

JOHN WAIHEE
GOVERNOR



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

OFFICE OF ENVIRONMENTAL QUALITY CONTROL
June 19, 1990

EDWARD Y. HIRATA
DIRECTOR

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JEANNE K. SCHULTZ
CALVIN M. TSUDA

IN REPLY REFER TO:

AIR-EP
90.2394

TO: Dr. Marvin Miura, Director
Office of Environmental Quality Control (OEQC)

FROM: Edward Y. Hirata, Director
Department of Transportation *Edward Y. Hirata*

SUBJECT: Environmental Assessment and Determination of Negative Declaration for the Jet Fuel Storage Facility for the Interim Helicopter Facility, Lihue Airport, Lihue, Kauai

We have reviewed the attached Environmental Assessment (EA) for the subject project and concur with the findings and determination that a Negative Declaration is acceptable for this project. Therefore, we are submitting the OEQC publication form, four (4) copies of the EA and this memo as our determination of Negative Declaration for this project.

cc: Pacific Resources Terminals, Inc.
(Steve Golden)

1990-07-08- KA-PBA

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OFFICE OF ENVIRONMENTAL
QUALITY CONTROL

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ENVIRONMENTAL ASSESSMENT



JET FUEL STORAGE FACILITY FOR THE INTERIM HELICOPTER FACILITY

LOCATED AT
LIHUE AIRPORT COMPLEX
LIHUE, KAUAI

TMK: 4TH DIV 3-5-1-8

PREPARED BY:
ENVIRONMENTAL TECHNOLOGIES
P.O. BOX 3379
HONOLULU, HAWAII 96842

ENVIRONMENTAL ASSESSMENT
FOR
LIHUE AIRPORT
JET FUEL STORAGE FACILITY
FOR THE
INTERIM HELICOPTER FACILITY

PROPOSING AGENCY:

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

ACCEPTING AUTHORITY:

GOVERNOR, STATE OF HAWAII

PREPARED BY

ENVIRONMENTAL TECHNOLOGIES, INC
P.O. BOX 3379
HONOLULU, HAWAII 96842

THIS DOCUMENT IS SUBMITTED PURSUANT TO CHAPTER 343, HRS

ENVIRONMENTAL ASSESSMENT
FOR
JET FUEL STORAGE FACILITY
INTERIM HELICOPTER FACILITY
LIHUE AIRPORT COMPLEX
LIHUE, KAUAI, HAWAII

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5. COUNTY OF KAUAI GENERAL PLAN
6. UNDERGROUND INJECTION CONTROL EXCERPT FROM MAP OF LIHUE KAUAI

ENVIRONMENTAL ASSESSMENT FOR
LIHUE AIRPORT JET FUEL
STORAGE FACILITY

I. INTRODUCTION

A. Project Description

State of Hawaii Department of Transportation Airports Division, proposes to install a fuel storage farm for the new Interim Helicopter Facility. This tank farm will be located at a site which is designated in the State Airports Master Plan as a Fuel Storage Facility. The property is currently undeveloped.

The Interim Helicopter Facility presently under construction, will serve as the base for the "flightseeing" industry on the island of Kauai. The proposed project for a fuel storage farm and a second proposed project for a fueling system, are designed to serve this facility. These two proposed projects will work in tandem for a coordinated refueling process, which will eliminate helicopter fueling by truck and the need for helicopter repositioning.

This project is an integral part of the fueling facility as described in the "Environmental Assessment/Negative Declaration for the Helicopter Fueling System Interim Helicopter Facility Project Number AK 1046-19", submitted December 1989. The aforementioned environmental assessment has received a negative declaration.

B. Project Location

The project, is part of the Interim Helicopter Facility, which will be located within the Lihue Airport Complex approximately two miles northeast of the civic center in Lihue, Kauai (see EXHIBIT 1: LOCATION MAP). The helicopter facility is on the northwest area of the airport complex (see EXHIBIT 2: VICINITY MAP). The fuel farm will be located on the east side of the Interim Helicopter Facility (See EXHIBIT 3: SITE PLAN). The site is buffered by canefields from the residential and commercial sections of Lihue Town.

II. PROPOSED PROJECT DESCRIPTION

A. Background

Presently, helicopter refueling is accomplished by fuel truck. These trucks are filled at the Nawiliwili Harbor tank farm and driven directly to the helicopter pads for helicopter refueling. Each helicopter company has the option to operate their own fuel trucks, but many select the refueling services of Hemmeter Aviation. In many cases refueling requires repositioning of helicopters to where the fuel trucks are available, requiring the services of air traffic controllers.

A "Study of Helicopter Operation in the State of Hawaii" (AWP-200) as prepared by the Federal Aviation Administration on May 29, 1986 discussed several findings and recommendations at the Lihue Airport. Findings included "Safe procedures for rapid refueling not adhered to by some operators" and "Quality assurance of fuel handling is questionable." The Committee to Develop Corrective Actions for the Lihue Helipad recommended relocation of the facility and regulation of fuel trucks.

Development of the Lihue Airport complex requires the relocation of the helicopter operations area to the west of the old terminal area. The proposed on-site storage and the new helicopter fueling system will provide safer and more efficient refueling capability. The additional expense for these projects will be offset by savings in refueling time, allowance for a standard operating procedure due to site specific location, and reduced potential for injuries and spills.

B. Technical Characteristics

The proposed Jet Fuel Storage and Distribution System will be built in two phases. The first phase will consist of two 30,000 gallon horizontal Jet Fuel Storage Tanks which are 40-feet long by 11.5 feet in diameter, a truck loading rack, an instrumentation module, and miscellaneous pumps, filters, valves, piping, etc. The tanks will be located within a lined spill containment berm. The second phase, also shown, will include a third horizontal 30,000 gallon tank and a vertical 5,000 barrel (210,000 gallons) tank with containment, more pumps and filters, a second instrumentation module, and a second load rack. The need to construct the second phase is contingent on fuel demand. A preliminary plan of the complete facility is shown as EXHIBIT 3 and an updated version of the site plan is attached as EXHIBIT 3A. All tanks will hold a kerosene based jet fuel.

A Spill Prevention Control and Countermeasure (SPCC) Plan will be prepared, as required of all petroleum terminals, in accordance with federal regulations. The following summarizes the procedures for stormwater, process water and product spills.

In summary, the containment will be designed to hold the full volume of one tank and a large volume of accumulated stormwater. The truck load rack will also drain to the containment area.

Any accumulated product or process water will be treated via an oil water sump and will be handled in accordance with County, State, and Federal regulations.

Stormwater from the load rack and containment area will accumulate within the containment area and allowed to evaporate. Should the volume of stormwater exceed a safe level, it will be visually inspected and pumped outside the containment if it has not come into contact with any product.

C. Project objective

The fuel farm will work in conjunction with the proposed helicopter refueling system with the objective of receiving, storing, and delivering Jet Fuel to rotary aircraft and occasionally fixed wing aircraft at the Lihue Airport.

Product receipts will be via trucks from the harbor storage at Nawiliwili to the on-site storage tanks. Product will then be transferred to helicopters by individual fuel dispensers via steel piping. Trucks will be used for occasional fueling of fixed wing aircraft.

A dual purpose load rack will be used to both deliver product to and receive product from the storage tanks.

The fuel farm will have fire hose connections and portable fire extinguishers suitable for petroleum fires.

D. Helicopter Fueling System

The proposed helicopter fueling system is being designed in conjunction with this project. This tank farm will be the storage and supply for the proposed fueling system at the Interim Helicopter Facility.

E. Economic and Social Characteristics

The proposed project will provide construction jobs employing a variety of construction trades. Construction supplies, services, and equipment will be purchased and utilized, thus generating revenues for both the State and Kauai County. The project construction cost is estimated to total \$650,000.

III. EXISTING LAND USE PLANS AND CONTROLS

A. Existing Use

The present site is owned by the State Department of Transportation, Airports Division. The site has been cleared for construction of the interim facility. The Interim Helicopter Facility including the fuel storage area, will occupy the site shown in EXHIBIT 3.

B. State Land Use

The State Land Use Law regulates the classification and uses of State lands to accommodate growth and development. All State Lands are classified by the State Land Use Commission as either Urban, Rural, Agricultural, or Conservative. The Lihue Airport including the project site is designated Urban Land as shown on EXHIBIT 4: STATE LAND USE MAP.

C. County of Kauai Planning

1. County General Plan

The Kauai General Plan land use designations of the project area are a mix of urban, agriculture, open resort, and public facilities. EXHIBIT 5: COUNTY GENERAL PLAN shows that the public facility (airport) is surrounded by agriculture (sugar cane), open lands (Hanamaulu Bay and shoreline) and touched by resort (Westin Kauai) and urban mixed use (Lihue Town). The proposed use of the site conforms with the Lihue Development Plan and is in harmony with the present agricultural designation of the surrounding lands.

2. County Zoning

Lihue Airport is zoned I-G/ST-P, denoting general industrial as well as special treatment public use. County zoning permits, if required, will be obtained.

D. Lihue Airport Master Plan

The Lihue Airport Master Plan includes the Interim Helicopter Facility. Helipad layout concept within the master plan is flexible to allow alternate fueling operations as approved by the State and the FAA. Ultimately, the master plan assumes the relocation of all helicopter facilities to an inland site.

IV. ENVIRONMENTAL SETTING

A. General

A complete inventory of the natural environment in the vicinity of Lihue Airport was conducted and reported as "Inventory and Initial Analysis of Environmental Conditions - Lihue Airport Master Plan Study of October 1975." Subjects within the report included topography, soils, geology, flora, fauna, air quality, water resources and drainage, archaeological and historic sites, and conservation and recreation areas.

The "Supplemental Environmental Statement for the Interim Helicopter Facility of February 1989", provided additional information on the environmental setting. Brief discussions on environmental characteristics are included in this assessment to summarize the conditions.

B. Geology

The Lihue Airport site is located on lava flows of the Koloa Volcanic series that erupted 2 million to 6 million years ago. The Koloa Volcanic Series consist of materials that are mostly dense to moderate dense. Lava flows are pahoehoe and aa (the more abundant).

C. Soils

The predominant soil covering the area is classified as Lihue silty clay. The Lihue silty clay series is suitable for use as topsoil, road fill and fill for low buildings.

D. Topography

The project area has been completely graded for sugar cane cultivation and regraded for the Interim Helicopter Facility. Topographic survey of the project area shows a general slope of approximately 3% from the southwest to the northeast across the project site.

E. Climate

The average annual temperature recorded at the Lihue Plantation range between a high of 77.9 degrees F. and a low of 65.5 degrees F. The average annual rainfall is 40 inches and the windspeed varies from 13 to 24 miles per hour from the northeasterly direction. The average relative humidity recorded at Lihue Airport is 67 % in the middle of the afternoon and 83 percent in the early morning hours.

F. Groundwater

Basal groundwater in the vicinity of Lihue Airport is of limited quantity and poor quality and cannot be used as a source of potable water for the airport or the surrounding area. The airport is not located in an aquifer recharge area nor over an aquifer used for domestic water supply. This is demonstrated in EXHIBIT 6: UNDERGROUND INJECTION CONTROL.

G. Biology

Most of the area in the vicinity of Lihue Airport has been in intense sugar cultivation for many years. Native flora has been destroyed and replaced by introduced or non-native species. There are no rare or endangered plant species within the project area.

Native birds and animals have retreated to the mountain forests upon removal of forests in the vicinity of the airport. Exotic birds, goats, horses and cattle have taken their place. The Interim Helicopter Facility area is mainly vacant and contains no suitable habitat for any endangered fowl.

H. Air Quality

Department of Health regularly samples ambient air for particulates in Lihue. The quality meets federal air quality standards. This project is within the airport complex and is subject to the vehicular and aircraft emissions normally associated with airport operations and support activities.

I. Archeology

There are no known archeological or historical values remaining in the project location because of its long agricultural use.

J. Flood Hazard

The airport drainage system proposed by a comprehensive engineering report is under incremental development. A concrete lined channel along the property line will be constructed with the Interim Helicopter Facility and provide flood protection for the project.

The Flood Insurance Rate Map (FIRM) of March 4, 1987 includes the project site within zone 'X' (areas outside the 500-year flood plain). There are no natural streams or gullies in the vicinity.

V. INFRASTRUCTURE & PUBLIC SERVICES

A. Water System

Water mains conforming to the standards of the County of Kauai Department of Water will supply the helicopter facility.

B. Sewer System

Adequate service for the project is available along the adjacent service road.

C. Electrical/Telephone

Electrical power for residential and commercial use is provided throughout the proposed service area by Kauai Electric Company.

Telephone service for the project is provided by Hawaiian Telephone Company.

D. Public Services

Fire and police protection provided by the County of Kauai supports the airports' Aircraft Rescue and Fire Fighting (ARFF) group and security team. The Lihue Fire Rescue Station is approximately 1-1/2 miles from the airport. The Lihue Police Station is approximately the same distance away.

Health and emergency care are available at the Wilcox Memorial Hospital which is 2 miles northwest of the airport. Annual training simulating an aircraft emergency are practiced by the airport, fire, police, and hospital personnel.

VI. PROBABLE IMPACTS OF THE PROPOSED ACTION TO THE ENVIRONMENT

A. Short Term Impacts

Short term impacts of the proposed project will be minimal. Daily traffic of the construction crew through existing streets should be during off-peak hours. Noise from the construction equipment is compatible with the airport and will be masked by aircraft and other construction equipment noise.

Dust from construction activity will be controlled by use of appropriate water sprinkling methods and limiting the area being worked at any one time. Upon completion, of the storage area exposed areas will be covered with concrete, asphalt or vegetation.

B. Long Term Effects

1. General

The master plan of the Lihue Airport Complex anticipates the relocation of the helicopter operations to an inland site. Site selection studies will determine candidate locations for the facility. Time schedule for the relocation is indefinite.

2. Air Quality

The proposed fuel system, including the storage tanks, will greatly reduce refueling by trucks and helicopter repositioning. The result will be a reduction of exhaust emissions which will be a benefit to the project area.

These storage vessels and this product are currently not regulated by environmental regulations and are not expected impact the air quality.

3. Groundwater and Surface Runoff

The tanks will be within a lined containment area to prevent environmental contamination from leaks or spills from the tanks. The load rack will be surrounded by a concrete berm which will drain into the tank containment area. In the very unlikely event that fuel would escape the containment area, it could enter the ecosystem as surface runoff. Large concentrations could potentially affect the receiving waters.

CORRECTION

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

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VII. ADVERSE IMPACTS THAT CANNOT BE AVOIDED

The noise level will increase during the construction period. This effect will be of short duration, lasting only for the construction phase, estimated to be 6 months. The noise level will be reduced, by the Contractor, by using properly functioning mufflers on all equipment, and conducting construction activity only during hours, between 7:30 a.m. to 5:00 p.m.

Dust problems may result from excavation, stockpiling and backfilling. If dust becomes a problem, it will be controlled to a large extent by water sprinkling and by limiting the area being worked on at any one time. It is anticipated that dust will not be a significant problem, due to the small volume of soil handled during each day of operation.

VIII. ALTERNATIVES TO THE PROPOSED ACTION

No action is the only alternative for the proposal. No action will severely limit the ability to use the new fueling facility with the related benefits for a complete modernized refueling system. These benefits include increased worker, fire and environmental safety. This will also mean continued use of independent and uncoordinated tank truck operations. Fuel truck traffic may also conflict with pedestrian/vehicular traffic associated with helicopter "flightseeing" passengers. Also, the present system for helicopter refueling results in operational conflicts when repositioning to the fuel pads. Repositioning requires observation by the air traffic controller, diverting his attention from takeoff/landing operations.

IX. RELATIONSHIP BETWEEN LOCAL SHORT TERM USES AND MAINTENANCE AND ENHANCEMENT OF LONG TERM PRODUCTIVITY

The short term use of the site as the Interim Helicopter Facility will not affect the long term use as is presently planned. The Lihue Airport Master Plan identifies this area for development as ground transportation and airport support lease lots. This development is master planned for construction within Phase III (1996-2005) along with airfield and terminal area improvements.

X. MITIGATING MEASURES TO MINIMIZE ADVERSE IMPACTS

A. Air Quality

The short term impacts occurring during the construction will be minimized by applying modern accepted techniques and methods.

Dust generated due to grading activities will be controlled by water sprinkling for compliance with the Air Pollution Regulations of the Department of Health and applicable portions of the County ordinances relating to grading, excavation, and material handling operations. After construction, all ground area that has been disturbed or exposed will be covered with asphalt, concrete, grass or vegetation.

B. Water Quality

Potential releases of fuel will be mitigated through several actions, resulting in little or no impact to water quality. These will be defined in a SPCC Plan, which is summarized below.

Tanks, connected pipes, valves, pumps and meters will be monitored by periodic testing, daily visual inspections, and the use of loss/gain reconciliation reports.

Spillage and leakage at the load rack will be contained by a concrete curb which will drain into the lined containment area.

The tanks will be located within a lined containment, large enough to hold one of the tank volumes and a large volume of storm water. In the event of a release, product that has spilled or leaked from the tanks or related equipment will be removed by tank truck and handled in accordance with State and Federal regulations. Stormwater will be allowed to evaporate. If there is a need to remove stormwater from the containment, and the water has not been in contact with product, it will be visually inspected to insure there is no sheen and be pumped outside the containment. If it is contaminated it will be handled in accordance with State and Federal regulations.

In case of an emergency relating to the fuel system operation and or the fueling of helicopters, an emergency shutdown system will be included. Switches will be mounted at each dispenser on a rigid steel post with protective barriers. Any switch will shutdown all fuel pumps at each dispenser and at the fuel farm facility.

XI. IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

The construction of the proposed project would involve the commitment of certain natural and fiscal resources. The commitment of construction materials, manpower, and energy are mostly unrenueable and irretrievable. The impacts of using these resources should be weighed against the benefits (safety and efficiency) to the airport users and helicopter "flightseeing" industry.

XII. DETERMINATION

Based on the preceding sections, it is anticipated that the impacts as described by this proposed action are insignificant and will result in no significant adverse impacts. As a result, a Negative Declaration is recommended.

XIII. FINDINGS AND REASONS SUPPORTING DETERMINATION

1. There are no natural or cultural resources associated with the project site. The site was used for helicopter activities, sugar cane fields and as open area.
2. The proposed project is consistent with the County's General Plan and the Department of Transportation's Lihue Airport Master Plan and would not curtail beneficial uses of the environment in the area. The proposed project will be compatible with the uses of the surrounding area.
3. The proposed project implements the Lihue Airport Master Plan which incorporates considerations of Chapter 343, HRS and other State planning documents.
4. The economic impact will be affected by the short-term construction related activities. Upon completion of the project, there should not be substantial affects to the social welfare as the project is similar with the existing operations.
5. The proposed project will not increase the population beyond the capacity of the community. Improvements to adjacent public facilities will be provided by the Department of Transportation during implementation of the Lihue Airport Master Plan involving timely infrastructure improvements to support land use development.

6. Only short-term impacts have potential for affecting public health. Construction activities will be regulated to minimize noise, dust and erosion.
7. The existing physical aspects of the surrounding area will be preserved.
8. The proposed project is part of the master planned development of the Lihue Airport. Approval of the project does not involve a commitment for any larger action.
9. There are no known rare, threatened or endangered species or habitat associated with the project site.
10. Development of the site will not increase ambient noise levels as it conforms to existing activities.

Short-term impacts on air and water quality, as well as noise, may occur during the construction period, but will be mitigated by normal construction practices and will be regulated by project plans and specifications
11. The proposed project is not located adjacent to the shoreline and is outside the tsunami inundation line.

XIV. LIST OF NECESSARY APPROVALS

The project is situated wholly within the Lihue Airport Complex which is under the jurisdiction of the Department of Transportation, Airports Division. The project will serve the Interim Helicopter Facility which has been reviewed by county agencies responsible for planning, water supply, and public works.

Concurrence was made with the Federal Aviation Administration (FAA) for the Helicopter refueling Facility, for which this project will serve. The FAA control tower will be relieved of controlling helicopter repositioning during refueling operations.

XV. ORGANIZATION CONTACTED

The following agencies were contacted in the preparation of the Environmental Assessment.

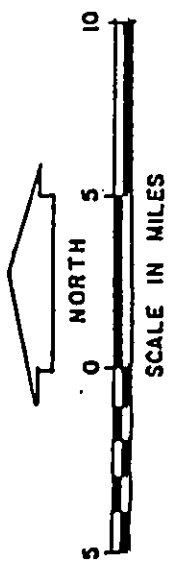
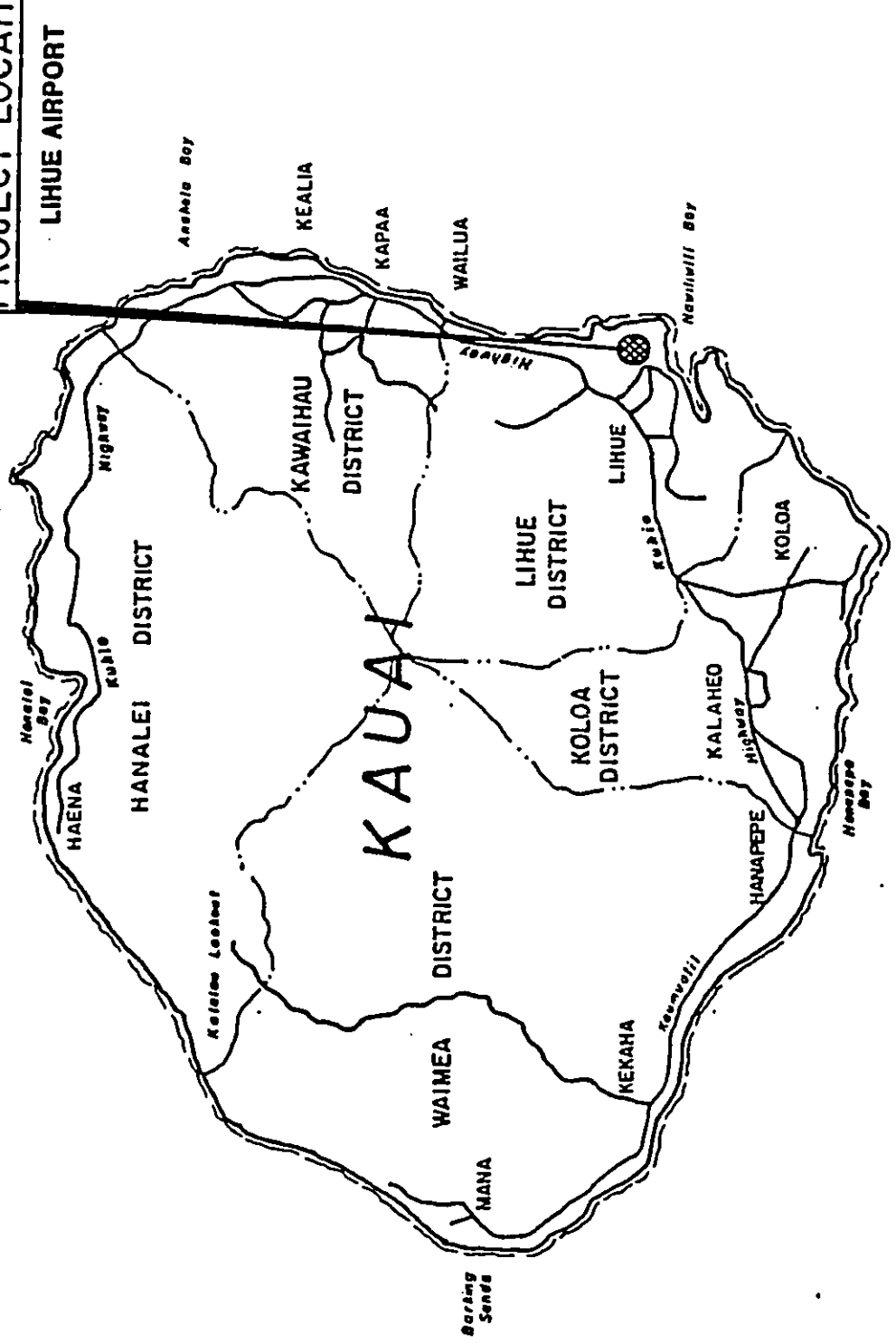
Department of Planning
County of Kauai
4280 A Rice Street
Lihue, Hawaii 96766

Department of Health
Clean Air Branch
Five Waterfront Plaza
500 Ala Moana Blvd.
Honolulu, Hawaii 96813

Department of Transportation
Airports Division
Honolulu International Airport
Honolulu, Hawaii 96819

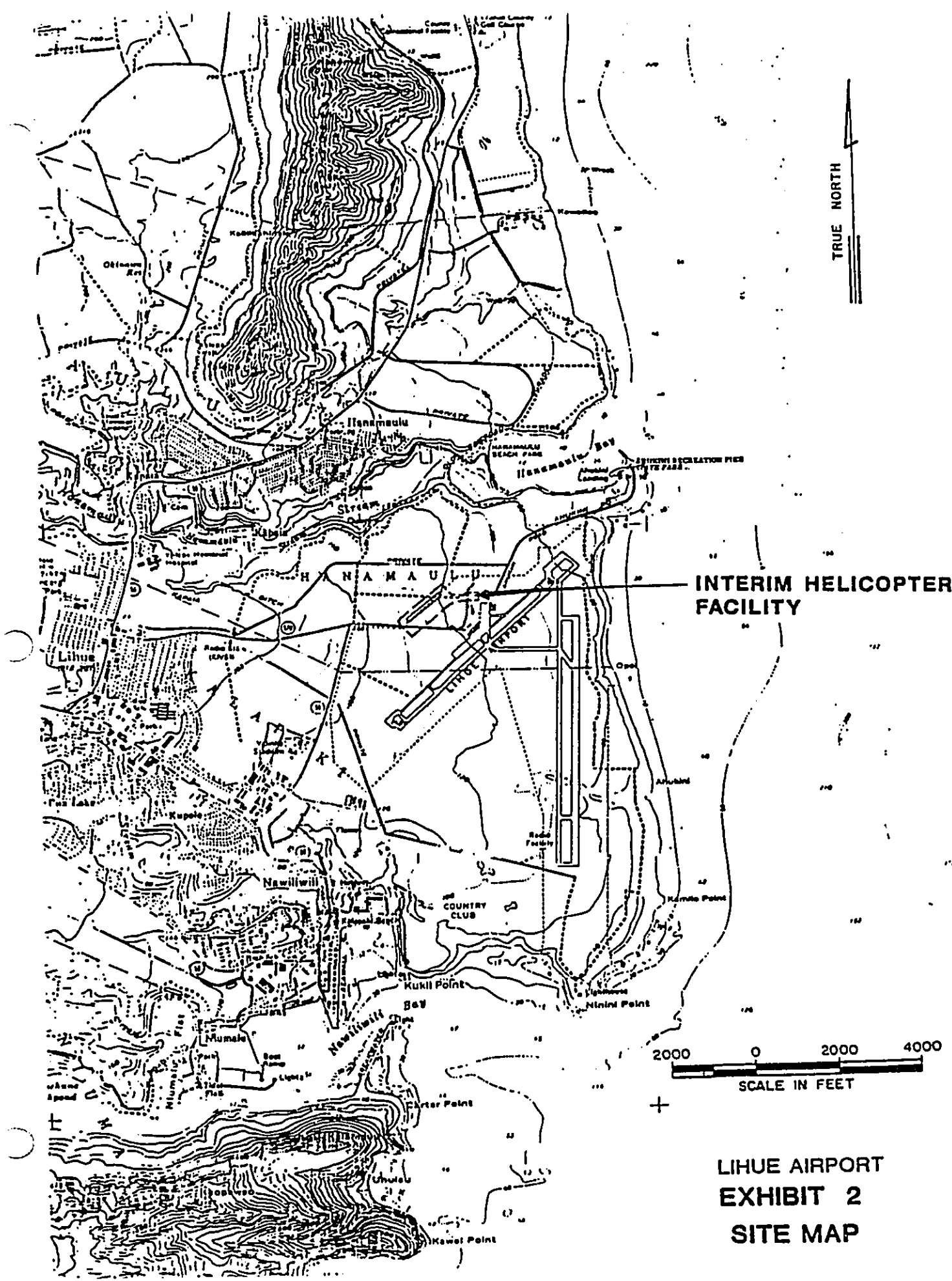
Kauai Fire Department
4223 Rice Street
Lihue, Hawaii 96766

PROJECT LOCATION



ISLAND OF KAUAI

**EXHIBIT 1
LOCATION MAP**

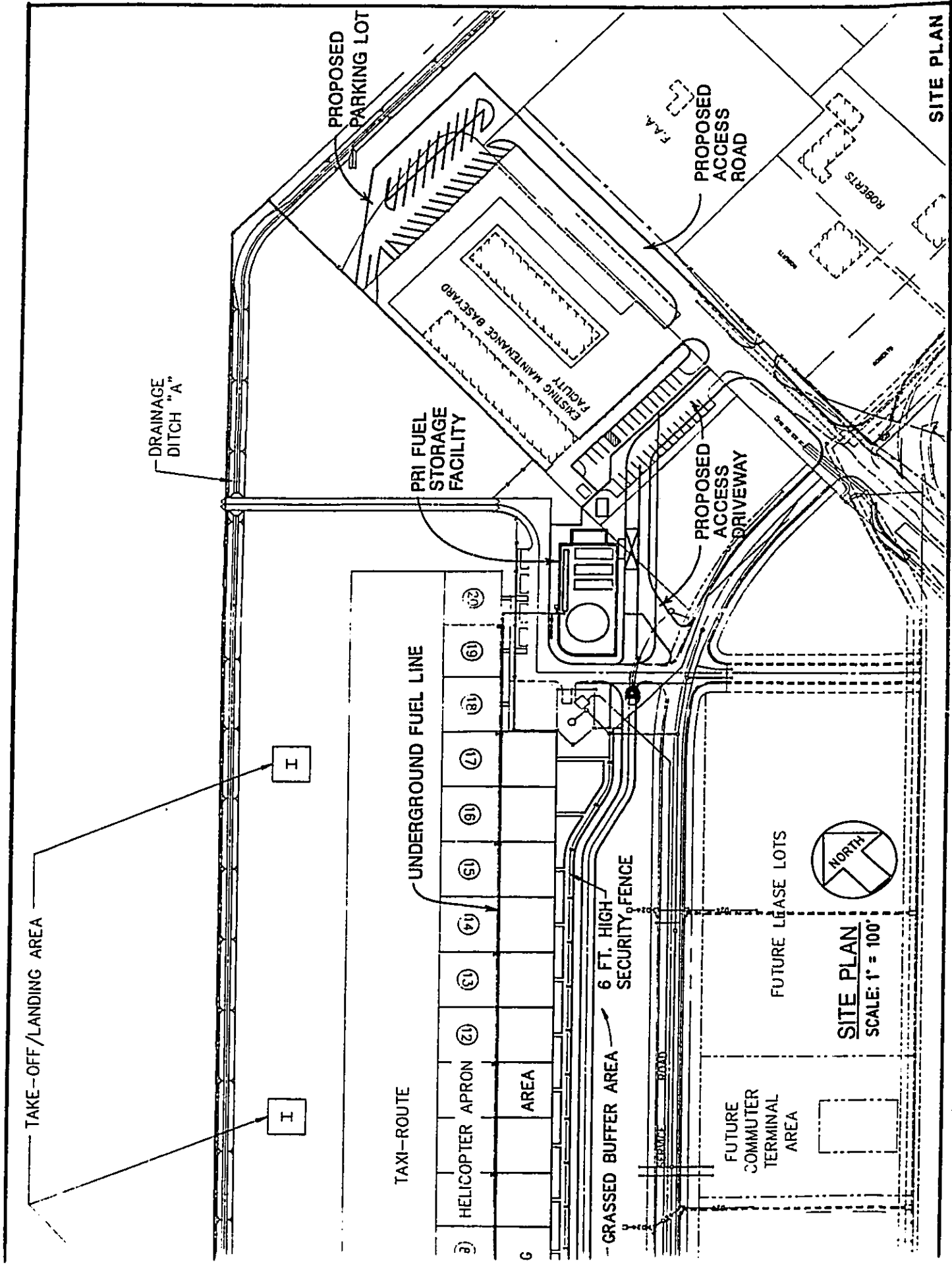


TRUE NORTH

INTERIM HELICOPTER FACILITY

2000 0 2000 4000
SCALE IN FEET

LIHUE AIRPORT
EXHIBIT 2
SITE MAP

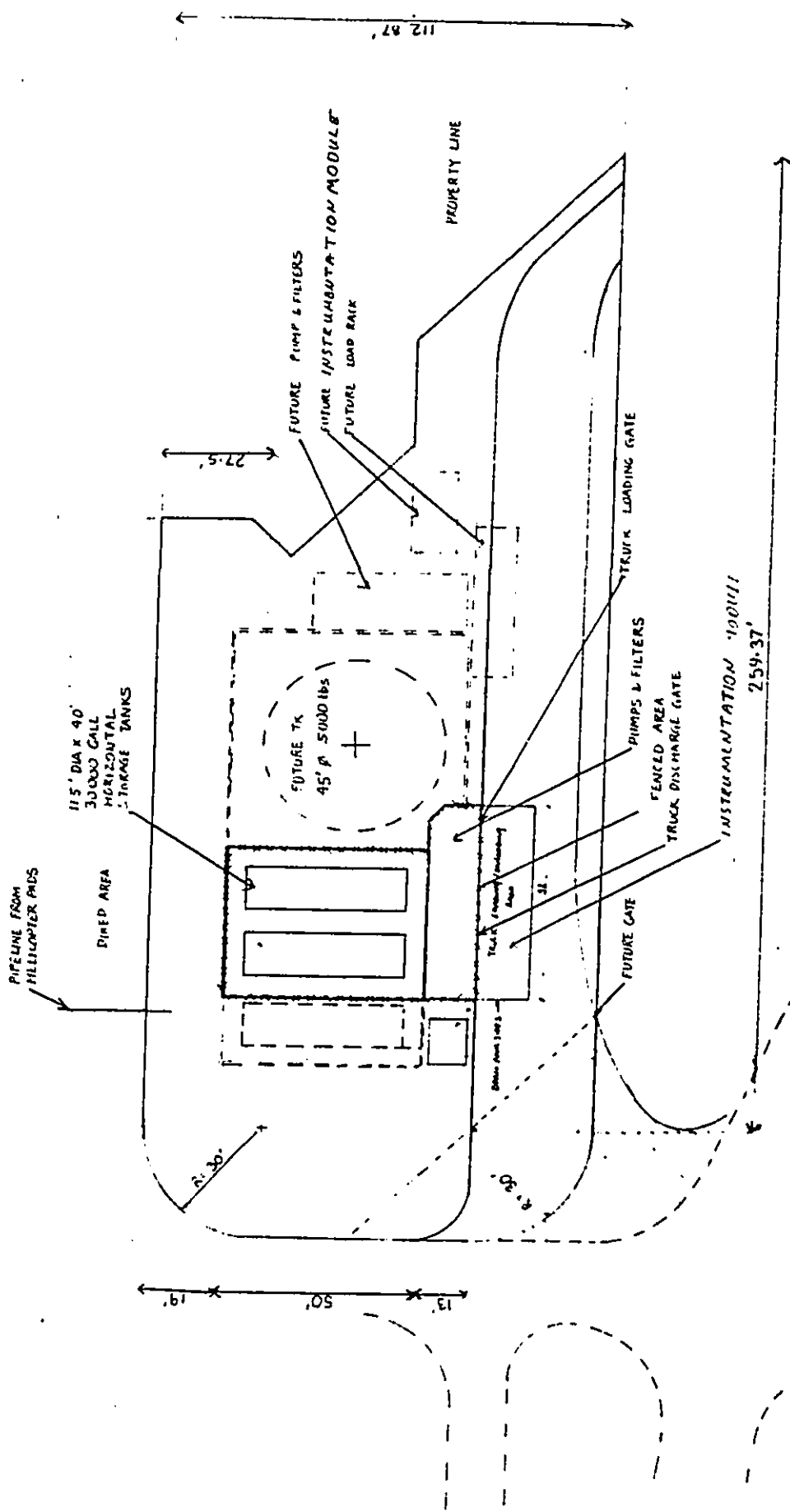


SITE PLAN

EXHIBIT 3

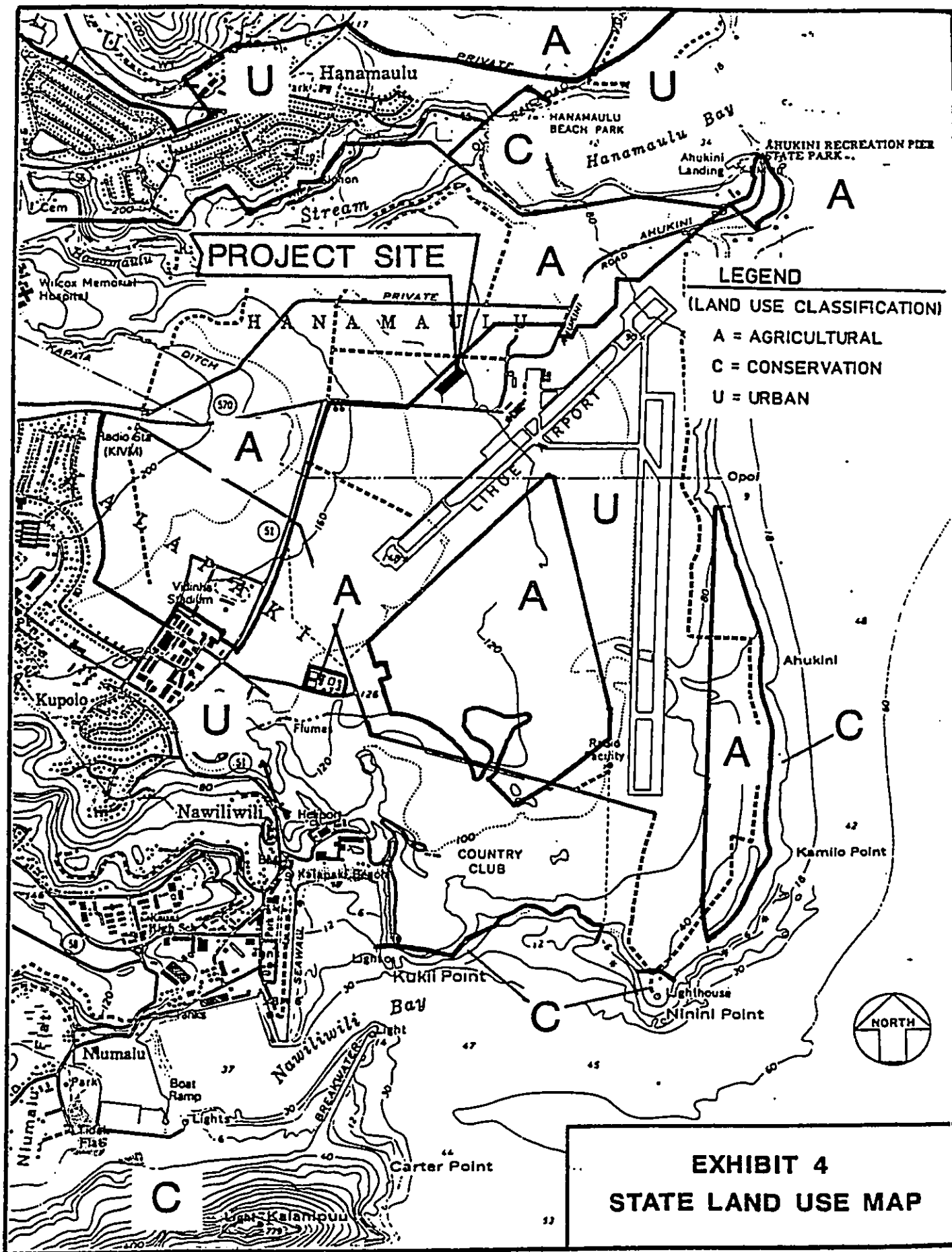
TRUE NORTH

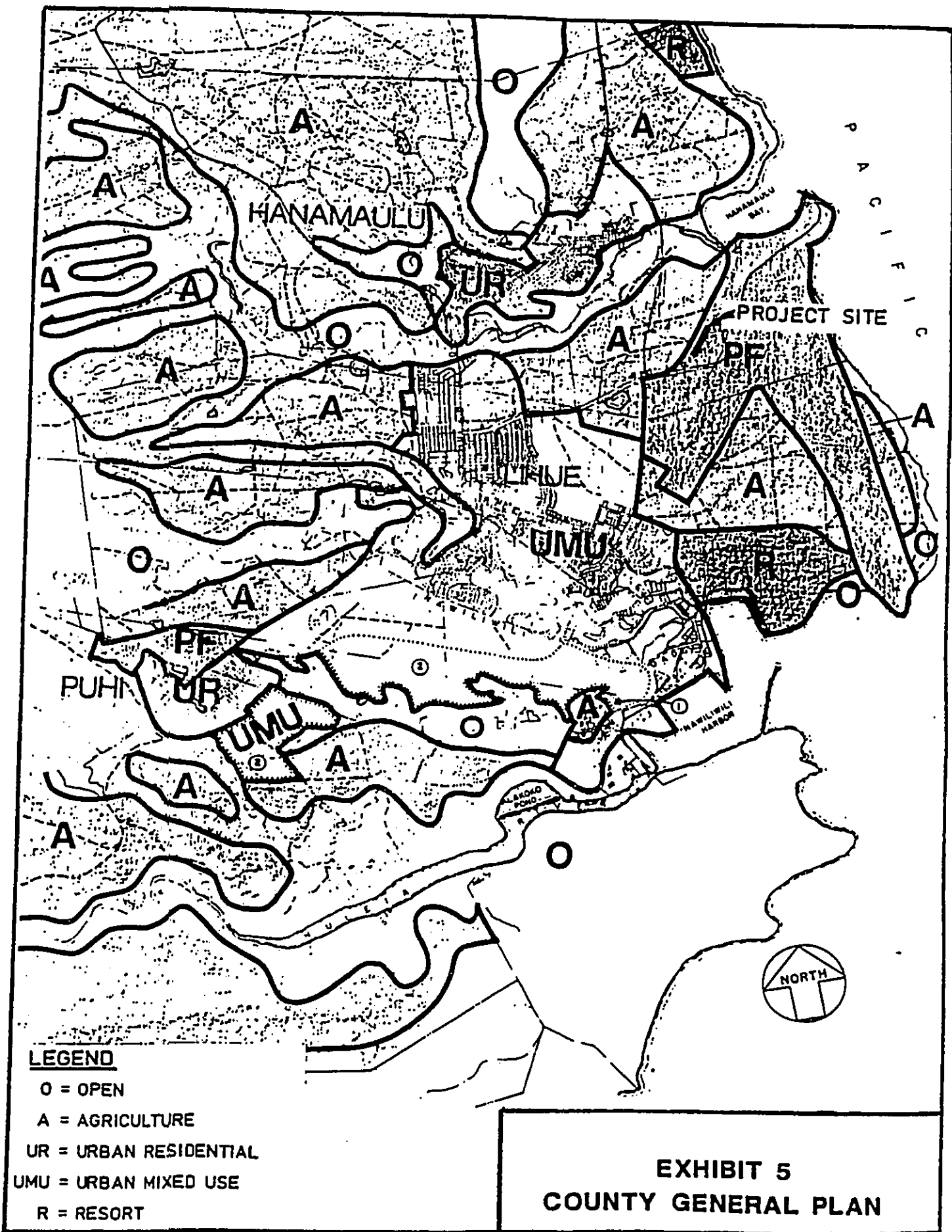
162' 40' 50' 27.5'



PROJECT NO.		SCALE	DATE
PACIFIC RESOURCES TERMINAL INC		1" = 20'	2-1-90
LILUAE AIRPORT TERMINAL		PROJECT NO.	DATE
		APPROVAL	
		APPROVAL	
SITE PLAN			

EXHIBIT 3A





LEGEND

- O = OPEN
- A = AGRICULTURE
- UR = URBAN RESIDENTIAL
- UMU = URBAN MIXED USE
- R = RESORT

**EXHIBIT 5
COUNTY GENERAL PLAN**

STATE OF HAWAII
 DEPARTMENT OF HEALTH
 UNDERGROUND INJECTION CONTROL PROGRAM
 Effective—July 6, 1984

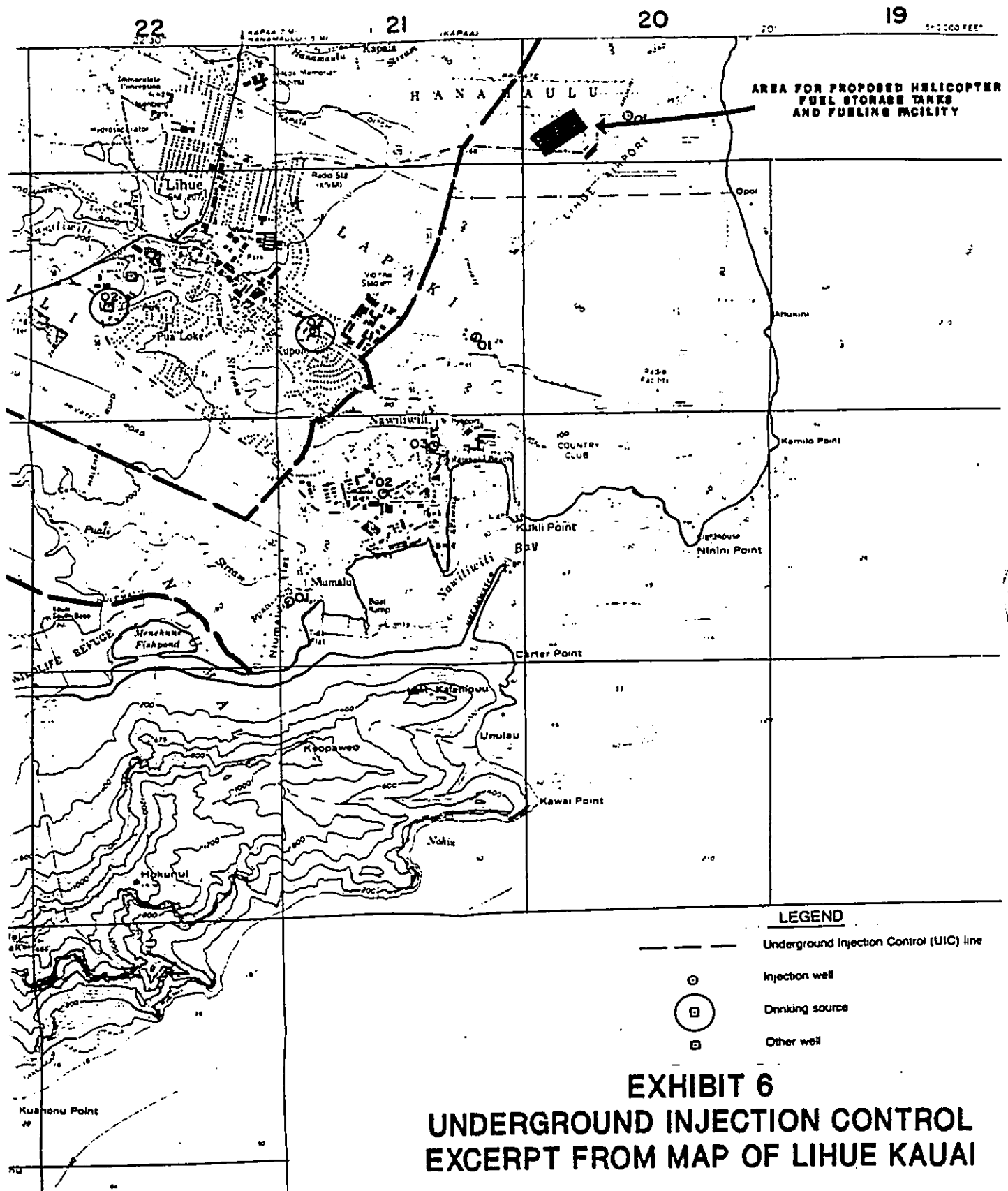


EXHIBIT 6
UNDERGROUND INJECTION CONTROL
EXCERPT FROM MAP OF LIHUE KAUAI