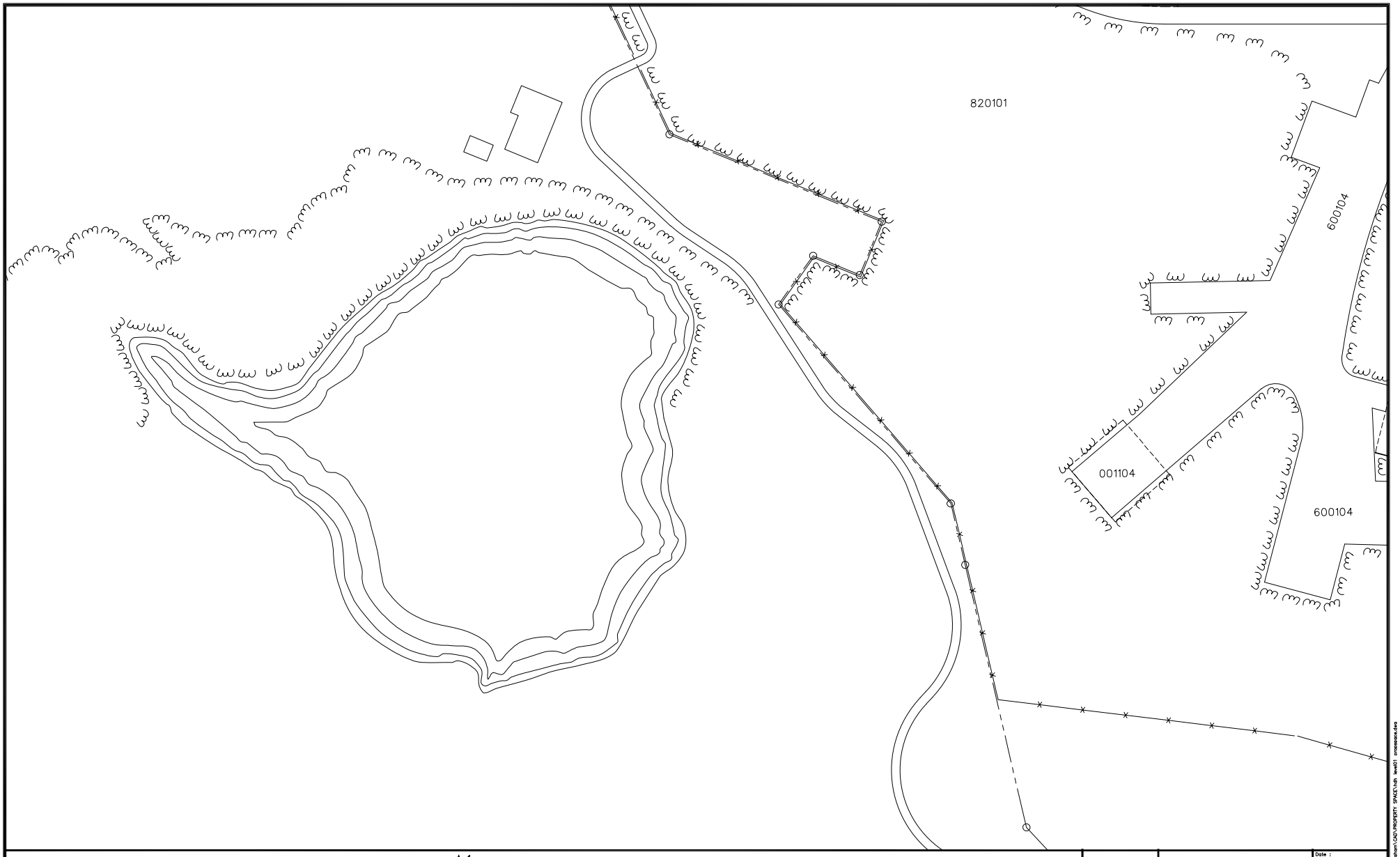
DEPARTMENT OF TRANSPORTATION · STATE OF HAWAII
AIRPORTS DIVISION

DILLINGHAM AIRFIELD

PROPERTY SPACES
GROUND LEVEL

Date : July 20
Drawing No:
Exhibit: **F1**
SHT. 6 OF 9

N:\AIRPORTS\Vdh_Dillingham\CAD\PROPERTY SPACES\Vdh_level1_Linespace.dwg



A1

H1

60' 0 60' 120'

GRAPHIC SCALE IN FEET

DEPARTMENT OF TRANSPORTATION · STATE OF HAWAII

AIRPORTS DIVISION

DILLINGHAM AIRFIELD

PROPERTY SPACES GROUND LEVEL

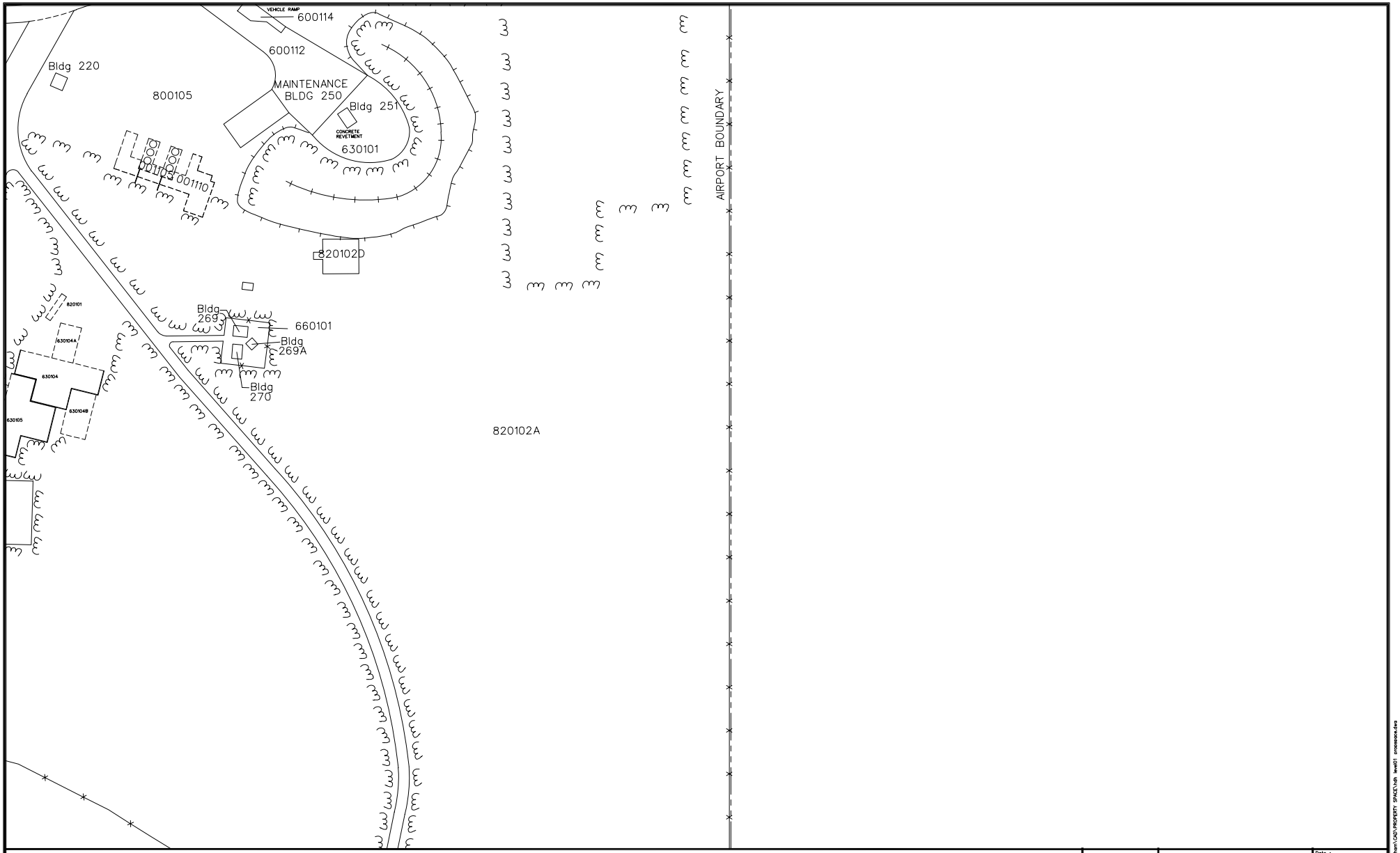
Date : July 20

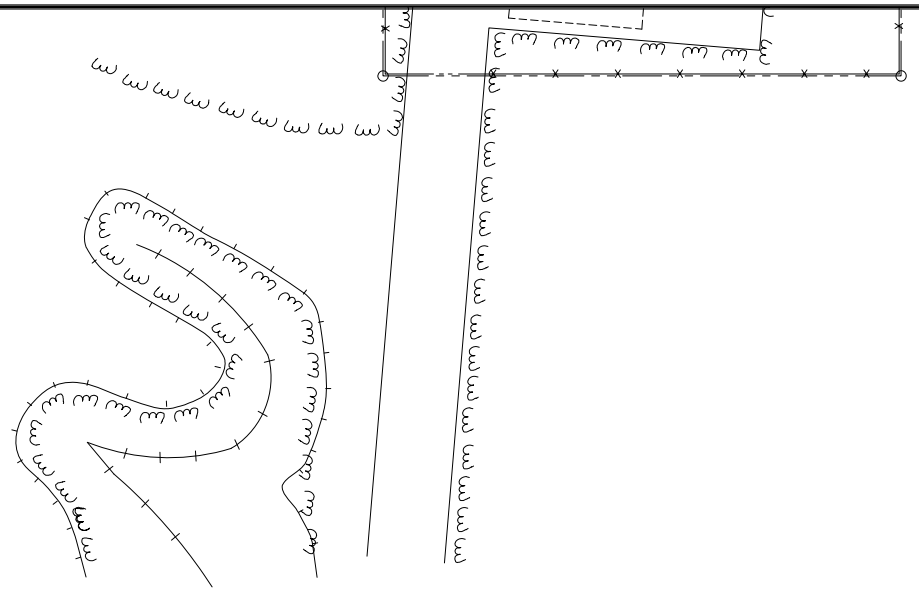
Drawing No:

Exhibit: **G1**

SHT. 7 OF 9

N:\AIRPORTS\HDH Dillingham\CAD\PROPERTY SPACE\hdh level01 crossspace.dwg


VEHICLE RAMP
600114
600112
Bldg 220
800105
MAINTENANCE
BLDG 250
Bldg 251
CONCRETE
REVETMENT
630101
001109
001110
820102D
AIRPORT BOUNDARY
820101
Bldg
269
660101
Bldg
269A
630104A
630104
630104B
630105
Bldg
270
820102A
B1
G1
J1
60' 0 60' 120'
GRAPHIC SCALE IN FEET
DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII
AIRPORTS DIVISION
DILLINGHAM AIRFIELD
PROPERTY SPACES
GROUND LEVEL
Date :
July 20
Drawing No:
Exhibit:
H1
SHT. 8 OF 9
N:\AIRPORTS\HDH Dillingham\CAD\PROPERTY SPACE\hdh lease01 crossspace.dwg



C1

H1

60' 0 60' 120'

GRAPHIC SCALE IN FEET

DEPARTMENT OF TRANSPORTATION · STATE OF HAWAII

AIRPORTS DIVISION

DILLINGHAM AIRFIELD

PROPERTY SPACES GROUND LEVEL

Date : July 20

Drawing No:

Exhibit: J1

SHT. 9 OF 9

N:\AIRPORTS\HDH Dillingham\CAD\PROPERTY SPACE\hdh level01 crossecxx.dwg