

BENJAMIN J. CAYETANO
GOVERNOR



KAZU HAYASHIDA
DIRECTOR

DEPUTY DIRECTORS
BRIAN K. MINAAI
GLENN M. OKIMOTO

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION RECEIVED
869 PUNCHBOWL STREET
HONOLULU, HAWAII 96813-5097

IN REPLY REFER TO:
AIR-P
00.0516

'00 SEP 13 P3:13

September 8, 2000

OFFICE OF ENVIRONMENTAL
QUALITY CONTROL

TO: GENEVIEVE SALMONSON, DIRECTOR
OFFICE OF ENVIRONMENTAL QUALITY CONTROL

FROM: KAZU HAYASHIDA *K.H.*
DIRECTOR OF TRANSPORTATION

SUBJECT: FINAL ENVIRONMENTAL ASSESSMENT
DILLINGHAM AIRFIELD
TMK 1-6-8-02:16, 1-6-8-03:9, 1-6-8-14:1-23, 25
STATE PROJECT NO. AO2011-01

Having reviewed the comments received on the Draft Environmental Assessment for the Dillingham Airfield Improvements located at Mokuleia, Oahu, the Department of Transportation has determined that this project will have no significant environmental effect. We request that you publish notice of this determination in the September 23, 2000, issue of the Environmental Notice.

Enclosed is a completed Bulletin Publication Form and four copies of the Final Environmental Assessment. Please contact Lynn Becones, Planner, at 838-8811 to clarify any questions you may have.

Enclosures: Bulletin Publication Form
Final Environmental Assessment (4)
Diskette

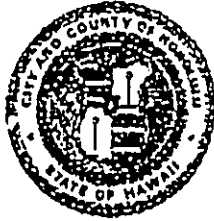
c: Edward K. Noda & Associates

110.

DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET 8TH FLOOR
HONOLULU, HAWAII 96813
PHONE: (808) 523-5427 • FAX: (808) 527-2498

JEREMY HARRIS
WATCH



RONALD S. LIM
DIRECTOR
ROLAND D. LEEBY, JR.
DEPUTY DIRECTOR

August 14, 1995

Mr. Owen Miyamoto
Airports Administrator
Airports Division
Honolulu International Airport
400 Rodgers Boulevard, Suite 700
Honolulu, Hawaii 96819-1880

Dear Mr. Miyamoto:

Subject: Environmental Assessment Preconsultation
Dillingham Airfield Master Plan
Wai'alua District, Oahu
Tax Map Keys: 6-8-02:18, 6-8-03:9, 6-8-12:1-23 & 25
State Project No. A02011-01

The Department of Housing and Community Development (DHCD) has no comments to offer on the proposed environmental assessment for the subject project at this time.

Should you have any questions, please contact Charlotte Yoshioka of our Planning and Analysis Branch at 527-5090.

Thank you for the opportunity to comment.

Sincerely,

A handwritten signature in black ink, appearing to read "Ronald S. Lim".

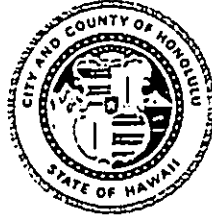
RONALD S. LIM
Director

DEPARTMENT OF LAND UTILIZATION
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET
HONOLULU, HAWAII 96813 • (808) 523-4432

DIRECTOR'S OFFICE
OF
TRANSPORTATION

AUG 30 9 06 AM '95

JEREMY HARRIS
MAYOR



PATRICK T. ONISHI
DIRECTOR

LORETTA K.C. CHEE
DEPUTY DIRECTOR

95-04914 (ASK)

August 29, 1995

The Honorable Kazu Hayashida, Director
Department of Transportation
State of Hawaii
AliiAIMOKU Hale
869 Punchbowl Street
Honolulu, Hawaii 96813

AUG 31 11 26 AM '95

DEPT OF TRANSPORTATION
STATEWIDE TRAMS.
PLANNING OFFICE

Dear Mr. Hayashida:

Environmental Assessment Preconsultation
Dillingham Airfield Master Plan
Waialua District, Oahu
Tax Map Keys: 6-8-02: 18; 6-8-03: 09; 6-8-12: 1-23 and 25

Thank you for allowing us to comment during the Environmental Assessment Preconsultation phase of the Dillingham Airfield Master Plan (Master Plan). According to your letter, the Master Plan will focus on short-term improvements to meet operational and safety needs at the facility. Improvements will include relocation of the parachute drop zone, acquisition of land, overlaying of pavements, and improvements to existing hangars and utilities.

The project is within the State Agricultural District and is subject to the requirements of Chapter 205, Hawaii Revised Statutes (HRS). As the proposal does not appear to meet the criteria for nonconforming uses as specified in Section 205-8, HRS, either a State Special Use Permit or State Land Use District Boundary amendment will be required.

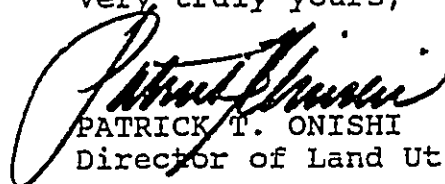
A portion of the project area is within the Special Management Area and is subject to the requirements of Chapter 25, Revised Ordinances of Honolulu. Based on the preliminary project description, a Special Management Area Use Permit will be required.

The Dillingham Airfield is zoned AG-2 General Agriculture. Airfields are permitted within any zoning district, subject to a Plan Review Use Permit.

The Honorable Kazu Hayashida, Director
Page 2
August 29, 1995

Should you have questions regarding the above, including information on application requirements, you may contact Ardis Shaw-Kim of our staff at 527-5349.

Very truly yours,



PATRICK T. ONISHI
Director of Land Utilization

PTO:am

A:airport.as7
G:airport.ask

BENJAMIN J. CAYETANO
GOVERNOR



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
AIRPORTS DIVISION
400 RODGERS BOULEVARD, SUITE 700
HONOLULU, HAWAII 96819-1880

OCT 27 1995

KAZU HAYASHIDA
DIRECTOR

DEPUTY DIRECTORS
JERRY M. MATSUDA
GLENN M. OKIMOTO

IN REPLY REFER TO:

AIR-EN
95.297

RECEIVED

NOV - 2 1995

EDWARD K. NODA & ASSOCIATES

Mr. Patrick T. Onishi, Director
Department of Land Utilization
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

Dear Mr. Onishi:

Subject: Environmental Assessment Preconsultation
Dillingham Airfield Master Plan
State Project No. AO2011-01

Thank you for your comments of August 29, 1995 on the
Environmental Assessment Preconsultation phase of the Dillingham
Airfield Master Plan.

As necessary, the State of Hawaii, Department of Transportation,
Airports Division, will obtain the applicable permits for the
improvements to the airfield.

Should you have any questions, please contact Mr. Steve Takashima
of my planning staff at 838-8810.

Very truly yours,

A handwritten signature in cursive script, appearing to read "Owen Miyamoto".

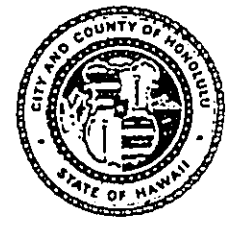
Owen Miyamoto
Airports Administrator

bc: EKNA

3964

DEPARTMENT OF TRANSPORTATION SERVICES
CITY AND COUNTY OF HONOLULU

PACIFIC PARK PLAZA
711 KAPIOLANI BOULEVARD, SUITE 1200
HONOLULU, HAWAII 96813



JEREMY HARRIS
MAYOR

CHARLES O. SWANSON
DIRECTOR

PR1.13 (WN)
(TMD-3851)

September 27, 1995

Mr. Owen Miyamoto
Administrator
Airports Division
State Department of Transportation
Honolulu International Airport
400 Rodgers Boulevard, Suite 700
Honolulu, Hawaii 96819

Dear Mr. Miyamoto:


Subject: Dillingham Airfield Master Plan
Environmental Assessment Preconsultation
TMK: 6-8-02: 18, 6-8-03: 9, 6-8-12: 1-23 & 25

This is in response to your letter dated July 31, 1995 requesting our comments on the subject project.

The access to this site appears to be from Farrington Highway, which is under the jurisdiction of the State Department of Transportation, Highways Division. We, therefore, have no objections or comments to offer at this time.

Should you have any questions, please contact Wayne Nakamoto of my staff at 523-4190.

Respectfully,


CHARLES O. SWANSON
Director

DEPARTMENT OF WASTEWATER MANAGEMENT
CITY AND COUNTY OF HONOLULU

DIVISION OF PLANNING AND SERVICE CONTROL
630 SOUTH KING STREET
HONOLULU, HAWAII 96813

DEREMY HARRIS
MAYOR



FELIX B. LIMTIACO
DIRECTOR
STEPHEN T.C. CHING
CHIEF

August 21, 1995

WPP 95-411

Mr. Owen Miyamoto, Airports Administration
State of Hawaii Department of Transportation
Airports Division
Honolulu International Airport
400 Rodgers Boulevard, Suite 700
Honolulu, Hawaii 96819-1880

Dear Mr. Miyamoto:

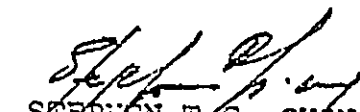
Subject: Environmental Assessment Preconsultation
Dillingham Airfield Master Plan
Waialua District, Oahu
Tax Map Keys: 6:8:02:18, 6:8:03:9, 6:8:12:1-23 & 25
State Project No. A02011-01

Reference is made to State of Hawaii, Department of Transportation
Airports Division letter AIR-EP 95 of July 31, 1995, regarding the
subject Environmental Assessment (EA) Preconsultation.

We would like to be consulted during the preparation of the EA.

If there are any questions, please contact Bill Liu at 527-6871.

Very truly yours,

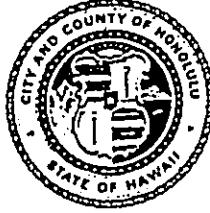

STEPHEN T.C. CHING
Chief

325;

POLICE DEPARTMENT
CITY AND COUNTY OF HONOLULU

801 SOUTH BERETANIA STREET
HONOLULU, HAWAII 96813 - AREA CODE (808) 529-3111

JEREMY HARRIS
MAYOR



MICHAEL S. NAKAMURA
CHIEF

HAROLD M. KAWASAKI
DEPUTY CHIEF

OUR REFERENCE

BS-DL

August 8, 1995

Mr. Owen Miyamoto
Airports Administrator
Airports Division
Honolulu International Airport
400 Rodgers Boulevard, Suite 700
Honolulu, Hawaii 96819-1880

Dear Mr. Miyamoto:

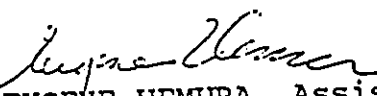
This is in response to your letter of July 31, 1995, requesting comments on an environmental assessment preconsultation for the Dillingham Airfield Master Plan in the Waiialua District, State Project No. AO2011-01.

This project should have no significant impact on the operations of the Honolulu Police Department.

Thank you for the opportunity to comment.

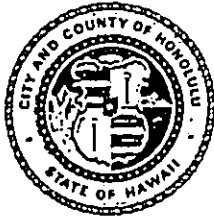
Sincerely,

MICHAEL S. NAKAMURA
Chief of Police

By 
EUGENE UEMURA, Assistant Chief
Administrative Bureau

DEPARTMENT OF PUBLIC WORKS
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET
HONOLULU, HAWAII 96813



JEREMY HARRIS
MAYOR

KENNETH E. SPRAGUE
DIRECTOR AND CHIEF ENGINEER

DARWIN J. HAMAMOTO
DEPUTY DIRECTOR

ENV 95-225

August 7, 1995

Mr. Owen Miyamoto
Airports Administrator
Airport Division
Department of Transportation
State of Hawaii
400 Rodgers Boulevard, Suite 700
Honolulu, Hawaii 96819-1880

Attention: Mr. Ben Schlapak, Planning Branch

Dear Mr. Miyamoto:

Subject: Environmental Assessment Preconsultation (EAP)
Dillingham Airfield Master Plan
TMK: 6-8-02: 18; 6-8-03: 9; 6-8-12: 1-23 & 25

We have reviewed the subject EAP and have no comments to offer at this time.

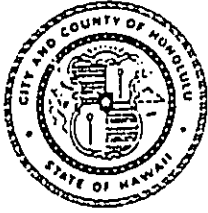
Should you have any questions, please contact Mr. Alex Ho,
Environmental Engineer, at 523-4150.

Very truly yours,

A handwritten signature in black ink, appearing to read "Ken Sprague", is written over the typed name.

KENNETH E. SPRAGUE
Director and Chief Engineer

5408



CITY COUNCIL

CITY AND COUNTY OF HONOLULU
HONOLULU, HAWAII 96813-3065 / TELEPHONE 547-7000

RENE MANSHO
COUNCILMEMBER AND CHAIR
OF COMMITTEE ON TRANSPORTATION
(808) 547-7001

August 11, 1995

Mr. Owen Miyamoto, Airports Administrator
Airports Division
Honolulu International Airport
400 Rodgers Boulevard, Suite 700
Honolulu, Hawaii 96819-1880

Dear Mr. Miyamoto: *Owen*

SUBJECT: Environmental Assessment Preconsultation
Dillingham Airfield Master Plan

Thank you very much for your July 31, 1995 update on the Dillingham Airfield Master Plan, and for allowing me the opportunity to voice my concerns regarding its environmental impact on the surrounding area.

As the councilmember for the Waialua Community and North Shore, there are several matters which I would like to see addressed in your Master Plan:

1. The potential increase in noise pollution: The acquisition of property would not only lead to an increase in the number of aircraft, but also lead to an increase in the number of cars commuting to and from the airfield thus, adding to the noise level.
2. The effects that the flight patterns for aircraft located at Dillingham would have on the Waialua Community: Specifically, would aircraft be flying directly above residential areas?
3. The potential traffic congestion: While Mokuleia and Waialua are not densely populated areas, an expansion to the Dillingham Airfield could increase the number of commuters from the east of Wahiawa, all of whom would use the same road--Farrington Highway.
4. The impact on pedestrians: An increase in the number of cars may also create a need for more traffic lights in order to insure the safety of pedestrians.

Mr. Owen Miyamoto
August 11, 1995
Page two

5. Tax Map Key 6:8:12:1-23 & 25: Your letter indicated that you hope to acquire Tax Map Key 6:8:12:1-23 & 25. This would necessitate purchasing twenty-four private properties along Crozier Drive--a residential area that is not adjacent to the DAF. Is this a correct Tax Map Key?

I would appreciate very much if you would consider these concerns, and look forward to your next report. Thank you.

Sincerely,
RENE MANSHO



Councilmember

RM:vm
cc: North Shore Neighborhood Board
Waiialua Community Association

BENJAMIN J. CAYETANO
GOVERNOR



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
AIRPORTS DIVISION
400 RODGERS BOULEVARD, SUITE 700
HONOLULU, HAWAII 96819-1880

KAZU HAYASHIDA
DIRECTOR

DEPUTY DIRECTORS
JERRY M. MATSUDA
GLENN M. OKIMOTO

IN REPLY REFER TO:
AIR-EN
95.298

OCT 27 1995

Councilmember Rene Mansho
City Council
City and County of Honolulu
Honolulu, Hawaii 96813

Dear Ms. Mansho:

Subject: Environmental Assessment Preconsultation
Dillingham Airfield Master Plan
State Project No. A02011-01

Thank you for your comments dated August 11, 1995 on the Environmental Assessment Preconsultation for the Dillingham Airport Master Plan.

- 1) The acquisition of the property will be used to relocate the parachute drop zone from the existing location at the end of the runway. It is hoped that this would increase the margin of safety at the airfield. The relocation of the parachute drop zone, in itself, will not increase the automobile traffic in the Dillingham Airfield area.
- 2) The existing and future aircraft noise impacts of the airfield are being addressed in a Federal Aviation Administration Noise Compatibility Study. The proposed short-term improvements will not increase the aircraft operations as these improvements are mainly for operational and maintenance purposes.

The Master Plan reserves a space for the Air Museum which is planned to be built with private funds. Environmental studies for the Air Museum would need to be completed prior to its construction.

- 3 and 4) As stated above, the proposed short-term improvements at Dillingham Airfield are for operational and maintenance purposes. Therefore, no significant increase in the automobile traffic in the Dillingham Airfield and Waialua areas is expected.

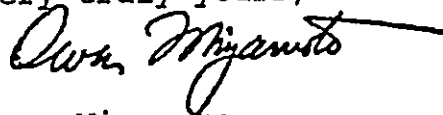
Councilmember Rene Mansho
Page 2
OCT 27 1995

AIR-EN
95.298

- 5) The tax map keys numbers 6:8:12:1-23 & 25 were incorrect. The correct numbers should have been 6:8:14:1-23 & 25. Thank you for pointing this out to us.

Should you have any questions, please contact Mr. Ben Schlapak of my planning staff at 838-8821.

Very truly yours,



Owen Miyamoto
Airports Administrator

bc: EKNA

Beyond the call

August 15, 1995

MR OWEN MIYAMOTO
AIRPORTS ADMINISTRATOR
AIRPORTS DIVISION
HONOLULU INTERNATIONAL AIRPORT
400 RODGERS BOULEVARD SUITE 700
HONOLULU HI 96819-1880

Dear Mr Miyamoto:

**SUBJECT: Environmental Assessment Preconsultation
Dillingham Airfield Master Plan
Waialua District, Oahu
TMK: 6:8:02:18, 6:8:03:9, 6:8:12"1-23 & 25
State Project No. A02011-01**

Thank you for the opportunity to review and comment on the environmental assessment for the planned improvements to the Dillingham Airfield.

GTE Hawaiian Tel does not foresee any problems in providing additional telecommunications services for the proposed improvements. However, further review will be required by GTE Hawaiian Tel during a design stages of the project to insure that existing cables placed along Farrington Highway will not be affected by proposed improvements.

If you have any questions, please call Calvin Hayamizu at 483-8056.

Sincerely,



MARK K. TAOSAKA
OPERATIONS SUPERVISOR-
OSP ENGINEERING

APPENDIX F

**Comments Received on
Draft Environmental Assessment, 2000**



DEPARTMENT OF THE ARMY
U. S. ARMY ENGINEER DISTRICT, HONOLULU
FT. SHAFTER, HAWAII 96858-5440

REPLY TO
ATTENTION OF

February 28, 2000

Civil Works Technical Branch

Mr. Jerry M. Matsuda, P.E.
Airports Administrator
State of Hawaii
Department of Transportation
Airports Division
400 Rodgers Boulevard, Suite 700
Honolulu, Hawaii 96819

Dear Mr. Matsuda:

Thank you for the opportunity to review and comment on the Revised Environmental Assessment (EA) for the Dillingham Airfield Project, Waialua, Oahu (TMKs 6-8-2: 16; 6-8-3: 9) and (TMKs 6-8-14: 1-23 and 25). The following comments are provided in accordance with Corps of Engineers authorities to provide flood hazard information and to issue Department of the Army (DA) permits.

a. Based on the information provided, a DA permit may be required for activities involving wetlands, intermittent streams, or other waters of the U.S. For further information, please contact Mr. Peter Galloway of our Regulatory Branch staff at (808) 438-8416 and refer to file number 20000101.

b. The flood hazard information provided on page 21 of the EA is correct.

Sincerely,

A handwritten signature in black ink, appearing to read "Milton Yoshimoto".

Milton Yoshimoto
Acting Chief, Civil Works
Technical Branch

BENJAMIN J. CAYETANO
GOVERNOR



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
AIRPORTS DIVISION
400 RODGERS BOULEVARD, SUITE 700
HONOLULU, HAWAII 96819-1880



KAZU HAYASHIDA
DIRECTOR
DEPUTY DIRECTORS
BRIAN K. MINAAI
GLENN M. OKIMOTO

May 5, 2000

IN REPLY REFER TO:

AIR-P
00.0234

Mr. Milton Yoshimoto
Acting Chief
Civil Works, Technical Branch
U.S. Army Engineer District, Honolulu
Fort Shafter, Hawaii 96858-5440

RECEIVED
MAY 11 2000

Dear Mr. Yoshimoto:

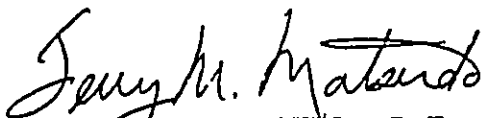
EDWARD K. NODA & ASSOC., INC.

Subject: Comments on the Revised and
Updated Draft Environmental Assessment
Dillingham Airfield Improvements, Waialua, Oahu
State Project No. A02011-01

Thank you for your letter dated February 28, 2000, commenting on the subject report. We do not foresee any impacts to the wetland areas within the vicinity of the Airfield. However, if in the future a wetland impact is identified, we will contact your Regulatory Branch and refer to file number 20000101.

Please contact Lynn Becones, of my planning staff, at 838-8811 to clarify any questions you may have.

Sincerely,


JERRY M. MATSUDA, P.E.
Airports Administrator

c: ✓ Edward K. Noda & Associates (B. Ishii)
Federal Aviation Administration (D. Welhouse)



**DEPARTMENT OF BUSINESS,
ECONOMIC DEVELOPMENT & TOURISM**

BENJAMIN J. CAYETANO
GOVERNOR
SEIJI F. NAYA, Ph.D.
DIRECTOR
BRADLEY J. MOSSMAN
DEPUTY DIRECTOR
DAVID W. BLANE
DIRECTOR, OFFICE OF PLANNING

OFFICE OF PLANNING

235 South Beretania Street, 6th Floor, Honolulu, Hawaii 96813
Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96804

Telephone: (808) 587-2846
Fax: (808) 587-2824

Ref. No. P-8343

AIRPORTS DIV.

J AIR 1
AIR-A
AIR-E
AIR-L 2 A8
AIR-R
AIR-F #3
AIR-S

Dear Project Manager:

Subject: Environmental Assessment and Environmental Impact Statement Reviews

For your information, the Hawaii Coastal Zone Management (CZM) Program is no longer routinely reviewing environmental assessment and environmental impact statement reports. If there are any questions, please call John Nakagawa of our CZM Program at (808) 587-2878.

Sincerely,

David W. Blane
Director
Office of Planning

BENJAMIN J. CAYETANO
GOVERNOR



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
869 PUNCHBOWL STREET
HONOLULU, HAWAII 96813-5097

KAZU HAYASHIDA
DIRECTOR
DEPUTY DIRECTORS
BRIAN K. MINAI
GLENN M. OKIMOTO

IN REPLY REFER TO:
AIR-P
00.0232

May 9, 2000

TO: DAVID BLANE, DIRECTOR
OFFICE OF PLANNING
DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT
AND TOURISM

FROM: KAZU HAYASHIDA *K. H.*
DIRECTOR OF TRANSPORTATION

SUBJECT: COMMENTS ON THE REVISED AND
UPDATED DRAFT ENVIRONMENTAL ASSESSMENT
DILLINGHAM AIRFIELD IMPROVEMENTS, WAIALUA, OAHU
STATE PROJECT NO. AO2011-01

Thank you for your letter regarding the subject project. Your comment will be incorporated into the Final Environmental Assessment.

Please have your staff contact Lynn Becones, Planner, of the Airports Division at 838-8811 to clarify any questions you may have.

c: Edward K. Noda and Associates (B. Ishii)
Federal Aviation Administration (D. Welhouse)

bc: AIR-L
AIR-O

LB:nf

RECEIVED
JUN 02 2000

EDWARD K. NODA & ASSOCIATES, INC.

BENJAMIN J. CAYSTANO
GOVERNOR OF HAWAIIDIRECTOR'S OFFICE
DEPT. OF
TRANSPORTATION

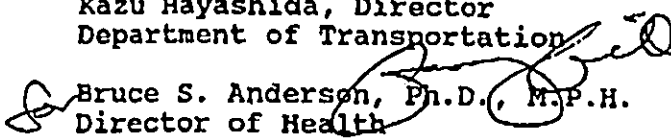
APR 12 1 43 PM '00

BRUCE S. ANDERSON, Ph.D., M.P.H.
DIRECTOR OF HEALTHSTATE OF HAWAII
DEPARTMENT OF HEALTH
P.O. BOX 3378
HONOLULU, HAWAII 96801In reply, please refer to:
File:

April 6, 2000

91-031C/epo

TO: Kazu Hayashida, Director
Department of Transportation

FROM:  Bruce S. Anderson, Ph.D., M.P.H.
Director of Health

SUBJECT: UPDATED DRAFT ENVIRONMENTAL ASSESSMENT
Dillingham Airfield
Mokuleia, Waiialua District, Oahu, Hawaii
TMK: 6-8-02:16

Thank you for allowing us to review and comment on the subject document. We have the following comments to offer:

Solid & Hazardous Waste Branch,
Underground Storage Tank Section

Two regulated underground storage tanks (USTs) are currently in use at the Dillingham Airfield site. One UST has a 12,000 gallon capacity and the other is of an unknown capacity. In addition, the U.S. Army is responsible for an active leaking underground storage tank (LUST) site at Dillingham Airfield. These UST and LUST issues, while not barriers to redevelopment, will need to be addressed and maintained in the future.

In addition, any new USTs installed at the site will need to comply with existing State, federal and City & County Fire Department regulations. The Department of Health has adopted new UST regulations which require a permit for all regulated USTs installed after January 28, 2000. For more information, please contact Richard Takaba of the UST Section at 586-4226.

Wastewater Branch

The Department of Health concurs with the proposed plan to re-route the domestic wastewater from cesspools to on-site treatment, individual wastewater systems. All wastewater plans

Mr. Kazu Hayashida
April 6, 2000
Page 2

91-031C/epo

must conform to applicable provisions of the Department's
Administrative Rules, Chapter 11-62, "Wastewater Systems"

Should you have any questions on this matter, please contact
the Planning/Design Section of the Wastewater Branch at
586-4294.

c: CWB
WWB

BENJAMIN J. CAYETANO
GOVERNOR



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
869 PUNCHBOWL STREET
HONOLULU, HAWAII 96813-5097

KAZU HAYASHIDA
DIRECTOR
DEPUTY DIRECTORS
BRIAN K. MINAII
GLENN M. OKIMOTO

IN REPLY REFER TO:

AIR-P
00.0233

July 27, 2000

TO: BRUCE S. ANDERSON, PH.D., M.P.H., DIRECTOR
DEPARTMENT OF HEALTH

FROM: KAZU HAYASHIDA *K. K.*
DIRECTOR OF TRANSPORTATION

SUBJECT: COMMENTS ON THE REVISED AND
UPDATED DRAFT ENVIRONMENTAL ASSESSMENT
DILLINGHAM AIRFIELD IMPROVEMENTS, WAIALUA, OAHU
STATE PROJECT NO. AO2011-01

Thank you for your comments of April 6, 2000. The following is a response to your comments:

Solid & Hazardous Waste Branch, Underground Storage Tank Section

The leaking underground storage tank (UST) is on army land and not within the jurisdiction of the State.

At this time, the DOT-Airports Division has no plans to construct any new USTs at the Airfield. However, if the need does arise, we will comply with all applicable Federal, State and County regulations.

Wastewater Branch

We will comply with all applicable Federal, State and County regulations for any new wastewater system(s) constructed at the Airfield.

Please contact Lynn Becones, Planner, of the Airports Division at 838-8811 to clarify any questions you may have.

c: Edward K. Noda & Associates (B. Ishii)
Federal Aviation Administration (D. Welhouse)

bc: AIR-L; -0

BENJAMIN J. CAYETANO
GOVERNOR



DIRECTOR'S OFFICE
DEPT. OF
TRANSPORTATION

MAR 30 7 40 AM '00

0818
GENEVIEVE SALMONSON
DIRECTOR

STATE OF HAWAII
OFFICE OF ENVIRONMENTAL QUALITY CONTROL

236 SOUTH BERETANIA STREET
SUITE 702
HONOLULU, HAWAII 96813
TELEPHONE (808) 686-4186
FACSIMILE (808) 686-4186

March 23, 2000

Mr. Kazu Hayashida, Director
State Department of Transportation
869 Punchbowl Street
Honolulu, Hawaii 96813

Dear Mr. Hayashida:

Subject: Revised and Updated Draft Environmental Assessment for
the Dillingham Airfield Improvements, Oahu

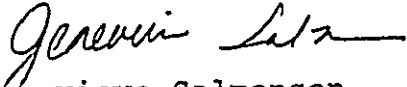
Thank you for the opportunity to review the subject document. We
have the following comments.

1. Please respond to all the comments that were submitted on
the November 1995 Draft Environmental Assessment and include
the comments and the responses in the final environmental
assessment.
2. Please describe the details of the management methods that
are employed to control the number of flying animals in the
vicinity of the airport. What are the impacts of these
methods on the population of the animals?
3. Please describe the impact of the aircraft noise on any
Hawaiian monk seals that frequent the nearby beaches.
4. Please describe why the on-site cesspools will not be
replaced with septic systems or other DOH-approved systems
as soon as possible. Please discuss this matter with the
Department of Health.
5. Please describe the mitigation measures that will be taken
to minimize the impact of the drainage discharge on the
water quality of the receiving ocean, wetlands and
groundwater. What is being done to fix the dry-wells that
need maintenance?
6. Please include a list of all permits and approvals (State,
Federal, County) required for the project in the final
environmental assessment.

Mr. Hayashida
Page 2

Should you have any questions, please call Jeyan Thirugnanam at
586-4185. Thank you.

Sincerely,



Genevieve Salmonson
Director

c: Edward Noda & Associates

BENJAMIN J. CAYETANO
GOVERNOR



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
869 PUNCHBOWL STREET
HONOLULU, HAWAII 96813-5097

DIRECTOR'S OFFICE
DEPT. OF
TRANSPORTATION

KAZU HAYASHIDA
DIRECTOR
DEPUTY DIRECTORS
BRIAN K. MINAII
GLENN M. OKIMOTO

MAY 11 1 20 PM '00

IN REPLY REFER TO:

AIR-P
00.0231

May 11, 2000

RECEIVED
MAY 16 2000

TO: GENEVIEVE SALMONSON, DIRECTOR
OFFICE OF ENVIRONMENTAL QUALITY CONTROL

FROM: KAZU HAYASHIDA *K. H.*
DIRECTOR OF TRANSPORTATION

SUBJECT: COMMENTS ON THE REVISED AND
UPDATED DRAFT ENVIRONMENTAL ASSESSMENT (DEA)
DILLINGHAM AIRFIELD IMPROVEMENTS, WAIALAU, OAHU
STATE PROJECT NO. AO2011-01

Thank you for your comments on the DEA for the proposed project.
The following is a response to your comments.

1. The comment letters and responses that were submitted on the 1995 DEA will be included in the Final Environmental Assessment;
2. The U.S. Department of Agriculture Wildlife Services, hazes the albatross by attempting to capture the bird. If captured, the bird is banded and released. Usually the same bird will not appear for another year. There are no known negative impacts to the albatross population. There will be no impact due to the proposed improvements on the hazing of albatross at the Airfield.
3. There are no known impacts to monk seals which frequent nearby beaches. The civilian aircraft DNL on the nearby beaches are close to the ambient noise DNL. The proposed improvements will not increase the noise impacts on the beaches. In addition, it has been generalized for large land mammals that "the behavior of carnivores in the presence of disturbances is flexible and intelligent. They learn to predict when intrusions are common and return to the disturbed areas when the intrusion ends." In addition, "... they [large mammals] rapidly habituate to such disturbances." Report to Congress, Potential Impacts of Aircraft Overflights of National Forest System Wilderness, July 1992.

Ms. Genevieve Salmonson
Page 2
May 11, 2000

AIR-P
00.0231

4. The Department of Health (DOH) does not require the removal of cesspools nor has DOH set a deadline for discontinuing the use of cesspools. However, DOH will not permit new cesspools in the future. It is the Department of Transportation's (DOT) intent to replace the cesspools at Dillingham with septic systems or other approved systems as stated in the DEA in the near future.
5. The DOT-Airports Division (DOT-A), continues to implement a storm water pollution control plan at Dillingham Airfield. This includes annual tenant and employee training on best management practices (BMP) and spill prevention. DOT-A has a storm water monitoring plan to monitor storm water runoff. Our consultant is in the process of evaluating a closure plan for the drywells on the Airfield. Due to the close proximity of high terrain (greater than 2,500 elevation) the groundwater levels fluctuate and the drywells become ineffective.
6. There are no known permits needed for this action.

Please have your staff contact Lynn Becones, Planner, of the Airports Division at 838-8811 to clarify any questions you may have.

c: Edward K. Noda & Associates (B. Ishii)
Federal Aviation Administration (D. Welhouse)

bc: AIR-O
AIR-L

LB:nf



University of Hawai'i at Mānoa

Environmental Center
A Unit of Water Resources Research Center
2550 Campus Road • Crawford 317 • Honolulu, Hawai'i 96822
Telephone: (808) 956-7381 • Facsimile: (808) 956-3980

March 23, 2000
EA: 00202

Mr. Kazu Hayashida
Director
Department of Transportation, Airports Division
Honolulu International Airport
Honolulu, Hawaii 96819

Dear Mr. Hayashida:

Revised and Updated Draft Environmental Assessment
Dillingham Airfield Improvements
Wailua, Oahu

The Airports Division of the Department of Transportation (DOT) is proposing a plan for improvements to the existing facilities for Dillingham Airfield. The plan is expected to meet existing and forecast operational, safety and maintenance needs until the planning horizon of 2010 and possibly beyond. The planned improvements include an extension of the existing parallel taxiway, new hangars for based aircraft and infrastructure (utilities) upgrades.

This review was prepared with the assistance of George Curtis, UH Hilo, and Jolie Wanger, UH Environmental Center.

General Comments

Considering the project has been scaled back significantly since the original plan (1995), the improvements described in the current version are minor, routine, and/or previously addressed as to their environmental effects. We do not find any significant adverse environmental impacts in this current plan.

Tsunamis

In 1995 we made the comment that a) There is no such thing as a "100 year tsunami" b) The inundation or evacuation map for tsunamis should be included in the document. This map

can be found in the phone book. A larger version, with inundation limits, is available from the C & C Civil Defense.

Thank you for the opportunity to comment on the revised and updated DEA.

Sincerely,



Peter Rappa
Environmental Review Coordinator

Cc: OFQC
James Moncur, WRRC
George Curtis, UH Hilo
Jolie Wanger, EC

BENJAMIN J. CAYETANO
GOVERNOR



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
AIRPORTS DIVISION
400 RODGERS BOULEVARD, SUITE 700
HONOLULU, HAWAII 96819-1880



KAZU HAYASHIDA
DIRECTOR

DEPUTY DIRECTORS
BRIAN K. MINAII
GLENN M. OKIMOTO

May 5, 2000

IN REPLY REFER TO:

AIR-P
00.0236

Mr. Peter Rappa
Environmental Review Coordinator
University of Hawaii at Manoa
Environmental Center
2550 Campus Road, Crawford 317
Honolulu, Hawaii 96822

RECEIVED
MAY 11 1 2000

EDWARD K. NODA & ASSOCIATES, INC.


Dear Mr. Rappa:

Subject: Comments on the Revised and
Updated Draft Environmental Assessment (DEA)
Dillingham Airfield Improvements, Waialua, Oahu
State Project No. AO2011-01

Thank you for your comments on the DEA for the proposed project.
In response to your comments, the wording on page 22 will be
changed from "100 year - tsunami" to "100 year flood." Also, the
tsunami evacuation line will be included in the document.

Please contact Lynn Becones, Planner, at 838-8811 to clarify any
questions you may have.

Sincerely,


JERRY M. MATSUDA, P.E.
Airports Administrator

c: ✓ Edward K. Noda & Associates (B. Ishii)
Federal Aviation Administration (D. Welhouse)

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HAWAII 96843



March 13, 2000

JEREMY HARRIS, Mayor

EDDIE FLORES, JR., Chairman
CHARLES A. STED, Vice Chairman
JAN M.L.Y. AMII
HERBERT S.K. KAOPUA, SR.
BARBARA KIM STANTON

KAZU HAYASHIDA, Ex-Officio
ROSS S. SASAMURA, Ex-Officio

CLIFFORD S. JAMILE
Manager and Chief Engineer

Mr. Jerry M. Matsuda, Airports Administrator
Airports Division
Department of Transportation
State of Hawaii
400 Rodgers Boulevard, Suite 700
Honolulu, Hawaii 96819

Dear Mr. Matsuda:

Subject: Your Transmittal of February 14, 2000 of the
Draft Environmental Assessment for the Dillingham
Airfield Master Plan Improvements, Waialua, Oahu,
TMK: 6-8-02: 16, 6-8-03: 09, 6-8-14: 01-23 and 25

Thank you for the opportunity to review the subject document. We have no objections to the proposed improvements. Our previous comments of August 16, 1995 on the Master Plan that are included in Section 7.0 are still applicable.

If you have any questions, please contact Rian Adachi at 527-5245.

Very truly yours,


CLIFFORD S. JAMILE
Manager and Chief Engineer

cc: Ed Noda and Associates, Inc.

BENJAMIN J. CAYETANO
GOVERNOR



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
869 PUNCHBOWL STREET
HONOLULU, HAWAII 96813-5097

KAZU HAYASHIDA
DIRECTOR
DEPUTY DIRECTORS
BRIAN K. MINAAI
GLENN M. OKIMOTO

IN REPLY REFER TO:
AIR-P
00.0232

May 9, 2000

Mr. Clifford Jamile
Manager and Chief Engineer
Board of Water Supply
City and County of Honolulu
630 South King Street
Honolulu, Hawaii 96813

Dear Mr. Jamile:

Subject: Comments on the Revised and
Updated Draft Environmental Assessment
Dillingham Airfield Improvements, Waialua, Oahu
State Project No. AO2011-01

Thank you for your letter regarding the subject project. Your
comment will be incorporated into the Final Environmental
Assessment.

Please have your staff contact Lynn Becones, Planner, of the
Airports Division at 838-8811 to clarify any questions you may
have.

Very truly yours,

A handwritten signature in cursive script that reads "Kazu Hayashida".

KAZU HAYASHIDA
Director of Transportation

RECEIVED
JUN 02 2000

EDWARD K. NODA & ASSOCIATES, INC.

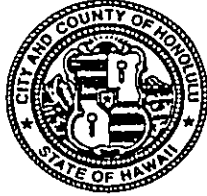
c: ✓ Edward K. Noda and Associates (B. Ishii)
Federal Aviation Administration (D. Welhouse)

bc: AIR-L
AIR-O

LB:nf

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DEPARTMENT OF ENVIRONMENTAL SERVICES
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 3RD FLOOR • HONOLULU, HAWAII 96813
PHONE: (808) 527-6663 • FAX: (808) 527-6675 • Website: www.co.honolulu.hi.us



JEREMY HARRIS
Mayor

KENNETH E. SPRAGUE, P.E., Ph.D.
Director

BARRY FUKUNAGA
Deputy Director

ENV 00-23

FEB 28 2000

Mr. Jerry Matsuda, P.E.
Airport Administrator
Department of Transportation
Airports Division
State of Hawaii
400 Rodgers Blvd., Suite 700
Honolulu, HI 96819


Dear Mr. Matsuda:

Subject: Draft Environmental Assessment (DEA)
Dillingham Airfield
TMK: 6-8-02:16, 6-8-03: 9, 6-8-14: 1-23 AND 25

We have reviewed the subject DEA and have no comments to offer at this time.

Should you have any questions, please contact Alex Ho at 523-4150.

Sincerely,


KENNETH E. SPRAGUE
Director

BENJAMIN J. CAYETANO
GOVERNOR



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
869 PUNCHBOWL STREET
HONOLULU, HAWAII 96813-5097

KAZU HAYASHIDA
DIRECTOR

DEPUTY DIRECTORS
BRIAN K. MINAAI
GLENN M. OKIMOTO

IN REPLY REFER TO:

AIR-P
00.0232

May 9, 2000

Mr. Kenneth Sprague
Director
Department of Environmental Services
City and County of Honolulu
650 South King Street, 3rd Floor
Honolulu, Hawaii 96813

Dear Mr. Sprague:

Subject: Comments on the Revised and
Updated Draft Environmental Assessment
Dillingham Airfield Improvements, Waialua, Oahu
State Project No. AO2011-01

Thank you for your letter regarding the subject project. Your comment will be incorporated into the Final Environmental Assessment.

Please have your staff contact Lynn Becones, Planner, of the Airports Division at 838-8811 to clarify any questions you may have.

Very truly yours,

Handwritten signature of Kazu Hayashida in cursive script.

KAZU HAYASHIDA
Director of Transportation

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JUN 6 2 000

EDWARD K. NODA & ASSOCIATES, INC.

c: Edward K. Noda and Associates (B. Ishii)
Federal Aviation Administration (D. Welhouse)

bc: AIR-L
AIR-O

LB:nf

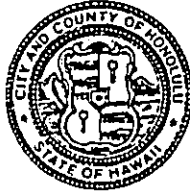
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DEPARTMENT OF PARKS AND RECREATION
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET, 10TH FLOOR • HONOLULU, HAWAII 96813
PHONE: (808) 523-4182 • FAX: 523-4054

FEB 24 2000

JEREMY HARRIS
MAYOR



WILLIAM D. BALFOUR, JR.
DIRECTOR

MICHAEL T. AMII
DEPUTY DIRECTOR

February 24, 2000

Mr. Jerry M. Matsuda, P.E.
Airports Administrator
Department of Transportation
Airports Division
400 Rogers Boulevard, Suite 700
Honolulu, Hawaii 96819

Dear Mr. Matsuda:

Subject: Dillingham Airfield
Draft Environmental Assessment
State Project No. AQ2011-01
TMK Nos. 6-8-02:16, 6-8-03:9, 6-8-14:1-23 and 25

Thank you for the opportunity to review and comment on the subject Draft Environmental Assessment (EA) relating to Dillingham Airfield.

We have no comments to offer at this time and look forward to reviewing the final EA.

Should you have any questions, please contact Mr. John Reid, Planner, at 547-7396

Sincerely,

W.D. Balfour, Jr.
WILLIAM D. BALFOUR, JR.
Director

WDB:cu
(00-0454JR)

BENJAMIN J. CAYETANO
GOVERNOR



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
869 PUNCHBOWL STREET
HONOLULU, HAWAII 96813-5097

KAZU HAYASHIDA
DIRECTOR
DEPUTY DIRECTORS
BRIAN K. MINAII
GLENN M. OKIMOTO

IN REPLY REFER TO:
AIR-P
00.0232

May 9, 2000

Mr. William Balfour, Jr.
Director
Department of Parks and Recreation
City and County of Honolulu
650 South King Street, 3rd Floor
Honolulu, Hawaii 96813

Dear Mr. Balfour:

Subject: Comments on the Revised and
Updated Draft Environmental Assessment
Dillingham Airfield Improvements, Waialua, Oahu
State Project No. A02011-01

Thank you for your letter regarding the subject project. Your
comment will be incorporated into the Final Environmental
Assessment.

Please have your staff contact Lynn Becones, Planner, of the
Airports Division at 838-8811 to clarify any questions you may
have.

Very truly yours,

A handwritten signature in cursive script that reads "Kazu Hayashida".

KAZU HAYASHIDA
Director of Transportation

RECEIVED
JUN 02 2000

EDWARD K. NODA & ASSOCIATES, INC.

c: Edward K. Noda and Associates (B. Ishii)
Federal Aviation Administration (D. Welhouse)

bc: AIR-L
AIR-O

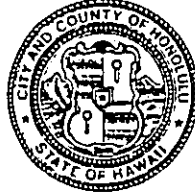
LB:nf

0822

DEPARTMENT OF PLANNING AND PERMITTING
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET • HONOLULU, HAWAII 96813
TELEPHONE: (808) 523-4414 • FAX: (808) 527-6743 • INTERNET: www.co.honolulu.hi.us/planning

JEREMY HARRIS
MAYOR



RANDALL K. FUJIKI, AIA
DIRECTOR

LORETTA K. C. CHEE
DEPUTY DIRECTOR

March 30, 2000

2000/CLOG-1038(ASK)

Jerry Matsuda, P.E.
Airports Administrator
Department of Transportation
Airports Division
400 Rodgers Boulevard, Suite 700
Honolulu, Hawaii 96819

Dear Mr. Matsuda:

Revised and Updated Draft Environmental Assessment (EA)
Dillingham Airfield Improvements
Tax Map Key: 6-8-2: 16, 6-8-3: 9, 6-8-14: 1-23 and 25

Thank you for the opportunity to comment on the above-referenced document. The Draft EA indicates the proposal is necessary to improve operations and safety and also to meet the forecasted demand for general aviation facilities.

The following are our comments:

1. Land Use Regulations

a. Development Plans

The Dillingham Airfield is located within the North Shore Development Plan and is designated Public Facility, Park, and Agriculture on the Development Plan Land Use Map (DPLUM). A portion of the land proposed for acquisition at the western end of the airfield is designated Park and Preservation, and involves a section of Farrington Highway. The North Shore DPLUM should be amended to Public Facility to reflect this expansion.

With respect to the proposed North Shore Sustainable Communities Plan (SCP), which is under consideration before the City Council, the airfield is retained in Military designation. Lands immediately adjacent to the airfield are proposed for Agriculture and Park. The SCP's Public Facilities Map indicates the site as an existing airfield. The SCP provides the following planning principles and guidelines for Dillingham Airfield:

- Maintain small aircraft general aviation and other recreational, commercial, or other military uses at Dillingham Airfield in cooperation with the U.S. Army. As necessary, upgrade and maintain facilities to support airfield use.
- Proposed uses in the vicinity of Dillingham Airfield should be compatible with aircraft noise levels and overflights from the airfield.

The proposed improvements appear to be consistent with the proposed North Shore SCP.

b. State Land Use District

The project is within the State Agricultural District and is subject to the requirements of Chapter 205, Hawaii Revised Statutes. Either a State Special Use Permit or a State Land Use District Boundary amendment will be required.

c. Zoning

The project area is within the AG-2 General Agricultural District. Airports are permitted within this and any other zoning district, subject to a Plan Review Use (PRU) Permit. As such, it is not necessary to obtain a zone change as indicated on page 11 of the Draft EA.

d. Special Management Area (SMA)

Figure 6 does not show the SMA boundary as stated on page 10 of the Draft EA. The final EA should include a map showing the location of the SMA.

The project area is within the SMA. Based on the preliminary description of the project contained in the Draft EA, an SMA Use Permit (SMP) will be required.

Application instructions for the SMP and PRU Permit are enclosed for your reference. Permit applications should be made for all of the improvements identified in the Draft EA.

2. Improvements

The location and type of proposed wastewater treatment facilities should be described in the final EA.

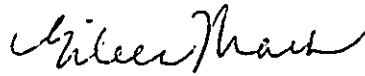
Page 15 of the Draft EA states that the drainage system will be refurbished and upgraded to alleviate flooding. The final EA should describe the proposed drainage infrastructure and improvements to support the claim that the proposal will not result in significant changes to surface water.

Jerry Matsuda, P.E.
Page 3
March 30, 2000

The final EA should include a description of proposed structures, such as hangars, blast pads and repaving.

Should you have any questions regarding this letter, please contact Ardis Shaw-Kim of our staff at 527-5349.

Sincerely yours,


for RANDALL K. FUJIKI, AIA
Director of Planning and Permitting

RKF:am
Enclosures

doc31447r1

CITY AND COUNTY OF HONOLULU
DEPARTMENT OF PLANNING AND PERMITTING

Special Management Area Use Permit (SMP)

Application Instructions

*This document is intended as a guide to preparing an application.
Please refer to Chapter 25, ROH, for more information concerning
SMP application requirements and procedures.*

I. Overview

- A. Applicability. This permit covers any development, structure, or activity within the special management area as defined by Chapter 25, Revised Ordinances of Honolulu (ROH).
 - B. Application Processing. Processing of this application by the DPP is a two-phase procedure. The first phase involves preparation of an Environmental Assessment or Environmental Impact Statement (as determined by the DPP) for the proposed project. The second phase involves acceptance and processing of the permit application which includes a mandatory public hearing to be held in the area in which the project is proposed. After the close of the public hearing, the DPP submits a report and recommendation to the City Council.
 - C. City Council. The Director's Report and proposed resolution must be reviewed and approved by the City Council before an SMP will be issued. See Sec. 25-3.2(a), (b), (c) of Chapter 25, Revised Ordinances of Honolulu for details.
 - D. Time Frame. The DPP must hold a public hearing no later than 60 days after acceptance of the completed application, and transmit its findings to the City Council within ten (10) working days after the conclusion of the public hearing. The City Council must grant or deny the application within sixty (60) days after the close of the public hearing, unless the applicant agrees to an extension of time.
- II. Pre-Application Meeting. You are encouraged to review this guide and schedule a preliminary meeting with DPP staff to discuss the application and processing requirements. Please call 527-5374 to schedule a meeting.

- d. When applicable, grading plans showing existing and finish grade conditions by contours, spot elevations or other means. Elevations should be marked on the site plan.
4. Additional Information. Additional information as may be required by the DPP.

(NOTE: Upon acceptance of the Environmental Assessment, the DPP will assess the project's impact on the SMA, and determine whether an Environmental Impact Statement (EIS) is required or issue a Finding of No Significant Impact (FONSI). The assessment is made using significant criteria of the objectives, policies and guidelines of Chapter 205A, HRS. You will be notified in writing when the environmental determination is completed.

The DPP will then process the permit upon receipt of the application fee, unless:

- (1) An EIS has been required, in which case, processing of the SMP will not begin until acceptance of the EIS;
- (2) The FONSI indicates that additional information is required prior to the processing of the SMP;
- (3) The applicant indicates that he/she is not ready to proceed with the SMP procedure; or
- (4) Plans have substantially changed indicating the need for a new assessment.)

B. Permit. The second phase of the SMP application procedure is the processing of the application by the DPP.

1. Written Information. Submit the following information as applicable:
 - a. A copy of the FONSI or EIS upon which waiver of the assessment procedure is based.
 - b. A copy of the EIS required by the DPP.
2. Drawings/Plans. Submit amendments to any drawings/plans previously submitted in the assessment phase.
3. Supplemental Information. Submit the following supplemental information:

CORRECTION

THE PRECEDING DOCUMENT(S) HAS
BEEN REPHOTOGRAPHED TO ASSURE
LEGIBILITY
SEE FRAME(S)
IMMEDIATELY FOLLOWING

- d. When applicable, grading plans showing existing and finish grade conditions by contours, spot elevations or other means. Elevations should be marked on the site plan.
4. Additional Information. Additional information as may be required by the DPP.

(NOTE: Upon acceptance of the Environmental Assessment, the DPP will assess the project's impact on the SMA, and determine whether an Environmental Impact Statement (EIS) is required or issue a Finding of No Significant Impact (FONSI). The assessment is made using significant criteria of the objectives, policies and guidelines of Chapter 205A, HRS. You will be notified in writing when the environmental determination is completed.

The DPP will then process the permit upon receipt of the application fee, unless:

- (1) An EIS has been required, in which case, processing of the SMP will not begin until acceptance of the EIS;
- (2) The FONSI indicates that additional information is required prior to the processing of the SMP;
- (3) The applicant indicates that he/she is not ready to proceed with the SMP procedure; or
- (4) Plans have substantially changed indicating the need for a new assessment.)

B. Permit. The second phase of the SMP application procedure is the processing of the application by the DPP.

1. Written Information. Submit the following information as applicable:
 - a. A copy of the FONSI or EIS upon which waiver of the assessment procedure is based.
 - b. A copy of the EIS required by the DPP.
2. Drawings/Plans. Submit amendments to any drawings/plans previously submitted in the assessment phase.
3. Supplemental Information. Submit the following supplemental information:

**CONTENT GUIDE for Preparing an ENVIRONMENTAL ASSESSMENT Required
with an Application for a Special Management Area Use Permit (SMP)
Chapter 25, Revised Ordinances of Honolulu, as amended**

This document is provided only as a guide for preparation of an Environmental Assessment. For procedural requirements, see Administrative Rules of the Department of Health, Chapter 200 of Title 11, "Environmental Impact Statement Rules," Sections 10, 11 and 12.

I. GENERAL INFORMATION

- A. Applicant: Name; Mailing Address; Phone Number.
- B. Recorded Fee Owner: Name; Mailing Address; Phone Number.
- C. Agent (if any): Name; Mailing Address; Phone Number.
- D. Tax Map Key: Zone, Section, Plat, and Parcel(s).
- E. Lot Area: Acreage or square footage.
- F. Agencies Consulted in Making Assessment: Indicate Federal, State, and/or County agencies consulted. Attach a copy of correspondence(s).

II. DESCRIPTION OF THE PROPOSED ACTION

A. General Description:

- (1) Brief narrative description of proposed project;
- (2) Relation of parcel to Special Management Area (i.e., entirely within, partially);
- (3) Location map (1" = 1000' scale preferred); and
- (4) Land use approvals granted and/or approvals required.

B. Technical Characteristics:

- (1) Use characteristics;
- (2) Physical characteristics - layout drawing showing property lines, lot size, elevations, existing structures;
- (3) Construction characteristics including demolition, removal, or modification of existing structures, clearing, grubbing, grading, filling, new structure height and design;
- (4) Utility requirements (water, electricity, gas, etc.);
- (5) Liquid waste disposal (municipal sewer system, septic tanks, or injection wells);
- (6) Solid waste disposal (includes refuse);
- (7) Access to site, and
- (8) Other pertinent information.

ground-level photographs should be used whenever location and site maps are not sufficient to adequately describe the project).

IV. PROJECT IMPACTS

Identify impacts of the project relative to the Coastal Zone Management objectives and policies (Section 205A-2, HRS) and the Special Management Area guidelines (Section 25-3.2, ROH).

V. MITIGATION MEASURES

Indicate proposed mitigation measures, if any.

CITY AND COUNTY OF HONOLULU
DEPARTMENT OF PLANNING AND PERMITTING

MINOR MODIFICATIONS

Applicants that have received the following permits but would like to modify the approved plan may apply for a Minor Modification.

Conditional Use Permit (Major) (CUP Major)
Conditional Use Permit (Minor) (CUP Minor)
Plan Review Use Permit (PRU)
State Special Use Permit (SUP)
Cluster Housing, Country Cluster, and Agricultural Cluster Permits
Planned Development - Housing (PDH)
Special District Permits, Major and Minor
Special Management Area Use Permit (SMP)
Existing Use Permit (EU)

The main criterion in determining whether a project is considered major or minor is not the size of the project, but rather its potential impact on surrounding land uses.

Projects that are determined by the DPP to have a major impact must apply for a new permit.

For a preliminary determination regarding whether a project is considered minor or major, you may call or meet with a planner in the DPP. Please be advised that the DPP will make the final determination on the permit status after the application has been accepted for processing.

Processing Fee: Except for Special Management Area Use Permits, State Special Use Permits and Special District (Minor) Permits which have no minor modification processing fee, the fee is \$100 (non-refundable).

The time frame for processing Minor Modifications to approved permit plans is 45 days from acceptance of the completed application.

CITY AND COUNTY OF HONOLULU
DEPARTMENT OF PLANNING AND PERMITTING

Plan Review Use (PRU)

Application Instructions

This document is intended to assist you in preparing a complete application, and should be read in conjunction with the Land Use Ordinance (LUO).

I. Overview

- A. City Council. Processing of this application by the Department of Planning and Permitting (DPP) and preparation of the Director's Report is only the first step in obtaining a PRU. The Director's Report and Recommendation must be processed and approved by the City Council. See Sec. 21-2.70 of the LUO for details.
- B. Time frame. The time frame for processing an application for a PRU by the DPP is 90 days from acceptance of the completed application. This time frame may be extended under certain circumstances.

II. Pre-Application Procedures

- A. Pre-Application Meeting. Prior to submitting the application, the applicant must meet with the DPP for an informal review of the project, unless such a meeting is determined to be unnecessary by the DPP. Please call 527-5374 to schedule a meeting:.....
- B. Presentation to Neighborhood Board. Prior to submitting the application, the applicant must also present the project to the neighborhood board of the district where the site is located, or if no such neighborhood board exists, then to an appropriate community association. The applicant must provide written notice of the presentation to all adjoining property owners.

This requirement will be deemed to have been satisfied if either:

- The neighborhood board (or community association if applicable) fails to provide an opportunity to present the proposed project at a meeting held within 60 days of the date of the written request to make a presentation; or

- The neighborhood board (or community association if applicable) submits a letter confirming that a presentation was made and describing the position of the Board, or stating that such a presentation is not necessary.

In the event that the neighborhood board does not submit a letter, the applicant may submit a copy of the board's minutes which documents that the presentation was made.

Please contact the Neighborhood Commission at 527-5749 for information concerning the appropriate neighborhood board and contact person for the project.

III. Application Requirements

- A. DPP Master Application. Complete and submit the DPP Land Use Permits Division Master Application Form. Provide all requested information.
- B. Fees. Submit the appropriate fees calculated as follows: \$400 base fee, plus an additional \$200 per acre, or major fraction thereof, of the project site, up to a maximum of \$5,000. Fees should be made payable to the City and County of Honolulu and are non-refundable.
- C. Affidavit. Submit an affidavit confirming that adjoining property owners were sent written notification of the required neighborhood board presentation.
- D. Written Statement. Your application package must include two copies of the following material. If the submittal is a multi-permit application, please submit two copies for each permit.

Upon completion of the DPP's initial review of the submittal, you will be notified of the number of ADDITIONAL copies required for agency and community review and comment.

The written statement must address the following issues:

1. Existing Facility. Describe the existing facility including the following:
 - a. Describe the project site, including topography, abutting uses and chronological history of the use of the land, including the present use of the property.

- b. Provide details on existing and proposed operations and activities, such as hours of operation, number of persons (clients/students and staff) on the site, number of hospital beds, occupancy of structures (use and number).
 - c. Provide details on existing and proposed structures and physical alterations to the project site, including parking areas, grading, landscaping, building heights, setbacks and buffering from adjoining parcels.
2. Master Plan. Submit a master plan of a minimum five (5) years covering future expansions, including new uses as well as physical development. The master plan should address the following:

(NOTE: Approval of a PRU by the City Council includes approval of this master plan. Therefore, the master plan must cover all lots for which the PRU is to be approved. No uses or structures, other than the uses and structures in the approved master plan, will be permitted on the lot or lots.)

- a. Information on future development shall include proposed heights, density, bulk concepts, land expansion, landscaping, setbacks, and buffering from adjoining parcels.
 - b. Parking and loading requirements shall be specified.
 - c. Master signage and exterior lighting plans must be included.
3. Infrastructure. Describe infrastructure requirements for the project, including the following if applicable (preliminary checks with the appropriate agency are encouraged):
- a. Wastewater disposal

Contact DPP, Wastewater Branch at 527-6064 or State Department of Health at 586-4294.
 - b. Water facilities

Contact Board of Water Supply, Project Review Section at 527-6122.

c. Traffic and parking

A traffic impact analysis may be required. Contact DPP's Traffic Review Branch at 523-4119 and/or State Department of Transportation for details.

4. Neighborhood Board. Describe all issues or causes of concern relating to the project raised at the presentation to the neighborhood board or community association. Describe the measures, if any, taken to mitigate such issues or concerns.

5. Other Impacts. Describe any other expected project impacts and proposed mitigative measures to address such impacts including the following, if applicable:

a. Public Services

- (1) Refuse collection
- (2) Fire protection
- (3) Police
- (4) Schools

b. Physical Environment

- (1) Natural land forms
- (2) Public views
- (3) Natural habitats
- (4) Historic sites
- (5) Flood hazard

c. Housing and Population

d. Employment

e. Parks and recreation

f. Day care

- g. Community Concerns
 - h. Other Impacts (i.e., noise, dust, lights, odors)
6. Justification. Justify any request to exceed the minimum development standards of the underlying zoning.
- E. Drawings/Plans. Submit the following drawings and/or plans applicable to the project. All drawings/plans must be drawn to scale and prepared by a draftsman, architect, engineer, or similar professional. For document imaging purposes, one (1) set of drawings shall be a maximum size of 11" x 17" and the second should not exceed 24" x 36". DPP staff may request additional copies after acceptance of the application.
- 1. Site Plan. Two (2) sets of a site plan reflecting the proposed five-year master plan, showing existing and proposed structures, including fences and walls. The site plan should also:
 - a. Delineate the boundaries of the property covered by the master plan.
 - b. Identify existing structures to be removed and/or modified.
 - c. Show on-site traffic circulation patterns and access.
 - d. Provide details of parking areas including dimensions of parking stalls and maneuvering areas.
 - 2. Conceptual Plan. Conceptual plans for all new structures indicating the following:
 - a. Building elevations and section drawings which show finish and existing grades, and setbacks from property lines.
 - b. Floor plans, including the dimensions of rooms/habitable areas and activity areas.
 - 3. Landscape Plans. Landscape plans indicating the following:
 - a. Sizes, locations and quantities of existing and proposed landscaping, including plantings to be removed.
 - b. Plant material by typical name.
 - c. Details of irrigation system.

F. Photos. Submit photos of the project site showing the following:

1. Street access (ingress and egress) to the project site;
2. Uses on adjoining properties; and
3. Building setbacks from property lines, distances to neighboring buildings, parking areas, and other uses, on the site.

(Note: all photos should be labeled and keyed to a general site map.)

PUBLIC NOTIFICATION. Within ten (10) working days of the DPP's application acceptance, the applicant must also comply with the notification requirements of Sec. 21-2.40-2(c)(3) of the LUO (Notification of owners of property within 300 feet).

*For further assistance or information on how to complete the application,
please call the DPP at 527-5374.*

PLAN REVIEW USE (PRU)
APPLICATION CHECK LIST

1.	Pre-Application meeting with DPP	
2.	Neighborhood Board (NB) Presentation (letter or meeting minutes attached; or copy of applicant's request to NB if no presentation opportunity provided)	
3.	Master Application Form	
4.	Fees	
5.	Affidavit (confirming Notification of Adjoining Property Owners of NB Presentation, and list of those notified)	
6.	Written Statement (2 copies)	
7.	Drawings/Plans - 2 sets drawn to scale, 1 set max. 11" x 17" and 2 nd set max. 24" x 36"	
	Site Plans	
	Conceptual Plans	
	Landscape Plans	
8.	Photos (labeled and keyed to a general site map)	

*Note: This list is intended as a general reference for applicants. Please refer to the attached permit instruction sheets for complete application requirements.

The adequacy/completeness of application submittals for acceptance will be determined by the DPP within 10 working days of application submittal.

CITY AND COUNTY OF HONOLULU
 DEPARTMENT OF PLANNING & PERMITTING
 650 South King Street
 Honolulu, Hawaii 96813

LAND USE PERMITS DIVISION MASTER APPLICATION FORM

Additional data, drawings/plans, and fee requirements are listed on a separate sheet titled "Instructions for Filing". PLEASE ASK FOR THESE INSTRUCTIONS.

All specified materials described in the "Instructions for Filing" and required fees must accompany this form; incomplete applications will delay processing. You are encouraged to consult with Zoning Division staff in completing the application. Please call the appropriate phone number given in the "Instructions for Filing."

Please print legibly or type the required information.

SUBMITTED FEE: \$ _____

PERMIT/APPROVAL REQUESTED (Check one or more as appropriate):

Cluster: <input type="checkbox"/> Agricultural <input type="checkbox"/> Country <input type="checkbox"/> Housing Conditional Use Permit: <input type="checkbox"/> Minor <input type="checkbox"/> Major <input type="checkbox"/> Existing Use: _____ <small>(Indicate Type of Use)</small> <input type="checkbox"/> Minor Shoreline Structures Permit <input type="checkbox"/> Modify Approved Permit: _____ <small>(Indicate Reference File No.)</small>	<input type="checkbox"/> Park Dedication <input type="checkbox"/> Plan Review Use Planned Development: <input type="checkbox"/> Housing <input type="checkbox"/> Commercial (WSD Only) <input type="checkbox"/> Resort (WSD Only) <input type="checkbox"/> Shoreline Setback Variance Special District Permit: <input type="checkbox"/> Minor <input type="checkbox"/> Major _____ <small>(Indicate District)</small> <input type="checkbox"/> Downtown Height > 350 Feet	Special Management Area Use Permit: <input type="checkbox"/> Minor <input type="checkbox"/> Major <input type="checkbox"/> Variance from LUO Sec.(s): _____ <input type="checkbox"/> Waiver <input type="checkbox"/> Zoning Adjustment, LUO Sec.(s): _____ <input type="checkbox"/> 201G Project
--	--	--

TAXMAP KEY(S): _____

LOT AREA: _____

ZONING DISTRICT(S): _____ STATE LAND USE DISTRICT: _____

STREET ADDRESS/LOCATION OF PROPERTY: _____

RECORDED FEE OWNER: Name (& title, if any) _____ Mailing Address _____ Phone Number _____ Signature _____	APPLICANT: Name _____ Mailing Address _____ Phone Number _____ Signature _____
--	---

PRESENT USE(S) OF PROPERTY/BUILDING: _____ _____	AUTHORIZED AGENT/CONTACT PERSON: Name _____ Mailing Address _____ Phone Number _____ Signature _____
---	---

PROJECT NAME (if any): _____

REQUEST/PROPOSAL (Briefly describe the nature of the request, proposed activity or project):

FOR DEPARTMENT USE ONLY

ACTION TAKEN BY DEPARTMENT <input type="checkbox"/> Application incomplete (not accepted) <input type="checkbox"/> Approved	<input type="checkbox"/> Exempt <input type="checkbox"/> Approved with attached conditions	POSSE JOB NO. _____ <input type="checkbox"/> Withdrawn by applicant <input type="checkbox"/> Denied for attached reason(s)
--	---	---

THIS COPY, WHEN SIGNED BELOW, IS NOTIFICATION OF THE ACTION TAKEN.

 Signature Title Date

BENJAMIN J. CAYETANO
GOVERNOR



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
869 PUNCHBOWL STREET
HONOLULU, HAWAII 96813-5097

KAZU HAYASHIDA
DIRECTOR
DEPUTY DIRECTORS
BRIAN K. MINAI
GLENN M. OKIMOTO

IN REPLY REFER TO:
AIR-P
00.0230

May 9, 2000

Mr. Randall K. Fujiki
Director of Planning and Permitting
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

RECEIVED
MAY 16 2000

Dear Mr. Fujiki:

Subject: Comments on the Revised and
Updated Draft Environmental Assessment (DEA)
Dillingham Airfield Improvements, Waialua, Oahu

Thank you for your comments on the DEA for the proposed project.
The following is a response to your comments.

1. Land Use Regulations:

- The sentence on page 4 of the DEA will be revised as requested.
- The SMA will be placed on Figure 6.
- The airfield is located on Federal land and not within the jurisdiction of State and County rules and regulations. Therefore, the SMA and PRU permits do not apply in this case.

2. Improvements:

- As stated in the DEA, the existing "wastewater from the various facilities is routed into on-site cesspools. In the future, these systems will be replaced with septic systems or other DOH-approved systems."
- The DEA is a planning document for proposed improvements. The details describing the structures are not fully known at this time. However, applicable State, County, Department of Transportation, Airports (DOT-A), and Federal Aviation Administration (FAA) rules and regulations will be

Mr. Randall K. Fujiki
Page 2
May 9, 2000

AIR-P
00.0230

followed. The blast pads, the repaving, and the new taxiway will be constructed of bituminous concrete and will be striped in accordance with FAA rules and regulations. The size of the taxiways are shown, to scale, on Figure 4 of the DEA.

Please have your staff contact Lynn Becones, Planner, of the Airports Division at 838-8811 to clarify any questions you may have.

Very truly yours,



KAZU HAYASHIDA
Director of Transportation

c: Edward K. Noda & Associates (B. Ishii)
Federal Aviation Administration (D. Welhouse)

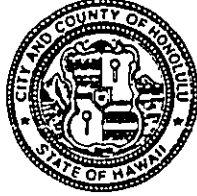
bc: AIR-L
AIR-O

LB:nf

0812

DEPARTMENT OF TRANSPORTATION SERVICES
CITY AND COUNTY OF HONOLULU

PACIFIC PARK PLAZA • 711 KAPIOLANI BOULEVARD, SUITE 1200 • HONOLULU, HAWAII 96813
TELEPHONE: (808) 523-4529 • FAX: (808) 523-4730



JEREMY HARRIS
MAYOR

CHERYL D. SOON
DIRECTOR

JOSEPH M. MAGALDI, JR.
DEPUTY DIRECTOR

March 28, 2000

TPD2/00-00876R

Mr. Jerry M. Matsuda, P.E.
Airports Administrator
Airports Division
Department of Transportation
State of Hawaii
400 Rodgers Boulevard, Suite 700
Honolulu, Hawaii 96819

Dear Mr. Matsuda:

Subject: Dillingham Airfield Improvements

In response to the February 17, 2000 letter from Mr. Kazu Hayashida, the revised and updated draft environmental assessment for the subject project was reviewed.

The proposed project should have minimal impact on City-jurisdiction roadways, as Dillingham Airfield accesses only onto the State-jurisdiction Farrington Highway.

Should you have any questions regarding this matter, please contact Faith Miyamoto of the Transportation Planning Division at 527-6976.

Sincerely,

A handwritten signature in cursive script that reads "Cheryl D. Soon".

CHERYL D. SOON
Director

BENJAMIN J. CAYETANO
GOVERNOR



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
869 PUNCHBOWL STREET
HONOLULU, HAWAII 96813-5097

KAZU HAYASHIDA
DIRECTOR
DEPUTY DIRECTORS
BRIAN K. MINAAI
GLENN M. OKIMOTO

IN REPLY REFER TO:
AIR-P
00.0232

May 9, 2000

Ms. Cheryl D. Soon
Director
Department of Transportation Services
City and County of Honolulu
711 Kapiolani Boulevard, Suite 1200
Honolulu, Hawaii 96813

Dear Ms. Soon:

Subject: Comments on the Revised and
Updated Draft Environmental Assessment
Dillingham Airfield Improvements, Waialua, Oahu
State Project No. AO2011-01

Thank you for your letter regarding the subject project. Your
comment will be incorporated into the Final Environmental
Assessment.

Please have your staff contact Lynn Becones, Planner, of the
Airports Division at 838-8811 to clarify any questions you may
have.

Very truly yours,

A handwritten signature in cursive script that reads "Kazu Hayashida".

KAZU HAYASHIDA
Director of Transportation

c: Edward K. Noda and Associates (B. Ishii)
Federal Aviation Administration (D. Welhouse)

bc: AIR-L
AIR-O

LB:nf

RECEIVED
JUN 02 2000

TRANSPORTATION

0488

Phillip B. Olsen
999 Wilder Avenue, Apt. 505
Honolulu, Hawaii 96822
Tel. (808) 521-2630, Fax -3378, e-mail pbolsen@pixi.com
February 25, 2000

Department of Transportation, Airport Division
400 Rodgers Boulevard, Suite 700
Honolulu, Hawaii 96819
Attention: Jerry Matsuda (Tel.838-8600)

SUBJECT: Dillingham Airfield Improvements

I am a frequent visitor at Dillingham Airfield as a pilot, flight instructor, tow-plane operator, and participant in activities of the Hawaii Historical Aviation Foundation.

While it is gratifying to see in the Draft Environmental Assessments, dated February 23, the DOT plans for many of the long-overdue improvements at Dillingham Field, I am concerned about the apparent continued failure to address two serious deficiencies at this airfield. These deficiencies are the lack of aviation fuel at the General Aviation (RW 08) end of the airfield, and failure to provide a wash rack for washing aircraft.

It is of great concern that the proposal to move a fueling facility to the Waiialua end of the airfield appears to mean that DOT has abandoned efforts to supply aircraft fuel to the General Aviation location, and to supply a facility at the sports parachuting location, instead. If such a move is DOT's intent, I wish to challenge the wisdom of it. Failure to accommodate the majority of airfield users to the benefit of a minority sports industry is unfair and contrary to principles of highest and best common use of public land.

Prohibition of washing aircraft on Dillingham Airfield ramps is a serious limitation, which must be addressed by DOT. The salt-laden atmosphere at the airfield makes frequent washing necessary to control corrosion. Prohibition of washing aircraft on the ramps is unreasonable, given the conditions and circumstances. If such a prohibition is to be enforced, then a wash-rack is essential.

Thank you for the opportunity to comment.

Very truly yours,



Phillip B. Olsen
ATP/CFII/ASME/SES, CE500, BAE125, HS125, FA119C, DA50(SIC)
CC: Col. Schauer, H.Bruckner

BENJAMIN J. CAYETANO
GOVERNOR



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
AIRPORTS DIVISION
409 RODGERS BOULEVARD, SUITE 700
HONOLULU, HAWAII 96819-1880

KAZU HAYASHIDA
DIRECTOR
DEPUTY DIRECTORS
BRIAN K. MINAII
GLENN M. OKIMOTO

May 5, 2000

IN REPLY REFER TO:

AIR-P
00.0237

Mr. Phillip B. Olsen
999 Wilder Avenue, Apt. 505
Honolulu, Hawaii 96822

RECEIVED
MAY 11 2000

Dear Mr. Olsen:

EDWARD K. NODA & ASSOC., INC.

Subject: Comments on the Revised and
Updated Draft Environmental Assessment (DEA)
Dillingham Airfield Improvements, Waialua, Oahu
State Project No. AO2011-01

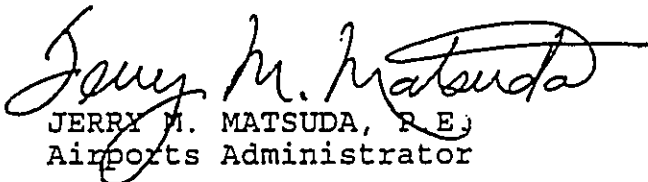
Thank you for your comments on the DEA for the proposed project.

In response to your comments as well as others, we have revisited the location of the fuel storage area and will be relocating the facility near the existing fueling station (the RW 8 end). The new location will be noted in our Final Environmental Assessment.

We appreciate your concern about the washing of aircraft. Wash areas are currently available on the west end of the airfield, subject to the guidelines found in the attached Airport Notice.

Please contact Lynn Becones, Planner, at 838-8811 to clarify any questions you may have.

Sincerely,


JERRY M. MATSUDA, P.E.
Airports Administrator

Attachment: Airport Notice

c: Edward K. Noda & Associates (B. Ishii)
✓ Federal Aviation Administration (D. Welhouse)

BENJAMIN J. CAYETANO
GOVERNOR



KAZU HAYAS
DIRECTOR

DEPUTY DIRECTOR
BRIAN K. MI
GLENN M. OK

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
AIRPORTS DIVISION • OAHU DISTRICT
HONOLULU INTERNATIONAL AIRPORT • 300 RODGERS BOULEVARD, #12
HONOLULU, HAWAII 96819-1897

IN REPLY REFER

April 10, 2000

AIRPORT NOTICE #00-031


TO: ALL DILLINGHAM AIRFIELD TENANTS

SUBJECT: WASHING OF AIRPLANES

Per the concurrence of the State Department of Health, airplanes may continue to be washed at the west end of Dillingham Airfield subject to the following guidelines:

1. The sailplanes may be washed at the wash rack or at the T-hangars.
2. For powered aircraft, the designated wash areas are the east side of T-hangar Buildings 401 and 402 as noted by the attached exhibit.

If you have any questions, please call Mr. James K. Iwamura, Assistant Airport Superintendent, at 836-6460.


STANFORD N. MIYAMOTO
Manager
Oahu District Airports

Attachment

APR 12 2000

TAXIWAY 501000

010105

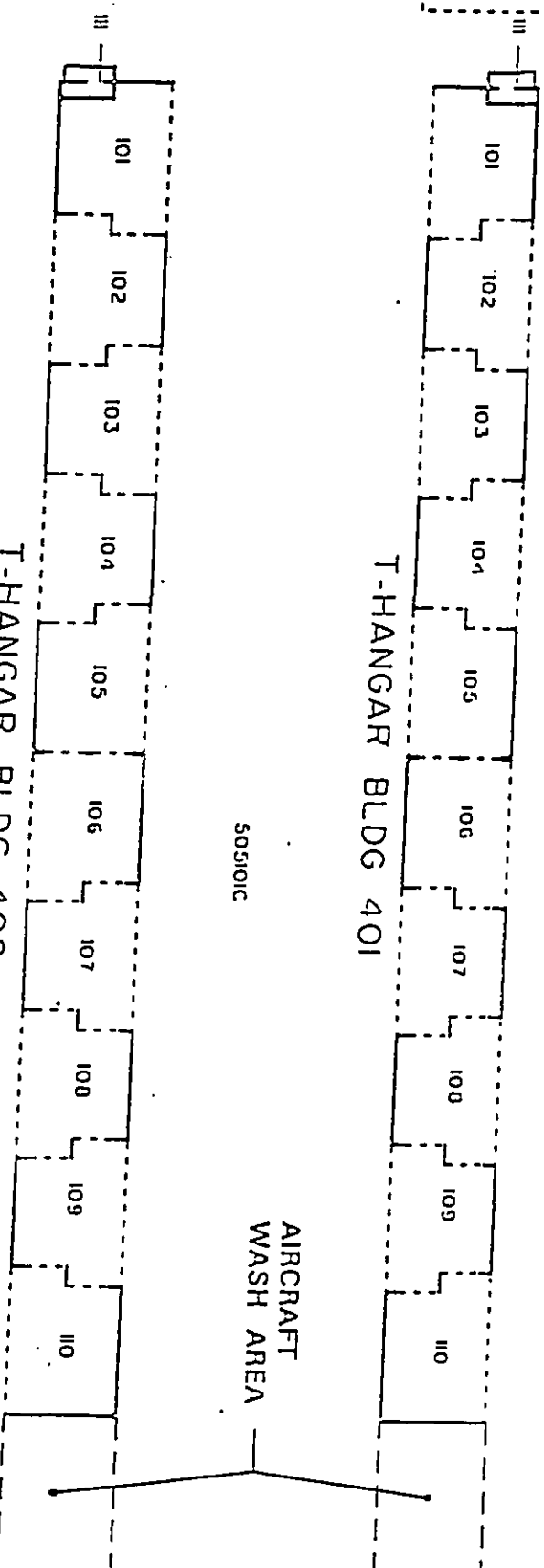


T-HANGAR BLDG 401

T-HANGAR BLDG 402

505101C

AIRCRAFT WASH AREA

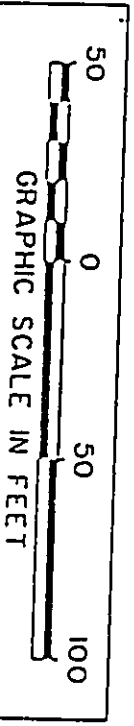


600111

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DILLINGHAM AIRFIELD



e: Brian
FEB 28 2000

Feb 27, 2000

TO: Edward Noda & Associates Inc.
FAX: 591-8553 EXT 203

COPY

FM: Thomas T. Shirai Jr.

RE: Draft Environmental Assessment (Dillingham Airfield)

Dear Mr. Noda & Associates,

I am writing in regards to the proposed projects at Dillingham Airfield. I encourage you to contact the North Shore Neighborhood Board 27 to give a presentation and opportunity for further public input. The Neighborhood Commission will inform the board:

Neighborhood Commission
Attn: North Shore Neighborhood Board 27
Phnr: (808) 527-5749
FAX: (808) 527-5760

North Shore Neighborhood Board 27
P.O. Box 577
Haleiwa, HI 96712

Please contact them because the community deserves more information via presentations. Thank you for your time. Mahalo. Sincerely,

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

DOCUMENT CAPTURED AS RECEIVED

Neighborhood Board Monthly Meeting Calendar

Published by the Neighborhood Board of Honolulu
Phone: (808) 527-5749 • FAX: (808) 527-5749 • E-mail: neighborhoodboard@hawaii.gov

Wednesday, March 25

Su	Mo	Tu	We	Th	Fr	Sa
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

Neighborhood Board No. 1, Makiki
 Community Center, 2111 S. King St.
 7 P.M.

Neighborhood Board No. 2, Kalaheo
 Kalaheo Community Center, 2111 S. King St.
 7 P.M.

Neighborhood Board No. 3, Kalaheo
 Kalaheo Community Center, 2111 S. King St.
 7 P.M.

Neighborhood Board No. 4, Kalaheo
 Kalaheo Community Center, 2111 S. King St.
 7 P.M.

Neighborhood Board No. 5, Kalaheo
 Kalaheo Community Center, 2111 S. King St.
 7 P.M.

Neighborhood Board No. 6, Kalaheo
 Kalaheo Community Center, 2111 S. King St.
 7 P.M.

Neighborhood Board No. 7, Kalaheo
 Kalaheo Community Center, 2111 S. King St.
 7 P.M.

Neighborhood Board No. 8, Kalaheo
 Kalaheo Community Center, 2111 S. King St.
 7 P.M.

Neighborhood Board No. 9, Kalaheo
 Kalaheo Community Center, 2111 S. King St.
 7 P.M.

Neighborhood Board No. 10, Kalaheo
 Kalaheo Community Center, 2111 S. King St.
 7 P.M.

Neighborhood Board No. 11, Kalaheo
 Kalaheo Community Center, 2111 S. King St.
 7 P.M.

Neighborhood Board No. 12, Kalaheo
 Kalaheo Community Center, 2111 S. King St.
 7 P.M.

Neighborhood Board No. 13, Kalaheo
 Kalaheo Community Center, 2111 S. King St.
 7 P.M.

Neighborhood Board No. 14, Kalaheo
 Kalaheo Community Center, 2111 S. King St.
 7 P.M.

Neighborhood Board No. 15, Kalaheo
 Kalaheo Community Center, 2111 S. King St.
 7 P.M.

Neighborhood Board No. 16, Kalaheo
 Kalaheo Community Center, 2111 S. King St.
 7 P.M.

Neighborhood Board No. 17, Kalaheo
 Kalaheo Community Center, 2111 S. King St.
 7 P.M.

Neighborhood Board No. 18, Kalaheo
 Kalaheo Community Center, 2111 S. King St.
 7 P.M.

Neighborhood Board No. 19, Kalaheo
 Kalaheo Community Center, 2111 S. King St.
 7 P.M.

Neighborhood Board No. 20, Kalaheo
 Kalaheo Community Center, 2111 S. King St.
 7 P.M.

Neighborhood Board No. 21, Kalaheo
 Kalaheo Community Center, 2111 S. King St.
 7 P.M.

Neighborhood Board No. 22, Kalaheo
 Kalaheo Community Center, 2111 S. King St.
 7 P.M.

Neighborhood Board No. 23, Kalaheo
 Kalaheo Community Center, 2111 S. King St.
 7 P.M.

Neighborhood Board No. 24, Kalaheo
 Kalaheo Community Center, 2111 S. King St.
 7 P.M.

Neighborhood Board No. 25, Kalaheo
 Kalaheo Community Center, 2111 S. King St.
 7 P.M.

Neighborhood Board No. 26, Kalaheo
 Kalaheo Community Center, 2111 S. King St.
 7 P.M.

Neighborhood Board No. 27, Kalaheo
 Kalaheo Community Center, 2111 S. King St.
 7 P.M.

Neighborhood Board No. 28, Kalaheo
 Kalaheo Community Center, 2111 S. King St.
 7 P.M.

Neighborhood Board No. 29, Kalaheo
 Kalaheo Community Center, 2111 S. King St.
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Neighborhood Board No. 30, Kalaheo
 Kalaheo Community Center, 2111 S. King St.
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Neighborhood Board No. 31, Kalaheo
 Kalaheo Community Center, 2111 S. King St.
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Neighborhood Board No. 32, Kalaheo
 Kalaheo Community Center, 2111 S. King St.
 7 P.M.

Neighborhood Board No. 33, Kalaheo
 Kalaheo Community Center, 2111 S. King St.
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Neighborhood Board No. 34, Kalaheo
 Kalaheo Community Center, 2111 S. King St.
 7 P.M.

Neighborhood Board No. 35, Kalaheo
 Kalaheo Community Center, 2111 S. King St.
 7 P.M.

Neighborhood Board No. 36, Kalaheo
 Kalaheo Community Center, 2111 S. King St.
 7 P.M.

Neighborhood Board No. 37, Kalaheo
 Kalaheo Community Center, 2111 S. King St.
 7 P.M.

Neighborhood Board No. 38, Kalaheo
 Kalaheo Community Center, 2111 S. King St.
 7 P.M.

Neighborhood Board No. 39, Kalaheo
 Kalaheo Community Center, 2111 S. King St.
 7 P.M.

FEB 26, 2000


TO: DEPARTMENT OF TRANSPORTATION
AIRPORTS DIVISION
ATTN: JERRY MATSUDA/AIRPORTS ADMINISTRATOR

FM: THOMAS T. SHIRAI JR

RE: DILINGHAM AIRFIELD DRAFT ENVIRONMENTAL ASSESSMENT (DEA)

DEAR MR. MATSUDA,

I AM WRITING THIS LETTER BECAUSE I AM A VERY CONCERNED RESIDENT OF MOKULEIA WHICH IS NEAR TO THE LOCATION OF DILINGHAM AIRFIELD. THE WAIALUA DISTRICT IS VERY ACTIVE IN KEEPING TRACK OF ANY PROPOSALS AND CONCERNS WHICH MAY HAVE AN IMPACT ON OUR LIFESTYLE. MEDIA ARTICLES (HONOLULU ADVERTISER DTD2/25/00) AND COPIES AT THE WAIALUA LIBRARY ARE NOT ENOUGH TO HAVE A POSITIVE RELATIONSHIP WITH OUR COMMUNITY. THEREFORE, A PRESENTATION AT THE NORTHSORE NEIGHBORHOOD BOARD NO 27 AND A PUBLIC INFORMATION AND OR HEARING MORE APPROPRIATE. I HAVE FOLLOWED THE SIMILAR APPROACH THAT IS PRESENTED HERE WITH YOUR PROPOSALS AT THE PRINCEVILLE AIRPORT ON KAUAI AND THE MOLOKAI AIRPORT WHICH LED TO SOME VERY ANGERED RESIDENTS OF THOSE AREAS. I DON'T WANT TO SEE ANY PROPOSED PROJECTS BYPASSING COMMUNITY INPUT AND THE DEADLINE SET FOR MARCH 24TH IS NOT ENOUGH TIME TO REVIEW THE DRAFT ENVIRONMENTAL ASSESSMENT AND MAY PRESSURE RESIDENTS IN THEIR TESTIMONIES. THANK YOU FOR YOUR TIME. SINCERILY,


THOMAS T. SHIRAI JR
P.O. BOX 601
WAIALUA, HI 96791

DISTRIBUTION: COUNCILMEMBER RENEE MANSHO
REPRESENTATIVE ALEX SANTIAGO
SENATOR ROBERT BUNDA
NORTHSORE NEIGHBORHOOD BOARD NO. 27
MOKULEIA COMMUNITY ASSOCIATION
WAIALUA COMMUNITY ASSOCIATION
LIFE OF THE LAND



FEBRUARY 23, 2000

Draft Environmental Assessments

Post-it Max Note	7071	Date	4/3	Page	1
To	James Shirai	From	O.P.R.C.		
Subject					
File #	623-6737				



(1) Dillingham Airfield Improvements

District: Waialua
TRMK: 6-8-02:16, 6-8-03:9, 6-8-14:1-23, 29

Applicant: Department of Transportation
 Airports Division
 400 Rodgers Boulevard, Suite 700
 Honolulu, Hawaii 96819
 Contact: Terry Matsuda (838-2600)

Approving Agency/Authority: Same as above.
Consultant: Edward K. Noda and Associates, Inc.
 615 Piikoi Street, Suite 300
 Honolulu, Hawaii 96814
 Contact: Brian Jellie (801-553 x 203)

Public Comment Deadline: March 24, 2000
Status: DEA First Notice pending public comment. Address comments to the applicant with copies to the consultant and OEQC.

Permits Required: FAR Part 150 Noise Compatibility Program

The proposed improvements are to address existing safety, operational, and hangar capacity needs for civil general aviation aircraft of 12,500 pounds or less gross weight. These improvements include the:

- Acquisition of approximately 3.2 acres of additional adjoining lands to meet FAA requirements for runway protection areas;
 - Add extended runway safety areas and blast pads at both ends of the existing runway in accordance with FAA Advisory Circular AC 150/3300-13;
 - Repave the runway and taxiway;
 - Designation of a fuel storage area on the Runway 26 (Waialua) end; and
 - Expand the existing parallel taxiway, 2,000 feet, to the end of Runway 26.
- Provision of a lease lot and construction of additional hangar space for fixed-wing aircraft at the mid-field location (construction of the hangars will be by the tenants).

Construction of additional sailplane hangars and associated aprons by the HDOY-ATA;
 Upgrading and construction of various infrastructure (utility) improvements, such as future septic tanks and leach field, and additional capacity, as needed, for electrical and communications; and
 Improving drainage to remedy existing flooding problems.

This draft EA is an update of a previous draft EA which was prepared in November 1993. Since that time, the scope of the project has changed as the State has acquired the former Barber's Point Naval Air Station for a general aviation airport.

(2) Halaona Stream Bridge Replacement

District: Hwa
TRMK: 9-9-03-66 (oldest plot in bridge)
Applicant: Department of Transportation
 Highways Division
 601 Kaimokila Boulevard, Room 688
 Kapolei, Hawaii 96707
 Contact: Chieftain Yamasaki (692-7572)

Approving Agency/Authority: Same as above.



NORTH SHORE

Mokuleia field getting upgrade

The state Department of Transportation is planning improvements at Dillingham Airfield in Mokuleia to upgrade safety and operations, as well as provide more hangar space.

The project includes purchase of about three acres of land for a security buffer zone, improving safety at both ends of the runway, and repaving the runway and taxiway.

There are plans for tenants to build a hangar on leased land, as well as

state-constructed sailplane hangars. The airfield's infrastructure and drainage also will be improved.

The department has drafted an environmental assessment for public review. Copies of the document are available at public libraries in the area. Public comments are due March 24. Call 586-4185.

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Feb 27, 2000

TO: Edward Noda & Associates Inc.
FAX: 591-8553 EXT 203

FM: Thomas T. Shirai Jr.

RE: Draft Environmental Assessment (Dillingham Airfield)

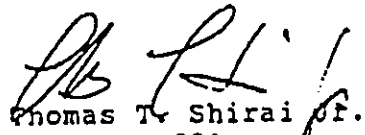
Dear Mr. Noda & Associates,

I am writing in regards to the proposed projects at Dillingham Airfield. I encourage you to contact the North Shore Neighborhood Board 27 to give a presentation and opportunity for further public input. The Neighborhood Commission will inform the board:

Neighborhood Commission
Attn: North Shore Neighborhood Board 27
Phnr: (808) 527-5749
FAX: (808) 527-5760

North Shore Neighborhood Board 27
P.O. Box 577
Haleiwa, HI 96712

Please contact them because the community deserves more information via presentations. Thank you for your time. Mahalo. Sincerely,


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

BENJAMIN J. CAYETANO
GOVERNOR



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
AIRPORTS DIVISION
400 RODGERS BOULEVARD, SUITE 700
HONOLULU, HAWAII 96819-1880



KAZU HAYASHIDA
DIRECTOR

DEPUTY DIRECTORS
BRIAN K. MINAII
GLENN M. OKIMOTO

May 5, 2000

IN REPLY REFER TO:

AIR-P
00.0235

Mr. Thomas T. Shirai, Jr.
P.O. Box 601
Waialua, Hawaii 96791

RECEIVED
MAY 11 1 23 00

EDWARD K. NODA & ASSOC., INC.


Dear Mr. Shirai:

Subject: Comments on the Revised and
Updated Draft Environmental Assessment
Dillingham Airfield Improvements, Waialua, Oahu
State Project No. AO2011-01

Thank you for your Memorandum dated February 26, 2000, commenting on the subject report and for your letter to our consultant, Edward K. Noda and Associates, Inc., on February 27, 2000. In response to your concern, we wrote to the North Shore Neighborhood Board describing the project. Also, Ben Schlapak our Head Planning Engineer attended the Mokuleia Community Association meeting on March 25, 2000, and presented our proposed improvements. Our intent was not to bypass community input and in fact, throughout the planning process, we have held five public meetings in the Waialua area.

In addition, Lynn Becones of my staff will be contacting you to discuss your concerns about access through Dillingham Airfield. If you have any questions, please contact her at 838-8811.

Sincerely,


JERRY M. MATSUDA, P.E.
Airports Administrator

c: ✓ Edward K. Noda & Associates (B. Ishii)
Federal Aviation Administration (D. Welhouse)

SEP 23 2000

2000-09-23-0A-~~FEA~~-

FILE COPY

(DILLINGHAM AIRFIELD IMPROVEMENTS)

Waialua District, Island of Oahu
Tax Map Keys: 1:6:8:02:16, 1:6:8:03:9, 1:6:8:14:1 through 23 and 25
State Project No. AO2011-01

FINAL ENVIRONMENTAL ASSESSMENT

Proposing Agency:

**STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
AIRPORTS DIVISION
HONOLULU INTERNATIONAL AIRPORT
HONOLULU, HAWAII 96819**

Responsible Official:

Kazu Hayashida

Kazu Hayashida
Director

8/15/00

Date

Prepared By:

Edward K. Noda and Associates, Inc.
615 Piikoi Street, Suite 300
Honolulu, Hawaii 96814

July 2000

This Document is prepared pursuant to Chapter 343, HRS.

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APPENDICES

- A. "Literature Review and Archaeological Reconnaissance Survey for Dillingham Airfield Master Plan Area, Oahu, Hawaii." Prep. by Pennie Moblo, International Archaeological Research Institute, Inc. 1991.
- B. "Air Quality Assessment for the Dillingham Airfield Master Plan." Prep. by B.D. Neal & Associates. 1993.
- C. "Survey of the Avifauna and Feral Mammals at Dillingham Airfield and Nearby Lands, Mokuleia, Oahu." Prep. by Phillip L. Bruner. 1991.
- D. Comments Received on Previous Draft Environmental Assessment, 1996
- E. Comments Received during Pre-consultation
- F. Comments Received on Draft Environmental Assessment, 2000

SECTION 1.0 PROJECT DESCRIPTION

This revised and updated environmental assessment (EA) is part of the Dillingham Airfield Master Plan and FAR Part 150 Noise Compatibility Program project. Funding for the program was provided through the State of Hawaii, Department of Transportation, Airports Division (HDOT-AIR) under State Contract No. 26985, State Project No. AO2011-01, and a planning grant from the Federal Aviation Administration (FAA).

1.1 BACKGROUND

Dillingham Airfield is located near Oahu's northwestern tip in the district of Waialua (Figure 1). Most of the land surrounding the airport is under the jurisdiction of the State of Hawaii and the City and County of Honolulu. The airfield proper is managed by the State of Hawaii, Department of Transportation, Airports Division (HDOT-AIR) and is leased from the United States, Department of Defense, Department of the Army. The Airfield 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.

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 weighing equal to or less than 12,500 pounds gross weight under Visual Flight Rules (VFR). Larger aircraft may use the airfield with prior permission from the HDOT-AIR. It serves as a base for 42 general aviation aircraft, including 21 fixed-wing aircraft, 20 gliders and one helicopter. Military aircraft that utilize the airfield are primarily helicopters and C-130 cargo aircraft.

In the 1960's and 1970's, general aviation was the fastest-growing segment of aviation on Oahu. In 1962, an agreement was made with the U.S. Army to permit civil use of Dillingham Airfield by general aviation aircraft. While this provided some relief, the rapid growth in general aviation aircraft operations at Honolulu International Airport (HNL) continued, and in 1970 the State received permission from the U.S. Navy to use Ford Island Auxiliary Landing Field (ALF) for general aviation training purposes.

In 1993, a Master Plan was prepared to provide a planned development of Dillingham Airfield for increased general aviation uses. The 1993 Master Plan (Noda, et al., 1993) used several assumptions for planning the improvements to the Dillingham Airfield general aviation facilities. The major planning assumptions are described below.

- 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, and that additional land can be acquired by the State for general aviation use.

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

In 1995, a Draft EA for the then Master Plan proposed improvements to Dillingham Airfield was prepared and submitted to the Office of Environmental Quality Control (OEQC). However, the recent closure and planned reuse of Barbers Point Naval Air Station (BPNAS) as Kalaeloa General Aviation Reliever Airport has changed many of the planning assumptions and negated the proposed later phases of the 1993 Master Plan. Because of this, only portions of Phase I of the Master Plan will be implemented. Subsequently, the 1995 EA was revised and the presently proposed improvements to the airfield are discussed in this revised and updated EA. However, several of the planning assumptions used in the 1993 Master Plan remain valid and are as follows.

- 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 that additional land can be leased by the State for aviation use.
- The north shore of Oahu, and particularly the Haleiwa/Mokuleia area, will not be economically developed to the point that air carrier/commuter airline service is needed to serve the area.
- the current aviation uses at Dillingham Airfield will remain.

1.2 THE PROPOSED ACTION

The existing facilities for Dillingham Airfield are shown on Figures 2 and 3, with Figure 3 being an enlargement of the Terminal Area portion of the Airfield. The current plan is expected to meet the needs of Dillingham Airfield until the planning horizon of 2010 and possibly beyond. The majority of the improvements are for operational, safety and maintenance improvements. Included is an extension of the existing parallel taxiway that will provide a hard surface for aircraft taxiing to the parachute staging areas. Currently, aircraft taxiing to the parachute staging areas use the unpaved areas and the runway itself. This condition is a serious safety and airfield operational concern. Aircraft taxiing on the unpaved area scatters debris that may damage aircraft, especially propellers, or injure bystanders.

In addition, planned improvements have been designed to meet existing and forecast aviation demand (Table 1). Dillingham Airfield has adequate runway capacity to accommodate the anticipated growth in aircraft operations within the planning period and beyond. However, hangars for based aircraft need to be provided and the infrastructure (utilities) needs to be upgraded to remedy existing deficiencies. Hangars are required to partially protect aircraft from the corrosive conditions at the Airfield caused by the naturally high humidity and salt-laden air.

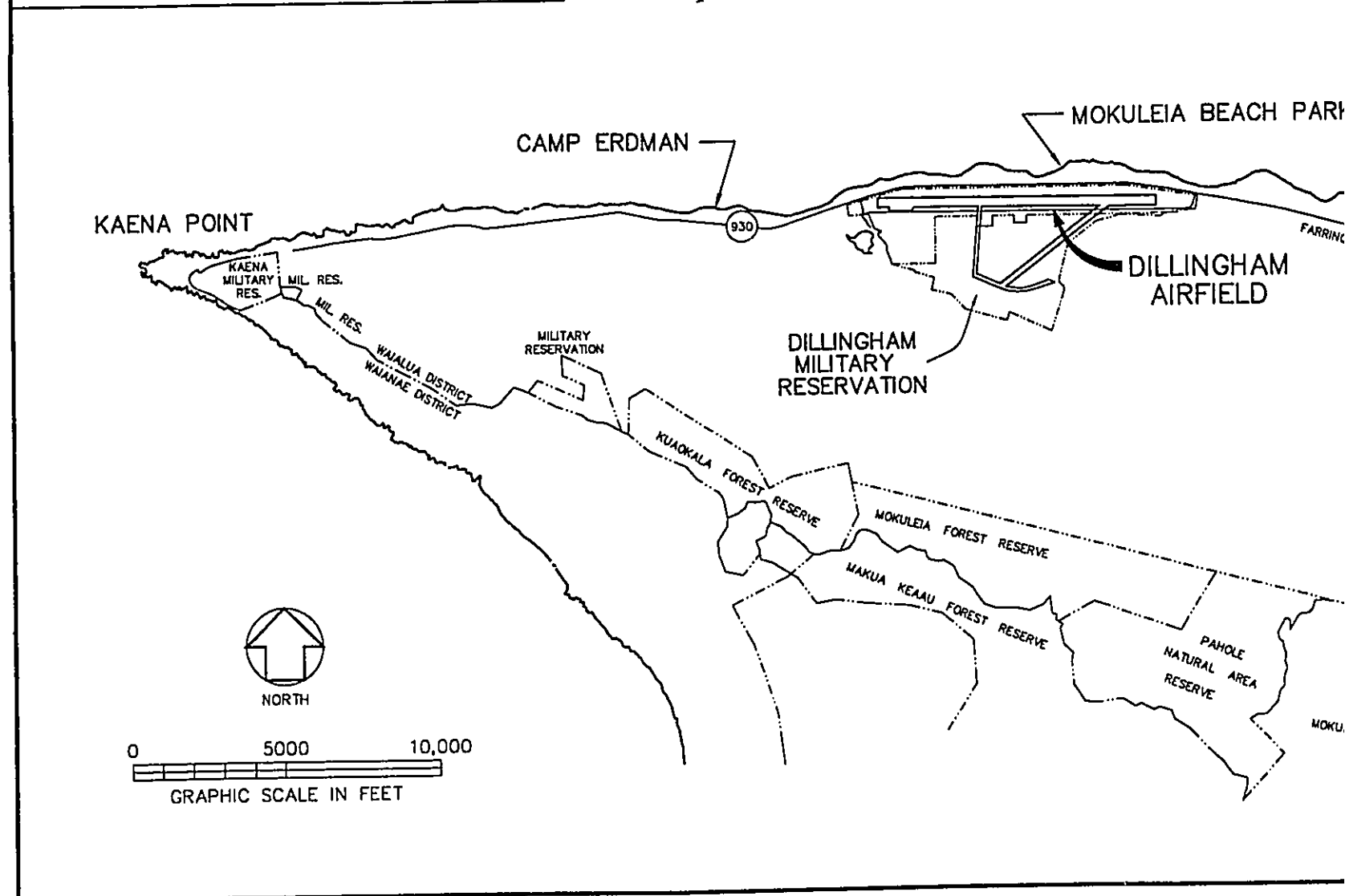
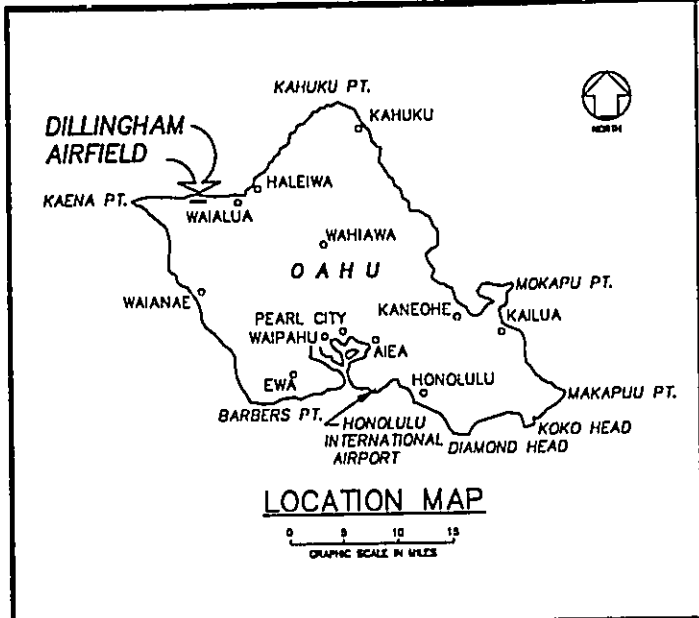
It should be noted that the forecasts were developed in 1990, and that present aircraft operations at the Airport are below the forecast. Although the forecast are liberal, if general aviation does have a resurgence, these forecast levels may occur with or without the proposed improvements. Therefore, at this point in time, it is anticipated that the future level of aircraft operations will remain similar to the current aviation demand of approximately 100,000 aircraft operations per year.

TABLE 1
AVIATION DEMAND FORECASTS FOR DILLINGHAM AIRFIELD 1989-2010

TYPE OF OPERATION	ACTUAL ¹ 1989	ACTUAL ¹ 1998	FORECASTS			
			1995	2000	2005	2010
Aircraft Operations ² (SASP)						
Civil	111,286	64,268	123,000	135,000	142,000	155,000
Military	<u>5,850</u>	<u>3,675</u>	<u>6,000</u>	<u>6,000</u>	<u>6,000</u>	<u>6,000</u>
Total	<u>117,136</u>	<u>67,943</u>	<u>129,000</u>	<u>141,000</u>	<u>148,000</u>	<u>161,000</u>
Based Aircraft (Total Gliders and Powered)	44	NA	48	52	56	60

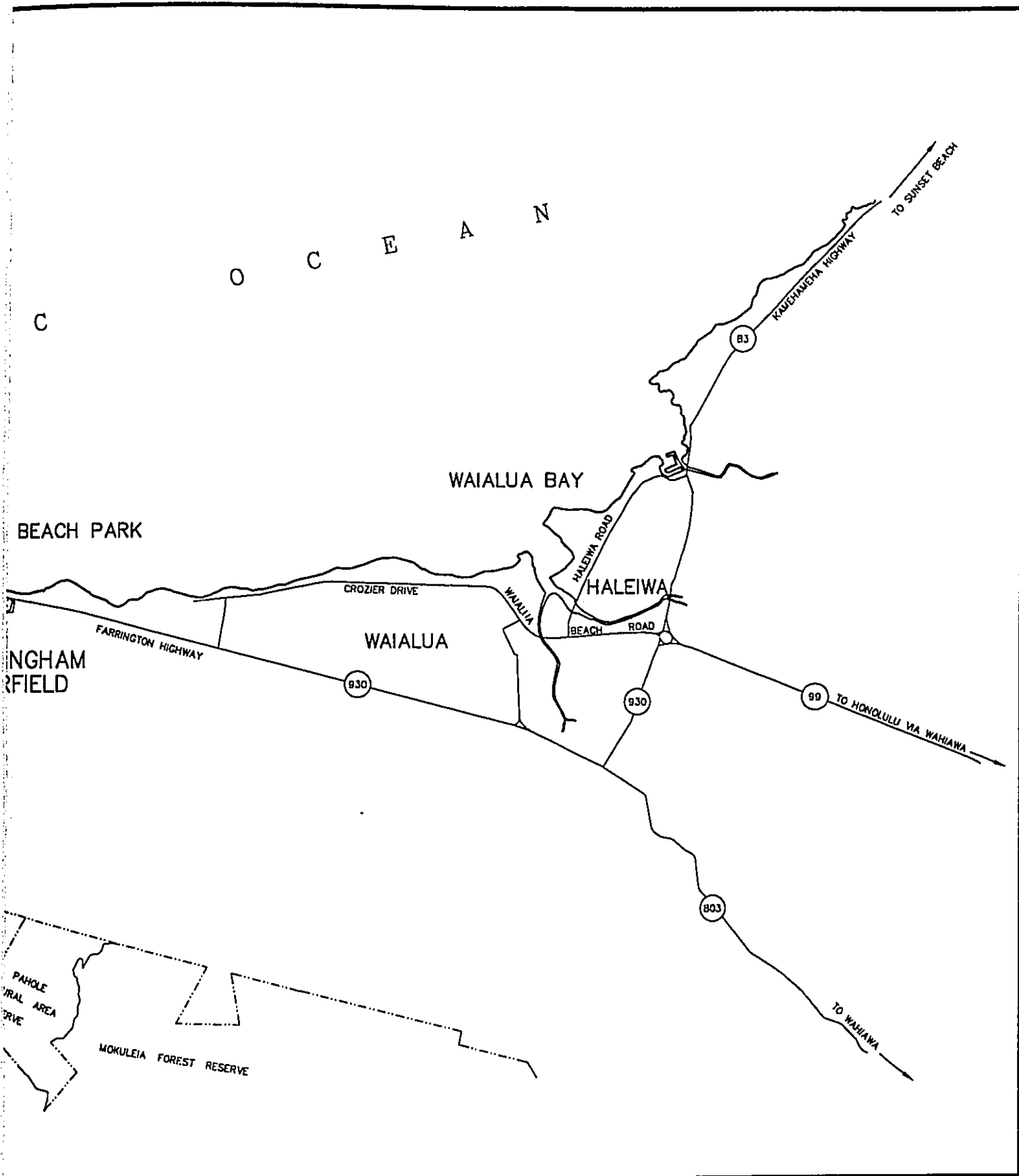
¹ Data from State of Hawaii, Department of Transportation


² Daylight operations only



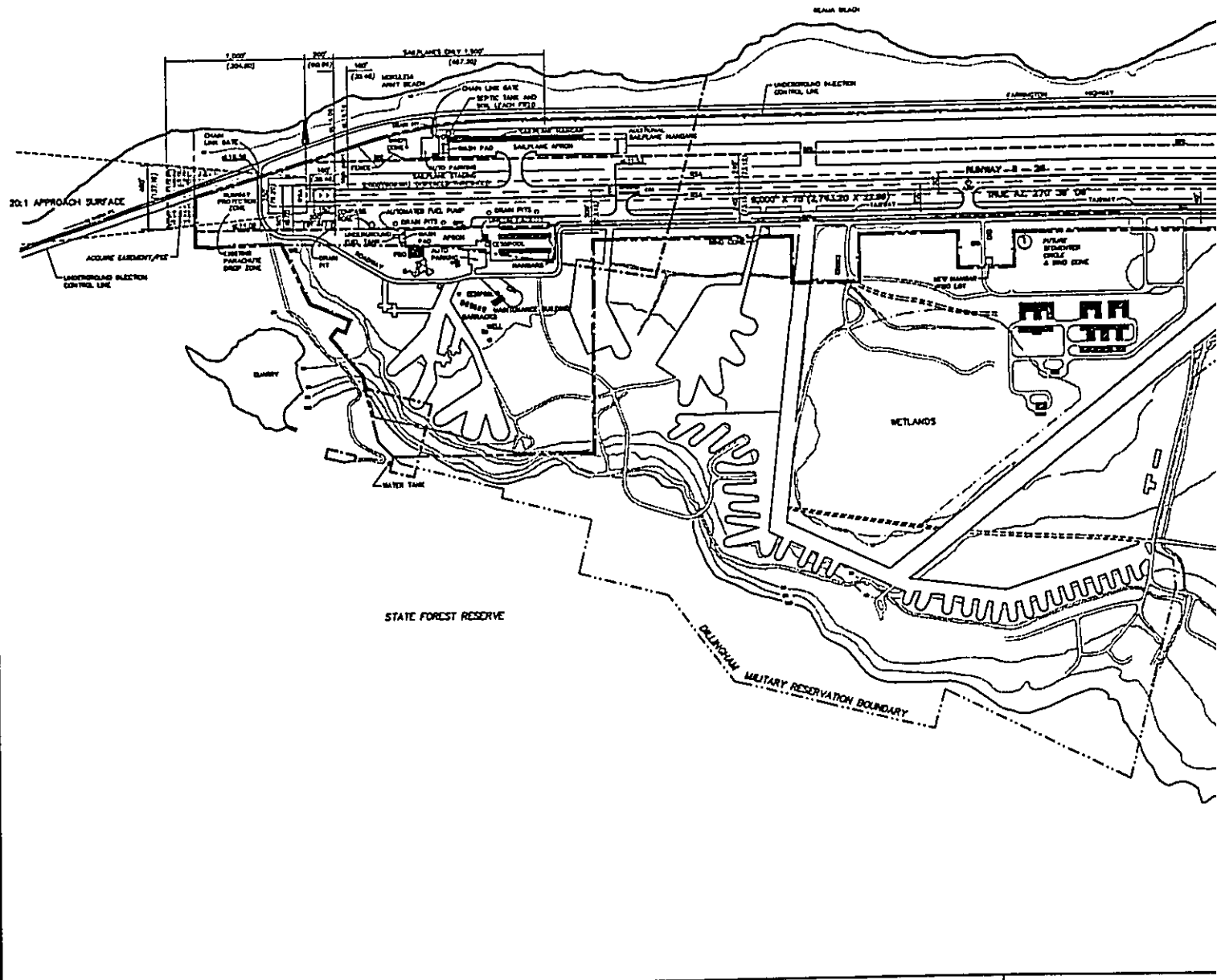
AIRPORTS DIVISION
 DEPARTMENT OF TRANSPORTATION
 STATE OF HAWAII

**DILLINGHAM AIRFIELD MASTER PLAN AND
 NOISE COMPATIBILITY PROGRAM**



<p>AND M</p>	 <p>Edward K. Noda and Associates, Inc.</p>	<p>AIRPORT VICINITY MAP</p>	<p>FIGURE 1 DECEMBER, 1999</p>
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p a c i f i c



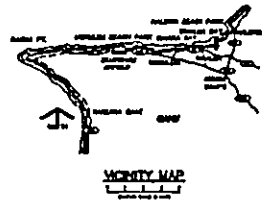
WIND ROSE	LEGEND	AIRPORT DATA			RUNWAY DATA
		EXTREME	LATITUDE	ULTIMATE	
<p>SOURCE DALMAN AIRFIELD JUNE, 1942 - DECEMBER, 1944</p> <p>WIND CONTOUR ONE FOR 10 MPH CROSSWIND</p> <p>GRAPHIC SCALE 1" = 10'</p>	<p>AIRPORT BOUNDARY</p> <p>BASELINE RESTRICTION LINE (BRL)</p> <p>BARRIERS</p> <p>BARRIERS TO BE REMOVED</p> <p>APPROACH SURFACE</p> <p>FENCE LINE</p> <p>OROAD CENTERLINE</p> <p>RAILWAY, TUNNEL, APRON</p> <p>PAVED ROADSWAYS</p> <p>UNPAVED ROADSWAYS</p> <p>RAILWAY SAFETY AREA</p> <p>BLAST PAD</p> <p>STATE OF NEVADA PROPERTY BOUNDARY</p> <p>ACREAGE</p>	<p>EXTREME</p> <p>LA TITUDE</p> <p>EXTREME</p> <p>LA TITUDE</p> <p>EXTREME</p> <p>LA TITUDE</p> <p>EXTREME</p> <p>LA TITUDE</p> <p>EXTREME</p> <p>LA TITUDE</p> <p>EXTREME</p> <p>LA TITUDE</p> <p>EXTREME</p> <p>LA TITUDE</p> <p>EXTREME</p> <p>LA TITUDE</p>	<p>AIRPORT REFERENCE POINT (ARP) COORDINATES</p> <p>NORMAL BAR TEMPERATURE DISTRICT NORTH</p> <p>AIRPORT ELEVATION (MSL)</p> <p>AIRPORT & TERMINAL NAVIGATIONAL AIDS</p> <p>AIRPORT TYPE</p> <p>IS WIND CONTOUR</p> <p>AIRPORT REFERENCE CODE</p>	<p>EXTREME</p> <p>LA TITUDE</p> <p>EXTREME</p> <p>LA TITUDE</p> <p>EXTREME</p> <p>LA TITUDE</p> <p>EXTREME</p> <p>LA TITUDE</p> <p>EXTREME</p> <p>LA TITUDE</p> <p>EXTREME</p> <p>LA TITUDE</p> <p>EXTREME</p> <p>LA TITUDE</p>	<p>RUNWAY IDENTIFICATION</p> <p>RUNWAY EXPOSURE LATITUDE (DMS S)</p> <p>LONGITUDE (DMS S)</p> <p>REPLACED BRIDGE LATITUDE (DMS S)</p> <p>LONGITUDE (DMS S)</p> <p>APPROACH SURFACE</p> <p>APPROACH LIGHTING AIDS</p> <p>RAILWAY SAFETY AREA (WITH 5' LIGHTS BEYOND RAILWAY OR PARALLEL AND VERTICAL AIDS)</p> <p>RUNWAY LENGTH AND WIDTH</p> <p>EFFECTIVE BRANCH (°)</p> <p>IS WIND CONTOUR (TYPICAL S)</p> <p>INSTANTANEOUS RAINFALL</p> <p>RUNWAY LIGHTING</p> <p>RUNWAY MARKING</p> <p>PAYMENT EXTENT</p> <p>SECTOR GROUP</p> <p>BARREL ELEVATION (MSL)</p> <p>RUNWAY AND PAVEMENT CATEGORY</p>



Air Force Civil Engineer Corps

DSGN. DRWN. CHKD. APPD.

KEY PLAN / NOTES :



1 JUNE 29, 1966 EXTENDED TAIWAY, CDED LAND

NO. DATE REVISIONS

PROJECT TITLE :

DILLINGHAM AIRFIELD
AIRPORT LAYOUT PLAN

PROJECT NO. :

SHEET TITLE :

AIRFIELD PLAN

DATE :

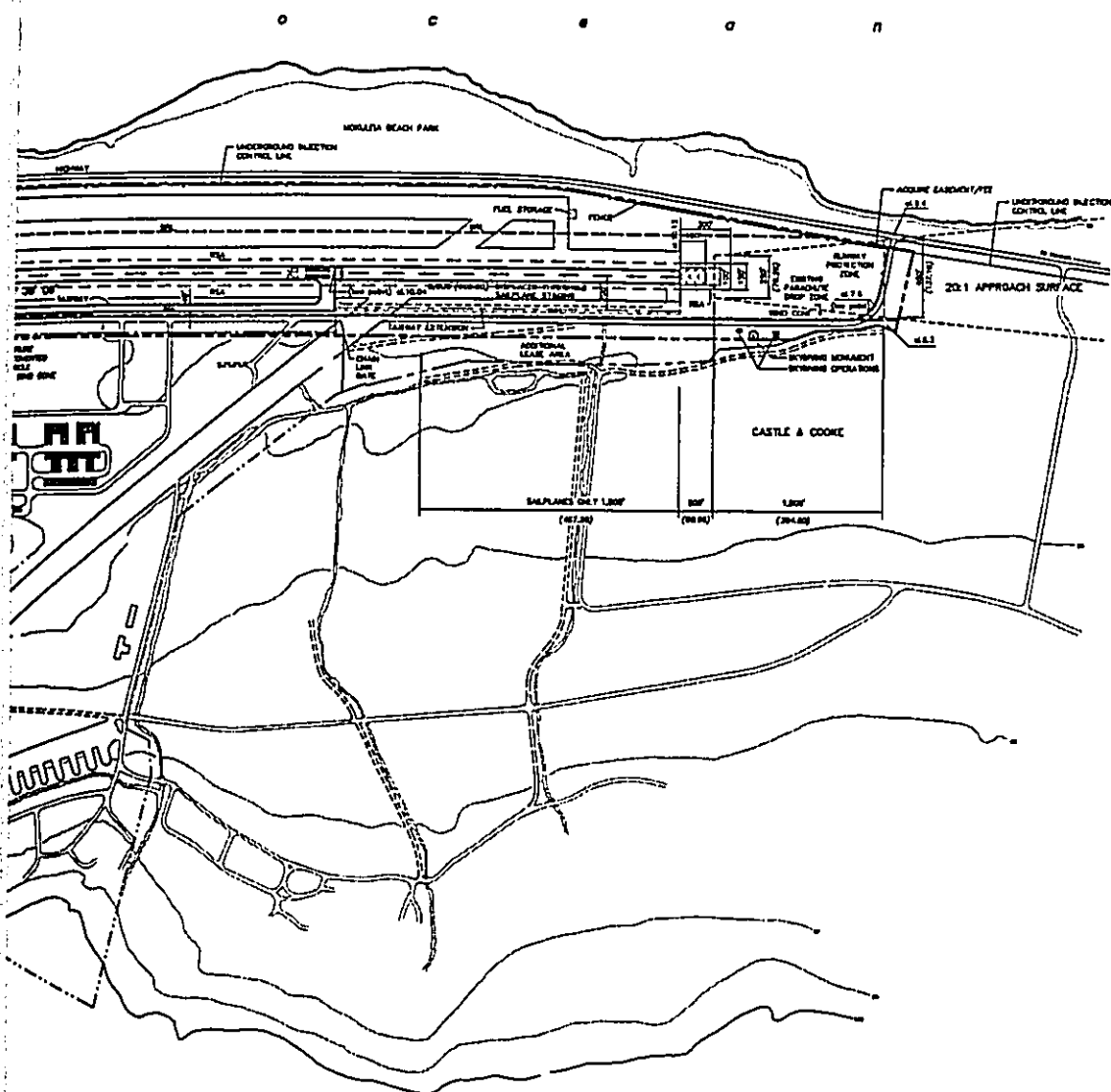
JULY 7, 1966

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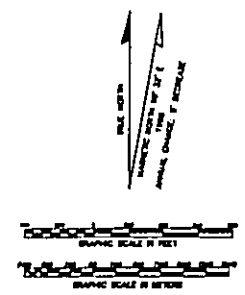
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2

OF 3 SHEETS

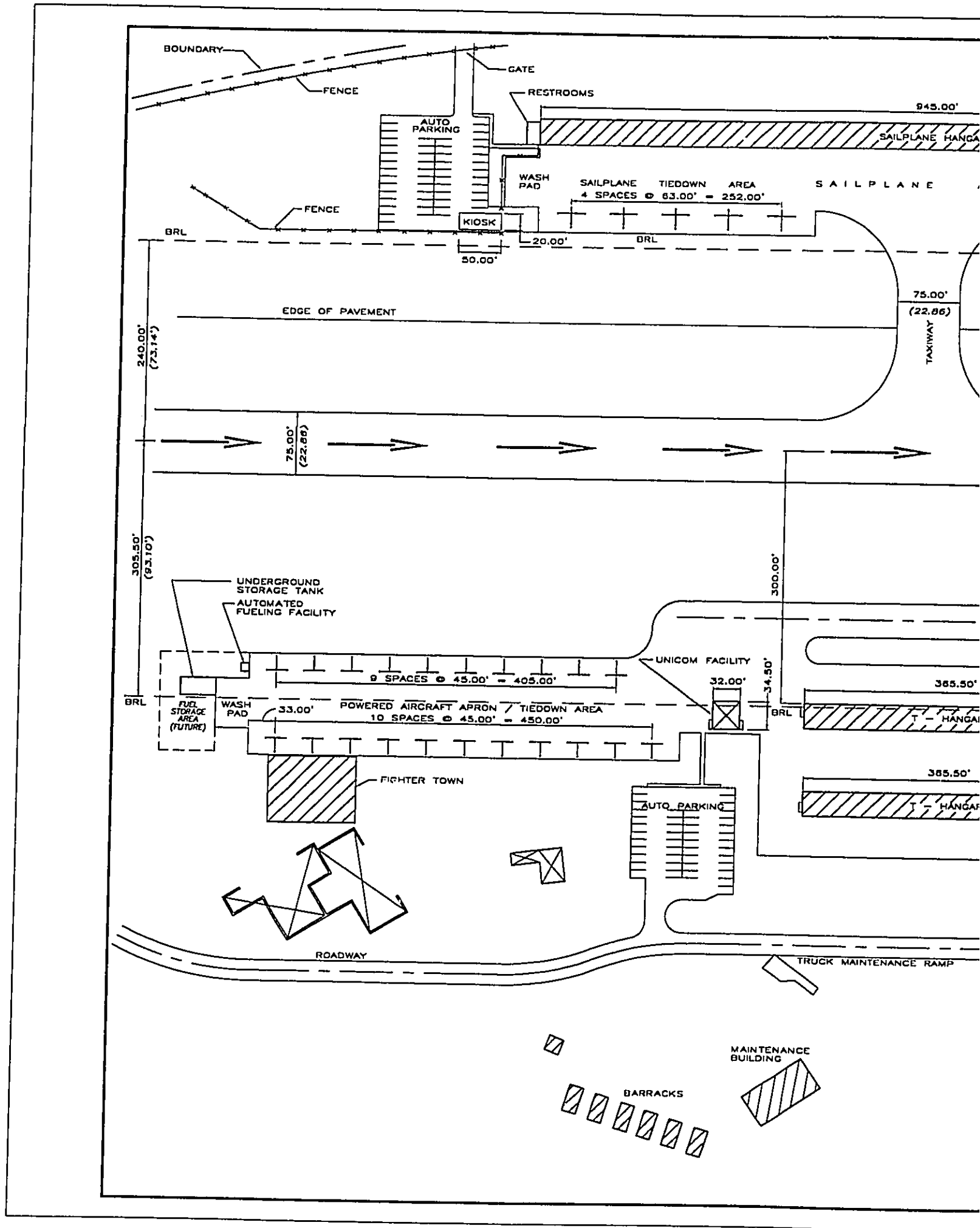


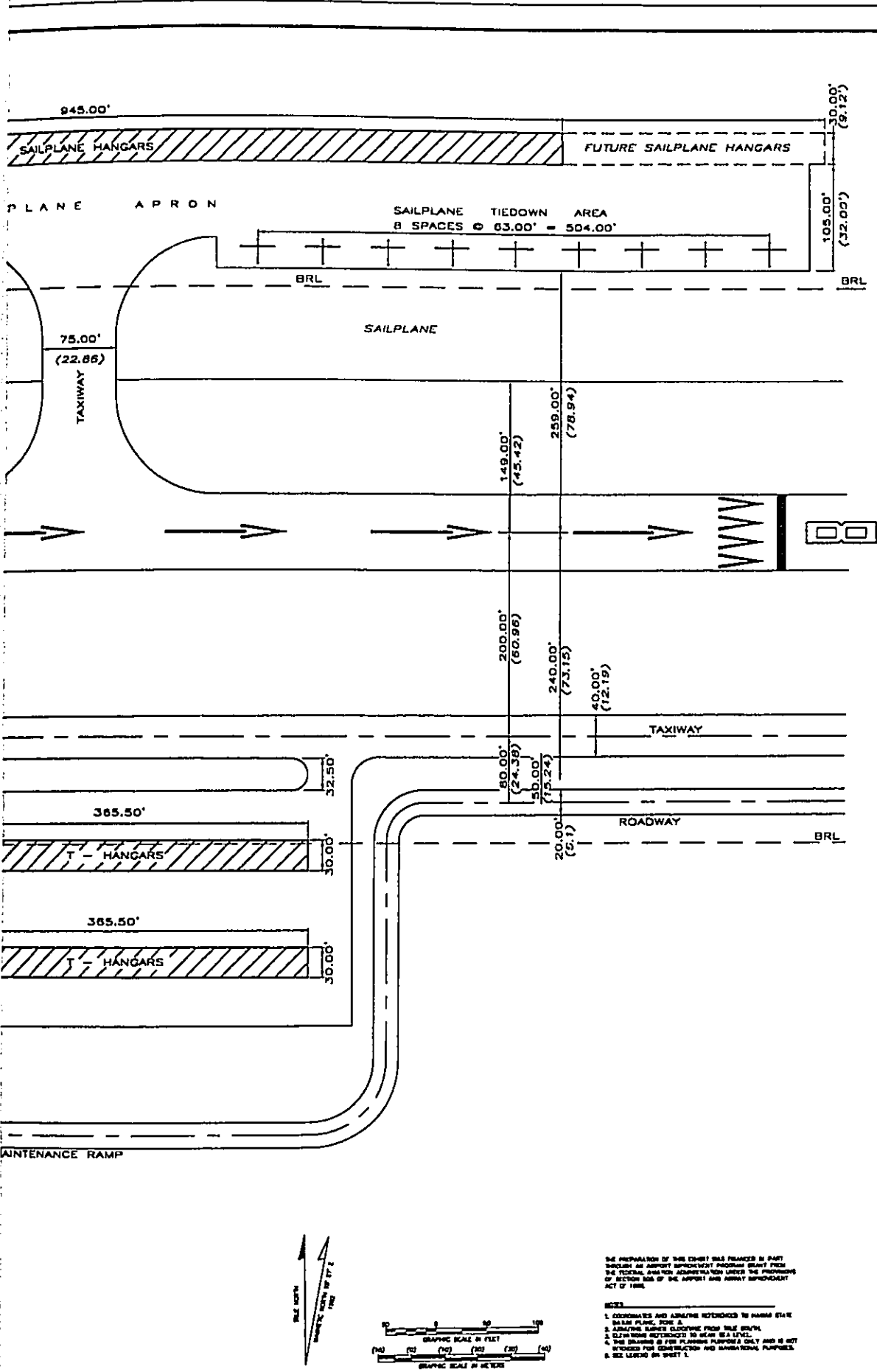
DESCRIPTION	DIMENSIONS			
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CONCRETE LA TIRAGE (DWS 8.5)	212'x46.5'	212'x46.5'	SAME	SAME
CONCRETE LA TIRAGE (DWS 8.5)	195'x37.5'	195'x37.5'	SAME	SAME
CONCRETE LA TIRAGE (DWS 8.5)	212'x46.5'	212'x46.5'	SAME	SAME
CONCRETE LA TIRAGE (DWS 8.5)	195'x37.5'	195'x37.5'	SAME	SAME
SURFACE	20 : 1	20 : 1	SAME	SAME
GRAVEL AND SAND	NONE	NONE	NONE	NONE
GRAVEL AND SAND (UNDER 2' LAYER)	150' x 200'	150' x 200'	SAME	SAME
GRAVEL AND SAND (UNDER 2' LAYER)	NONE	NONE	NONE	NONE
GRAVEL AND SAND (UNDER 2' LAYER)	0.007 x 70'		SAME	
GRAVEL (10)	20		SAME	
GRAVEL (15)	53		SAME	
GRAVEL (20)	NONE		NONE	
GRAVEL (25)	NONE		NONE	
GRAVEL (30)	NONE		NONE	
GRAVEL (35)	NONE		NONE	
GRAVEL (40)	NONE		NONE	
GRAVEL (45)	NONE		NONE	
GRAVEL (50)	NONE		NONE	
GRAVEL (55)	NONE		NONE	
GRAVEL (60)	NONE		NONE	
GRAVEL (65)	NONE		NONE	
GRAVEL (70)	NONE		NONE	
GRAVEL (75)	NONE		NONE	
GRAVEL (80)	NONE		NONE	
GRAVEL (85)	NONE		NONE	
GRAVEL (90)	NONE		NONE	
GRAVEL (95)	NONE		NONE	
GRAVEL (100)	NONE		NONE	



THE PREPARATION OF THIS DRAWING WAS FINANCED IN PART BY THE FEDERAL AVIATION ADMINISTRATION UNDER THE PROVISIONS OF SECTION 106 OF THE AIRPORT AND AIRWAY IMPROVEMENT ACT OF 1962.

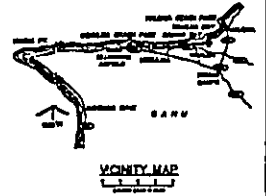
1. COORDINATES AND ELEVATIONS REFERENCED TO MEAN SEA LEVEL.
2. ELEVATIONS REFERENCED TO MEAN SEA LEVEL IN FEET.
3. DIMENSIONS REFERENCED TO MEAN SEA LEVEL IN FEET.
4. THIS DRAWING IS FOR PLANNING PURPOSES ONLY AND IS NOT INTENDED FOR CONSTRUCTION AND NAVIGATIONAL PURPOSES.





DSGN DRWN CHKD APPD

KEY PLAN / NOTES :



NO.	DATE	REVISIONS

DIRECTOR, DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII

PROJECT TITLE :
DILLINGHAM AIRFIELD
AIRPORT LAYOUT
PLAN

PROJECT NO. :

SHEET TITLE :

TERMINAL AREA
LAYOUT PLAN

DATE : JANUARY, 2000	FIGURE 3 JANUARY, 2000
DWG. NO. :	

THE PREPARATION OF THIS CONCEPT WAS FINANCED IN PART THROUGH AN AIRPORT IMPROVEMENT PROGRAM GRANT FROM THE FEDERAL AVIATION ADMINISTRATION UNDER THE PROVISIONS OF SECTION 405 OF THE AIRPORT AND AIRWAY REVENUE ACT OF 1982.

- NOTES
1. COORDINATES AND AIRLINE REFERENCES TO HAWAII STATE BOUNDARY, ZONE A.
 2. AIRLINE SURVEY ELEVATIONS FROM MEAN SEA LEVEL.
 3. ELEVATIONS REFERENCED TO MEAN SEA LEVEL.
 4. THIS DRAWING IS FOR PLANNING PURPOSES ONLY AND IS NOT INTENDED FOR CONSTRUCTION AND NAVIGATION PURPOSES.
 5. SEE LEGEND ON SHEET 1.

SECTION 2.0 ALTERNATIVES

The need for a separate general aviation (GA) airport on Oahu was recognized as early as 1962. Since then, numerous studies of the need and potential sites for such a facility have been completed. The most comprehensive of these studies was the Oahu General Aviation Master Plan Study (OGAMPS) (Kentron Hawaii, Ltd., 1978). That study considered eighteen possible sites and joint use arrangements for their potential as a reliever airport. Following completion of the 1978 study, HDOT-AIR studied several of the possible alternative general aviation airfield sites identified, and eliminated most of them due to costs, operational constraints or public opposition. In 1993, the Dillingham Airfield Master Plan (Edward K. Noda and Associates, Inc.) was prepared. This Master Plan identified a phased improvement plan that would result in Dillingham Airfield serving as the Oahu general aviation reliever airfield. Subsequent to the 1993 Master Plan, Barbers Point Naval Air Station (BPNAS) became available and, presently, the HDOT-AIR has designated Kalaeloa Airport, the former BPNAS, as the general aviation reliever airfield for Oahu. Because of this, the 1993 Master Plan alternative sites and improvement actions are no longer applicable to the presently proposed action and are not being considered at this time. The only applicable alternative at this time, other than the Proposed Action, is the No-Action (Non-Development) alternative. *Note: BPNAS was declared excess military property by the Pentagon's Base Realignment and Closure Commission in 1995. The Hawaii Reuse Commission determined that various compatible State and City and County of Honolulu (C&C) uses could be made of the former base and those functions are currently in different stages of implementation, including use of Kalaeloa as a GA reliever airfield. Kalaeloa General Aviation Reliever Airfield was opened in 1999.*

2.1 NO-ACTION ALTERNATIVE

This alternative assumes that no actions will be taken to improve the existing facilities at Dillingham Airfield, and that the Airfield will continue to operate as a civil general aviation airfield for the foreseeable future. The forecast growth of aviation demand, as shown on Table 1, is expected to occur with or without the Proposed Action.

The prevailing winds at Dillingham and the airfield's proximity to the ocean combine to cause a corrosive atmosphere for air frames and engines. The hangars allow aircraft owners some protection from this corrosive atmosphere which reduces operating and maintenance costs. Other existing deficiencies at the Airfield would remain, such as HDOT-AIR's lack of control of the land under the runway protection zones, aircraft taxiing on unpaved surfaces, lack of a centralized fuel area on the east side of the airfield, and poor drainage and utility service to portions of the Airfield.

2.2 PROPOSED ACTION

The Proposed Action (Preferred Alternative) is shown on Figure 4 and recommends improvements for the Airfield to meet safety, operational, and capacity needs for civil general

aviation aircraft of 12,500 pounds or less gross weight. The majority of the improvements are for operational, safety and maintenance improvements. These improvements include the:

- acquisition of approximately 3.2 acres of additional adjoining lands to meet FAA requirements for runway protection areas;
- 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;
- repave the runway and taxiway;
- provide a fuel storage area on the Runway 8 end (Kaena Point end), encompassing the existing underground storage tank for jet-fuel; and
- extend the existing parallel taxiway, 2,000 feet, to the end of Runway 26.

Included are the extension of the existing parallel taxiway to provide a hard surface on which aircraft can taxi to the parachute staging areas. Currently, aircraft taxiing to the parachute staging areas use the unpaved areas or the runway itself. This condition is a serious safety and airfield operational concern. Aircraft taxiing on the unpaved area scatter debris that may damage aircraft, especially propellers, or injure bystanders.

In addition, planned improvements have been designed to meet existing and forecast aviation demand (Table 1). Dillingham Airfield has adequate runway capacity to accommodate the anticipated growth in aircraft operations within the planning period and beyond. However, hangars for based aircraft need to be provided and the infrastructure (utilities) needs to be upgraded to remedy existing deficiencies. Hangars are required to partially protect aircraft from the corrosive conditions at the Airfield caused by the naturally high humidity and salt-laden air. The recently proposed improvements include:

- provision of a lease lot and construction of additional hangar space for fixed-wing aircraft at the mid-field location (construction of the hangars will be by the tenants);
- construction of additional sailplane hangars and associated aircraft aprons by the HDOT-AIR;
- upgrading and construction of various infrastructure (utility) improvements, such as future septic tanks and leach field, and additional capacity, as needed, for electrical and communications; and
- improving drainage to remedy existing flooding problems.

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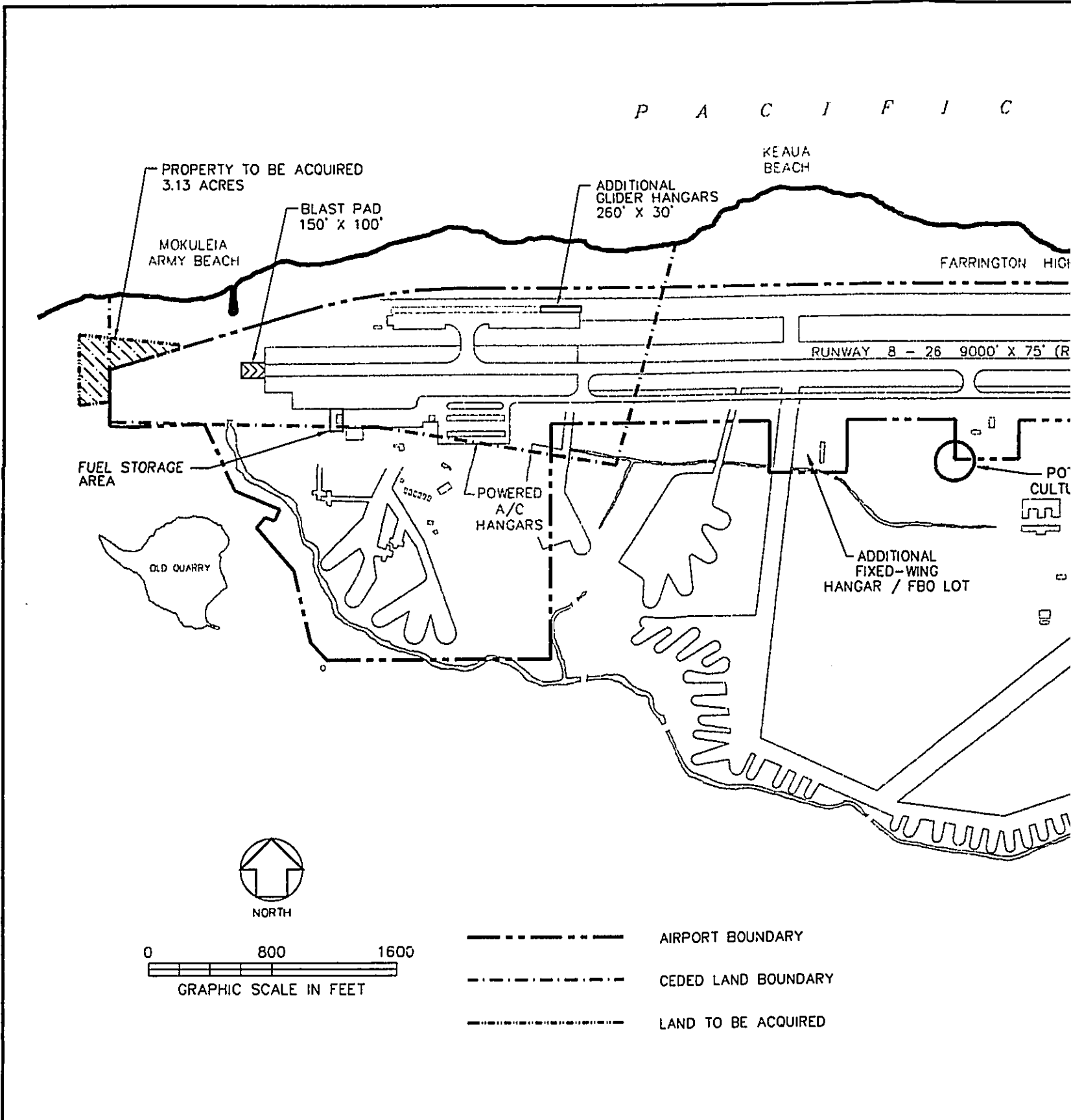
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- improving drainage to remedy existing flooding problems.

P A C I F I C



PROPERTY TO BE ACQUIRED
3.13 ACRES

MOKULEIA
ARMY BEACH

BLAST PAD
150' X 100'

ADDITIONAL
GLIDER HANGARS
260' X 30'

KEAUA
BEACH

FARRINGTON HIGH

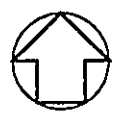
RUNWAY 8 - 26 9000' X 75' (R)

FUEL STORAGE
AREA

OLD QUARRY

POWERED
A/C
HANGARS

ADDITIONAL
FIXED-WING
HANGAR / FBO LOT



NORTH

0 800 1600

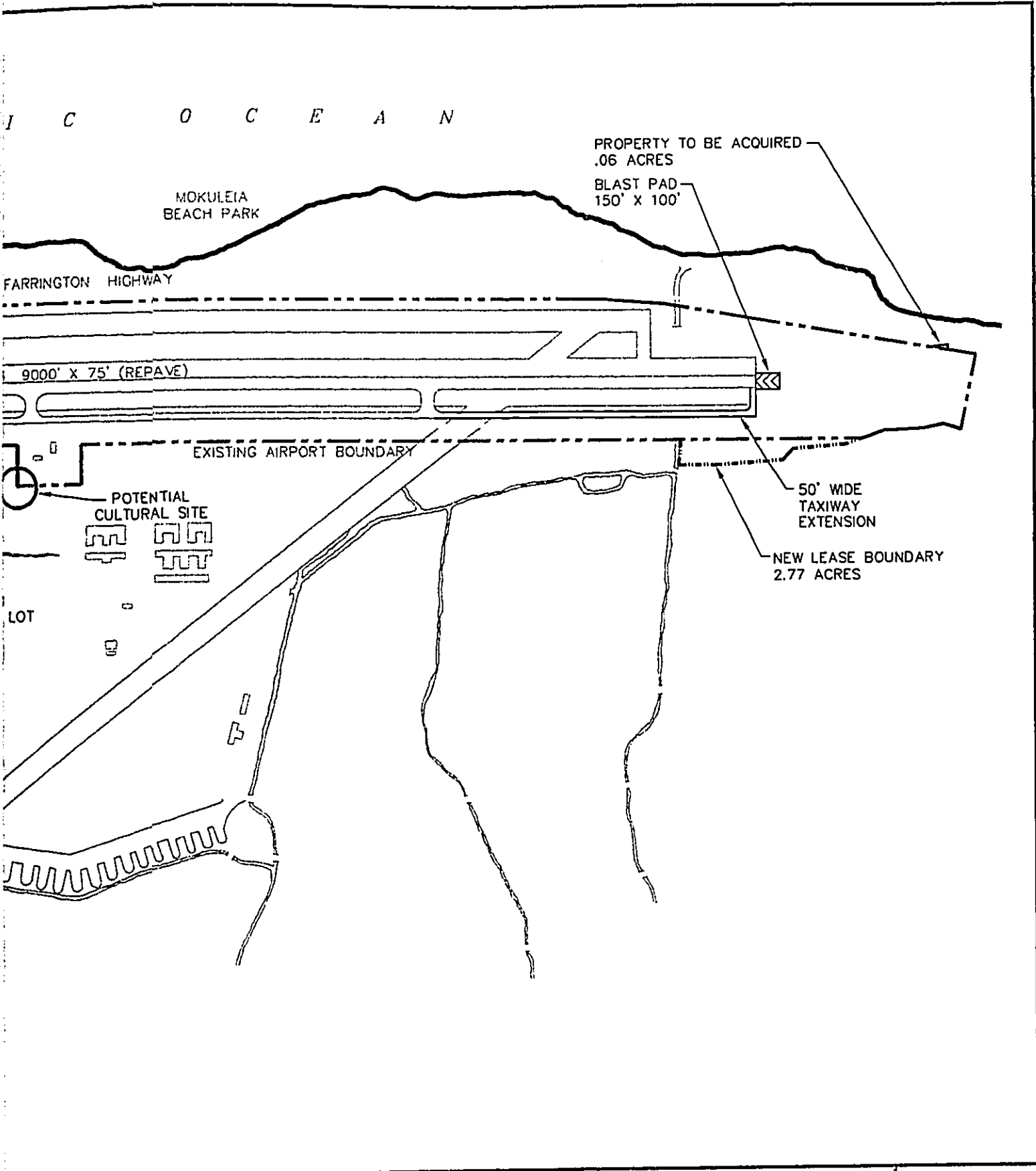
GRAPHIC SCALE IN FEET


- AIRPORT BOUNDARY
- - - CEDED LAND BOUNDARY
- - - - - LAND TO BE ACQUIRED



AIRPORTS DIVISION
DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII

**DILLINGHAM AIRFIELD MASTER PLAN AND
NOISE COMPATIBILITY PROGRAM**



<p>N AND AM</p>	 <p>Edward K. Noda and Associates, Inc.</p>	<p>PROPOSED IMPROVEMENTS</p>	<p>FIGURE 4 JULY, 2000</p>
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2.3 PROJECT COST AND SCHEDULE

The costs and duration of the three phases of development are summarized in Table 2. Costs are in mid-1991 dollars. The proposed improvements would be made over the next 5 to 10 year period, depending of the availability of funding.

TABLE 2
DILLINGHAM AIRFIELD IMPROVEMENT COSTS
[\$ Millions (1998)]

IMPROVEMENT	COST
Repave Runways and Taxiways	1.21
Additional Sailplane Hangars	1.49
Provide Additional Fixed Wing Hangar Space	0.21
Utilities	0.58
Land Acquisition	<u>0.02</u>
Totals:	<u>3.51</u>

SECTION 3.0
SUMMARY DESCRIPTION OF THE
AFFECTED ENVIRONMENT, POTENTIAL ENVIRONMENTAL
IMPACTS AND MITIGATION MEASURES

3.1 EXISTING SITE AND SURROUNDING AREA

EXISTING FACILITIES AND ON-SITE LAND USE

The majority of Dillingham Airfield's land is classified as two land use categories: 1) the Aircraft Operating Area (AOA), and 2) the Terminal Area (Table 3). The AOA includes the area within the Obstacle Free Zone and the Runway Protection Zones at the ends of the runway (see Figure 2). 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. The remaining land uses on the airfield include the UNICOM operator's residence, the six overnight quarters, and the parachutists' club houses.

TABLE 3
EXISTING LAND USE AT DILLINGHAM AIRFIELD

LAND USE CATEGORY	QUANTITY (ACRES)
Aircraft Operating Area ¹	166.2
Terminal Area ²	48.7
Aviation Commercial Area ³	54.4
Aviation Reserve/Buffer Area ⁴	<u>2.7</u>
Total	<u>272.0</u>

¹ Area set aside for the operation of aircraft, including areas reserved for protection from obstructions or facilities.

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

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

⁴ 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.

The terminal area is located on the west end (Runway 8) of Dillingham Airfield and was developed by HDOT-AIR (Figure 3). There are no passenger terminal facilities. The sailplane area is located on the north side of the runway where a kiosk (20 ft. by 50 ft.) is located for sailplane ride sales. A paved automobile parking area, the sailplane hangar and tiedown area are located to the north and east of the kiosk. The hangar structure is a precast concrete rectangular building 945 feet by 31 feet. 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 is 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. The UNICOM Tower is a three-story wooden structure that 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 is 32 feet by 34 feet.

Two rows of hangars (365 feet by 30 feet) are located to the east of the UNICOM Tower and accommodate a total of 20 powered aircraft. The hangars are constructed of concrete and incorporate restroom facilities. As with the sailplane facilities, these hangars have no doors or dividers between parking spaces. Some tenants have installed doors or have made other improvements.

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.

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 that houses approximately five aircraft in makeshift hangars.

Several 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.

There is a single runway 100 feet wide and 9,000 feet long, oriented approximately 080/260 degrees magnetic. The average elevation is 15 feet above mean sea level (MSL). A 5,000 by 60-foot runway for light-powered aircraft has been painted in the center of the main runway. Glider operating areas are designated at either end of the main runway.

AIRCRAFT OPERATIONS

Dillingham Airfield is located on land owned by the federal government and administered by the U.S. Department of the Army. The airfield is a general aviation airport, accommodating civilian and military aircraft operations through a joint-use agreement, and is open daily to civil aircraft. Only daylight visual flight rule (VFR) operations (requiring good weather and visibility) are conducted by civil aircraft. Dillingham is also the primary facility in the State that regularly

accommodates glider and parachute operations. There are 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.

The HDOT-AIR has a 25-year lease with the U.S. Army which was signed in 1983. The terms of the lease limit civil operations to the daytime hours (sunrise to sunset), and reserves evening and nighttime hours for military operations. Civil aircraft operations are limited to general aviation aircraft with gross weights less than 12,500 pounds and approach speeds less than 121 knots. 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; and
- No. 3 - Military ground maneuvers.

Dillingham Military Reservation and the airfield are currently used by the military for tactical training. Training involves small troop movements, some heavy equipment use (principally trucks) and a moderate amount of helicopter activity. These operations are most intense during nighttime hours, and will occasionally extend beyond midnight.

Military helicopters and light fixed-wing aircraft also use the airfield during daylight hours, conforming generally to established traffic patterns.

Total aircraft operations at the airfield have declined over 50 percent from 139,764 in 1975 to a low of 67,943 in 1998. Operations by powered aircraft declined from 91,453 in 1975 to 47,025 in 1998, and gliders operations have declined from 31,650 in 1975 to 17,243 in 1998. The largest decline in daytime airfield usage was the military operations which peaked at 27,162 in 1978, and declined to 3,675 in 1998.

SURROUNDING LAND USE

There are a few 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 Waiialua town is approximately two miles further east.

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

At present, the land use to the north and west of the Airport is designated by the C&C 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 the 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 lands to the south of the airport are owned by Waialua Sugar Company and Mokuleia Land Co. This land is zoned by the C&C for agricultural use and public facilities. Informal meetings with the Mokuleia Land Co., however, indicated 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. At the time of the application, these changes were rejected by the City and County of Honolulu.

REGULATORY LAND USE STATUS

The State Land Use District boundaries are shown on Figure 5. Dillingham Airfield is almost entirely in the State Agricultural District. A small portion of the property at the extreme western edge is in the Conservation District. The mauka lands are classified as Agricultural. The makai lands are a mix of Agricultural, Conservation and, at the eastern end, Urban.

C&C zoning and the Special Management Area (SMA) are shown on Figure 6. The airfield, Dillingham Military Reservation (DMR) and lands mauka of these facilities are zoned for agriculture. Lands to the west and along the shoreline to the north are zoned for preservation, although the Mokuleia Army Beach is federally-owned, and not subject to other County zoning. The Urban area to the east of the airfield is zoned residential.

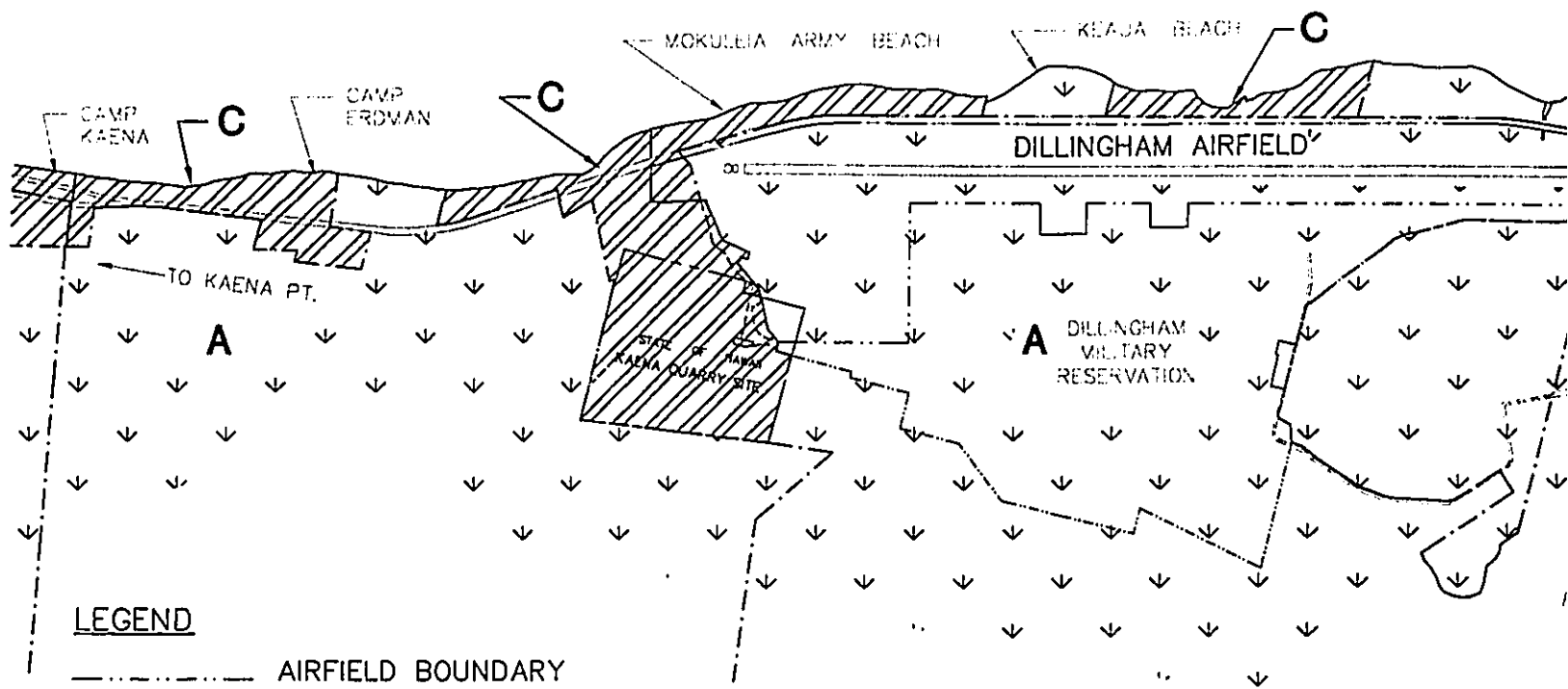
The County Development Plan map for the area, shown on Figure 7, designates the airfield and military reservation as public facilities. Mauka lands retain their agricultural designations, but the coastal lands are designated as preservation or are slated for public facility or park use.

LAND TO BE ACQUIRED

The acquisition of additional land for airport use is necessary to allow the HDOT-AIR to control and protect the airspace of Dillingham Airfield, including the runway protection zones (formerly called clear zones) at both ends of runway 8-26 and to insure these zones are within the airport boundary. If land in the runway protection zones cannot be acquired in fee simple title, then aviation easements should be obtained.

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 transferred to the State of Hawaii. The remaining 522.4 acres of DMR is fee simple land, including approximately 55 acres that are classified as "wetlands" by the U.S. Army Corps of Engineers.

It is anticipated that it will be necessary to change the State land use classification from "Agriculture" to "Urban."



LEGEND

- AIRFIELD BOUNDARY
- MILITARY RESERVATION BOUNDARY
- STATE LAND USE BOUNDARY
- PAVED ROAD
- UNPAVED ROAD

LAND USE

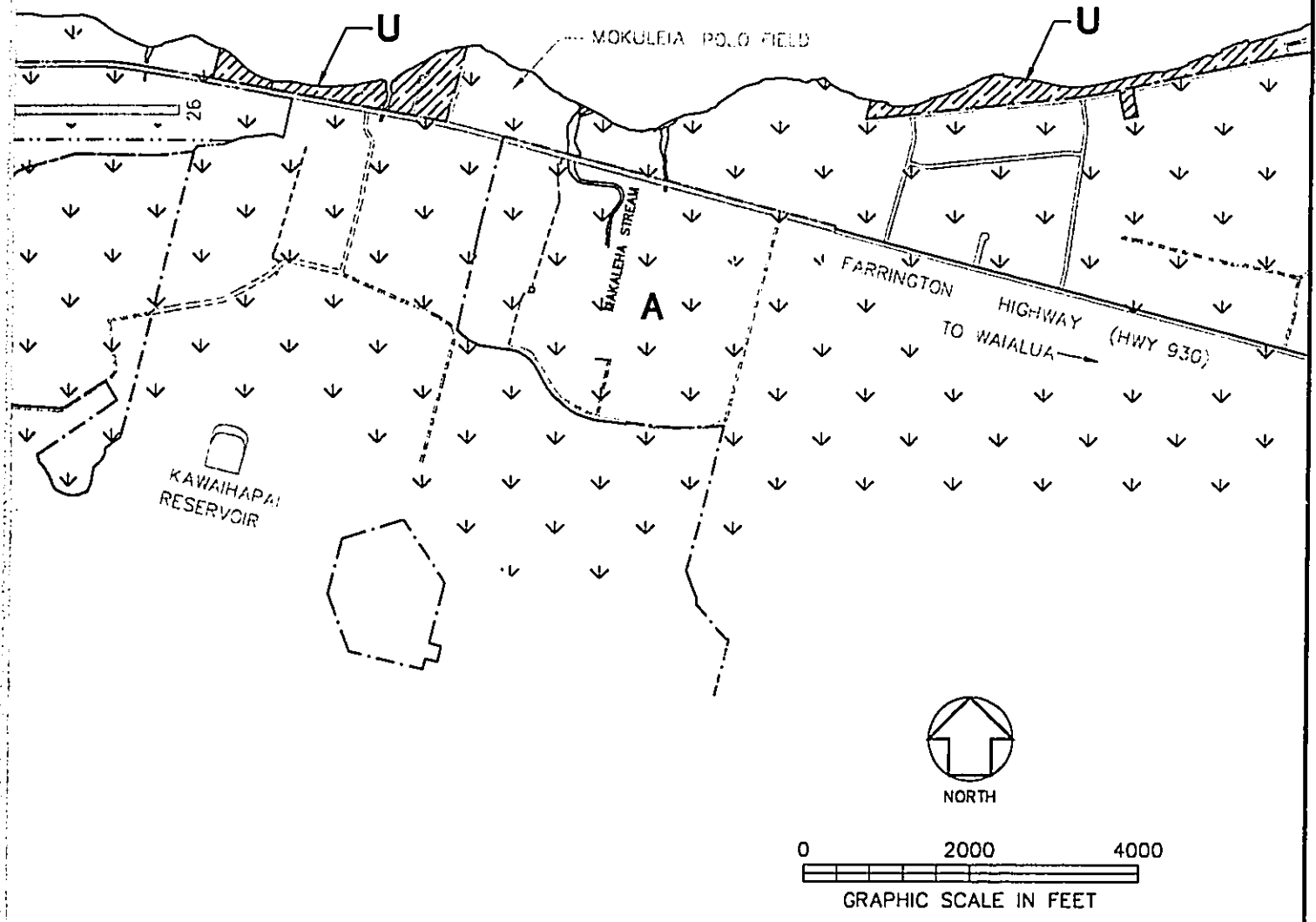
- U** = URBAN
- A** = AGRICULTURAL
- C** = CONSERVATION



AIRPORTS DIVISION
DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII

**DILLINGHAM AIRFIELD MASTER PLAN AND
NOISE COMPATIBILITY PROGRAM**

O C E A N



AND

 Edward K. Noda
and Associates, Inc.

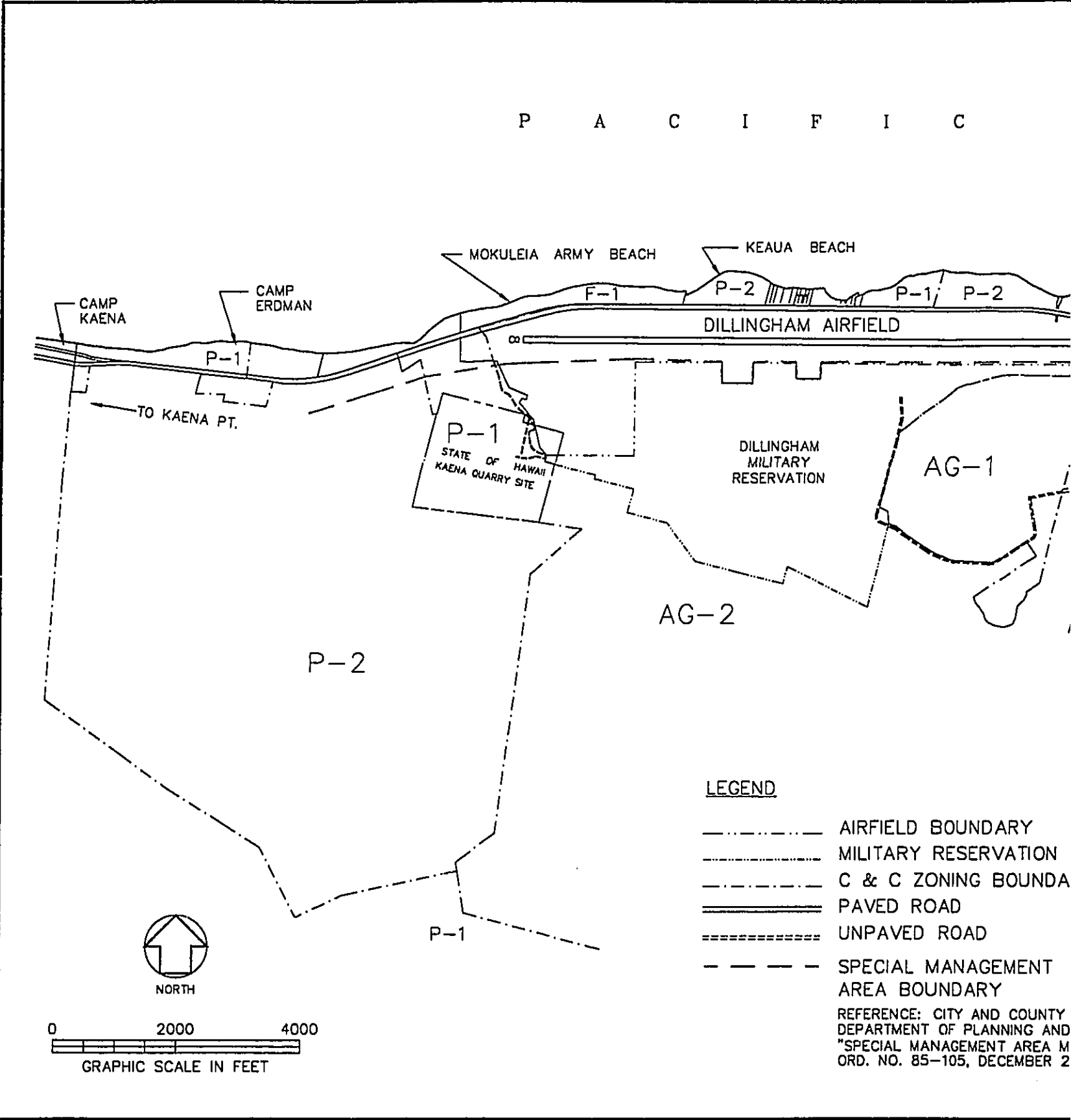
STATE OF HAWAII LAND USE
DESIGNATIONS - DILLINGHAM
AIRFIELD AND ENVIRONS

FIGURE

5

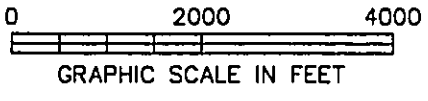
DECEMBER, 1999

P A C I F I C



LEGEND

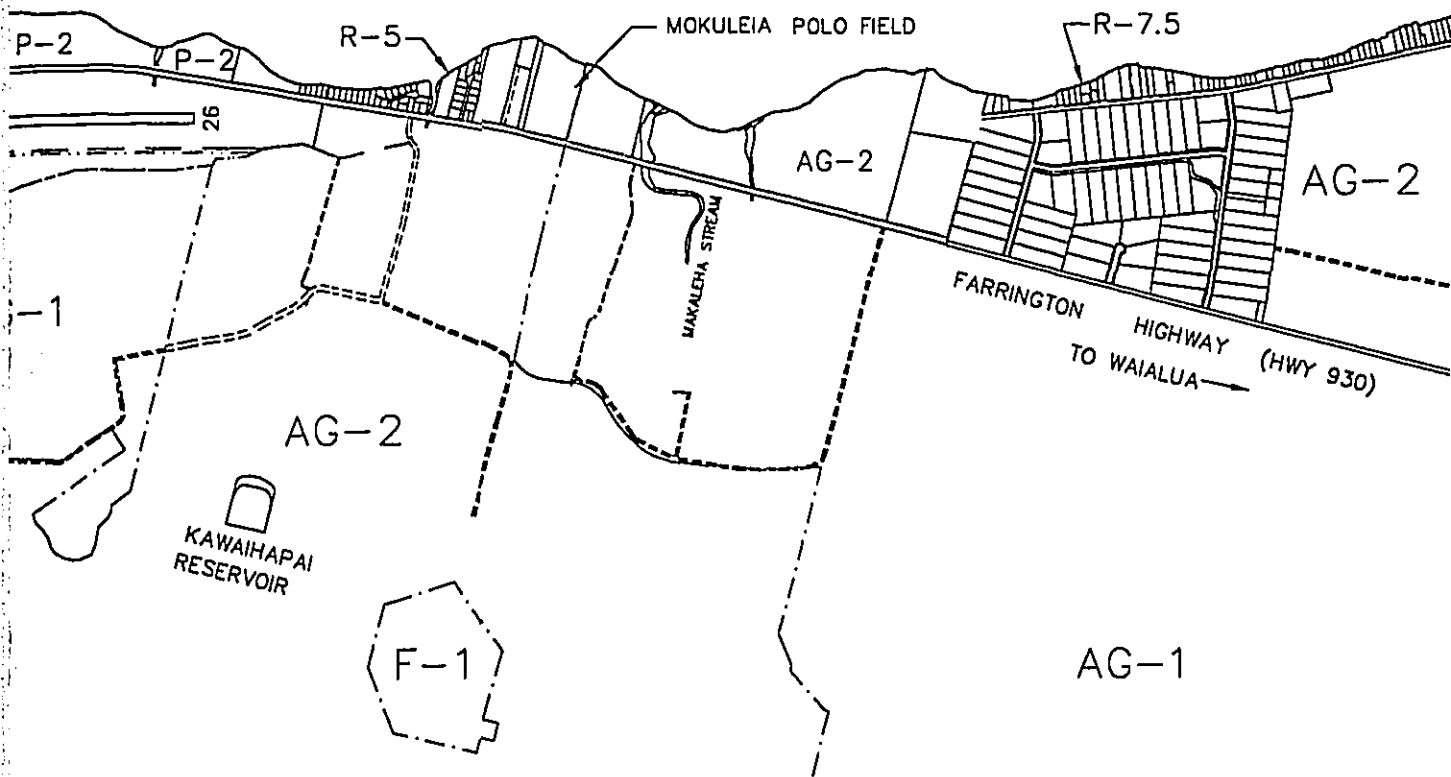
- AIRFIELD BOUNDARY
 - MILITARY RESERVATION
 - C & C ZONING BOUNDARY
 - ===== PAVED ROAD
 - UNPAVED ROAD
 - SPECIAL MANAGEMENT AREA BOUNDARY
- REFERENCE: CITY AND COUNTY DEPARTMENT OF PLANNING AND "SPECIAL MANAGEMENT AREA M ORD. NO. 85-105, DECEMBER 2



AIRPORTS DIVISION
DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII

DILLINGHAM AIRFIELD MASTER PLAN AND NOISE COMPATIBILITY PROGRAM

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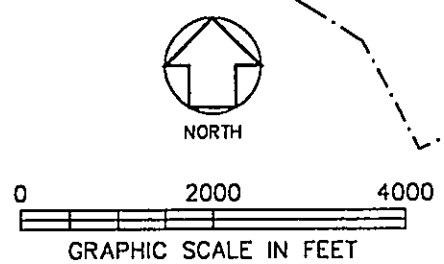
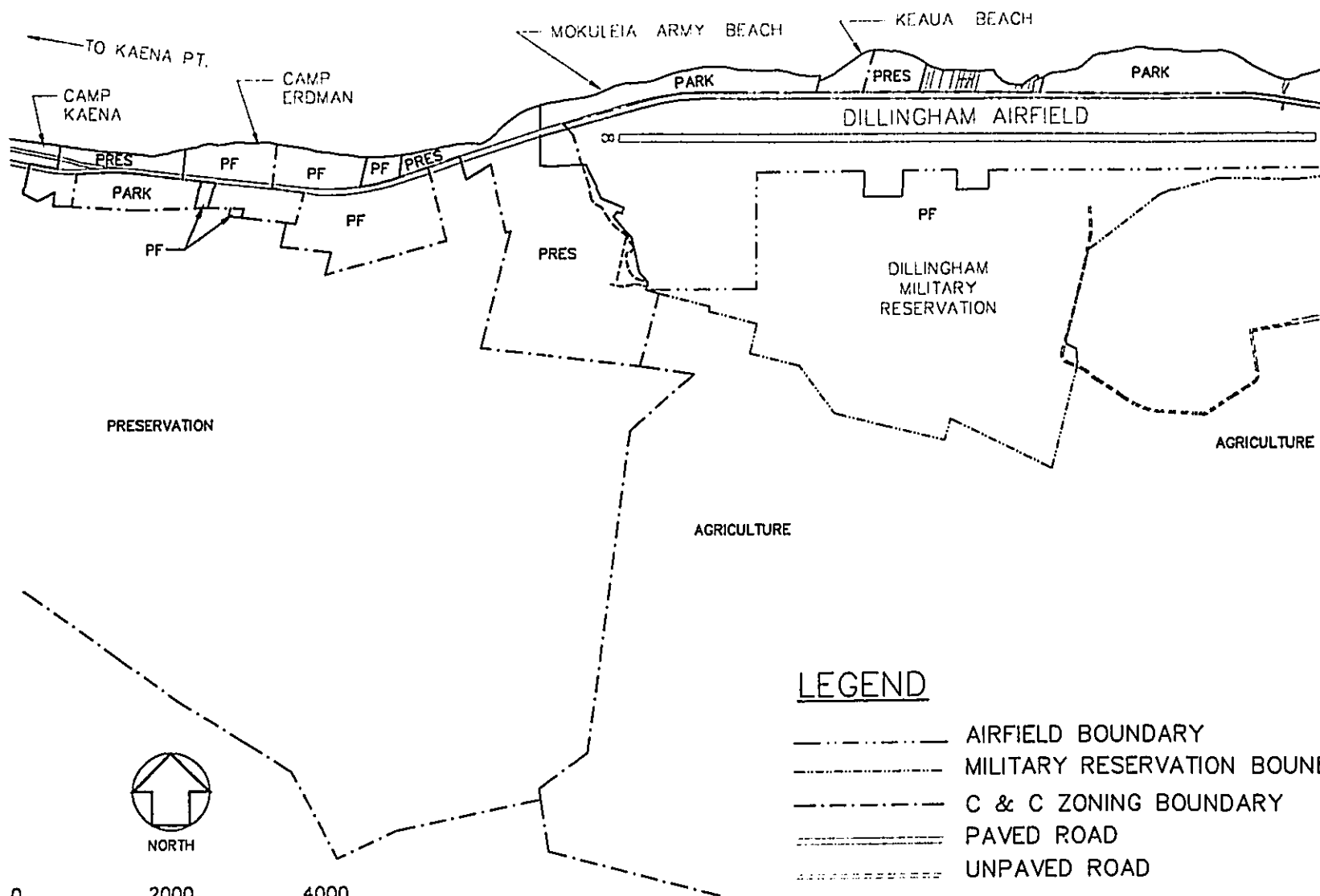
LAND ZONING

- AG ≡ AGRICULTURE
- F ≡ MILITARY & FEDERAL
- P ≡ PRESERVATION
- R ≡ RESIDENTIAL

CITY AND COUNTY OF HONOLULU,
 PLANNING AND PERMITTING,
 GEMENT AREA MAP, NORTH SHORE,
 05, DECEMBER 2, 1985"

<p>AND</p>	 <p>Edward K. Noda and Associates, Inc.</p>	<p>CITY AND COUNTY OF HONOLULU ZONING DESIGNATIONS</p>	<p>FIGURE 6 SEPTEMBER, 2000</p>
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P A C I F I C



LEGEND

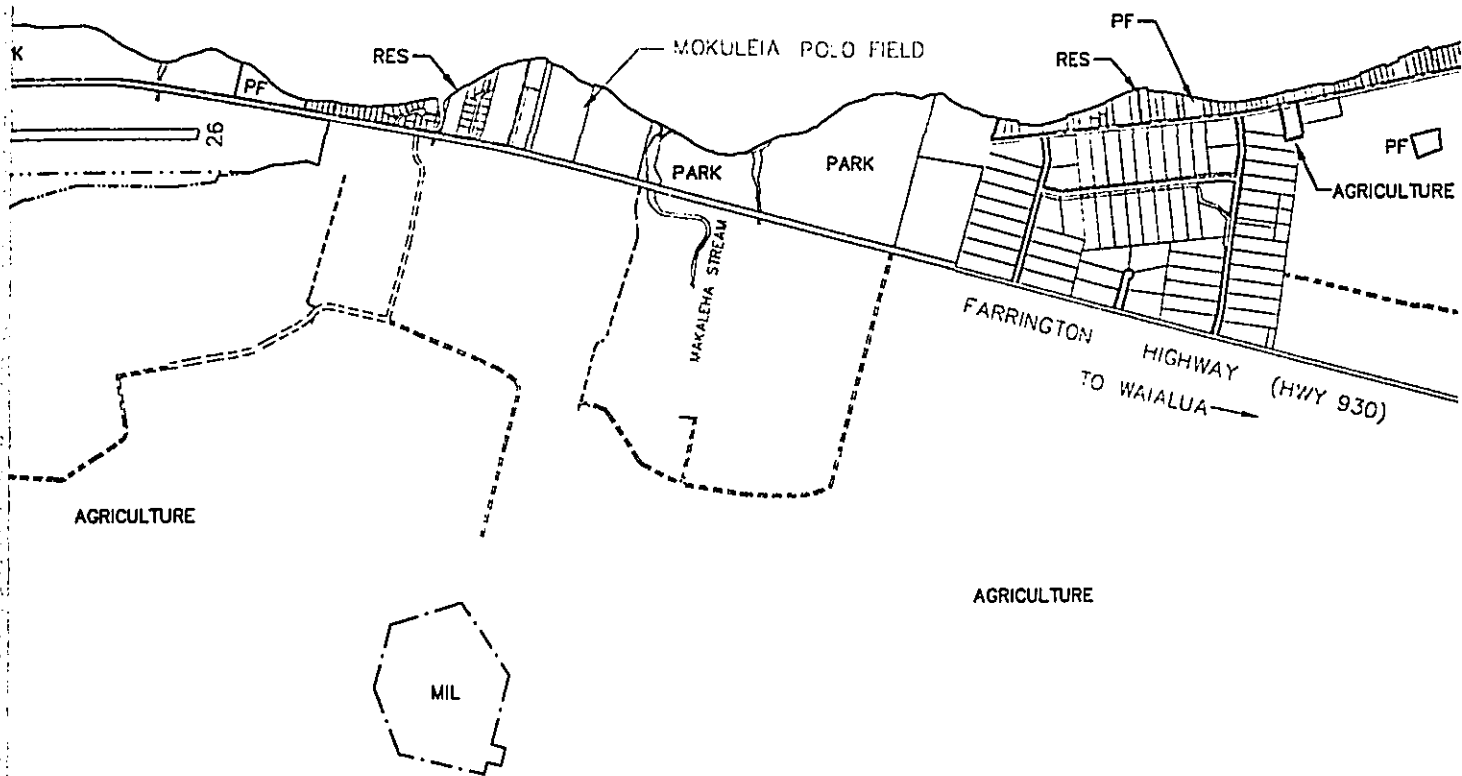
- AIRFIELD BOUNDARY
- MILITARY RESERVATION BOUNDARY
- C & C ZONING BOUNDARY
- ===== PAVED ROAD
- UNPAVED ROAD



AIRPORTS DIVISION
DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII

**DILLINGHAM AIRFIELD MASTER PLAN AND
NOISE COMPATIBILITY PROGRAM**

O C E A N



ARY
VATION BOUNDARY
BOUNDARY

AG = AGRICULTURE
MIL = MILITARY
PF = PUBLIC FACILITY
PRES = PRESERVATION
RES = RESIDENTIAL

AND

 Edward K. Noda
and Associates, Inc.

CITY AND COUNTY
OF HONOLULU
DEVELOPMENT PLAN
DESIGNATIONS

FIGURE

7

DECEMBER, 1999

PROPOSED LAND USE

The proposed improvements, with the exception of the land acquisition are within the present Airfield boundary. The proposed improvements, including the land acquisition will not displace or cause relocation of any persons or existing non-aviation activities. On-airport land uses will not change.

3.2 ARCHAEOLOGICAL, HISTORICAL, AND CULTURAL SITES

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) since January, 1962. Dillingham Airfield is part of the Dillingham Military Reservation. 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.

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.

Following World War II, the Hawaii Air National Guard utilized the Airfield for training operations and made a number of improvements to the facilities. In 1962, the State of Hawaii Department of Transportation initiated a series of short-term leases with the U.S. Air Force to use the facilities for 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 HNL.

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

THE SITE

There are no historical structures within the Dillingham Airfield boundaries. An archaeological survey (Appendix A) was prepared for the Master Plan, and the recommendations listed below were made and will be followed by the HDOT-AIR. NOTE: Although the archaeological survey prepared for the Master Plan and proposed action was completed in 1991, because of the lack of significant changes to the airfield and/or surrounding area, the survey is considered to still reflect existing conditions.

- 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 need to be determined, and an assessment of their significance should 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 pondfield 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.
- During the public comment period, a commentator¹ stated that his descendants were buried south of the Airfield, further inland in Dillingham Military Reservation. The location of the burials are presented in the archaeological study (Appendix A). In addition, the commentator identified a potential cultural site along the existing fence line as shown on Figure 4. This area may contain additional burials and a house site, however, field investigations were not undertaken as the proposed improvements will not impact this area.

The proposed improvements will not impact any of the known archaeological sites referred to in the archaeological survey, any burials or the potential cultural site. In addition, the areas which will be used for the proposed improvements are not currently used for traditional or cultural gathering rights, and limited access to the area has been maintained for over 50 years. The proposed improvements will not have an impact to the access to the burials and the potential cultural site. The DOT-A will allow access to the sites through the Airfield property, and will assist in coordinating the access to the site(s) with the U.S. Army. Therefore, no significant impacts to traditional or cultural gathering rights are anticipated and shoreline access will not be impacted by the proposed improvements. The design and construction of the proposed improvements will be in compliance with all applicable Federal and State rules and regulations.

If archaeological remains are encountered, standard specifications of State contracts will apply. Specifications with respect to archaeological, historical, and burial site findings are as follows:

Whenever the Contractor encounters possible archaeological, historical or burial site findings, the Contractor shall immediately suspend the operation and inform the Engineer verbally and follow up with a written letter. The Engineer will contact the Department of Land and Natural Resources (DLNR) and other agencies to evaluate such findings and decide the course of action.

¹ The location of the site was described and located by Mr. Thomas Shirai, who is a resident of the area and whose family has provided knowledge of the area in various reference documents.

The contractor shall not resume operations suspended without the prior written acceptance of the Engineer....

Failure or refusal to comply with the terms of this Section of Chapter 6E, Hawaii Revised Statutes, may subject the Contractor to the penalties described in Section 6E-11, Hawaii Revised Statutes:

- (1) a fine of not more than ten thousand (\$10,000) dollars for each separate offense,*
- (2) seizure and disposition of equipment, and*
- (3) if the Contractor knowingly fails or refuses to comply, a prohibition from participating in the construction of State or county projects for ten (10) years.*

Construction work and equipment shall remain within the right-of-way limits....The Archaeologist will decide the limits of the site. Also, the Archaeologist will decide, with the Engineer, the best means for protecting the site from further disturbances which require further investigation or salvage as determined by the SHPO [State Historic Preservation Officer]. Protection may include barricades, roping off, temporary fencing or other means.

3.3 SOCIAL AND ECONOMIC ENVIRONMENT

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 of Oahu increased from 636,658 to 839,300. The Waialua District population has increased from 9,171 in 1970 to 11,549 in 1990.

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 diversify the economy by attracting "high-tech" enterprises involved in such fields as computer software development, alternative energy and space technologies; encouraging developments in foreign trade, film-making, and ocean resource use; and conventions.

The major industries in the Waialua area are based on agricultural crops such as 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.

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.

The socioeconomic concerns relative to the proposed improvements at Dillingham Airfield can be divided into those of users of the airfield and those of nearby residents. Concerns of airfield users include: the distance of the airport from urban Honolulu; potential use conflicts among increased general aviation traffic, sport parachutists and sailplane enthusiasts; and the lack of support services. The concerns of nearby residents include: potential increased noise exposure; increased numbers of visitors to the area; and a general diminishing of the rural character of the Mokuleia area.

Noise concerns are addressed briefly in Section 3.5, and in depth in Volume II, the Noise Compatibility Program (Noda, 1998). The noise complaints generated by civilian aircraft operators, which were voiced at the Public Informational meetings, were typically single event in nature. Most of the noise complaints are a consequence of nighttime military operations, especially helicopters. These operations have decreased significantly in recent years, and are not expected to increase greatly in the future. The potential primary mitigation measure will be to implement informal noise abatement procedures for departing civilian aircraft, and has been analyzed in the Noise Compatibility Program (Noda, 1998).

The rural character of the vicinity will not be changed by the proposed improvements to Dillingham Airfield. At present, based on C&C and State Land Use Commission decisions, it appears that *large-scale resort, commercial or residential development in the area will not occur*. It is expected that much of the land near the airfield will remain designated for agricultural uses.

The proposed improvements to Dillingham Airfield will have some economic affects principally from the additional short-term employment opportunities afforded by the construction activities. Increases in personal income have multiplier effects throughout the community, both nearby and island-wide. No significant effects on the social or economic characteristics of the immediate area, island or State are projected to result from the proposed action.

3.4 UTILITIES AND INFRASTRUCTURE

On-site utilities and infrastructure include potable water, wastewater disposal, electric power, communications, a drainage system and a roadway network. All of these are expected to be upgraded in the Dillingham Airfield improvement program. The proposed plans for upgrading utilities will have a beneficial impact on the airfield and no impact on nearby communities. The new utilities will meet all current standards and will not significantly adversely impact existing utility service outside of the Airfield.

WATER SUPPLY

The Airfield is served by a State of Hawaii owned potable 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. Annual consumption is about 18 million gallons, approximately 0.05 million gallons per day (mgd).

WASTEWATER DISPOSAL

Wastewater from the various facilities is routed into on-site cesspools. In the future, these systems will be replaced with septic systems or other DOH-approved systems. This can be expected to have localized positive impacts on groundwater and coastal water quality by providing a greater level of treatment than currently experienced.

ELECTRICAL 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 Airfield to the UNICOM Tower. From there, power is distributed on the Airfield in underground ducts. Additional capacity will be installed as needed. Due to the relatively low present and projected electrical power requirements, the proposed action will not significantly affect HECO's generating, transmission or distribution system.

TELEPHONE

Telephone lines are provided by Hawaiian Telephone Company (HTCo) from its Waialua switching station. The lines run overhead along Farrington Highway to the airport and in underground ducts on the site. Additional capacity will be installed as needed. The proposed action will not result in significant changes to HTCo's system.

DRAINAGE

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. The system will be refurbished and upgraded as necessary, with the intention of alleviating the problem of occasional flooding of the eastern portion of the Airfield. Based on engineering studies conducted, the proposed action will not result in significant changes to surface water quantities or water quality.

TRANSPORTATION

The only road providing surface access to Dillingham Airfield is Farrington Highway (State Highway 930), a two-lane highway passing between the airfield and shoreline and paved only as far as Camp Erdman, about a mile west of the airfield. From Camp Erdman westward, the road is not maintained and hence, does not support regular through vehicular traffic between Mokuleia and the leeward coast. There is no public transportation to Mokuleia.

Farrington Highway 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 use having three connections to the airport service roads on Dillingham Airfield.

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

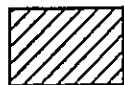
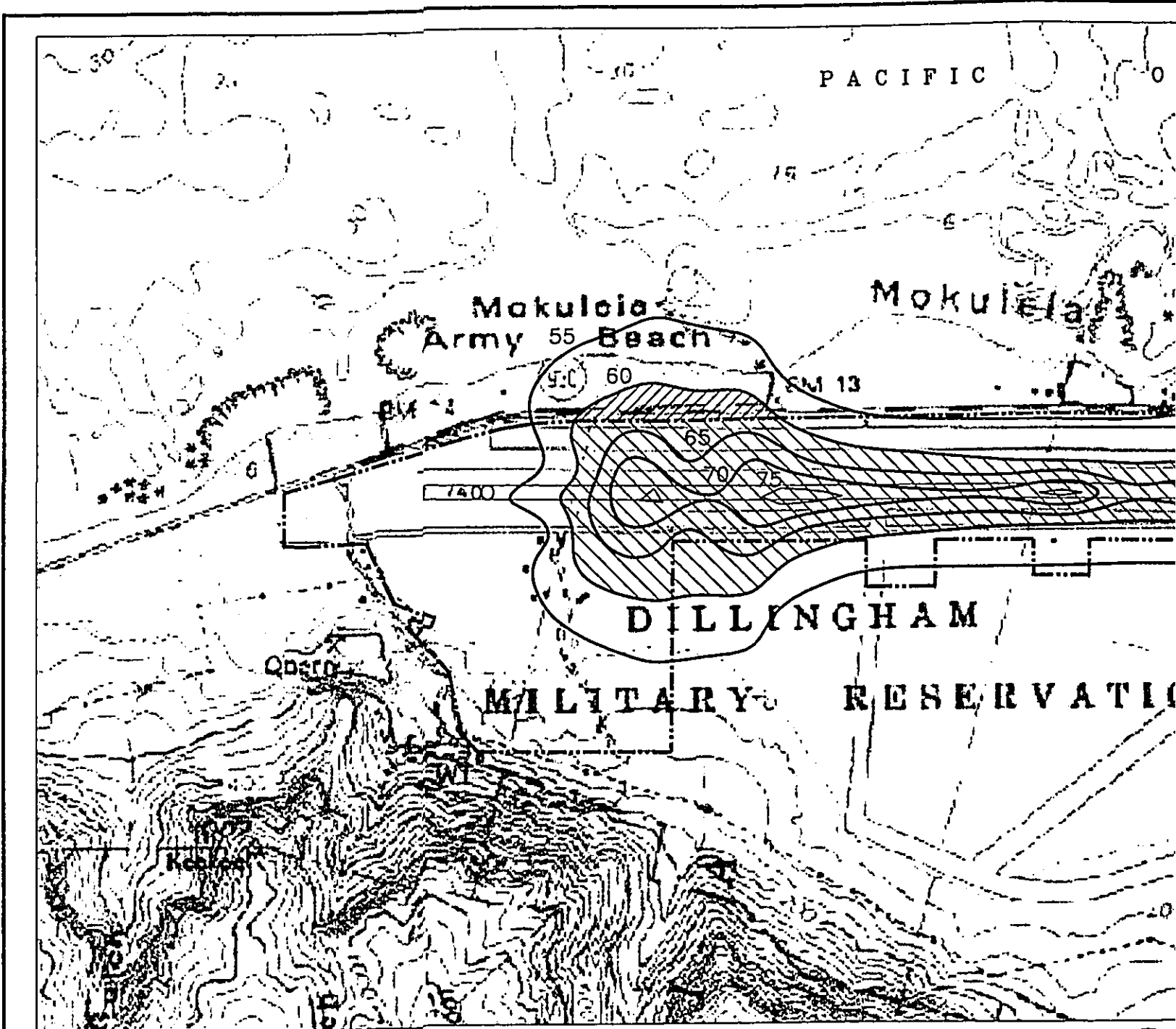
3.5 NOISE

Present noise sources in the airfield area include surf, wind, rain, insects and birds; motor vehicle traffic on Farrington Highway; and aircraft. As part of the Oahu General Aviation Master Planning Study, measurements of then existing noise exposure levels in the Dillingham Airfield area were made over a two month period. The typical diurnal noise 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 dBA at a beachfront location directly under the departing flight path. The average total day-night sound level (DNL) was 61 dBA over a 21-day period. Based on the analysis conducted in the Kentron study, in beachfront populated areas, background DNL will generally be higher than sound levels caused by civilian general aviation aircraft.

A FAR Part 150 Noise Compatibility Study (Noda, 1998, revised 2000) was completed under this contract. As part of this program, a field measurement study of aircraft noise was completed with ambient noise levels within the Airfield's environs ranging from 53 to 59 DNL. The field study indicated that the ambient daytime noise level in the nearby residential areas is DNL 57 dBA. In addition, the field measurements indicate that the single event noise level of a one to two foot wave was 81 dBA at a distance of approximately 60 feet.

The FAR Part 150 Noise Compatibility Study produced the Noise Exposure Maps for the existing year (2000) and 5-year forecast conditions (2005), and these are shown on Figures 8 and 9, respectively. As defined by the FAA and State, there are no incompatible land uses within the Airfield's environs. The noise contours represent the noise exposure from daytime aircraft operations, as the HDOT-AIR only operates the airfield from sunrise to sunset. In addition, as there are no lights on the Airfield, civilian use of the Airfield is limited to daylight hours. There is military use of the Airfield during the nighttime hours, however, the HDOT-AIR has no control of the military operations (whether day or night).

Several noise complaints were expressed at both the Technical Committee and Public Informational Meetings. The majority of the complaints were directed to night and evening military helicopter operations, over which HDOT-AIR has no control. The Part 150 Noise Compatibility



STATE CONTROLLED LAND USE



FEDERALLY CONTROLLED LAND USE



DNL NOISE CONTOUR REPRESENTING CIVILIAN AIRCRAFT OPERATION ONLY



AIRPORT BOUNDARY

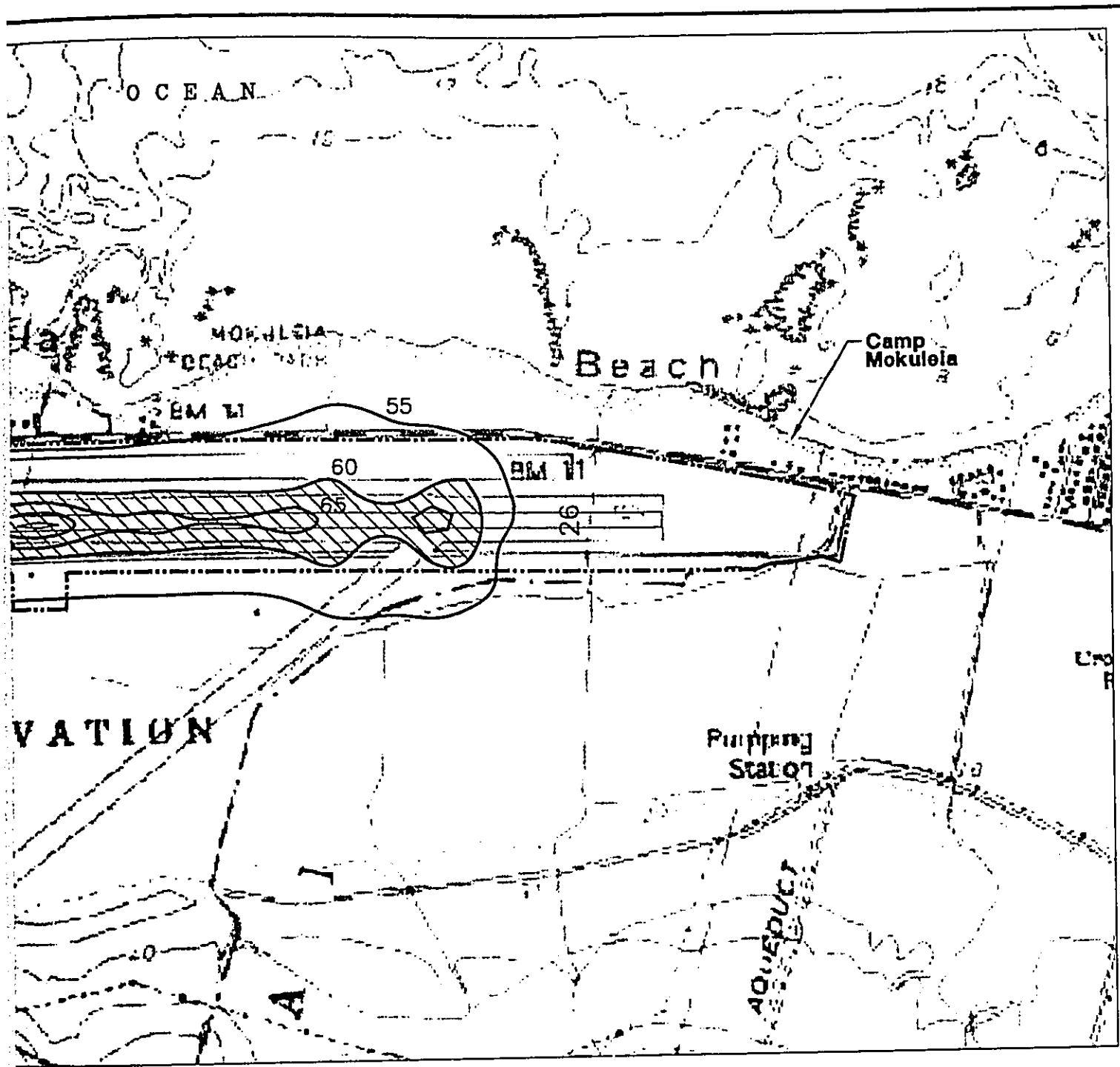


NORTH



AIRPORTS DIVISION
DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII

**DILLINGHAM AIRFIELD MASTER PLAN AND
NOISE COMPATIBILITY PROGRAM**



NORTH

1000 2000

GRAPHIC SCALE IN FEET

NOTE:
 LAND USE AUTHORITY RESTS WITH THE
 STATE OF HAWAII LAND USE COMMISSION, AS WELL AS
 DEPARTMENT OF LAND AND NATURAL RESOURCES,
 (FOR CONSERVATION DISTRICTS ONLY).

**PLAN AND
 GRAM**

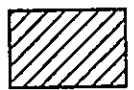
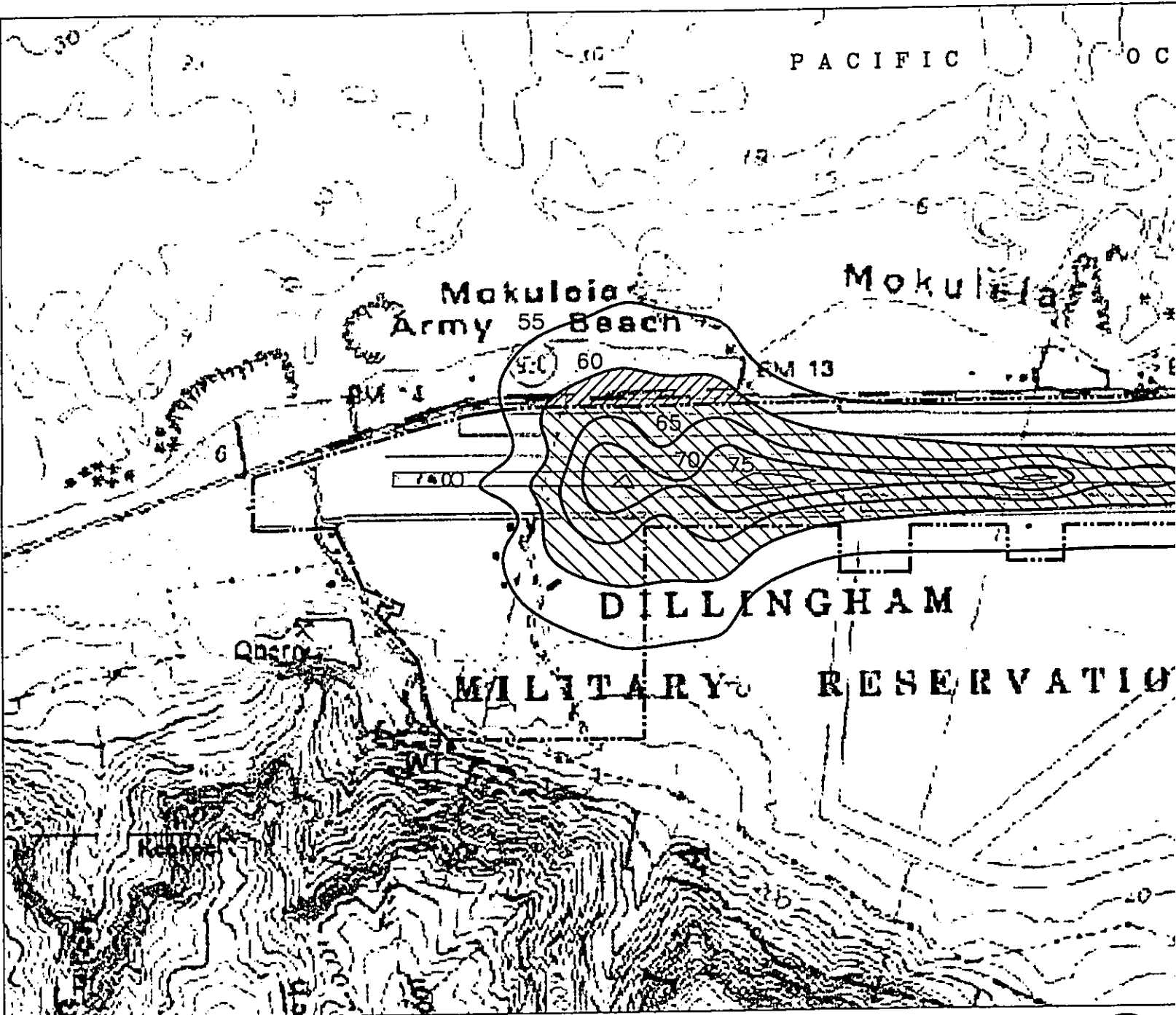
Edward K. Noda
 and
 Associates, Inc.

**2000 (EXISTING)
 NOISE
 EXPOSURE
 MAP**

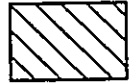
FIGURE

8

MAY, 2000



STATE CONTROLLED LAND USE



FEDERALLY CONTROLLED LAND USE



DNL NOISE CONTOUR REPRESENTING CIVILIAN AIRCRAFT OPERATION ONLY



AIRPORT BOUNDARY

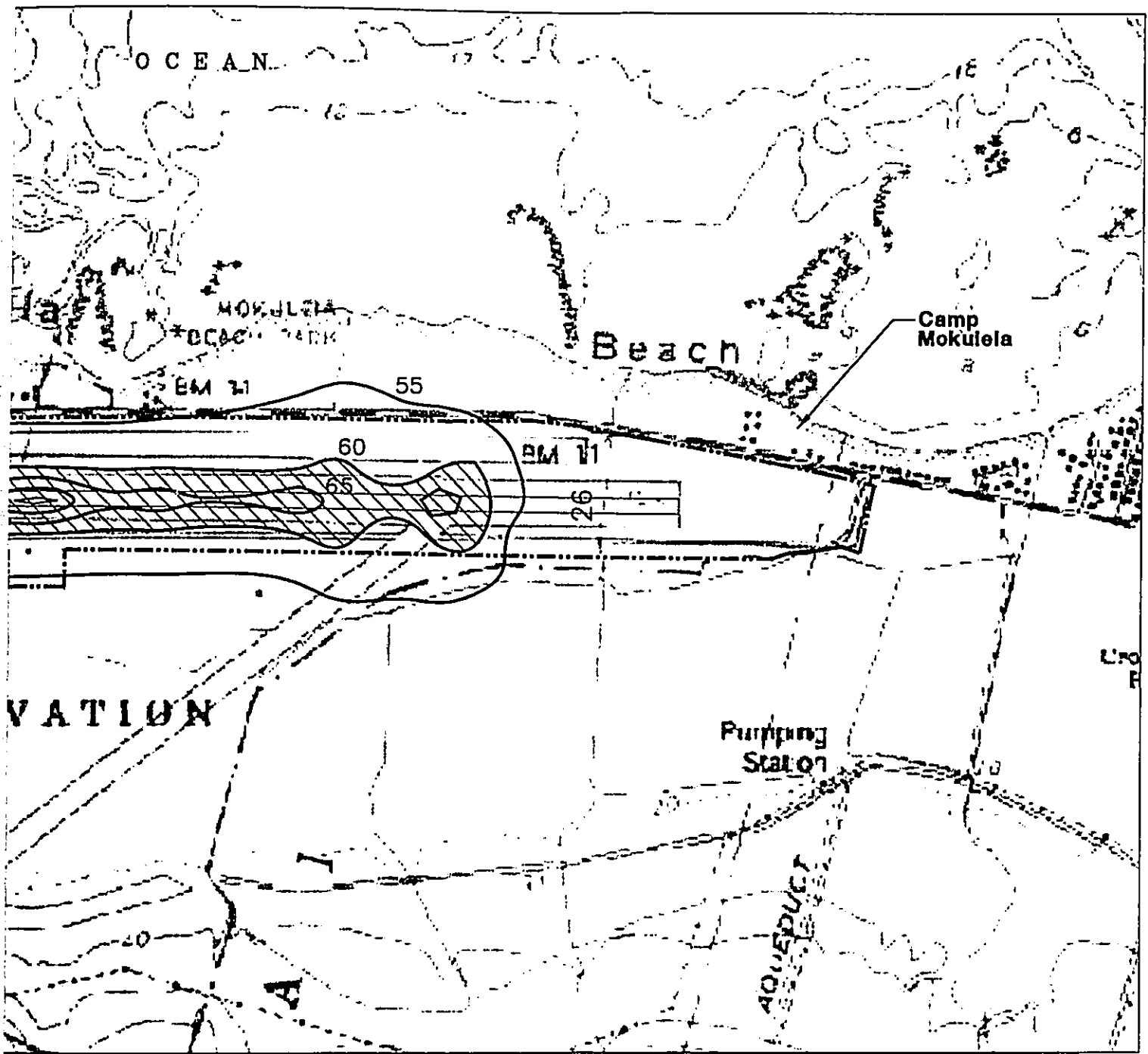


NORTH



AIRPORTS DIVISION
DEPARTMENT OF TRANSPORTATION
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**DILLINGHAM AIRFIELD MASTER PLAN AND
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<p>PLAN AND GRAM</p>	<p>Edward K. Noda and Associates, Inc.</p>	<p>2005 (FIVE YEAR) NOISE EXPOSURE MAP</p>	<p>FIGURE 9 MAY, 2000</p>
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Program concluded that there were no incompatible land uses within the Dillingham Airfield environs. Therefore, only preventive noise measures were included to maintain compatible land use around Dillingham Airfield. Typical preventive measures include the use of zoning, preserving current compatible State Land Use classifications, aviation easements, or property acquisition.

The proposed improvements are not expected to alter the noise environment at Dillingham Airfield because the improvements do not alter the existing runway use or flight patterns. However, increased aircraft operations, with or without the Proposed Action, may cause single event noise impacts, depending on the flight track used by the aircraft pilot. Pilots are requested to refer to the "Airport Directory and Flying Safety Manual," published by the State of Hawaii, Department of Transportation. There are existing noise abatement procedures at Dillingham Airfield which are not formalized, but state that aircraft using the Airfield should attempt to avoid the noise sensitive area to the northeast adjacent to the airport. The proposed improvements will not affect military use of the airfield, and the military will continue using their airfield for nighttime training operations.

3.6 CLIMATE AND AIR QUALITY

Climatological data are currently being collected at climatological station 847, which is maintained by the Waialua Sugar Company. Although this station is about five miles from the airfield, it is the nearest available, and data on average rainfall, temperature and humidity found there approximate those at Dillingham Airfield.

As recorded at station 847, monthly temperatures range from 60°F to 86°F, with an average of 73°F. Monthly rainfall ranges from 0.8 inches in the summer months to 5.7 inches in the winter, producing a total annual rainfall of about 33.8 inches. The average annual pan evaporation rate is 73.2 inches, and because evaporation exceeds precipitation, there is virtually no groundwater recharge.

The only available wind data, collected at the airfield itself, were amassed by the Air Force several decades ago. The prevailing trade winds are from the east. The primary direction of aircraft takeoff is therefore to the east. With an alignment of 090/270 degrees true, the runway wind coverage with a crosswind component of 12 miles per hour or less is about 93 percent.

An air quality assessment of the proposed Dillingham Airfield Master Plan was prepared by B.D. Neal & Associates and is included as Appendix B. That report contains the following conclusions and recommendations. The recommendations will be followed by HDOT-AIR during implementation of the proposed action. NOTE: Although the air quality analysis prepared for the Master Plan and proposed action was completed in 1993, because of the lack of significant changes to the airfield and/or surrounding area, the analysis is considered to still reflect existing conditions.

There do not appear to be any unusual meteorological conditions present in the project area that would significantly affect air quality. Rainfall in the area is relatively moderate which will help to naturally control dust during construction

phases. The prevailing easterly winds at the site will carry emissions from aircraft operations away from populated areas and out to sea a large percentage of the time.

Although there is very little air quality data available for the project area, based on the location and character of the project site and the few major sources of air pollution in the area, it appears likely that all state and national air quality standards are currently being met in the project vicinity except possibly for occasional exceedances of carbon monoxide and/or particulate standards due to agricultural operations in the area. Emissions estimates for existing operations at the airfield indicate that all emissions are less than the state-defined significant emission rates except for carbon monoxide.

The major potential short-term air quality impact of the project will occur from the emission of fugitive dust during construction phases. Uncontrolled fugitive dust emissions from construction activities are estimated to amount to about 1.2 tons per acre per month or less, depending on rainfall. To control dust, active work areas and any temporary unpaved work roads should be watered at least twice daily on days without rainfall. Use of wind screens and/or limiting the area that is disturbed at any given time will also help to contain fugitive dust emissions. Wind erosion of inactive areas of the site that have been disturbed could be controlled by mulching or by the use of chemical soil stabilizers. Dirt-hauling trucks should be covered when traveling on roadways to prevent windage. A routine road cleaning and/or tire washing program will also help to reduce fugitive dust emissions that may occur as a result of trucks tracking dirt onto paved roadways in the project area. Paving of parking areas and establishment of landscaping early in the construction schedule will also help to control dust.

During construction phases, emissions from engine exhausts (primarily consisting of carbon monoxide and nitrogen oxides) will also occur both from on-site construction equipment and from vehicles used by construction workers and from trucks traveling to and from the project. Increased vehicular emissions due to disruption of traffic by construction equipment and/or commuting construction workers can be alleviated by moving equipment and personnel to the site during off-peak traffic hours.

Even though carbon monoxide emissions from the airfield are estimated to exceed the state-defined significant emission rate, ambient concentrations of carbon monoxide along the airfield boundary would likely remain well within state and national ambient air quality standards. This would be true at least through the year 2010 and with or without relocated operations from Ford Island and from HNL. This conclusion is reached based on results of a worst-case air quality modeling study that assumed only a single airfield runway and that the airfield boundaries remain unchanged.

Whereas the short-term air quality impact of the project will occur from the emission of fugitive dust during construction, the long-term impact will be less dust and soil erosion in the airport area because of the additional paved areas.

3.7 TOPOGRAPHY, GEOLOGY AND SOILS

TOPOGRAPHY

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.

GEOLOGY

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.

SOILS

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, Jaucus 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.

3.8 WATER RESOURCES

Dillingham Airfield is located in the western portion of the Honolulu Board of Water Supply's Service Area 5. This 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 water supply for the Airfield is from an on-airfield well operated by the HDOT-AIR.

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 east of the Airfield, is an important perennial stream. According to the *Hawaii Stream Assessment* (National Park Service, 1990), Makalena Stream is one of six Oahu streams listed as candidates for protection. Its riparian resources are rated outstanding, and it also has moderate recreational resources (hunting and scenic views). Its riparian resources include about thirty percent surrounding native forest supporting at least three threatened or endangered bird species and six rare plants. A wetland area provides recovery habitat for several endangered species of waterbirds.

Makalena stream itself has been modified in part, leading to a relatively low ecological quality rating (III on a scale of I-best to IV-worst). Category III, termed "exploitive-consumptive, is defined as having moderate to low natural and/or water quality (well exploited, modified or degraded), used for water-related recreational activities (Timbol and Maciolek, 1978).

Two intermittent streams are located closer to the airport. Kapalaa Stream enters the ocean just east of the Polo Field. Polipoli Stream enters the ocean about one half mile east of the airport.

Four other (unnamed) intermittent 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 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.

Several wetland areas have been identified in the environs of the existing Dillingham Military Reservation property by the U.S. Army Corps of Engineers. The primary site neighbors the airfield to the south and is presently within the Dillingham Military Reservation (DMR). The size of this wetland varies with rainfall, with extensive mudflats flooded after heavy rains. The wetland is typically shallow (six inches or less), with turbid standing water. According to an Army Corps of Engineers-sponsored survey (Ahuimanu Productions, 1977), "[t]he ephemeral nature of the Dillingham Airfield "wetland" provides little waterbird habitat....Total elimination of the marginal habitat at Dillingham Airfield would probably have no noticeable impact on the population of...any...waterbird on Oahu."

Adjacent to the west end of the airport is an abandoned quarry, currently being used for aquaculture. This area is not included in the proposed land acquisitions, and no change in use is required.

The proposed improvements will have an insignificant impact, if any, on the wetlands, groundwater, surface water or coastal water resources. Although there will be no impacts to the wetlands, the Army Corps of Engineers' has assigned file number 20000101 to the Dillingham Airfield project. Additional demand for potable water can be easily accommodated from existing sources. Discussions with the City and County of Honolulu, Board of Water Supply (BWS), indicate that the Waialua plain aquifer has additional drinking water capacity. Therefore, the BWS's long range plans include two new wells in the Waialua area. In the past, the Hawaii Department of Land and Natural Resources drilled an exploratory well in the Kawaihapai area which had a yield of approximately 1 million gallons per day.

Improvements to the drainage system will reduce flooding of the eastern portion of the airfield during and after heavy rains. If necessary, holding basins will be used to minimize silt transport to the ocean.

Erosion, runoff and siltation arising from construction activities will be controlled through regulatory means at federal, state and county levels. In particular, the National Pollutant Discharge Elimination System (NPDES) permit requirements and use of best management practices (BMP) will provide effective control mechanisms to limit both point and nonpoint sources of water pollution.

3.9 NATURAL DISASTERS

Based on the latest Flood Insurance Rate Map (FIRM), about 2,000 feet of the east end of the Dillingham Airfield runway is within the 100-year flood hazard Zone A (Figure 10). In addition, the tsunami evacuation line from the City and County Civil Defense is presented on Figure 11. 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 for that area. Similarly, during heavy storms, some portion of the east end of the runway might be closed to operations.

The planned facilities that could be affected by flooding include airfield pavements at the east end of the airport and the 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.

The additional paving will add to the water run-off during periods of heavy rain. The proposed improvements includes upgrading the drainage system to alleviate the flooding which occurs on the east end of the runway during and after heavy rains. Applicable design standards and construction techniques will be employed for all structures built within the flood hazard zones.

The beach and runway areas are subject to high surf and tsunami inundation. The 1946 tsunami caused runup to heights of 14 to 16 feet at Mokuleia (Loomis, 1976). Runup was 12 feet off the east end of Dillingham Airfield and 14 feet at Kealia Beach opposite the middle of the airfield. Storm waves in December 1969 caused damage as far as 250 feet inland (U.S. Army, 1971). Storm swells originating in the North Pacific Ocean often cause high winter surf that is damaging to Mokuleia Beach and beachfront properties. Critical erosion has occurred along a long stretch of the Mokuleia shoreline. Sections of Mokuleia Beach are severely eroded by winter storm waves and accrete during calm summer months.

The planned improvements could be affected by a tsunami or by the 100-year flood, but because most of the improvements consist of paving additional areas, damage would be minimal. On-site utilities improvements would be buried, minimizing exposure to tsunami damage. The greatest tsunami risks would be to based and itinerant aircraft, which presumably could be moved elsewhere with adequate warning.

Hawaii's counties follow the "Uniform Building Code" which assesses earthquake severity in terms of seismic zones 0 through 4, with 4 representing areas most prone to damage-causing earthquakes. The island of Oahu is classified in seismic risk Zone 2B, raised from Zone 1 in 1991. Design and construction standards appropriate to that zone will be employed in all improvements.

3.10 TERRESTRIAL FLORA AND FAUNA

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 molucana*), milo (*Thepesia populnea*), passion fruit (*Passiflora foetida* and *P. edulis*), Christmas berry (*Schinus molle*), coconut trees (*Cocos nucifera*), Chinese banyans (*Ficus retusa*) and several other introduced species generally used for landscaping purposes. There are no known listed or candidate endangered or threatened plant species found within the airfield area.

The terrestrial wildlife in the airport area includes introduced and native species of land and seabirds, mongoose, rats, mice 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 elevations.
- **Migratory Indigenous (Native) Birds.** The Pacific Golden Plover (*Pluvialis fulva*) is fairly common within the airfield boundaries and it is likely that the Ruddy Turnstone (*Arenaria interpres*) and the Wandering Tattler (*Heteroscelus incanus*)

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.

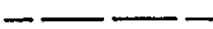


OTHER AREAS

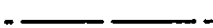
- ZONE X** Areas determined to be outside 500-year flood plain.
- ZONE D** Areas in which flood hazards are undetermined.



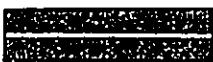
Flood Boundary



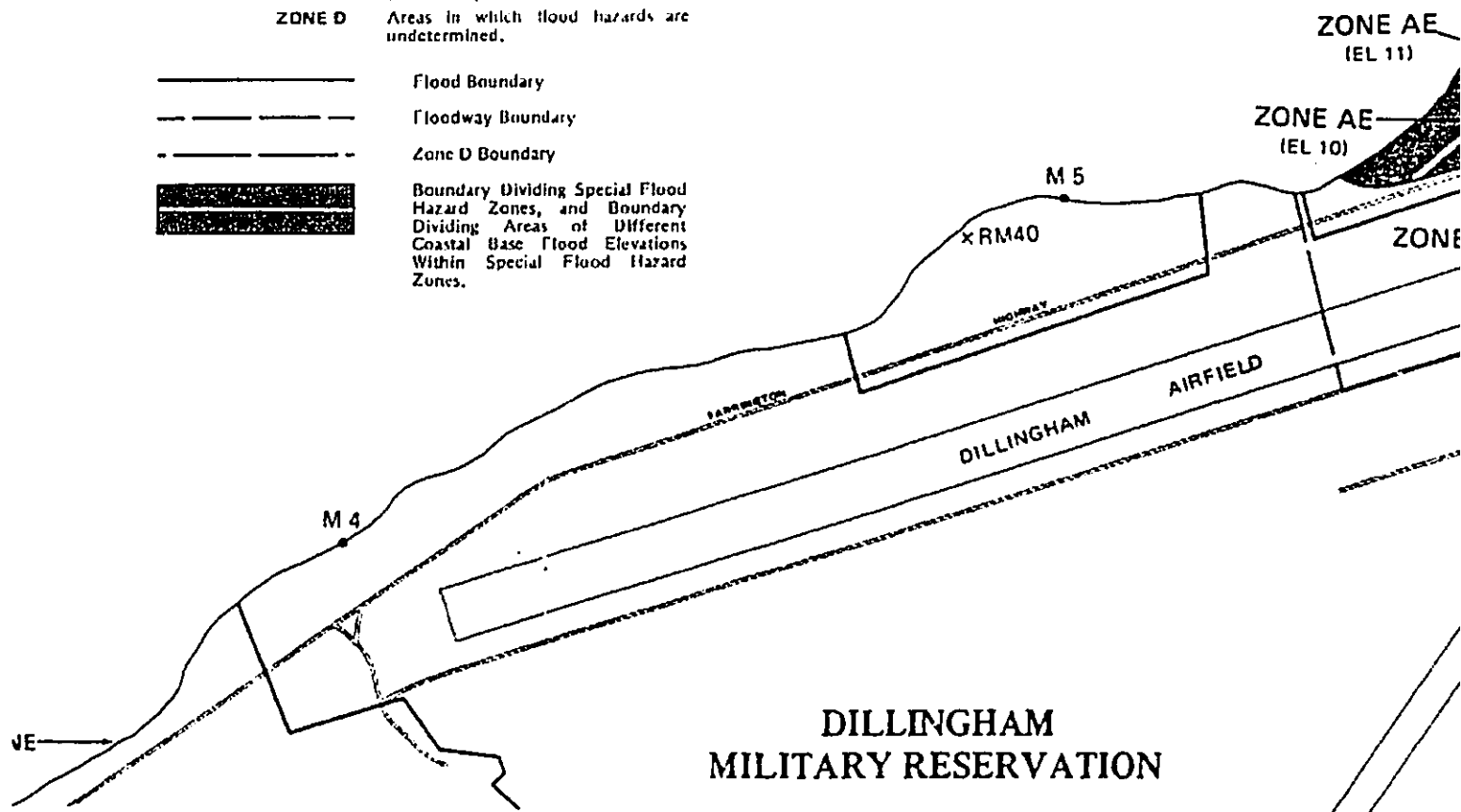
Floodway Boundary



Zone D Boundary



Boundary Dividing Special Flood Hazard Zones, and Boundary Dividing Areas of Different Coastal Base Flood Elevations Within Special Flood Hazard Zones.

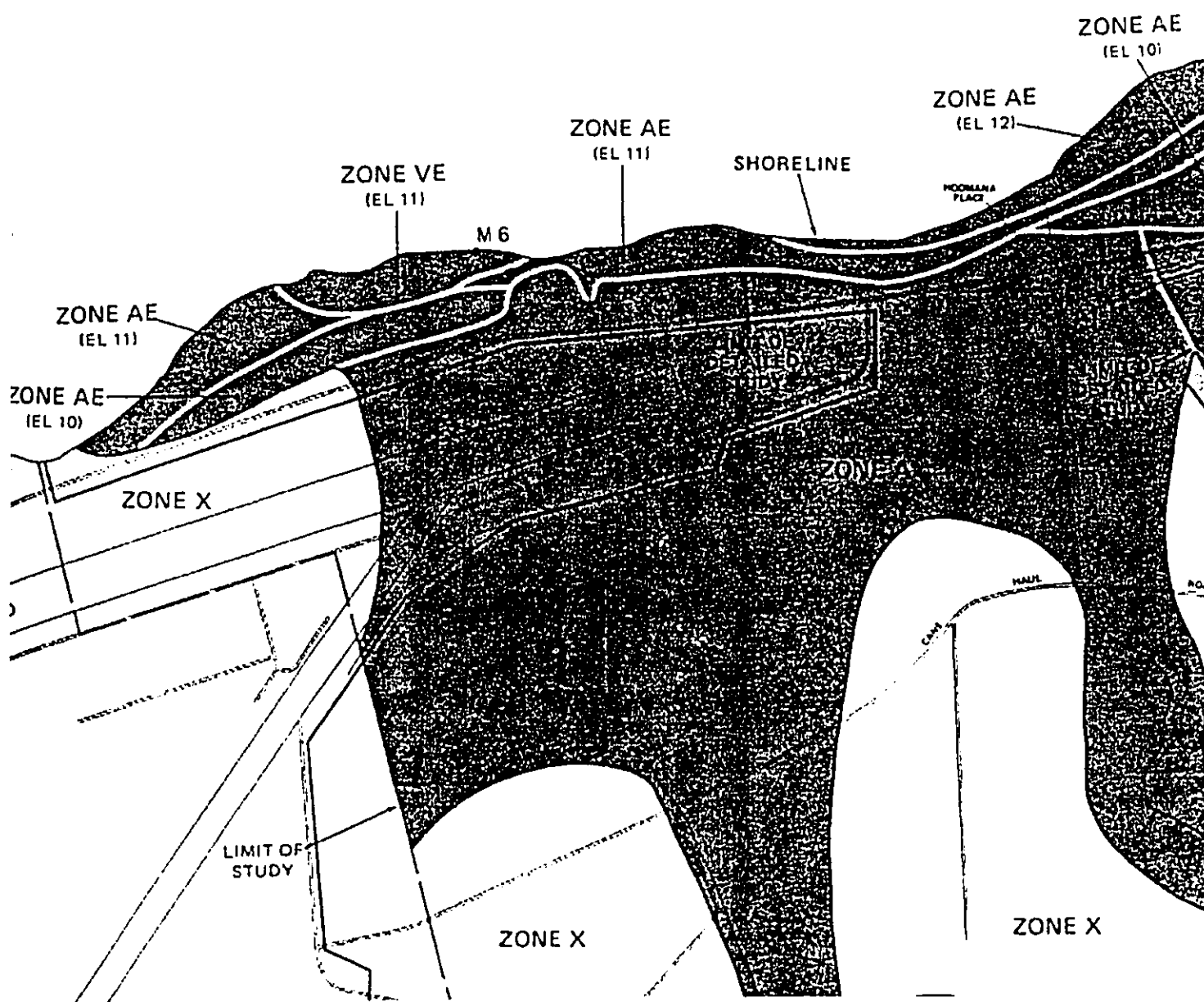


**DILLINGHAM
MILITARY RESERVATION**



AIRPORTS DIVISION
DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII

**DILLINGHAM AIRFIELD MASTER PLAN AND
NOISE COMPATIBILITY PROGRAM**



PLAN AND
GRAM

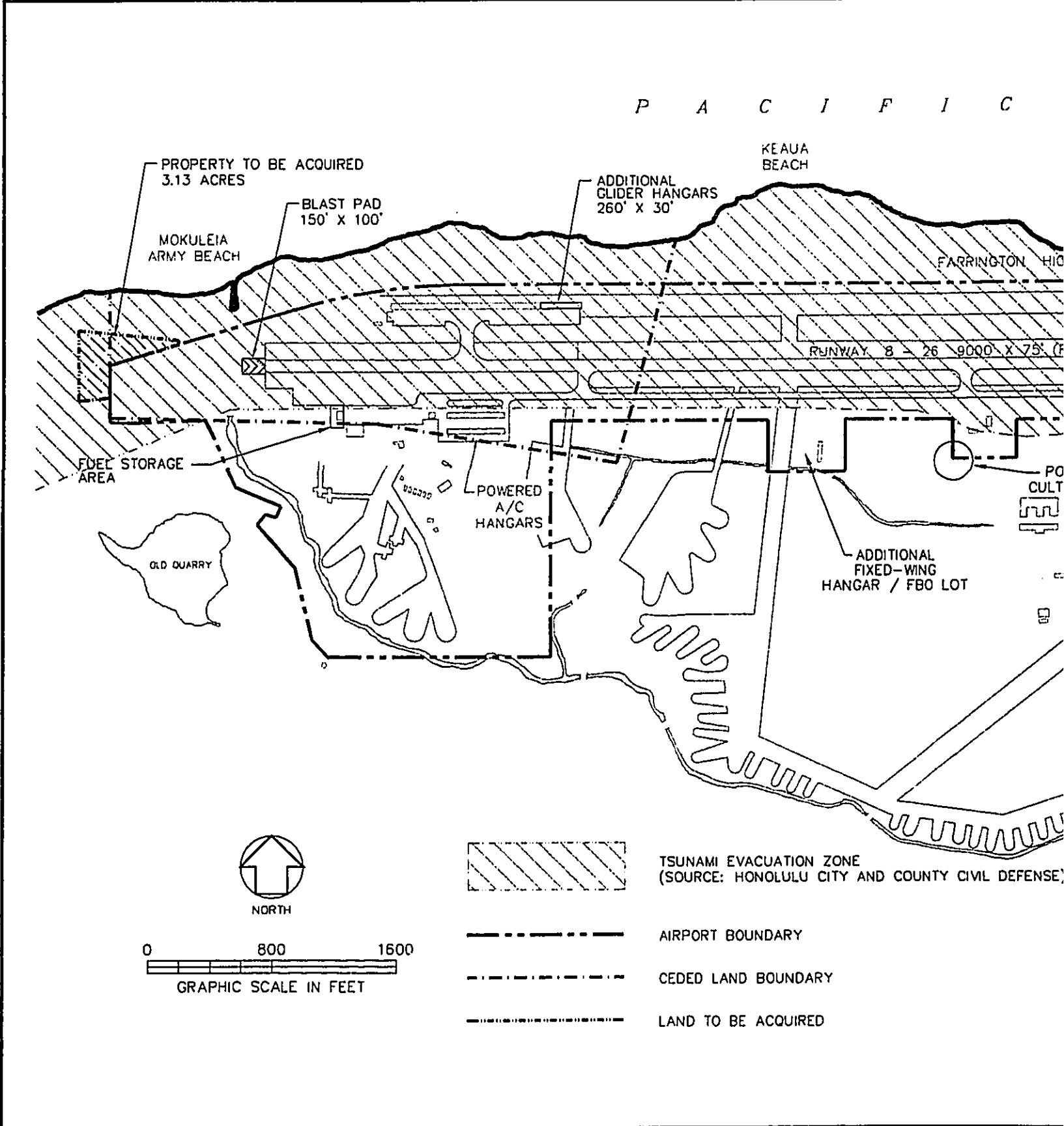
Edward K. Noda
and
Associates, Inc.

FLOOD
HAZARD
ZONES

FIGURE

10

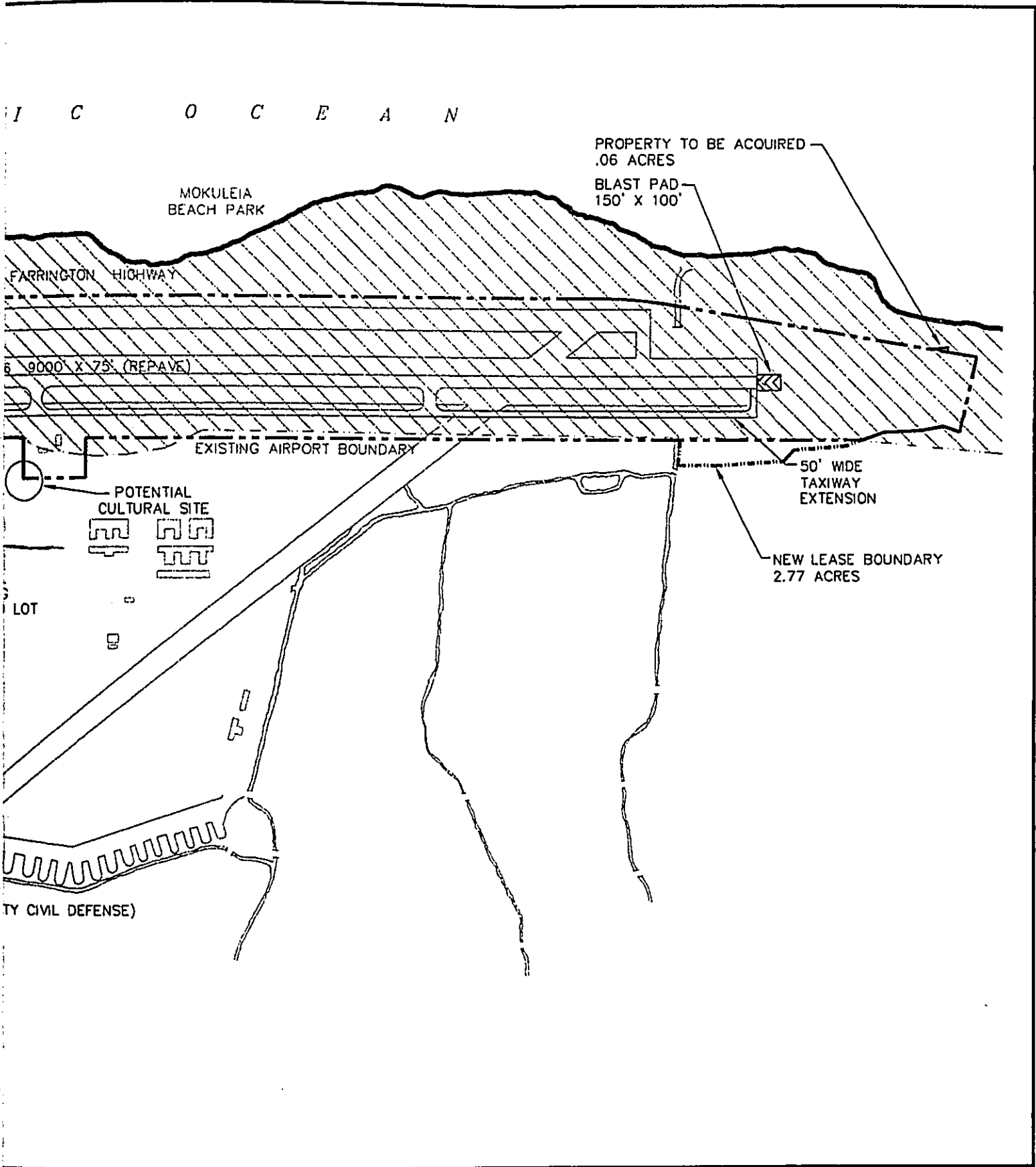
MAY, 2000



AIRPORTS DIVISION

DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII

**DILLINGHAM AIRFIELD MASTER PLAN AND
NOISE COMPATIBILITY PROGRAM**



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AM



TSUNAMI
EVACUATION ZONE

FIGURE
11
JULY, 2000

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., 1978).

- **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 airfield 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 seven 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*).

There are no known listed or candidate endangered or threatened wildlife species inhabiting or frequenting the airfield area. A terrestrial avifauna and mammal survey (Appendix C) was completed during the master planning process and offers the conclusions listed below. NOTE: Although the avifauna and feral mammal survey for the Master Plan and proposed action was completed in 1991, because of the lack of significant changes to the airfield and/or surrounding area, the survey is considered to still reflect existing conditions.

- 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. The Dillingham Quarry Pond provides habitat for coot and night heron, but is presently being used for commercial aquaculture.
- Migratory shorebirds such as the Pacific Golden Plover and Ruddy 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 low lying 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) make this reestablishment 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 low lying 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 at the Crowbar Ranch Pond.

The primary direct impact of the project on wildlife and vegetation will result from an increase in paved area, although this will constitute less than 0.5 percent of the existing paved airport areas. Although grasses and plants will be removed, no rare or endangered species will be affected. Increased operations unavoidably will increase the possibility of bird strikes by aircraft.

The effects of aircraft noise on wildlife is a consideration. Total emanated noise exposure is not significantly different with or without the proposed improvement.

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 vegetation which is comprised of mostly introduced species. There are no species in the area listed by the U.S. Fish and Wildlife Service as endangered, threatened or candidate for such status.

3.11 MARINE FLORA AND FAUNA

The airfield is separated from the coastal strand and shoreline by Farrington Highway and a narrow strip of sand. Mokuleia Beach fronts Dillingham Airfield across Farrington Highway. It extends for six miles between Puuiki and Camp Erdman. Outcrops of beach rock occur along the shore and extensive dune ridges occur back from the beach fronting Dillingham Airfield. The dunes are stable and inactive. Winter storm waves cut back and steepen the moderately wide beach.

Offshore, the bottom consists of a limestone reef platform dissected by numerous sand channels (AECOS, 1979). Coral cover is high, providing habitat for large populations of juvenile

fish. Toward the west, coral cover is much reduced with many dead coral heads and much higher algal coverage.

Coastal waters are discolored by fine sediments washed from the land following heavy rains. Sediment loading is not great however, and the major "red water" area to the east does not include the waters off Dillingham Airfield.

Recreational use of these waters is limited by access and, in winter, strong currents. Waters can be quite turbid when surf is high. Fishing, diving, snorkeling, surfing and beachcombing are popular in the area. Pole fishing is the favored fishing technique used, although spearfishing and netting also occur. Green Sea Turtles, a threatened species, are frequently seen offshore.

Airfield improvements will not cross Farrington Highway, so neither the marine resources nor the existing recreational uses of the beach and coastal waters will be directly affected. Erosion control mechanisms will limit runoff and siltation to ocean waters. Elimination of cesspools in favor of septic tanks will remove a potential public health hazard and reduce potential contamination of groundwater and coastal waters.

3.12 AESTHETIC CONSIDERATIONS

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 proposed developments would not impact the visual characteristics of the area because they are all at or near ground level and below existing structures.

SECTION 4.0 SUMMARY OF MAJOR IMPACTS

Direct effects of implementing the proposed Dillingham Airfield improvements are as follows.

- A temporary increase in local noise, surface vehicular traffic, and air pollution due to construction personnel and equipment.
- A short term beneficial impact on the construction industry by the providing of jobs.
- An increase in local solid waste generated during construction.
- Improved drainage structures and decreased flooding of the east end of the runway.
- Improved operational efficiency and safety at Dillingham Airfield.
- Improved utilities service to portions of the airfield.

Indirect effects of implementing the improvements on the environment include the following.

- A small increase in stormwater runoff and change in recharge patterns within the Airport's boundary due to the addition of pavement to previously unpaved areas.

SECTION 5.0 DETERMINATION AND JUSTIFICATION

The "Significance Criteria," Section 12 of Hawaii Administrative Rules Title 11, Chapter 200, "Environmental Impact Statement Rules," were reviewed and analyzed. The conclusions of the analysis are as follows:

1. *The proposed action does not involve irrevocable commitment to loss or destruction of any natural or cultural resource.* The areas affected by the proposed improvements consist primarily of previously disturbed lands overgrown with exotic flora providing little habitat for native wildlife. No significant natural resources would be destroyed or lost. No surface cultural remains were identified on the site. Monitoring for subsurface cultural remains will be required during excavations. If uncovered, these resources will be evaluated by state archaeologists for their significance and a determination made as to their disposition.
2. *The proposed action would not curtail the range of beneficial uses of the environment.* Land use on the airfield and surrounding properties will not change.
3. *The proposed action does not conflict with the state's long-term environmental policies or goals and guidelines.* The State's environmental policies and guidelines are set forth in Chapter 344, Hawaii Revised Statutes, "State Environmental Policy." Two broad policies are espoused: conservation of natural resources, and enhancement of the quality of life. With regard to the former, the proposed project does not consume significant natural resources. It would include mitigative measures to minimize various categories of pollution, while promoting general welfare and creating and maintaining conditions under which man and nature can exist in productive harmony. It will create opportunities for the residents of Hawaii to improve their quality of life through diverse economic activities.
4. *The economic or social welfare of the community or state would not be substantially affected.* The proposed actions will allow further development of the civil general aviation industry on Oahu. The project will result in positive economic impacts without significant negative social consequences.
5. *The proposed action does not substantially affect public health.* The project will have no significant negative impacts on public health. It will improve safety at Dillingham Airfield.
6. *The proposed action does not involve substantial secondary impacts, such as population changes, and effects on public facilities, are not anticipated.* The project is not expected to have any effects on public facilities, and will not indirectly result in any increase in the population of Waialua District.

7. *The proposed action does not involve substantial degradation of environmental quality. No major environmental impacts are expected. There will be minor (insignificant) impacts in the areas of noise, and air quality.*
8. *The proposed action does not involve a commitment to larger actions, nor would cumulative impacts result in considerable effects on the environment. The proposed action is self-contained and phased to allow flexibility in implementation. At this time there are no significant nearby developments which could cause significant cumulative impacts.*
9. *The proposed action does not affect rare, threatened or endangered species or their habitats. The DMR wetland, which is outside of the Airfield's boundary, provides a small amount of marginal habitat for endangered waterbirds. It will not be altered or impacted in any way by the proposed action.*
10. *The proposed action does not detrimentally affect air quality, water quality or ambient noise levels. Air emissions and noise will unavoidably increase as aircraft operations increase, but all appropriate federal and state standards will be met. The potential for contamination of groundwater and coastal waters will be lessened by substitution of septic tank systems for the existing cesspools in the future.*
11. *The project would not affect or likely suffer damage by being located in environmentally sensitive areas, such as flood plains, tsunami zones, erosion-prone areas, geologically hazardous lands, estuaries, fresh waters or coastal waters. Drainage improvements will reduce flooding on the east end of the airfield. Design and construction standards will reflect the possibility of flooding and tsunamis. Coastal waters will benefit by elimination of nearshore cesspools.*
12. *The project does not substantially affect scenic vistas and viewplanes identified in county or state plans or studies. The proposed action is not expected to impact any county or state scenic vista or viewplanes.*
13. *The project does not require substantial energy consumption. Other than energy required for construction, the improvements are largely passive. The number of forecast aircraft flight operations per day is not expected to change significantly with or without the improvements.*

Based on the analyses conducted for the proposed action as described in this EA, the proposed improvements will not have a significant effect on the natural, social, economic, or man-made environmental characteristics of the immediate area, island or State. Therefore preparation of an environmental impact statement for the proposed action is not required.

SECTION 6.0 LIST OF REFERENCES

- Ahuimanu Productions. 1977. "An Ornithological Survey of Hawaiian Wetlands." Prep for U.S. Army, Engineer District, Honolulu.
- Kentron Hawaii, Ltd. 1978. "Oahu General Aviation Master Planning Study." Prep. for Hawaii Department of Transportation, Airports Division.
- National Park Service, Western Region Natural Resources and Research Division, Hawaii Cooperative Park Service Unit. 1990. "Hawaii Stream Assessment: A Preliminary Appraisal of Hawaii's Stream Resources." Rept. R84. Prep. for Hawaii Commission of Water Resource Management.
- Noda, Edward K. and Associates and Aries Consultants Ltd. 1993 "Dillingham Airfield Master Plan and Noise Compatibility Program, Volume I: Master Plan." Prep. for Hawaii Department of Transportation, Airports Division.
- Noda, Edward K. and Associates, Inc. 1998, revised 2000, "Dillingham Airfield Master Plan and Noise Compatibility Program, Volume II: FAR Part 150 - Noise Exposure Maps and Noise Compatibility Program." Prep. for Hawaii Department of Transportation, Airports Division.
- Shirai, Thomas, personal communication with Ben Schlapak, HDOT-AIR, July 2000.
- Timbol, A.S. and J.A. Maciolek. 1978. "Stream Channel Modification in Hawaii, Part A: Statewide Inventory of Streams, Habitat Factors and Associated Biota." Prep. for U.S. Dept. of the Interior, Fish and Wildlife Service, Office of Biological Services, Stream Alteration Project.
- Wilson Okamoto & Associates, Inc. and Aries Consultants Ltd. 1990. "Statewide Airport Systems Plan." Prep for Hawaii Department of Transportation, Airports Division.

SECTION 7.0 LIST OF CONSULTED PARTIES

7.1 PRE-ASSESSMENT CONSULTATION

The following agencies, organizations, utilities and individuals were consulted. Non-substantive (no comment) responses are indicated below with a single asterisk. Responses are indicated below with a double asterisk, and reproduced at the Appendix E. The pre-assessment consultation was performed for the Master Planning process.

FEDERAL AGENCIES

Department of the Army, Headquarters, U.S. Army Western Command**
Department of the Army, United States Army Garrison, Hawaii*
Federal Aviation Administration, Airports District Office
Federal Aviation Administration, Flight Standards**
U.S. Army Corps of Engineers, Pacific Ocean Division
U.S. Army Support Command, Hawaii
U.S. Department of Agriculture, Soil Conservation Service
U.S. Department of Commerce, Hawaiian Islands Humpback Whale
National Marine Sanctuary
U.S. Department of Commerce, National Marine Fisheries Services
U.S. Department of Interior, Fish and Wildlife Service
U.S. Department of Interior, National Park Service

STATE AGENCIES

Board of Land and Natural Resources
Department of Accounting and General Services
Department of Agriculture
Department of Business, Economic Development & Tourism**
Department of Business, Economic Development & Tourism, State Energy Office*
Department of Education**
Department of Hawaiian Home Lands
Department of Health**
Department of Health, Environmental Management Division
Department of Land and Natural Resources, State Historic Preservation Division**
HDH Unicom
Office of Environmental Quality Control**
Office of Hawaiian Affairs**
Office of State Planning**
Statewide Transportation Planning Office

University of Hawaii, Environmental Center
University of Hawaii, Water Resources Research Center

CITY AND COUNTY AGENCIES

Board of Water Supply*
Department of General Planning**
Department of Housing and Community Development*
Department of Land Utilization **
Department of Parks and Recreation
Department of Transportation Services*
Department of Wastewater Management**
Police Department**
Public Works Department*

STATE LEGISLATORS

Senator Lehua Fernandes Salling, Chairperson, Transportation Committee
Senator Robert Bunda, 14th District
Representative Ken Hiraki, Chairperson, Transportation Committee
Representative Alex Santiago, 14th District

COUNCILMEMBERS

Councilmember Mufi Hannemann, Chair, Committee on Economic Development
& Transportation
Councilmember Rene Mansho, Chair, Transportation**

UTILITIES

GASCO, Inc.
Hawaiian Electric Company
Hawaiian Telephone Company**
Honolulu Board of Water Supply
Oceanic Cablevision

ORGANIZATIONS

American Lung Association
Camp Mokuleia
Central YMCA
Citizen Against Noise
Civil Air Patrol
General Aviation Council of Hawaii

Hawaii Helicopter Operators Association
Hawaii Polo Club
Hawaiian Aviation Historical Foundation, Inc.
Honolulu Soaring Club
Hutch Air
Life of the Land
Mokuleia Land Company
Neighborhood Board No. 27
North Shore Aviation Services Corp.
Oahu Soaring, Ltd.
Outdoor Circle
Sierra Club - Hawaii Chapter
Skydive Academy of Hawaii, Inc.
Soar Hawaii, Ltd.
Tandem Hawaii, Inc.

INDIVIDUALS

Mr. Donald Frost
Mr. A. Peter Howell
Dr. Dave Lohmann
Mr. D. Luehring
Mr. Gary Wilson

7.2 RESPONSE TO PRE-ASSESSMENT CONSULTATION

The response letters to the pre-assessment consultation are presented in Appendix E.

7.3 COMMENTS RECEIVED ON DRAFT ENVIRONMENTAL ASSESSMENT

The following is a list of agencies, organizations and individuals who provided comments on the Draft Environmental Assessment, January 2000. The letters and response letters are presented in Appendix F. Those commentators marked with "*" offered substantive comments to the project.

FEDERAL AGENCIES

Department of the Army, U.S. Army Engineer District

STATE OF HAWAII AGENCIES

Department of Business, Economic Development & Tourism
Department of Health*
Office of Environmental Quality Control*
University of Hawaii, Environmental Center*

CITY AND COUNTY OF HONOLULU AGENCIES

Board of Water Supply
Department of Environmental Services
Department of Parks and Recreation
Department of Planning and Permitting*
Department of Transportation Services

INDIVIDUALS AND PRIVATE ORGANIZATIONS

Phillip B. Olsen*
Thomas T. Shirai*

APPENDIX A

**Literature Review and Archaeological
Reconnaissance Survey for Dillingham Airfield
Master Plan Area, Oahu, Hawaii**

LITERATURE REVIEW AND
ARCHAEOLOGICAL RECONNAISSANCE SURVEY FOR
DILLINGHAM AIRFIELD MASTER PLAN AREA, O'AHU, HAWAII

by

Pennie Moblo, M.A.

final report prepared for:

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Honolulu, Hawaii 96814

International Archaeological Research Institute, Inc.
949 McCully St, Suite 5
Honolulu, Hawaii 96826

January 1991

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ABSTRACT

A literature review and archaeological field reconnaissance was undertaken of the Dillingham Master Plan project area to determine the impact of possible future construction on archaeological resources in the area.

Background sources indicate that there was both prehistoric and historical use of the area, particularly along water courses. In a two-day field reconnaissance, the area was found to have been heavily impacted by airfield construction. However, a number of stone structures were found and the potential exists for intact subsurface archaeological remains beneath filled land.

Based on these findings, the following recommendations are made. Prior to any development, (1) the southwestern portion of the project area should be surveyed and the nature and significance of the stone structures in that area should be assessed; (2) subsurface testing should be carried out along stream courses where prehistoric habitation and cultivation may have occurred; and (3) beach sand areas should be tested for burials.

I: INTRODUCTION

At the request of Edward K. Noda and Associates, Inc., Honolulu, Hawaii, a preliminary archaeological planning assessment was undertaken for the Dillingham Airfield Master Plan project area in West O'ahu. The investigation included an archival literature search for archaeological and historical information relevant to the Dillingham Airfield area and its immediate vicinity. A walk-through field reconnaissance of portions of the project area was conducted on June 25 and 26, 1990. This report summarizes the findings of the investigation.

Project Area

The Dillingham Airfield Master Plan project covers an area of approximately 3,400 by 700 meters, including the existing Dillingham Airfield runway (Fig. 1). It is located on the inland side of Farrington Highway, on the lowlying plain at the base of the northern edge of the Waianae Mountains. It falls within the Waialua district, crossing coastal portions of the *ahupua'a* of Ka'ena, Kealia, Kawaihapai, and Mokule'ia.

The Master Plan project area is primarily filled land, with sections of Jaucas sand exposed along its inland boundary (USDA 1972, sheet 33; Fig. 2). Soils in the surrounding area include Lualualei clay, Haleiwa silty clay, and Mokuleia and Pulehu clay loams to the southeast and east and Kaena very stony clay to the south along the base of the mountain range.

The runway at Dillingham Airfield is currently used for general aviation and commercial glider tours. Although the paved airstrip itself is well maintained, some surrounding areas are overgrown in *koa haole* (*Leucaena leucocephala*) and dense grass reaching 2 m in height.

Historical Background

The earliest documented records relating to the project area are grants for Government lands around Mokule'ia that were divided and sold in 1850 (records of original land grant titles, Department of Land and Natural Resources). J. S. Emerson's 1889 map (Emerson 1889) shows the ownership of these grants; however, Emerson believed that the earlier survey maps from which he compiled his data were inaccurate.

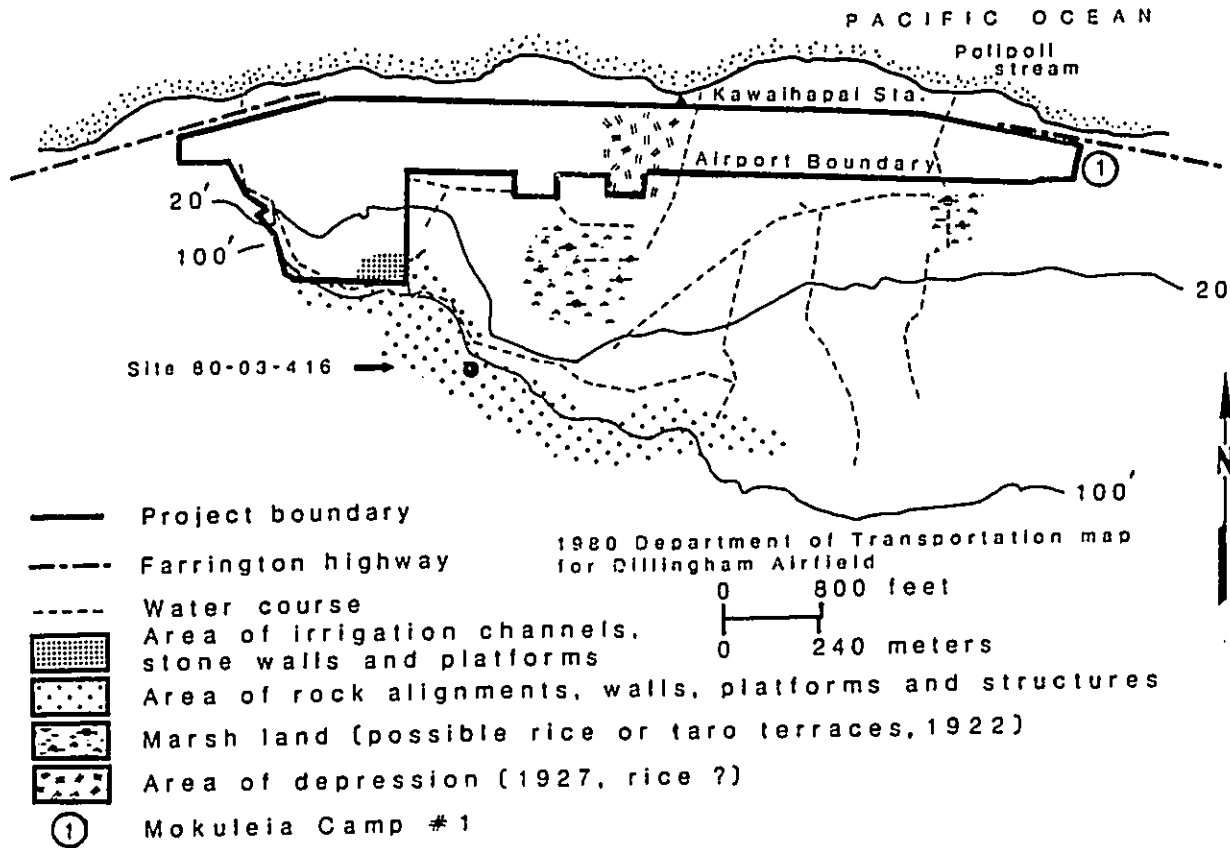
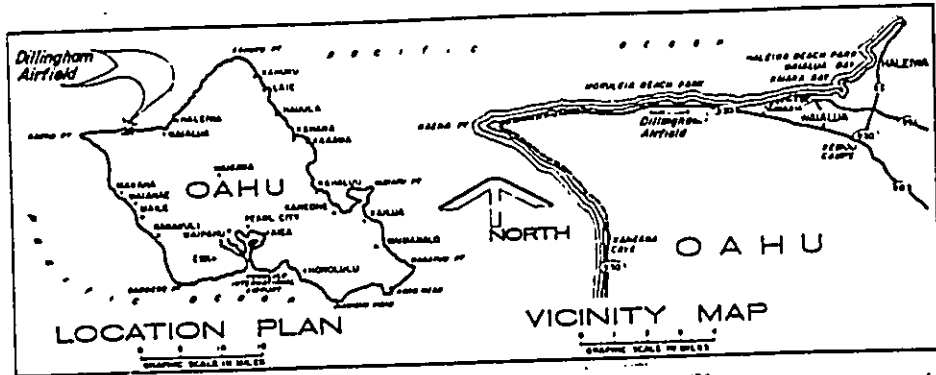
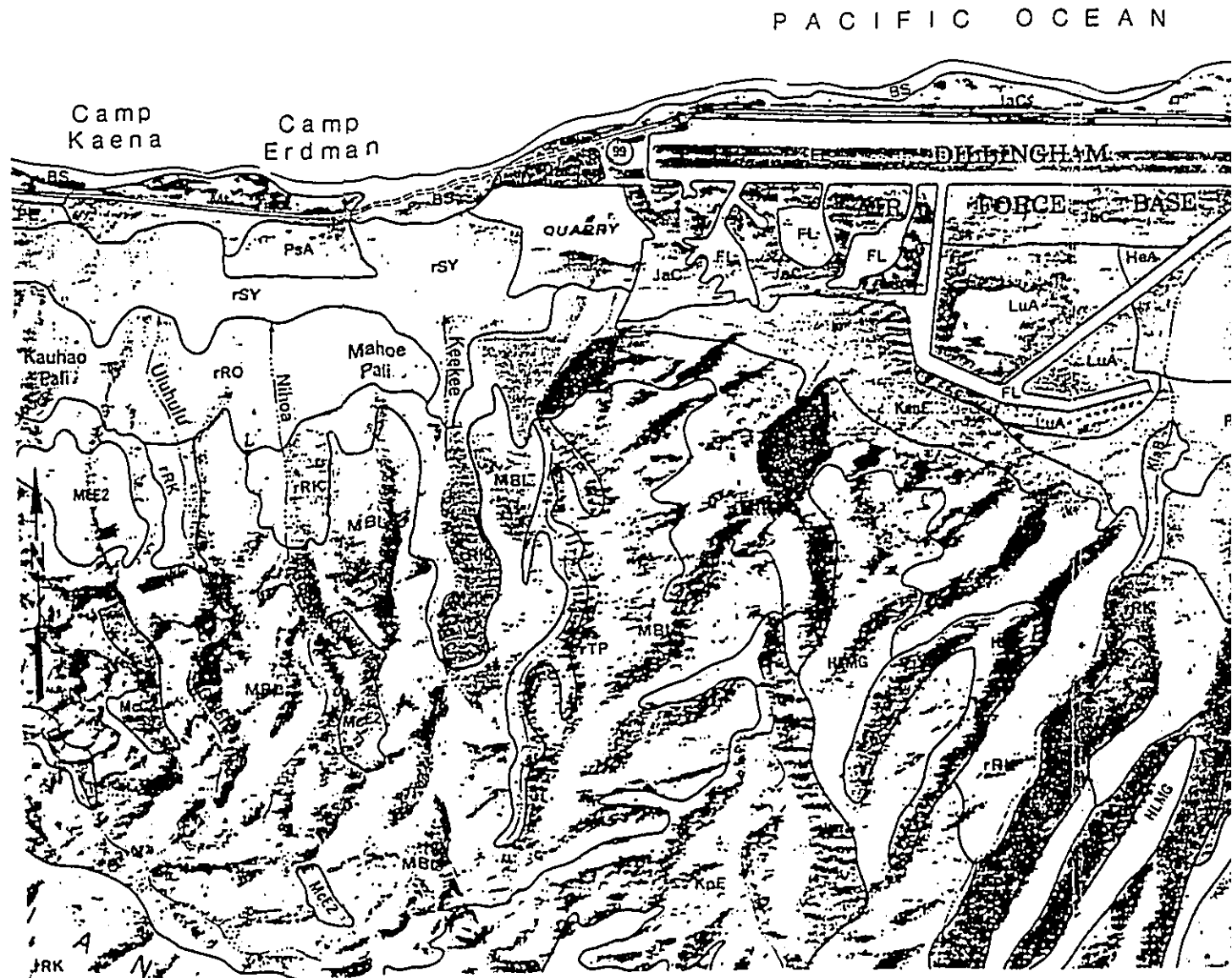


Figure 1. Project area: Dillingham Airfield.

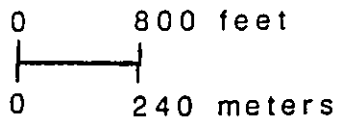
Figure 2. Soil map of Dillingham Airfield and vicinity (from Foote et al. 1972 with additions)



Dillingham Soils BS - Beach FL - Fill land
JaC - Jaucas sand: sandy, single grain soil more than 60 inches deep.
KanE - Kaena, very stony clay used for non-irrigated pasture.

2 with additions).

E A N



dep.

On June 11, 1898, the Oahu Railway and Land Company completed its railroad from Honolulu to Waialua with a station at Kawaihapai. Four months later, on October 11, 1898, the Waialua Agricultural Company was officially established by J. B. Atherton, E. D. Tenney, B. F. Dillingham, W. A. Bowen, H. Waterhouse and M. R. Robinson and sugar production became a major economic activity in the area.

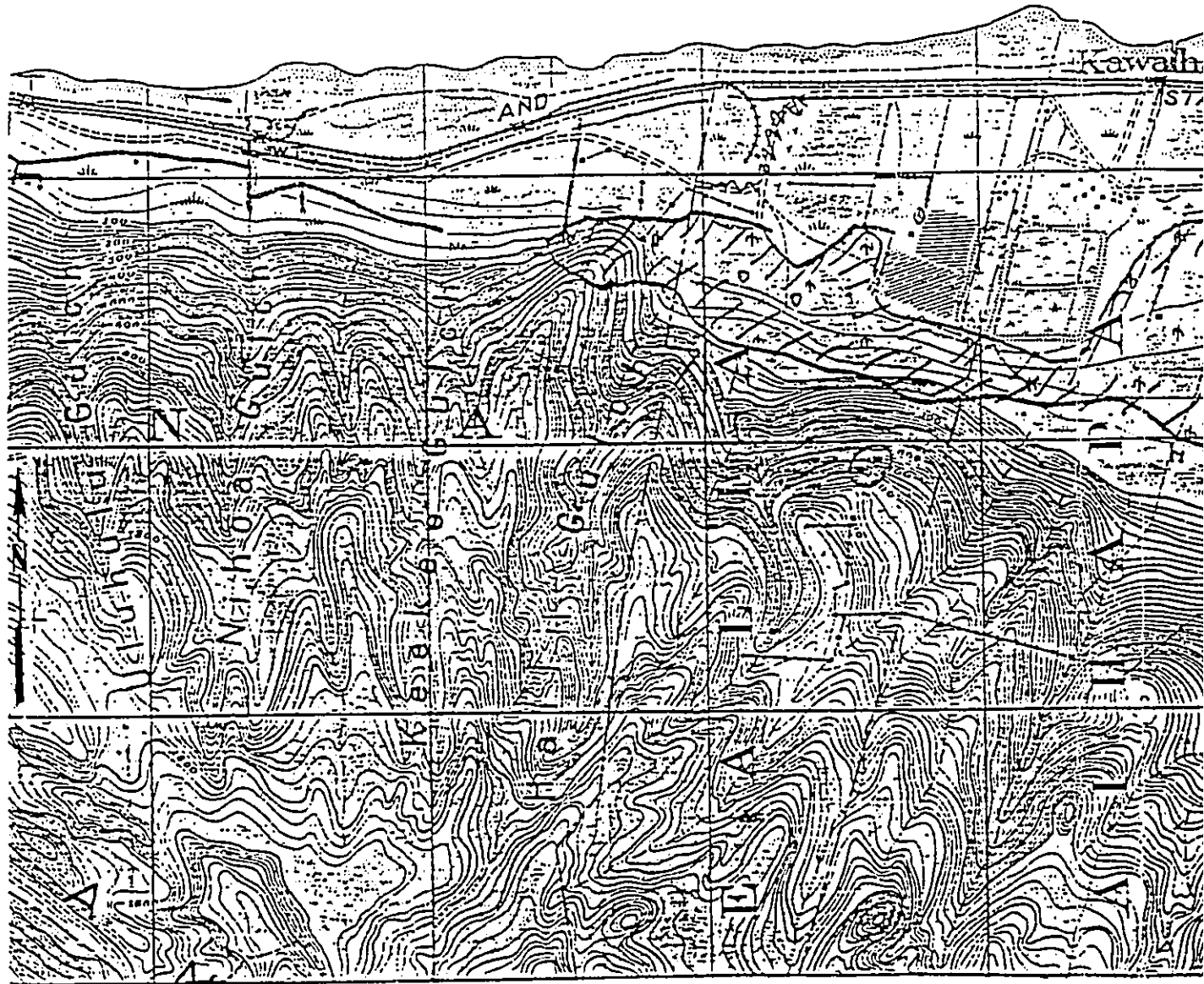
A 1922 Army map (U.S. Army Corps of Engineers 1922) diagrams the community and land use in the vicinity of the project area (Fig. 3). The railroad lies just inland of the coast, along the present alignment of Farrington Highway; a railroad station is located inland of railroad track where it crosses Kawaihapai Stream. A number of structures, which could be a small village, are clustered inland of the railway station. Between the village and the base of the mountain are three, delimited areas of marsh land, each bounded by stone walls and fenced, which suggests that they may have been cultivated in rice or taro; Handy (1940:45) mentions terraces for rice or taro cultivation in this area. The westernmost plot appears to have been irrigated for cultivation. A smaller group of houses and a marsh are shown on the west side of Polipoli River near the Kawaihapai-Mokule'ia boundary (just outside of the project area). There are a number of fences and a few stone walls which appear to be associated with individual property grants.

The 1922 map also shows that the railroad operated by the sugar company ran to the eastern boundary of Kawaihapai and that the surrounding areas were planted in sugar.

Both the Kawaihapai railroad station and adjacent village were probably located within what is now the Master Plan project area. Areas at Kawaihapai that were planted in sugar are inland from the project area, but in Mokule'ia and Kealia, sugar fields extended to the Oahu Railway line that ran along the coast. Reservoirs, water tanks, and flumes used in irrigating the fields are within the project area. The plantation's Mokuleia Camp No. 1 was at the east end of the present runway (see Fig. 1).

By 1927, the sugar company railroad extended into the middle of Kawaihapai, indicating that cultivation may have increased there (USGS 1929 map). The small village at Kawaihapai appears to have continued in existence, at least until 1944 when it was recorded on an Army map (U.S. Army Corps of Engineers 1944).

Seven days after the attack on Pearl Harbor in 1941, Mokuleia Airfield, which was later renamed Dillingham Air Force Base, began operation. By April 1942, its small grass and sand landing strip was developed into an 8,000-foot runway; it








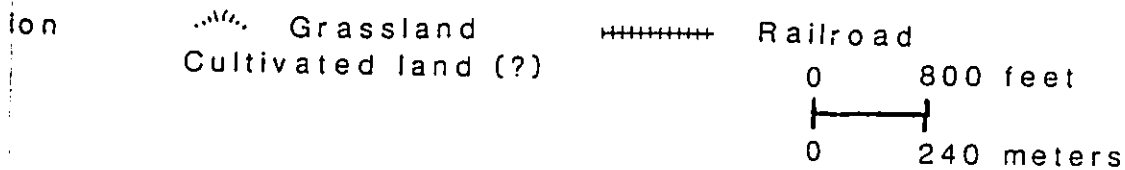
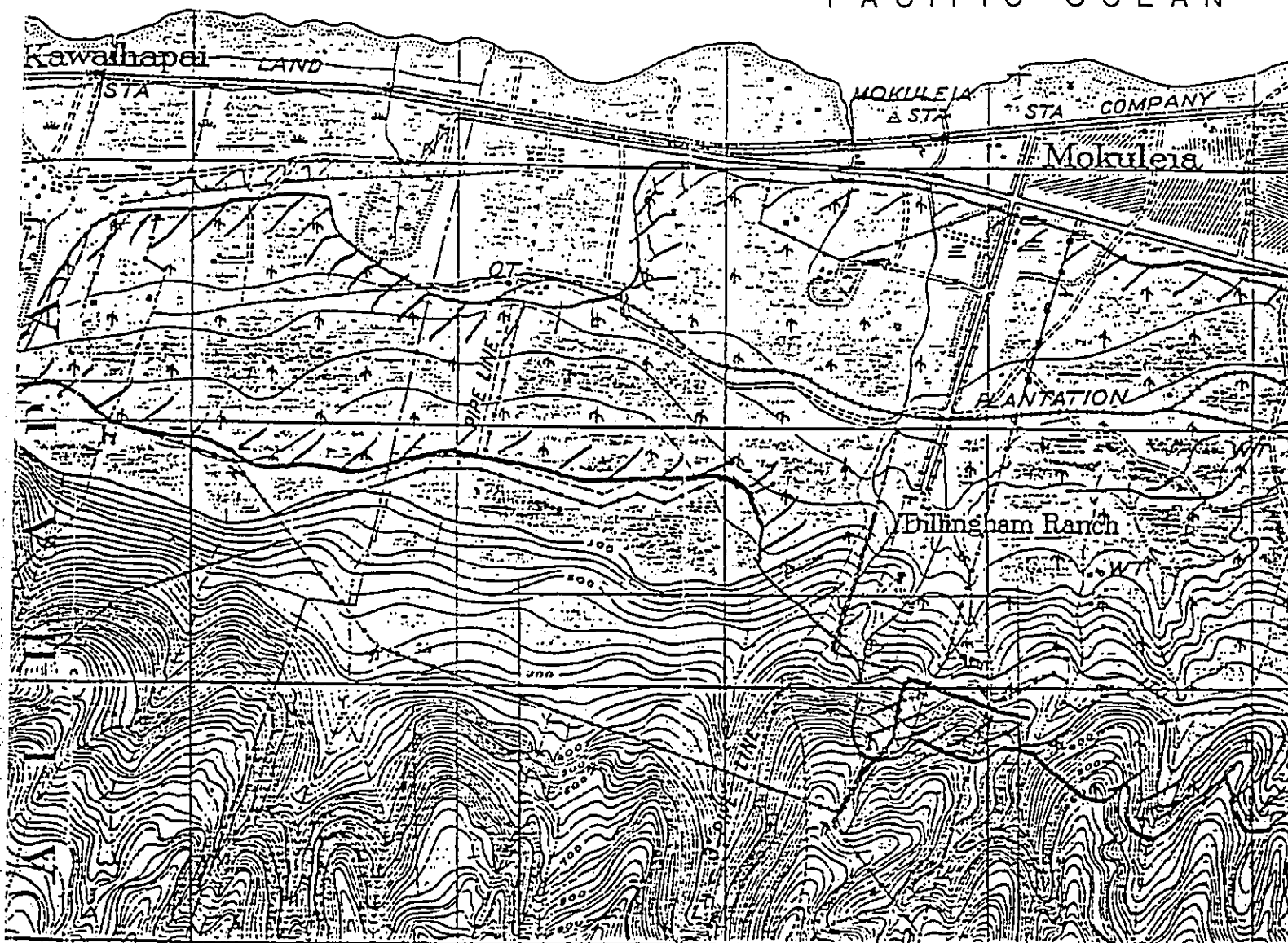
- | | | |
|--|--|---|
|  Marsh land (possible rice or taro) |  Sugar plantation | |
|  Fence |  Trail |  Basalt stone wall |

Figure 3. U.S. Army War Department Fire Control Map, dated 1922 (courtesy of B. P. Bi

PACIFIC OCEAN



eventually became the longest runway in the islands (Allen 1971:226-7). The runway is now used for small private planes and commercial glider tours.

Traditional Land Use in the Project Area

Descriptions of traditional land use in this area come from ethnohistoric and historical sources (Handy 1940; Handy and Handy 1972). Handy (1940) observed lowland terraces on the plain between the cliff and coast, extending from Kawaihapai into Kealia to the west. He notes that Kawaihapai had considerable terraced areas in the lowlands, surrounded by sugar cane, which had been lying fallow for some time. Several terraces were plowed for rice or taro in the summer of 1935. He was told by an inland grower that taro could not be grown in the lowlands due to salt water seepage into the terraces (Handy 1940:85). At one time, however, Kawaihapai Stream watered a sizable area of taro terraces (Handy and Handy 1972:467). The diversion of streams for cane field irrigation may account for the salinity problem in 1940. A worksheet used by Emerson (n.d.) indicates a stream fountainhead, *po'owai o Kealia*, in the vicinity of site 50-80-03-416, which could have been used in irrigating the Kawaihapai-Kealia pondfields.

Although the probable irrigated terraces extended into Kealia, Handy notes that, aside from these terraces, the land in Kealia offered little opportunity for growing anything other than sweet potatoes (1940:85).

Terraces were also located in Mokule'ia, on flat land near the sea; they were watered by an underground flow of fresh water (Handy 1940:85). Although this was essentially sweet potato country, there were at least two extensive sets of taro terraces on coastal land east of the present airfield. Makaleha Stream had an abundance of wild taro in 1935 and was also known for sweet potatoes, bananas, and kava (Handy and Handy 1972:467).

Beatrice Krauss (interviewed by A. Joesting, in Rosendahl 1977:Appendix) believes that the Mokule'ia area may have supported a large population. The area would have been ideal for cultivation because it has a gentle slope that would have permitted the building of taro terraces and an abundant supply of water from the large valleys inland; irrigation ditches would have brought water from either springs or streams for cultivation near the seashore. The lush inland valleys provided the resources for a "streamside culture", described as such because the narrow floors of these valleys required cultivation to be carried out along the sides of streams. She notes that "...near the shore it would have been sweet potatoes, and further back

taro, and then in the shelter of the valleys or at the lee of mountain ranges, bread fruit and bananas and things like that" (Krauss, in Rosendahl 1977:Appendix).

Deep plowing of the lowlands for sugar cane has yielded adzes, 'ulu maika (game stones), and other artifacts that indicate intense settlement of the area (Krauss, in Rosendahl 1977:Appendix).

Previous Archaeological Work

J. G. McAllister surveyed the project area vicinity in the early 1930s as part of a B. P. Bishop Museum-sponsored survey of the island of O'ahu. He found information on a number of archaeological sites in the area, including heiau, fishing shrines, and a village. However, there was little left of these sites in 1930, because their stones had been taken for the construction of historic period walls or had been disturbed by ocean or stream currents (McAllister 1933:127-9).

An archaeological inventory and evaluation of the Dillingham Military Reservation was undertaken by the B. P. Bishop Museum in 1977 (Rosendahl 1977; Yoshinaga 1977). Approximately 65 acres, or 10 % of the installation was surveyed; three sites were identified. Only one of these (50-80-03-416) was possibly relocated in the present reconnaissance (see Section II).

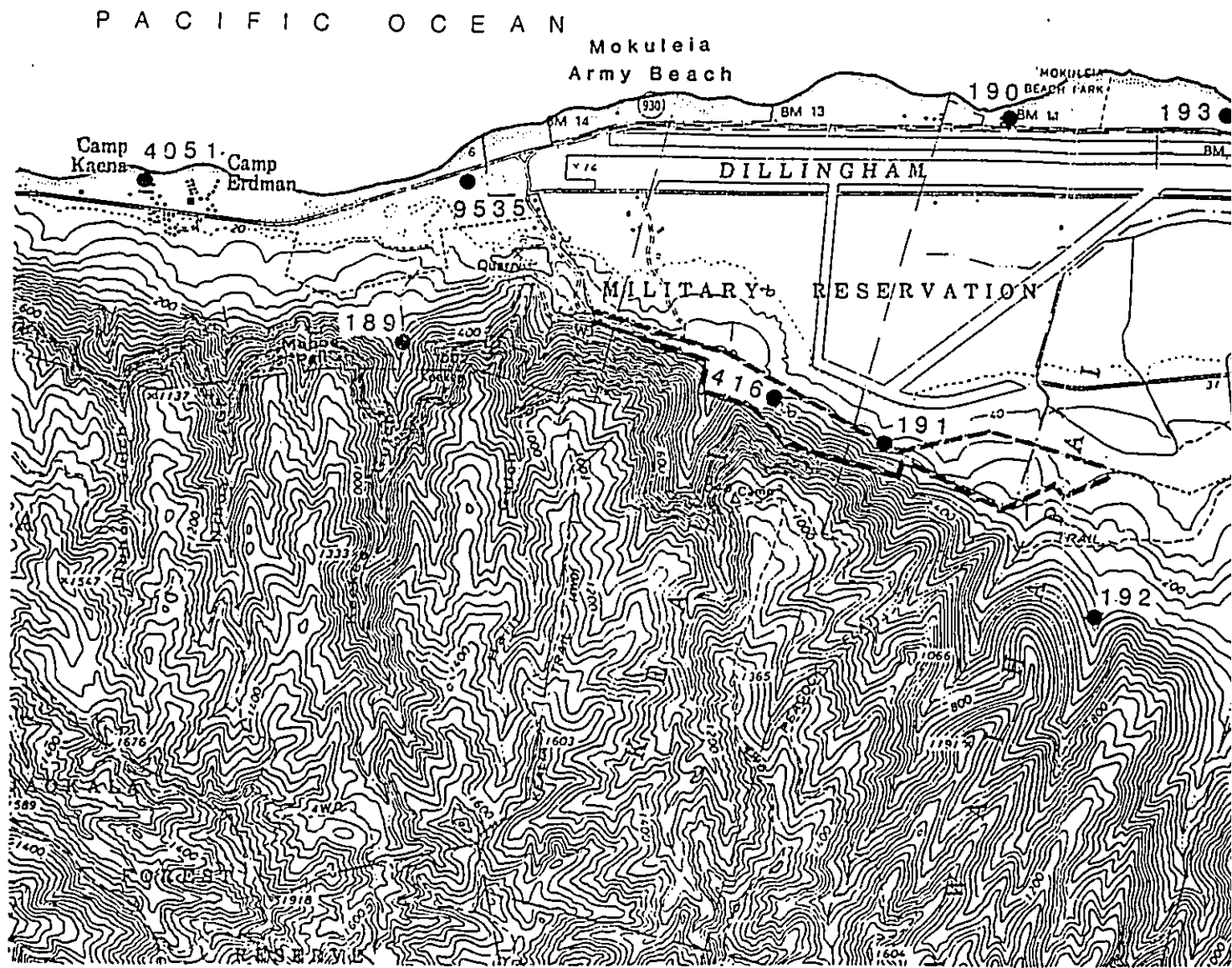
Two burial sites have been recently located in the vicinity of Dillingham Airfield. Site 50-80-03-3747 was uncovered during construction of a boathouse at Camp Mokuleia near the east end of the airfield runway (Bath 1987) and Site 50-80-03-4051 was exposed by heavy surf at Camp Erdman to the west of the project area (Smith 1989).

Known Archaeological Sites

The following sites, listed by Hawaii State site number, have been recorded for Ka'ena, Kealia, Kawaihapai and Mokule'ia. Figure 4 shows the location of these sites.

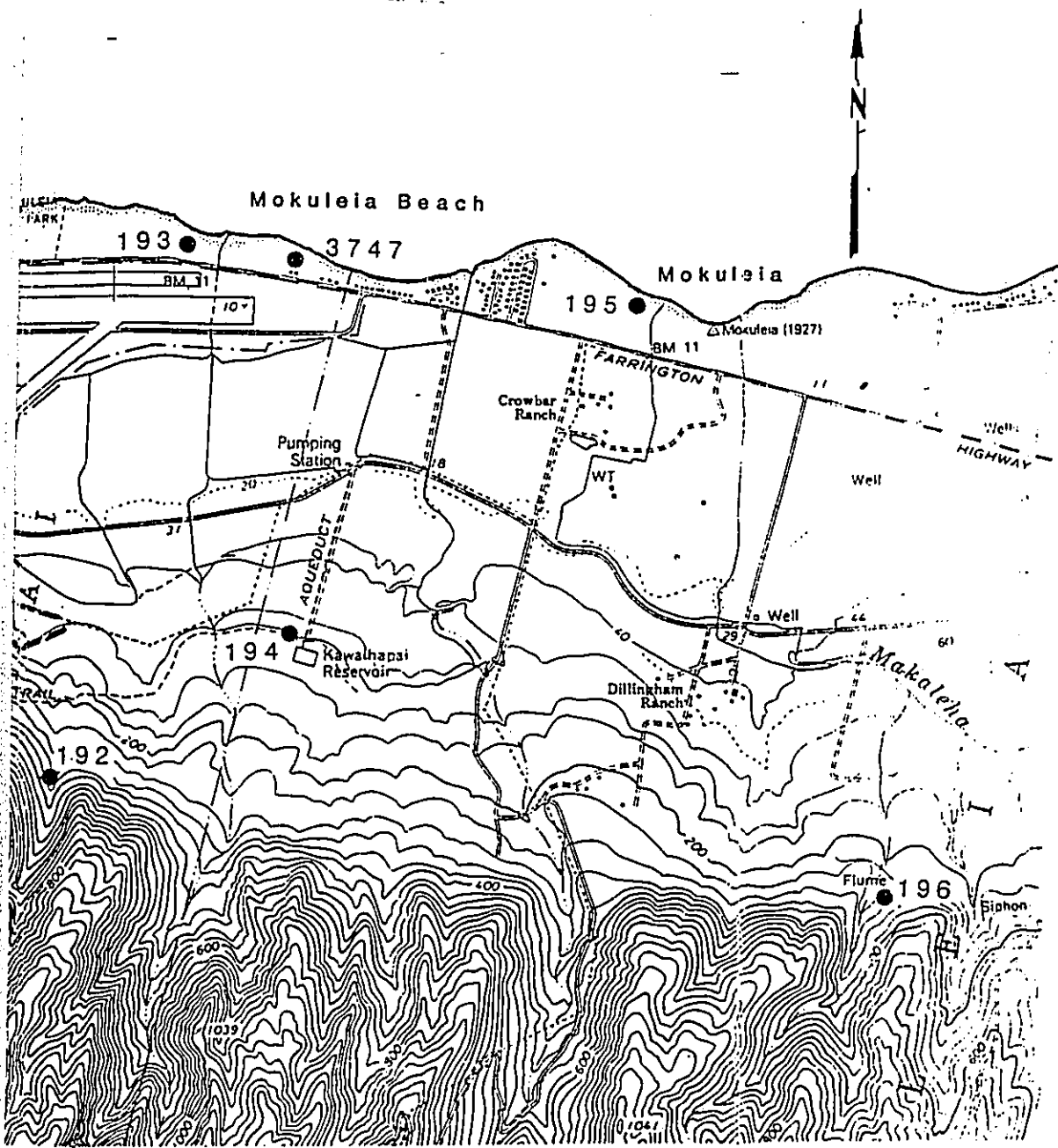
50-80-03-189: Uluhulu Heiau is located in Ka'ena, on the inland side of the sugar cane fields. The scattered remains of the structure observed by McAllister gave little indication of the extent of the structure or internal features. The stones of this structure were apparently used to construct modern walls in the vicinity (McAllister 1933:127-8). It lies outside the Dillingham Master Plan area.

Archaeological Sites
recorded in the vicinity of
Dillingham Military Reservation

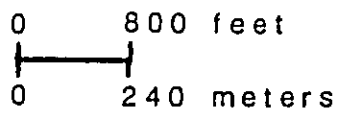


----- Site 416 Area of rock alignments, walls, platforms and structures
1983 U.S.G.S. Map





Figure 4. Location of previously recorded sites



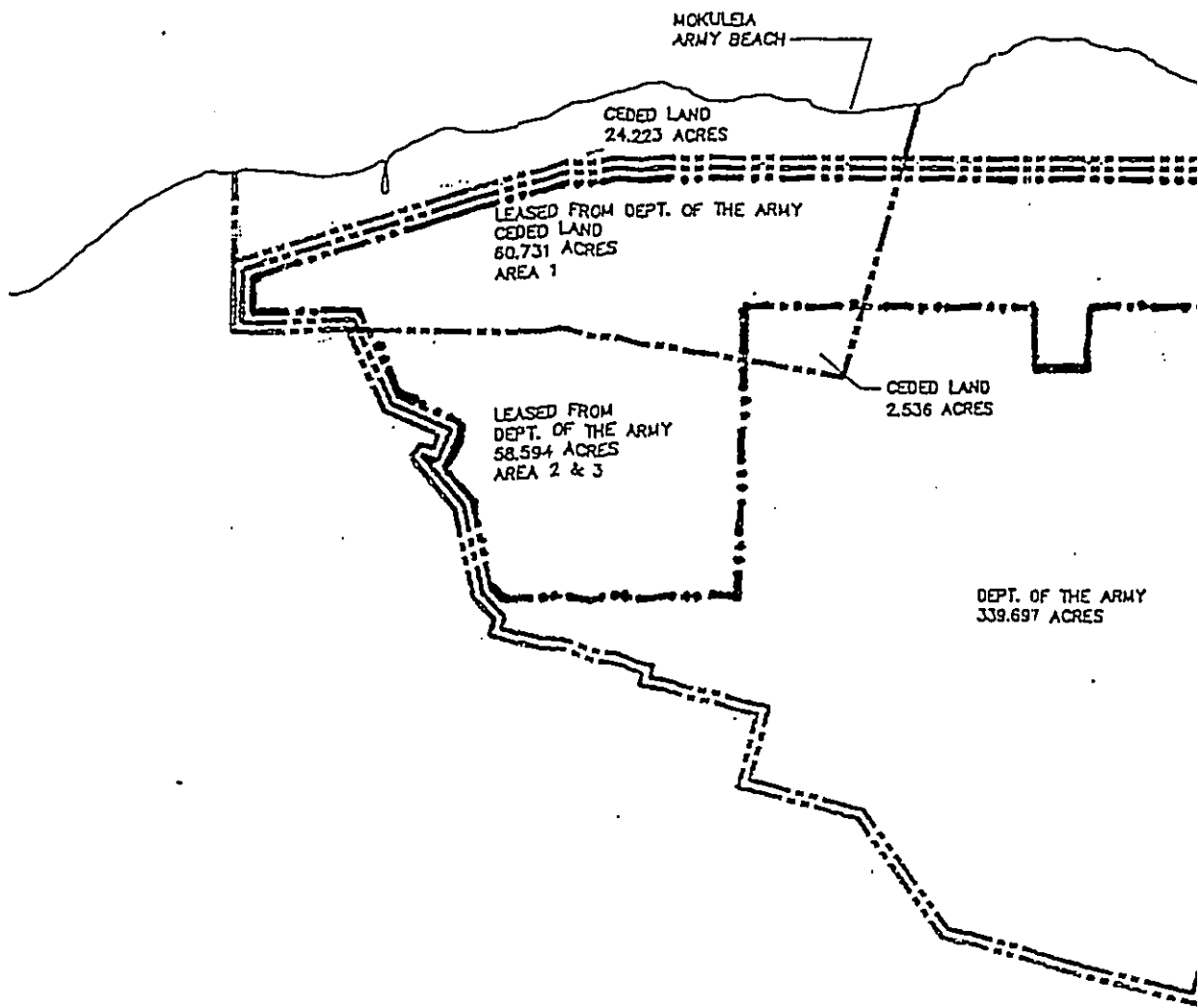
id structures of undetermined form



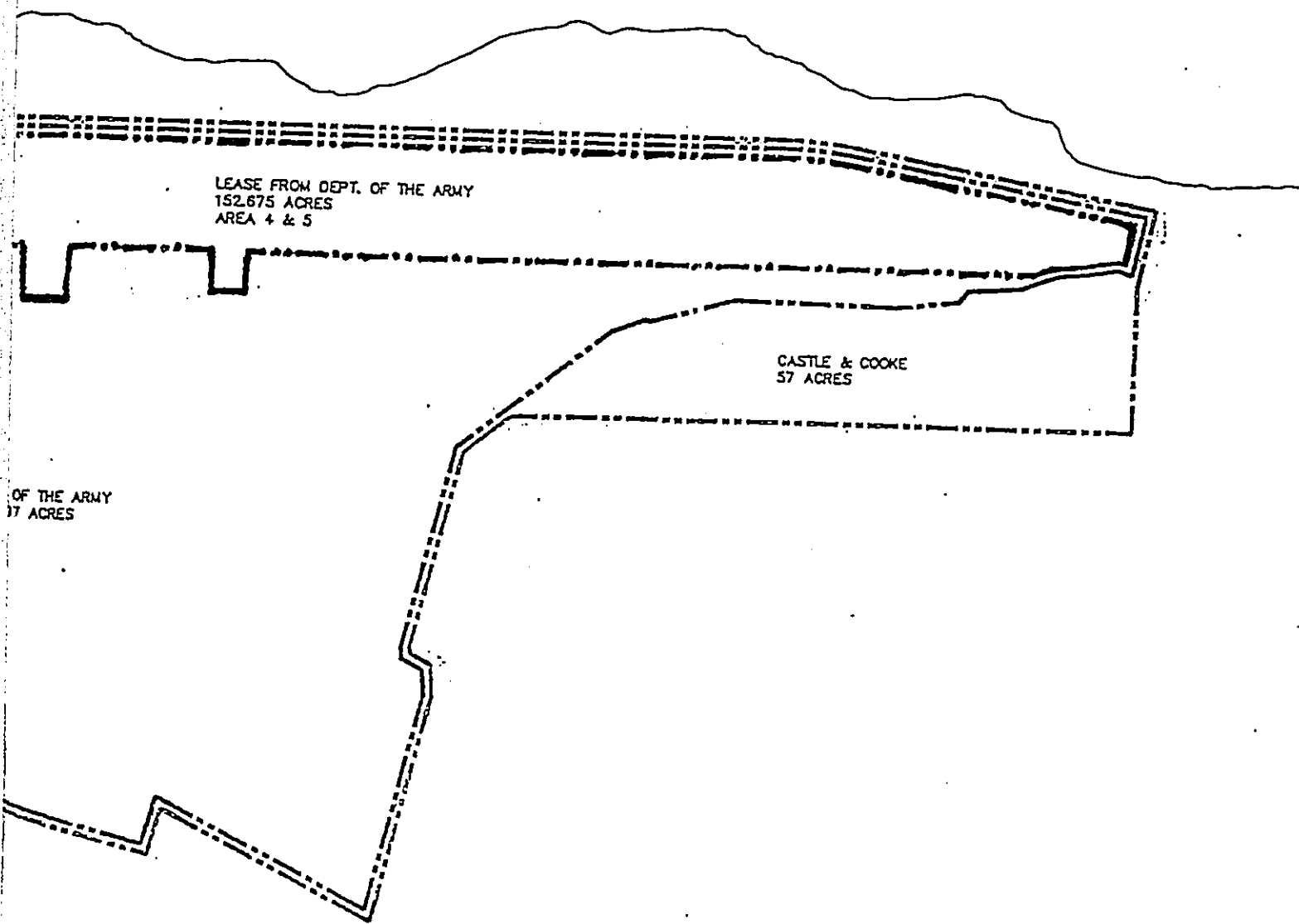
DILLINGHAM AIRFIELD

-  DILLINGHAM MILITARY RESERVATION, 614.233 ACRES
-  EXISTING AIRPORT BOUNDARY, 272 ACRES
-  CEDED LAND, 87.49 ACRES
-  FUTURE AIRPORT BOUNDARY, 671.233 ACRES

P A C I F I C



P I C O C E A N



LEASE FROM DEPT. OF THE ARMY
152.675 ACRES
AREA 4 & 5

CASTLE & COOKE
57 ACRES

OF THE ARMY
37 ACRES

OAHU

*E. K. Noda & Assoc.
Feb. 91*

FIGURE 1

50-80-03-190: Pu'u o Hikili, an *ahua*, was located on the beach below Kawaihapai station. It was evidently a fishing shrine. No evidence of it was found in 1930 (McAllister 1933:128).

50-80-03-191: Kawailoa *Heiau*, in Kawaihapai, had only a portion of its two terraces remaining in 1930. A B. P. Bishop Museum map (Sterling and Summers 1977:128) indicates its location near the inland boundary of the Dillingham Military Reservation, outside the limits of the current project area. The site was not located in the archaeological inventory of 1977 (Rosendahl 1977 v.1:11,2:11); it was believed to lie outside the airfield installation.

50-80-03-192: "Hidden waters," refers to the four hidden waters mentioned in the Hi'iaka chant. The site is inland of Dillingham Airfield, at the base of the mountains (McAllister 1933:129, Sterling and Summers 1977:128), outside of the current project area.

50-80-03-193: Kuakea fishing shrine, in Kawaihapai; it had disappeared by 1930 (McAllister 1933:129).

50-80-03-194: This possible *heiau* site was near the plantation reservoir on the Ka'ena (west) side of Dillingham Ranch in Mokule'ia. McAllister describes it as a "stragglng stone wall near a group of rather large rocks". In his opinion, it suggested a house site rather than a *heiau* and he doubted that it was of any importance (1933:129). The site is located outside the current project area.

50-80-03-195: Kolea fishing shrine, in Mokule'ia, was only an indistinct line of stones in 1930; the rest of the site had been removed (McAllister 1933:129). Kennedy (1987) reports it as destroyed. Neither McAllister nor Kennedy describe how the stones were removed from the structure, but its location in the vicinity of the Dillingham Ranch suggests they might have been used in historical construction activities.

50-80-03-196: The village site in Mokule'ia was, at one time, a large Hawaiian settlement. It was located in a valley on Makaleha Stream to the east of the current project area. Although roaming cattle and water freshets had obliterated many of the remains by 1930, old coconut palms, house sites, and sections of terracing were still evident. The site was thought to have provided stones for the numerous walls of later

construction on the hillside and in the valley (McAllister 1933:129; Sterling and Summers 1977:128). The site lies outside of the current project area.

50-80-03-416: The Kealia-Kawaihapai Complex consists of a series of cultivation terraces, stacked stone walls, and walled enclosures. It is not clear whether they are of historical or prehistoric origin. These may be the terraces referred to by Handy (1940:85). Although an early State site inventory had listed the site as destroyed, it was relocated in the 1977 B. P. Bishop Museum survey (Rosendahl 1977).

Handy describes terraces in the small ahupua'a of Kealia, but also notes that, aside from these terraces, the land offered little opportunity for cultivation other than for sweet potatoes (Handy 1940:85); this implies that the terraces were used for taro. Kealia Stream appears to have had its source in the vicinity (Emerson n.d.), which makes irrigation likely. Handy and Handy (1972:467) mention lo'i (taro ponds) in Kawaihapai which extend into Kealia. The terraces are located within the Dillingham Airfield installation, but appear to be at the edge of or just outside the southwestern portion of the Master Plan area.

50-80-03-3747: Human remains were found during excavation of a boat house foundation at Camp Mokuleia in 1987. The burials contained the remains of 21 individuals of pre-Contact origin (Bath 1987; Pietrusewsky 1988). Two radiocarbon dates (C13 adjusted age) for the site are 510 ± 70 years B.P. and 1180 ± 60 years B.P. The site is on the beach, across Farrington Highway from the Dillingham Airfield.

50-80-03-4051: A single human burial, probably exposed by heavy surf, was found by campers at Camp Harold Erdman, at Ka'ena (west of Dillingham Airfield). The ancient remains, found at the beach site, are those of a four year old child (Smith 1989; Douglas and Pietrusewsky 1989).

50-80-03-9535: Hauone Ko'a fishing shrine in Ka'ena was said to have been on the beach directly shoreward of Ulehulu Heiau. McAllister could find no evidence of the shrine and felt it must have been destroyed, or perhaps was covered with sand, or may have been just one of the stones on the beach (1933:128).

Although only one of the known sites listed above (50-80-03-416) may fall within the Dillingham Airfield Master Plan project area, the others have some relevance in respect to the potential for cultural resources within the project area. The presence of burials and terraces indicates prehistoric occupation of the area, the remains of which could lie yet intact under airport fill.

Site 50-80-03-416 has been evaluated as a site that should be preserved because it has important historic properties as a representative example of its type. The site holds potential for yielding information regarding the cultural history of the region (Yoshinaga 1977:57-60).

II: FIELD RECONNAISSANCE

This section of the report describes the field reconnaissance of the project area, which was carried out by two archaeologists on June 25 and 26, 1990. The purpose of the field work was to evaluate the potential for intact archaeological remains within the project area.

Field Methods and Results

Since the paved runway along the coastal stretch of the Dillingham Airfield installation offered no promise of observable surface features, field investigation was concentrated in the areas along the project area's inland boundary, near stream channels, and in the inland projection of the Master Plan project area at the west end of the airfield. Field investigations amounted to only a pedestrian walk-through of selected areas.

The western portion of the airfield, in the *ahupua'a* of Ka'ena, has been heavily impacted by military construction. Aprons cut into the hillside at the southwest corner of the airfield are overgrown with tall grass and *koa haole*. The hillside appears to have been altered to prevent boulders from tumbling onto the aprons. There is no clear evidence of prehistoric, ranch, or sugar plantation use.

The inland portion of the project area, in the *ahupua'a* of Kealia, has been the least impacted by military use; it is the only area surveyed where archaeological features are clearly visible on the surface. The area, however, is overgrown with grass and vines, making the precise form or function of structures difficult to determine.

Almost all of the features in this inland portion (i.e., southern projection) of the project area are located in the southeast corner, in an area extending roughly 75 meters from the south fence and 150 meters from the east boundary. Most of these features appear to be related to irrigation for sugar cane cultivation or ranching. These include a gully or eroded flume along the base of the cliffs at the south edge of the project area, a rock-lined ditch about 50 cm wide and deep with a concrete sluice gate frame, and low walls along irrigation channels. Rock piles observed along the channel might also have functioned in water control. A set of concrete foundations were found near the inland boundary of the project area.

In addition to the modern structures, a number of unmortared stone structures were observed. These include platforms (ranging in size from approximately 3 by 4 m to approximately 5 m square), rough boulder alignments, piled stones, and low cobble walls. Historical trash, especially bottles and fencing wire, was spread throughout the area. It appears that the structures are historical in origin, but dense vegetation made precise analysis impractical in the time allotted for fieldwork. Some of the structures have been impacted by bulldozing along the property perimeter.

The portion of the Master Plan project area that falls within the *ahupua'a* of Kawaihapai is within the currently used landing field area; no surface archaeological features are visible. Military buildings had been constructed in the area immediately inland from the project area. Although the bed of Kawaihapai Stream could not be located, a swampy area was observed in the location where a possible pondfield was shown on the 1929 USGS map.

Unlike Kawaihapai Stream, Polipoli River in Mokule'ia is still identifiable, although its course has been altered by decades of diversion to the cane fields bordering the airfield. The river disappears into tall grass at the inland boundary of the project area, passing through a culvert to the other side of the runway.

A cut in the bank along Polipoli River near Farrington Highway was examined for subsurface deposits. A considerable silt deposit beneath the Dillingham Airfield runway indicates that construction at the airfield may have had only minimal subsurface disturbance. This suggests that there is potential for intact buried cultural deposits beneath airfield facilities.

Summary

The Dillingham Master Plan project area and its immediate vicinity has been greatly altered by filling, paving, and building construction in its use as a military and civilian airfield for over 40 years. Because of this, it was not expected that archaeological features would be readily visible on the surface. However, documentary sources indicate historical and probable prehistoric utilization of the land, especially along water courses. The object of the field reconnaissance was to check for the remains of irrigated cultivation, probable prehistoric and known historical habitation sites, and ancient burial grounds.

Field inspection revealed that archaeological features, primarily related to historical sugar cane cultivation, remain in the southeast corner of the inland portion (or projection) of the project area (Fig. 1). A swampy area, matching the 1929 USGS map location of a possible pondfield, was also found.

An attempt was made to locate Site 50-80-03-416, the series of cultivation terraces, stacked stone walls, and walled enclosures of the Kealia-Kawaihapai Complex. Stone structures were found in the area indicated for the site, but dense vegetation and its location at the edge of and outside the project area made investigation of the extent and nature of the complex impractical for this survey. Whether the features at this site are of historic or prehistoric origin was not determined in the 1977 survey which first identified them (Rosendahl 1977).

A series of rough rock walls, probably associated with historic land grants and irrigation channels, extend more or less continuously along the base of the mountains into the Master Plan project area. More intense research is needed in evaluating these features to determine site density, function, and age.

Examination of a bank cut along Polipoli River indicates that airfield construction may be surficial and that intact subsurface cultural deposits may exist within the project area.

III: CONCLUSION AND RECOMMENDATIONS

This section of the report summarizes the nature of archaeological remains in the Master Plan project area and presents recommendations for future archaeological work.

Conclusion

The literature research and field reconnaissance indicates that there was prehistoric and historical land use within the Master Plan project area, with the control of water by irrigation appearing to have been an important element. Portions of the State registered agricultural complex designated Site 50-80-03-416, which has been recommended for further study and preservation (Rosendahl 1977; Yoshinaga 1977), was relocated at the edge of and to the south and southeast of the project area. Other archaeological features were also located.

The "streamside culture" described by Krauss (in Rosendahl 1977:Appendix) could have supported a large population along the Polipoli River and would have been possible, on a smaller scale, along Kawaihapai and Kealia Streams. Such streamside agricultural systems combined planting areas along streams in the narrow valleys and irrigation ditches that transported water to taro pondfields on the gradual slopes of the lowlands.

Using Site 50-80-03-196 along Makaleha Stream as a model for Krauss' streamside culture, we might expect utilization of the lowlands and perhaps a village to be found on Kawaihapai Stream or Polipoli River. Polipoli River still furnishes water to the cane fields in the area and it seems very likely that there were prehistoric sites along its banks; such sites may be yet intact below the Dillingham Airfield. However, the course of Polipoli River has been altered for sugar cane irrigation, making the location of possible archaeological sites difficult.

Burial Site 50-80-03-3747, which was located near the mouth of Polipoli River, is also suggestive of a pre-Contact occupation in this area. Radiocarbon dates on human remains from this site are 510 ± 70 and 1180 ± 60 years B.P. (Pietrusewsky 1988).

A number of cultural features from the sugar plantation era are identified on historical maps of the area. The most conspicuous feature is the Oahu Railway, which runs along the coastal boundary of the project area. Evidence of the cultivation of sugar, including water tanks, flumes and a plantation camp, are also seen on the maps. In the *ahupua'a* of

Kealia, there were roads, stone walls along grant boundaries, and water tanks. The 1922 map shows a train station at Kawaihapai, as well as a possible village immediately inland (near the inland boundary of the Master Plan project area). The east boundary of Dillingham Airfield crosses the location of the Mokule'ia plantation camp. Although none of these features remains on the surface, subsurface testing of the area might reveal building foundations and trash pits associated with these mapped features. The remains of the railway's Kawaihapai station, the surrounding community, and the Mokuleia plantation camp may be buried under airport fill or paving.

The historical maps also indicate an irrigated rice or taro field just outside of the project area, as well as associated features, such as drainage ditches, within the project area. The 1929 USGS map shows a large depression near the railway station; its origin and use, however, are not discernible from the maps. The depression lies within the current Master Plan area. There appears to have been an historic taro field on the Polipoli River in Mokule'ia, with a number of nearby buildings. The pondfield appears to be outside the Master Plan area, but the buildings are on the inland boundary.

Much of the Master Plan project area lies on the sandy deposit of former beaches (see Fig.2). Prehistoric and historical Hawaiian burials are a common occurrence in beach sand deposits such as those in the project area. Burial Site 50-80-03-3747 was uncovered at the eastern edge of the airfield runway, suggesting that there may be more burials along the coastal edge of the project area.

Recommendations

Prior to any development within the Master Plan project area, the following recommendations should be implemented:

1. The inland, southwestern projection of the project 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 need to be determined; an assesement of their significance needs to be made.
2. Areas along Polipoli River and Kawaihapai Stream should be tested for subsurface cultural deposits. Historical settlements are known to have existed along these streams; there is potential for prehistoric habitation and irrigated pondfield sites as well.

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

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APPENDIX B

**Air Quality Assessment for the
Dillingham Airfield Master Plan**

AIR QUALITY STUDY
FOR THE DILLINGHAM AIRFIELD
MASTER PLAN

MOKULEIA, OAHU

Prepared for:
Edward K. Noda and Associates

February 1995



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FOR THE DILLINGHAM AIRFIELD
MASTER PLAN

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1.0 SUMMARY

The Airports Division of the State of Hawaii Department of Transportation has developed a Master Plan to accommodate the forecast growth in aviation demand at Dillingham Airfield located near Mokuleia on the island of Oahu. Major elements of the Master Plan include relocating and upgrading parachuting facilities, overlaying airfield pavements, adding a helipad for civil use, upgrading existing hangars and increasing hangar space and apron tiedowns, setting aside land for a private air museum, adding ground vehicle parking spaces, increasing fuel storage capacity, improving airfield utilities, upgrading facilities for fixed base operators and planning for an eventual air traffic control tower, navigational aids and a second parallel runway. The Master Plan is designed to meet aviation demand forecasts through the year 2010. The purpose of this study was to describe existing air quality in the project area and to assess the potential short- and long-term air quality impacts that could result from construction and use of the proposed facilities as planned. Measures to mitigate potential impacts are suggested where possible and appropriate.

Both federal and state standards have been established to maintain ambient air quality. At the present time, six parameters are regulated including: particulate matter, sulfur dioxide, nitrogen dioxide, carbon monoxide, ozone and lead. Hawaii state air quality standards are more stringent than the comparable national limits except for the standards for sulfur dioxide and particulate matter, which are set at the same levels.

Regional and local climate together with the amount and type of human activity often determine the air quality of a given location. The climate of the project area is very much affected by its coastal, northshore location near the northern end of the Waianae

Mountains. The Koolau Mountains to the northeast partially shelter the site from the northeast trade winds, while the nearby Waianae Mountains cause winds over the site to come predominantly from a more easterly direction and substantially shelter the site from occasional strong Kona (south) winds during winter. When the larger scale trade winds or Kona winds are weak or absent, small scale landbreeze-seabreeze and/or mountain-induced circulations may develop. Based on historical data for Mokuleia Airfield, wind speeds typically vary between about 5 and 15 miles per hour, although there can be prolonged periods of higher or lower wind speeds. Temperatures in this area of Oahu are generally slightly cooler than other parts of the island with average daily temperatures ranging from about 64°F to 82°F. The extreme minimum temperature recorded at nearby Waialua is 47°F, while the extreme maximum temperature is 99°F. Rainfall in the area can be highly variable. Monthly rainfall has been measured to vary from as little as a trace to as much as 13 inches. Average annual rainfall amounts to about 29 inches with summer months being the driest.

Occasional dust and smoke from local agricultural operations are probably the dominant factors currently affecting air quality in the project area. Aside from the subject airfield, few other sources of air pollution exist in the area. Virtually no air quality monitoring data are available for this area of Oahu, but based on what little data are available, it appears likely that both state and national ambient air quality standards are currently being met, except possibly for occasional exceedances due to agricultural activities.

If the proposed project is given the necessary approvals to proceed, it is inevitable that some short- and long-term impacts on air quality will occur either directly or indirectly as a consequence of project construction and use. Short-term impacts from

fugitive dust will likely occur during project construction phases. To a lesser extent, exhaust emissions from stationary and mobile construction equipment and from workers' vehicles and excess exhaust emissions from the disruption of traffic may also affect air quality during the period of construction. State air pollution control regulations require that there be no visible fugitive dust emissions at the property line. Hence, an effective dust control plan must be implemented to ensure compliance with state regulations. Fugitive dust emissions can be controlled to a large extent by watering of active work areas, use of wind screens, keeping adjacent paved roads clean, and by covering of open-bodied trucks. Other dust control measures could include limiting the area that can be disturbed at any given time and/or mulching or chemically stabilizing inactive areas that have been worked. Paving and landscaping of project areas early in the construction schedule will also reduce dust emissions. Exhaust emissions from combustion engines can be largely mitigated by moving construction equipment and workers to and from the project site during off-peak traffic hours.

Long-term impacts on air quality could potentially occur as a result of emissions emanating from both aircraft and automobile traffic coming to and from the airfield. To assess the significance of emissions that would be associated with expanded aircraft operations, an emissions inventory was prepared detailing annual emissions of carbon monoxide, nitrogen oxides, hydrocarbons, sulfur oxides and particulate matter. Emission estimates both for the 1989 base year and for future levels of operations were then compared to the state-defined significant emission rates. This comparison indicated that the 1989 base year emissions of carbon monoxide exceeded the significant emission rate while emissions of other air pollutants were below the significant levels. In the year 2010 scenario that assumes some general aviation operations are relocated to Dillingham Airfield from other Oahu airfields,

carbon monoxide emissions were estimated to more than double compared to the 1989 level, thus further exceeding the significant emission rate, and the net increase in emissions would also exceed the significant emission rate. Other air pollution emissions would increase by nearly the same amount for the 2010 with relocated operations scenario, but the emission rates would remain below the significant levels.

Because the net increase in carbon monoxide emissions between 1989 and the year 2010 operations was estimated to exceed the significant emission rate, potential ambient air quality impacts resulting from these emissions were assessed using an atmospheric dispersion model. The results of this assessment indicated that in the worst case the national ambient air quality standards for carbon monoxide would be met along the airfield boundary in the year 2010, but that the more stringent state standards could be exceeded depending on airfield capacity, the level of operations and the time of peak-hour activity. In preparing the worst-case assessments for both 1989 and 2010 scenarios, it was assumed that: (1) airfield boundaries remained unchanged, (2) a single airfield runway existed, and (3) peak-hour operations coincided with worst-case atmospheric dispersion conditions. Presently, peak-hour operations occur during the late morning or early afternoon when dispersion conditions are relatively good. If future peak-hour operations at the airfield continue to occur during midday, then even with only a single runway and the level of activity which assumes relocated operations from other airfields, the more stringent state standards (which set concentration limits at one-fourth to one-half of the national standards) would likely be met in the year 2010. The proposed second runway would serve to reduce queue delay times and thus substantially reduce ambient air quality impacts. An airfield layout plan that maximizes the distance between aircraft queuing areas and airfield boundaries will help to minimize offsite air pollution concentrations.

2.0 INTRODUCTION AND PROJECT DESCRIPTION

The Airports Division of the State of Hawaii Department of Transportation (HDOT-A) has developed a Master Plan [Ref. 1] to accommodate projected growth in aircraft operations at Dillingham Airfield. The period being considered in the Master Plan extends from the present through the year 2010.

Dillingham Airfield is located near Mokuleia within the Waialua District on the island of Oahu. As indicated in Figure 1, the airfield is situated immediately mauka of Farrington Highway adjacent to Mokuleia Beach Park on the north shore of Oahu. Presently, it is comprised of a single 9,000-foot by 75-foot runway with a 40-foot wide parallel taxiway. Except for wind cones, there are no airfield lights or other navigational aids. Two small terminal areas exist on the north and south sides of the west end of the runway along with hangars, communications, maintenance, fuel storage, parking and other facilities, and a parachute drop zone exists in the runway protection zone on the east end of the runway. General aviation activities, by both powered and glider aircraft, account for most of the operations at the airfield, while military aircraft operations account for the remainder. Civil aviation activity takes place at Dillingham Airfield during daylight hours only; military activity occurs during both daytime and nighttime hours. The majority of the civilian powered aircraft are small, fixed-wing and single-engine aircraft; military aircraft are mostly helicopters. In 1992, there was a total of 97,278 daytime operations at Dillingham Airfield, of which 61,979 were civilian powered aircraft, 30,393 sailplanes and 4,906 military aircraft. No figures for nighttime military operations are available.

With the anticipated closure of Ford Island Auxiliary Landing Field (ALF) to civilian use and increased traffic and operating costs at Honolulu International Airport (HIA), total operations at Dillingham Airfield are expected to increase to 226,000 in 2010, of which 220,000 will be civilian and 6,000 military. After near-term improvements are made, it is estimated that the annual service volume (capacity) of the single runway will be 305,000 operations. Near- and long-term improvements recommended in the Master Plan, either because of operational and safety considerations or because of aviation demand forecasts, include: relocating and upgrading parachuting facilities, overlaying airfield pavements, adding a helipad for civil use, upgrading existing hangars and increasing hangar space and apron tiedowns, setting aside land for a private air museum, adding ground vehicle parking spaces, increasing fuel storage capacity, improving airfield utilities, and upgrading facilities for fixed base operators. Forecast aircraft operations also indicate the eventual need for an air traffic control tower and navigational aids, and a second parallel runway is also being considered.

The purpose of this study was to evaluate the potential air quality impacts of the proposed project and recommend mitigative measures, if possible and appropriate, to reduce or eliminate any degradation of air quality in the area. Before examining the potential impacts of the proposed project, a discussion of ambient air quality standards is presented and background information concerning the regional and local climatology and the present air quality of the project area is provided.

3.0 AMBIENT AIR QUALITY STANDARDS

Ambient concentrations of air pollution are regulated by both national and state ambient air quality standards (AAQS). National

AAQS are specified in Section 40, Part 50 of the Code of Federal Regulations (CFR), while State of Hawaii AAQS are defined in Chapter 11-59 of the Hawaii Administrative Rules. Table 1 summarizes both the national and the state AAQS that are specified in the cited documents. As indicated in the table, AAQS have been established for six air pollutants. These regulated air pollutants include: particulate matter, sulfur dioxide, nitrogen dioxide, carbon monoxide, ozone and lead. National AAQS are stated in terms of primary and secondary standards. National primary standards are designed to protect the public health with an "adequate margin of safety". National secondary standards, on the other hand, define levels of air quality necessary to protect the public welfare from "any known or anticipated adverse effects of a pollutant". Secondary public welfare impacts may include such effects as decreased visibility, diminished comfort levels, or other potential injury to the natural or man-made environment, e.g., soiling of materials, damage to vegetation or other economic damage. In contrast to the national AAQS, Hawaii State AAQS are given in terms of a single standard that is designed "to protect public health and welfare and to prevent the significant deterioration of air quality".

Each of the regulated air pollutants has the potential to create or exacerbate some form of adverse health effect or to produce environmental degradation when present in sufficiently high concentration for prolonged periods of time. The AAQS specify a maximum allowable concentration for a given air pollutant for one or more averaging times to prevent harmful effects. Averaging times vary from one hour to one year depending on the pollutant and type of exposure necessary to cause adverse effects. In the case of the short-term (i.e., 1- to 24-hour) AAQS, both national and state standards allow one exceedance per year.

State of Hawaii AAQS are in some cases considerably more stringent than comparable national AAQS. In particular, the State of Hawaii 1-hour AAQS for carbon monoxide is four times more stringent than the comparable national limit, and the state 1-hour limit for ozone is more than two times as stringent as the federal standard.

Hawaii AAQS for sulfur dioxide were relaxed in 1986 to make the state standards essentially the same as the national limits. In 1993, the state also revised its particulate standards to follow those set by the federal government. It has been proposed in various forums that the state also relax its carbon monoxide standards to the national levels, but at present there are no indications that such a change is being considered.

4.0 REGIONAL AND LOCAL CLIMATOLOGY

Regional and local climatology significantly affect the air quality of a given location. Wind, temperature, atmospheric turbulence, mixing height and rainfall all influence air quality. Although the climate of Hawaii is relatively moderate throughout most of the state and most of the year, significant differences in these parameters may occur from one location to another. Most differences in regional and local climates within the state are caused by the mountainous topography.

Hawaii lies well within the belt of northeasterly trade winds generated by the semi-permanent Pacific high pressure cell to the north and east. On the island of Oahu, the Koolau and Waianae Mountain Ranges are oriented almost perpendicular to the trade winds, which accounts for much of the variation in the local climatology of the island. Mokuleia, the site of the proposed project, is located along Oahu's north shore near the windward

slope of the Waianaes near the northern end of the range. Long-term weather data are available both from Mokuleia and from Waialua, located a few miles to the east of the project site.

Historical wind frequency data for Mokuleia Airfield (now called Dillingham Airfield) are given in Table 2. These data are based on hourly observations of wind speed and direction collected between 1942 and 1945. As indicated in the table, the Dillingham Airfield area has an annual prevailing wind direction from the east. On an annual basis, 22.4 percent of the time the wind is from the east, and more than 50 percent of the time it is in the northeast quadrant. Winds from the south are infrequent occurring only a few days during the year and mostly in winter in association with Kona storms; the Waianae Mountains to the south substantially shelter the area from these winds. Wind speeds average about 8 knots (9 mph) and mostly vary between about 5 and 15 knots (6 and 17 mph). Calms occur about 9 percent of the time.

Air pollution emissions from motor vehicles, the formation of photochemical smog and smoke plume rise all depend in part on air temperature. Colder temperatures tend to result in higher emissions of contaminants from automobiles but lower concentrations of photochemical smog and ground-level concentrations of air pollution from elevated plumes. In Hawaii, the annual and daily variation of temperature depends to a large degree on elevation above sea level, distance inland and exposure to the trade winds. Average temperatures at locations near sea level generally are warmer than those at higher elevations. Areas exposed to the trade wind tend to have the least temperature variation, while inland and leeward areas often have the most. Dillingham Airfield's north-shore location results in a relatively moderate temperature profile compared to other locations around Oahu and the state. At nearby Waialua, average daily minimum and maximum temperatures are 64°F

and 82°F, respectively [Ref. 2]. The extreme minimum temperature at this location was 47°F, and the extreme maximum was 99°F. Maximum temperatures in the northshore area tend to be about the same on the average compared to Honolulu, while average minimum temperatures are about 5 degrees cooler. Temperatures at the project site should be very close to those recorded at Waialua.

Small scale, random motions in the atmosphere (turbulence) cause air pollutants to be dispersed as a function of distance or time from the point of emission. Turbulence is caused by both mechanical and thermal forces in the atmosphere. For air pollution assessments, turbulence is usually measured and described in terms of Pasquill-Gifford stability class. Stability class 1 is the most turbulent and class 6 the least. Thus, air pollution dissipates best during stability class 1 conditions and worst when stability class 6 prevails. In the Mokuleia area, stability class 5 or 6 could occur during clear, calm nighttime, early morning or early evening hours when temperature inversions form either due to radiational cooling or to downslope winds that push warmer air aloft. Stability classes 1 through 4 prevail during the daytime, depending mainly on the amount of cloud cover and incoming solar radiation and the onset and extent of sea breeze conditions.

Mixing height is defined as the height above the surface through which relatively vigorous vertical mixing occurs. Low mixing heights can result in high ground-level air pollution concentrations because contaminants emitted from or near the surface can become trapped within the mixing layer. In Hawaii, minimum mixing heights tend to be high because of mechanical mixing caused by the trade winds and because of the temperature moderating effect of the surrounding ocean. Low mixing heights may sometimes occur, however, at inland locations and even at times along coastal areas early in the morning following a clear, cool, windless night.

Coastal areas also may experience low mixing levels during sea breeze conditions when cooler ocean air rushes in over warmer land. Mixing heights in the state typically are above 3000 feet (1000 meters). Low mixing heights in the Mokuleia area may occur on occasion either early in the morning during the breakup of nocturnally-formed temperature inversions or later in the day when large-scale wind patterns are weak and seabreeze conditions develop and extend inland a few miles.

Rainfall can have a beneficial effect on the air quality of an area in that it helps to suppress fugitive dust emissions, and it also may "washout" gaseous contaminants that are water soluble. Rainfall in Hawaii is highly variable depending on elevation and on location with respect to the trade wind. At nearby Waialua, average annual rainfall amounts to about 29 inches [Ref. 2]. Annual rainfall may vary at this location, however, from less than 15 inches during a dry year to 40 inches or more during a wet year. Monthly rainfall may vary from a few hundredths an inch during the summer to more than 13 inches during the winter. Being nearer to the windward slope of the Waianaes, rainfall at the project site is likely slightly higher than that at Waialua.

5.0 PRESENT AIR QUALITY

The State Department of Health operates a network of air quality monitoring stations at various locations on Oahu and elsewhere in the state. Unfortunately, no long-term measurements have been obtained anywhere near the project site. Thus, present air quality conditions can only be inferred based on the existing air pollution sources in the area.

Present air quality in the project area could potentially be affected by air pollutants from natural, industrial, agricultural and/or vehicular sources (including the existing airport operations). Natural sources of air pollution which could affect the area include the ocean, plants (aero-allergens), wind-blown dust, or perhaps distant volcanic emissions from the island of Hawaii.

As will be discussed in subsequent sections of this report, air pollution emissions from present airport operations consist primarily of carbon monoxide. Carbon monoxide, and to a lesser extent, nitrogen oxides and hydrocarbons are also emitted from motor vehicles using Farrington Highway. Spot-check measurements of carbon monoxide concentrations were made during the afternoon peak-traffic hour on January 30, 1992 along Farrington Highway near Mokuleia and also at the intersection of Farrington Highway with Kaukonahua Road (Thomson Corner). In the Mokuleia area, carbon monoxide concentrations were found to be near zero, while in the vicinity of Thomson Corner, concentrations averaged from about 1 to 2 milligrams per cubic meter (mg/m^3) with occasional momentary spikes up to $13 \text{ mg}/\text{m}^3$. Worst-case carbon monoxide concentrations in the area are probably higher.

Air pollution originating from agricultural sources in the project area can mainly be attributed to sugar cane and pineapple cultivation. Large agricultural areas presently exist to the east of the project site. Prevailing easterly winds occasionally cause smoke and dust from cultivating and harvesting operations to impact the project site.

Industrial sources of air pollutants are located primarily on the leeward and central portions of Oahu. These sources are distant and generally downwind from the project location and thus do not

impact the area. The only significant industrial source of air pollution in the Waialua area is the Waialua Sugar Mill, located about 6 miles to the east. Emissions from this facility will likely be carried toward the project site by the prevailing easterly winds in the area.

6.0 SHORT-TERM IMPACTS OF PROJECT

Short-term direct and indirect impacts on air quality could potentially occur during project construction phases. For a project of this nature, there are two potential types of air pollution emissions that could directly result in short-term air quality impacts during project construction: (1) fugitive dust from vehicle movement and soil excavation; and (2) exhaust emissions from on-site construction equipment. Indirectly, there also could be short-term impacts from slow-moving construction equipment traveling to and from the project site and from a temporary increase in local traffic caused by commuting construction workers.

Fugitive dust emissions may arise from the grading and dirt-moving activities associated with site clearing and preparation work. The emission rate for fugitive dust emissions from construction activities is difficult to estimate accurately because of its elusive nature of emission and because the potential for its generation varies greatly depending upon the type of soil at the construction site, the amount and type of dirt-disturbing activity taking place, the moisture content of exposed soil in work areas, and the wind speed. The U.S. Environmental Protection Agency (EPA) has provided a rough estimate for uncontrolled fugitive dust emissions from construction activity of 1.2 tons per acre per month under conditions of "medium" activity, moderate soil silt content (30%), and precipitation/evaporation (P/E) index of 50 [Ref. 3]. Uncontrolled fugitive dust emissions in the project area would

likely be somewhere near this level. In any case, State of Hawaii Air Pollution Control Regulations [Ref. 4] prohibit visible emissions of fugitive dust from construction activities at the property line. Thus, an effective dust control plan for the project construction phases is essential.

Adequate fugitive dust control can usually be accomplished by the establishment of a frequent watering program to keep bare-dirt surfaces in construction areas from becoming significant sources of dust. In dust-prone or dust-sensitive areas, other control measures such as limiting the area that can be disturbed at any given time, applying chemical soil stabilizers, mulching and/or using wind screens may be necessary. Control regulations further stipulate that open-bodied trucks be covered at all times when in motion if they are transporting materials that could be blown away. Haul trucks tracking dirt onto paved streets from unpaved areas is oftentimes a significant source of dust in construction areas. Some means to alleviate this problem, such as road cleaning or tire washing, may be appropriate. Paving of parking areas and establishment of landscaping as early in the construction schedule as possible can also lower the potential for fugitive dust emissions.

On-site mobile and stationary construction equipment also will emit air pollutants from engine exhausts. The largest of this equipment is usually diesel-powered. Nitrogen oxides emissions from diesel engines can be relatively high compared to gasoline-powered equipment, but the standard for nitrogen dioxide is set on an annual basis and is not likely to be violated by short-term construction equipment emissions. Carbon monoxide emissions from diesel engines, on the other hand, are low and should be relatively insignificant compared to vehicular emissions on nearby roadways.

Indirectly, slow-moving construction vehicles on roadways leading to and from the project site could obstruct the normal flow of traffic to such an extent that overall vehicular emissions are increased, but this impact can be mitigated by moving heavy construction equipment during periods of low traffic volume. Likewise, the schedules of commuting construction workers can be adjusted to avoid peak hours in the project vicinity. Thus, most potential short-term air quality impacts from project construction can be mitigated.

7.0 LONG-TERM IMPACTS OF PROJECT

7.1 Air Pollution Emissions

In order to ascertain the potential long-term air quality impacts from air pollution emissions associated with increased aircraft operations, an emission inventory was prepared for comparison with the "significant" emission rates as defined by the State Department of Health [Ref. 4]. If emissions are below the significant levels, it is unlikely that any significant impacts on air quality would occur. If emissions exceed the significant levels, it does not necessarily indicate that there would be significant impacts, but it does suggest that a more detailed analysis of the potential impacts may be warranted. It should be noted, however, that the significant emission rates as defined by the Department of Health are generally used to assess stationary point sources and not an area or volume source such as an airport. Emissions from area and/or volume sources are much more diluted than point source emissions, and hence ambient concentrations and impacts on air quality are generally less significant for a given emission rate.

Air pollution emissions from airports occur primarily from aircraft operations, motor vehicles, fuel storage and handling, and aircraft

maintenance operations. At Dillingham Airfield, aircraft refueling and maintenance operations have been and are expected to remain relatively minimal activities. Thus, both present and projected air pollution emissions are or will be due mainly to aircraft landing, taxiing and taking off and from motor vehicle traffic traveling to and from the airfield.

Both aircraft and automobile emissions in the vicinity of the airfield were estimated for the years 1995, 2000 and 2010. The estimates for 2000 and for 2010 pertain to the scenario which assumes some operations will be relocated to Dillingham Airfield from HIA and from Ford Island ALF. For comparison purposes, emission estimates were also prepared for the year 1989 based on airport operations data. Aircraft emissions were estimated based on the aviation demand forecasts for Dillingham Airfield given in the Master Plan and U.S. EPA emissions factors [Ref. 5] for civilian and military aircraft. U.S. EPA emission factors for aircraft are given in terms of pounds of air pollution emitted per landing/takeoff cycle. These emission factors were developed based on testing of several types of aircraft and the time-in-mode and engine power settings for the various modes of operation. A landing/takeoff cycle includes all of the normal flight and ground operation modes including: descent/approach from approximately 3000 feet, touchdown, landing run, taxi in, idle and shutdown, startup and idle, checkout, taxi out, takeoff, and climbout to 3000 feet. Thus, based on the actual or estimated number and category of aircraft operations per year, the emission factors will yield an estimate of annual emissions from aircraft in the vicinity of the airport.

The EPA computer model MOBILE5A [Ref. 6] was used to estimate tailpipe emissions from automobiles traveling to and from the airfield for each of the years studied. Some of the key inputs to MOBILE5A include: target year, vehicle mix, vehicle engine temperature, ambient temperature and vehicle speed. Average emissions per vehicle generally decrease in future years due to the effects of older vehicles being retired. Based on the location and nature of the proposed project, a vehicle mix of 90% light-duty gasoline-powered vehicles, 4% light-duty gasoline-powered trucks and vans, 4% gasoline-powered trucks between 6000 and 8500 lbs, and 2% motorcycles was assumed. It was further assumed that the vehicle mix would include little or no diesel-powered and/or heavy duty vehicles. It was assumed that about 25 percent of all vehicles would be operating in the cold-start mode and that about 5 percent would be operating in the hot-start mode. These are typical values that are used in calculating cold/hot start emissions for most applications involving surface roadways. MOBILE5A emission estimates are inversely related to ambient temperature and to vehicle speed. An ambient temperature of 75°F was used to reflect average annual conditions, while vehicle speeds were assumed to average 15 miles per hour.

Output from the MOBILE5A emission model is given in terms of composite emission factors for carbon monoxide, nitrogen oxides and hydrocarbons expressed as grams of air pollution emitted per vehicle miles of travel (VMT). These composite emission factors account for the various modes of automobile operation (i.e., deceleration, idle, acceleration and cruise). Thus, given the MOBILE5A emission factor and the VMT for vehicles associated with the airfield for a given year, an annual estimate of automotive-related emissions can be calculated. VMT for the base year 1989 were estimated based on the average daily traffic volumes entering and leaving the airfield; VMT for the future years studied were projected based on the ratio of the aviation demand forecasts to

the 1989 level [Ref. 7]. Each vehicle entering or leaving the airfield was assumed to contribute the equivalent of 2 VMT of emissions to the airfield emission inventory.

Fugitive dust emissions from automobile traffic were estimated based on U.S. EPA emission factors for paved roadways [Ref. 3] and annual VMT estimates. Similar to emission factors for exhaust emissions, emission factors for fugitive dust from roadways are given in terms of grams per VMT.

Table 3 is an emission inventory for the Dillingham Airfield Master Plan based on the emission factors and assumptions described above. Emission estimates are given for each of the major (regulated) air pollutants that would be emitted including: carbon monoxide, nitrogen oxides, hydrocarbons, sulfur oxides, total suspended particulate (TSP), and particulate matter less than 10 microns diameter (PM-10). As indicated in the table, estimates are given in terms of tons of air pollution emitted during each year studied. Carbon monoxide emissions were estimated to amount to about 326 tons during 1989, with most of it originating from aircraft operations; this would increase to about 784 tons in 2010. Emissions of nitrogen oxides were calculated to amount to about 5 tons during 1989 and were projected to increase only slightly to about 6 tons during 2010. Excluding fuel storage and refueling operations, hydrocarbon emissions were estimated to amount to about 17 tons during 1989; this would increase to about 27 tons during 2010. Sufficient information is not currently available concerning fuel usage to estimate hydrocarbon emissions from fuel storage and refueling operations. Emissions of sulfur oxides were estimated to amount to about 0.6 ton per year in 1989 and were projected to remain at this level through 2010. TSP and PM-10 emissions were estimated to amount to about 7 tons and 3 tons, respectively, during 1989; these emissions were projected to increase to about

14 tons of TSP and 5 tons of PM-10 during 2010. As indicated in the table, particulate emission estimates are comprised primarily of fugitive emissions from automobiles; no estimates of fugitive particulate emissions from aircraft operations are available. Emissions from aircraft maintenance operations were also excluded from the estimates due to the lack of data pertaining to these activities.

Table 4 shows the state-defined significant emission rates (in tons per year) for carbon monoxide, nitrogen oxides, volatile organic compounds (hydrocarbons), sulfur dioxide and particulate matter. These values can be used to assess the significance of the estimated emission rates. Emissions (or changes in emissions) below the significant emission rates are considered minor enough that any air quality impacts will likely be small. Emissions above the significant levels generally indicate that an air quality analysis or a more detailed examination of those emissions may be warranted to determine what impact significance the project might have.

Comparing the significant emission rates to the estimated emissions given in Table 3, it can be seen that 1989 emission levels were less than the significant emission rates for all of the regulated pollutants except for carbon monoxide. Annual emissions up to the year 2010 would remain less than the significant emission rates except for carbon monoxide. Between 1989 and 2010, annual emissions of carbon monoxide are projected to increase by about 457 tons per year; thus, the change in carbon monoxide emissions would also exceed the significant emission rate (100 tons per year). Note again that the estimates for 2000 and for 2010 pertain to the scenario that assumes some relocated operations from Ford Island and from HIA.

7.2 Air Quality Impact Assessment

Based on the results of the air pollution emission inventory for the project and the comparison of the estimated emissions with the state-defined significant emission rates, an air quality impact assessment was prepared for project-related carbon monoxide emissions. This was accomplished using the Emissions and Dispersion Modeling System (EDMS) [Ref. 8]. EDMS was developed jointly by the Federal Aviation Administration (FAA) and the United States Air Force (USAF), and its use is recommended by the U.S. EPA for assessing air quality impacts from airport emissions [Ref. 9].

EDMS is a computerized model that estimates both emissions and dispersion at civilian airports and military air bases. Emission estimates are based on U.S. EPA emission factors, and standard Gaussian dispersion techniques are used to calculate ambient concentrations at user specified locations. The required inputs to the model include: airport geometry, peak-hour aircraft take-off volume by aircraft type, peak-hour aircraft queue length and queue delay time, and hourly meteorology. The emission source characteristics for other sources present in the vicinity of the airport, such as automobile traffic, power plants, fuel storage facilities, etc., must also be supplied to the model.

To begin the carbon monoxide air quality modeling study, three scenarios were selected for analysis and comparison: year 1989 based on actual aircraft operations, year 2010 based on forecast aircraft operations (without relocated operations from other airfields), and year 2010 based on forecast aircraft operations assuming some operations are relocated to Dillingham Airfield from Ford Island ALF and from HIA. The basic airport geometry for all three scenarios was assumed to remain unchanged from the 1989 case, i.e., the existing airport boundary and a single airport runway was

assumed. This may be a worst-case assumption since the Master Plan calls for an enlarged airport boundary and the addition of a second parallel runway prior to 2010.

Defining the airport geometry for an EDMS application involves using a consistent coordinate system to identify runway and aircraft queue locations and orientations and the locations of model receptor sites. Receptor sites are the locations where the model will estimate ambient air pollution concentrations. Receptors are typically located either at locations where maximum concentrations could be expected to occur or at locations that are considered to be sensitive to air pollution. Most of the emissions from activities at or near an airport occur at or near groundlevel. Thus, maximum offsite groundlevel concentrations are typically assumed to occur at the airport boundary and to decrease with distance thereafter. As indicated in Figure 2, model receptors were placed along the entire boundary of Dillingham Airfield at intervals of approximately 100 m. Eighty receptors in all were used in the modeling study.

Peak-hour aircraft take off operations input to EDMS for each of the three scenarios studied are given Table 5. The values given in the table were estimated as one half of the actual (1989) and the forecast (2010) peak-hour total aircraft operations given in the Master Plan.

As indicated in Table 5, there are four classes of aircraft takeoff operations at Dillingham Airfield: air taxi/powered, air taxi/glider, general aviation and military. The air taxi/powered takeoffs were represented in the EDMS modeling as single engine piston aircraft. The air taxi/glider operations emit no air pollution and thus these operations were excluded. General

aviation operations at Dillingham are comprised primarily of single engine piston aircraft. Hence, all peak-hour general aviation takeoffs were assumed to be single engine piston aircraft. Military aircraft operations at Dillingham Airfield include both fixed wing and helicopter aircraft, but as indicated in Table 5, military operations represent a relatively small portion of the total aircraft operations during the peak hour. The fixed wing aircraft consist mostly of C-130's. Military helicopter operations consist of CH-46/53, UH-1N, UH-1H and CH-47 aircraft. The current version of EDMS is not capable of representing helicopter operations. Thus, all military aircraft takeoffs during the peak hour were assumed to be C-130 aircraft. This is probably a worst-case assumption both in terms of air pollution emitted during a takeoff cycle and the impact on aircraft queuing.

The peak-hour queue length, as required by EDMS, was calculated based on the average number of aircraft queued and the average length of each aircraft in the queue (including spacing between aircraft). The average number of aircraft queued was estimated based on classical queuing theory as follows:

$$N = \frac{V}{C-V}$$

where,

N = number of aircraft queued

V = demand volume of aircraft takeoffs during the peak hour

C = hourly runway takeoff capacity

The above relationship indicates that a calculated estimate of the number of aircraft queued can be obtained given the hourly demand volume of aircraft takeoff operations and the hourly runway takeoff capacity. The estimated total demand volume of aircraft takeoffs

during the peak hour for each of the scenarios studied is indicated in Table 5. As discussed above, this was estimated as one half of the total actual and forecast airport operations given in the Master Plan. The Master Plan estimates that the hourly capacity of the single runway at Dillingham Airfield was 135 operations in 1989 and would be 141 operations in 2010. It is assumed that one half of these operations would be takeoffs and the other one half landings. Hence, the hourly capacity was assumed to be 68 takeoffs in 1989 and 70 takeoffs in 2010. These data are summarized in Table 6 along with the calculated number of aircraft queued for each scenario studied. Note that due to over capacity conditions for the 2010 with relocated operations from Ford Island ALF and HIA scenario, the number of aircraft queued could not be calculated; the number of aircraft queued for this scenario was assumed to be double the number queued in 2010 without relocated operations from Ford Island ALF and HIA.

After estimating the number of aircraft queued during the peak hour, the peak-hour queue length was calculated by multiplying the number of aircraft queued by 50 feet. This is the estimated average aircraft length including spacing between aircraft. The resulting estimated queue length for each scenario studied is indicated in Table 6.

The next task in developing the inputs to EDMS is to estimate queue delay time during the peak hour. This was estimated from the following formulation:

$$T = \frac{60}{C} N$$

where,

T = queue delay time (minutes)
C = hourly runway takeoff capacity
N = number of aircraft queued

Table 7 shows the resulting estimated queue delay time for each scenario studied.

To fully evaluate air quality conditions in the vicinity of an airport, both aircraft emissions and any other nearby significant sources of air pollution must be considered. As indicated in the airfield emission inventory given in Table 3, airfield-related automobile traffic also emits carbon monoxide, but the emission quantities are relatively small in comparison to the emissions from aircraft. Hence, these emissions were considered insignificant and were not included in the EDMS modeling study. Except for occasional emissions from agricultural activities, there are no other significant sources of carbon monoxide in the vicinity of Dillingham Airfield.

Meteorological inputs to EDMS include hourly values of wind speed, wind direction, temperature and atmospheric stability class. As discussed in Section 4, atmospheric stability class is a measure of the small scale, random motions in the atmosphere (turbulence) that cause air pollutants to be dispersed as a function of distance or time from the point of emission. Stability class 1 is the most turbulent and class 6 the least. Thus, air pollution dissipates the most during stability class 1 conditions and the least when stability class 6 prevails.

EDMS can be executed in either a screening mode or a refined mode. The screening mode is typically used when representative hourly meteorological data are not available for the airport location or

when the small size of the airport does not warrant a more refined analysis. Screening analyses are designed to yield conservatively high estimates of impact. The refined mode is generally used when a screening analysis indicates potentially unacceptable impacts or for larger airports when more realistic estimates of impacts are required. A refined analysis requires the input of hourly meteorological data, typically for at least a one-year period, and hourly aircraft activity factors.

Due to the relatively low volume of aircraft operations at Dillingham Airfield and because there are no hourly onsite or nearby representative atmospheric stability data available, a screening-level analysis was performed for the subject study. Basically, a screening-level analysis is performed by assuming worst-case meteorological dispersion conditions for a given hour occur coincidentally with the period of maximum emissions, i.e., during the peak hour of aircraft traffic. In most cases, this results in conservatively high estimates of worst-case air pollution concentrations for a 1-hour period. Meteorological inputs to EDMS for the screening-level analysis include wind speed, wind direction, atmospheric stability and temperature.

Worst-case wind speeds for a source such as an airport that emits air pollution at or near groundlevel are light wind speeds which result in minimal dilution. In air quality modeling, the lowest wind speed that is typically considered is 1 meter per second (mps). Thus, for the Dillingham Airfield screening analysis, a wind speed of 1 mps was assumed.

The worst-case wind direction generally depends on the geometry of the airport and its relationship to any nearby sources. To determine the worst-case wind direction, a screening analysis

generally assumes that the wind could come from any direction. For the Dillingham Airfield screening analysis, the worst-case wind direction was determined by examining 36 wind directions at 10-degree intervals around the compass, e.g., 10 degrees, 20 degrees, 30 degrees, etc.

Worst-case stability is primarily a function of time-of-day. Flight operations at Dillingham Airfield occur during the daylight hours only except for a few nighttime military operations. The peak hour for aircraft operations occurs at midday on weekends. Based on the hours of operation of the airfield, two stability classes, class 6 and class 4, were considered in the screening analysis. As indicated previously, stability class 6 occurs during the nighttime or during the hour just after sunrise or just before sunset. Stability class 4 typically occurs during the daytime when the sky is mostly overcast. These are the worst-case stability conditions that occur during the respective time periods. Given that peak-hour aircraft operations occur during midday, stability class 4 is probably more representative of actual worst-case dispersion conditions.

Although EDMS requires the input of temperature, predicted concentrations from aircraft sources are relatively insensitive to this meteorological variable. For the Dillingham Airfield screening analysis, a temperature of 70°F was assumed. This is the average annual temperature at nearby Waiialua [Ref. 2].

Predicted Worst-Case 1-Hour Concentrations

Table 8 summarizes the final results of the EDMS screening analysis in the form of the estimated worst-case 1-hour ambient carbon monoxide concentrations at each of the 80 receptors included in the

model. At each receptor location, the worst-case concentration for each of the three scenarios and two stability classes studied is shown. Background contributions of carbon monoxide from sources not directly considered in the analysis were accounted for by adding a concentration of 0.1 mg/m³ to the predicted concentrations. The relative significance of the estimated worst-case concentrations indicated in the table can be evaluated by comparing the values to the state and the national AAQS.

During stability class 6, the predicted highest worst-case 1-hour carbon monoxide concentration for 1989 was 6.2 mg/m³ and occurred at receptor 19. As indicated in Figure 2, receptor 19 is located along the south boundary of the airfield near the queuing area for runway 26. A slightly lower worst-case concentration of 6.0 mg/m³ was predicted to occur at receptor 1, which is located along the south boundary near the queuing area for runway 8. In the 2010 scenario under stability class 6, the predicted highest worst-case 1-hour concentration was 8.1 mg/m³; this occurred at receptor 38 which is located along the north boundary near the displaced threshold area for runway 26. In the 2010 with Ford Island/HIA relocations scenario, the maximum predicted worst-case 1-hour concentration increased to 18.6 mg/m³ and occurred at receptor 37. The substantial increase compared to the 2010 without relocations scenario was due primarily to the over capacity situations that would exist with only a single runway.

During stability class 4, the predicted worst-case 1-hour concentrations decreased by about 35 to 50 percent compared to the stability class 6 estimates. In the 1989 scenario, the highest predicted worst-case 1-hour concentration was 4.0 mg/m³. This occurred at the same location as the stability class 6 estimate (receptor 19). In the 2010 scenario, the maximum predicted worst-case concentration was 5.5 mg/m³ and occurred at receptor 1

(located along the south boundary near the queuing area for runway 8). In the 2010 scenario with relocated operations from Ford Island ALF and from HIA, the highest predicted worst-case 1-hour concentration occurred again at receptor 19 and was 9.1 mg/m³.

All predicted worst-case 1-hour concentrations for all scenarios were well within the national AAQS of 40 mg/m³. The screening analysis also indicates that the more stringent 1-hour state standard of 10 mg/m³ would be met in all scenarios except for the 2010 scenario with some relocated operations from Ford Island ALF and from HIA during stability class 6 conditions.

Predicted Worst-Case 8-Hour Concentrations

Worst-case 8-hour carbon monoxide concentrations were estimated by multiplying the worst-case 1-hour values by a persistence factor of 0.5. This is a standard technique that is used to convert hourly averages to longer averaging times. It accounts for two factors: (1) aircraft operations averaged over eight hours are generally lower than peak 1-hour values, and (2) meteorological dispersion conditions are typically more variable (and hence more favorable) over an 8-hour period than they are for a single hour. Based on carbon monoxide monitoring data, 1-hour to 8-hour persistence factors for most locations generally vary from about 0.4 to 0.8 with 0.6 being the most typical. EPA guidelines [Ref. 10] recommend using a value of 0.6 to 0.7 unless a locally derived persistence factor is available. Recent monitoring data for Honolulu reported by the Department of Health [Ref. 11] suggests that this factor may range between about 0.35 and 0.55. Considering the isolated location of the airfield and the aircraft traffic

pattern, a 1-hour to 8-hour persistence factor of 0.5 is probably most appropriate for this application.

The resulting estimated worst-case 8-hour concentrations are indicated in Table 9. For the 1989 scenario, the estimated worst-case 8-hour carbon monoxide concentration in the airfield area was 3.1 mg/m³ as derived from the highest 1-hour stability class 6 estimate and 2.0 mg/m³ as derived from the highest 1-hour stability class 4 estimate. The predicted maximum values for the year 2010 scenario were 4.0 mg/m³ based on the maximum 1-hour stability class 6 estimate and 2.8 mg/m³ for the maximum 1-hour stability class 4 prediction. With some relocated operations from Ford Island ALF and from HIA in 2010, the worst-case 8-hour concentration estimates increased to 9.3 mg/m³ as derived from the highest 1-hour stability class 6 concentration and 4.6 mg/m³ as determined from the highest 1-hour stability class 4 concentration.

Comparing the predicted worst-case 8-hour concentrations to the state and the national AAQS, it appears likely that both standards would be met in all scenarios except for the 2010 with relocated operations from Ford Island ALF/HIA scenario when the 8-hour concentration estimate is derived from the 1-hour class 6 stability estimate. In this case, the more stringent state standard of 5 mg/m³ is predicted to be exceeded by a large margin.

8.0 CONCLUSIONS AND RECOMMENDATIONS

There do not appear to be any unusual meteorological conditions present in the project area that would significantly affect air quality. The prevailing easterly winds at the site will carry emissions from aircraft operations away from populated areas and out to sea a large percentage of the time. Rainfall in the area is

relatively moderate which will help to naturally control dust during construction phases.

Although there is very little air quality data available for the project area, based on the location and character of the project site and the few major sources of air pollution in the area, it appears likely that all state and national air quality standards are currently being met in the project vicinity except possibly for occasional exceedances of carbon monoxide and/or particulate standards due to agricultural operations in the area. Emissions estimates for existing operations at the airfield indicate that all emissions are less than the state-defined significant emission rates except for carbon monoxide.

The major potential short-term air quality impact of the project will occur from the emission of fugitive dust during construction phases. Uncontrolled fugitive dust emissions from construction activities are estimated to amount to about 1.2 tons per acre per month or less, depending on rainfall. To control dust, active work areas and any temporary unpaved work roads should be watered at least twice daily on days without rainfall. Use of wind screens and/or limiting the area that is disturbed at any given time will also help to contain fugitive dust emissions. Wind erosion of inactive areas of the site that have been disturbed could be controlled by mulching or by the use of chemical soil stabilizers. Dirt-hauling trucks should be covered when traveling on roadways to prevent windage. A routine road cleaning and/or tire washing program will also help to reduce fugitive dust emissions that may occur as a result of trucks tracking dirt onto paved roadways in the project area. Paving of parking areas and establishment of landscaping early in the construction schedule will also help to control dust.

During construction phases, emissions from engine exhausts (primarily consisting of carbon monoxide and nitrogen oxides) will also occur both from on-site construction equipment and from vehicles used by construction workers and from trucks traveling to and from the project. Increased vehicular emissions due to disruption of traffic by construction equipment and/or commuting construction workers can be alleviated by moving equipment and personnel to the site during off-peak traffic hours.

Emissions from aircraft and automobile traffic associated with the airfield operations by the year 2010 with or without relocated operations from Ford Island ALF and from HIA would continue to exceed the state-defined significant emission rates for carbon monoxide while remaining within these levels for the other air quality parameters. The change in carbon monoxide emissions between 1989 and 2010 with or without relocated operations from Ford Island and HIA would also exceed the significant emission rate.

Even though carbon monoxide emissions from the airfield are estimated to exceed the state-defined significant emission rate, ambient concentrations of carbon monoxide along the airfield boundary would likely remain well within state and national ambient air quality standards. This would be true at least through the year 2010 and with or without relocated operations from Ford Island and from HIA. This conclusion is reached based on the results of a worst-case air quality modeling study that assumed only a single airfield runway and that the airfield boundaries would remain unchanged. Although the modeling study shows a potential exceedance of the more stringent state standards, this would occur only if:

- 1) Aircraft operations are relocated to Dillingham Airfield from Ford Island and from HIA in the year 2010 and only a single runway and the present airfield boundaries are in place; and
- 2) Peak-hour operations occur during the early morning or late afternoon when atmospheric dispersion conditions may be reduced.

It is unlikely that both of these conditions would occur. Even if operations are relocated to Dillingham Airfield from Ford Island and from HIA in the year 2010 and only a single runway and the current airfield boundaries remain, ambient air quality standards would likely be met if aircraft operations during the hour just after sunrise or just before sunset are less than 50 percent of the peak-hour operations. Even if peak-hour operations for the 2010 with relocated operations from Ford Island/HIA scenario did occur during the early morning or late afternoon, a second runway would reduce queue delay times and would likely bring worst-case ambient concentrations of carbon monoxide along the airfield boundary into compliance with the state standards. Maximizing the distance between aircraft queuing areas and airfield boundaries will help to minimize offsite air pollution concentrations.

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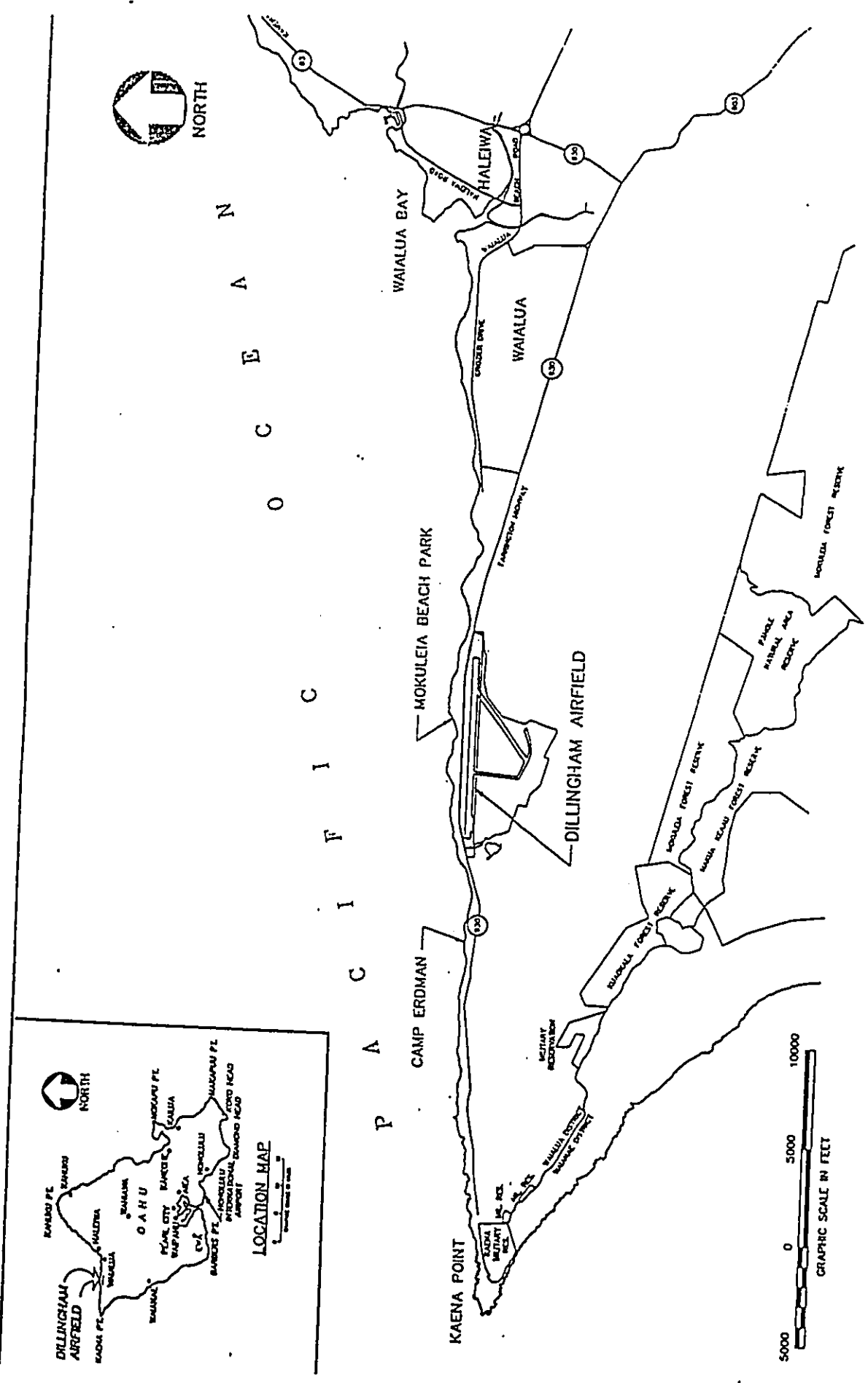
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Appendix A
AIR POLLUTION CONVERSION FACTORS

Parameter	Units Given	Conversion Units	Conversion Factor
Sulfur Dioxide	$\mu\text{g}/\text{m}^3$	ppb	0.38
Carbon Monoxide	mg/m^3	ppm	0.87
Nitrogen Dioxide	$\mu\text{g}/\text{m}^3$	ppb	0.53
Ozone	$\mu\text{g}/\text{m}^3$	ppb	0.51

Note: All conversions assume 25 degrees C and 760 mm Hg.



DILLINGHAM AIRFIELD MASTER PLAN AND NOISE COMPATIBILITY PROGRAM

AIRPORTS DIVISION
DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII

Figure 1
LOCATION MAP

P A C I F I C I S L A N D S L O C A T I O N M A P

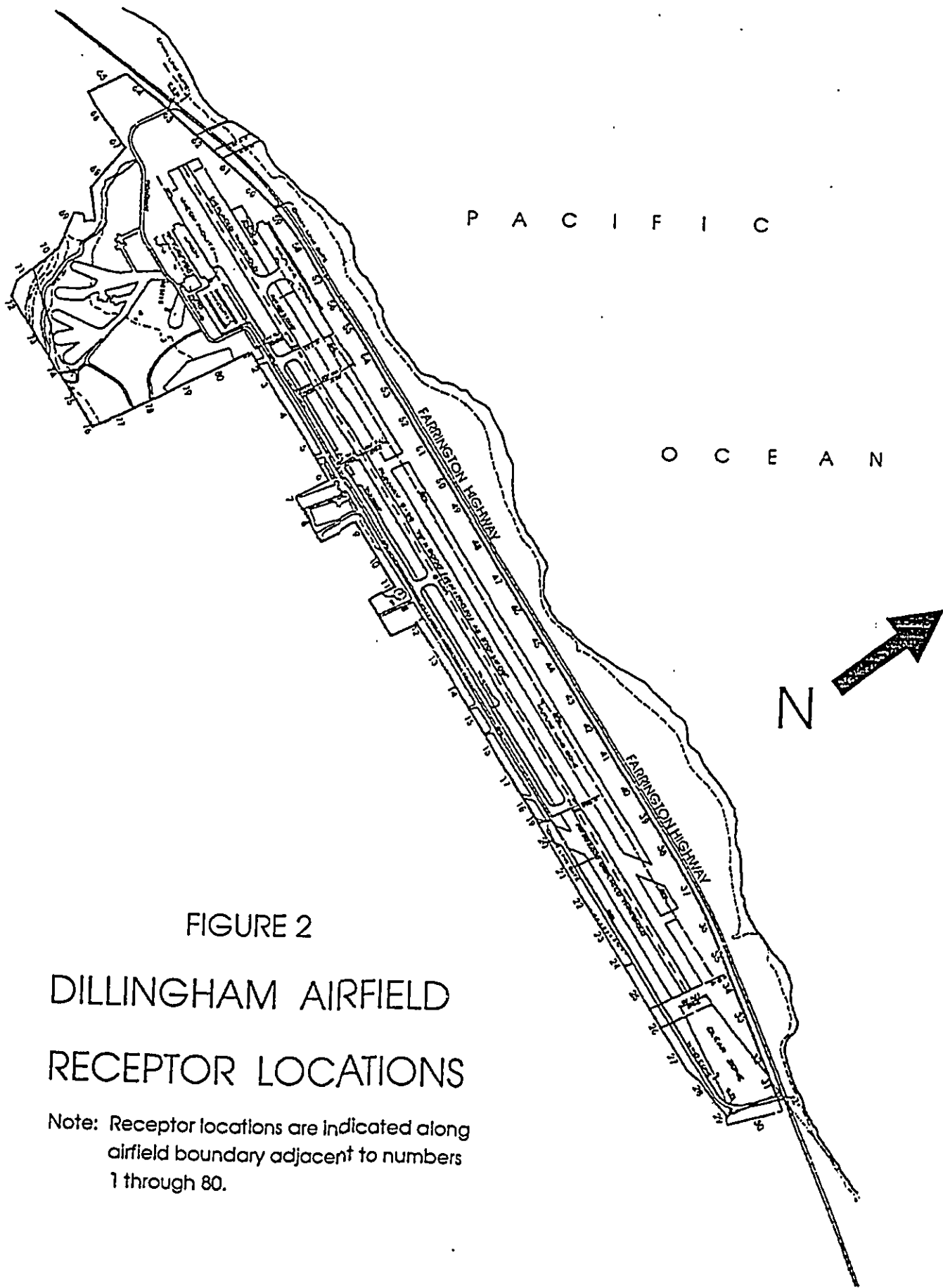


FIGURE 2
DILLINGHAM AIRFIELD
RECEPTOR LOCATIONS

Note: Receptor locations are indicated along airfield boundary adjacent to numbers 1 through 80.

Table 1
SUMMARY OF STATE OF HAWAII AND NATIONAL
AMBIENT AIR QUALITY STANDARDS

Pollutant	Units	Averaging Time	Maximum Allowable Concentration		
			National Primary	National Secondary	State of Hawaii
Particulate Matter ^a	$\mu\text{g}/\text{m}^3$	Annual	50	50	50
		24 Hours	150 ^b	150 ^b	150 ^b
Sulfur Dioxide	$\mu\text{g}/\text{m}^3$	Annual	80	-	80
		24 Hours	365 ^b	-	365 ^b
		3 Hours	-	1300 ^b	1300 ^b
Nitrogen Dioxide	$\mu\text{g}/\text{m}^3$	Annual	100	100	70
Carbon Monoxide	mg/m^3	8 Hours	10 ^b	-	5 ^b
		1 Hour	40 ^b	-	10 ^b
Ozone	$\mu\text{g}/\text{m}^3$	1 Hour	235 ^b	235 ^b	100 ^b
Lead	$\mu\text{g}/\text{m}^3$	Calendar Quarter	1.5	1.5	1.5

^aParticles less than or equal to 10 microns aerodynamic diameter

^bNot to be exceeded more than once per year

Table 2
ANNUAL WIND FREQUENCY FOR MOKULEIA AIRFIELD (%)

Wind Direction	Wind Speed (knots)									Total (%)	Mean Speed (knots)
	1-3	4-6	7-10	11-16	17-21	22-27	28-33	34-40	>40		
N	0.6	0.8	0.5	0.1	0.0					2.0	5.7
NNE	0.6	0.6	0.9	0.6	0.2	0.0				2.8	8.3
NE	2.1	2.0	3.1	3.7	2.3	0.1	0.1			13.4	10.5
ENE	0.9	1.4	3.2	5.6	5.2	0.6				16.7	13.4
E	5.0	5.5	8.7	2.4	0.8	0.2	0.0			22.4	7.3
ESE	1.6	5.1	6.1	0.7	0.1	0.0				13.6	6.7
SE	2.5	3.7	1.6	0.1	0.0	0.0				7.9	4.9
SSE	0.6	0.5	0.2	0.1	0.0	0.0	0.0	0.0		1.3	5.3
S	0.5	0.3	0.2	0.1	0.1	0.0	0.0	0.0		1.2	6.8
SSW	0.4	0.3	0.3	0.2	0.1	0.0	0.0			1.4	7.5
SW	0.5	0.4	0.4	0.2	0.0	0.0				1.6	6.4
WSW	0.2	0.2	0.2	0.1	0.0	0.0				0.8	7.6
W	0.4	0.4	0.5	0.2	0.0	0.0				1.4	6.7
WNW	0.1	0.3	0.7	0.2	0.0					1.4	7.8
NW	0.5	0.8	0.6	0.1	0.0					2.0	5.7
NNW	0.3	0.5	0.2	0.0	0.0					1.1	5.3
CALM										9.0	
TOTAL	16.7	22.7	27.3	14.4	8.9	1.0	0.0	0.0		100.0	7.7

Note: Based on 27,898 hourly observations from 1942 to 1945.

Source: U.S. Department of Commerce, National Climatic Center, Asheville, NC.

Table 3
 AIR POLLUTION EMISSIONS INVENTORY FOR
 DILLINGHAM AIRFIELD MASTER PLAN (TONS/YR)^a

Pollutant / Source	Year			
	1989	1995	2000	2010
Carbon Monoxide/				
Aircraft	316.0	355.0	620.0	766.0
Automobiles	10.2	9.6	15.6	17.6
Total	326.2	364.6	635.6	783.6
Nitrogen Oxides/				
Aircraft	4.8	4.8	5.4	5.5
Automobiles	0.6	0.6	0.8	0.8
Total	5.4	5.4	6.2	6.3
Hydrocarbons/				
Aircraft	15.2	16.1	21.9	25.1
Automobiles	1.4	1.2	1.8	1.8
Fuel Storage/Refueling	N/A	N/A	N/A	N/A
Total	16.6	17.3	23.7	26.9
Sulfur Oxides/				
Aircraft	0.6	0.6	0.6	0.6
Automobiles	nil	nil	nil	nil
Total	0.6	0.6	0.6	0.6
Total Suspended Particulate/				
Aircraft	0.7	0.7	0.7	0.7
Automobiles ^b	6.2	6.8	11.8	13.4
Total	6.9	7.5	12.5	14.1
Particulate Matter (<10 um)/				
Aircraft	0.7	0.7	0.7	0.7
Automobiles ^b	2.0	2.4	4.0	4.6
Total	2.7	3.1	4.7	5.3

^aEmission inventory does not include nighttime military operations; 2000 and 2010 years assume some operations relocated from Ford Island ALF and from HIA.

^bFugitive dust

Note: N/A indicates emission estimate not available.

Table 4
SIGNIFICANT AIR POLLUTION EMISSION RATES

Air Pollutant	Significant Emission Rate (tons/year)
Carbon Monoxide	100
Nitrogen Oxides	40
Volatile Organic Compounds	40
Sulfur Dioxide	40
Particulate Matter (total)	25
Particulate Matter (<10 microns)	15

Source: Hawaii Administrative Rules, Title 11, Department of Health, Chapter 60, Air Pollution Control

Table 5

PEAK-HOUR AIRCRAFT TAKEOFF OPERATIONS AT DILLINGHAM AIRFIELD

Aircraft	Year/Scenario		
	1989	2010	2010 w/ FI/HIA
Air taxi - powered	14.0	18.5	18.5
Air taxi - glider	14.0	18.5	18.5
General aviation	13.5	21.0	45.5
Military	2.5	2.5	2.5
Total	44.0	60.5	85.0

Note: 2010 w/ FI/HIA denotes 2010 scenario with some relocated operations from Ford Island ALF and from HIA.

Table 6

ESTIMATED NUMBER OF AIRCRAFT QUEUED AND
 QUEUE LENGTH AT DILLINGHAM AIRFIELD
 DURING PEAK HOUR

Year/Scenario	Peak-Hour Takeoffs	Hourly Capacity	Aircraft Queued	Queue Length (feet)
1989	44	68	2	100
2010	60	70	6	300
2010 w/ FI/HIA	85	70	12*	600

Note: 2010 w/ FI/HIA denotes 2010 scenario with some relocated operations from Ford Island ALF and from HIA.

*Due to over capacity conditions, number of aircraft queued could not be calculated; number of aircraft queued was assumed to be double the number queued in 2010 without relocated operations from Ford Island ALF and from HIA.

Table 7

ESTIMATED QUEUE DELAY TIME AT DILLINGHAM AIRFIELD
DURING PEAK HOUR

Year/Scenario	Queue Delay Time (minutes)
1989	2
2010	5
2010 w/ FI/HIA	10

Note: 2010 w/ FI/HIA denotes 2010 scenario with some relocated operations from Ford Island ALF and from HIA.

Table 8
 ESTIMATED WORST-CASE 1-HOUR CARBON MONOXIDE CONCENTRATIONS
 AT DILLINGHAM AIRFIELD
 (milligrams per cubic meter)

Receptor Number	Stability Class 6			Stability Class 4		
	1989	2010	2010 w/ FI/HIA	1989	2010	2010 w/ FI/HIA
1	6.0	7.0	9.2	3.8	** 5.5 **	7.1
2	3.5	1.2	1.8	2.7	0.8	1.3
3	0.5	0.7	1.0	0.4	0.6	0.9
4	0.4	0.5	0.8	0.3	0.4	0.5
5	0.4	0.5	0.7	0.3	0.3	0.5
6	0.3	0.4	0.6	0.2	0.3	0.4
7	0.2	0.3	0.4	0.2	0.2	0.3
8	0.2	0.3	0.4	0.2	0.2	0.3
9	0.3	0.4	0.5	0.2	0.3	0.4
10	0.3	0.3	0.5	0.2	0.2	0.3
11	0.2	0.3	0.4	0.2	0.2	0.3
12	0.3	0.3	0.5	0.2	0.2	0.3
13	0.3	0.4	0.5	0.2	0.3	0.4
14	0.3	0.4	0.6	0.2	0.3	0.4
15	0.4	0.5	0.7	0.3	0.3	0.4
16	0.4	0.5	0.7	0.3	0.3	0.5
17	0.4	0.6	9.9	0.3	0.4	8.5
18	0.3	6.8	12.6	2.3	5.3	9.0
19	** 6.2 **	6.9	12.6	** 4.0 **	5.2	** 9.1 **
20	5.8	6.7	14.2	3.5	3.9	8.7
21	5.2	5.5	11.5	2.5	2.6	6.5
22	4.2	2.5	12.1	1.8	1.5	5.1
23	1.4	2.4	10.7	1.0	1.0	4.2
24	2.1	2.4	8.0	1.0	0.9	3.2
25	2.5	2.0	5.5	0.9	0.8	2.4
26	2.2	1.5	3.5	0.7	0.6	1.8
27	1.5	1.0	2.1	0.6	0.5	1.4
28	0.8	0.5	0.9	0.4	0.5	0.9
29	0.4	0.3	1.0	0.3	0.5	0.7
30	1.3	3.2	3.6	0.5	1.0	1.1

Table 8 (cont.)

ESTIMATED WORST-CASE 1-HOUR CARBON MONOXIDE CONCENTRATIONS
AT DILLINGHAM AIRFIELD
(milligrams per cubic meter)

Receptor Number	Stability Class 6			Stability Class 4		
	1989	2010	2010 w/ FI/HIA	1989	2010	2010 w/ FI/HIA
31	1.1	2.0	1.6	0.5	0.9	0.8
32	0.5	0.9	1.3	0.4	0.8	1.5
33	0.6	1.5	4.6	0.4	1.0	2.4
34	1.8	4.6	11.8	0.7	1.5	3.6
35	2.0	4.7	10.4	0.8	1.8	4.1
36	1.3	3.0	6.9	0.8	1.7	4.0
37	2.6	7.3	** 18.6 **	1.2	2.8	6.7
38	3.8	** 8.1 **	8.9	1.5	3.5	4.2
39	4.4	3.1	14.8	2.0	2.2	7.3
40	4.0	7.2	13.6	2.4	3.8	8.0
41	0.5	2.8	10.4	0.5	2.2	6.9
42	0.3	0.4	1.3	0.2	0.3	1.5
43	0.3	0.4	0.6	0.2	0.3	0.4
44	0.3	0.4	0.5	0.2	0.3	0.3
45	0.3	0.3	0.5	0.2	0.2	0.3
46	0.2	0.3	0.4	0.2	0.2	0.3
47	0.2	0.3	0.4	0.2	0.2	0.3
48	0.2	0.2	0.3	0.2	0.2	0.3
49	0.2	0.3	0.4	0.2	0.2	0.3
50	0.2	0.3	0.4	0.2	0.2	0.3
51	0.3	0.3	0.5	0.2	0.2	0.3
52	0.3	0.4	0.5	0.2	0.3	0.3
53	0.3	0.4	0.6	0.2	0.3	0.4
54	0.3	0.4	0.6	0.3	0.3	0.5
55	0.5	0.7	1.1	0.5	0.6	0.9
56	3.9	5.9	8.6	2.3	3.8	6.1
57	1.5	5.6	8.5	1.2	3.3	5.8
58	2.3	3.7	9.2	1.3	2.1	5.7
59	1.4	2.7	9.9	0.9	1.5	5.5
60	2.3	3.5	9.9	1.0	1.4	4.6

Table 8 (cont.)
 ESTIMATED WORST-CASE 1-HOUR CARBON MONOXIDE CONCENTRATIONS
 AT DILLINGHAM AIRFIELD
 (milligrams per cubic meter)

Receptor Number	Stability Class 6			Stability Class 4		
	1989	2010	2010 w/ FI/HIA	1989	2010	2010 w/ FI/HIA
61	1.7	2.3	4.7	0.8	1.0	2.7
62	1.6	1.8	8.2	0.7	0.8	2.9
63	0.4	0.4	2.8	0.4	0.5	1.8
64	0.9	0.8	2.2	0.5	0.4	1.1
65	1.4	1.0	3.2	0.5	0.4	1.1
66	0.4	0.7	1.7	0.4	0.8	2.0
67	0.6	1.4	3.7	0.5	1.1	2.8
68	0.6	1.4	6.2	0.4	1.1	3.6
69	0.6	1.5	5.8	0.5	1.2	2.1
70	0.6	2.7	8.3	0.5	1.4	3.1
71	1.0	1.6	7.3	0.5	1.1	2.8
72	1.7	0.9	5.7	0.6	0.5	2.5
73	1.3	2.2	4.4	0.6	0.9	2.2
74	0.6	2.9	5.5	0.5	1.1	2.6
75	0.7	3.2	5.9	0.5	1.2	2.8
76	1.1	3.0	4.2	0.6	1.2	2.2
77	1.2	3.3	4.7	0.7	1.4	2.4
78	2.3	4.1	5.6	1.1	1.9	3.0
79	3.6	5.0	6.8	1.6	2.5	3.8
80	3.0	6.1	8.1	1.9	3.7	5.2

Notes:

- (1) 2010 w/ FI/HIA scenario refers to 2010 with some relocated operations from Ford Island ALF and from HIA.
- (2) The highest predicted concentration in the receptor network for each stability class/scenario studied is indicated in the table with asterisks before and after predicted value.
- (3) Hawaii 1-hour AAQS is 10 mg/m³. National 1-hour AAQS is 40 mg/m³.

Table 9
 ESTIMATED WORST-CASE 8-HOUR CARBON MONOXIDE CONCENTRATIONS
 AT DILLINGHAM AIRFIELD

Year/Scenario	Concentration (mg/m ³)	
	Derived from 1-Hour Stability Class 6 Estimate	Derived from 1-Hour Stability Class 4 Estimate
1989	3.1	2.0
2010	4.0	2.8
2010 FI/HIA	9.3	4.6

Hawaii State AAQS: 5
 National AAQS: 10

Note:

2010 FI/HIA scenario refers to 2010 with some relocated operations from Ford Island ALF and from HIA.

APPENDIX C

**Survey of the Avifauna and Feral Mammals
at Dillingham Airfield and Nearby Lands, Mokuleia, Oahu**

SURVEY OF THE AVIFAUNA AND FERAL MAMMALS AT
DILLINGHAM AIRFIELD AND NEARBY LANDS,
MOKULEIA, OAHU

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2 January 1991

INTRODUCTION

The purpose of this report is to summarize the findings of a two day (18 July, 27 December 1990) bird and mammal field survey of the Dillingham Airfield area at Mokuleia, Oahu for the Dillingham State Project Master Plan and noise compatibility program, No. A02011-01. Also included are references to pertinent literature as well as unpublished reports on the fauna of this region.

The objectives of the field survey were to:

- 1- Document what bird and mammal species occur on the property or may likely occur given the range of habitats available.
- 2- Provide some baseline data on the relative abundance of each species.
- 3- Supplement these findings with published and/or unpublished data.
- 4- Determine if any special or unique habitats critical to birds and mammals in this region of the island occur on the property and if necessary suggest some possible ways these areas may be protected.

GENERAL SITE DESCRIPTION

The area surveyed is shown in Figure One. The site presently contains scrubby second growth patches of introduced trees and brush with an understory of grass. The east end of the property is in sugarcane. Lowlying areas are prone to flooding creating temporary shallow ponds. More permanent wetlands are located at either ends of

the site at Crowbar Ranch and the old Dillingham Quarry.

Weather during the field survey was generally clear with some brief cloudy periods. Winds were light.

STUDY METHODS

Field observations were made with the aid of binoculars and by listening for vocalizations. Attention was also paid to the presence of tracks and scats as indicators of bird and mammal activity.

At various locations (see Fig.1) eight minute counts were made of all birds seen or heard. Between these count stations walking tallies were also kept. These counts provide the basis for the population estimates given in this report.

Observations of feral mammals were limited to visual sightings and evidence in the form of scats and tracks. No attempts were made to trap mammals in order to obtain data on their relative abundance and distribution.

Scientific names used herein follow those given in the most recent American Ornithologist's Union Checklist (A.O.U. 1983), Hawaii's Birds (Hawaii Audubon Society 1989), Field Guide to the Birds of Hawaii and the Tropical Pacific (Pratt et al. 1987) and Mammal Species of the World (Honacki et al. 1982).

RESULTS AND DISCUSSION

Resident Endemic (Native) Birds

No endemic birds were recorded during the course of the field survey. Based on data from a variety of sources (Shallenberger 1977; DLNR 1983-1988; Bruner 1982, 1986) the following species are known to occur in the area: Hawaiian Owl or Pueo (Asio flammeus sandwichensis), Black-necked Stilt (Himantopus mexicanus knudseni), Common Moorhen (Gallinula chloropus sanvicensis), American Coot (Fulica americana alai) and Hawaiian Duck (Anas wyvilliana).

Resident Indigenous (Native) Birds:

One Black-crowned Night Heron (Nycticorax nycticorax) was seen flying over the site in the direction of the Dillingham Quarry Pond.

Resident Indigenous (Native) Seabirds:

Seabirds typically nest on offshore islands which are free from disturbance by dogs, cats, mongooses and rats. However, there are areas on the main islands where predators lack access and nesting can be successful (Bruner 1988). Laysan Albatross (Diomedea immutabilis) have become a common winter visitor to the north shore of Oahu and Mokuia. Two albatross were seen offshore during the second day of the survey. Mr. Bob Patison who operates the control tower at the Dillingham Airfield reports that albatross frequent the west end of the airfield.

Migratory Indigenous (Native) Birds:

Two migratory shorebirds were found during the survey: The Pacific Golden Plover (Pluvialis fulva) and Ruddy Turnstone (Arenaria interpres). Both of these species are common migrants which can be found on lawns and fields as well as along the intertidal zone. Johnson et al. (1981) and Bruner (1983) have shown plover are extremely site-faithful on their wintering grounds and many establish foraging territories which they vigorously defend. Such behavior makes it possible to acquire a fairly good estimate of the abundance of plover in any one area. These populations likewise remain relatively stable over many years (Johnson et al. 1989). A total of two plover and four turnstone were recorded on the July survey and 52 plover and 18 turnstone on the December survey.

Exotic (Introduced) Birds:

A total of 16 species of exotic birds were found during the field survey. Table One shows the species recorded and their relative abundance. The most abundant species were Zebra Dove (Geopelia striata), Red-vented Bulbul (Pycnonotus cafer), and Japanese White-eye (Zosterops japonicus). Exotic species not recorded on the actual survey but which potentially could occur at this locality include: Ring-necked Pheasant (Phasianus colchicus), Chestnut Mannikin (Lonchura malacca), Java Sparrow (Padda oryzivora), Cattle Egret (Bubulcus ibis) and Barn Owl (Tyto alba) (Bruner 1982, 1986;

CORRECTION

THE PRECEDING DOCUMENT(S) HAS
BEEN REPHOTOGRAPHED TO ASSURE
LEGIBILITY
SEE FRAME(S)
IMMEDIATELY FOLLOWING

RESULTS AND DISCUSSION

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Pratt et al. 1987; Hawaii Audubon Society 1989).

Red-vented Bulbul have become one of Oahu's most abundant species in recent years. The adaptability of this species of a wide variety of habitats and its remarkable population increase have been well documented (Williams 1983; Williams and Giddings 1984; Williams and Evenson 1985).

Feral Mammals:

The only feral mammals observed during the survey were cats and the Small Indian Mongoose (Herpestes auropunctatus). No rats or mice were recorded but undoubtedly occur on the property. Without a trapping program it is difficult to conclude much about the relative abundance of rats, mice, cats and mongooses at this site. It is likely that their numbers are typical of what one would find elsewhere in similar habitat on Oahu.

Records of the endemic and endangered Hawaiian Hoary Bat (Lasiurus cinereus semotus) are sketchy but the species has been reported from Oahu (Tomich 1986; Kepler and Scott 1990). None were observed on this field survey.

CONCLUSION

A brief field survey can at best provide a limited perspective of the wildlife present in any given area. Not all species will necessarily be observed and information on their use of the site must be sketched together from brief observations and the available

literature. The number of species and the relative abundance of each may vary throughout the year due to available resources and reproductive success. Species which are migratory will quite obviously be a significant part of the ecological picture only at certain times during the year. Exotic species sometimes prosper for a time only to later decline (Williams 1987). Thus only long term studies can provide the insights necessary to acquire a complete understanding of the bird and mammal populations in a particular area. However, when data from other sources are examined the value of the conclusions drawn can be significantly increased.

The following are some broad conclusions related to bird and mammal activity on this property:

- 1- 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. This may have been due to the brief length of the survey.

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

- 3- No native endemic birds were recorded on the survey. The ephemeral wetlands in the lowlying areas mauka of the main airstrip provide temporary foraging opportunities for native waterbirds.

- 4- 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 an apparently attractive site for albatross based on the number of birds seen in this area over the last few years. If their numbers increase they may at some point become a significant threat to air safety. Efforts to control this problem may need to follow the procedures presently employed at Kaneohe Marine Corps Airstation and Pacific Missile Range Facility, Kauai.

- 5- 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.

- 6- Except for the ephemeral wetlands which occasionally occur in the lowlying areas mauka of the airstrip 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 at the 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 operation on the waterbirds is unknown.

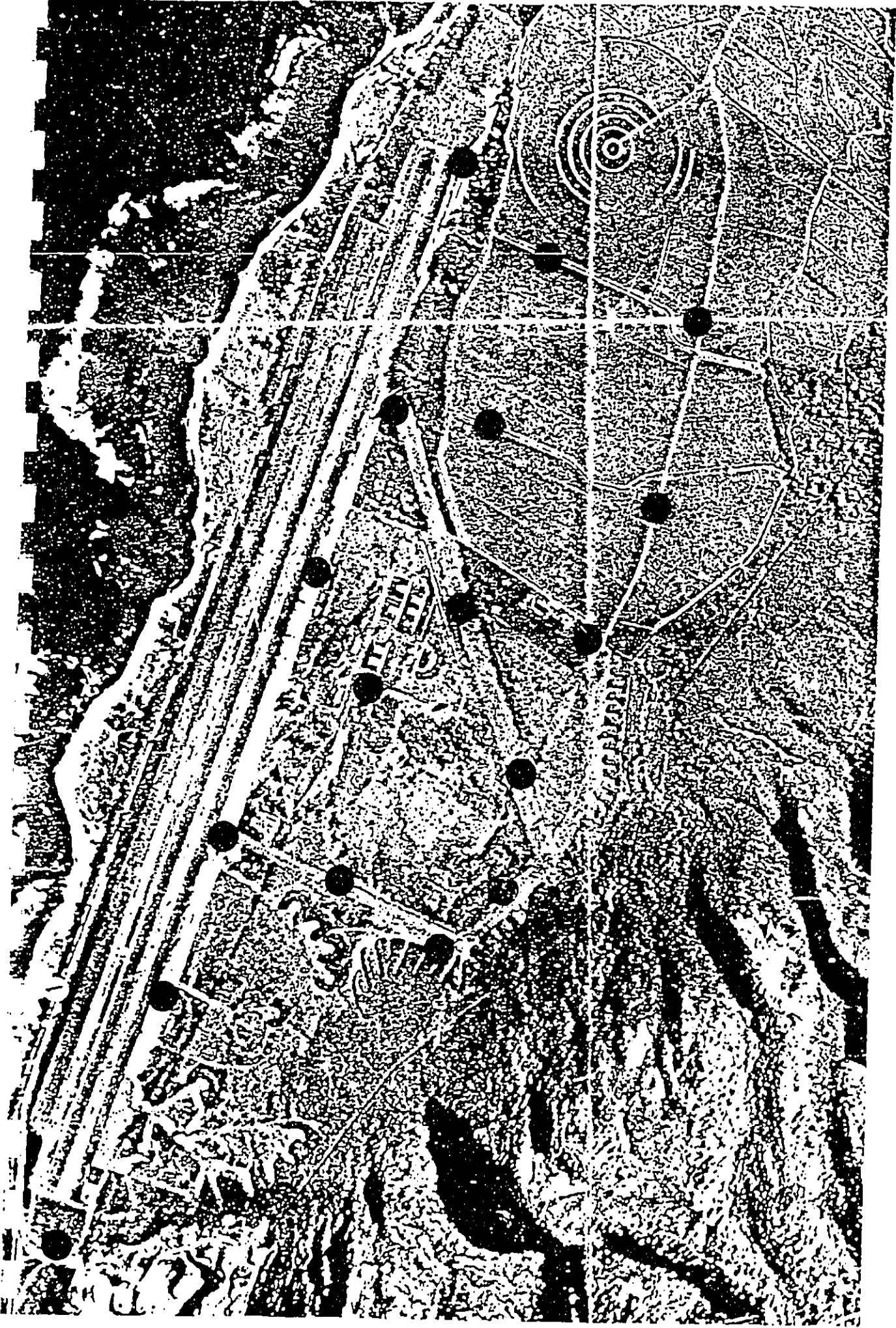


Figure 1. Dillingham Airfield, Oahu, with location of faunal census stations shown as solid circles.

TABLE 1

Relative abundance of exotic birds at Dillingham Airfield and nearby lands, Mokualeia, Oahu

COMMON NAME	SCIENTIFIC NAME	RELATIVE ABUNDANCE*
Erckel's Francolin	<u>Francolinus erckelii</u>	C = 6
Spotted Dove	<u>Streptopelia chinensis</u>	C = 5
Zebra Dove	<u>Geopelia striata</u>	A = 12
Common Myna	<u>Acridotheres tristis</u>	C = 7
Red-vented Bulbul	<u>Pycnonotus cafer</u>	A = 13
White-rumped Shama	<u>Copsychus malabaricus</u>	C = 6
Northern Mockingbird	<u>Mimus polyglottos</u>	R = 3
Northern Cardinal	<u>Cardinalis cardinalis</u>	C = 8
Red-crested Cardinal	<u>Paroaria coronata</u>	C = 9
Japanese White-eye	<u>Zosterops japonicus</u>	A = 15
Japanese Bush-warbler	<u>Cettia diphone</u>	C = 8
House Sparrow	<u>Passer domesticus</u>	U = 4
House Finch	<u>Carpodacus mexicanus</u>	C = 9
Nutmeg Mannikin	<u>Lonchura punctulata</u>	C = 8
Red Avadavat	<u>Amandava amandava</u>	R = 10
Common Waxbill	<u>Estrilda astrild</u>	C = 9

* (see page 11 for key to symbols)

KEY TO TABLE 1

Relative abundance = number of individuals observed during walking survey or frequency on eight minute counts in appropriate habitat.

A = abundant (10+) on 8 min. counts

C = common (5-10) on 8 min. counts

U = uncommon (less than 5) on 8 min. counts

R = recorded but not on 8 min. counts (number which follows is the total recorded over the course of the entire survey)

SOURCES CITED

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- Johnson, O.W., P.M. Johnson and P.L. Bruner. 1981. Wintering behavior and site-faithfulness of Golden Plovers on Oahu. 'Elepaio 41(12):123-130.
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- Williams, R.N. 1983. Bulbul introduction on Oahu. 'Elepaio 43(11):89-90.
- _____ 1987. Alien Birds on Oahu 1944-1985. 'Elepaio 47(9):87-92.
- Williams, R.N., and W.E. Evenson. 1985. Foraging niche of two introduced bulbul species (Pycnonotus) on Oahu, Hawaii. Unpubl. ms.
- Williams, R.N. and L.V. Giddings. 1984. Differential range expansion and population growth of bulbuls in Hawaii. Wilson Bulletin 96:647-655.

APPENDIX D

**Comments Received on Previous
Draft Environmental Assessment, 1996**

List of Agencies, Organizations and Individuals commenting on the 1996 Draft Environmental Assessment for Improvements on Dillingham Airfield.

FEDERAL AGENCIES

Department of Agriculture, Natural Resources Conservation Service
Department of the Army, Corps of Engineers
Department of the Army, Directorate of Public Works
Department of the Interior, Fish and Wildlife Service
Federal Aviation Administration, Airport District Office, Honolulu

STATE OF HAWAII

Department of Accounting and General Services
Department of Business, Economic Development and Tourism, Energy Division
Department of Education
Department of Health
Department of Land and Natural Resources
Office of Environmental Quality Control
Office of Hawaiian Affairs
Office of State Planning Office
University of Hawaii, Environmental Center
University of Hawaii, Water Resources Research Center

CITY AND COUNTY OF HONOLULU AGENCIES

Board of Water Supply
Department of Parks and Recreation
Department of Public Works
Department of Transportation Services
Department of Wastewater Management
Planning Department
Police Department

ORGANIZATIONS AND INDIVIDUALS

Roy Alameida
Meryl Andersen
BHP Gas Co.
Gary Bignami
Hawaiian Electric Company
Life of the Land
Kenneth Martyn
Mokuleia Community Association
North Shore Environmental Coalition
North Shore Neighborhood Board No. 27
Alex Santiago, Representative
William Saunders
Sunset Beach Community Association



United States
Department of
Agriculture

Natural
Resources
Conservation
Service

MAK 1 HLO
P. O. Box 50004
Honolulu, HI
96850-0001

Handwritten initials

February 28, 1996

Mr. Ben Schlapak ⁵¹
State Of Hawaii
Department of Transportation
Airports Division
400 Rodgers Boulevard, Suite 700
Honolulu, Hawaii 96819-1880

Dear Mr. Schlapak:

Subject: Draft Environmental Assessment - Dillingham Airfield Master Plan and Noise
Compatibility Program, Volume III, State Project No. A02011-01

We have received the above-mentioned document and have no comments to offer at this time.

We apologize for submitting our comments to you after the deadline. We thank you for the
opportunity in allowing us to review this document.

Sincerely,

KENNETH M. KANESHIRO
State Conservationist

The Natural Resources Conservation Service
formerly the Soil Conservation Service, works
hand-in-hand with the American people to
conserve natural resources on private lands.

AN EQUAL OPPORTUNITY EMPLOYER

0072



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
PACIFIC OCEAN DIVISION, CORPS OF ENGINEERS
FORT SHAFTER, HAWAII 96858-5440

January 10, 1996

Planning and Operations Division

Mr. Owen Miyamoto, Airports Administrator
State of Hawaii
Department of Transportation
Airports Division
400 Rodgers Boulevard, Suite 700
Honolulu, Hawaii 96819-1880

Dear Mr. Miyamoto:

Thank you for the opportunity to review and comment on the Draft Environmental Assessment (DEA) for the Dillingham Airfield Master Plan and Noise Compatibility Program, Oahu (State Project No. A02011-01). The following comments are provided pursuant to Corps of Engineers authorities to disseminate flood hazard information under the Flood Control Act of 1960 and to issue Department of the Army (DA) permits under the Clean Water Act; the Rivers and Harbors Act of 1899; and the Marine Protection, Research and Sanctuaries Act.

a. Based on the information provided, a DA permit may be required for activities that would impact any perennial or intermittent streams and wetland areas. Please contact our Regulatory Section at 438-9258 for further information and refer to file number 960000027.

b. The flood hazard information provided on page 30 of the DEA is correct.

Sincerely,

A handwritten signature in black ink, appearing to read "Paul Mizue".

Paul Mizue, P.E.
Acting Chief, Planning
and Operations Division



REPLY TO
ATTENTION OF

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



Directorate of Public Works

26 AUG 1996

Mr. Owen Miyamoto, Airports Administrator
Department of Transportation
Airports Division
400 Rodgers Boulevard, Suite 700
Honolulu, Hawaii 96819-1880

Dear Mr. Miyamoto:

We have reviewed the Draft Environmental Assessment (EA), Volume III, Dillingham Airfield Master Plan and Noise Compatibility Program, November 1995, that we received from your office. We noted the document did not adequately address the impact to the Army from the State's proposed acquisition of land and the proposed changes in civilian operations at the Dillingham Airfield. The Army's position on these two points are as follows:

- a. The Army will not agree to any increase in the size of the airfield within the Dillingham Military Reservation (DMR) nor will it give up its complete control of land within the DMR. Our land use requirements study (LURS) for two light infantry brigades shows a shortfall of 70,000 acres.
- b. The Army will not agree to any increase in airfield hours of operation. Civilian air traffic must be restricted to the hours from dawn to dusk. The Army conducts military night flight training using light sensitive equipment to see and navigate. Therefore, no lights are allowed during nighttime hours as would be with civilian aircraft traffic. Accordingly, when building and improving facilities at the airfield, there must be some thought given to military night flying operations.

If there are any questions, please contact Mr. Robert Antonio, DPW Master Planner, at 656-2682.

Sincerely,

Dennis J. Fontana
Colonel, U. S. Army
Director of Public Works



United States Department of the Interior

FISH AND WILDLIFE SERVICE
PACIFIC ISLANDS ECOREGION
300 ALA MOANA BOULEVARD, ROOM 3108
BOX 50088
HONOLULU, HAWAII 96850
PHONE: (808) 541-3441 FAX: (808) 541-3470

In Reply Refer To: AAP

MAR - 4 1996

Mr. Owen Miyamoto
Department of Transportation
Airports Division
400 Rodgers Boulevard, Suite 700
Honolulu, Hawaii 96819-1880

Re: November 1995 Draft Environmental Assessment (DEA) for the Dillingham Airfield
Master Plan and Noise Compatibility Program, Waialua District, Oahu, Hawaii
State Project No. AO2011-01

Dear Mr. Miyamoto:

The U.S. Fish and Wildlife Service (Service) has reviewed the November 1995 Draft Environmental Assessment (DEA) for the Dillingham Airfield Master Plan and Noise Compatibility Program in Waialua, Oahu, Hawaii. The project sponsor is the State of Hawaii, Department of Transportation, Airports Division (HDOT - AIR). Project funding is through a State contract and a planning grant from the Federal Aviation Administration (FAA). This letter has been prepared under the authority of and in accordance with provisions of the National Environmental Policy Act of 1969 [42 U.S.C. 4321 *et seq.*; 83 Stat. 852], as amended, the Fish and Wildlife Coordination Act of 1934 [16 U.S.C. 661 *et seq.*; 48 Stat. 401], as amended, the Endangered Species Act of 1973 [16 U.S.C. 1531 *et seq.*; 87 Stat. 884], as amended, and other authorities mandating Service concern for environmental values. Based on these authorities, the Service offers the following comments for your consideration.

The HDOT-AIR proposes three phases of facility improvements at the Dillingham Airfield. Actual implementation of each phase will be driven by the anticipated demand for general aviation facilities in order to relieve aviation congestion at the Honolulu International Airport. This DEA focuses on the impacts of the proposed Phase I improvements. Phase I improvements include the relocation of the parachute drop zone, land acquisition to align runway protection zones and the parachute drop zone within the airport boundary, and improvements to the airfield surfaces, existing hangars and utilities.

DEA

Dillingham Airfield Master Plan & Noise Compatibility Program
Waialua, Oahu, HI

Phase 2 involves construction of an air traffic control tower, additional apron space, hangars, and space for commercial aviation / fixed base operators and improvements to internal roads, utilities, and aircraft rescue and fire fighting equipment to support 190,000 annual aircraft operations. Finally, Phase 3 involves the construction of a 3,000 foot long parallel runway with supporting taxiways and navigational aids. The environmental impacts of Phase 2 and 3 improvements will be addressed in future environmental documents.

The Service does not anticipate significant adverse impacts to fish and wildlife resources to result from construction of the proposed Phase 1 improvements. The development avoids wetlands and rare, threatened, or endangered species. Four known populations of federally endangered plants occur outside the boundary of the DMR and are not likely to be adversely impacted by the construction and operational activities of the airfield. Although a 20-hectare [ha] (50-acre) seasonal wetland occurs within the Dillingham Military Reservation (DMR), adverse impacts to waterbirds are unlikely. The wetland is completely overgrown with California grass (*Brachiaria mutica*) and provides limited habitat for endangered Hawaiian waterbirds and migratory shorebirds and waterfowl.

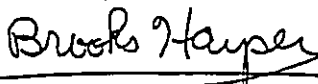
Birdstrike events have been identified as a problem at a number of Hawaii airports. Because Laysan albatross (*Diomedea immutabilis*) have been seen in the general project area, the potential for increased birdstrikes as a result of Phase 3 improvements (runway construction) should be addressed in the environmental documents (DEA) prepared for those actions. Specific measures to minimize birdstrike events should be identified, and the Service and the Hawaii Division of Forestry and Wildlife should be consulted for updated information on rare, migratory, or endangered species in the project area.

In summary, the Service believes that for general planning purposes the DEA adequately addresses the impacts of the Master Plan Development and Phase 1 construction on fish and wildlife resources, and we concur with the HDOT - AIR's finding that an Environmental Impact Statement is not required. This concludes the Service's review of Phase I construction plans as required by the National Environmental Policy Act and the Fish and Wildlife Coordination Act and fulfills the requirements of Section 7 of the Endangered Species Act for Phase 1 improvements. However, obligations under Section 7 of the Act must be reconsidered if (1) new information reveals impacts of this identified action that may affect listed species or critical habitat in a manner not previously considered, (2) this action is subsequently modified in a manner which was not considered in this assessment, or (3) a new species is listed or critical habitat determined that may be affected by the identified action.

DEA
Dillingham Airfield Master Plan & Noise Compatibility Program
Waiialua, Oahu, HI

We appreciate the opportunity to comment. If you have questions regarding these comments, please contact Fish and Wildlife Biologist Arlene Pangelinan at 808/541-3441.

Sincerely,



Brooks Harper
Field Supervisor
Ecological Services

0086



U.S. Department
of Transportation
Federal Aviation
Administration

Western-Pacific Region
Airports District Office

300 Ala Moana Blvd., Rm. 7116
Honolulu, HI 96813
MAIL: Box 50244
Honolulu, HI 96850-0001
(808) 541-1230
FAX: (808) 541-3462

January 10, 1996

Mr. Owen Miyamoto
Airports Administrator
Airports Division
400 Rodgers Boulevard, Suite 400
Honolulu, Hawaii 96813

Dear Mr. Miyamoto:

We have reviewed the Dillingham Airfield Master Plan and Noise Compatibility Program, Draft Environmental Assessment (EA), Volume III submitted on December 19, 1995. Our comments are as follows:

Page 3, second paragraph - The sentence, "Currently, HDOT-AIR is pursuing the use of BPNAS for aviation uses," should be changed to a footnote. The sentence is out of place in the paragraph.

Page 6, first paragraph - The sentence, "Currently, HDOT-AIR is proposing a general aviation facility at BPNAS, due to the recent base closure announcement," should also be changed to a footnote.


Page 10, third bullet under Alternative 2 - These development items are not shown on Figure 8.

Page 11, fourth bullet under Alternative 3 - These development items are not shown on Figure 9.

Figure 14 - The boundaries of the lands listed in Linda Colburn's November 7, 1995 letter should be shown on this figure and discussed in the text as to their disposition.

If you have any questions regarding our review, please contact us.

Sincerely,


Howard S. Yoshioka
Manager, Airports District
Office

BENJAMIN J. CAYETANO
GOVERNOR



STATE OF HAWAII
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
P. O. BOX 119, HONOLULU, HAWAII 96810

S. F. J.
J. B. H.
SAM CALLEJO
COMPTROLLER

MARY PATRICIA WATERHOUSE
DEPUTY COMPTROLLER

LETTER NO. (P) 1027.6

JAN 11 1996

Department of Transportation
Airports Division
State of Hawaii
400 Rodgers Boulevard, Suite 700
Honolulu, Hawaii 96819-1898

Attention: Mr. Ben Schlapak

Gentlemen:

Subject: Dillingham Airfield Master Plan and
Noise Compatibility Program
Waialua, Oahu, Hawaii
Draft Environmental Assessment

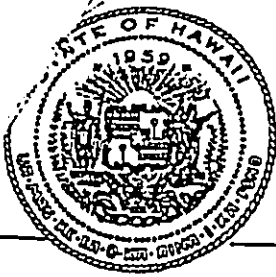
Thank you for the opportunity to review the subject document. The proposed project will not impact any of our facilities. Therefore, we have no comments to offer.

If there are any questions, please call Mr. Ralph Yukumoto of the Planning Branch at 586-0488.

Very truly yours,

Gordon Matsuoka
GORDON MATSUOKA
State Public Works Engineer

RY:jy



DEPARTMENT OF BUSINESS,
ECONOMIC DEVELOPMENT, AND TOURISM

ENERGY DIVISION, 335 MERCHANT ST., RM. 110, HONOLULU, HAWAII 96813 PHONE: (808) 587-3800 FAX: (808) 587-3820

4695
BENJAMIN J. CAYETANO
Governor

SEUFI HAYA
Director

RICK EGGED
Deputy Director

092 Miyamoto

December 21, 1995

Mr. Owen Miyamoto, Airports Administrator
Department of Transportation
Airports Division
400 Rodgers Boulevard, Suite 700
Honolulu, Hawaii 96819-1880

Dear Mr. Miyamoto:

SUBJECT: Dillingham Airfield Master Plan and Noise Compatibility Program, Draft
Environmental Assessment, Volume III, State Project No. A02011-01

We wish to inform you that we have no comments regarding the subject Draft
Environmental Assessment, Volume III.

Thank you for the opportunity to submit any comments or recommendations.

Sincerely,

Maurice H. Kaya
Energy, Resources, and Technology
Program Administrator

MHK:aw

Benjamin J. Cayetano
JOHAK KAUHINE
GOVERNOR



STATE OF HAWAII
DEPARTMENT OF EDUCATION
P. O. BOX 2360
HONOLULU, HAWAII 96804

DIRECTOR'S OFFICE
DEPT. OF
TRANSPORTATION

JAN 17 8 58 AM '96

HERMAN M. AIZAWA, PH.D.
SUPERINTENDENT



OFFICE OF THE SUPERINTENDENT

January 10, 1996

Mr. Kazu Hayashida, Director
Department of Transportation
Airports Division
400 Rodgers Boulevard, Suite 700
Honolulu, Hawaii 96819-1880

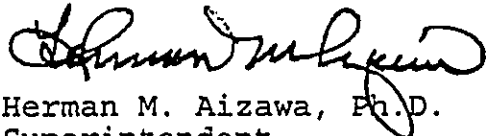
Dear Mr. Hayashida:

SUBJECT: Draft Environmental Assessment
Dillingham Airfield Master Plan
and Noise Compatibility Program, Volume III,
State Project No. A02011-01

We have reviewed the subject environmental assessment and
have no comment on the proposed project.

Thank you for the opportunity to respond.

Sincerely,


Herman M. Aizawa, Ph.D.
Superintendent

HMA:hy

cc: A. Suga, OBS
A. Hokama, CDO

JAN 17 3 12 PM '96

DEPT OF TRANSPORTATION
STATEWIDE TRANS.
PLANNING OFFICE

JAMIN J. CAYETANO
GOVERNOR OF HAWAII



LAWRENCE MIIKE
DIRECTOR OF HEALTH

STATE OF HAWAII
DEPARTMENT OF HEALTH
P.O. BOX 3378
HONOLULU, HAWAII 96801

In reply, please refer to:

February 7, 1996

91-031(B)/epo

Mr. Owen Miyamoto
Airports Administrator
Department of Transportation
Airports Division
400 Rogers Boulevard, Suite 700
Honolulu, Hawaii 96819

Dear Mr. Miyamoto:

Subject: Draft Environmental Assessment
Dillingham Airfield Master Plan and Noise
Compatibility Program, Volume III
State Project No. A02011-01
Mokuleia, Oahu
TMK: 6-8-2: 16; 6-8-3: 9; 6-8-14: 1-23, 25

Thank you for allowing us to review and comment on the subject document. We do not have any comments to offer at this time.

Sincerely,

A handwritten signature in cursive script, appearing to read "Lawrence Miike".

LAWRENCE MIIKE
Director of Health

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

STATE HISTORIC PRESERVATION DIVISION
33 SOUTH KING STREET, 6TH FLOOR
HONOLULU, HAWAII 96813

January 16, 1995

0224
MICHAEL D. WILSON, CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES

DEPUTY
GILBERT COLOMA-AGARAN

AQUACULTURE DEVELOPMENT
PROGRAM

AQUATIC RESOURCES
CONSERVATION AND

ENVIRONMENTAL AFFAIRS
CONSERVATION AND
RESOURCES ENFORCEMENT
CONVEYANCES

FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
DIVISION

LAND MANAGEMENT
STATE PARKS
WATER AND LAND DEVELOPMENT

MEMORANDUM

LOG NO: 16203 ✓
DOC NO: 9601TD04

TO: Owen Miyamoto, Airports Administrator
Department of Transportation

FROM: Don Hibbard, Administrator
Historic Preservation Division

A handwritten signature in black ink, appearing to be "D. Hibbard", written over the name of the sender.

SUBJECT: Draft Environmental Assessment (DEA), Dillingham Airfield Master
Plan and Noise Compatibility Program, Vol. III (State Project No.
A02011-01).
Ka`ena, Kealia, Kawaihapai, and Mokule`ia, Waialua, O`ahu
TMK: 6-8-2:16; 6-8-3:9; 6-8-14:1-23, 25

The Literature Review and Archaeological Reconnaissance Survey for Dillingham Airfield Master Plan Area (Moblo 1991) included as Appendix A of the DEA is a useful planning document and we concur with its recommendations.

The DEA commits to monitoring for subsurface cultural remains during construction excavations on page 37. We concur with the commitment to monitor construction activities, rather than performing archaeological investigations prior to construction, because the locations of unmarked burials cannot be predicted with confidence and because any extant cultural deposits are now deeply buried beneath the airfield.

The archaeological monitoring for this project must be guided by a monitoring plan, which must be developed and submitted for our review prior to construction. Following the recommendations of the archaeological report, the monitoring plan should include provisions for identifying and treating unmarked human burials that might be inadvertently discovered in the portion of the project area with Jaucas sand soils, and for the identification and investigation of buried cultural deposits in the vicinity of the ancient stream courses that now lie beneath the airfield.

If you have any questions please call Tom Dye at 587-0014.

TD:mb

BENJAMIN J. CAYETANO
GOVERNOR



GARY GILL
DIRECTOR

STATE OF HAWAII
OFFICE OF ENVIRONMENTAL QUALITY CONTROL
220 SOUTH KING STREET
FOURTH FLOOR
HONOLULU, HAWAII 96813
TELEPHONE (808) 506-4106
FACSIMILE (808) 596-2446

January 22, 1996

RECEIVED
JAN 23 1996

Mr. Kazu Hayashida, Director
Department of Transportation
869 Punchbowl Street
Honolulu, Hawaii 96813

EDWARD K. NODA & ASSOCIATES

Dear Mr. Hayashida:

Subject: Draft Environmental Assessment for the Dillingham Airfield Master Plan

Thank you for the opportunity to review and comment on the subject document. We have the following comments.

1. Segmentation

Page 3 of the draft environmental assessment states, "This environmental assessment focuses on the impacts of the Proposed Phase 1 improvements." To be consistent with section 11-200-7 of the environmental impacts statement rules, all three phases of this project must be analyzed and addressed as a single action.

2. Noise Impacts

This project will substantially increase the number of operations and cause a different mix in the types of aircraft (including helicopters) operating at Dillingham Airfield. The above changes are expected to increase noise levels in the surrounding area. The severity of the noise impacts is presently being examined in the Part 150 Noise Compatibility Program.

Since the severity of the noise impacts have not yet been determined, we cannot support the conclusion that this project will have no significant impact on the environment.

Mr. Hayashida
January 22, 1996
Page 2

3. Social Impacts

This project will add a runway, taxiway, helipad, air museum, air traffic control tower and increase apron space, hangars and space for commercial aviation/fixed based operators. The number of aircraft operations and based aircraft will approximately double to 226,000 and 90 per year, respectively. The above intensification of use will bring in new workers and visitors to the area. Indirectly, residential and business development will occur to serve the newcomers.

The final environmental assessment should fully describe the direct and indirect social impacts of this project on the surrounding rural community.

4. Significance Determination

Page 22 of the draft environmental assessment states, "Improvement of Dillingham Airfield will avoid the necessity to select a new site, which could have much more severe impacts on an existing community." We believe that this project will severely impact the existing community surrounding the Dillingham Airfield as much as it would any other community.

Based on the above comments, we believe that this project may detrimentally affect ambient noise levels and substantially affect the social welfare of the community. Accordingly, we recommend that an environmental impact statement be prepared.

If you have any questions, please call Jeyan Thirugnanam at 586-4185. Thank you.

Sincerely,


Gary Gill
Director

c: Owen Miyamoto, DOT-AIR
Ed Noda and Assoc.

PHONE (808) 594-1888



0121
FAX (808) 594-1865

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

January 5, 1996

Mr. Owen Miyamoto
Airports Administrator
Airports Division
Honolulu International Airport
400 Rodgers Boulevard, Suite 700
Honolulu, Hawai'i 96819-1880

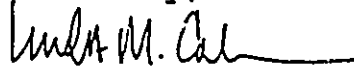
Re: Draft Environmental Assessment, Volume III,
Dillingham Airfield Master Plan
Waialua District, O'ahu
Tax Map Keys: 6-8-02:18; 6--8-03:9; 6-8-12:1-23 & 25
State Project No. A02011-01

Dear Mr. Miyamoto:

Thank you for the opportunity to review the Draft Environmental Assessment, Volume III, (EA) for the Dillingham Airfield Master Plan. All of the concerns identified by the Office of Hawaiian Affairs during the preconsultation phase of the project have been met. At this time, therefore, the Office of Hawaiian Affairs has no comments or concerns.

If you have any questions please contact Linda Delaney, Land and Natural Resources Officer or Lynn Lee, EIS Planner at 594-1888.

Sincerely,


Linda M. Colburn
Administrator

cc: Clayton H.W. Hee, Chairperson
Board of Trustees

0223



OFFICE OF STATE PLANNING

Office of the Governor

MAILING ADDRESS: P.O. BOX 3540, HONOLULU, HAWAII 96811-3540
STREET ADDRESS: 250 SOUTH HOTEL STREET, 4TH FLOOR
TELEPHONE: (808) 587-2846, 587-2800

BENJAMIN J. CAYETANO, Governor

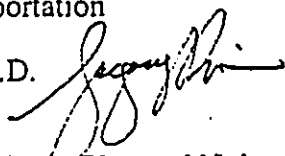
FAX: Director's Office 587-2848
Planning Division 587-2824

Ref. No. Z-0007

January 17, 1996

MEMORANDUM

TO: Mr. Owen Miyamoto, Airports Division Administrator
Department of Transportation

FROM: Gregory G.Y. Pai, Ph.D. 
Director

SUBJECT: Dillingham Airfield Master Plan and Noise Compatibility Program,
Draft Environmental Assessment, Volume III, State Project No.
AO2011-01

Thank you for the opportunity to review the draft environmental assessment for the Dillingham Airfield Master Plan and Noise Compatibility Program. We have the following comments to offer.

Section 3.1 Existing Site and Surrounding Area In the subsection Land To Be Acquired, it is mentioned that approximately 55.0 acres within the Dillingham Military Reservation have been classified as "wetlands" by the U.S. Army Corps of Engineers. The statement is insufficient. We recommend an expanded discussion regarding the wetland value and whether buffer and protection is required. Information should be provided indicating whether the Army did a jurisdictional wetland delineation for the area. If the delineation was done, then information regarding date and applicability should also be included.

Section 3.5 Noise It is stated that "proposed Phase I improvements are not expected to alter the noise environment at Dillingham Airfield." It identifies the noise element for impact to existing nearby residents; however, its impact to nearby, and much closer, beach users appears to have been lightly reviewed.

The ocean frontage directly makai of Farrington Highway from Dillingham Airfield is a highly desired sandy beach highly for both resident and visitors. Sandy beaches that provide ocean recreation opportunities on Oahu is a major and finite economic resource of the State. Noise can affect the value of Mokuleia and Keaua Beach as a coastal resource for recreation activities and as a result the impact from enhanced aircraft activity to beachgoers require greater consideration. Coastal Zone Management policies call for the protection of coastal resources uniquely suited for recreational activities that cannot be provided in other areas.

Mr. Owen Miyamoto
Page 2
January 17, 1996

We note that proposed Phase 1 improvements include the provision of a helipad as well as other improvements designed to enhance the capability of Dillingham Airfield. With the ability to facilitate increased general aviation as well as the additional helicopter operation, we feel that the foregoing statement may require further review and explanation. The installation of a formalized noise abatement program should also be investigated.

Section 3.10 Flora and Fauna While conducting the Oahu State Land Use District Boundary Review, we identified the Dillingham Field Ponds located within the project boundaries as a Priority 1 area for reclassification to conservation district. The Dillingham Field Ponds have been identified as the primary habitat for the endangered Hawaiian coot, gallinule, stilt and koloa. The pond is included in the Hawaiian Waterbird Recovery Plan. In addition, the ponds provide habitat for migratory water birds and Coastal Zone Management policies call for the preservation of valuable coastal ecosystems of significant biological and economic importance.

Miscellaneous Following are additional comments regarding the assessment.

Sand Mining The focus of our earlier comment regarding sand mining appears to have been misunderstood. We wish to explain that the site exhibits potential as a major sand resource notwithstanding the existing sand mining operations further east of the airfield. The comment was to recognize and identify steps that may be undertaken so that the State's options may not be precluded by the construction of airfield improvements should the resource be needed in the future.

Ceded Lands Now that uses have been identified for the ceded lands portions of the airfield, the information should be submitted to the Office of Hawaiian Affairs as requested by their letter of August 8, 1995. Determination for appropriateness under the provision of 5(f) of the Admissions Act should be obtained.

Assessment We request that you reconsider this "incrementalizing" through the environmental assessment thus ignoring cumulative impact on environmental and fiscal resources through commitment of this project.

Thank you for providing us the opportunity to comment on the assessment with the additional information available regarding the project. Should there be any questions, please contact Howard Fujimoto of our staff at 587-2898.



University of Hawai'i at Mānoa

Environmental Center
A Unit of Water Resources Research Center
Crawford 317 • 2550 Campus Road • Honolulu, Hawai'i 96822
Telephone: (808) 956-7361 • Facsimile: (808) 956-3980

Jan. 22, 1995
EA:00139

Mr. Owen Miyamoto
Department of Transportation, Airports Division
400 Rodgers Boulevard, Suite 700
Honolulu, Hawaii 96819-1880

Dear Mr. Miyamoto:

Draft Environmental Assessment
Dillingham Airfield Master Plan and Noise Compatibility Program
Waiialua, Oahu

The Airports Division of the Department of Transportation (DOT) has proposed a Dillingham Airfield Master Plan for the period 1992 to 2010. The Plan covers three phases: Phase 1 (present to 1997), Phase 2 (1998 to 2002), and Phase 3 (2003 to 2010). Phase 1 improvements focus on safety and maintenance, while Phases 2 and 3 provide for additional apron space, hangars, utilities, an Air Traffic Control Tower, navigational aids, and another runway.

We reviewed the draft Environmental Assessment (EA) with the assistance of George Curtis, Joint Institute for Marine and Atmospheric Research; and Paul Berkowitz of the Environmental Center.

Segmentation

According to Section 11-200-7, Hawaii Administrative Rules (H.A.R.),

“a group of actions shall be treated as a single action when:

- (1) The component actions are phases or increments of a larger undertaking.
- (2) An individual project is a necessary precedent for a larger project.
- (3) An individual project represents a commitment to a larger project.

Mr Owen Miyamoto
January 22, 1996
Page 2

(4) The actions in question are essentially identical, and a single statement will adequately address the impacts of each individual action and those of the group as a whole."

In addition to representing an increment of a larger undertaking, the first phase of the proposed Master Plan (in which land is acquired for all planned developments to the year 2010) represents a commitment to a larger project. Pursuant to the above definition, the three phases of the Master Plan should be treated as a one project in a single document. Therefore, instead of focusing on the impacts of Phase 1 (as stated on page 3) and identifying the "impacts of all three phases if presently known," the document should identify the significant impacts of all three phases. Since the phases have been outlined, maps have been drawn, and costs have been tabulated, major prospective impacts can be identified and assessed. Should additional concerns arise during future plan revisions, they may appropriately be addressed in a supplemental statement pursuant to §11-200-26, H.A.R. In short, the public has the right to consider the project in its entirety, "at the earliest practicable time" as stipulated by law (§343-5(b), HRS).

Incomplete Data Regarding Noise

Information on the projected usage, hours of operation, and aircraft mix needs to be presented in the document. This type of data will allow for a better understanding of noise levels and other regional effects. Furthermore, the noise study which was conducted in 1991 or the additional study which is presently underway should be appended to allow the public to adequately evaluate the Plan's impacts. How does the current noise study differ from the one performed in 1991? According to the significance criteria in Section 11-200-12 H.A.R., any project which "detrimentally affects air or water quality or ambient noise levels" significantly affects the environment, requiring preparation of an Environmental Impact Statement (EIS). Without the opportunity to review the noise studies, the public cannot reliably evaluate potential effects of anticipated noise levels.

Land Ownership

A portion of the airfield expansion lies on land ceded to the federal government in the World War II era. The army offered to give the State some of this land in the late 1970s or early 1980s, but was unable to determine how or if they had acquired the title to the land. To resolve this issue, the State was given a 30-year lease, and an EA was prepared to assess that action. These land ownership issues require discussion in documentation supporting the present proposed action.

Mr Owen Miyamoto
January 22, 1996
Page 3

Tsunami Factor

Section 3.9 should note that the flood probabilities on the Flood Insurance Rate Maps (FIRM) include a tsunami factor. However, no such thing as a "100-year tsunami" exists. The document ought to describe the tsunami evacuation zone which is shown in front of the phone book. Furthermore, the area of maximum inundation, which is available from the Oahu Civil Defense, ought to be displayed on a map.

Miscellaneous Details

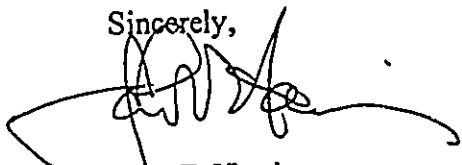
Figure 2, the present configuration, shows a full length makai taxiway which is elsewhere mentioned as an expansion item.

Conclusion

Since Barbers Point Naval Air Station is likely to be utilized as a general aviation airport in the future, Dillingham usage should not increase greatly. However, to comply fully with requirements of Chapter 343, this EA needs to assess the impacts of all three phases of the proposed Master Plan. Furthermore, the noise impacts of the airfield need to be thoroughly documented, since they are potentially significant. In light of the lack of information on Phases 2 and 3, this document needs to be revised and expanded to encompass the entire project. In view of the extent and potential significance of the proposed project, an EIS should be prepared, and the present draft EA should be reissued in an expanded form as an EIS Preparation Notice.

Thank you for the opportunity to comment on this draft EA.

Sincerely,



John T. Harrison
Environmental Coordinator

cc: OEQC
Roger Fujioka
Brian Ishii ✓
George Curtis
Paul Berkowitz



University of Hawaii at Manoa

Water Resources Research Center
Holmes Hall 283 • 2540 Dole Street
Honolulu, Hawaii 96822

29 December 1995

Mr. Owen Miyamoto
Airports Administrator
Department of Transportation
Airports Division
400 Rodgers Boulevard, Suite 700
Honolulu, Hawaii 96819

Attn: Mr. Ben Schlapak

Dear Mr. Miyamoto:

**Subject: Dillingham Airfield Master Plan and Noise
Compatibility Program, Draft Environmental
Assessment, Volume III, State Project No. A02011-
01**

We have reviewed the subject EIS and have no comments to offer at this time.

Thank you for the opportunity to respond.

Sincerely,


Roger S. Fujioka, Ph.D.
Director, WRRC

RSF:jmn

Enclosure

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HAWAII 96843
PHONE (808) 527-6180
FAX (808) 533-2714



January 12, 1996

2/08
JEREMY HARRIS, Mayor
WALTER O. WATSON, JR., Chairman
MAURICE H. YAMASATO, Vice Chairman
KAZU HAYASHIDA
MELISSA Y.J. LUM
FORREST C. MURPHY
KENNETH E. SPRAGUE
BARBARA KIM STANTON
RAYMOND H. SATO
Manager and Chief Engineer

Mr. Owen Miyamoto, Airports Administrator
Airports Division
Department of Transportation
State of Hawaii
Honolulu International Airport
Honolulu, Hawaii 96819

Dear Mr. Miyamoto:

Subject: Your Memorandum of December 19, 1995 Regarding the Draft Environmental Assessment (DEA) for the Proposed Dillingham Airfield Master Plan and Noise Compatibility Program, State Project No. A02011-01, TMK: 6-8-02: 16, 6-8-03: 09, and 6-8-14: 1-23, 25, Waialua, Oahu

Thank you for the opportunity to review and comment on the DEA for the proposed improvements to the Dillingham Airfield. We have no objections to the proposed project; however, we have the following comments on the DEA:

1. Our existing water system cannot provide adequate fire protection to the private water system serving Dillingham Airfield. Major upgrades to our water system would be required to extend our water system and provide adequate fire protection to the project area. A water master plan including proposed improvements to our water system should be submitted for our review and approval. Hydraulic analyses should also be submitted for verification of the system improvements required.
2. The existing Dillingham Airfield water system must be upgraded to Board of Water Supply (BWS) standards before it can be dedicated to the BWS.

If you have any questions, contact Barry Usagawa at 527-5235.

Very truly yours,

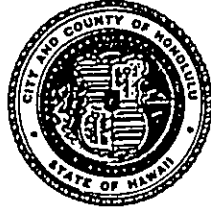

RAYMOND H. SATO
Manager and Chief Engineer

0 327

DEPARTMENT OF PARKS AND RECREATION
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET
HONOLULU, HAWAII 96813

JEREMY HARRIS
MAYOR



DONA L. HANAIKE
DIRECTOR

ALVIN K.C. AU
DEPUTY DIRECTOR

January 26, 1996

Mr. Owen Miyamoto, Administrator
Airports Division
Department of Transportation
State of Hawaii
400 Rodgers Boulevard, Suite 700
Honolulu, Hawaii 96819-1880

Attention: Mr. Ben Schlapak

Dear Mr. Miyamoto:

Subject: Dillingham Airfield Master Plan and Noise
Compatibility Program, Draft Environmental
Assessment (DEA), State Project No. A02011-01

This responds to your request for comments on the
subject DEA for the Dillingham Airfield master plan.

Based on our review of the subject document, we have no
comments to offer at this time on the proposed Phase 1
improvements outlined in the DEA.

Should you have any further questions on the matter,
please contact Brian Suzuki of our Advance Planning Branch at
527-6316.

Sincerely,

A handwritten signature in cursive script, appearing to read "Dona L. Hanaike".

DONA L. HANAIKE
Director

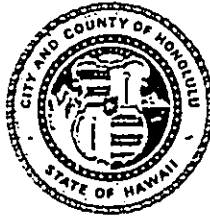
DLH:ei

We Add Quality to Life

4700

DEPARTMENT OF PUBLIC WORKS
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET
HONOLULU, HAWAII 96813



JEREMY HARRIS
MAYOR

KENNETH E. SPRAGUE
DIRECTOR AND CHIEF ENGINEER

DARWIN J. HAMAMOTO
DEPUTY DIRECTOR

ENV 96-002

January 3, 1996

Mr. Owen Miyamoto
Airports Administrator
Airport Division
Department of Transportation
State of Hawaii
400 Rodgers Boulevard, Suite 700
Honolulu, Hawaii 96819-1880

Dear Mr. Miyamoto:

Subject: Draft Environmental Assessment (DEA), Volume III
Dillingham Airfield Master Plan and Noise
Compatibility Program, State Project No. A02011-01
TMK: Various

We have reviewed the subject DEA and have the following comments:


1. The DEA should expand the discussion on water quality. Does the facility require a stormwater pollution control plan approved by the State Department of Health?
2. Increase of traffic at the facility is projected due to closure of Barbers Point Naval Air Base and planned closure of Ford Island ALF. Therefore, the DEA should discuss mitigation measures to minimize discharge of pollutants resulting from fueling, aircraft wash, etc., from the site.
3. If drywells are to be kept active, address plan to improve scheduled maintenance.
4. Provide a sketch to show location of streams and flow patterns as described in Section 3.8.
5. Has the status of wetlands ever changed since 1977 when the Corps of Engineers issued its report?
6. A drainage report should be submitted to the Drainage section, Division of Engineering, for review and approval.

24 13

Mr. Owen Miyamoto
Page 2
January 3, 1996

If you have any questions, please contact Mr. Alex Ho,
Environmental Engineer, at 523-4150.

Very truly yours,

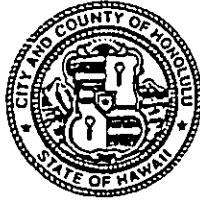

KENNETH E. SPRAGUE
Director and Chief Engineer

0186

DEPARTMENT OF TRANSPORTATION SERVICES
CITY AND COUNTY OF HONOLULU

PACIFIC PARK PLAZA
711 KAPIOLANI BOULEVARD, SUITE 1200
HONOLULU, HAWAII 96813

JEREMY HARRIS
MAYOR



CHARLES O. SWANSON
DIRECTOR

12/95-05910R

January 22, 1996

Mr. Owen Miyamoto, Airports Administrator
Airports Division
Department of Transportation
State of Hawaii
400 Rodgers Boulevard, Suite 700
Honolulu, Hawaii 96819-1880

Dear Mr. Miyamoto:

Subject: Draft Environmental Assessment for Dillingham
Airfield Master Plan and Noise Compatibility
Program, State Project No. AO2011-01

In response to your memorandum dated December 19, 1995, we reviewed the subject draft environmental assessment. As the access for this project appears to be from Farrington Highway, a State Department of Transportation facility, we have no objections or comments regarding its transportation or traffic impacts.

Should you have any questions regarding this matter, please contact Faith Miyamoto of the Transportation Systems Planning Division at 527-6976.

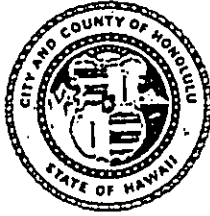
Respectfully,

for 
CHARLES O. SWANSON
Director

4/142

DEPARTMENT OF WASTEWATER MANAGEMENT
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET
HONOLULU, HAWAII 96813



JEREMY HARRIS
MAYOR

FELIX B. LIMTIACO, P.E.
DIRECTOR

CHERYL K. OKUMA-SEPE, ESQ.
DEPUTY DIRECTOR

In reply refer to:
WCC 95-59

December 27, 1995

Mr. Owen Miyamoto
Airports Administrator
State of Hawaii
Department of Transportation
400 Rodgers Boulevard, Suite 700
Honolulu, Hawaii 96819-1880

Dear Mr. Miyamoto:

Subject: **Draft Environmental Assessment**
Dillingham Airfield Master Plan and Noise Compatibility Program
TMK: 6-8-2:16, 6-8-3:9, 6-8-14:1-23 and 25

We have no objection to the proposed Dillingham Airfield improvements. There are no City sewers in the subject area. The proposal calls for a private septic system or other State Department of Health approved wastewater systems to replace the current on-site cesspools.

If you have any questions, please contact Ms. Tessa Yuen of the Service Control Branch at 523-4957.

Very truly yours,

A handwritten signature in black ink, appearing to read "Felix B. Limtiaco".

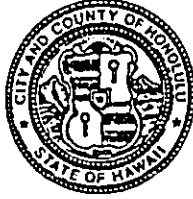
FELIX B. LIMTIACO
Director

✓ 15

PLANNING DEPARTMENT
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET
HONOLULU, HAWAII 96813

JEREMY HARRIS
MAYOR



CHERYL D. SOON
CHIEF PLANNING OFFICER
CAROLL TAKAHASHI
DEPUTY CHIEF PLANNING OFFICER

LW 12/95-2613

January 24, 1996

Mr. Owen Miyamoto
Airports Administrator
State Department of Transportation
Airports Division
400 Rodgers Boulevard, Suite 700
Honolulu International Airport
Honolulu, Hawaii 96819-1880

Dear Mr. Miyamoto:


Draft Environmental Assessment for
- Dillingham Airfield Master Plan
- Waialua District, Oahu
State Project No A02011-01, Reference AIR-EN 95.368

We have reviewed the subject Draft Environmental Assessment (DEA) and note that our previous comments to the DEA remain valid. Attached is a copy of our comments dated August 29, 1995.

The DEA stated on page 18 that "it is anticipated that it will be necessary to change the State land use classification from 'Agriculture' to 'Urban' and the County zoning from 'Agriculture' and 'Military & Federal' to 'Industrial and Public Facility,' respectively." We would add that an amendment to the North Shore Development Plan Land Use Map (DPLUM) to redesignate portions of the subject site to Public Facility will be required, as noted in our previous comments.

Thank you for the opportunity to comment. Should you have any questions, please call Lin Wong of my staff at 523-4485.

Sincerely,


CHERYL D. SOON
Chief Planning Officer

CDS:js

Attachment

PLANNING DEPARTMENT
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET
HONOLULU, HAWAII 96813



JEREMY HARRIS
MAYOR

CHERYL D SOON
DEPT PLANNING DEPT
CAROL TAKAHASHI
DEPT CHIEF PLANNING OFFICER

LW 8/95-1576

August 29, 1995

Mr. Owen Miyamoto
Airports Administrator
State Department of Transportation
Airports Division
400 Rodgers Boulevard, Suite 700
Honolulu International Airport
Honolulu, Hawaii 96819-1880

Dear Mr. Miyamoto:

Draft Environmental Assessment Preconsultation
Dillingham Airfield Master Plan
Waialua District, Oahu
State Project No A02011-01, Reference AIR-EP 95.178

In response to your letter of July 31, we offer the following comments.

The majority of the masterplan site is currently designated as Public Facility on the North Shore Development Plan Land Use Map (DPLUM) except for the following:

- Portions of the proposed site for the runway protection zone on the western end of the airfield (portions of TMKs: 6-8-14: 1 & 6-9-1: 36) is designated as Park and Preservation, respectively; and
- The proposed site for the parachute drop zone (portion of 6-8-14: 1) south-east of the site is designated for Agriculture use.

An amendment to the North Shore DPLUM to redesignate the above-mentioned sites to Public Facility is required.

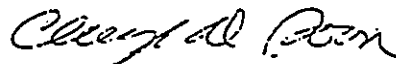
The Planning Department will be initiating a year-long comprehensive review of the North Shore Development Plan area from Kaena Point to Kawela Bay beginning in September 1995. Until a revised plan is drafted and subsequently adopted by the City

Mr. Owen Miyamoto
Airports Administrator
State Department of Transportation
August 29, 1995
Page 2

Council, the existing General Plan and Development Plans (DP) still apply. In general, the Special Provisions of the existing DP for the North Shore state that proposed improvements on the North Shore should be compatible with the rural, open space character of the area; mauka and makai views from Farrington Highway are to be preserved; and building height is to be limited to 25 feet.

Thank you for the opportunity to comment. Should you have any questions, please call Lin Wong of my staff at 523-4485.

Sincerely,



CHERYL D. SOON
Chief Planning Officer

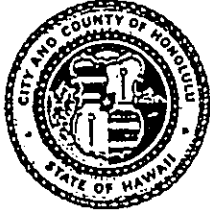
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pg 56

POLICE DEPARTMENT
CITY AND COUNTY OF HONOLULU

801 SOUTH BERETANIA STREET
HONOLULU, HAWAII 96813 - AREA CODE (808) 529-3111

JEREMY HARRIS
MAYOR



MICHAEL S. NAKAMURA
CHIEF

HAROLD M. KAWASAKI
LEE DONOHUE
DEPUTY CHIEFS

OUR REFERENCE BS-DL

January 4, 1996

Mr. Owen Miyamoto
Airports Administrator
Department of Transportation
400 Rodgers Boulevard, Suite 700
Honolulu, Hawaii 96819-1880

Dear Mr. Miyamoto:

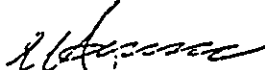
We have received your letter of December 19, 1995, requesting comments on a draft environmental assessment for the Dillingham Airfield Master Plan and Noise Compatibility Program, Volume III.

This project should have no significant impact on the operations of the Honolulu Police Department.

Thank you for the opportunity to comment.

Sincerely,

MICHAEL S. NAKAMURA
Chief of Police

By 
EUGENE UEMURA, Assistant Chief
Administrative Bureau

JAN 23 1996

68-240 Mahina'ai St.
Waiialua, HI 96791
January 19, 1996

Mr. Owen Miyamoto
Department of Transportation
Airports Division
400 Rodgers Boulevard, Suite 700
Honolulu, Hawai'i 96819-1880

Aloha Mr. Miyamoto,

I am responding to the Draft Environment Assessments to the Dillingham Airfield Master Plan and Noise Compatibility Program. I strongly object to all projected phases of the master plan.

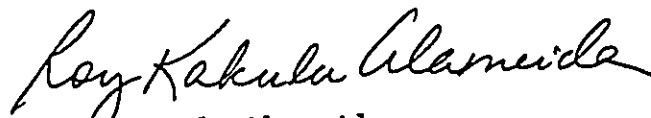
As a descendant of ancestors who worked the 'āina that the airfield sits on, I considered insensitive for Government to neglect traditional Hawaiian cultural practices of *mālama 'āina* or caring for the land. The 'āina which my *kūpuna* loved so much was confiscated by the U.S. Government for military purposes during World War II (the airfield was not really used for that purpose other than a place for military maneuvers). Was this action justified?

I also object to the fact that expansions of the present facilities will increase noise pollution, traffic, and the obvious, tourism. Again, here is another prime example of the 'āina being taken away from the *kanaka maoli*.

I feel that the 'āina should be returned to the descendants of those ancestors who lived at Mokulēia, Kawaihāpai, Kealia and Ka'ena prior to 1778. They are the rightful *kahu* or caretakers for the 'āina. The reasons are quite obvious.

Thank you for your attention.

'O au iho nō,


Roy Kakulu Alameida

cc: Edward K. Noda and Associates, Inc.
615 Pi'ikoi Street, Suite 300
Honolulu, Hawai'i 96814

RECEIVED

JAN 22 1996

EDWARD K. NODA & ASSOCIATES

pp 8 ←

January 9, 1996

DIRECTOR'S OFFICE
DEPT. OF
TRANSPORTATION

JAN 10 10 11 AM '96

Mr. Kazuo Hayashida, Director
State Dept. of Transportation
869 Punchbowl St.
Honolulu, Hawaii 96813

Dear Mr. Kazuo Hayashida,

Subject: Negative Impact Declaration proposal for
Dillingham Airfield.

I am Meryl Andersen, long time resident of Haleiwa. Also, a
member of the Neighborhood Board.

I am for an Environmental Impact Statement and against the
proposal for Negative Impact Declaration for these reasons:

1. The community should have input on this important
issue.
2. There has been years of studies to have Dillingham Airfield
up-graded for General Aviation, but the location near the Waianae
Mt. slopes limits the number & size of aircraft.
3. Safety reason
4. Noise
5. It would be more convient for private plane owners to
use airfields that are located closer to Honolulu.
6. Kealia trail is an ancient Hawaiian trail used as a
access to both sides of Waianae Range. In view of this, there
may have been a substantial ancient Hawaiian Community in the
area.
7. In this "economical crunch" monies spent for major
improvements to this airfield is not justified when other airfield
available & could be persured.

Sincerely,

Meryl M. Andersen

Meryl M. Andersen
66-008 B Kamehameha Highway
Haleiwa, Hawaii 96712

CC: Senator Bunda
Representative Santiago
Councilmember Mansho



0242

January 16, 1996

BHP Hawaii

State of Hawaii
Department of Transportation
Airports Division
400 Rodgers Boulevard, Suite 700
Honolulu, Hawaii -96819-1880

Attention: Mr. Owen Miyamoto
Airports Administrator

Gentlemen:

Subject: Dillingham Airfield Master Plan and Noise Compatibility Program
Draft Environmental Assessment, Volume III
Plan Review and Comment

In response your letter dated December 19, 1995, reference number AIR-EN 95.367, we are returning one (1) copy of the draft environmental assessment (EA) for the subject. Based on our review of the draft EA, it has been determined that the area is currently clear of utility gas facilities.

Thank you for the opportunity to review the draft EA. Should there be any questions, or if additional information is desired, please call me at 594-5574.

Very truly yours,

BHP Gas Company

A handwritten signature in black ink, appearing to read 'Keith K. Yamamoto'.

Keith K. Yamamoto
Supervisor, Engineering

KKY:krs
96-103

Attachment: Plans

Gary S. Bignami
68-205 Waialua Beach Rd.
Waialua, HI 96791

January 22, 1996

Owen Miyamoto
Department of Transportation
Airports Division
400 Rodgers Blvd., Suite 700
Honolulu, HI 96819-1880

Re: Draft Environmental Assessment Dillingham Airfield Master Plan

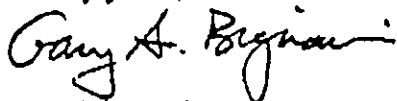
Dear Mr. Miyamoto:

As a resident and homeowner in the Mokuleia/Waialua community, I am very concerned about the proposed "incremental" improvements to Dillingham airfield. I do not believe that a negative declaration on a complete environmental impact statement is justified, since there are many concerns that are not adequately addressed in the absence of an EIS. Furthermore, the EIS should be conducted on the entire proposed project (i.e. all increments) so that the community has a clear picture of what the Department of Transportation has in mind for this quiet, small community.

Without a doubt, this ambitious expansion of the Dillingham airfield will have negative impacts to the surrounding community: increased automobile traffic, air traffic noise, and potential environmental degradation. Specifically, Kaukonahua road and Farrington highway are already among the state's most dangerous roadways. How will the increased traffic be accommodated safely? The Mokuleia area is known for its tranquillity and fine beaches. The increase in air traffic will diminish the recreational value of this area, and poses possible hazards to the residents of the area should aircraft crash. Currently, there is no general aviation air traffic at night, and the community highly values the solitude which currently exists. Without a complete EIS, can the state assure the residents of this community, and Hawaii at large, that important archeological sites will not be impacted? With a change in Dillingham airport of this magnitude, can changes in zoning and urbanization of this rural region of North Shore be avoided, or is this also part of the potential impact which must be addressed and justified to the community in a complete EIS?

I believe that a complete EIS is necessary before proceeding with any of the proposed incremental expansions. The State has not adequately explored other alternatives to the Dillingham site. Why shouldn't the Barber's Point airfield be used for the expansion of general aviation? This area is much closer to the majority of general aviation aircraft owners and pilots, already has considerable infrastructure, and seems to be a much more logical choice than the far reaches of the North Shore.

Sincerely yours,



Gary S. Bignami
68-205 Waialua Beach Rd.
Waialua, HI 96791

cc: Edward K. Noda & Assoc.
Attn: Brian Ishii

Ø 281



William A. Bonnet
Manager
Environmental Department

January 26, 1996

Mr. Owen Miyamoto
- Airports Administrator
Department of Transportation
State of Hawaii
Honolulu International Airport
Honolulu, Hawaii 96819

Dear Mr. Miyamoto:

Subject: Dillingham Airfield Master Plan and Noise Compatibility Program

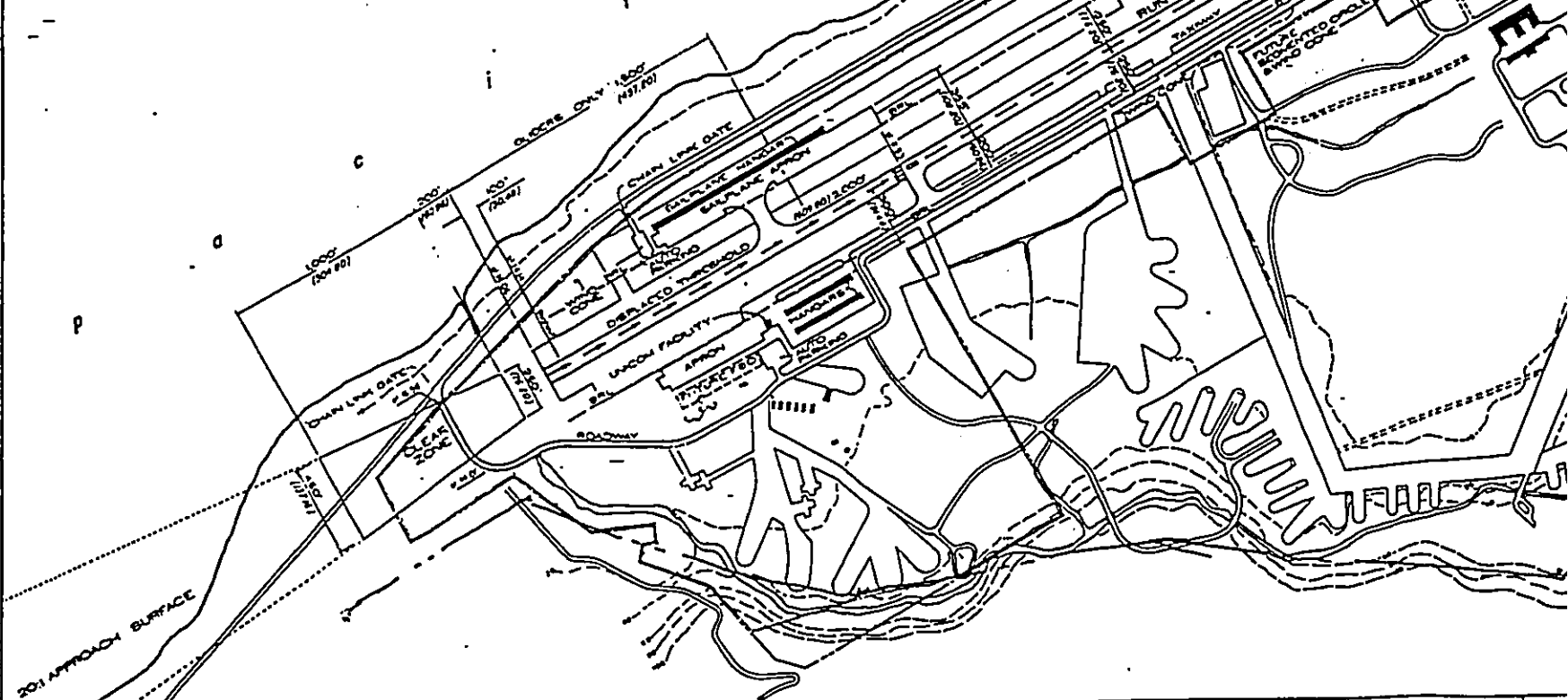
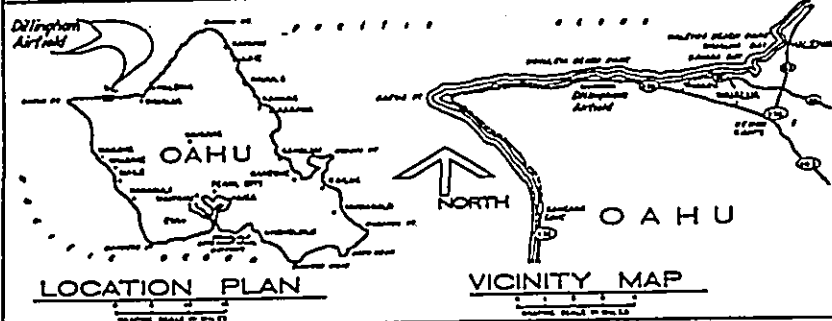
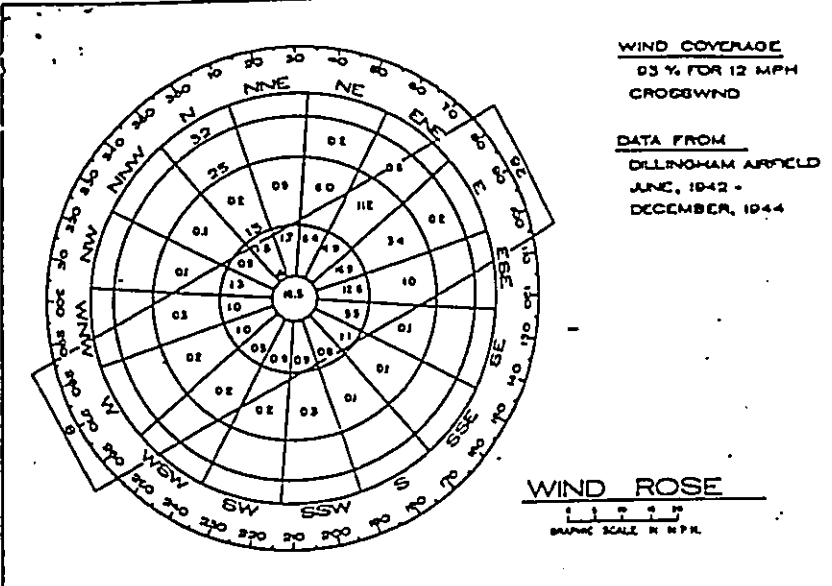
Thank you for the opportunity to comment on your November 1995 Draft Environmental Assessment report for the Dillingham Airfield project, as proposed by the Department of Transportation Airport Division. We have reviewed the subject document and would like to point out that HECO has an existing 11.5KV overhead poleline along the mauka side of the airfield (see fig. 2 for approximate location). We are checking with Lands and Natural Resources, but we probably do not have an easement for this line. Under this master plan, the State seeks to acquire additional land which would then encompass this existing poleline. Although it does not appear that the future airport operations will be affected by the presence of this poleline, we may be forced to relocate the line. HECO shall reserve further comments pertaining to the protection of existing powerlines bordering the project area until construction plans are finalized. Our point of contact for this project, and the originator of these comments, is Francis Hirakami (543-7536) principal engineer. I suggest your staff and consultants deal directly with Francis to coordinate HECO's continuing input on this project.

Sincerely,

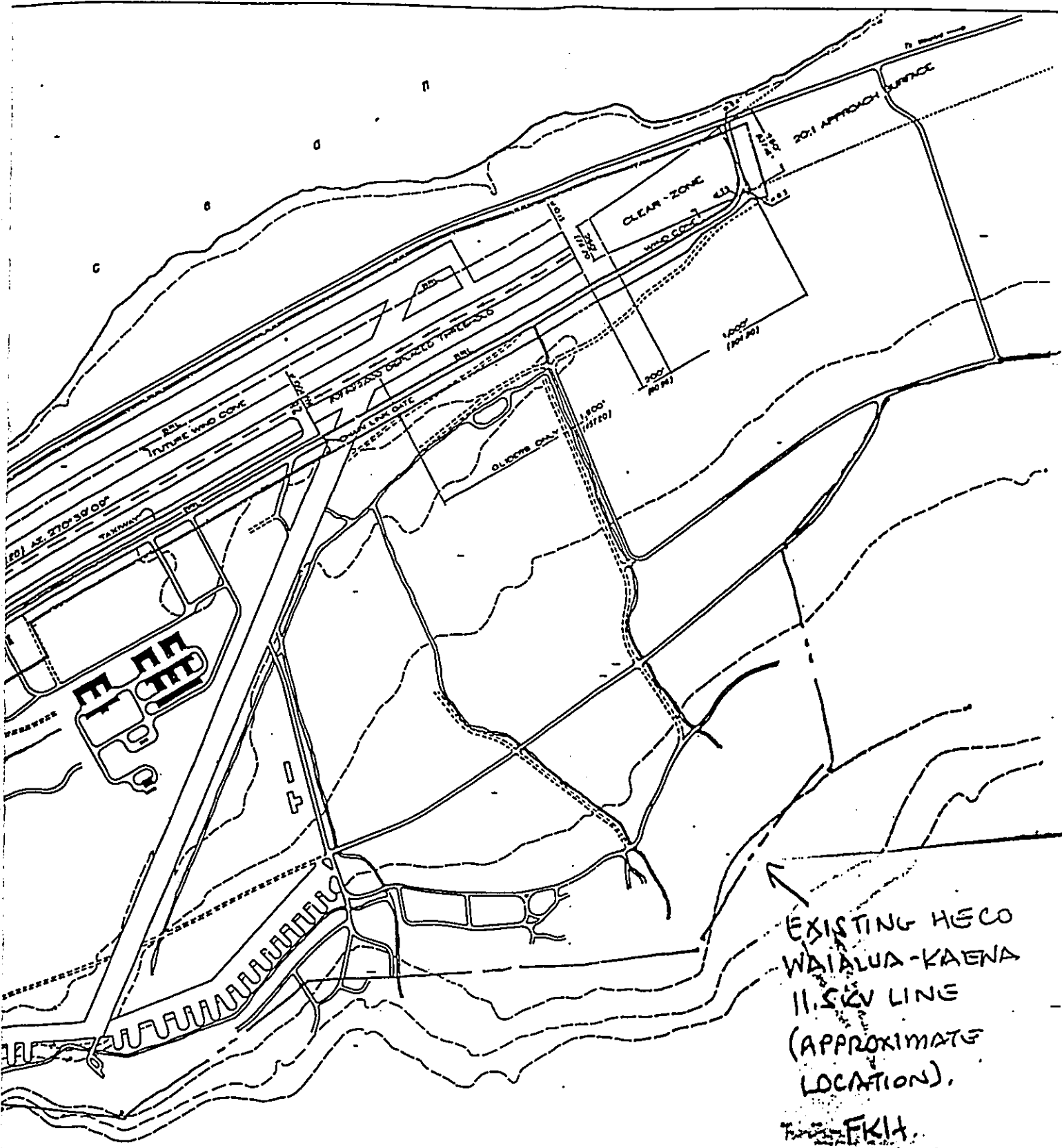
Enclosure

xc. F.Hirakami

An HEI Company



AIRPORT DATA			RUNWAY DATA			
	EXISTING	ULTIMATE		EXISTING	ULTIMATE	
AIRPORT REFERENCE POINT (EAST COORDINATES)	21°31'00" N 158°21'00" W	SAME	EFFECTIVE GRADIENT (%)	0.4	SAME	APPR
NORMAL ANNUAL TEMPERATURE (HIGHEST MONTH)	80° F	SAME	% WIND COVERAGE (12 MPH)	83	SAME	BUILD
AIRPORT ELEVATION (MSL)	18'	SAME	NAVIGATIONAL AID	NONE	NONE	BUILD
AIRPORT'S TERRAIN AID	NONE	NONE	APPROACH SURFACE	30:1	30:1	BUILD
			RUNWAY LIGHTING	NONE	NONE	APPR
			RUNWAY MARKING	BASIC	BASIC	FENC
			PAVEMENT STRENGTH	40,000 (I) 43,000 (II) 80,000 (III)	SAME SAME SAME	GRAD UNPR RUNW



EXISTING HECO
 WAIALUA-KAENA
 11.5KV LINE
 (APPROXIMATE
 LOCATION).

FKI
 2/5/96

LEGEND		EXISTING	ULTIMATE	REVISION	DATE
ULTIMATE	AIRPORT BOUNDARY	---	---		
SAME	BUILDING RESTRICTION LINE (BRL)	BRL			
OR NONE	BUILDINGS	=====	=====		
SAME	BUILDINGS TO BE REMOVED	=====	=====	GENERAL UPDATE	2/5/96
NONE	APPROACH SURFACE	-----		FAA APPROVED-REFER TO LETTER DATED SEPT. 17, 1990	
SAME	FENCE LINE	-----		APPROVED:	
SAME	GROUND CONTOURS	-----		<i>Jonathan S. Shindler</i> 9/4/90	
SAME	UNPAVED ROADWAY	-----		<i>Clara Mjanta</i> 9/1/90	
SAME	RUNWAY, TAXIWAY, APPROX. B. HANGARS	---		DEPT. AIRPORTS & TRAVEL, STATE OF HAWAII	

DEPARTMENT OF TRANSPORTATION
 BUREAU OF AIRPORTS & TRAVEL

DUNEDIN AIRFIELD

AIRPORT LAYOUT PLAN

DATE: MARCH, 1990 SHEET 1 OF 3 SHEETS



LIFE OF THE LAND

HAWAII'S OWN ENVIRONMENTAL ACTION GROUP
EDUCATION, RESEARCH, LOBBYING & LITIGATION
PROTECTING HAWAII'S FRAGILE ENVIRONMENT

January 15, 1996

Assessment of the Dillingham Airfield Master Plan and Noise Compatibility Program
Proposing Agency: State of Hawaii, Department of Transportation. Prepared by: Edward K Noda and Associates. November 1995.

• **INTRODUCTION:** Most people tell you up front what they are all about, if you just listen to them. Let us listen to the Dillingham Air Field Expansion Environmental Assessment: "Assumptions: It is possible to negotiate a new lease for civil use of Dillingham Airfield that will be less restrictive ... and with fewer operational constraints."¹ "It is recommended that development take place in three phases with Phase I to be completed by 1997, Phase II by 2002 and Phase 3 by 2010. ... only the Phase 1 improvements are presently recommended."² "The alternative ... is not considered prudent."³

The first paragraph of the lead story in the January 1, 1996 Pacific Business News summed the project up as follows: "The state has proposed a \$32 million expansion of Dillingham Airfield on Oahu's North Shore as a part of a plan to relieve congestion at Honolulu International Airport. ... The overall expansion program, which is expected to extend through the year 2010, has been divided into three phases, said Ben Schlapak, a planning engineer with the state Department of Transportation's Airport Division.

The EA continues: "It is unwise to forcibly constrain an industry that serves the State and the public in essential and diverse ways. It would be prudent to resolve the environmental issues and permit the normal growth of general aviation to the benefit of the public."⁴

... less restrictive fewer operational constraints prudent to resolve the environmental issues permit the normal growth hmm. Let us review the environmental issues that the EA says need to be relaxed.

• **ROADS:** "The proposed short-term improvements at Dillingham Airfield are for operational and maintenance purposes. Therefore no significant increases in the auto traffic in the Dillingham Airfield

¹ EA pg 2
² EA pg 3
³ EA pg 7
⁴ EA pg 7

and Waialua areas is expected."⁵ And yet the expansion will "provide additional recreational opportunities for both residents and tourists."⁶ Perhaps the additional opportunities will be for people who "drop in". How will "Snake Road" (officially called Kaukonahua Rd, it is the back road from Wahiawa to Waialua) be affected? The road may need to be realigned. How will locals feel about that?

• **BIRDS:** "Laysan Albatross have only recently begun to reoccupy the main Hawaiian Islands ... Dillingham Airfield is an apparently attractive site for albatross based on the number of birds seen in this area over the last few years."⁷ Laysan Albatross will be controlled⁸ by USDA.⁹ "Total elimination of the marginal habitat ... would probably have no noticeable impact on ... any ... waterbird."¹⁰ Game birds are being released in the area by the state and pheasants are being released by the private sector. Will the hunting of birds conflict with the growth of aviation? Are these compatible multi-uses of the area?

• **UTILITIES:** No new utilities are needed at this time. However "additional [HECO] electric power capacity will be installed as needed"¹¹ and "additional [HTEL] capacity will be installed as needed."¹² It remains unclear how much new capacity is needed, where upgrades would need to be placed, how soon they might be needed, and at what cost.

• **GROUND WATER:** The water system must be upgraded. The choices are "connection to the Board of Water Supply (BWS) system (at an estimated cost of \$4.6 million)" or improvement the existing system and then "dedication of the existing system to the BWS" (at a cost of several million dollars).¹³ Luckily this is not part of the Dillingham Airfield expansion and need not be considered here.

The Waialua Water Management Area has a sustainable yield of "90 million gallons per day (mgd)."¹⁴ This figure is misleading since the Waialua Water Management Area contains 6 aquifers. These are located in the Mokuleia-Dillingham, Waialua-Haleiwa, Waimea-Sunset, Schofield, Koolau Mountains and Waianae Mountains areas. The Mokuleia-Dillingham aquifer has a sustainable yield of 60 mgd.¹⁵ With all the proposed changes in the ground water, what will be the effect on the ocean? How does the proposed project conform to existing state laws (HRS) and county laws (ROH)? Is compliance relevant? These issues were raised in the comments section of the EA, but they were not addressed in the body of the EA.

• **WASTE WATER:** The Wastewater Disposal System will need a conversion between existing cesspools and new septic tanks or other DOH approved systems.¹⁶ With all the proposed changes in

⁵ Reply to Rene Mancho

⁶ EA pg 22

⁷

⁷ Survey of the Avifauna and Feral Mammals at Dillingham Airfield and nearby lands, Mokuleia, Oahu

⁸ by noise & movement

⁹ EA pg 32

¹⁰ EA pg 29

¹¹ EA pg 24

¹² EA pg 24

¹³ EA pg 23

¹⁴ EA pg 23

¹⁵ "Draft Environmental Impact Statement: Supplemental Waialua-Hale'iwa Wastewater Facility Plan". Prepared by Hydro Resources Intl, Arcata, California for the Department of Wastewater Management, City and County of Honolulu. November 1995.

¹⁶ EA pg 24. See also the letter from Lawrence Miiki, Dir of Health regarding Chapter 11-62 Wastewater Systems.

the waste water, cess pools, etc. what will be the effect on the ocean? How does the proposed project conform to existing state laws (HRS) and county laws (ROH)? These issues were raised in the comments section of the EA, but they were not addressed in the body of the EA.

• **TRAILS:** The EA does not address trail and access issues. The Kealia Trail starts on the Dillingham Airfield property. "You must drive onto Dillingham Airfield to get to the trailhead, and Dillingham's gates are closed overnight. Permit/permission required: None."¹⁷

A more complete review is given by Towhill and Associates^{17.1} "[Kealia Trail] is the only trail located on DMR proper ... It is owned by the Federal government and the State of Hawaii. Kealia Trail is managed by the Department of Transportation (DOT) and DOFAR. Access is open and there are no restrictions."^{17.2}

This Draft states that DMR is Class 1* (open daily for non-military personnel) for biking and hiking. It is interesting to note that horses are kept at Crowbar Ranch and are used on trails in the vicinity, such as the Nike Trail to Peacock Flats. How airplanes will affect people and horses are irrelevant.

• **FLOODING:** Occasional flooding occurs on the eastern portion of the runway.¹⁸ "During extended periods of intense heavy rainfall, the eastern end of the runway can flood to a depth of several inches, requiring a day or more to drain."¹⁹ "The additional pavement will add to water run-off during periods of heavy rain."²⁰ No need to worry. Master Plan developments will correct all of these problems. The EA need not worry where the additional runoff will go, it is someone else's problem.

• **NOISE:** "The noise complaints generated by civilian aircraft operators, which were voiced at the Public Informational meetings, were typically single event in nature"²¹ [as opposed to planes that circled for days?]. The public should not worry because the average total day-night sound level ... over a 21 day period" is reasonable.²² Other terms used are the "typical diurnal noise variation"²³ and the "total emanated noise exposure"²⁴ In other words, the temporary noise disturbance disappears when averaged out over time. OSP Director Gregory Pai asked about how the noise would affect beachgoers.²⁵ The question was not answered.

Noise is a serious issue. Most people are concerned about how a given plane sounds at a given time, not whether the sound can be averaged out of existence. Will there be an increase in point-source

¹⁷ Oahu Trails. Kathy Morey. Trip 39, page 169

²

^{17.1} "Draft: Outdoor Recreation for the U. S. Army Training Areas" Prepared for U. S. Army Garrison - Hawaii and the U. S. Army Corps of Engineers. December 1995. It is true that this report (like the Waialua-Hale'iwa Wastewater report) did not get published until late 1995. However, the authors of the Dillingham Airfield expansion assumed that if information was not right in front of them, that it did not exist, and if the information was right in front of them, it was not pertinent.

^{17.2} Draft page 2-17 through 2-21.

¹⁸ EA pg 24

¹⁹ EA pg 29

²⁰ EA pg 30

²¹ EA pg 22

²² EA pg 25

²³ EA pg 25

²⁴ EA pg 32

²⁵ See: the potential impacts, particularly to those who use nearby beaches (letter from Gregory Pai, Dir OSP)

noises? Will noise complaints rise linearly or exponentially in proportion to the growth of flights at the airport?

What effect will noise have on hikers, bikers, and horse riders in the area? There has been a great deal of public comment dealing with planes buzzing remote areas of this state. How will trail users be affected by increased use of the airport by planes? This problem was overlooked.

• **GENERAL AVIATION:** Los Angeles attempted to unload general aviation onto neighboring airports. It has been reported that the federal government was not happy. Airports receiving federal money must be open to all general aviation. Pilots would need to be encouraged to move to other airports. Mokule'ia is not a desired airport due to location, closeness to mountains, and saltwater breezes. Would the state need to provide incentives to encourage companies to move? At what cost to the taxpayer?

• **RURAL CHARACTER OF THE NORTH SHORE:** The Master Plan of Oahu calls for a rural North Shore. With the proposed Lihi Lani project at Sunset Beach, the proposed urban development of Waialua Polo Fields on hold pending the legal outcome of the Lihi Lani project, the proposed Dillingham Airfield expansion at Mokule'ia, proposed state-endorsed eco-tourism at Kaena Point (Draft EA circulating within DLNR), and proposed wastewater recovery facilities being planned in Haleiwa, Waialua, and the northern edge of Wahiawa, is not the rural North Shore being encroached on from all sides? This crucial question is outside of the scope of this EA. Some might say that for the EA to omit this analysis borders on the illegal.

The only other item needed for the exploitation of this area would be to connect the Board of Water Supply (BWS) Waianae-Halawa-Honolulu-Windward water tunnel system to the North Shore water tunnel system. This could be done through Kahuku or Kaena. The BWS is looking into those possibilities. The airport expansion would serve notice that the state is intent on such a program of "advancement." HTEL just buried cables through Kaena. The rural character of the North Shore is under assault!

• **SEGMENTATION:** The EA is supposed to be a neutral, unbiased analysis of the positive and negative impacts of the proposed project. Instead, the EA goes out of the way to minimize any impacts. It does this first by project segmenting: The EA adopts planning assumptions which include: "Dillingham Airfield is needed even if BPNAS [Barbers Point Naval Air Station] is approved as a public airport."²⁶ The EA then enters into timeline segmentation: The project will be divided into three phases, this EA covers only phase I. [Phase I (1992-97), Phase II (1998-2002), Phase III (2003-2010)]. Then the EA farms out the projects through localization segmentation: All items needing to be upgraded as a result of this project - including ground water, waste water, electricity, flooding, bird control - are given to other agencies or organizations.

• **CONTRADICTION:** But after all of the segmentation is done, there is still a problem. There is a contradiction within the EA: On the one hand, there are statements such as "It is possible to negotiate a new lease for civil use of Dillingham Airfield that will be less restrictive ... and with fewer operational constraints."²⁷ "It would be prudent to resolve the environmental issues and permit the normal growth of general aviation to the benefit of the public."²⁸ On the other hand, the only item mentioned in the EA that could be a detriment to the environment is the statement: "if some of the ironwood trees have

²⁶ EA pg 2

²⁷ EA pg 7

²⁸ EA pg 7

to be removed or trimmed, every effort would be made to minimize the impact on this portion of the viewshed."²⁹

• **THE TRUE PROBLEM:** There are four major issues that need to be resolved: First, will this project contribute to the conversion of the North Shore from a largely rural area to a suburb? Obviously, the pressures on the North Shore to urbanize will be greatly increased when a modern airport exists in the vicinity.

Second, is the state looking to expand aircraft capacity on the island? It is clear that the entire Honolulu International Airport (HIA) - Barbers Point Naval Air Station - Dillingham Airfield is part and parcel of one master plan based on expected demand. Rather than piecemealing, slicing and dicing the project up into tiny pieces, the project should be evaluated as a whole.

Removing small private operations from HIA so that HIA can handle more traffic implies that a secondary impact of expanding the Dillingham Airfield is to increase tourist arrivals and tourist revenue. This in turn will put increased pressures on the environment island-wide, including, but not limited to, Non-Point Source Pollution, Haunama Bay and Waikiki. These secondary impacts must be analyzed.

Third, and most important, the EA minimizes all environmental concerns. This goes vehemently against the purpose of an EA: to determine if a project will significantly affect the environment. The EA could raise these issues, however, alongside its opening statement that it is *assumed that this project is needed*, another statement appears to be implied: "It is assumed that people are too stupid to understand the EA process". This is a good time to remember a similar fiasco - the 1992 Kahului Airport EIS - created by the State Department of Transportation³⁰, and successfully challenged in court. Assuming that the project is needed implies that the authors will be biased about whether the project should be implemented, whether viable alternatives exist, and whether there are overriding environmental and cultural concerns. There is universal concern that the state DOT has produced some of the worst EA's and EIS's ever seen.

Fourth, what is the true total cost of the project? \$32M? \$50M? \$100M? What will the final package look like? Why not be open about it?

• **DECEPTIVENESS:** The EA states that "The concerns of nearby residents are 1) potential increase in noise exposure; 2) increased numbers of visitors in the area; 3) a general diminishing of the rural character of the Mokuleia area."³² The EA further reflects that "prior site selection studies for such a facility have failed to identify a suitable, receptive community on Oahu."³³ That may be one reason this EA seeks to be deceptive. The authors seem to feel that presenting the facts might alter the outcome, therefore the facts should be hidden, segmented and or omitted. The EA is clearly a deceptive, one-sided example of "project advocacy". It is nothing more than a defense of the project. The EA overlooks all direct and indirect impacts. But the EA does not stop there. In the Determination and Justification section, the EA states:

²⁹ EA pg 34

³⁰ "Perhaps the state Department of Transportation has been issuing negative declarations for its projects for so long it simply has forgotten how to do a proper environmental impact statement. Or did it so grossly underestimate the public's intelligence that it sincerely believed it could get away with the outrageous, puffed-up nonsense package as a draft environmental impact statement for expanding the Kahului airport? Whatever one thinks, the fact is that rarely has a draft environmental impact statement been subject to such harse ridicule, such devastating critique, such withering rebuke as this one has been subject to. All of it justified." (Environment Hawaii, February 1992, pages 1-8.)

³² EA pg 22

³³ EA pg 22

• SIGNIFICANCE CRITERIA: "The proposed project would not have a significant effect on the environment and therefore preparation of an environmental impact statement is not required. The 'Significance Criteria,' Section 12 of Hawaii Administrative Rules Title 11, Chapter 200, 'Environmental Impact Statement Rules,' were reviewed and analyzed. Based on the analysis, the following were concluded: ...

3. *The proposed action does not conflict with the state's long-term environmental policies or goals or guidelines. ... It will create opportunities for the residents of Hawaii to improve the quality of life through diverse economic activities. [significance added].*

There is obviously a problem here. The Hawaii Revised Statutes NEVER states that economic diversity is a justification for overriding the environmental triggers of the Significance Criteria.

4. *The economic or social welfare of the community or state would not be substantially affected. ... The project will result in positive economic impacts without significant negative social consequences. [significance added]."*³⁴

This is pilau. Many people who live in a rural setting relish the openness, the quietness, the peacefulness. Obviously the writer of paragraph 4 lives in a world of concrete and noise.

According to the Significance Criteria §11-200-12): (6) *Involves substantial secondary impacts (significance added) such as population changes or effects on public facilities; (8) Is individually limited but cumulatively (significance added) has considerable effect upon the environment or involves a commitment for larger actions; (11) Affects an environmentally sensitive area such as a flood plain (significance added) ...* These are intentionally omitted from the analysis.

• REJECT THE EA: This EA should be rejected under Hawaii Administrative Rules. We ask that a true, unbiased analysis of the alternatives be created in a new EA, one completed with respect for the Hawaii Revised Statutes and the Significance Criteria.

We also ask for community input, instead of seeking to impose a solution on a community which has never asked for this expansion. Projects which have a major impact on an area should be raised at neighborhood board meetings, community association meetings, etc, instead of a heavy-handed, top-down approach.

• ATTORNEY GENERAL: We request that the Hawaii Attorney General's office review this project for any illegal segmentation and or sloppy omission of relevant facts relating to the project.

Henry Q Curtis

Henry Q Curtis
Executive Director

0001

Kenneth A. Martyn
Attorney at Law

Downtown Office:
1188 Bishop St., Suite 2304
Honolulu, Hawaii 96813
Fax (808) 599-2502
Telephone (808) 531-5162

North Shore Office:
P.O. Box 1132
Haleiwa, Hawaii 96712
Fax (808) 637-9708
Telephone (808) 637-6427

January 22, 1996

Mr. Owen Miyamoto
Department of Transportation, Airports Division
400 Rodgers Boulevard, Suite 700
Honolulu, Hawaii 96819-1880

Dear Mr. Miyamoto:

I am a homeowner and resident of the Mokuleia/Waialua community residing at 68-545 Crozier Drive, Waialua, Hawaii 96791.

I have the following comments on the proposed draft environmental assessment for Dillingham Airfield Master Plan.

1. Environmental Assessment (EA) is inadequate for a project of this scope and magnitude. Clearly there will be at least some significant impacts from such a project. The potential expenditures alone are enough to create significant economic impacts. There will also be significant social and environmental impacts. An environmental impact statement (EIS) is clearly required.

2. The evaluation of the project should not be done on an incremental basis. An EIS for the entire project (all three phases) is the appropriate way to proceed.

3. The EA inadequately addresses many of the potential social, economic and environmental impacts of this major project. Those areas include, but are not limited to, the following:

a. The impacts of increased air traffic noise, and potential safety problems associated with increased airport usage.

b. Increased automobile traffic on both Farrington Highway and Kaukonahua Road. These roads are already dangerous.

c. The increase in the tendency to create urbanization of the surrounding areas that may be caused by such a large-scale expansion of the airport.

d. The impact of general aviation air traffic at night.

e. The impact on potential archeological sites is not adequately addressed.

Mr. Owen Miyamoto
January 22, 1996
Page 2

f. The potential impacts on the recreational value of the area are not adequately considered.

g. Potential impacts on tourism, which could be negatively impacted by increases in urbanization and diminished recreational values in the Mokuleia area.

h. Diminishing the beauty of the North Shore can have significant economic impacts all over the island of Oahu, as well as the economy of the entire state. Tourism is our lifeblood, we must be extremely careful with anything that could negatively impact it.

i. Alternatives to the proposed Dillingham Airport expansion are not adequately discussed. For example, there is inadequate discussion of the possibility of utilizing portions of the Barbers Point airfield, -or other potential areas for airport expansion that are closer to the existing urban core of Honolulu. Such alternatives are either not discussed at all or are considered in a conclusory and inadequate manner.

4. It is not reasonable or appropriate for the Department of Transportation to be both the applicant and the accepting authority.

I truly believe it is a serious mistake to ask our governmental officials to begin expending major economic resources on a project of this magnitude with such inadequate information as to the potential economic, social and environmental impacts of the project.

Very truly yours,



Kenneth A. Martyn

KAM:ky

cc: Edward K. Noda and Associates, Ltd. (Attn: Brian Ishii)

c88\kam.dil



2-96 HUN 5100

E1876

MOKULEIA COMMUNITY ASSOCIATION

1696 ALA MOANA BLVD. HONOLULU, HAWAII 96815
PHONE: (808) 949-0061 FAX: (808) 949-4906

January 19, 1996

Owen Miyamoto
Department of Transportation
Airports Division
400 Rodgers Blvd., Suite 700
Honolulu, HI 96819-1880

Re: Draft Environmental Assessment Dillingham Airfield Master Plan

Dear Mr. Miyamoto:

The Mokuleia Community Association is very concerned that the proposed "incremental" improvements to Dillingham Airfield will be approved as requested via a "negative declaration" rather than the complete EIS. A project of this scope in a sensitive rural residential and recreational area such as Mokuleia deserves much greater scrutiny as to the potential negative impacts on the surrounding community and eco-system.

The issues of noise, traffic and environmental degradation have not been adequately addressed. Additionally, Mokuleia area in which the Dillingham airfield is located has historical roots as an ancient Hawaiian settlement area - the burial caves in the mountains above Kaena point are just one of the indications of the extent of the settlements along the Mokuleia coastal region.

These issues and others can only be adequately addressed through a full and complete EIS on the proposed improvements before moving the project any further ahead.

Yours truly,

Michael Dailey
President
Mokuleia Community Association

0175

North Shore Environmental Coalition
P.O. Box 416
Waiialua, HI 96791

Owen Miyamoto
Department of Transportation
Airports Division
400 Rodgers Blvd., Suite 700
Honolulu, HI 96819-1880

Re: Draft Environmental Assessment Dillingham Airfield Master Plan

Dear Mr. Miyamoto:

The North Shore Environmental Coalition is concerned that the proposed improvements to Dillingham Airfield will be approved as has been requested via a negative declaration rather than a complete EIS. This project which is being proposed for the residential and recreational area of Mokuleia should be given further scrutiny since it could have serious impacts to the surrounding community as well as the eco-system of the area.

Issues of noise, traffic and environmental degradation have not been adequately addressed. The area should be considered for its historical aspects as well as its environment ones. These are only a few of the things that need to be considered before this project goes any further along into the planning stages. Again the North Shore Environmental Coalition strongly urges that a complete EIS be done so that all the issues can be adequately addressed.

Mahalo,



Sydney Piilani Peiler
North Shore Environmental Coalition



NORTH SHORE NEIGHBORHOOD BOARD NO. 27

P.O. BOX 607 • HALEIWA, HAWAII 96712

0247

January 24, 1996

Owen Miyamoto
Department of Transportation
Airports Division
400 Rodgers Blvd., Suite 700
Honolulu, Hawaii 96819-1880

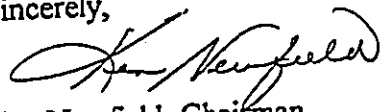
Re: Comments on Draft Environmental Assessment
Dillingham Airfield Master Plan

Dear Mr. Miyamoto:

Thank you for granting the North Shore Neighborhood Board an extension until today to comment on the Draft Environmental Assessment ("EA") for the Dillingham Airfield Master Plan. The Board has reviewed the EA and believes that it is insufficient. Given a project of this scope and the apparently improper segmentation of this project, a full Environmental Impact Statement is warranted by H.R.S. Chapter 343. Furthermore, the Board believes that DOT needs to re-evaluate the entire concept of an expansion of Dillingham Airfield, given current aviation alternatives on O'ahu.

Accordingly, the Board recommends that the request for a Negative Declaration be denied and that, if this project goes forward, an EIS be prepared.

Sincerely,


Ken Newfield, Chairman

cc: Edwin K. Noda & Assoc.
OEQC
Mokuleia Community Assoc.
Gary S. Bignami
North Shore Environmental Coalition



Oahu's Neighborhood Board System-Established 1973



HOUSE OF REPRESENTATIVES

STATE OF HAWAII
STATE CAPITOL
HONOLULU, HAWAII 96813

January 16, 1996

Mr. Owen Miyamoto, Airports Administrator
Department of Transportation

Dear Mr. Miyamoto:

Pursuant to your letter dated December 19, 1995, wherein you solicited my comments regarding the Dillingham Airfield Master Plan. Please be advised that it is my position that expanded use of the airfield should only take place after a complete and comprehensive environmental impact statement has been conducted.

Furthermore, I believe that the community should have a substantial role in determining the particular nature of the expansion. As you are aware, prior to now, meetings have been conducted within the community. The results of these meetings are illustrative of the communities intent. I recommend that the Department refer to the results of these meetings before any further decisions regarding this matter are made.

Thank you very much for extending to me the opportunity to express my concerns.

Sincerely

Handwritten signature of Alexander C. Santiago in cursive.
Alexander C. Santiago
State Representative
45th District

ACS:cb

147

BICKERTON ■ SAUNDERS ■ DANG ■ BOUSLOG
Attorneys at Law

Three Waterfront Plaza • Suite 500 • 500 Ala Moana Boulevard • Unit 51 • Honolulu Hawaii 96907-4920
Telephone: (808) 599-3811 • Facsimile: (808) 533-2467

DIRECTOR
DEPT. OF
TRANSPORTATION

JAN 22 2 23 PM '96

January 22, 1996

Mr. Kazu Hayashida
Director of Transportation
State Department of Transportation
869 Punchbowl Street
Honolulu, Hawaii 96813

Re: Proposed Dillingham Airfield Expansion

Dear Mr. Hayashida:

I am a life-long resident of O'ahu and my family has owned a beach home in Mokule'ia continuously since 1959. I have reviewed the Draft Environmental Assessment ("EA") for the Department of Transportation's proposed expansion of the Dillingham Airfield in Mokule'ia and I am very concerned about the manner in which this proposal is being processed by your office as well as by the nature of the proposal itself. Here are my comments:

1. The project consists of several phases and it is appropriate that the impacts of all of the phases be fully identified now, in one environmental disclosure document. While DOT is only recommending that "Phase 1" be undertaken now, it is clear that DOT intends to push ahead with the remaining phases at some point in the future. I believe that the laws and regulations require DOT to address the possible impacts of all those phases at this time, even if final implementation will not occur for many years. This is especially so since Phase 1 includes the purchase of all lands necessary to complete Phases 2 and 3 as well. Hence, there is a proposed commitment of resources which will likely lead to implementation of all phases. If government decision-makers are being asked to make such a commitment, they should be fully briefed on all possible impacts of the entire project.

2. There is insufficient analysis, discussion and study concerning the uniqueness of the Mokule'ia/Ka'ena Point environment and what impact increased aircraft traffic and noise will have on the area. In addition, there has been insufficient analysis, discussion or study concerning the impact of the attendant increase in vehicle traffic on the area and on the limited one-lane roads leading into the area.

3. There is no analysis of the problems inherent in creating a reliever airport so far from O'ahu's centers of population. This factor will obviously lead to an increase in traffic, commuter miles and fuel consumption elsewhere on the island, as well as in the immediate area.

Mr. Kazu Hayashida
January 22, 1996
Page 2

4. There has been insufficient analysis, discussion and study of the impact of the project on protected species in the area. The EA totally fails to mention that Hawaiian monk seals have begun to appear on beaches in the area and that the endangered Hawksbill and green sea turtles frequent the near-shore area. The airfield is less than 50 yards from the beach in some places and never more than a few hundred yards. With an increase in air traffic there will be an increase in the amount of fuel stored on the site, there will be an increase in the number of fueling operations, there will be an increase in the total paved area, and (as admitted in the EA) there will be an increase in runoff. All of these factors point to a significant increase in the risk of an aircraft fuel spill reaching the ocean and adversely affecting the environment, including the protected species. There has been no mention of this very real threat anywhere in the EA.

5. There has been no discussion of the endangered bird species which have been seen in the quarry pond at the West end of the runway. I have seen koloa (Hawaiian duck) and 'alae ke'oke'o (Hawaiian coot) in that pond and it is important that the impact of increased noise and air traffic on these protected birds be addressed.

6. While the EA does acknowledge that the Laysan Albatross frequents the area, it does not adequately address the impact of the project on that species. Neither does it honestly or adequately identify mitigation measures which can be taken to minimize impact on these birds. Instead, the assumption of the EA seems to be that the birds will just have to be removed. This is especially distressing where, for the first time in recorded history, this species spontaneously is trying to re-establish breeding colonies on O'ahu. Significantly, not only are there nesting birds out at Ka'ena Point, I have witnessed large numbers of immature albatross mimicking breeding behavior on the beach directly opposite the runway in the area near the Titcomb residence and in another set of empty lots closer to the beach park. These young birds will be nesting in earnest in the next few years and, with a minimum of disturbance, may make Mokule'ia their permanent home. Is it your Department's foregone conclusion that aircraft will have to take precedence? What cost/benefit analysis has been undertaken to arrive at this conclusion?

7. There appear to be errors in the discussion concerning Poli Poli Stream. That watercourse is not a half mile away from the project. In fact, it traverses the airport. Again, there is insufficient discussion concerning drainage and increased runoff and its effect on the fresh surface water and aquifers in the area, as well as on the ocean which ultimately receives those waters.

Mr. Kazu Hayashida
January 22, 1996
Page 3

8. The discussion concerning the expected increased noise and its impact on residents, surfers, beach-goers, campers and picnickers is cursory and not entirely honest. To state that aircraft noise will be masked by the surf and wind at beach-side is simply a bald attempt to minimize and cover-up the obvious degradation of quality of life for residents and other area users who will have to endure a significant increase in the number of overflights.

9. A very important issue which has not been discussed in the EA is the increased pressure for urbanization and development that this airport will place on the Mokule'ia area. There have already been proposals by the foreign owners of Mokule'ia Ranch to turn Mokule'ia into a resort area. - What effect will a bigger airfield have on these foreigners' plans and desires to radically alter this area. What effect will it have on government decision-makers who will consider those plans. Doesn't a bigger airport invite resort-development and, if so, shouldn't that issue be addressed now, while we are considering the first step. Are you intending to create, or inadvertently inviting, another Ka'anapali?

10. - Finally, the discussion of alternatives is confused and full of uncertainty. The whole project seems very premature, especially given the fact that Barber's Point will likely be returned to the State and already has runway facilities closer to the urban core. To expend significant funds on Dillingham at a time of fiscal crisis, especially where another, more practical alternative may soon be available, seems especially irresponsible.

In short, the EA is inadequate to assess the full effect of this project. Clearly, it fails to establish that there will be "no significant impact" on the environment. The document seems to be little more than a whitewash -- full of foregone conclusions and lacking serious inquiry into the significant impacts that this project, in its final form, could have on this unique area and its rare creatures. It is clear that an in-depth Environmental Impact Statement is required to fully address all phases of this proposed airport and to identify all of the impacts and potential impacts it will have on the delicate ecology and country life-style of the Mokule'ia/Ka'ena Point area.

Please feel free to contact me if you have any questions or wish to discuss this matter further.

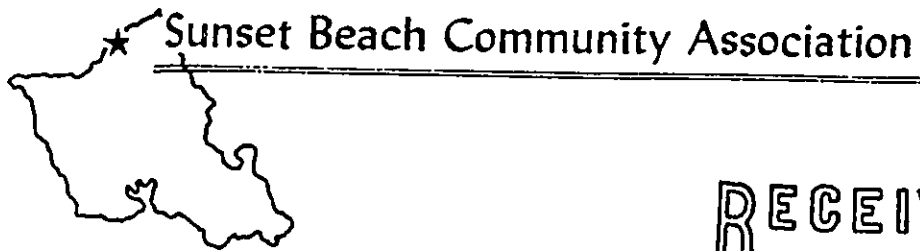
Very truly yours,


William W. Saunders, Jr.

WWS:ms

cc: Mr. Gary Gill, OEQC
Mr. Michael Wilson, DLNR

JAN 23 1996



P.O. BOX 471
HALEIWA, HAWAII 96712

RECEIVED

JAN 22 1996

Edward K. Noda and Associates, Inc. EDWARD K. NODA & ASSOCIATES January 20, 1996
615 Piikoi Street, Suite 300
Honolulu, Hawaii 96814
Mr. Brian Ishii

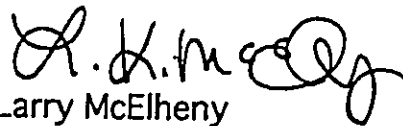
Dear Mr. Ishii:

The Sunset Beach Community Association feels very strongly that an Environmental Impact Statement (EIS) should be prepared before the Department of Transportation proceeds with further planning to expand Dillingham airfield. The potential impacts of an expansion of this type can not be over estimated, and frankly, we are surprised and disappointed that the DOT expected an Environmental Assessment to be sufficient.

Clearly, increased noise, loss of open space, and the potential for urban sprawl are significant environmental impacts that necessitate further review of the wisdom of the expansion proposal. Moreover, the reasoning used to question the certainty of Phases 2 and 3 should be applied to Phase 1. Since Barbers Point Naval Air Station is available, the DOT should focus on using BPNAS for aviation services.

Regardless of the "uncertainty" of Phases 2 and 3, our Community Association feels that it is essential that a comprehensive EIS be prepared. The North Shore has already exceeded its population guidelines and projects that encourage further urbanization (and consequently, infrastructure costs that exceed revenues) need to be carefully evaluated. The faulty decision-making that has led to the current budget crisis highlights the need for prudent decisions and rational long-range planning.

Sincerely,



Larry McElheny

President

Sunset Beach Community Association

APPENDIX E

Comments Received during Pre-consultation



REPLY TO
ATTENTION OF

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



September 12, 1995

Directorate of Public Works

Mr. Owen Miyamoto
Airports Administrator
Airports Division
Honolulu International Airport
400 Rodgers Boulevard, Suite 700
Honolulu, Hawaii 96819-1880

Dear Mr. Miyamoto:

Request a copy of your Environmental Assessment for Dillingham Airfield Master Plan for review. In reply to your letter of July 31, 1995 (AIR-EP 95.178), no known environmental concerns could be identified at this time except possible archeological monitoring as this is a beach area. Our point of contact is Mr. Daniel Bow, Chief, Master Planning Division, at 656-2682.

Sincerely,

Dennis J. Fontana
Colonel, U.S. Army
Director of Public Works

324



U.S. Department
of Transportation
Federal Aviation
Administration

Honolulu Flight Standards District
Office
Western-Pacific Region

Honolulu International Airport
135 Nakalo Place
Honolulu, HI 96819-1845
Telephone: (808)837-8300
FAX: (808)837-8399

August 10, 1995


Mr. Owen Miyamoto
Airports Administrator
Department of Transportation
Honolulu International Airport
400 Rodgers Boulevard, Suite 700
Honolulu, HI 96819-1880

Dear Mr. Miyamoto:

This office concurs that the parachute drop zones at Dillingham Airfield should be relocated from their present location as soon as possible. As we have indicated during previous correspondence having the drop zone located at the end of an active runway, at a busy non-controlled airport is certainly not considered to be an ideal situation.

We encourage any attempt to acquire the use of additional land for this purpose and suggest meetings with the user groups and other concerned individuals, groups or agencies to work out the most suitable location that will ensure the safe operation of all aviation activities, including powered aircraft, gliders and parachutists at Dillingham Airfield.

Sincerely,


Peter H. Beckner
Manager

BENJAMIN J. CAYETANO
GOVERNOR



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
AIRPORTS DIVISION
400 RODGERS BOULEVARD, SUITE 700
HONOLULU, HAWAII 96819-1880

KAZU HAYASHIDA
DIRECTOR

DEPUTY DIRECTORS
JERRY M. MATSUDA
GLENN M. OKIMOTO

IN REPLY REFER TO:

AIR-EN
95.303

NOV - 7 1995

Mr. Peter Beckner, Manager
Federal Aviation Administration
Honolulu Flight Standards District Office
Western-Pacific Region
Honolulu International Airport
135 Nakolo Place
Honolulu, Hawaii 96819-1845

Dear Mr. Beckner:

Subject: Environmental Assessment Preconsultation
Dillingham Airfield Master Plan
State Project No. A02011-01

Thank you for your letter of August 10, 1995 regarding the preparation of an Environmental Assessment for the Dillingham Airfield Master Plan.

Your comments will be considered in the preparation of the environmental assessment.

Should you have any questions, please contact Mr. Ben Schlapak of my planning staff at 838-8821.

Very truly yours,

A handwritten signature in cursive script that reads "Owen Miyamoto".

Owen Miyamoto
Airports Administrator

bc: EKNA

RECEIVED

NOV - 8 1995

EDWARD K. NODA & ASSOCIATES



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
U. S. ARMY ENGINEER DISTRICT, HONOLULU
FT. SHAFTER, HAWAII 96858-5440

September 5, 1995

Planning Division

Mr. Owen Miyamoto
Airports Administrator
State of Hawaii
Department of Transportation
Airports Division
400 Rodgers Boulevard, Suite 700
Honolulu International Airport
Honolulu, Hawaii 96819-1880

Dear Mr. Miyamoto:

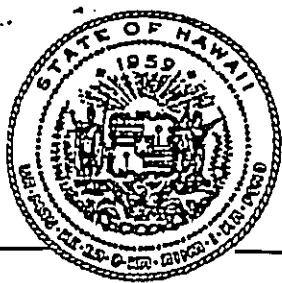
Thank you for the opportunity to review and comment on the Environmental Assessment for the Dillingham Airfield Master Plan, Oahu (TMKs 6-8-2: 18; 6-8-3: 9; and, 6-8-12: 1-23 and 25). We do not have any comments to offer at this time. However, we would like to review the final document when completed to determine Department of the Army permit requirements and provide flood hazard information and evaluations if needed. The point of contact for this information is Ms. Jessie Dobinchick of my planning staff (telephone: 438-7006).

Sincerely,

Ray H. Jyo, P.E.
Director of Engineering

Copy Furnished:

Colonel Dennis J. Fontana
Director of Public Works
Department of the Army
U.S. Army Garrison, Hawaii
Schofield Barracks, Hawaii 96857-5000



DEPARTMENT OF BUSINESS,
ECONOMIC DEVELOPMENT, AND TOURISM

ENERGY DIVISION, 335 MERCHANT ST., RM. 110, HONOLULU, HAWAII 96813 PHONE: (808) 587-3800 FAX: (808) 587-3820

BENJAMIN J. CAYETAN
Governor
SEMI F. HAY
Director
RICK EGGER
Deputy Director

058 Miyamoto

August 9, 1995

Mr. Owen Miyamoto
Airports Administrator
Airports Division
Honolulu International Airport
400 Rodgers Boulevard, Suite 700
Honolulu, Hawaii 96819-1880

SUBJECT: Environmental Assessment Preconsultation
Dillingham Airfield Master Plan
Waialua District, Oahu
Tax Map Keys: 6:8:02-18, 6:8:03-9, 6:8:12:1-23 & 25
State Project No. A02011-01

Dear Mr. Miyamoto:

We wish to inform you that we have no comments regarding the Dillingham Airfield Master Plan.

Thank you for the opportunity to submit any comments or recommendations.

Sincerely,

Maurice H. Kaya
Energy Program Administrator

MHK:aw

Benjamin J. Cayetano
JOYAK WAKHICZ
GOVERNOR

HERMAN M. AIZAWA, PH.D.
SUPERINTENDENT



STATE OF HAWAII
DEPARTMENT OF EDUCATION
P. O. BOX 2360
HONOLULU, HAWAII 96804

OFFICE OF THE SUPERINTENDENT

August 15, 1995

Mr. Owen Miyamoto, Administrator
Airports Division
Honolulu International Airport
400 Rodgers Boulevard, Suite 700
Honolulu, Hawaii 96819-1880

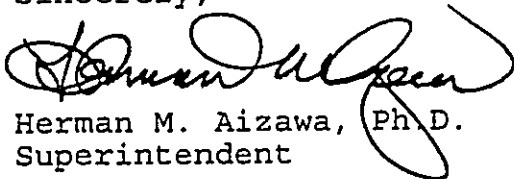
Dear Mr. Miyamoto:

SUBJECT: Environmental Assessment Preconsultation
Dillingham Airfield Master Plan
Waiialua District, Oahu
Tax Map Keys: 6-8-02: 18; 6-8-03: 9, 6-8-12: 1-23 & 25;
State Project No. A02011-01

We have reviewed your letter dated July 31, 1995 regarding the subject assessment and have determined that the planned improvements to Dillingham Airfield will have no impact on the schools in the area.

Thank you for the opportunity to comment.

Sincerely,


Herman M. Aizawa, Ph.D.
Superintendent

HMA:jml

cc: A. Suga
R. Hiraishi, Windward

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII



STATE OF HAWAII
DEPARTMENT OF HEALTH
P.O. BOX 3378
HONOLULU, HAWAII 96801
August 17, 1995

21
LAWRENCE MIIKE
DIRECTOR OF HEALTH

In reply, please refer to:

95-151/epo

Mr. Owen Miyamoto
Airports Administrator
Department of Transportation
Airports Division
400 Rodgers Boulevard, Suite 700
Honolulu International Airport
Honolulu, Hawaii 96819-1880

Dear Mr. Miyamoto:

Subject: Environmental Assessment Preconsultation
Dillingham Airfield Master Plan
Waiialua District, Oahu
TMK: 6-8-02: 18

Thank you for allowing us to review and comment on the subject project.

We are aware that there is a private wastewater treatment system and a drinking water system at Dillingham Airfield. Both of these systems will need to comply with applicable sections of Chapter 11-62, "Wastewater Systems" and Chapter 11-20, "Potable Water Systems". Both systems should be addressed in the Draft Environmental Assessment.

Sincerely,

A handwritten signature in black ink, appearing to read "Lawrence Miike".

LAWRENCE MIIKE
Director of Health

c: SDWB
WVB

BENJAMIN J. CAYETANO
GOVERNOR



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
AIRPORTS DIVISION
400 RODGERS BOULEVARD, SUITE 700
HONOLULU, HAWAII 96819-1880

KAZU HAYASHIDA
DIRECTOR

DEPUTY DIRECTORS
JERRY M. MATSUDA
GLENN M. OKIMOTO

IN REPLY REFER TO:

AIR-EN
95.300

OCT 27 1995

TO: LAWRENCE MIIKE, DIRECTOR
DEPARTMENT OF HEALTH

FROM: OWEN MIYAMOTO
AIRPORTS ADMINISTRATOR *Owen Miyamoto*

SUBJECT: ENVIRONMENTAL ASSESSMENT PRECONSULTATION
DILLINGHAM AIRFIELD MASTER PLAN
STATE PROJECT NO. AO2011-01

Thank you for your comments of August 17, 1995 on the Environmental Assessment Preconsultation for Dillingham Airfield Master Plan. Both the wastewater and water systems for Dillingham Airfield will be addressed in the Environmental Assessment.

Should you have any questions, please contact Mr. Ben Schlapak of my planning staff at 838-8821.

bc: EKNA

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII



STATE OF HAWAII

DEPARTMENT OF LAND AND NATURAL RESOURCES

STATE HISTORIC PRESERVATION DIVISION
33 SOUTH KING STREET, 6TH FLOOR
HONOLULU, HAWAII 96813

August 25, 1995

Mr. Owen Miyamoto
Airports Administrator
Airports Division
Honolulu International Airport
400 Rodgers Boulevard, Suite 700
Honolulu, Hawaii 96819-1880

MICHAEL D. WILSON, CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES

DEPUTY
GILBERT COLOMA-AGARAN

AQUACULTURE DEVELOPMENT
PROGRAM
AQUATIC RESOURCES
CONSERVATION AND
ENVIRONMENTAL AFFAIRS
CONSERVATION AND
RESOURCES ENFORCEMENT
CONVEYANCES
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
DIVISION
LAND MANAGEMENT
STATE PARKS
WATER AND LAND DEVELOPMENT

LOG NO: 15254 ✓
DOC NO: 9508EJ27

Dear Mr. Miyamoto:

SUBJECT: Environmental Assessment Preconsultation: Dillingham Airfield Master
Plan
Mokuieia, Waialua, O'ahu
TMK: 6-8-02:018; 6-8-03:009; 6-8-14:1-23, 25

Thank you for the opportunity to comment on the proposed EA for the Dillingham Airfield Master Plan. Planned improvements to Dillingham Airfield include the acquisition of property to bring the runway protection zones and the parachute drop zone to within airport property, overlaying of pavements, and improving existing hangars and utilities. A review of our records shows that several historic sites have been recorded for this area. Kawailoa *heiau* (50-80-04-191), Kuakea fishing shrine (-193), and a possible *heiau* (-194) have been recorded for two of the three parcel locations. Also numerous unmarked burial sites have been discovered in the sandy soils along this coastline. It is possible that activities related to this master plan may have an adverse effect on historic sites. We look forward to reviewing the detailed master plan to in order to determine the plan's effect on historic sites.

Sincerely,

A handwritten signature in black ink, appearing to read "Don Hibbard".

Don Hibbard, Administrator
Historic Preservation Division

EJ:jk

BENJAMIN J. CAYETANO
GOVERNOR



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
AIRPORTS DIVISION
400 RODGERS BOULEVARD, SUITE 700
HONOLULU, HAWAII 96819-1880

KAZU HAYASHIDA
DIRECTOR
DEPUTY DIRECTORS
JERRY M. MATSUDA
GLENN M. OKIMOTO

IN REPLY REFER TO:
AIR-EN
95.299

NOV - 7 1995

TO: DON HIBBARD, ADMINISTRATOR
DEPARTMENT OF LAND AND NATURAL RESOURCES
STATE HISTORIC PRESERVATION DIVISION

FROM: OWEN MIYAMOTO, AIRPORTS ADMINISTRATOR *Owen Miyamoto*

SUBJECT: ENVIRONMENTAL ASSESSMENT PRECONSULTATION
DILLINGHAM AIRFIELD MASTER PLAN
STATE PROJECT NO. AO2011-01

Thank you for your comments of August 25, 1995. As part of the Master Plan, we conducted a limited field survey and document survey for possible historic and archaeological sites in the vicinity of Dillingham Airfield. The survey was conducted by International Archaeological Research Institute, Inc. Upon review of the survey results, the proposed improvements at Dillingham Airfield showed that it would not impact any known archaeological or historic sites.

The archaeological report will be included in the Environmental Assessment as an Appendix. We look forward to your comments on the Environmental Assessment for the Dillingham Airfield Master Plan.

Should you have any questions, please contact Mr. Ben Schlapak of my planning staff at 838-8821.

bc: EKNA

RECEIVED
NOV - 9 1995

EDWARD K. NODA & ASSOCIATES

BENJAMIN J. CAYETANO
GOVERNOR



GARY GILL
DIRECTOR

STATE OF HAWAII
OFFICE OF ENVIRONMENTAL QUALITY CONTROL
220 SOUTH KING STREET
FOURTH FLOOR
HONOLULU, HAWAII 96813
TELEPHONE (808) 586-4185
FACSIMILE (808) 586-2452

August 9, 1995

Mr. Owen Miyamoto
Airports Administrator
Airports Division
Honolulu International Airport
400 Rodgers Boulevard, Suite 700
Honolulu, Hawaii 96819-1880

Dear Mr. Miyamoto:

Subject: Environmental Assessment Preconsultation
Dillingham Airfield Master Plan

This is in response to your preconsultation notice for the Dillingham Airfield Master Plan.

Enclosed is a copy of the environmental assessment for the Dillingham Airfield Replacement of Fueling System for your information and use.

If you have any questions, please call Jeyan Thirugnanam at 586-4185.

Sincerely,


Gary Gill
Director

GG/JT:kk

Enclosure



STATE OF HAWAII
OFFICE OF HAWAIIAN AFFAIRS
711 KAPIOLANI BOULEVARD, SUITE 500
HONOLULU, HAWAII 96813-5249
PHONE (808) 586-3777
FAX (808) 586-3799

August 8, 1995

Mr. Owen Miyamoto
Airports Administrator
Airports Division
Honolulu International Airport
400 Rodgers Boulevard, Suite 700
Honolulu, Hawai'i 96819-1880

Re: Environmental Assessment Preconsultation
Dillingham Airfield master Plan
Waiialua District, O'ahu
Tax Map Keys: 6-8-02:18; 6--8-03:9; 6-8-12:1-23 & 25
State Project No. A02011-01

Dear Mr. Miyamoto:

Thank you for the opportunity to participate in the Environmental Assessment (EA) preconsultation for improvements to Dillingham Airfield. The Office of Hawaiian Affairs has the following concerns.

The draft Hawaii Military Land Use Masterplan, dated April 1995 indicates that 73 acres of ceded lands used for Dillingham Airfield is being returned to the State of Hawai'i by the U.S. Army. The EA should include a discussion on how these lands will be used in the improved airfield and whether this use is appropriate under the 5(f) provisions of the Admissions Act. Although the airfield has been used for many years as a military and private airstrip the EA should also include all cultural, archeological, floral and faunal information known about the area.

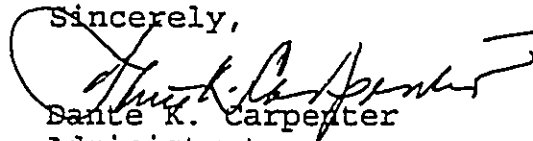
In addition, the EA should contain information concerning the new lands which will be acquired for the airfield including whether

Mr. Owen Miyamoto
Airports Administrator
August 8, 1995
Page two

those lands have been surveyed for archaeological/cultural resource and whether floral and faunal surveys have been completed.

If you have any questions please contact Linda Delaney, Land and Natural Resources Officer or Lynn Lee, EIS Planner at 594-1888.

Sincerely,



Dante K. Carpenter
Administrator

cc: Clayton H.W. Hee, Chairperson
Board of Trustees

BENJAMIN J. CAYETANO
GOVERNOR



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
AIRPORTS DIVISION
400 RODGERS BOULEVARD, SUITE 700
HONOLULU, HAWAII 96819-1880

KAZU HAYASHIDA
DIRECTOR

DEPUTY DIRECTORS
JERRY M. MATSUDA
GLENN M. OKIMOTO

IN REPLY REFER TO:

AIR-EN
95.295

NOV - 7 1995

RECEIVED

NOV - 8 1995

FORWARD K. NODA & ASSOCIATES

TO: LINDA COLBURN, ACTING ADMINISTRATOR
OFFICE OF HAWAIIAN AFFAIRS

FROM: OWEN MIYAMOTO, AIRPORTS ADMINISTRATOR *Owen Miyamoto*

SUBJECT: ENVIRONMENTAL ASSESSMENT PRECONSULTATION
DILLINGHAM AIRFIELD MASTER PLAN
STATE PROJECT NO. AO2011-01

Thank you for your letter of August 8, 1995 regarding the ceded lands at Dillingham Airfield. Under the original legislation, sponsored by Senator Inouye in the FY 1991 Defense Authorization Bill, attached, approximately 87 acres of ceded land was to be conveyed to the State of Hawaii at Dillingham Airfield or in its vicinity. Listed below are the present uses of that ceded land:

Dillingham Airfield	60.731 acres
Mokuleia Beach and Farrington Highway	24.223
Dillingham Military Reservation	<u>2.536</u>
Total	87.490 acres

Presently, the Army is completing the environmental documentation needed for the conveyance of these ceded lands. Under the draft, *Hawaii Military Land Use Master Plan*, April 1995, 73 acres of ceded land has been identified to be released for the Airfield.

The future use of the land would remain the same as present with 60.731 acres needed for Dillingham Airfield, 2.536 acres on the hillside of the Airfield not needed for airfield operations, and the remainder of the land presumed to be Farrington Highway right-of-way. These uses of the ceded lands needed for Dillingham Airfield are considered as lands for education (general aviation training) and public use under provision 5(f) of the Admission Act.

LINDA COLBURN

Page 2

NOV - 7 1995

AIR-EN

95.295

Archaeological/cultural studies for the Dillingham Airfield have been completed by International Archaeological Research Institute, Inc. and a fauna survey performed by Mr. Phillip Bruner of Brigham Young University - Hawaii. Preliminary flora studies in the areas being impacted by the Phase I improvements indicated that the site consists of introduced trees, brush with an understory of grass, and sugar cane fields. Therefore, a formal flora study was deemed unnecessary. In the future, prior to the acquisition of new lands, archaeological, floral and fauna surveys will be completed.

The ceded land usage, the archaeological survey, and the fauna survey will be discussed in the Environmental Assessment.

Should you have any question, please contact Mr. Ben Schlapak of my planning staff at 838-8821.

Attachment: FY 1991 Defense Authorization Bill
Map

bc: EKNA

DEFENSE AUTHORITY
DILLINGHAM

CONGRESSIONAL RECORD — HOUSE

October 28, 1990

Administrative Services Act of 1949 (40 U.S.C. 485(h)).

CONVEYANCE.—The subsection (a) shall apply to the property that the real property shall be used by the Secretary determines appropriate to protect the interests of the United States.

SEC. 1012. LAND CONVEYANCE, SOUTH BEND, INDIANA.

(a) **IN GENERAL.**—Subject to subsections (b) through (j), the Secretary of the Army shall convey to the Civic Foundation, Incorporated, a not-for-profit corporation organized and operating pursuant to the laws of the State of Indiana, or the City of South Bend, Indiana, or to both, all right, title, and interest of the United States in and to real property appraising approximately 4.15 acres, including improvements thereon, located at 1733 East Northside Boulevard, South Bend, Indiana, and known as the Northside Army Reserve Training Center.

(b) **CONSIDERATION.**—(1) In consideration for the conveyance made under subsection (a), the Civic Foundation or the City, as the case may be, shall, in accordance with the agreement required by subsection (c), be required to—

(A) convey to the United States all right, title, and interest in and to a parcel of real property of approximately eight acres, together with improvements thereon, located at 2402 Rose Street, South Bend, Indiana, and known as the Maple Lane School;

(B) repair and rehabilitate the Maple Lane School in accordance with plans and specifications approved by the Secretary;

(C) construct an access driveway to the Maple Lane School property from Ironwood Drive; and

(D) design to Department of the Army standards and construct additional improvements on the Maple Lane School property in accordance with the requirements, and subject to the approval, of the Secretary.

(2) The cost of the repair, rehabilitation, construction work, and other improvements carried out under subparagraphs (B), (C), and (D) of paragraph (1) (including but not limited to the cost of any and all architectural, engineering design, environmental assessment and remediation, construction financing, and all legal and inspection fees for the additional improvements) shall be paid as follows:

(A) The Civic Foundation or the City, or both, shall pay a total of \$500,000. Any funds expended by the Civic Foundation or the City pursuant to obligations under paragraph (1) before the execution of the agreement required by subsection (c) shall be considered as part of this payment.

(B) After payment by the Civic Foundation or the City, or both, as provided in subparagraph (A), the Secretary of the Army shall pay any remaining amount necessary to complete the work described in subparagraphs (B), (C), and (D) of paragraph (1), out of funds available for such purpose.

(3) The amount of \$397,000 is hereby authorized to be appropriated to pay for the design and construction of improvements authorized by paragraph (1)(D).

(c) **AGREEMENT.**—In order to implement this section, the Secretary shall enter into an agreement with the Civic Foundation or the City, or both.

(d) **OCCUPANCY.**—The Department of the Army shall vacate the Northside Army Reserve Training Center upon beneficial occupancy of Maple Lane School.

(e) **DESCRIPTION OF PROPERTY.**—The exact acreage and legal description of the properties to be conveyed under this section shall be determined by surveys acceptable to the Secretary. The cost of such survey shall be borne by Civic Foundation, Incorporated, or by the City of South Bend, or both.

(f) **ADDITIONAL TERMS AND CONDITIONS.**—The Secretary may require such additional terms and conditions as the Secretary considers appropriate to carry out the provisions of

shall deposit any such amount into the special account established pursuant to section 201(h) of the Federal Property and Administrative Services Act of 1949 (40 U.S.C. 485(h)).

(c) **LEGAL DESCRIPTION OF LANDS.**—The exact acreage and legal descriptions of the lands to be conveyed under this section shall be determined by surveys satisfactory to the Secretary. The cost of the surveys shall be borne by the City.

(d) **ADDITIONAL TERMS AND CONDITIONS.**—The Secretary may require such additional terms and conditions in connection with the transactions authorized by this section as the Secretary determines appropriate to protect the interests of the United States.

SEC. 1013. LAND CONVEYANCE, ROBINS AIR FORCE BASE, GEORGIA.

(a) **IN GENERAL.**—Subject to subsections (b) through (e), the Secretary of the Air Force may sell and convey all right, title, and interest of the United States in and to a parcel of real property, including improvements thereon, consisting of a total of approximately 70 acres, and comprising a portion of Robins Air Force Base, Georgia.

(b) **COMPETITIVE BID REQUIREMENT, MINIMUM SALE PRICE.**—(1) The Secretary shall use competitive procedures for the sale of property referred to in subsection (a).

(2) In no event may any of the property referred to in subsection (a) be sold for an amount less than the fair market value, as determined by the Secretary.

(c) **USE OF PROCEEDS.**—The Secretary shall deposit proceeds received from the sale of property authorized by this section in the special account established pursuant to section 201(h) of the Federal Property and Administrative Services Act of 1949 (40 U.S.C. 485(h)).

(d) **LEGAL DESCRIPTION OF PROPERTY.**—The exact acreage and legal description of the property to be conveyed under subsection (a) shall be determined by a survey that is satisfactory to the Secretary. The cost of such survey shall be borne by the purchaser.

(e) **ADDITIONAL TERMS AND CONDITIONS.**—The Secretary may require such additional terms and conditions in connection with any transaction authorized by this section as the Secretary considers appropriate to protect the interests of the United States.

SEC. 1014. LAND CONVEYANCE, DILLINGHAM MILITARY RESERVATION, HAWAII.

(a) **IN GENERAL.**—Subject to subsections (b), (c), and (d), the Secretary of the Army shall convey to the State of Hawaii, without consideration, all right, title, and interest of the United States in and to a parcel of land, together with improvements thereon, consisting of approximately 87 acres, that comprises a portion of Dillingham Military Reservation at Mokuia, Hawaii, and which was previously ceded, without consideration, to the United States by the State of Hawaii for use by the Armed Forces of the United States.

(b) **CONDITION.**—The conveyance authorized by subsection (a) shall be made on condition that the State of Hawaii enter into an agreement with the Secretary of the Army that is acceptable to the Secretary and provides for joint civilian and military use of the property as an airfield by the State of Hawaii and the Army.

(c) **DESCRIPTION OF PROPERTY.**—The exact acreage and legal description of the property referred to in subsection (a) shall be determined by a survey satisfactory to the Secretary. The cost of the survey shall be borne by the State of Hawaii.

(d) **ADDITIONAL TERMS AND CONDITIONS.**—The Secretary may require such additional terms and conditions in connection with the conveyance under this section as the Secretary

property shall be by and of not less than if the property (as defined).

—The Secretary may the sale authorized in interests in additional element facility to provide buffer zone necessary ration of the facility;

ted to the sale of subsection (a).

SALE.—The Secretary the sale authorized by the conditions of the on-aviation use.

SEC. 1015. PORT BENNING, GEORGIA.

CONVEY.—Subject to subsection (a), the Secretary of the Army shall convey to the City of Columbus, Georgia, and interest of the State of Georgia in and to a tract of real property, consisting of approximately 3,000 acres and located at Fort Benning, Georgia.

USE OF PROCEEDS.—The Secretary may require such additional terms and conditions in connection with the conveyance by the City of Columbus, Georgia, as the Secretary determines appropriate to protect the interests of the United States.

(a) **LEGAL DESCRIPTION OF PROPERTY.**—The exact acreage and legal description of the property to be conveyed under subsection (a) shall be determined by a survey satisfactory to the Secretary. The cost of the survey shall be borne by the City of Columbus, Georgia, or both.

(b) **ADDITIONAL TERMS AND CONDITIONS.**—The Secretary may require such additional terms and conditions in connection with the conveyance under this section as the Secretary



OFFICE OF STATE PLANNING

Office of the Governor

MAILING ADDRESS: P.O. BOX 3540, HONOLULU, HAWAII 96811-3540
STREET ADDRESS: 250 SOUTH HOTEL STREET, 4TH FLOOR
TELEPHONE: (808) 587-2846, 587-2800

BENJAMIN J. CAYetano, Governor

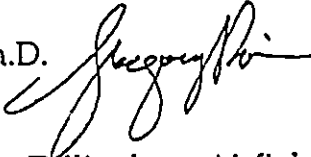
FAX: Director's Office 587-2848
Planning Division 587-2824

Ref. No. D-100

August 8, 1995

MEMORANDUM

TO: Mr. Owen Miyamoto
Airports Administrator
Department of Transportation

FROM: Gregory G.Y. Pai, Ph.D. 
Director

SUBJECT: EA Pre-Consultation Dillingham Airfield Master Plan
Waialua, District, Oahu Tax Map Keys: 6:8:02:18; 6:8:03:9;
6:8:12:1-23 & 25 State Project No. A02011-01

This letter responds to your request for input regarding your planned environmental assessment for the Dillingham Airfield Master Plan.

The environmental assessment should discuss both short-term improvements and any related long-term improvement plans. The assessment should consider the potential noise impacts, particularly to those who use the nearby beaches. The assessment should also address whether the acquisition of land or any of the structural improvements will preclude future mining of any of the sand in the area. Sand found in Mokuleia has been used to replenish beaches. If there is sand that could be mined from the area, the proposed improvements could potentially reduce the State's ability to use the sand for beach nourishment. The assessment should also discuss the specific benefits gained from acquisition of the land.

Thank you for the opportunity to comment. If you have any questions, please contact David Kimo Frankel at 587-2839.

BENJAMIN J. CAYETANO
GOVERNOR



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
AIRPORTS DIVISION
400 RODGERS BOULEVARD, SUITE 700
HONOLULU, HAWAII 96819-1880

KAZU HAYASHIDA
DIRECTOR

DEPUTY DIRECTORS
JERRY M. MATSUDA
GLENN M. OKIMOTO

IN REPLY REFER TO:
AIR-EN
95.301

OCT 27 1995

TO: GREGORY G. Y. PAI, PH.D., DIRECTOR
OFFICE OF STATE PLANNING

FROM: OWEN MIYAMOTO
AIRPORTS ADMINISTRATOR *Owen Miyamoto*

SUBJECT: ENVIRONMENTAL ASSESSMENT PRECONSULTATION
DILLINGHAM AIRFIELD MASTER PLAN
STATE PROJECT NO. A02011-01

Thank you for your memorandum of August 8, 1995 regarding the preparation of an Environmental Assessment for the Dillingham Airfield Master Plan.

Your comments will be considered in the Environmental Assessment. At this time, we do not see any impact on the mining of beach sand from the Mokuleia area. The majority of land which we plan to acquire is used for sugar cane production and neighbors the existing Airfield property. Sand mining at Mokuleia should be coordinated with DLNR.

Should you have any questions, please contact Mr. Ben Schlapak of my planning staff at 838-8821.

bc: EKNA

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU

630 SOUTH BERETANIA STREET

HONOLULU, HAWAII 96843



August 16, 1995

JEREMY HARRIS Mayor

WALTER O. WATSON JR. Chairman
MAURICE H. YAMASATO Vice Chairman

KAZU HAYASHIDA
MELISSA Y. J. LUM
FORREST C. MURPHY
KENNETH E. SPRAGUE

RAYMOND H. SATO
Manager and Chief Engineer

Mr. Owen Miyamoto, Airports Administrator
Airports Division
Honolulu International Airport
State of Hawaii
400 Rodgers Boulevard, Suite 700
Honolulu, Hawaii 96819-1880

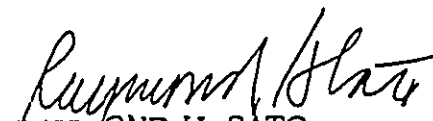
Dear Mr. Miyamoto:

Subject: Your Letter of July 31, 1995 Regarding the Environmental Assessment
Preconsultation for the Proposed Dillingham Airfield Master Plan,
TMK: 6-8-02: 18, 6-8-03: 9 and 6-8-12: 1-23 and 25, Waiialua, Oahu

Thank you for the opportunity to review and comment on the proposed improvements to the Dillingham Airfield. We have no objections to the project as it will not affect our water facilities. Any water requirements should be accommodated by the private water system serving the area.

If you have any questions, please contact Barry Usagawa at 527-5235.

Very truly yours,

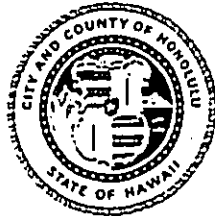

RAYMOND H. SATO
Manager and Chief Engineer

3457

PLANNING DEPARTMENT
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET
HONOLULU, HAWAII 96813

JEREMY HARRIS
MAYOR



CHERYL D. SOON
CHIEF PLANNING OFFICER

CAROLL TAKAHASHI
DEPUTY CHIEF PLANNING OFFICER

LW 8/95-1576

August 29, 1995

Mr. Owen Miyamoto
Airports Administrator
State Department of Transportation
Airports Division
400 Rodgers Boulevard, Suite 700
Honolulu International Airport
Honolulu, Hawaii 96819-1880

Dear Mr. Miyamoto:

Draft Environmental Assessment Preconsultation
Dillingham Airfield Master Plan
Waialua District, Oahu
State Project No A02011-01, Reference AIR-EP 95.178

In response to your letter of July 31, we offer the following comments.

The majority of the masterplan site is currently designated as Public Facility on the North Shore Development Plan Land Use Map (DPLUM) except for the following:

- Portions of the proposed site for the runway protection zone on the western end of the airfield (portions of TMKs: 6-8-14: 1 & 6-9-1: 36) is designated as Park and Preservation, respectively; and
- The proposed site for the parachute drop zone (portion of 6-8-14: 1) south-east of the site is designated for Agriculture use.

An amendment to the North Shore DPLUM to redesignate the above-mentioned sites to Public Facility is required.


The Planning Department will be initiating a year-long comprehensive review of the North Shore Development Plan area from Kaena Point to Kawela Bay beginning in September 1995. Until a revised plan is drafted and subsequently adopted by the City

Mr. Owen Miyamoto
Airports Administrator
State Department of Transportation
August 29, 1995
Page 2

Council, the existing General Plan and Development Plans (DP) still apply. In general, the Special Provisions of the existing DP for the North Shore state that proposed improvements on the North Shore should be compatible with the rural, open space character of the area; mauka and makai views from Farrington Highway are to be preserved; and building height is to be limited to 25 feet.

Thank you for the opportunity to comment. Should you have any questions, please call Lin Wong of my staff at 523-4485.

Sincerely,


CHERYL D. SOON
Chief Planning Officer

CDS:js

BENJAMIN J. CAYETANO
GOVERNOR



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
AIRPORTS DIVISION
400 RODGERS BOULEVARD, SUITE 700
HONOLULU, HAWAII 96819-1880

KAZU HAYASHIDA
DIRECTOR
DEPUTY DIRECTORS
JERRY M. MATSUDA
GLENN M. OKIMOTO

IN REPLY REFER TO:
AIR-EN
95.302

OCT 27 1995

Ms. Cheryl D. Soon
Chief Planning Officer
Planning Department
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

Dear Ms. Soon:

Subject: Environmental Assessment Preconsultation
Dillingham Airfield Master Plan
State Project No. A02011-01

Thank you for your letter of August 29, 1995 regarding the preparation of an Environmental Assessment for the Dillingham Airfield Master Plan.

Your comments will be considered in the preparation of the environmental assessment. My staff will be working with your department to complete the required changes to the North Shore Development Plan.

Should you have any questions, please contact Mr. Ben Schlapak of my planning staff at 838-8821.

Very truly yours,


Owen Miyamoto
Airports Administrator

bc: EKNA