JOHN WAIHEE



REC

ROBERT P. TAKUSHI

93 SET 28

LLOYD I. UNEBASAMI DEPUTY COMPTROLLER

DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES

P. O. BOX 119. HONOLULU. HAWAII 96810

GUALLE

LETTER NO.PM-1301.3

SEP 2 0 1993

Mr. Brian J. J. Choy
Director
Office of Environmental
Quality Control
220 South King Street, Suite 400
Honolulu, Hawaii 96813

Dear Mr. Choy:

Subject:

Negative Declaration for

Waiawa Army National Guard Armory

Addition and Renovations D.A.G.S. Job No. 12-14-6193

TMK: 9-6-04:20 Waiawa, Ewa, Oahu, Hawaii

The Department of Accounting and General Services has reviewed the comments received during the 30-day public comment period which began on August 23, 1993. The agency has determined that this project will not have significant environmental effect and has issued a negative declaration. Please publish this notice in the October 8, 1993, OEQC Bulletin.

We have enclosed a completed OEQC Bulletin Publication Form and four copies of the final Environmental Assessment.

Please contact Mr. Stanley Hayashi at 586-0479 if you have any questions.

Very truly yours,

/ GORDON MATSUOKA State Public Works Engineer

SH/si Encl.

1993-10-08-OA-FEA-Warawa army. National guard Bernony.

NEGATIVE DECLARATION

WAIAWA ARMY NATIONAL GUARD ARMORY ADDITION AND RENOVATIONS

Waiawa, Ewa, Oahu, Hawaii

Prepared in Fulfillment of the Requirements of Chapter 343, Hawaii Revised Statutes and Hawaii Administrative Rules, Title 11, Chapter 200

Prepared for

Department of Accounting and General Services State of Hawaii

Prepared by

Gerald Inouye, AIA and Gerald Park Urban Planner

September, 1993

SUMMARY INFORMATION

PROJECT:

Waiawa Army National Guard Armory

Addition and Renovations

PROPOSING AGENCY:

Department of Accounting and

General Services

DETERMINING AGENCY:

Department of Accounting and

General Services

LOCATION:

Pearl City Industrial Park

Waiawa, Ewa, Oahu

TAX MAP KEY:

9-6-04: 20

LAND AREA: -

3.00 acres

LANDOWNER:

State of Hawaii

STATE LAND USE

DESIGNATION:

Urban

DEVELOPMENT PLAN

DESIGNATION:

Multi-Family

ZONING:

Federal (F-1)

EXISTING USE:

Hawaii Army National Guard Armory

CONTACT PERSON:

Mr. Stanley Hayashi

Project Management Branch Department of Accounting and General Services

State of Hawaii

1151 Punchbowl Street Honolulu, Hawaii 96813

Phone: 586-0479

Note: Revisons to the text of the Preliminary Environmental Assessment are shown in **bold** type.

TABLE OF CONTENTS

SECTION 1	DESCRIPTION OF THE PROPOSED PROJECT	<u>Page</u> 1
		•
	A. Need for the Project	1
	B. Technical Characteristics	l
	C. Economic Characteristics	2
	D. Social Characteristics	2
SECTION 2	DESCRIPTION OF THE AFFECTED ENVIRONMENT	7
	A. Existing Use	7
	B. Climate	7
	C. Topography	7
	D. Soils	7
	E. Water Resources	10
	F. Flood Hazards	10
	G. Cultural Resources	10
	H. Flora and Fauna	10
	I. Land Use Controls	10
	J. Public Facilities and Services	10
	1. Circulation	11
	2. Water	11
	3. Wastewater	11
	4. Drainage	11
	5. Power and Communication	11
SECTION 3	SUMMARY OF POTENTIAL ENVIRONMENTAL IMPACTS	
	AND MEASURES TO MITIGATE ADVERSE EFFECTS	12
	A. Assessment Process	12
	B. Short-term Impacts	12
	C. Long-term Impacts	12
SECTION 4	ALTERNATIVES TO THE PROPOSED ACTION	15
	A. No Action	15
SECTION 5	AGENCIES AND ORGANIZATIONS CONSULTED IN THE PREPARATION OF THE ENVIRONMENTAL ASSESSMENT	16
SECTION 6	DETERMINATION OF SIGNIFICANCE	17
REFERENCE	S	
APPENDIX	COMMENT LETTERS AND RESPONSES	

LIST OF FIGURES

No.	<u>Title</u>	Page
1	Location Map	3
2	Preliminary Site Plan	4
3	Building Section Northwest/Southwest Elevation	5
4	Building Section Southeast/Northeast Elevation	6

PHOTOGRAPHS

No.	<u>Title</u>	<u>Page</u>
1	Landscaped Area Fronting Headquarters Building	8
2	One Story Building/Storage Boxes North End of Property	8
3	Gravel Area Adjacent to Armory Building	8
4	South View Open Field Storage Area	9
5	East View Open Field Storage Area	9

DESCRIPTION OF THE PROPOSED PROJECT

The Department of Accounting and General Services, State of Hawaii, proposes to construct building addition and ancillary improvements at the existing Waiawa Army National Guard Armory located adjacent to the Pearl City Industrial Park, Waiawa, Ewa, Oahu. The project site bears tax map key 9-6-04: 20 and encompasses an area of 3.00 acres. A Location Map is shown in Figure 1.

A. Need for the Project

Addition and alteration to the existing facility will foster the peacetime mission of the Hawaii Army National Guard units stationed at the armory. The space will permit all personnel to perform the necessary tasks that will improve their readiness posture to support combat objectives, mobilization requirements, and community support.

The facility is required to house all elements of the Troop Command, 227th Engineer Company (Combat), 111th Army Band, and the 25th Infantry Detachment. These units will have a required strength of 271 personnel. The additions to the existing armory will provide the necessary administrative, training, and storage areas required to achieve proficiency in required training tasks.

B. Technical Characteristics

The primary facility to be constructed is a two-story building to house the 111th Army Band and the 25th Infantry Detachment (RTOC). Located on the west side of the property, the building has a footprint of approximately 21,400 square feet and a total floor area of approximately 32,000 square feet. The structure will be erected on poured in place concrete foundation and footings, framed with concrete and cement masonry walls, and topped with a concrete roof with built-up roofing. The height of the building measures 35'0" from existing grade to top of a concrete fascia encircling the roof.

The 111th Army Band will occupy the ground floor and space has been allocated for rehearsal and practice rooms, instrument storage, arms vault, storage, locker facilities and office use. Administrative offices, classrooms, an arms vault, and storage rooms for the 25th Infantry Detachment (RTOC) will occupy the second floor and part of the first floor. Ground level space is allocated also for storing facility maintenance equipment, a food preparation area, and an assembly hall.

Existing unimproved, open areas to the south and east of the building will be paved with asphaltic concrete. A 24-foot wide loading area is planned for the northwest end of the building and will connect to as existing paved asphalt road.

The building will be air conditioned with mechanical equipment positioned atop the roof.

A 1,560 square foot addition (65' X 24') will be added to the west wing of the existing headquarters building at a later date. The single-story addition will be of cement masonry construction on

concrete slab with built up roofing. The addition will match the design and materials of the existing building.

An 18-stall, double-loaded, off-street parking lot will be constructed between the existing headquarters building and Waihona Street. Two existing parking stalls adjacent to the new parking lot driveway will be modified for handicap parking.

An existing low-rise wooden structure, a storage box, and concrete pad at the north end of the property will be demolished to make way for a paved driveway and single-loaded, seven stall parking lot.

On site improvements for the new two-story building include 280 LF of 6" sewer, 240 LF of 2 1/2" waterline, and 223 LF of 12" and 18" drainlines. Connections will be made to existing systems serving the armory.

C. Economic Characteristics

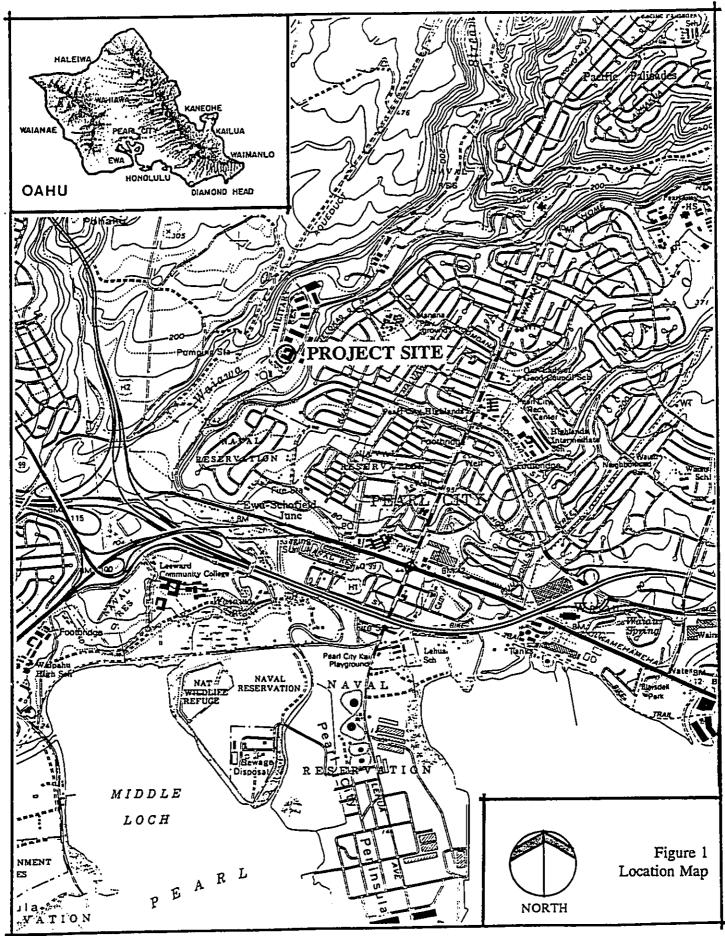
The cost of the project is estimated at \$5.0 million and will be funded by the National Guard Bureau (federal) and State of Hawaii.

Construction will commence after receiving all necessary approvals. A late 1993 start is scheduled and construction should be completed in one year.

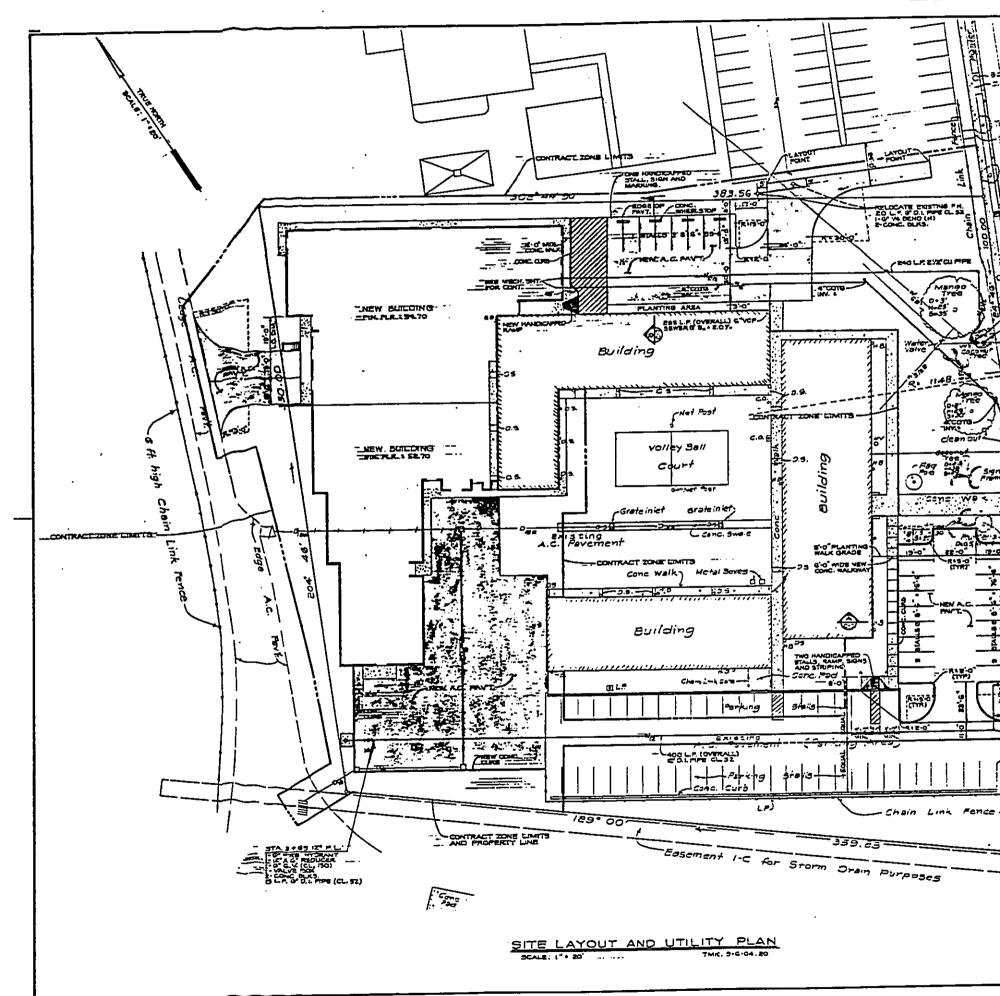
The 3.0 acre property was acquired from the United States of America by the State of Hawaii in 1972. There are no significant encumbrances on the land except for a drainage easement (Easement 1-B) in favor of the United States of America (through the Department of the Navy) along Waihona Street and a 6" waterline that crosses the eastern corner of the property. The waterline serves National Guard buildings to the north of the property.

D. Social Characteristics

The project will not displace any residents or business establishments. Army National Guard activities and equipment directly affected by construction will temporarily relocate elsewhere on the armory grounds.



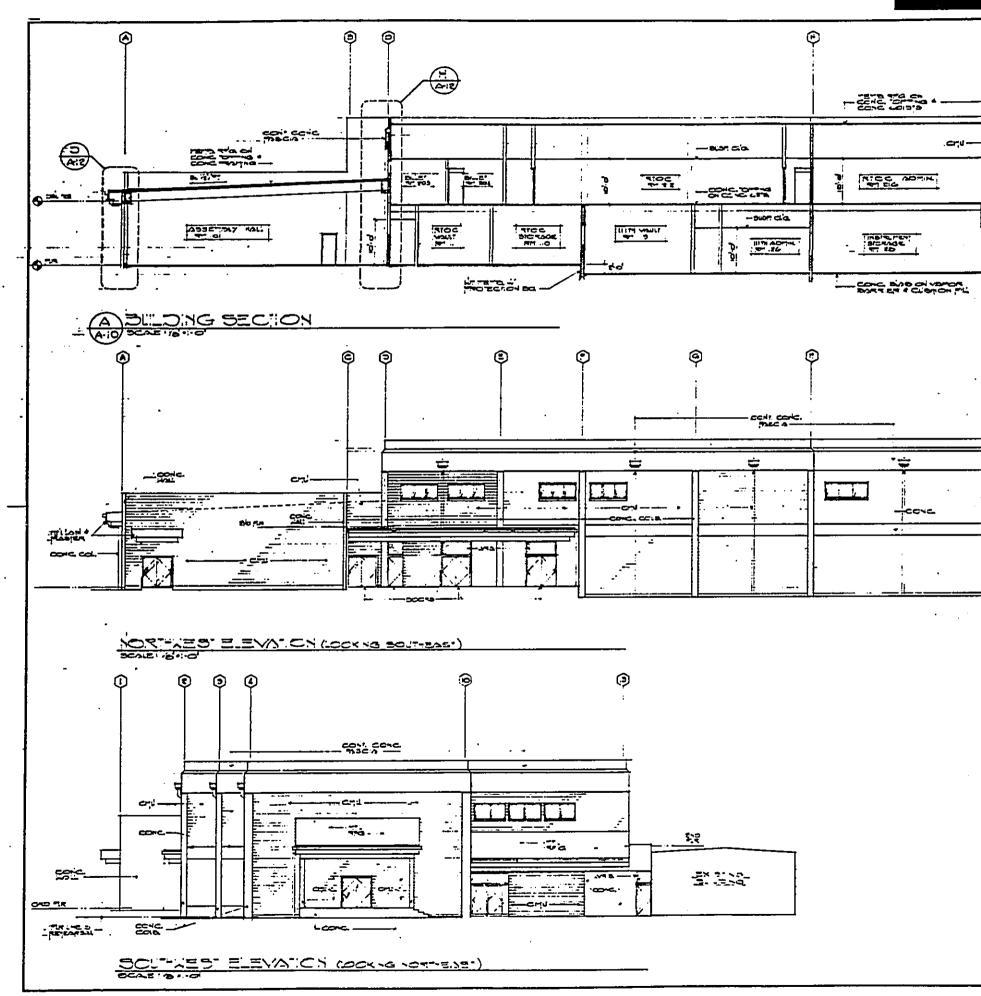
DOCUMENT CAPTURED AS RECEIVED



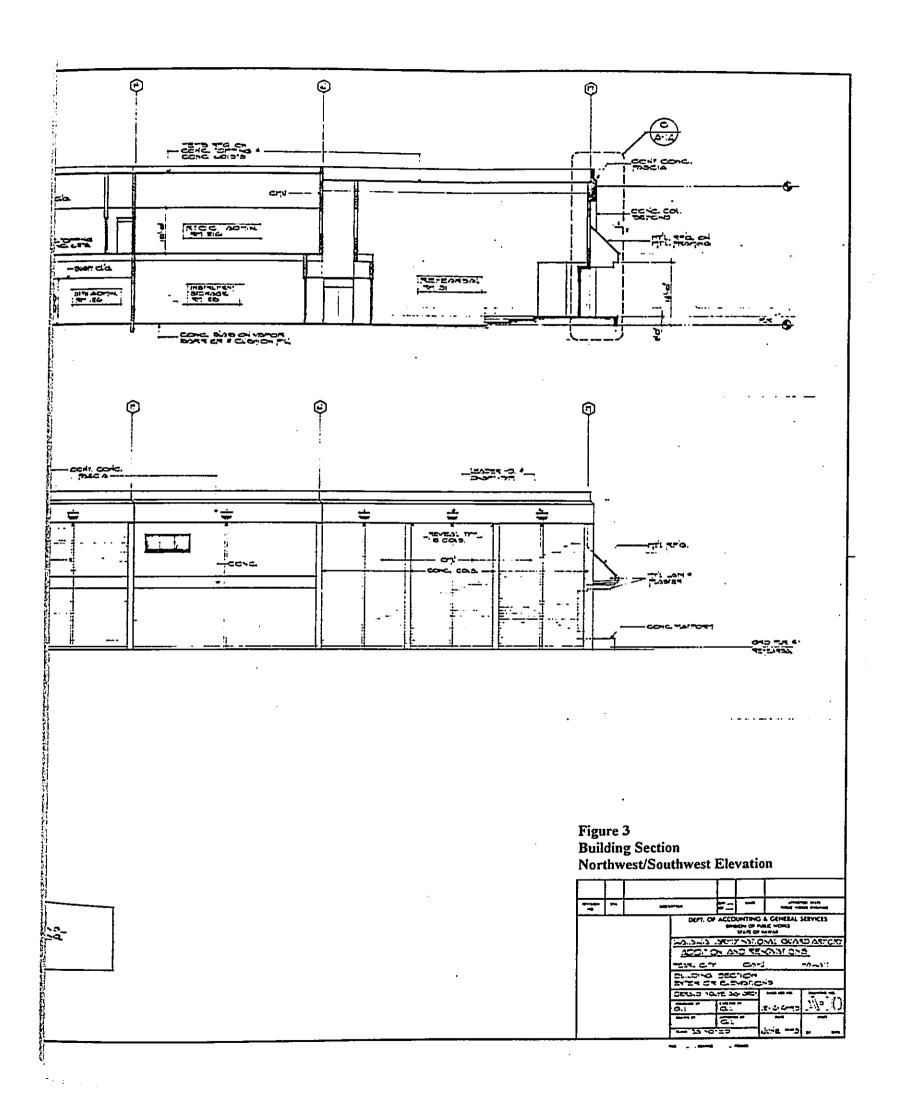
4

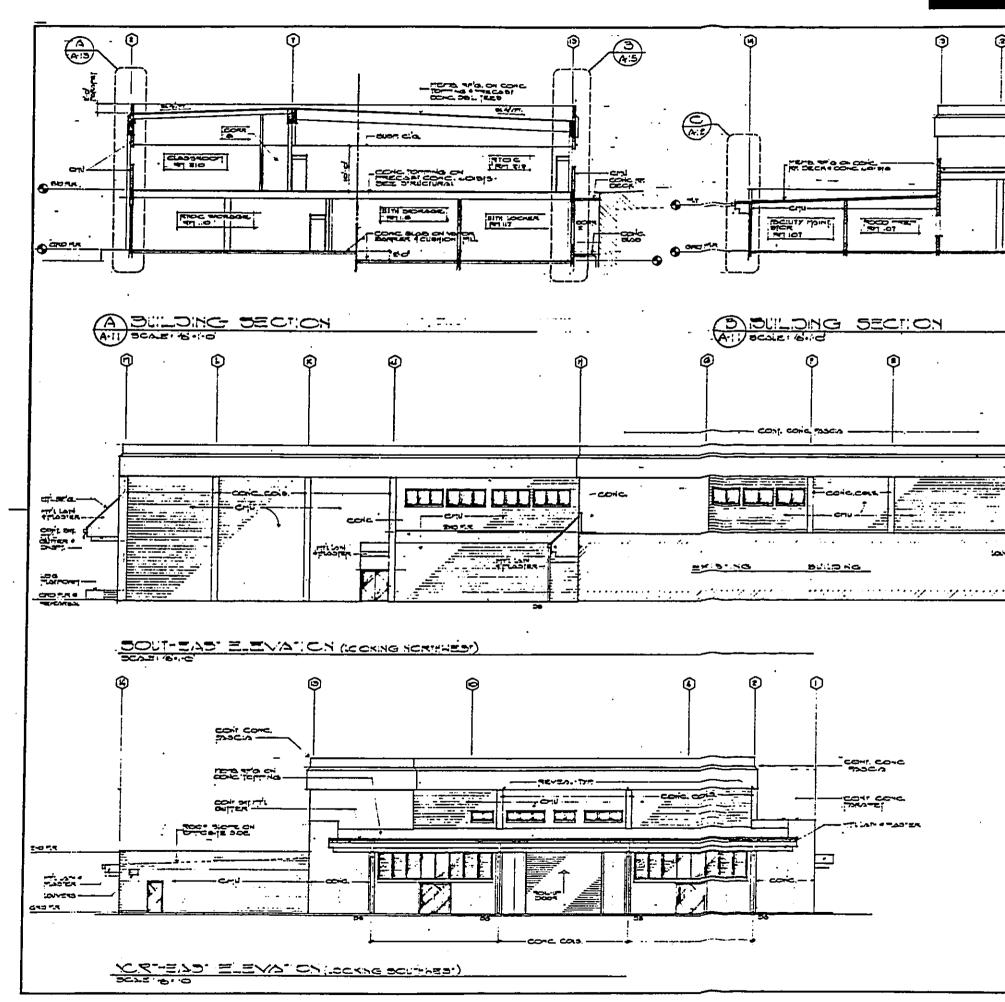
DOCUMENT CAPTURED AS RECEIVED

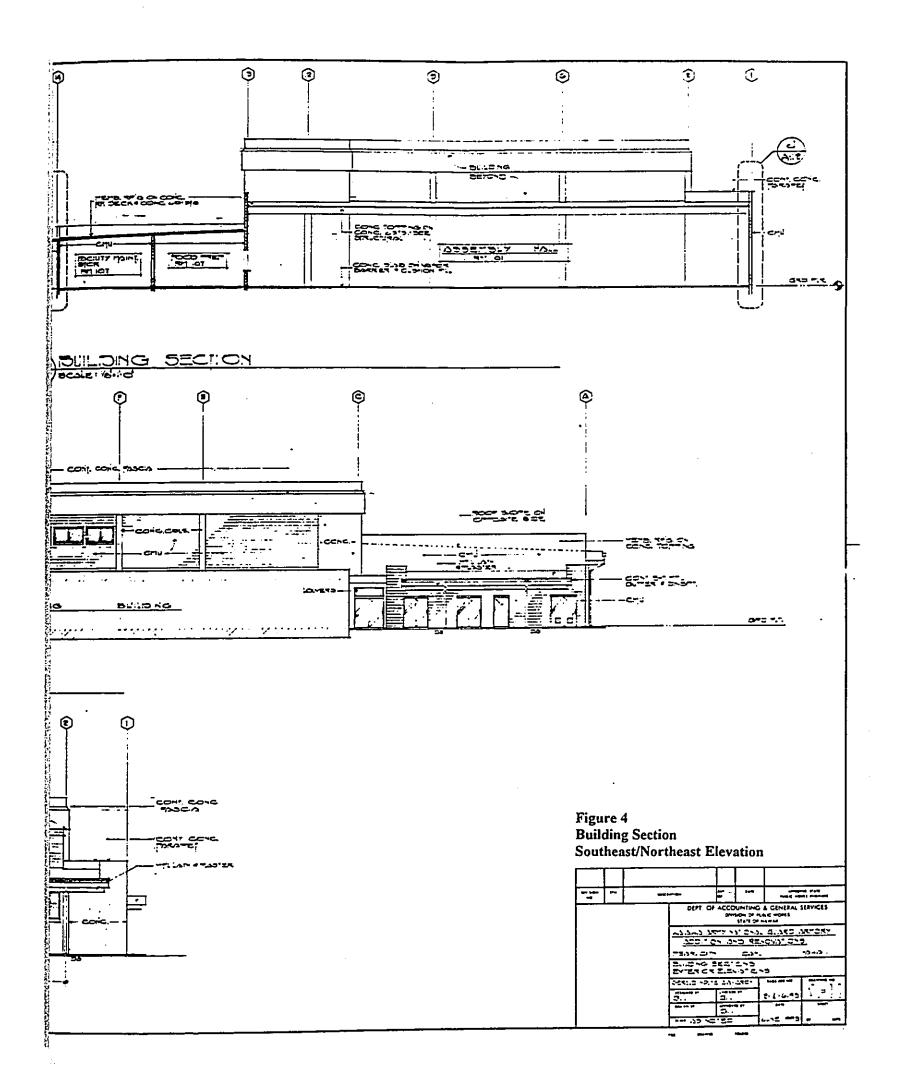
. 11 1111:	
LATTOUT 1 LANGUET 1 LANGUE	POR SSTIMATING PURPOSES CYLY DOMESTIC SERVICE METER INSTALLATION CHARGE WATER SYSTEM FACILITIES CHARGES CREDIT SIN MYN PRE SERVICE INSTALLATION CHARGE CHARGES CHARGES CREDIT SIN MYN PRE SERVICE METER INSTALLATION CHARGE CHA
FRUNCO PROCESS CONTINUE PAR CON	THIS ESTIMATE S SUBJECT TO CHANGE AND A PORMAL WESTERN COUNTY ON SHALL BE STRANDS WHITE SO CARTS ON SHALL BE STRANDS WHITE SO CARTS ON SHALL BE SHALL
D.S. 1148. Wert Sand To Bust. Eye W 18.33 TO Bust.	PLOW REQUIREMENTS M/N E.U. OPM GPD A PROPOSED DOMESTIC D *PROPOSED TITAL (A+D) D. TO BILLEMONS/CONQUITON E. NET TOTAL (C-O) F. ENST TO REMAIN G. GRAND TOTAL (E+F) *(RRIGATION DURING OFF PEAK HOURS ONLY)
SETTLE WELL TO THE LIMITS OF GRACING SETTLE WELL TO THE LIMITS OF GRA	
king Short State S	
C for Storm Drain Purposes	Preliminary Site Plan OUT, OF ACCOUNTING & CENTRAL SERVICES SOURCE OF ACCOUNTING & CONTRAL SERVICES SOURCE OF ACCOUN



J







DESCRIPTION OF THE AFFECTED ENVIRONMENT

A. Existing Use

The Waiawa National Guard Armory was constructed in 1974 to serve units of the Hawaii Army National Guard (HIARNG). The armory is the headquarters for components of the 227th Engineer Company (Combat), the 291st Maintenance Company, and Troop Command Brigade. The armory is manned daily by approximately 20 full-time guard personnel and, during monthly weekend training sessions, approximately 400 guardsmen are on duty at the armory.

The headquarters area is comprised of two rectangular and an L-shaped building that enclose an open, asphaltic concrete quardrangle. All buildings are one-story in height and house classrooms administrative offices, and training facilities. The three buildings are of cement masonry unit construction and topped by built-up roofing. Off-street parking for 55 vehicles is provided to the south of the headquarters complex. The front of the headquarters building facing Waihona Street is landscaped (See Photograph 1). The site is secured by a 6-foot high chain link fence topped with triple strands of barbed wire.

A one-story wooden structure and storage boxes occupy the area to the north planned for a new driveway and parking (See Photograph 2). The site of the addition is a gravelled area adjacent to an existing headquarters/classroom building (See Photograph 3).

The site of the new two-story structure is an open field used for parking heavy and light trucks, trailers, vans, and self-contained storage boxes (See Photographs 4 and 5). There are no permanent structures on the premises. A paved, asphaltic concrete road separates the building site from Waiawa Stream to the west (See Photograph 5). The road provides access between National Guard storage warehouses to the north and a motor pool/fueling facility to the south.

B. Climate

Climatic conditions at the project site like most of Oahu is equable year 'round. Rainfall averages between 30" to 40" annually and the average temperature is about 72 degrees Fahrenheit.

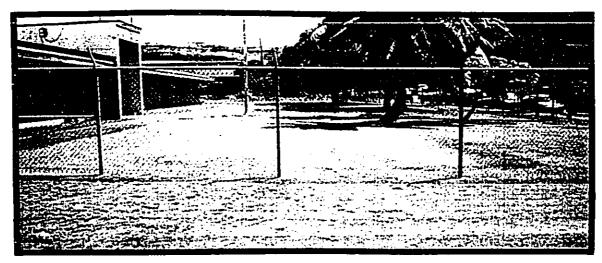
C. Topography

The improved site is relatively level. The ground surface slopes north-south from a high of 54 feet in the northern corner to approximately 51 feet in the southern corner. Cross slope is less than 1%.

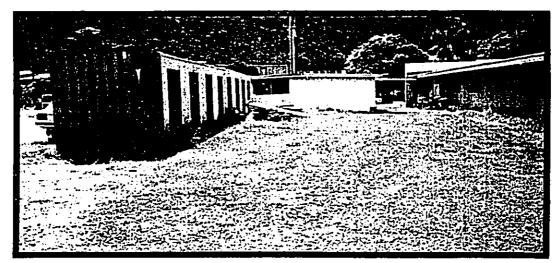
The west property line stands about +2 feet above adjoining federal lands.

D. Soils

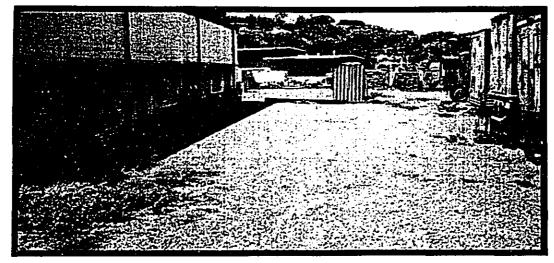
Site soils are identified as Kawaihapai stony clay loam (KlaB) by the Soil Conservation Service (1972). This soil is good for foundations for low buildings and road fill. The soil is moderately permeable, runoff is slow, and the erosion hazard is slight.



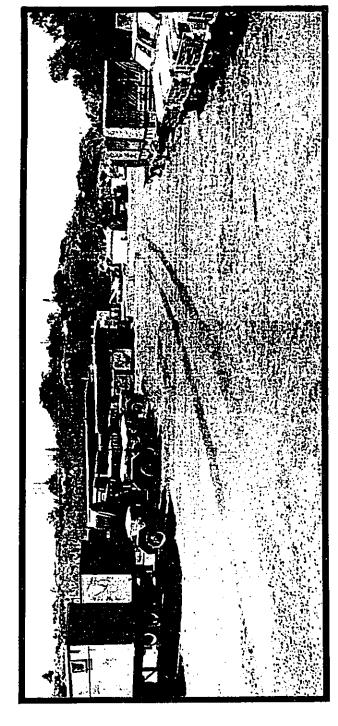
Photograph 1. Landscaped Area Fronting Headquarters Building



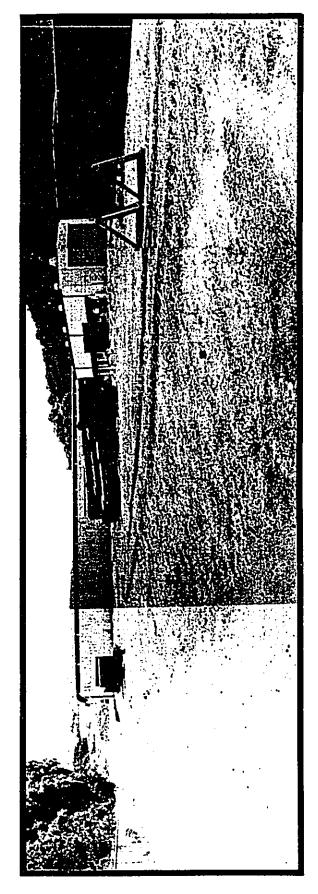
Photograph 2. One Story Building/Storage Boxes at North End of Property



Photograph 3. Gravel Area Adjacent to Armory Building



Photograph 4. South View. Open Field Storage Area



Photograph 5. East View. Open Field Storage Area.

Considering that the site has been extensively modified, we suspect that the site has been filled (or backfilled) with soil types other than that identified by the Soil Conservation Service.

E. Water Resources

There are no surface or underground water resources on the subject property. Waiawa Stream, one of the major perennial streams in central Oahu, flows to the west of the armory and discharges into Pearl Harbor's Middle Loch. The stream drains an area of of 26.4 square miles and average yearly mean flow is gaged at 32.60 cfs (National Park Service, 1990).

Further inland of the armory site, a portion of Waiawa Stream flows through a rectangular concrete drainage channel. The 40-foot wide channel was constructed in the mid-1970s as part of the development improvements for the Waiawa (Pearl City) Industrial Park. The channel is designed for a flow of 15,850 cfs. Adjacent to the armory, the stream flows in a natural channel.

F. Flood Hazards

The armory site is designated Zone X (unshaded) on Flood Insurance Rate Maps (Panel 00065C) prepared by the Federal Emergency Management Agency (1983). Zone X (unshaded) is defined as "areas determined to be outside the 500-year flood plain".

Waiawa Stream is designated Zone A which is defined as "special hazard areas inundated by 100-year flood; no base flood elevations determined" (FEMA, 1983).

Water overtopping the banks of Waiawa Stream has flooded the armory grounds and on one occasion seeped into the headquarters building. Flooding occurs when storm debris obstructs the stream channel outlet into Pearl Harbor.

G. Cultural Resources

Cultural features or deposits were not observed during our field survey. Historic site maps on file at the Division of Historic Sites, Department of Land and Natural Resources, State of Hawaii, also do not indicate the presence of historic features.

H. Flora and Fauna

Fronting the headquarters building, flora consists primarily of ornamental trees (coconut (Cocos nucifera) and plumeria (Plumeria sp.)) and honohono grass. Bermuda grass (Cynodon dactylon) is the predominant ground cover at the site of the two-story addition. The area of the to be demolished one-story building and storage boxes is gravelled and devoid of vegetation.

I. Land Use Controls

The property is designated Urban by the State Land Use Commission, general planned Multi-Family on the Primary Urban Center Development Plan Land Use Map of the City and County of Honolulu, and zoned F-1 Military and Federal Preservation District.

J. Public Facilities and Services

1. Circulation

Waihona Street is the major collector road serving the Pearl City Industrial Park. The 60-foot right-of-way accommdates two traffic lanes and both sides of the street are improved with curbs, gutters, and sidewalks. The posted speed limit is 25 mph. On-street parking is allowed on both sides of the street.

Waihona Street meets Kamehameha Highway in a T-intersection. In bound movement is from the Pearl City direction (east) only; outbound movements in an east or west direction are stop controlled.

2. Water

A 12" municipal main in Waihona Street serves the Pearl City Industrial Park. Water for the armory is drawn by a 2 1/2" lateral off the main water line.

3. Wastewater

An existing 10" municipal line in Waihona Street collects wastewater from the Pearl City Industrial Park. Wastewater from the armory is collected by a 6" line and discharged into a sewer manhole along Waihona Street.

4. Drainage

Existing grated inlets in the headquarters quadrangle collects runoff and conveys same through a 12" pipe to the west end of the property where it outlets onto an a.c. road. The discharge is dispersed in the direction of Waiawa Stream or towards a drainage inlet just outside the south corner of the property. The drain inlet is part of a drainage easement on the adjoining property.

5. Power and Communication

Power and communication services are available from overhead lines along Waihona Street.

SUMMARY OF POTENTIAL ENVIRONMENTAL IMPACTS AND MEASURES TO MITIGATE ADVERSE EFFECTS

A. Assessment Process

The scope of the project was discussed with staff of the Department of Accounting and General Services and Hawaii Army National Guard, and the consulting architect and engineer. Federal, State, and County agencies were consulted for information relative to their jurisdiction and expertise. Time was spent in the field collecting data and noting site conditions as well as conditions in the vicinity of the project site. The discussions and field investigations allowed us to identify existing conditions and features that could affect or be affected by the project. These conditions include:

- No significant change in existing use is considered by the proposed action;
- Land on which the improvements are proposed has been modified extensively by the
 existing use;
- The site is devoid of archaelogical features;
- · There are no rare, threatened, or endangered flora and fauna in the project area;
- · The west side of the property adjoins the 100-year flood plain of Waiawa Stream;
- · There are no wetlands in the vicinity of the project area;
- Essential public utilities are available and can adequately accommodate the planned armory additions; and
- There are no hazardous substances stored in buildings to be demolished. Tests for asbestos containing materials and lead containing paints have been negative.

B. Short-term Impacts

Construction work will alter the ground topography in areas planned for the proposed improvements. Construction of the two parking lots and driveways requires minor site work—primarily grading, compacting, and paving. Because the areas for the two new parking lots are relatively small in size and already have been modified by man, topographical modifications and potential erosion resulting from construction activities are not considered significant. The site of the building addition is relatively small in size and located in area that already has been improved. Construction of the addition to include a poured in place concrete slab will require some grading, filling (+1 foot), and excavating for footings. These actions will neither significantly alter the ground surface and soil regime nor create erosion problems.

The site of the two-story building is the largest of the areas to be improved. This site was previously rough graded and compacted thus there is little of a "natural" environment to be affected

by sitework. The area will be grubbed of grass and weeds, graded to design elevation, partially filled to accommodate a terraced concrete floor, and excavated for footings and utility lines. The potential for erosion can be mimized by having the Contractor perform all site work according to acceptable and City and County of Honolulu approved grading and erosion control standards.

Demolition of buildings, grubbing of vegetation, and grading work will raise fugitive diust. Dust cannot be eliminated entirely but can be controlled by sprinkling water over exposed areas or by employing other dust suppression measures stipulated in Chapter 60 (Air Pollution Control), Title 11, Hawaii Administrative Rules.

Temporary and unavoidable construction noises will occur over the 12 month construction period. Sound levels in the range of 85-96 dB(A) will be generated by heavy equipment, trucks, power tools, and other construction equipment. Fluctuations in sound levels, frequency, and duration can be expected during the different construction stages. There are no noise sensitive locations, for example schools and hospitals, in the vicinity of the armory. The acoustical environment already is conditioned by noise producing light industrial activities from within the Industrial Park, moving vehicles, and repair/maintenance activities at the National Guard motor pool to the south of the armory site.

Severe storm water discharge could contribute debris and soil material to the stream during construction thus increasing turbidity and sedimentation. Mitigating measures will be implemented prior to, during, and following land disturbance activities to control storm water discharge and negate potential adverse effects. Grading and erosion control plans will be submitted to the Department of Public Works for review and approval prior to construction.

Construction measures will be implemented prior to, during, and following land disturbing activities to manage storm water discharge and to negate potential adverse effects on receiving waters. Mitigative measures will be submitted as part of the project grading and erosion control plan to the Department of Public Works, City and County of Honolulu for review and approval prior to construction.

Should subsurface archaeological features be unearthed, work in the immediate area will cease and historic authorities notified for proper disposition of the finds.

The areas to be improved harbor no rare, threatened, or endangered flora and fauna. All observed species are common to the State of Hawaii.

Construction work should not adversely affect traffic circulation on Waihona Street. No work is proposed within in and outbound travel lanes. A sewer connection will be made along the public sidewalk fronting the armory and construction would inconvenience pedestrians for 2-3 days. Similary, off-street parking will be prohibited for this same period. The excavated area will be covered with plates at the end of each work day and restored to pre-construction conditions when the connection is completed.

Trucks hauling construction materials and supplies to the job site will increase vehicle traffic on Waihona Street. This impact, which cannot be avoided, is typical for construction projects. To mitigate potential adverse effects, delivery times can be scheduled for off-peak industrial traffic hours or flagmen posted for traffic control.

Solid waste will be hauled to a County approved site for disposal.

Seven off-street parking stalls fronting the headquarters building will be 'lost' but replaced as part of the new 18-stall lot.

C. Long-term Impacts

Implementation of the project will achieve the short and long-term goals of the Hawaii Army National Guard described in the need for the project.

The completed project will increase the number of on duty guardsmen assembling at the armory during weekend drills. This impact cannot be avoided considering that one of the project objectives is to consolidate guard units from other locations at the Waiawa Armory.

The project does not require the installation or construction of major utility systems such as roads, water, and sewer. These systems are already in place servicing the armory and are adequate to accommodate the planned improvements.

Planned drainage improvements should accommodate runoff from the proposed improvements. New drain lines will be installed and runoff will be conveyed via an existing drain line into Waiawa Stream which outlets into Pearl Harbor's Middle Loch. The stream already receives storm water discharges from developed areas upstream of the armory site and downstream agricultural uses. In addition, residential, commercial, and agricultural activities located makai of Kamehameha Highway on the Pearl Harbor coastal plain already discharge into the stream. The many point and non-point sources and the uncertainty of the quantity and quality of the respective discharges make it very difficult to evaluate and attribute cumulative water quality impacts to the proposed project (or similar sources).

Although most of the planned improvements are not located in a flood hazard area, the 24-foot wide loading zone and driveway extend into the flood plain of Waiawa Stream. It is reasonable to expect that the short driveway will be inundated during severe flood events and, based on previous flood experiences, much of the armory site too is susceptible to flooding. Upstream flooding along Waiawa Stream can be mitigated to a certain extent by annual (or more frequent) clearing of the stream channel and its outlet of debris and overgrown vegetation.

The proposed project is consistent with the existing use of the property and supports the established land use pattern for the area. No adverse effects on light industrial uses are anticipated as a result of the project.

The two-story structure should not adversely affect roadside views in the direction of Waiawa Stream. The structure is sited about 300 feet from Waihona Street and its lower level should be screened from view by the existing headquarters building and other Guard buildings on adjoining properties. These buildings already obstruct views toward the Stream from Waihona Street. The second level will be visible above the lower buildings in the foreground but should not significantly differ in form and appearance from existing warehouse buildings found throughout the Industrial Park.

ALTERNATIVES TO THE PROPOSED ACTION

A. No Action

For reasons presented in the purpose of the project, the no action alternative is not desirable.

A no action alternative maintains the status quo and precludes all impacts, short and long-term, beneficial and adverse, described in this Assessment. The present facility deficiencies will continue to negatively impact the readiness and morale of the units involved. The lack of proper and inaequate training, storage, and administrative areas will impair the units ability to attain mobilization requirements.

AGENCIES AND ORGANIZATIONS CONSULTED IN THE PREPARATION OF THE ENVIRONMENTAL ASSESSMENT

Federal

- *U.S. Army, Corps of Engineers
- *U.S. Department of the Interior, Fish and Wildlife Service
- * Department of the Navy, Pearl Harbor

State

- *Department of Land and Natural Resources
- *Department of Defense
- Department of Health
- *Office of Environmental Quality Control

City and County of Honolulu

- *Board of Water Supply
- Department of Land Utilization
- *Department of Public Works
- *Department of Transportation Services

Fire Department

Police Department

Others

- *Hawaiian Electric Company
- *GTE Hawaiian Telephone Company, Ltd.
- * Denotes consulted parties who responded in writing.

DETERMINATION OF SIGNIFICANCE

Chapter 200 (Environmental Impact Statement Rules) of Title 11, Administrative Rules of the State Department of Health, presents criteria for determining whether an action may have significant effects on the environment (Section 11-200-112). The relationship of the proposed project to these criteria is discussed below.

(1) Involves an irrevocable commitment to loss or destruction of any natural or cultural resource;

No natural or cultural resources are present in the project area.

(2) Curtails the range of beneficial uses of the environment;

The building site is open, partially improved, and used for storing equipment and materials. No other use has been contemplated for this location. The Hawaii Army National Guard has has no other adequately sized building site at its Waiawa Armory for locating the new structure. The project commits an undeveloped site in an improved area to a needed facility and consolidates National Guard fuctions in one location.

(3) Conflicts with the state's long-term environmental policies or goals and guidelines as expressed in Chapter 344, Hawaii Revised Statutes, and any revisions thereof and amendments thereto, court decisions or executive orders;

The project does not conflict with long-term environmental goals and policies of the State of Hawaii.

(4) Substantially affects the economic or social welfare of the community or state:

The project does not substantially affect the economic or social welfare of the community of state. Capital expenditures in the form of construction monies will provide short-term job opportunities for the local construction industry.

(5) Substantially affects public health;

Substantial adverse impacts on public health are not anticipated. No hazardous materials are present on the building site and buildings to be demolished have tested negative for asbestos containing materials and lead containing paints.

(6) Involves substantial secondary impacts, such as population changes or effects on public facilities;

Substantial secondary impacts are not anticipated. Water, sewer, drainage, and power systems are adequate to serve the proposed improvements. The provision of additional

off-street parking should alleviate some of the parking problems experienced on Waihona Street during weekend National Guard training drills.

(7) Involves a substantial degradation of environmental quality;

Environmental quality will not be degraded. Measures to mitigate construction related impacts will be implemented during all phases of site improvement.

(8) Is individually limited but cumulatively has considerable effect upon the environment or involves a commitment for larger actions;

The project does not entail a commitment for a larger action.

(9) Substantially affects a rare, threatened or endangered species, or its habitat;

There are no rare, threatened or endangered flora or fauna on the premises.

(10) Detrimentally affects air or water quality or amient noise levels; or

Ambient air quality will be affected temporarily by dust and combustion emissions but can be controlled by measures described in this Assessment. Construction noise will be pronounced during site preparation but should diminish during actual building construction. In addition, there are no noise-sensitive activities (for example residences, schools, or hospitals) in the vicinity of the building site that could be adversely affected by construction noise or the use of the facility.

(11) Affects an environmentally sensitive area such as a flood plain, tsunami zone, erosion-prone area, geologically hazardous land, estuary, fresh water, or coastal waters.

In general, the project is not proposed in the vicinity of wetlands or coastal waters. Although most of the planned improvements are not located in a flood hazard area, a loading zone and short driveway extend into the flood plain of Waiawa Stream. These two improvements should not significantly affect calculated flood heights in the area. Based on past experience the armory grounds would probably continue to be flooded during severe flood events with or without the project..

Based on the above criteria and after considering the scope of the project, anticipated short and long-term consequences of the proposed action, and all comments received during the consultation process, it is recommended that a Negative Declaration be filed for the proposed Waiawa Army National Guard Armory Addition and Renovations project.

BIBLIOGRAPHY

- Environmental Communications Inc. 1987. Final Environmental Impact Statement for the Proposed Gentry 515 Development, Waiawa, Central Oahu, Hawaii.
- Federal Emergency Management Agency. 1987. Flood Insurance Rate Map, City and County of Honolulu. Community Panel 150001 00065C.
- National Park Service. 1990. Hawaii Stream Assessment: A Preliminary Appraisal of Hawaii's Stream Resources. Report R34. Prepard for Commission on Water Resource Management, State of Hawaii. Prepared by Hawaii Cooperative Park Service Unit, Western Region Natural Resources and Research Division, National Park Service.
- Park, Gerald Urban Planner. 1993. Field Observation.
- U.S. Department of Agriculture, Soil Conservation Service. 1972. Soil Survey of Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of hawaii. In Cooperation with the University of Hawaii Agricultural Experiment Station. U.S. Government Printing Office, Washington D.C.

APPENDIX

COMMENT LETTERS AND RESPONSES

STHER MADE

District. J. Coor Design

STATE OF HAWAII
OFFICE OF ENVIRONMENTAL QUALITY CONTROL
28 SOUTH SAC STATE
TOWN HANDS
MONONAL MAND MIS
TOWN HAND HIS

July 7, 1993

Mr. Gerald Park Gerald Fark Urban Planner 1245 Young Street, Suite 201 Honolulu, Hawaii 96814

Dear Mr. Park:

This is written in reference to your July 2, 1993, latter requesting comments on a draft environmental assessment for the Waiawa Army National Guard Armory, Waiawa, Ewa, Oahu, Hawaii. The Office of Environmental Quality Controt has reviewed the subject document and has no comments to offer. Thank you for the opportunity to comment.

Very truly yours,

Serti. Para E BRIAN J. J. CHOY Director

Stanley Hayashi, DAGS

July 15, 1993

Hawaiian Electric Company, Inc. - PO Box 2750 - Honoru HI 96840 331

I ... L. ... L. ... L. ... L. ...

Wikam A. Bonnel Manager Envormental Department

Mr. Gerald Park Gerald Park Urban Planning 1245 Young Street, Suite 201 Honolulu, HI 96814

Dear Mr. Park:

Subject: Draft Environmental Assessment (DEA) for Walawa Army Mational Guard Armory Addition and Renovations Walawa, Ewa, Oahu

We have reviewed the subject DEA, and have no comments on the proposed expansion project. Thank you for the opportunity to comment.

Sincerely,

O.B. - 850

An HEI Company

DEPARTMENT OF PUBLIC WORKS

CITY AND COUNTY OF HONOLULU



July 7, 1993

Bitter a survey coulded

PANTE CHITACO ENV 93-147

Mr. Gerald Park Page 2 July 7, 1993

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

Very truly yours,

Hr. Gerald Park Gerald Park Urban Planner 1245 Young Street, Suite 201 Honolulu, Hawail 96814

Subject: Draft Environmental Assessment (DEA) Haiawa Army National Guard Armory THK: 9-6-04:20

- The DEA should address the potential impact of storm water discharge associated with construction activities on water quality of the receiving waters.
 - The DEA should also state what structural or non-structural best management practices (BHP) will be provided to control and reduce discharge of pollutants resulting from construction activities.
- If devatering activity is anticipated during construction, dewatering permits will be required by the State Department of Health as well as the City Department of Public Works. ų.
 - The DEA should also address the potential impact of hazardous waste on the proposed project site. 4.
- Please forward this DEA to the Department of Wastewater Management for comments on sewer adequacy. ر. د

C. HICHAEL STREET Director and Chief Engineer

Dear Hr. Park:

We have reviewed the subject DEA and have the following comments:

September 21, 1993

C. Michael Street
Director and Chief Engineer
Department of Public Works
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

Dear Mr. Street:

Subject: Draft Environmental Assessment Waiawa Army National Guard Armory (ENV 93-147) Thank you for reviewing the Draft Environmental Assessment prepared for the subject project. We offer the following responses to your comments,

1. Storm water from the project site will be conveyed via an existing drain line into Waiawa Stream which outlets into Pearl Harbor's Middle Loch. The stream already receives storm water discharges from developed areas upstream of the armory site and downstream agricultural uses. In addition, residential, commercial, and agricultural activities located makai of Kamehaneta Highway on the Pearl Harbor coastal plain already discharge into the stream. The many point and non-point sources and the uncertainty of the quantity and quality of the respective discharges make it very difficult to evaluate and attribute cumulative water quality impacts to the proposed project (or similar sources).

Severe storm water discharge could contribute debris and soil material to the stream thus increasing turbidity and sedimentation. Mitigative measures will be implemented prior to, during, and following hand disturbance activities to control storm water discharge and negate potential adverse effects. In addition, grading and ecosion control plans will be submitted to the Department of Public Works for review and approval prior to construction.

- 2. The job site is less than five acres in area and NPDES permits are not required for construction related discharges. During construction, measures such as stabilized access for vehicle egress and ingress and perimeter mosf controls will be implemented to reduce discharge of pollutants. Following construction the project will provide paved parking surfaces and all exposed surfaces will be grassed for long-term pollution discharge control.
 - 3. Dewatering activities are not anticipated during construction.

CERNLD PARK whan plannel

4. There are no known hazardous wastes on the project site.

C. Michael Street Page 2 September 21, 1993 5. The consulting engineers have consulted with the Department of Wastewater Management for sewer adequacy.

Our responses will be incorporated in to the Environmental Assessment. If you have any questions concerning the project, please contact Mr. Stan Hayashi, Project Manager, at 586-0479.

Sincerely,

GERALD PARK URBAN PLANNER

Gerald Park

xc: Stan Hayashi, DAGS G. Inouye

wiarmdpw.ftr

ना Hawaiian Tel

GTE Havanan Tekprone Company Incorporated P.O. Box 2200 - Honorun 14 96841 - 19081 545-4511

Beyond the call

July 30, 1993

FRIST FAG.

Hr. Gerald Park Urban Planner 1245 Young Street Honolulu, HI 96814

Dear Mr. Park:

Haiawa Army Hational Guard Armory

We have reviewed the Environmental Assessment and find no GTE Hawaiian Telephone or Joint Trunking System facilities in the way of the building addition.

GTE Hawaiian Telephone does not have any other comments regarding the Environment Assessment,

If you have any questions, please contact James Takeuchi at 834-6211.

Mach K-Jasah

Mark K. Taosaka Operations Supervisor -OSP Enginearing

JMT/kr (9349.1tr)

CITY AND COUNTY OF HONOLULU CITY AND COUNTY OF HONOLULU COUNTY OF THE COUNTY OF THE

PERSON WASSOL

August 4, 1993

Mr. Gerald Park Gerald Park Urban Planner 1245 Young Street, Suite 201 Honolulu, Hawail 96814

Dear Mr. Park:

Subject: Walhona Street - Walawa Army Mational Guard Armory Draft Environmenal Assessment THK: 9-6-04: 20 This is in response to your letter dated July 2, 1993 requesting our comments on the subject property.

Sufficient off-street parking should be provided to support the additional parking demand from the new buildings during weekend drills.

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

Sincerely,

Joseph H. HAGALDI, JR. Director



DEPARTMENT OF THE ARMY U.S. ARM BOSHER DETRICT, HONOLULU FORT SHAFTER, HAWAII \$6455.400

_

_

July 30, 1993



Planning Division

Hr. Gerald Park, Urban Planner 1245 Young Street, Suite 201 Honolulu, Hawaii 96814

Dear Mr. Park:

Thank you for the opportunity to review and comment on the Draft Environmental Assessment for the Halawa Army National Guard Armory, Ewa, Oahu (THK 9-6-4: 20). 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 Mater Act; the Rivers and Harbors Act of 1899; and the Marine Protection, Research and Sanctuaries Act.

a. The project does not involve work in waters of the U.S.; therefore, a DA permit is not required.

b. The zone designation (Zone X-unshaded: Areas outside the 500-year flood plain) cited on page 10 of the report is correct. However, the Maiawa Stream 100-year flood plain shown on the Federal Emergency Management Agency's Flood insurance Rate Map (FIRM) is designated as Zone A and was determined by approximate methods without the determination of base flood elevations. Since this is a joint Federal and State of Hawaii project, Executive Order 11988 applies, requiring that a determination be made as to whether or not the proposed project lies in a 100-year flood plain. Detailed information, if available, should be utilized in site evaluation.

For your information, the U.S. Army Corps of Engineers conducted a flood study of Walawa Stream for the City and County of Honolulu in 1992 and a reconnaissance study for flood damage reduction in 1988. The 1982 study was intended for planning purposes only and not for flood map revision. Based on the results of

-2-

this study, the proposed project lies within the 100-year flood plain (enclosure). Historical records also indicate that the site is prone to flooding. This is confirmed and cited on page 10 of your draft assessment. The 1988 study was terminated due to lack of economic justification for flood control improvements.

In addition, FEMA has contracted R. M. Towill Corporation to conduct a flood study to determine 100-year base flood elevations of Malawa Stream. The study results will be used to update the existing 100-year flood plain on the current firm. Inquiries regarding the study status should be directed to R. M. Towill Corporation.

Sincerely,

Alsuk Cheung, P.E. Director of Engineering

Enclosure

September 21, 1993

Kisuk Cheung, P.E.
Director of Engineering
Department of the Army
U.S. Army Engineer District, Honolulu
Fort Shafter, Hawaii 96859-5440

Attention: Planning Division

Dear Mr. Cheung:

Subject: Walawa Army National Guard Armory TMK: 9-6-4: 20 Walawa, Ewa, Otahu, Hawaii Thank you for reviewing and offering comments to the draft Environmental Assessment for the subject project.

In consideration of your comments enocerning the boundaries of the 100-year flood plain, the National Guard believes that the project site lies outside the 100-year flood plain of Walawa Steam. The basis for this determination is Flood Insurance Rate Map Community Panel Number 150001 00659 dated September 4, 1987.

We also reviewed comments and photographs from your office for an earlier National Guard project in the vicinity of the project site and proposed revisions to the Waiawa Stream flood plain prepared by your office. The photographs and delineated flood plain markings depict the present project site to be within the 100-year flood plain and the base flood height estimated at 52 feet above mean sea flood height estimation was not intended for flood height deremination and was not used in the plans for the proposed improvements. Although the flood height has not been determined, the flowest finish floor of the two story building has been established at 52.70 feet which is above the estimated flood height.

We have contacted the R.M. Towill Corporation to inquire if they have developed any information in their contracted study with the Federal Emergency Management Agency which would establish a 100-year flood water surface near the new Armory building. They have completed the hydrology study (runoff quantity determination) for the portion of Waiawa Stream below Armchameha Highway and have circulated the study for comments. Hydraulic calculations to establish water surface profiles are expected to be completed by the end of 1993.

GERALD PARK wounplaying

Kisuk Cheung September 21, 1993 Page 2 Please call me at 533-0018 or Mr. Stan Hayashi, Project Management Branch, Department of Accounting and General Services at 586-0479 if you have any questions.

Sincerely,

GERALD PARK URBAN PLANNER

Gerald Park

xc; Stan Hayashi, DAGS Gerald Inouye

wiarmooe.ltr



DEPARTMENT OF THE NAVY COMMONDS HAVE EAST FORE HARBON BOX 110 FEARL HARBON HAWAN MARSON HAWAN MA

5090 Ser H42(H43)/2834 06 Aug 93

> Mr. Gerald Park Gerald Park Urban Planner 1245 Young Street Suite 201 Honolulu, HI 96814

Dear Mr. Park:

Your letter of July 2, 1993, requested comments from the Navy concerning the Environmental Assessment (EA) for the Walawa Army Mational Guard Armory Additions and Renovations.

As requested, the following comments are provided for your consideration.

- a. The Mavy owns and operates a major drinking water shaft located manks from the project site in Walawa Gulch. The Mavy is concerned if there are any releases of hazardous substance during the construction and/or operation of your proposed project which may have deleterious impact on ground water quality.
- b. The Navy also owns properties and manages wetlands which are located along Halawa stream, downstream from your project, and also performs periodic maintenance dredging of Pearl Harbor. Therefore, the Navy is concerned if any hazardous substance or significant sediment loading is introduced into Walawa stream via drainage from the project. Proper drainage controls and pollution prevention measures (i.e. sediment/erosion control, management of stora run-off/non-point soil pollution) should be instituted. Dewatering, hydrotesting, or similar activities which may discharge into Halawa Stream may require an NPDES permit for non-storm discharge.
 - c. The EA should also address whether potentially hazardous constituents may be released during the demolition work for the project (i.e., asbestos, lead paint, etc.).
- d. The appropriate State agency should be consulted to ensure that historic and culturally significant resources are not affected by the project.

Thank you for the opportunity to comment on the EA. Should you have any questions concerning these comments, please contact Hr. clyde Yokota at 471-1324.

¬:

Sincerely,

And Effu.

STAMFORD B. C. YUEN

Pacilities Engineer
By direction of
the Commander

7

September 21, 1993

Stanford B.C., Yuen
Facilities Engineer
Department of the Navy
Naval Base Pearl Harbor
Pearl Harbor, Hawaii 96860-5020

Dear Mr. Yuen:

Subject: Ser N42(N43)7834
Wainwa Army National Guard Armory
Wainwa, Ewa, Oahu, Hawaii

Thank you for reviewing the Draft Environmental Assessment for the subject project. In consideration of your comments, we offer the following:

There are no bazardous substances stored in buildings to be demolished.
 Tests for asbestos containing materials and lead containing paints have been negative.

b. Storm water from the project site will be conveyed via an existing drain line into Waiawa Stream which outlets into Pearl Harbor's Middle Loch. The stream already receives storm water discharges from developed areas upstream of the armory site and downstream agricultural uses. In addition, residential, commercial, and agricultural activities located makai of Kantchancia Highway on the Pearl Harbor coastal plain already discharge into the stream. The many point and non-point sources and the uncertainty of the quantity and quality of the respective discharges make it very difficult to evaluate and attribute cumulative water quality impacts to the proposed project (or similar sources).

Severe storm water discharge could contribute debris and soil material to the stream thus increasing turbidity and solimentation. Mitigative measures will be implemented prior to, during, and following land disturbance activities to control storm water discharge and negate potential adverse effects. Graling and erosion control plans will be submitted to the Department of Public Works for review and approval prior to construction.

c. See response to Item a. above.

GERALD PARK urban planner

d. The Historic Preservation Divison (HPD), Department of Land and Natural Resources, State of Havaii, commented that "a review of their record shows that there are no known historic sites at the project location. The project was previously rough graded and compacted. Because of this previous development, HPD believes that construction of the augrade facilities described in the DEA will have "no effect" on historic sites.

Department of the Navy September 21, 1993

- mg

Please call me at \$33-0018 or Mr.Stan Hayashi, Project Management Branch, Department of Accounting and General Services at 586-0479 if you have any questions.

Sincerely,

GERALD PARK URBAN PLANNER

Chance Mrs.
Gerald Park

xc: Stan Hayashi, DAGS G. Inouye

waiarmnav.ltr

Hand Change



ALITH W AND CHANGASS. ?

DEPARES DOWN REPORTS DOWN NAMES

STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES

ACUCATIVE OF NO CONTROL OF NO

P. O. BOX 621 HOHOLULU, HAWAII \$6809

AUG 12 1593

File No.: 94-017 DOC. ID.: 3321

DEGENIZED OF THE PROPERTY OF T

Hr. Gerald Park, Urban Planner 1245 Young Street, Suite 201 Honolulu, Hawaii 96814

Dear Mr. Park:

Subject: Preparation of a Draft Daviromental Assessment (DEA) for the Waisma Army National Quard Armory, Walawa, Daa, Cahu, DrK: 9-6-04: 20

We have reviewed the Early Assessment information for the subject arrory project transmitted by your letter dated July 2, 1993, and have the following comments:

Ocmission on Nater Resource Management

The Ozmission on Nator Resource Management's staff comments that a Stream Channel Alteration Permit (SCAP) will be required if any work connected with the drainage improvements for the project is performed on the banks of the Naiawa Stream at the western boundary of the property.

Historic Preservation Division

The Historic Preservation Division (HFD) comments that a review of their records shows that there are no known historic sites at the project location. The project was previously rough graded and compacted. Because of this previous development, HFD believes that construction of the at-grade facilities described in the DFA will have "no effect" on historic

We have no other comments to offer at this time. Thank you for the opportunity to comment on this matter.

Mr. Park

- 2 -

Please feel free to call Steve Tagawa at our Office of Conservation and Environmental Affairs, at 587-0377, should you have any questions.

Wery truly yours,

File to.: 94-017

1983 EN REU NSK AUG-18-93 MED 8:35 .

F. 02

ż

FISH AND WILDLIFE SERVICE FACTORIST TO PRESENT FO. BOX 30107 NG 17 12 25 Pt 193 Honolulu, Nawell 90850 014, 0F PUBLIC WORKS

In Reply Refer To: AAP

Project Management Branch Department of Accounting and General Services Mr. Stanley Hayashi

1 t AUG 1993

State of Hawaii

1151 Punchbowl Street. Honolulu, Mawaii 96813

Ko: Diast Environmental Assessment for the Walawa Army National Guurd Amiory Additions

Dear Mr. Hayashi:

The U.S. Fish and Wildlife Service (Scrylce) has reviewed the Draft Environmental Assessment (DEA) for the Walawa Array National Guard Armory Auditions and Renovations, Walawa, Ewa. Oahu, Hawaii. The following confinents for provided for your consideration pursuant to the National Environmental Policy Act of 1969, as amended, (42 U.S.C. 4321 et seg.), the Fish and Wildlife Coordination Act (48 Stat 401, as emended; 16 U.S.C. 661 et 529.), and other authorities mandating Service concern for environmental values.

Although the existing vegetation was described for the project slie, we recommend including a statement within the FLORA and FAUNA section of the document clining the absence of tare and endangered and threstened plant and animal species. Similarly, the absence of wetlands should be referenced under an appropriate section such as WATER RESOURCES,

The DEA states in SECTION 3. C. Long-term Impacts that TNew drain lines will be installed and runoff will be conveyed into an existing drain inlet and elsebarged into Waiava Stream.* Impacts to Waiawa Stream from this increased discharge, including increases in pollutants associated with paved areas, and mitigation measures to prevent additional stream degradation should be included in the final Environmental Assessment. The Service supports the recommendation in SECTION 3. C. Long-term Impacts that upstream flooding along Walawa Stream be mitigated by more frequent clearing of the debrisand overgrown vegeration from the stream channel and its outlet. Alternately, the installation of adequately designed drainage may accommodate generated storm water discharges on-site.

AUG-18-93 WED 8:56.

NGS I'PU FROT I'BIT

P . G

We appreciate the opportunity to provide these comments. If you have questions or need further assistance, please contact Arlene Pangellaan or Karen Evans (808/341-3441),

Robert P. Smith Field Supervisor Pacific Islands Office

September 21, 1993

Field Supervisor, Pacific Islands Office Robert P. Smith

United States Department of the Interior Fish and Wildlife Service Box 50167 Honolulu, Hawaii 96850

Dear Mr. Smith:

Subject: Waiawa Atmy National Guard Atmory (AAP)
Waiawa, Ewa, Oahu, Hawaii

Thank you for reviewing the Draft Environmental Assessment prepared for the subject project. In consideration of your comments, we offer the following:

- 1. We will include a statement citing the absence of rare, endangered, or threatened plant and animial species within the project site.
- 2. We will reference the absence of wetlands in the vicinity of the project site.
- 3. Storm water from the project site will be conveyed via an existing drain line into Walawa Stream which outlets into Pearl Harbor's Middle Loch. The stream already receives storm water discharges from developed areas upstream of the armory site and downstream agricultural uses. In addition, residential, commercial, and agricultural activities located makei of Kamehameha Highway on the Pearl Harbor coastal plain already discharge into the stream. The many point and non-point sources and the uncertainty of the quantity and quality of the respective discharges make it very difficult to evaluate and attribute cumulative water quality impacts to the proposed project (or similar sources).

Severe storm water discharge could contribute debris and soil material to the stream thus increasing turbidity and sodimentation. Mitigating measures will be implemented prior to, during, and following land disturbance activities to control storm water discharge and negate potential adverse effects. Grading and erosion control plans will be submitted to the Department of Public Works for review and approval prior to construction.

Robert P. Smith September 21, 1993 Page 2

Please call me at 533-0018 or Mr. Stan Hayashi, Project Management Branch, Department of Accounting and General Services at 586-0479 if you have any questions.

Sincerely,

GERALD PARK URBAN PLANNER

Chouse One

Gerald Park

xc: Stan Hayashi, DAGS Gerald Inouye

waiarmfws.ltr

GERALD PARK urbun planner

BOARD OF WATER SUPPLY CITY AND COUNTY OF HONOLULU 630 SOUTH BERETAWA STREET

HONOLUTU HAWAU \$6813

August 16, 1993

NATITION WAISON AS COMMON MATTER IN WAISON WE COMMON SETTING DAYS WAGESON AS RELIGIOUS AS LEAST AS ILLUM C. MOUNTED IN THE COMMON OF THE COMMO KAZU HAYASHDA Manger and Chel Engreen FRUKF FAST NAME

Mr. Gerald Park Gerald Park Urban Planner 1245 Young Street, Suite 201 Honolulu, Hawaii 96814

Dear Mr. Park:

Subject: Your Letter of July 2, 1993 on the Draft Environmental Assessment (DEA) for the Waiawa Army National Guard Armory Addition and Renovations, Wajawa, Oahu, TMK: 9-6-04: 20

Thank you for the opportunity to review and comment on the DEA for the proposed improvements to the existing armory.

We have the following comments to offer:

- 1. There is a 2-inch water meter which currently serves the project site.
- The developer will be required to obtain a water allocation for any additional water from the State Department of Land and Natural Resources.
- The availability of additional water will be determined when the Building Permit Application is submitted for our review and approval. If water is made available, the developer will be required to pay our Water System Facilities Charges for transmission and daily storage.
- The on-site fire protection requirements should be coordinated with the Fire Prevention Bureau of the Honolulu Fire Department. 4.
- If a three-inch or larger meter is required, the construction drawings showing the installation of the meter should be submitted for our review and
- 6. The ownership and disposition of the 6-inch water main crossing the property should be addressed during the design phase.



-

August 16, 1993 Mr. Gerald Park

7. Board of Water Supply (BWS) approved reduced pressure principle backflow prevention assemblies (RP) are required to be installed immediately after all domestic water meters. Any fire meters will also require BWS approved RPs should they be interconnected with an auxiliary source.

If you have any questions, please contact Roy Doi at 527-5235.

Very truly yours,

an the

KAZU HAYASHIDA Manager and Chief Engineer