Revised

ENVIRONMENTAL IMPACT STATEMENT
FOR
CRATER ELEMENTARY SCHOOL

PREPARED BY
PLANNING BRANCH

Environmental Quality Commission
Office Of The Governor
550 Halekauwila Street
Leiopapa A Kamehameha Building, Room 301
Honolulu, Hawaii 96813

DIVISION OF PUBLIC WORKS
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
FEBRUARY 1978

OA
193

SUMMARY

Crater Elementary School is located within the military family housing project which is presently being constructed in the Aliamanu Military Reservation in Honolulu, Island of Oahu. The Environmental Impact Statement (EIS) for the housing project was prepared under federal guidelines and approved by the federal government. The final EIS is dated March 1975.

Construction of Crater Elementary School will help to keep student enrollments at existing neighboring elementary schools at desirable levels. However, comfort to occupants of the school is expected to be worse than occupants of schools outside the crater. The Department of Education (DOE) has made a request to the federal government for funds to install air conditioners to relieve this anticipated condition. Proper building placement and orientation to take maximum advantage of the prevailing wind condition should help to minimize discomfort to occupants if air conditioning is not provided.

Impacts normally associated with construction projects on vacated sites such as employment and noise and dust pollutions will exist. State and County land use designations permit the development of the school. The site is not within the tsunami zone and present flooding conditions will be corrected under the federal housing project.

Although the school will require teachers to drive to the school, overall traffic congestion will be reduced since vehicles to transport elementary grade students attending Crater Elementary School to schools located outside the crater will not be required.

Air quality in the crater is not expected to be detrimental to public health and safety. However, in view of the concerns raised on air quality, the federal government will monitor air quality after completion and occupancy of their housing development. Should air quality exceed the standards established by the Environmental Protection Agency, these occurrences are expected to be very infrequent and of short duration due to the island's tradewinds. This situation can be lessened by the imposition of restrictions on the use of vehicles by the military. If need be, the school can be closed during these situations similar to emergency situations during disruptions of sewer, water and electrical services.

The benefits of Crater Elementary School will far outweigh the detrimental effects associated with the project.

TABLE OF CONTENTS

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

ENVIRONMENTAL IMPACT STATEMENT
FOR
CRATER ELEMENTARY SCHOOL

PROJECT DESCRIPTION

A. Background

Figure 1 shows the boundaries of Moanalua High Educational Complex together with the approximate locations of existing and proposed schools within the complex. Figure 2 - School Organization shows the movement of students as they advance from grammar school (kindergarten to 6th grade) to intermediate school (7th and 8th grades) and on to high school (9th to 12th grades).

Enrollment in the Moanalua Complex is projected to increase approximately 40 percent in the next 10 years. The growth will result primarily from 2,600 military housing units under construction in Aliamanu Crater and 3,000 additional single-family townhouses and apartment units to be constructed in the Salt Lake area.

Moanalua High is being constructed in increments to relieve the enrollment overload at Radford High and to serve planned new housing developments.

The tentative plan is to accommodate projected 7th and 8th-grade growth in the Moanalua Complex with Moanalua Intermediate based on: (1) approximately 170 Halsey Terrace and Radford Terrace students transferring from Moanalua Intermediate to Aliamanu Intermediate and (2) expansion of Moanalua to accommodate 1,100 students.

The projected K to 6th-grade growth will be accommodated at the proposed Crater Elementary and at existing elementary schools in the Moanalua Complex, Radford Complex and possibly Aiea Complex.

Housing development in the Salt Lake area is not expected to begin for some time. However, the military housing development at Aliamanu Crater is under construction. The number and types of housing units planned for the crater area are:

2-Bedroom	1,090 units
3-Bedroom	200
4-Bedroom	1,202
5-Bedroom	108
Total	2,600 units

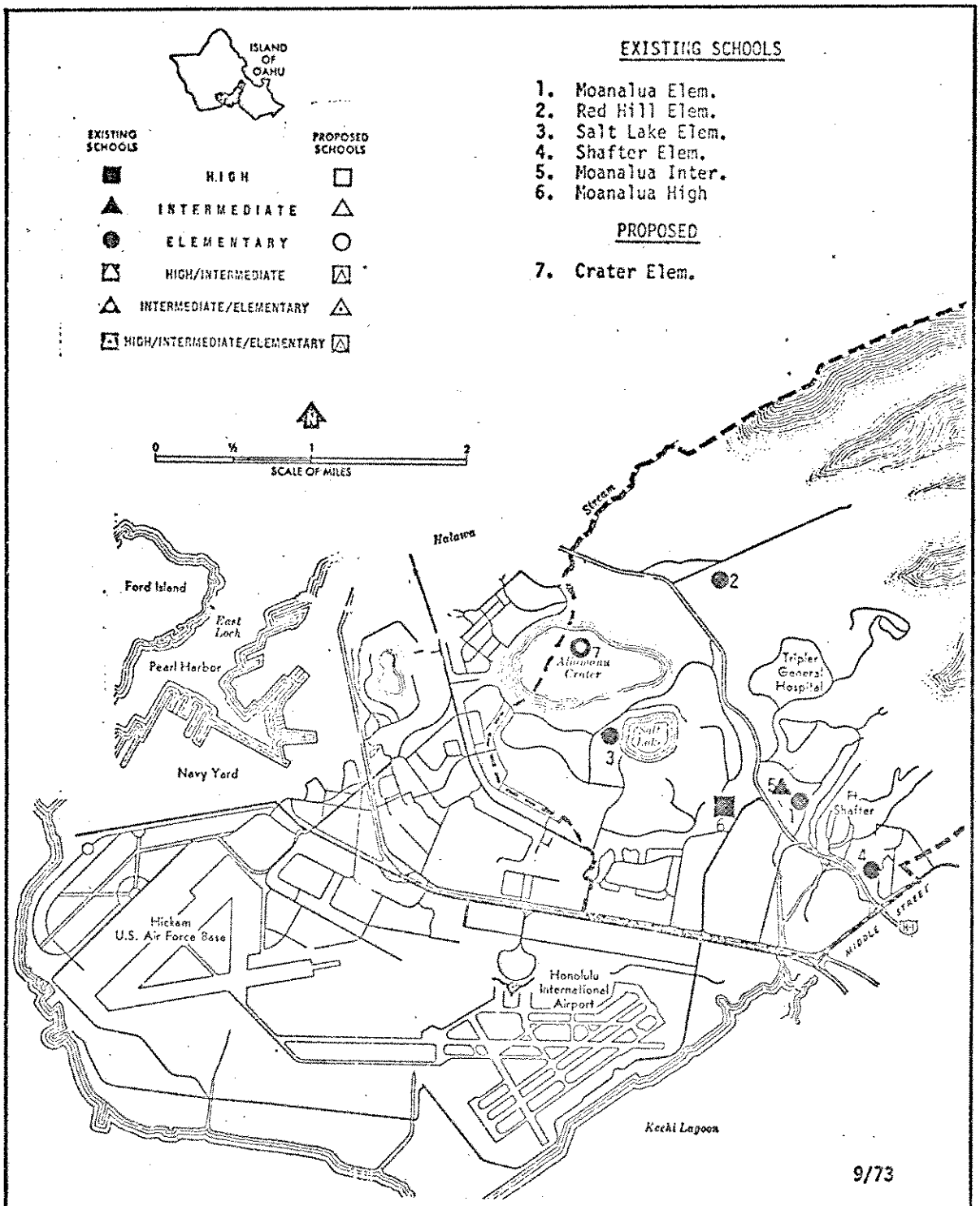
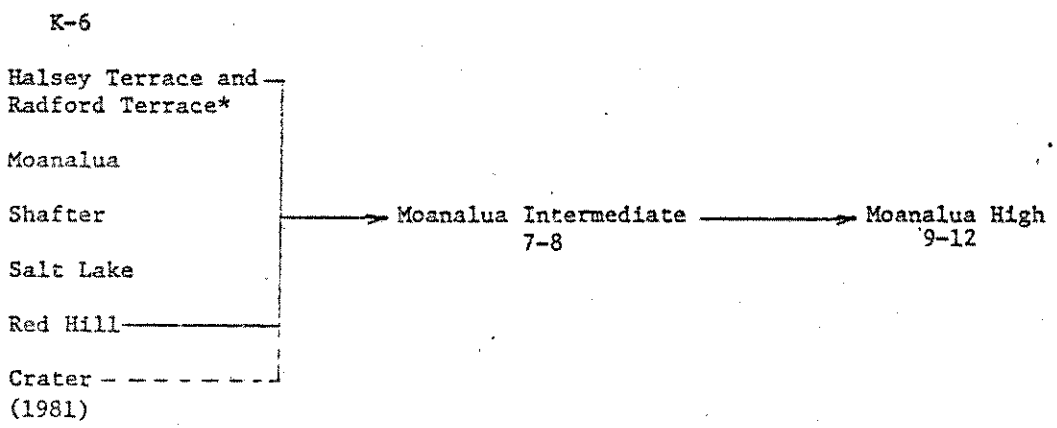


FIGURE 1	MOANALUA HIGH EDUCATIONAL COMPLEX
STATE OF HAWAII	DEPT. OF ACCOUNTING & GENERAL SERVICES
DIVISION OF PUBLIC WORKS	PLANNING BRANCH

FEEDER COMPLEX

MOANALUA HIGH SCHOOL 9/77



*Portion of Aliamanu Elementary service area (Radford Complex)

Note: 1979 - Halsey Terrace and Radford Terrace to be reassigned to Radford Complex (becomes feeder to Aliamanu Intermediate).

FIGURE 2	MOANALUA HIGH EDUCATIONAL COMPLEX - SCHOOL ORGANIZATION
STATE OF HAWAII	DEPT. OF ACCOUNTING & GENERAL SERVICES
DIVISION OF PUBLIC WORKS	PLANNING BRANCH

Table 1 and Figure 3 provide the land use overview of the crater development.

TABLE 1

LAND USE OVERVIEW

	Land Use	Acres	Percent Site
0	Residential (Buildable Area)	254.49	48.55
1	Play Lots	5.95	1.14
2	Recreation Buildings	3.81	.73
3	Swimming Pools	1.45	.28
4	Play Fields	20.35	3.88
5	Schools	20.00	3.82
6	Support Facilities	3.73	.71
7	Pedestrian Walks	.14	.03
8	Utility Centers	1.71	.33
9	Utility Easements	8.37	1.60
10	Existing Major Streets	11.57	2.21
11	Existing Minor Streets	6.34	1.21
12	Major Streets	17.50	3.34
13	Minor Streets	18.47	3.52
14	Residential Streets	31.96	6.10
15	Boat and Trailers	1.54	.29
16	Acoustical Buffer	6.43	1.28
17	Open Space	110.42	21.06
	TOTAL SITE	524.21	100.00

Approximately 1,700 K-6 grade students are expected from this housing development. To cope with this large number of students, the DOE's plan is to assign the students to various existing schools around the crater and to the proposed Crater Elementary School shown in Figure 4.

The final EIS for the military family housing project, dated March 1975 was filed by the U.S. Department of Army Headquarters Support Command, Hawaii. This statement was prepared in accordance with Army regulation 200-1 and the DAEN-2CE letter of 11 July 1974, entitled, "Environmental Considerations in DA Actions". It conforms with the Council on Environmental Quality guidelines of 1 August 1973.

The proposed Crater Elementary will be designed to accommodate 820 students. The school was planned for in the military housing project as part of the support facilities. The housing development plan locates the school in Aliamanu Crater, Island of Oahu as shown in

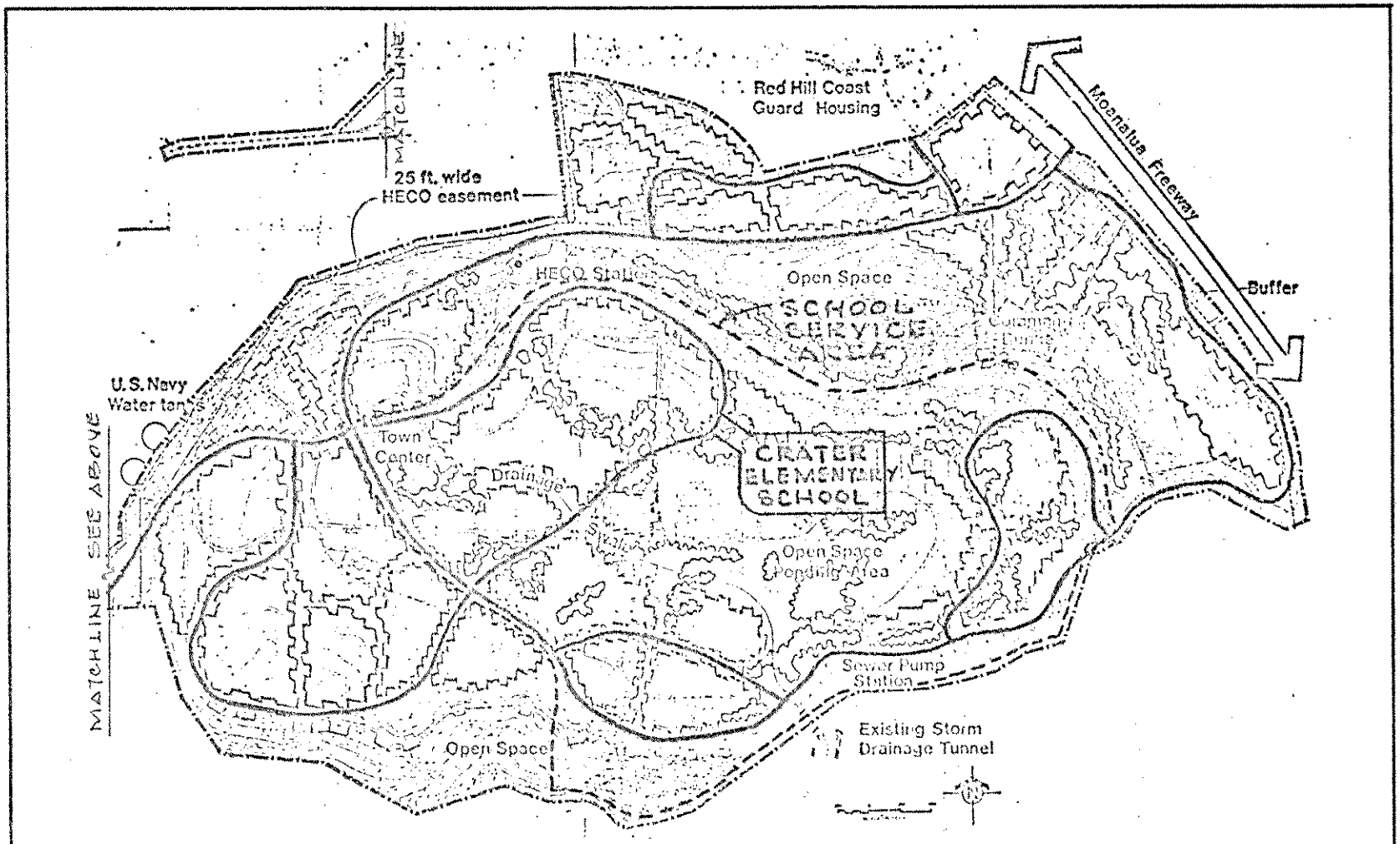
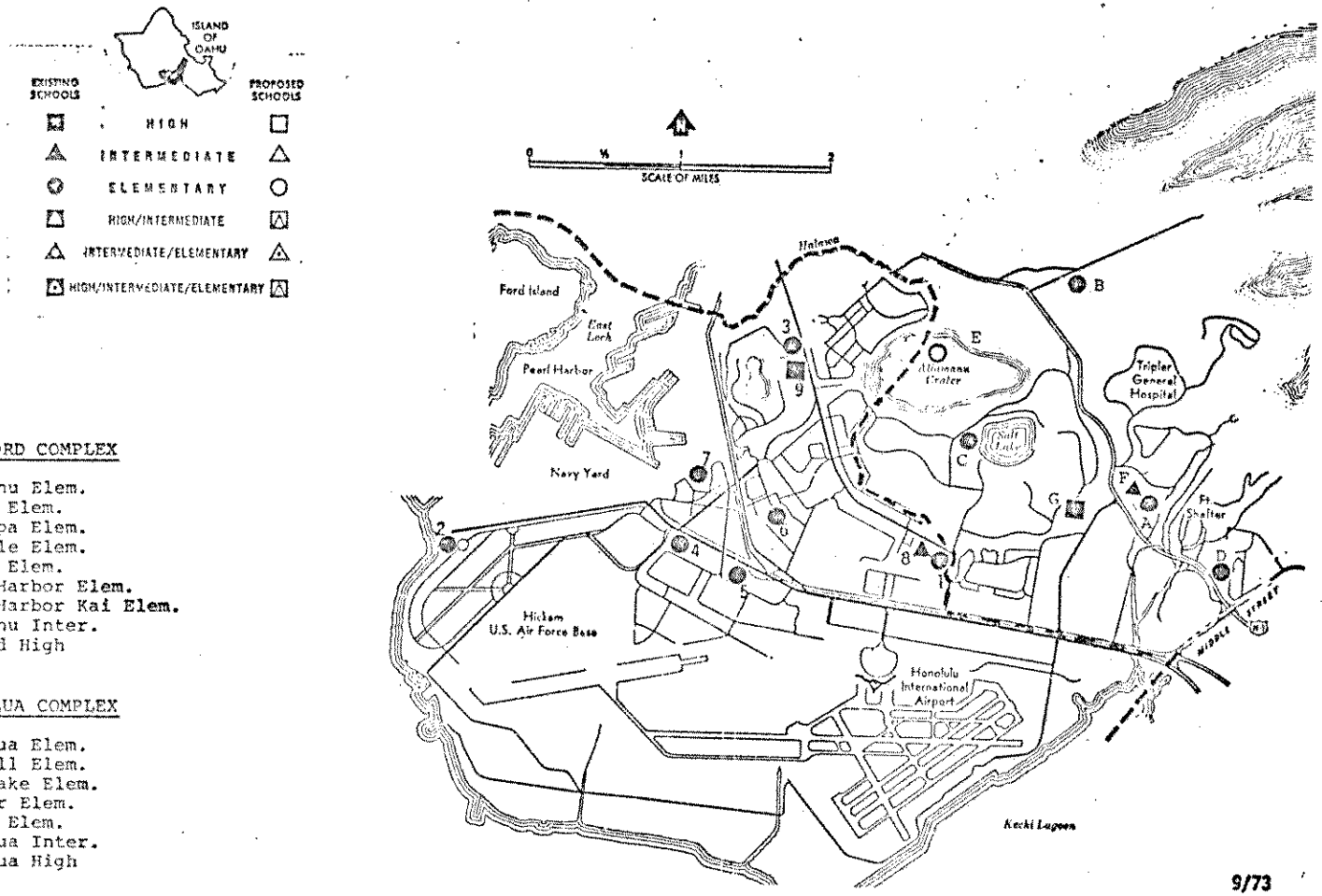


FIGURE 3	LAND USE OVERVIEW MAP
STATE OF HAWAII	DEPT. OF ACCOUNTING & GENERAL SERVICES
DIVISION OF PUBLIC WORKS	PLANNING BRANCH



RADFORD COMPLEX

1. Aliamanu Elem.
2. Hickam Elem.
3. Makalapa Elem.
4. Mokulele Elem.
5. Nimitz Elem.
6. Pearl Harbor Elem.
7. Pearl Harbor Kai Elem.
8. Aliamanu Inter.
9. Radford High

MOANALUA COMPLEX

A. Moanalua Elem.
B. Red Hill Elem.
C. Salt Lake Elem.
D. Shafter Elem.
E. Crater Elem.
F. Moanalua Inter.
G. Moanalua High

FIGURE 4

RADFORD AND MOANALUA HIGH COMPLEXES

STATE OF HAWAII
DIVISION OF PUBLIC WORKS

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING BRANCH

Figure 3. The crater is located about 1.5 miles north of Honolulu International Airport and a mile west of Tripler Army Hospital as shown in Figure 5. It is identified by Tax Map Key: 1-1-11:01 portion.

B. Objective

The primary objective of the DOE is to provide adequate educational opportunities to all school-age children residing in the State of Hawaii. A sub-objective is to provide adequate educational facilities for children residing in the State or in this instance, the military family housing project. The objective of Crater Elementary School project is in consonance with the primary and sub-objectives.

C. Characteristics

The proposed school site will consist of 7 to 8 acres of land on the crater floor as shown in Figure 6. The site is flat and improved with pavement and five abandoned warehouses. The site is prone to flooding under existing conditions. However, the area just south of the school site will be developed into an open space flood ponding area in conjunction with the housing development. This will lower the flood level elevation to protect the school site during a 100-year occurrence storm.

Facilities for Crater Elementary School will be provided for a design enrollment of 820 students. The proposed facilities together with approximate sizes and numbers are shown in Table 2.

The buildings will be limited to two stories in height. The library building will be air conditioned. The DOE has made a request to the federal government for funds to air condition all school buildings in anticipation of the warm weather condition. Utility services will be brought to the school site under the housing project.

Project Cost is estimated at $4,000,000. No cost is anticipated for the acquisition of a 25-year lease of land from the U.S. government. The actual project cost to ultimately construct the school will depend on the design of the school and incremental development schedule.

D. Funds

Funds for this project are appropriated under Act 226, Session Laws of Hawaii 1976, Item G-14 which reads as follows:

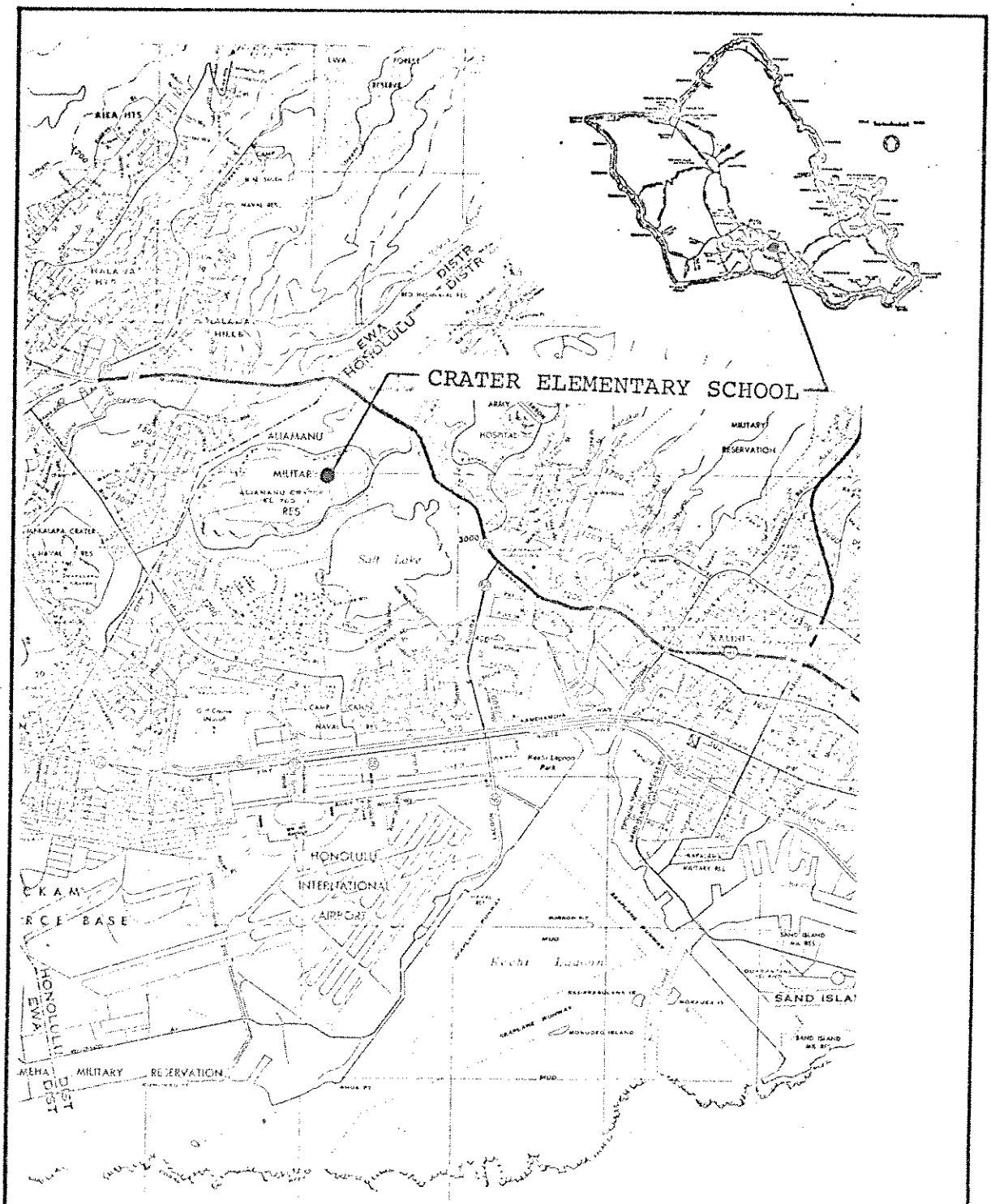


FIGURE 5	CRATER ELEMENTARY SCHOOL - LOCATION MAP
STATE OF HAWAII	DEPT. OF ACCOUNTING & GENERAL SERVICES
DIVISION OF PUBLIC WORKS	PLANNING BRANCH

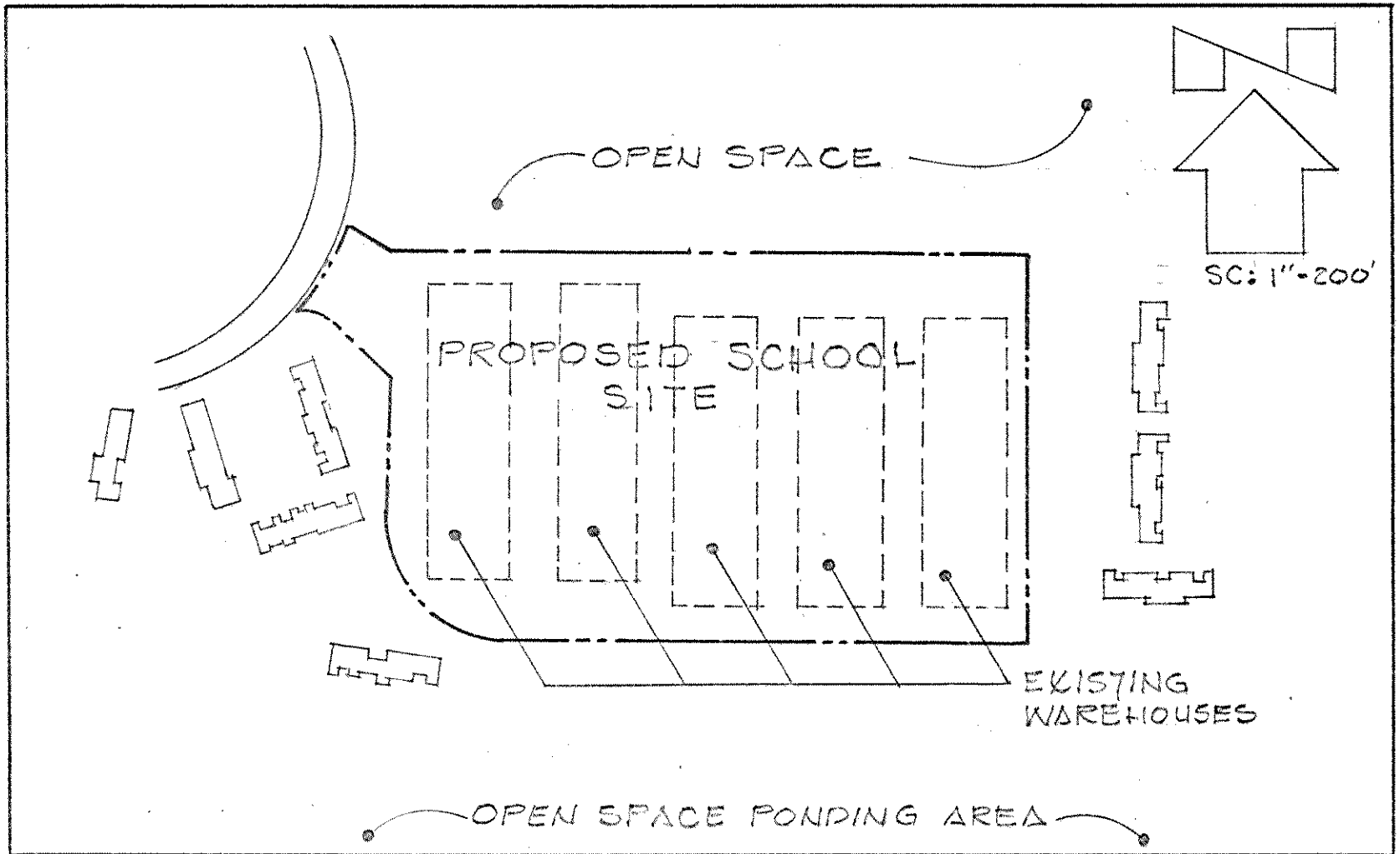


FIGURE 6	CRATER ELEMENTARY SCHOOL SITE PLAN
STATE OF HAWAII	DEPT. OF ACCOUNTING & GENERAL SERVICES
DIVISION OF PUBLIC WORKS	PLANNING BRANCH

TABLE 2

PROPOSED FACILITIES

Facilities		Number or Size
Administration Building		3,350 s.f.
Library Building		5,500 s.f.
Service Kitchen/Dining Building		
Classrooms		
Regular	(960 s.f. each)	28 ea.
Portable	(960 s.f. each)	4 ea.
Teachers' Workroom		1,800 s.f.
Parking Stalls		60 ea.
Bus Loading Zones		2 ea.
Grassed Play Areas		119,000 s.f.
Kindergarten	(3,000 s.f.)	
Grades 1-3	(27,000 s.f.)	
Grades 4-6		
Softball	(175' x 200')	
Football	(180' x 300')	
Apparatus Areas		12,000 s.f.
Kindergarten	(2,000 s.f.)	
Grades 1-3	(4,000 s.f.)	
Grades 4-6	(6,000 s.f.)	
Paved Play Area	(72' x 96')*	6,912 s.f.
Basketball Courts	(1 @ 50' x 48')	
	(2 @ 40' x 60')	
Volleyball Courts	(2 @ 30' x 60')	
	(2 @ 25' x 50')	
Badmington Courts	(2 @ 20' x 44')	

* Superimpose courts as required.

"Aliamanu Crater Elementary School - Ultimate site plan, plan and construct 1st increment - $214,000."

E. Schedule

Occupancy is presently scheduled for September 1981. This tight time frame may necessitate concurrent development of the master plan and first increment design plans.

Incremental Development priorities are generally scheduled in the order of first constructing permanent classrooms with adequate temporary support facilities. This is followed by permanent service kitchen and dining, library and administration buildings. Proposed for first increment construction are the following:

1. 16-Classroom Building (Permanent)
2. Administration Building (Portable)
3. Library Building (Portable)
4. Serving Kitchen Building (Portable)
5. Portion of Parking Lot (Permanent)
6. Play Area (grassed unoccupied space)

Student enrollments will determine scheduling and scope of subsequent construction phases.

ENVIRONMENTAL SETTING

A. Site

Ownership of the Aliamanu Crater by the U.S. government was achieved through several land acquisitions, exchanges and transfers. Title to the principal parcel of Aliamanu land was acquired by the U.S. government in 1932 from Damon Estate holdings. A 25-year lease agreement will be obtained from the U.S. government for use of the school site.

Use of the crater as an ammunition storage depot has ceased to make way for the housing project which is presently under construction. Plans for Crater Elementary School were included in the housing project as a support facility. Figure 3 and Table 1 provide the land use overview.

Aliamanu Crater was extensively altered to accommodate the military's ammunition storage and command post functions. There is a network of roads which circles and crosses the interior of the crater. Tunnels were drilled into the crater walls for ammunition storage and command post.

The proposed school site is improved with warehouses and paving. There are no fuel storage tanks or service lines within the school site. See Appendix A.

Site conditions will again be altered to accommodate the housing project. Grading will be required for new roads and house pads, tunnels will need to be sealed, new utility systems will need to be constructed, etc., to develop the housing project as shown in Figure 3. The school will be constructed by the State.

Land Classifications under the University of Hawaii's Land Study Bureau Bulletin No. 3, "Detailed Land Classification - Island of Oahu", published January 1963 and Circular No. 14, "Oahu Lands Classified by Physical Qualities for Urban Usage", are "U" and "IIIlL" respectively as shown in Figures 7 and 8. The "U" classification denotes areas where physical use pre-

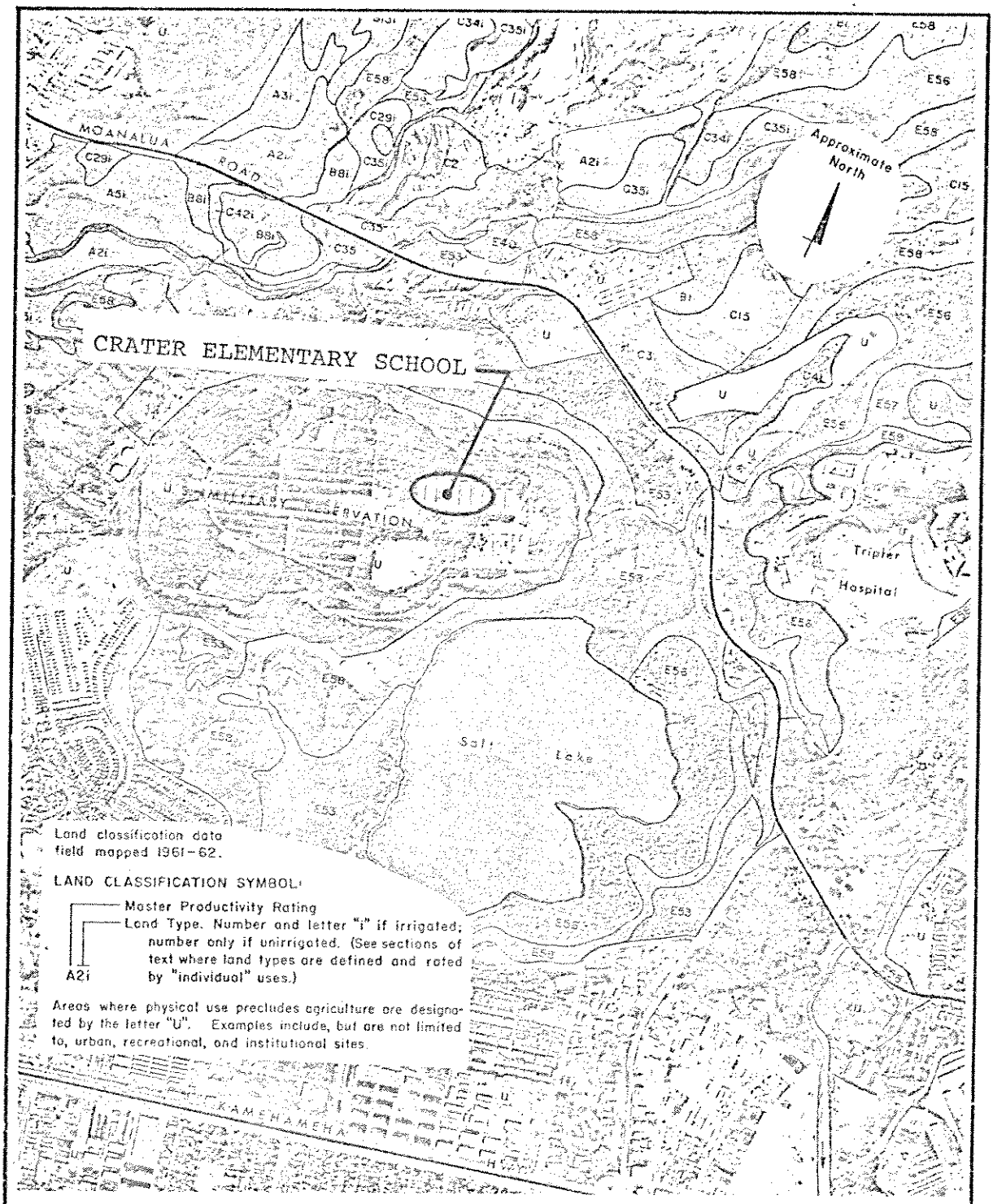


FIGURE 7	DETAILED LAND USE CLASS. - ISLAND OF OAHU PORTION OF MAP NO. 68
STATE OF HAWAII	DEPT. OF ACCOUNTING & GENERAL SERVICES
DIVISION OF PUBLIC WORKS	PLANNING BRANCH

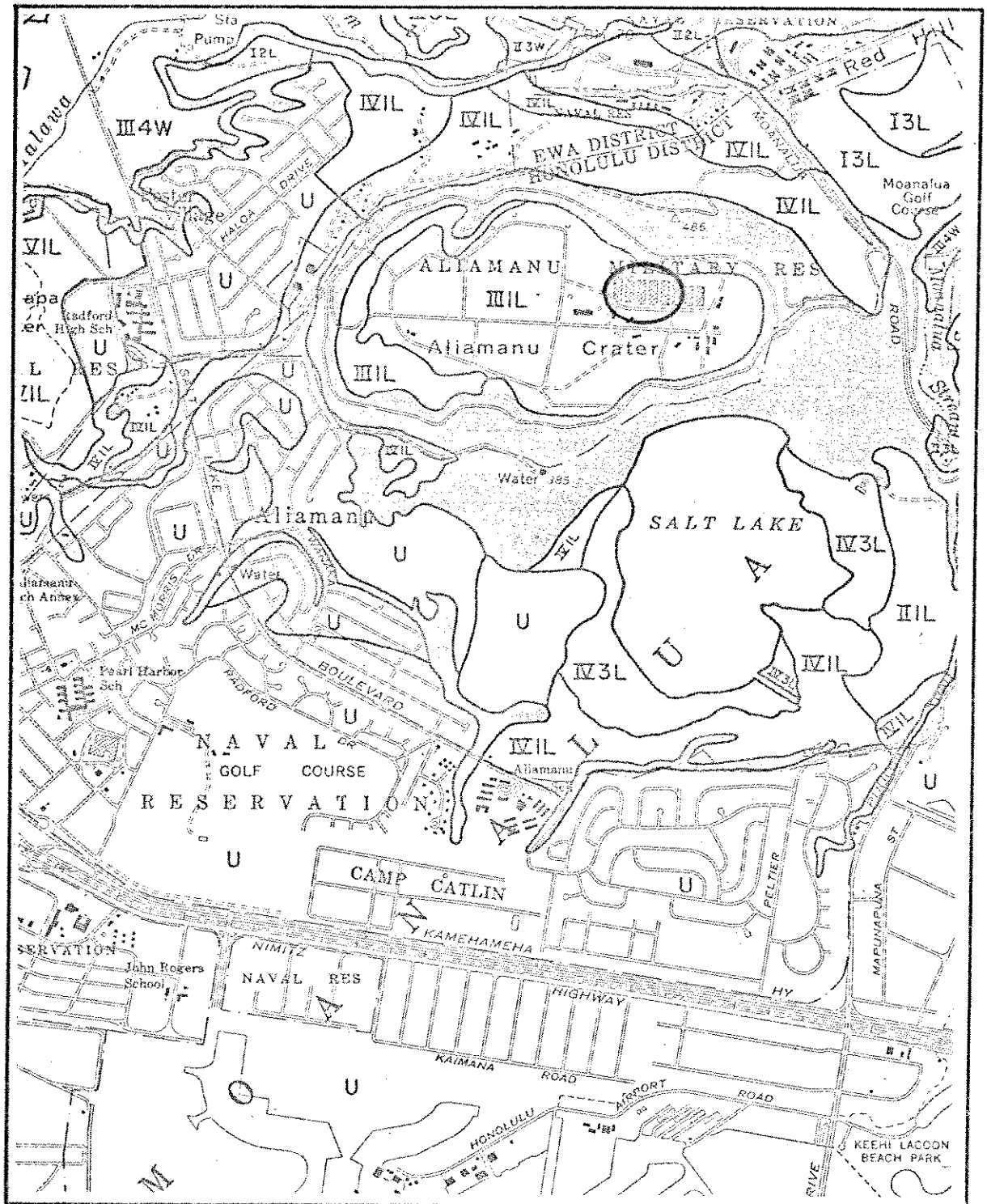


FIGURE 8	OAHU LANDS CLASSIFIED BY PHYSICAL QUALITIES FOR URBAN USAGE
STATE OF HAWAII	DEPT. OF ACCOUNTING & GENERAL SERVICES
DIVISION OF PUBLIC WORKS	PLANNING BRANCH

cludes agriculture and "IIIlL" classification denotes physical properties of land to accommodate construction. This classification is described in Figure 9.

B. Utilities

Sewage Treatment Plant constructed for the ammunition storage and command post operations is not adequate for the housing project. Thus, a new sewer system will be constructed and connected to the Fort Shafter Lift Station.

Drainage for the crater is provided by a tunnel which empties onto the outer slope of the rim ridge and flows down the hillside into Salt Lake. Figure 10, prepared by the U.S. Department of Interior, Geological Survey shows that the existing site proposed for the school to be within the flood zone for a 100-year occurrence storm. This flooding condition will be corrected under the housing project by excavating the ponding area shown in Figure 3. This increase in storage capacity is designed to lower the 100-year flood water level sufficiently below the school site elevation.

Electrical and Water Systems constructed for the ammunition depot is inadequate for the housing project. Thus, these systems will be replaced.

C. Environmental

Vegetation in the crater is predominantly grasses, haole koa and keawe trees. No rare or endangered species of plants are known to occur in the crater. The biological report as presented in the final EIS prepared for the housing project is shown in Appendix B. Very little vegetation exists on the proposed school site because warehouses and paving cover most of the site.

Animals found in the crater consist of mongooses, cats and small rodents. Small numbers of land birds live or visit the crater. No rare or endangered species of wildlife are known to inhabit the proposed school site.

Climatic Conditions in terms of comfort for human beings vary at different parts of the crater during normal tradewind days. The average temperatures in the crater are either the same or slightly higher than at the airport. The average wind speed in the open locations of the crater was about 8 knots compared to 14 knots at the airport. The data in the final EIS for the housing project indicates that the proposed school site will have poor wind circulation which may create an uncomfortably warm condition. In anticipation of

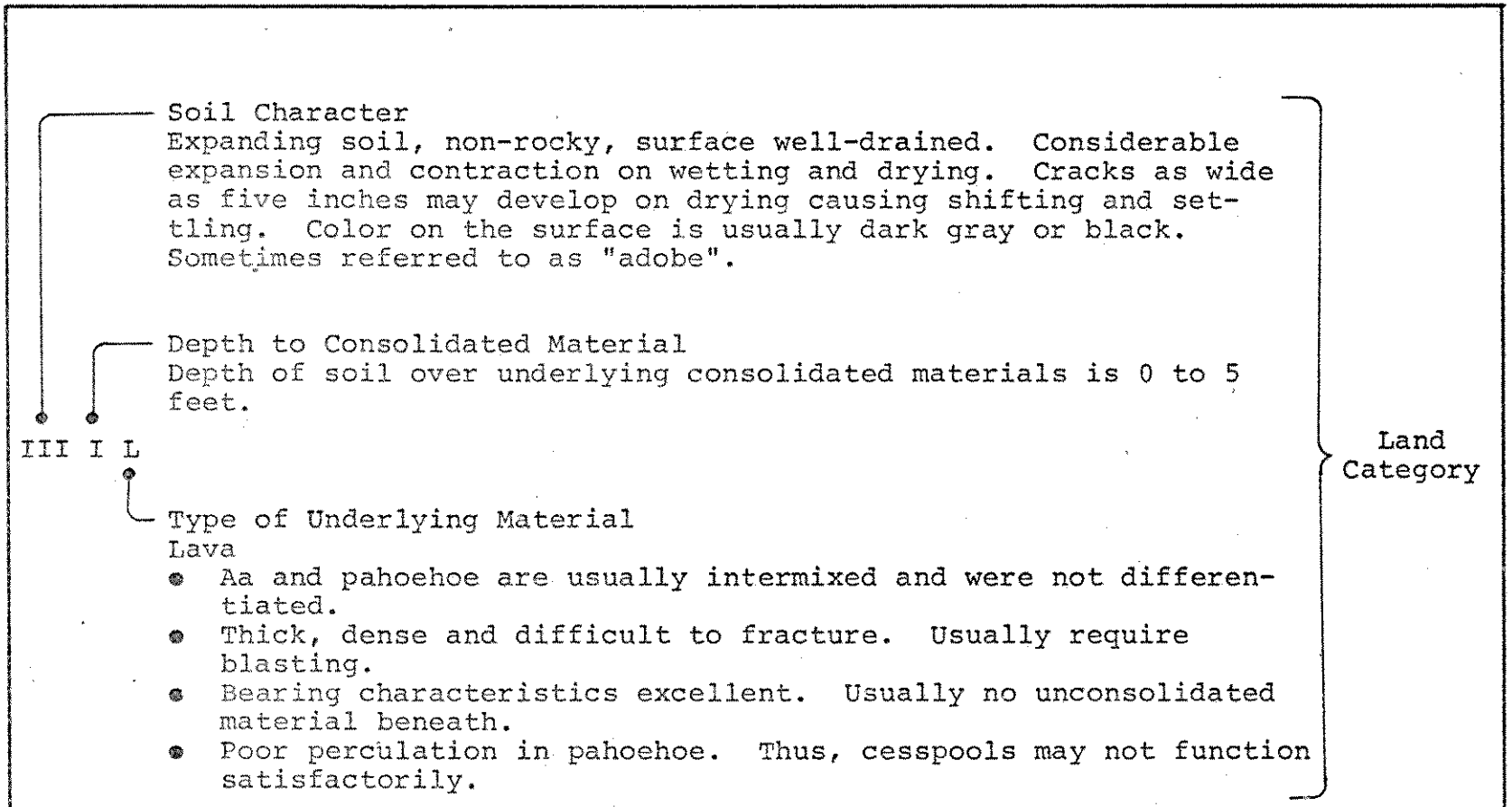


FIGURE 9	DESCRIPTION OF URBAN LAND CLASSIFICATION
STATE OF HAWAII	DEPT. OF ACCOUNTING & GENERAL SERVICES
DIVISION OF PUBLIC WORKS	PLANNING BRANCH

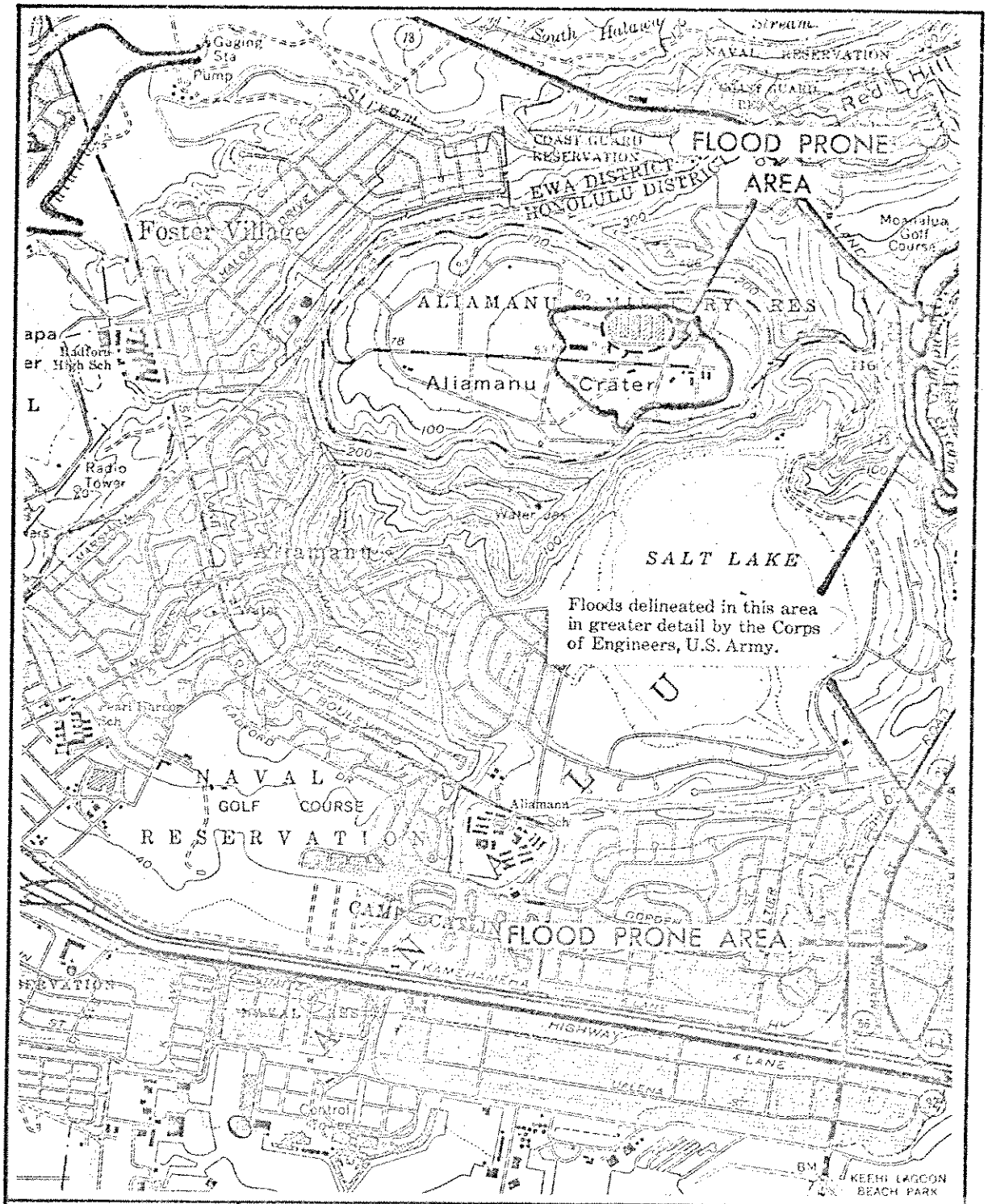


FIGURE 10	U. S. DEPARTMENT OF INTERIOR FLOOD PRONE MAP
STATE OF HAWAII	DEPT. OF ACCOUNTING & GENERAL SERVICES
DIVISION OF PUBLIC WORKS	PLANNING BRANCH

this condition, the housing units will be air conditioned.

Noise and Sight Pollutions are somewhat tempered by the crater walls. The terrain largely isolates the crater interior from the heavily traveled Moanalua Highway. The crater is located nearly right angle to the path of commercial air traffic. Thus, aircraft noise is not a frequent nuisance.

Air Quality at the Aliamanu Military Reservation was investigated by the federal government for their military family housing project. The final EIS and subsequent Air Pollution Special Study No. 21-005-75/76 prepared for the housing project states that there was an occurrence when carbon monoxide in the crater exceeded the State's ambient air standard. It also states that standards of hydrocarbons and nitrogen oxides will be exceeded at the Moanalua Road entry during certain wind conditions. Further, the study indicates that the levels of carbon monoxide during the test period did not exceed the standards established by the U.S. Environmental Protection Agency.

In view of the Special Study's recommendation to proceed with the housing project, it appears the occurrences during which State air quality standards are exceeded will not jeopardize public health and safety.

In response to our inquiry relative to air quality at the crater, the Department of Health expects the levels of pollutants to be relatively low during the hours of school. See Appendix A.

Tsunami Inundation Area delineated in Bulletin B15, Volume II, "Flood Control and Flood Water Conservation in Hawaii", does not include the crater. This bulletin was prepared by the State Department of Land and Natural Resources.

Flood Zone, see discussion on "Drainage" and Figure 10 under section on "Utilities".

State of Hawaii Register of Historic Places does not include the proposed school site in its list.

LAND USE PLANS, POLICIES AND CONTROLS

A. Land Use Designations

State Land Use designation of the site is "Urban" as shown in Figure 11. This designation permits construction of the school.

LAND USE DISTRICT BOUNDARIES

DISTRICT MAP	STATE OF HAWAII LAND USE COMMISSION DEPT. OF PLANNING & ECONOMIC DEVELOPMENT EFFECTIVE DATE: DEC 20 1974	DISTRICTS U = URBAN R = RURAL A = AGRICULTURAL C = CONSERVATION
O-10		

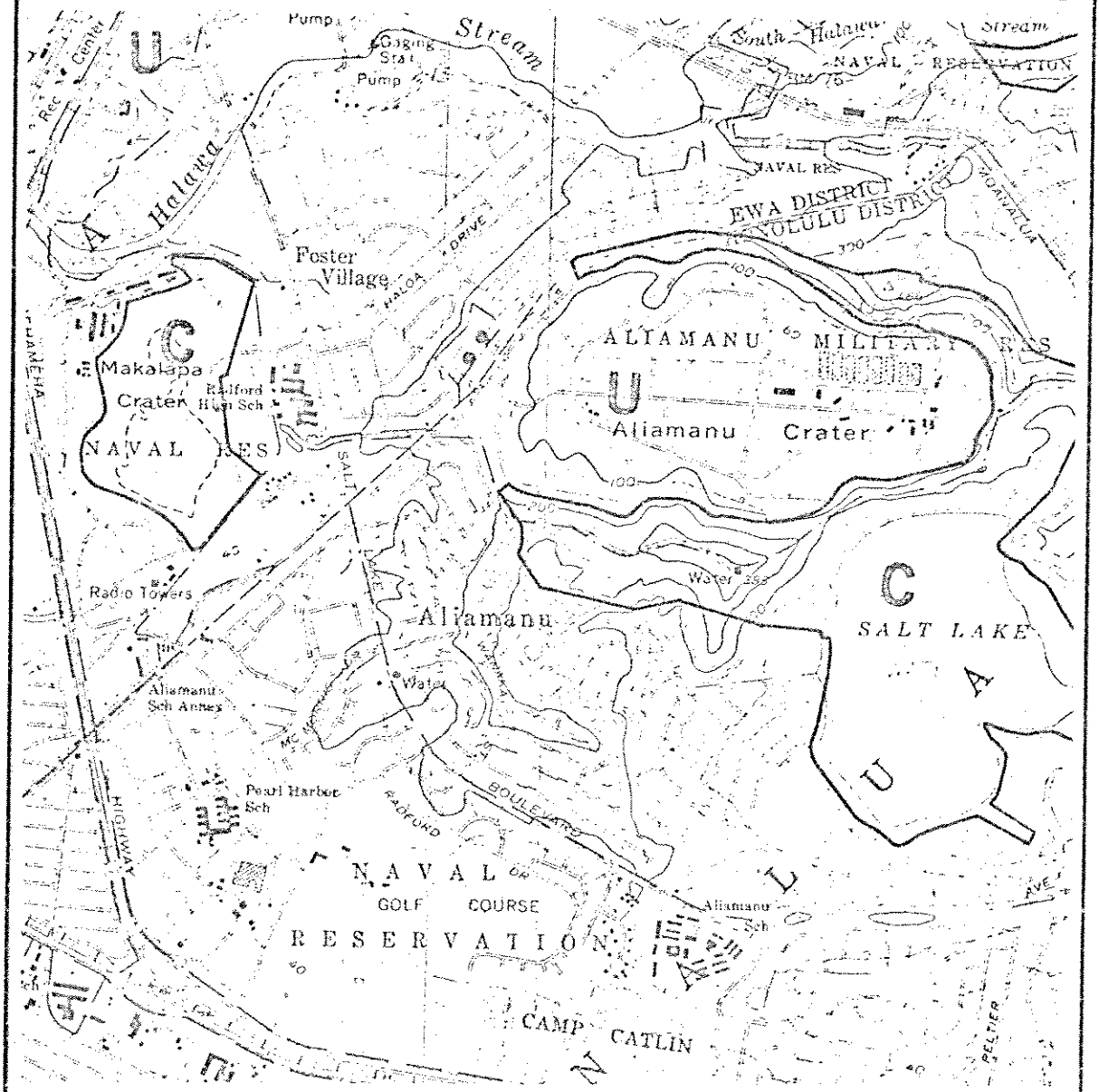


FIGURE 11	LAND USE DISTRICT BOUNDARIES
STATE OF HAWAII	DEPT. OF ACCOUNTING & GENERAL SERVICES
DIVISION OF PUBLIC WORKS	PLANNING BRANCH

County General Plan designation of the site is "Military" as shown in Figure 12. This designation permits construction of the school.

County Zoning designation of the site is "R-6 Residential". This designation permits construction of the school.

B. Land Use Policies and Control

Shoreline Management Area that was established by the County excludes the crater from its boundaries.

PROBABLE IMPACT OF THE PROPOSED ACTION ON THE ENVIRONMENT

A. Social

Public Safety will not be jeopardized during and after construction of the school with adherence to good engineering and construction practice.

The function of storing ammunition in the crater was officially cancelled on September 1, 1974. Further, there are no fuel storage tanks or service lines within the proposed school site. Thus, there is no "blast" zones within the housing area.

Unused tunnels will be sealed under the housing project. The Army maintains an underground alternate command post in one wall of the crater. However, access to this post is from the exterior of the crater.

Air quality is not expected to be detrimental. However, appropriate action will be taken should the levels of air pollutants exceed the limit established by the federal government.

Neighborhood Character will be enhanced with the construction of the school since the existing neighboring schools will not be able to accommodate the projected 1,700 elementary school students that the housing project is expected to generate. Crater Elementary School will be designed to accommodate 820 of these students to keep neighboring elementary school enrollment at a desirable level. The neighboring intermediate and high schools will accommodate the projected intermediate and high school students the housing project is expected to generate. Bus service will be made available to students residing over a mile from school.

Education for the students residing in the housing project and neighboring community will be adequately provided for with the construction of Crater Elementary School and some expansion of neighboring schools.

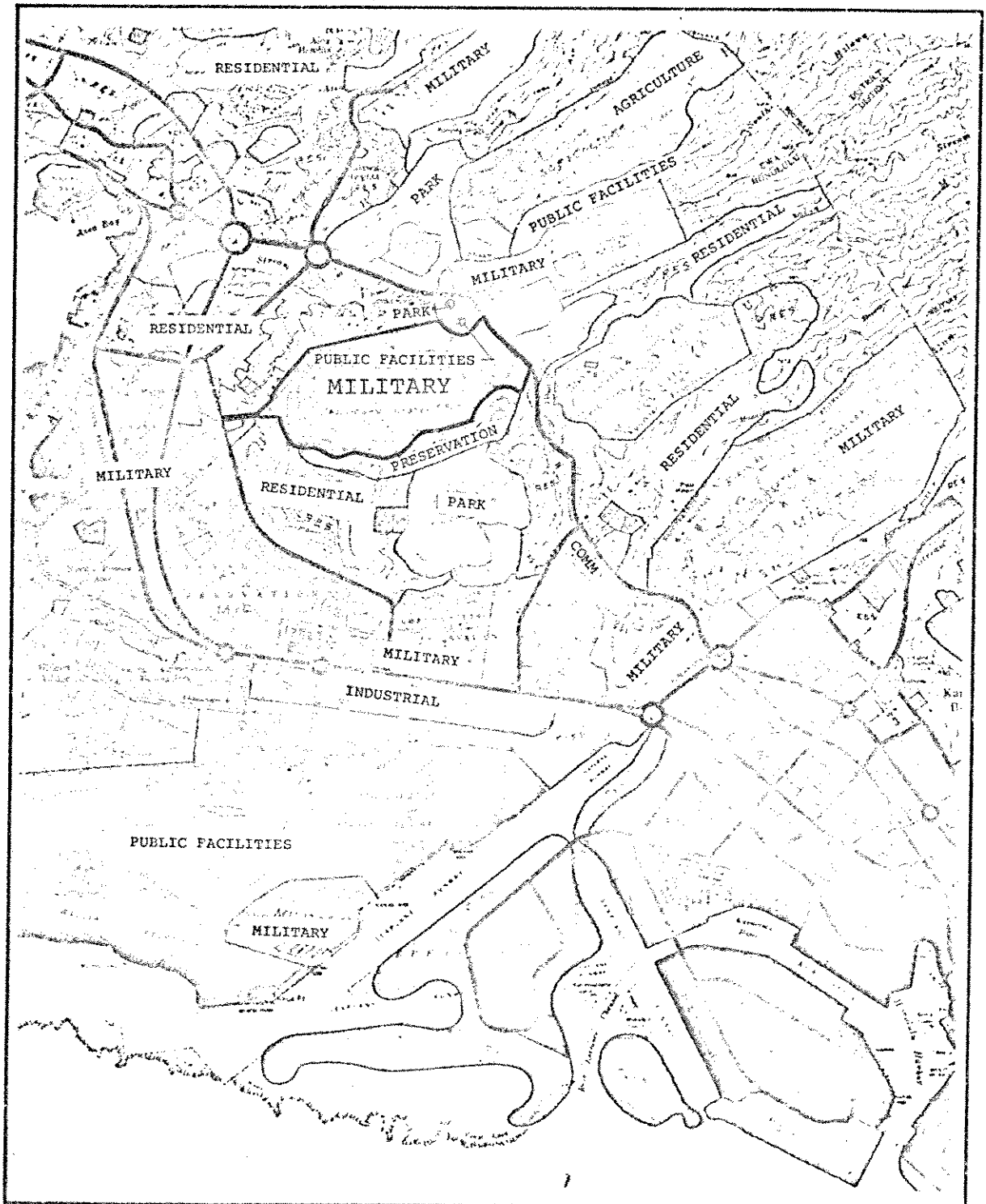


FIGURE 12	COUNTRY GENERAL PLAN
STATE OF HAWAII ○	DEPT. OF ACCOUNTING & GENERAL SERVICES
DIVISION OF PUBLIC WORKS ○	PLANNING BRANCH

County Parks are not expected to be affected with construction of the school.

Relocation of families, businesses or other establishments will not be required for construction of the school.

B. Economics

Employment will be generated for the design and construction of the school. Employment of additional teachers are not anticipated to operate the school since the housing development will merely relocate families from other locations of Oahu to the crater. It is anticipated that teachers will be relocated from other schools to Crater Elementary and its neighboring schools. However, employment of custodial and/or clerical staff may be required for the maintenance and administrative operation of this added school.

Project Cost is estimated at $4,000,000. This cost will vary depending on the school design and scheduling of incremental development of the school.

Property Tax collection will not be affected since military lands are exempt from property tax assessment.

C. Environmental

Flora that exist in the crater are predominantly grasses, haole koa and keawe trees. No rare or endangered species of flora are known to exist on the proposed school site.

Fauna that exist in the crater are predominently mongooses, dogs and small rodents. No rare or endangered species of fauna are known to exist on the proposed school site.

Construction work will create noise and dust pollutions that are normally associated with school construction. These will be temporary and controlled in accordance with the Department of Health and County regulations.

Climatic Conditions in terms of comfort to occupants of the proposed school are expected to be worse than most areas outside the crater due to slightly higher temperatures from lesser wind speeds at the school site. The design of the school facilities will try to maximize natural air circulation. However, the use of fans for forced ventilation or air conditioning may be required. To this end, the DOE is trying to obtain funds from the federal government to air condition the school.

Air Quality in terms of levels of carbon monoxides, hydrocarbons and/or nitrogen oxides at the school site, may occasionally exceed the standards established by the State Department of Health. However, the levels of these pollutants are not expected to exceed the standard levels established by the U.S. Environmental Protection Agency.

The Department of Health, in response to our inquiry on this concern anticipates the levels of carbon monoxides, hydrocarbons and nitrogen oxides to be relatively low during the hours of school use.

Sitework is expected to be minimal due to the relatively flat site conditions and the availability of utilities at the site boundaries. However, work will require the removal of five warehouses and removal of existing pavement. Sitework will not create any detrimental impact on the environment other than noise and dust pollutions normally associated with this type of work.

Drainage Improvements will be provided by the housing development to safeguard the school site from flooding during a 100-year occurrence storm. On-site drainage improvements will be provided by the State as required.

Land Use Plans, Policies and Control permit construction of the school.

Vehicular Traffic conditions on Moanalua Roadway and Nimitz-Kamehameha corridor are at or near saturation capacity during peak hours. The school is expected to generate about 40 inbound automobiles and reduce the number of outbound buses from about 90 to 70 during morning peak traffic hours. The reverse in terms of vehicular destinations will occur prior to afternoon peak traffic hours. Although Crater Elementary School will generate increased traffic around the proposed school, it will reduce the traffic elsewhere.

Noise from KC-135 aircraft may generate "some complaints" during takeoffs. However, essentially no complaints would be expected when the reef runway becomes operational. The school site will be shielded from vehicular noise generated outside the crater walls. Vehicular noise generated inside the crater is not expected to be any worse than noise generated in other residential developments.

Water quality is not expected to be affected since the site will not be used for disposal of waste material. Water is expected to be supplied by the Navy's water supply system. The school's water demand was considered with the housing development.

Sewerage System will be constructed under the housing project to accept the school's load. Sewer lines will be extended to the school site by the military.

Solid Waste generated during construction of the school will be removed by the contractor. Those generated from school operations will be removed by a private refuse firm under contract with the DOE.

Power and Communication Services will be provided by Hawaiian Electric and Hawaiian Telephone Companies.

Soil investigation of the site will be conducted during the design stage of the school project to facilitate suitable structural design. Building height will be limited to two stories. Thus, problems in design are not anticipated.

PROBABLE ADVERSE ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED

Development of the school will create noise, dust and water pollution during construction. However, these will be temporary and will be controlled by applicable State and County pollution control measures.

Temperature and humidity at the school site are expected to be higher than in areas of housing developments located just outside of the crater walls. Other long-term adverse effects would be some noise pollution, generation of solid waste and the consumption of water, gas, and electricity. However, these will be generated or consumed elsewhere if not at this school.

Air quality in terms of hydrocarbons, nitrogen oxides and carbon monoxides is not expected to rise to the level where public health and safety will be jeopardized. Should this occur, the school will be closed until students can safely re-enter the school site.

ALTERNATIVES TO THE PROPOSED ACTION

Possible alternatives to the development of the proposed Crater Elementary School are:

1. Expand the facilities at neighboring elementary schools to accommodate the Crater Elementary School students.

2. Transport the students to elementary schools in Honolulu with empty classrooms.

3. Use double shift at neighboring schools so new facilities need not be constructed.

The above alternatives were not considered to be suitable for the following reasons:

1. The enrollments at neighboring elementary schools will be increased by an estimated 780 students from the crater. An additional 820 students will be added to these schools if Crater Elementary School is not constructed. This will increase the enrollment at the schools above the maximum desirable size of 800 students.

2. Transporting the students into town will require students to ride the bus an estimated minimum of one hour per day. The students would be subjected to increased hazards from vehicular accidents involving the buses. This may create adjustment problems for students and also cause an inconvenience to parents in terms of traveling to school for conferences and PTA meetings.

   Many of the unused classrooms in Honolulu are old buildings and many of these schools do not meet the present DOE acreage requirements for their current enrollments.

3. Adding a second shift to schools will require the second shift to begin at 2:30 p.m. and end at about 9:00 p.m. This will increase traffic hazards to students due to darkness, disrupt the social life of many families, cause inconvenience to educational presentation and use of equipment, and cause inconvenience to parents.

RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF MAN'S ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

The short-term effects of air, water and noise pollution created during the construction of the school are considered to be of minor significance when compared to the long-term educational benefits that will be gained by the housing community from the school.

MITIGATION MEASURES PROPOSED TO MINIMIZE IMPACT

The development of the school will comply with all applicable regulations. Of primary concern is the question of air quality at the school site. Precautionary measures will be taken to ensure health and safety to occupants of the school. Should findings dictate, the school will be provided with an air quality monitoring device and alarm system to sound when air quality endangers public health and safety. The school will be closed and then reopened when air quality improves. This situation is not expected to happen. However, should it occur, it will probably last for only a short duration of time.

IRREVERSIBLE COMMITMENTS OF RESOURCES

The labor and utilities required for construction of the school and the materials which cannot be economically recycled will be irreversible commitments of resources. The labor, material and utilities used to operate and maintain the school are also irreversible commitments. The school site can be used for other purposes when the school is no longer required.

CONSULTATION WITH OTHER AGENCIES

The following agencies were consulted in the preparation of this document. Comments and responses are included in Appendix C of this EIS.

A. Federal

U.S. Department of the Army
Corps of Engineers
Pacific Ocean Division
Fort Shafter, Bldg. 230
APO San Francisco 96558

U.S. Department of the Army
Commanding General
Tripler Army Medical Center
Health and Environmental Services
APO 96438

Environmental Protection Agency
Bishop Trust Building
1000 Bishop Street, Room 601
Honolulu, Hawaii 96813

B. State of Hawaii

Department of Agriculture
Mr. John Farias, Jr.

Department of Education
Mr. Charles Clark

Department of Education, Central Oahu District Office
Mr. George Yamamoto

Department of Health
Environmental Protection and Health Services Division
Dr. James S. Kumagai

Department of Land and Natural Resources
Mr. William Thompson

Department of Planning and Economic Development
Mr. Hideto Kono

Department of Social Services and Housing
Mr. Andrew Chang

Department of Transportation
Admiral E. Alvey Wright

Office of Environmental Quality Control
Dr. Richard Marland

U.H. Environmental Center
Dr. Doak C. Cox

C. City and County of Honolulu

Board of Water Supply
Mr. Edward Hirata

Department of General Planning
Mr. Robert Way

Department of Land Utilization
Mr. George Moriguchi

Department of Public Works
Mr. Wallace Miyahira

Department of Parks and Recreation
Mr. Young Suk Ko

Department of Transportation Services
Mr. Kazuyoshi Hayashida

D. Public Utilities

Hawaiian Electric Company
Mr. Richard Bell
P. O. Box 2750
Honolulu, Hawaii 96840

Hawaiian Telephone Company
Mr. G. Kaneko
P. O. Box 2200
Honolulu, Hawaii 96841

Gasco Inc.
P. O. Box 3379
Honolulu, Hawaii 96842

APPENDIX A

Inquiries and Responses

DEPARTMENT OF THE ARMY
PACIFIC OCEAN DIVISION, CORPS OF ENGINEERS
BLDG. 230, FT. SHAFTER
APO SAN FRANCISCO 96558

RECEIVED
APR 7 8 32 AM '77
DIV. OF PUBLIC WORKS

PODED-H

4 April 1977

U. S. Corps of Engineers
Department of the Army
Honolulu District
Building 96, Fort Armstrong
Honolulu, Hawaii 96813

Gentlemen:

Subject: Crater Elementary School

An environmental impact statement is being prepared for the subject project. In order to complete the EIS, we would like to have information on the following questions:

1. Is the subject school site located in any military "blast" zone? If yes, please define.

2. Are there any fuel storage tanks or service lines within the subject school site? If so, are they in use or abandoned? Please define.

Your early assistance in providing the above information will be appreciated. We are on a very tight time schedule to plan, design and construct the school by September 1979. If you have any questions, please contact Mr. Henry Yasuda of my Planning Branch at 548-5742.

Very truly yours,

RIKIO NISHIOKA
State Public Works Engineer

State of Hawaii
Department of Accounting and
General Services
Division of Public Works
ATTN: Mr. Henry Yasuda
P. O. Box 119
Honolulu, HI 96810

Dear Mr. Yasuda:

This letter is in reply to your letter number (P)1319.7 concerning the school to be constructed at the Aliamanu Military Reservation (AMR).

At one time, AMR was used for the storage of ammunition. This is no longer the case and, therefore, there are no "blast" zones within the housing area.

To our knowledge, there are no fuel storage tanks or service lines within the proposed school site which would interfere with the construction of the school. Utility lines are available at the perimeter of the site which allow for the utility connections for the school.

Sincerely yours,

for KISUK CHEUNG
Chief, Engineering Division

BICENTENNIAL AMERICAN REVOLUTION 1776-1976

(P)1481.7

MAY 10 1977

Dr. James Kumagai
Deputy Director for
Environmental Health
Department of Health
State of Hawaii
Honolulu, Hawaii

Dear Dr. Kumagai:

Subject: Crater Elementary School

This is to request your assistance in determining the hydrocarbon and nitrogen oxide levels that can be expected at the proposed school site. Your comments on public health and safety when these levels are exceeded are also requested.

DAGS is presently preparing an EIS for the development of Crater Elementary School which will be located as shown on Figures 1 and 2. In this regard, we note that the final EIS and subsequent Air Pollution Special Study No. 21-005-75/76 prepared for the Military Family Housing Project at the Aliamanu Military Reservation states that there was an occurrence when carbon monoxide in the crater exceeded the State's ambient air standard. It also states that standards of hydrocarbons and nitrogen oxides will be exceeded at the Moanalua Road entry during certain wind conditions.

Since the special study recommended proceeding with the housing project, it appears that the occurrences during which State air quality standards are exceeded will not jeopardize public health and safety. Your comments on this item will be appreciated. If public health and safety are determined to be in jeopardy, some of the questions that should be answered: (1) Will a program of alarm and evacuation of school occupants be adequate? and (2) If so, what is the recommended air pollution level at which the alarm should activate?

In view of the urgency of this project, an early response to our request will be appreciated. If you have any questions, please have your staff contact Mr. Henry Yasuda of my Planning Branch at extension 5742.

Very truly yours,

RIKIO NISHIOKA
State Public Works Engineer

HY:nk 1-5
Attachment

GEORGE R. ARIYOSHI
GOVERNOR OF HAWAII

RECEIVED
JUN 17 8 20 AM '77
DIV. OF PUBLIC WORKS
DAGS

STATE OF HAWAII
DEPARTMENT OF HEALTH
P O Box 3378
HONOLULU, HAWAII 96801

GEORGE A. L. YUEN
DIRECTOR OF HEALTH

Audrey W. Mertz, M.D., M.P.H.
Deputy Director of Health

James S. Kumagai, Ph.D., P.E.
Deputy Director of Health

Henry N. Thompson, M.A.
Deputy Director of Health

In reply, please refer to
File: EPHSD-PIE

June 6, 1977

Mr. Rikio Nishioka
State Public Works Engineer
Division of Public Works
Department of Accounting & General Services
State of Hawaii
P. O. Box 119
Honolulu, Hawaii 96810

Dear Mr. Nishioka:

SUBJECT: CRATER ELEMENTARY SCHOOL

This is in reply to your letter of May 10, 1977, which requested assistance in determining the hydrocarbon and nitrogen oxide levels at the proposed Crater Elementary School sites and our comments on public health and safety impacts when these levels are exceeded.

Since the housing project is in the construction stage and occupancy is still in the future, the levels of pollutants can only be predicted by the use of mathematical and/or physical models. To do this, more detailed information with respect to meteorological conditions and expected traffic density is needed. However, because the original study on air pollution has been deemed acceptable and the military intends to monitor pollutant levels at the site following completion of the housing project, it is our opinion that an additional study at this time is not justified.

Although it is predicted that levels of hydrocarbon, nitrogen oxide and carbon monoxide may exceed State Standards, the public health and safety should not be jeopardized unless the levels also exceed Federal Primary Standards or Emergency Episode levels as listed in Public Health Regulations, Chapter 43, Section 19. These pollutants are automobile-related pollutants which reach their peak levels when traffic is at its peak. Normally the peak levels occur between 6:30 a.m. and 8:00 a.m., drops off very fast and picks up during the afternoon peak traffic hours between 4:00 p.m. to 5:30 p.m. Therefore, during the school hours the levels of pollutants can be expected to be relatively low.

For the purpose of emergency plans, the recommended levels for action should be as those specified in Public Health Regulations, Chapter 43, Section 19, Prevention of Air Pollution Emergency Episodes. However, it is not known at this time whether or not these levels would every be reached at the project site. Follow-up monitoring intended by the military should provide the basis for predicting the likelihood of emergency episodes at the school.

If you need further assistance in this matter, please feel free to contact the Pollution Technical Review Branch at 548-6410.

Sincerely,

JAMES S. KUMAGAI, Ph.D.
Deputy Director for Environmental Health

cc: PTR Branch

APPENDIX B

A Biological Report
on Aliamanu Crater and
Its Water Drainage to Keehi Lagoon
Aliamanu Family Housing Project

October 20, 1974

TO: U. S. ARMY ENGINEER DIVISION
PACIFIC OCEAN
BLDG. 230, FT. SHAFTER
APO SAN FRANCISCO 96558

FROM: RONALD A. DARBY & ASSOCIATES
122 ONEAWA STREET
KAILUA, HAWAII 96734

BY: JACK TROUTWINE

A BIOLOGICAL REPORT

ON ALIAMANU CRATER AND

ITS WATER DRAINAGE TO KEEHI LAGOON

ALIAMANU FAMILY HOUSING PROJECT

CONTRACT NO. DACA 84-75-C-0043

Aliamanu Crater lies adjacent to Salt Lake Crater and is just to the left (going Ewa) of Red Hill. It is a dry area ranging in elevation from about thirty to four hundred eighty-five feet on the northern rim. The flora is that which is suited for dry areas and so of course is the fauna. We will discuss the fauna in order down to insects. There are no people now living in the crater. But dogs (canus familiaris) were sighted. They are feral or from the surrounding housing areas. Cats (Felis catus) were not sighted recently although two years ago they were found in the crater. Mongooses (herpestes auropuntatus auropuutatus) are quite common in the crater area. Rats probably exist in the area.

"There are many birds in the crater. The only native bird seen in two days spent in the crater was the Kolea or golden plover (Pluvialia dominica) which is migratory, arriving in late August and staying until late April.

"There are many other birds although no other natives were sighted.

"The Myna or Pilia'E-kelo, (Acridotheres tristis) is common.

"There are many Japanese white eye (Zosterops palpebrosus japonicus). Some are nesting now (April) in the haole koa.

"Other birds sighted: Cardinal (Richmondena cardinalis); Brazilian cardinal (Paroaria cucullata); House Sparrow or Manuli'ili'i (Passer domesticus); Barred dove (Geopelia striata striata); Ricebird or 'Ai-laiki (Lonchura punctulata)"*

* From "A Summary of the Plant and Animal Life in the Aliamnu Crater" April 1972. No new birds were sighted this year.

There are also lizards (geckos and skinks), Arachnids (scorpions and spiders), Diplopoda (millipedes) and many insects including a nest of honey bees (Apis melifera).

The flora of the crater is dominated by haole koa (leucaena glauca) which is found in the bottom of the crater to the highest point on the rim. Kiawe trees (prosopis pallida) are plentiful, especially on the crafter floor. They grow with the haole koa. The drier parts of the rim have pauini or prickly pear cactus (opuntia megacantha) as well as many grasses and ilima (sida fallax). The ilima is not rare but it is a native plant, the emblematic flower of Oahu and a flower used since ancient times for lei making. It would be good to retain many of these plants. They grow in the less desirable building areas anyway, usually on steep rocky ground. The rest of the flora from in and on the crater is contained in this list in order of abundance (with the grasses listed separately):

haole koa	Leucaena glauca	Trop. Am.
Kiawe	Prosopis pallida	Peru
desmanthus	Desmanthus virgatus	Trop. Am.
morning glory	Ipomea carica	Tropics
hairy morning glory	Merremia aegyptia	Tropics
passion fruit	Passiflora foetida	Trop. Am.
pluchea	Pluchea indica	India
pluchea	Pluchea oderata	Trop. Am.
spiney amaranth	Amaranthus spinosus	Trop. Am.
Christmas berry	Schinus tereointhi folius	Trop. Am.
White shrimp plant	Justicia betonica	Malaya
ilima	Siola fallax	Native
Klu	Acasia farnesiana	Trop. Am.
Lantana	Lantana camara	Trop. Am.
panini	Opuntia megacantha	Mexico
nut grass	Cyperus rotundus	W. Indies
false vervain	Stachy tarpheta dichotoma	Trop. Am.
sticktights	Bidens pilosa	Trop. Am.
Salvia	Salvia farinacea	Mexican
Maile hohono	Ageratum conyzoides	Trop. Am.
flora's paint brush	Emilia sonchifolia	Malay
fuzzy rattlepod	Crotalaria incana	Trop. Am.
balloon vine	Cardiosperonum halicacabum	Cosmo.
cherry tomato	Lycoperscion esculentum	S. Am.
plantain	Plantago major	Cosmo.
sow thistle	Souchus oleraceus	Europe
croton	Codiaeum variegatum	Fiji
banana	Musa sp.	India
pepper	Capsicum anuum	Trop. Am.
monstera	Monstera deliciosa	Trop. Am.
papaya	Carica papaya	Trop. Am.
banyon	Ficus retusa	S. Am.
coconut	Cocos nucifera	Cosmo.
mango	Mangifera indica	India
red hibiscus	Hibiscus sp.	
canna lily	Canna sp.	Trop. Am.
ti plant	Cordyline terminalis	Native
plumeria	Plumeria acuminata	Trop. Am.
citrus	Citrus sp.	S. Asia
water hyacynth	Eichornia orassipes	Brazil
horseradish tree	Moringa oleitera	Africa
mauna-loa	Canavalia cathartica	Madagascar

Grasses:

natal-red-top	Tricholaena rosa	S. Africa
bermuda grass	Cynodon dactylon	Old World
swollen finger grass	Chloris barbata	Trop. Am.
rhodes grass	Chloris gayana	Africa
panic grass	Panicum sp.	
Guinea grass	Panicum maximum	Africa
burgrass	Cenchrus echinatus	Trop. Am.
sugar cane	Saccharum officinarum	Hybrid

The water drainage from the crater goes through a tunnel approximately six by ten feet for over four hundred feet through the crater rim and empies into Salt Lake. Salt Lake is the only natural lake on Oahu. It is brackish because there is no natural drainage. However it is being filled in to create a golf course which will have a series of water hazards with a drain into Moanalua Stream.

Salt Lake presently has talapia (Talapia mozambique) guppies (Gambusia offinis) and mollies (Mollenisia sp.) living in it as well as the castle snail (Melania sp.). The birds

found on and near the shore of the area are as follows:

ruddy turnstone	Arenaria interpres
kolea (golden plover)	Plurialis dominica
coot ('alae ke'oke'o)	Fulica americana
Hawaiian duck (Koloa maoli)	Auas platyrhynehos wyvilliana
ae'o (black-necked stilt)	Himantopus mexicanus

The tunnel from Aliamanu Crater empties several hundred yeards up from Salt Lake. In the gully formed between the tunnel and the lake are found crayfish. The vegetation in this area is:

haole koa	Leucaena glauca	Trop. Am.
pluchea	Pluchea odorata	Trop. Am.
Christmas berry	Schinus terebinthifolius	Asia
honhouo grass	Commelina nudiflora	Cosmo
finger grass	Chloris sp.	
Chinese banyon	Ficus retusa	S. Asia
spiney amaranth	Amaranthus spinosus	Trop. Am.
panic grass	Panicum sp.	
Kiawe	Prosopis pallida	Peru
ilima	Sida fallax	Native
ipo moeae	Ipomoeae cairica	Cosmo
milo tree	Thesposia populnea	S. Asia

The vegetation of Salt Lake near the water is:

batis grass	Batis maritima	Trop. Am.
kiawe	Prosopis pallida	Peru
panic grass	Panicum sp.	
natal-red-top	Tricholaena rosa	S. Af.
haole koa	Leucaena glauca	Trop. Am.
Indian pluchea	Pluchea indica	India
Sour bush	Pluchea oderata	S. Am.
hairy morning glory	Morremia aegyptia	Tropics
sand bur	Cenchrus echinatus	Trop. Am.
spiney amaranth	Amaranthus spinosus	Trop. Am.
passion flower	Passiflora foetida	Trop. Am.
klu bush	Acacia farnesiana	Trop. Am.
fingergrass	Chloris sp.	
stick tights	Bidens pilosa	
caster bean	Ricinus communis	Asia
desmanthus	Desmanthus virgatus	Trop. Am.
honohonograss	Commelina nudiflora	Cosmo.
ilima	Sida fallax	Native
milo tree	The spesia populnea	Asia
false mallow	Malvastrum tricuspidatum	Cosmo.
spurge	Euphorbia hirta	Cosmo.
rattle pod	Crotalaria saltiana	S. Asia
leonotis sp.	Leonotis nepetaefolia	

Salt Lake is drained into Moanalua Stream at a point where the water is brackish and has tidal variation. The banks of the stream in this area have been lined with concrete nearly to Keehi Lagoon. Talapia and other brackish water fish live here.

The vegetation from the Salt Lake outflow to Keehi Lagoon which grows above, in the cracks of, between, and on top of the concrete banks is as follows:

haole koa	Leucaena glauca	Trop. Am.
Indian pluchea	Pluchea indica	Ind.
desmanthus	Desmanthus virgatus	Trop. Am.
Sour bush	Pluchea oderata	Trop. Am.
mangrove	Rhizophora mangle	Trop. Am.
finger grass	Chloris sp.	
spiney amaranth	Amaranthus spinosus	Trop. Am.
natel red top	Tricholaena rosa	S. Af.
Bermuda grass	Cynodon dactylon	Old World
poha	Prosopis pallida	Peru
ipomoea	Ipomoeae earica	Cosmo.
milo	Thespesia populnea	Asia
Mexican creeper	Antigonon leptopus	Mexican
casuarina	Casuarina equisetifolia	S. Pacific
Christmas berry	Schinus terebinthifolius	Asia
castor bean	Ricinus communis	Asia
False mallow	Mal vastrum tricuspidatum	Cosmo.
pandanus	Pandanus odoratissimus	Native
wild cucumber	Cucumis dipsauceus	Arabia

All of the flora listings in this paper are in order of abundance.

APPENDIX C

Review Comments and Responses
Consultation Phase

GEORGE R. ARIYOSHI
GOVERNOR

STATE OF HAWAII
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
P. O. BOX 119, HONOLULU, HAWAII 96810

HIDEO MURAKAMI
COMPTROLLER

MIKE N. TOKUNAGA
DEPUTY COMPTROLLER

LETTER NO. (P)1899.7

AUG 24 1977

TO WHOM IT MAY CONCERN

Subject: Draft Environmental Impact Statement
Crater Elementary School
Moanalua, Honolulu, Oahu

Attached is a copy of the subject report for your review and comments. Please submit your written comments by September 30, 1977 to:

Department of Accounting and General Services
Division of Public Works
P. O. Box 119
Honolulu, Hawaii 96810

Comments related to your area of responsibility, expertise and/or concern would be appreciated. All comments received will be reviewed and considered in preparing the environmental impact statement.

If you have no comments to offer on the project, we would appreciate your response to that effect. Should you have any questions on the report, please call the project coordinator, Mr. Henry Yasuda of the Public Works Division at 548-5742.

Very truly yours,

HIDEO MURAKAMI
State Comptroller

Attachment

DEPARTMENT OF THE ARMY
HONOLULU DISTRICT, CORPS OF ENGINEERS
BLDG 230, FT. SHAFTER
APO SAN FRANCISCO 96558

PODED-PV

20 September 1977

State Compt ller
Department of Accounting and General Services
Division of Public Works
State of Hawaii
ATTN: Mr. Henry Yasuda
P. O. Box 119
Honolulu, Hawaii 96810.

RECEIVED
SEP 22 8 37 AM '77
DIV. OF PUBLIC WORKS
DAGS

Dear Sir:

We have reviewed the Draft Environmental Impact Statement (DEIS) for the Crater Elementary School, Moanalua, Honolulu, Oahu, as requested in your letter dated 24 August 1977. The DEIS adequately addresses the potential air quality, climatic, and flooding problems which may exist after project completion. We have no comments to offer at this time.

Sincerely yours,

WM J. MATTHEWS
Acting Chief, Engineering Divison

BICENTENNIAL 1776-1976 AMERICAN REVOLUTION

DEPARTMENT OF THE ARMY
HEADQUARTERS, UNITED STATES ARMY SUPPORT COMMAND, HAWAII
APO SAN FRANCISCO 96558

RECEIVED
SEP 9 8 35 AM '77
DIV. OF PUBLIC WORKS
DAGS

AFZV-HS-HE

8 SEP 1977

Department of Accounting and
General Services
Division of Public Works
P. O. Box 119
Honolulu, Hawaii 96810

Dear Sirs:

We have reviewed the Draft Environmental Impact Statement for Crater Elementary School and have no comments to offer.

Thank you for the opportunity to review the EIS.

Sincerely yours,

JOHN R. MOHN
Major, MSC
Administrative Officer
Directorate of Health Services

GEORGE R. ARIYOSHI
GOVERNOR

STATE OF HAWAII
DEPARTMENT OF AGRICULTURE
1428 SO. KING STREET
HONOLULU, HAWAII 96814
August 29, 1977

JOHN FARIAS, JR.
CHAIRMAN, BOARD OF AGRICULTURE

YUKIO KITAGAWA
DEPUTY TO THE CHAIRMAN

BOARD MEMBERS

IRWIN S. HIGASHI
MEMBER - AT - LARGE

ERNEST F. MORGADO
MEMBER - AT - LARGE

KALFRED K. YEE
MEMBER - AT - LARGE

SHIZUTO KADOTA
HAWAII MEMBER

STEPHEN O. L. AU
KAUAI MEMBER

FRED M. OJASAKARA
MAUI MEMBER

MEMORANDUM

To: Mr. Hideo Murakami, State Comptroller
Department of Accounting & General Services

Subject: Draft EIS - Crater Elementary School
Moanalua, Honolulu, Oahu TMK: 1-1-11:01

The Department of Agriculture has no comments to offer on this draft Environmental Impact Statement.

The document is herewith returned for further use.

Thank you for the opportunity to comment.

RECEIVED
SEP 2 8 00 AM '77
DIV. OF PUBLIC WORKS
DAGS

John Farias, Jr.

JOHN FARIAS, JR.
Chairman, Board of Agriculture

Attachment

GEORGE R. ARIYOSHI
GOVERNOR OF HAWAII

STATE OF HAWAII
DEPARTMENT OF HEALTH
P.O. Box 3378
HONOLULU, HAWAII 96801
August 29, 1977

RECEIVED
Aug 30 8 38 AM '77
DIV. OF PUBLIC WORKS
DAGS

GEORGE A. L. YUEN
DIRECTOR OF HEALTH
Audrey W. Hertz, M.D., M.P.H.
Deputy Director of Health
Henry N. Thompson, M.A.
Deputy Director of Health
James S. Kumagai, Ph.D., P.E.
Deputy Director of Health

In reply, please refer to:
File: EHS - 55

MEMORANDUM

To: Environmental Quality Commission
Office of the Governor

From: Deputy Director for Environmental Health

Subject: Environmental Impact Statement (EIS) for Crater Elementary School, Moanalua, Honolulu, Oahu

Thank you for allowing us to review and comment on the subject EIS. On the basis that the project will comply with all applicable Public Health Regulations, please be informed that we have no objections to this project.

We realize that the statements are general in nature due to preliminary plans being the sole source of discussion. We, therefore, reserve the right to impose future environmental restrictions on the project at the time final plans are submitted to this office for review.

FOR JAMES S. KUMAGAI, Ph.D.

cc: Dept. of Accounting & General Services

GEORGE R. ARIYOSHI
GOVERNOR

CHARLES G. CLARK
SUPERINTENDENT

RECEIVED
SEP 21 10 04 AM '77
DIV. OF PUBLIC WORKS
DAGS

STATE OF HAWAII
DEPARTMENT OF EDUCATION
P. O. BOX 2360
HONOLULU, HAWAII 96804

OFFICE OF THE SUPERINTENDENT

September 15, 1977

MEMO TO: Honorable Hideo Murakami, Comptroller
Department of Accounting and General Services

F R O M: Charles G. Clark, Superintendent
Department of Education

SUBJECT: Crater Elementary School
Environmental Impact Statement

Thank you for providing us a copy of the subject EIS. We request the following changes to reflect our updated plan:

1) Reschedule the opening date from 1979 to 1981. Planning and construction funds programmed for fiscal year 1978 and FY 1979 will be reprogrammed to FY 79 and FY 80. Students from Aliamanu Crater will be bussed to surrounding schools pending further evaluation of enrollment trends and possible entitlement for federal funds under Public Law 81-815.

2) Page 1 - Delete reference to a combination Grade K-6 and Grade 7-8 school in Aliamanu Crater.

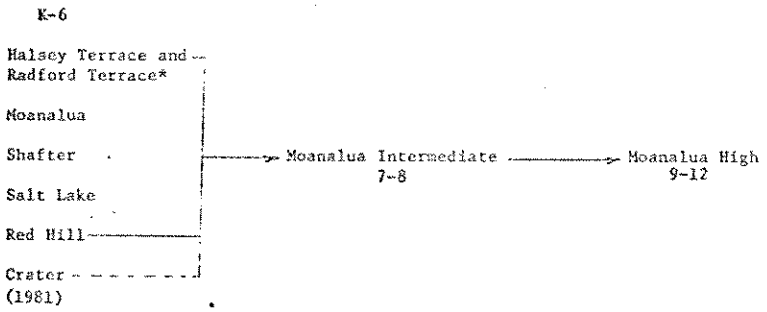
3) Page 3 - Substitute the enclosed update chart.

4) Page 11 - Paragraph "E" - Change to show occupancy in 1981.

Enclosure

FEEDER COMPLEX

MOANALUA HIGH SCHOOL 9/77



*Portion of Aliamanu Elementary service area (Radford Complex)

Note: 1979 - Halsey Terrace and Radford Terrace to be reassigned to Radford Complex (becomes feeder to Aliamanu Intermediate).

GEORGE R. ARIYOSHI
GOVERNOR

STATE OF HAWAII
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
P. O. BOX 119, HONOLULU, HAWAII 96810

HIDEO MURAKAMI
COMPTROLLER

MIKE N. TOKUNAGA
DEPUTY COMPTROLLER

LETTER NO. (P) 2312.7

DEC 20 1977

Honorable Charles Clark
Superintendent
Department of Education
State of Hawaii
Honolulu, Hawaii

Dear Mr. Clark:

Subject: Crater Elementary School
Environmental Impact Statement
Consultation Phase

This is in response to your letter of September 15, 1977 on the subject project. We will make the following changes to the subject statement with reference to your comments:

1. Page 1 - Delete the sentence, "The alternative plan is to construct a new school in Aliamanu Crater to service a combination grades K-6 and grades 7-8 school".

2. Page 3 - Replace the existing school organization chart with the updated chart.

3. Page 11 - Change occupancy from 1980 to 1981.

We thank you for your comments.

Very truly yours,

HIDEO MURAKAMI
State Comptroller

GEORGE R. ARIYOSHI
GOVERNOR

ANDREW I. T. CHANG
DIRECTOR, SOCIAL SERVICES & HOUSING

RECEIVED
Sep 2 8 04 AM '77
DIV. OF PUBLIC WORKS
DAGS

STATE OF HAWAII
DEPARTMENT OF SOCIAL SERVICES AND HOUSING
P. O. Box 339
Honolulu, Hawaii 96809

August 31, 1977

MEMORANDUM

TO: Department of Accounting and General Services
Division of Public Works
P. O. Box 119
Honolulu, Hawaii 96810

FROM: Andrew I. T. Chang, Director
Department of Social Services and Housing

SUBJECT: Draft Environmental Impact Statement
Crater Elementary School
Moanalua, Honolulu, Oahu

The draft EIS has been reviewed for its impact on departmental programs.

We have no comment to make regarding this project.

Thank you for the opportunity to review and comment.

Acting Director

GEORGE R. ARIYOSHI
GOVERNOR

RECEIVED
Sep 15 8 13 AM '77
DIV. OF PUBLIC WORKS
DAGS

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

E. ALVEY WRIGHT
DIRECTOR

DEPUTY DIRECTORS
WALLACE AOKI
RYOKICHI HIDASHIONNA
DOUGLAS S. SAKAMOTO
CHARLES O. SWANSON

IN REPLY REFER TO:

September 13, 1977

STP 8.4459

Department of Accounting
and General Services
Division of Public Works
P. O. Box 119
Honolulu, Hawaii 96810

Gentlemen:

Subject: Draft EIS, Crater Elementary
School, Moanalua, Honolulu, Oahu

Thank you very much for giving us the opportunity to review the above-captioned document. We have no comments to offer which could improve the statement.

Sincerely,

E. ALVEY WRIGHT
Director

GEORGE R. ARIYOSHI
GOVERNOR

RECEIVED
Oct 11 3 00 PM '77
DIV. OF PUBLIC WORKS
DAGS

STATE OF HAWAII
OFFICE OF ENVIRONMENTAL QUALITY CONTROL
OFFICE OF THE GOVERNOR
550 HALEKAUWILA ST
ROOM 301
HONOLULU, HAWAII 96813

RICHARD E. MARLAND, PH.D.
DIRECTOR

TELEPHONE NO.
548-6915

October 7, 1977

MEMORANDUM

To: Hideo Murakami, State Comptroller
Department of Accounting and General Services

From: Dr. Richard E. Marland, Director
OEQC

Subject: ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE FOR CRATER ELEMENTARY SCHOOL

Thank you for inviting us to comment on the subject project. Unfortunately, we are not able to accommodate every request for consultation that is received. We will, however, comment on the EIS when it is officially filed with the Environmental Quality Commission.

If you should have further questions regarding this matter, please do not hesitate to contact us again.

BOARD OF WATER SUPPLY
CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA
HONOLULU, HAWAII 96843

RECEIVED
SEP 21 8 09 AM '77
CIV. OF PUBLIC WORKS
DAGS

September 14, 1977

FRANK F. FASI, Mayor
YOSHIE M. FUJINAKA, Chairman
STANLEY S. TAKAHASHI, Vice Chairman
TERESITA H. JOHNSKY
EDWARD F.C. LAU
E. ALVEY WRIGHT
Wallace S. Miyahira
Fred Dailey
EDWARD Y. HIRATA
Manager and Chief Engineer

GEORGE R. ARIYOSHI
GOVERNOR

Mr. Hideo Murakami
State Comptroller
Dept. of Accounting and
General Services
Division of Public Works
P. O. Box 119
Honolulu, Hawaii 96810

Dear Mr. Murakami:

Subject: Draft Environmental Impact Statement for
Crater Elementary School Moanalua,
Honolulu, Oahu

We have no objections to the construction of the proposed project. Although water for the project will be supplied from the Navy's water system, construction plans should be submitted to us for our review and approval.

If you have any questions, please call Lawrence Whang at 548-5221.

Very truly yours,

Edward Y. Hirata
Manager and Chief Engineer

STATE OF HAWAII
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
DIVISION OF PUBLIC WORKS
P. O. BOX 119, HONOLULU, HAWAII 96810

HIDEO MURAKAMI
COMPTROLLER

MIKE N. TOKUNAGA
DEPUTY COMPTROLLER

LETTER NO. (P)2316.7

DEC 16 1977

Mr. Edward Y. Hirata
Manager and Chief Engineer
Board of Water Supply
P. O. Box 3410
Honolulu, Hawaii 96801

Dear Mr. Hirata:

Subject: Crater Elementary School
Environmental Impact Statement
Consultation Phase

This is in response to your letter of September 14, 1977 on the subject project. The construction plans will be submitted for your review and approval in accordance with existing procedures. We thank you for your concern of the project.

Very truly yours,

RIKIO NISHIOKA
State Public Works Engineer

HY:jnt

C-8

DEPARTMENT OF GENERAL PLANNING
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET
HONOLULU, HAWAII 96813

RECEIVED
SEP 14 8 06 AM '77
DIV. OF PUBLIC WORKS
DAGS

ROBERT A. WAY
CHIEF PLANNING OFFICER

DGP8/77-2327(CT)

September 13, 1977

Department of Accounting and General Services
Division of Public Works
P. O. Box 119
Honolulu, Hawaii 96810

Gentlemen:

Draft Environmental Impact Statement
Crater Elementary School, Moanalua
Comments Requested August 24, 1977

We offer the following comments:

1. With the projected enrollment of 1700 and a recommended maximum enrollment of 800, we wonder why provisions were not made for two elementary schools in the design of the housing project.

2. The draft EIS indicates:

"Air quality is not expected to be detrimental. However, appropriate action will be taken should the levels of air pollutants exceed the limit (sic) established by the federal government" (p. 18).

This implies that some continuous air quality monitoring devices or system will be set up to determine when appropriate action should be taken. The draft EIS, however, does not indicate what monitoring system, if any, will be set up.

We are concerned with automobile-oriented pollutants. The Department of Health has indicated that normally the peak levels will occur between 6:30 and 8:00 a.m., drop off very fast, and pick up again during the afternoon peak traffic hours between 4:00 to 5:30 p.m. (Appendix, p. A-3).

A traffic jam on Moanalua Highway in the morning could keep traffic moving at a snail's pace up to 9 a.m. or later. This could result in high air pollutant levels for a short time and impact the school. Without a monitoring system, how would school officials know what pollutant levels are, and whether or not to take action? This should be discussed in the EIS.

Sincerely,

RAMON DURAN
Chief Planning Officer

RDrfmt

C-9

GEORGE R. ARIYOSHI
GOVERNOR

STATE OF HAWAII
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
DIVISION OF PUBLIC WORKS
P. O. BOX 119, HONOLULU, HAWAII 96810

HIDEO MURAKAMI
COMPTROLLER

MIKE M. TOKUNAGA
DEPUTY COMPTROLLER

LETTER NO (P)2319.7

DEC 16 1977

Mr. Ramon Duran
Chief Planning Officer
Department of General Planning
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

Dear Mr. Duran:

Subject: Crater Elementary School
Environmental Impact Statement
Consultation Phase

This is in response to your letter of September 13, 1977 regarding the subject project. Our response to your comments follows:

1. Two Schools - In the absence of other elementary schools, a projected enrollment of 1,700 students would require the construction of two schools with about 850-student design capacities. However, the Department of Education projections indicate several existing schools around the Crater and the proposed school can accommodate the projected enrollment of 1,700 students.

2. Air Quality - The federal government will monitor the air quality in the Crater after occupancy to obtain readings under actual conditions. We do not have any information at this time on the type of system or device that the federal government will use. Should the readings indicate that air pollutants sometimes exceed the limits established by the federal government, the State will work with the federal government to develop an air quality alarm system for the residents and the school. This system will depend on the frequency, extent and other factors determined during the monitoring.

We thank you for your comments and trust that they have been answered.

Very truly yours,

RIKIO NISHIOKA
State Public Works Engineer

HYsrdr
cc: U. S. Department of the Army
Commanding General
Tripler Army Medical Center

DEPARTMENT OF LAND UTILIZATION
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET
HONOLULU, HAWAII 96813

RECEIVED
Sep 6 9 23 AM '77
CITY OF PUBLIC WORKS
DAGS

FRANK F. FASI
MAYOR

GEORGE S. MORIGUCHI
DIRECTOR

LU8/77-5805(JW)
77/EC-1

September 1, 1977

Mr. Hideo Murakami, Comptroller
Department of Accounting & General Services
State of Hawaii
Honolulu, Hawaii

Dear Mr. Murakami:

Environmental Assessment
Crater Elementary School, Oahu

It appears that the above is actually an environmental assessment rather than an Environmental Impact Statement because it has not been filed with the Environmental Quality Commission in accordance with Chapter 343, HRS.

On January 28 of this year, we responded to your EIS Preparation Notice on the same project and questioned your reasons for requiring the EIS. We are still confused on this point, especially since the present submittal does not seem to be in accord with Chapter 343 procedures.

We have no objections to the project and feel that you have shown ample justification for going ahead with it.

Should you have any questions on this matter, please contact Mr. John Whalen of our staff at 523-4256.

Very truly yours,

GEORGE S. MORIGUCHI
Director of Land Utilization

GSM:ey

GEORGE R. ARIYOSHI
GOVERNOR

STATE OF HAWAII
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
DIVISION OF PUBLIC WORKS
P.O. BOX 119, HONOLULU, HAWAII 96810

HIDEO MURAKAMI
COMPTROLLER

MIKE M. TOKUNAGA
DEPUTY COMPTROLLER

LETTER NO. (P)2317.7

DEC 16 1977

Mr. George Moriguchi
Director
Department of Land Utilization
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

Dear Mr. Moriguchi:

Subject: Crater Elementary School
Environmental Impact Statement
Consultation Phase

This is in response to your letter of September 1, 1977 regarding the subject statement. Our environmental assessment at the start of the project determined that an environmental impact statement (EIS) was needed. Accordingly, an EIS Preparation Notice for the subject project was filed with the Environmental Quality Commission on January 4, 1977 and your office was listed as an agency to be consulted. The subject statement was prepared to solicit your comment as a means of meeting the consultation requirements of the EIS regulations before the EIS was prepared and submitted to the Environmental Quality Commission.

If it were determined during preparation of the subject statement that an EIS was not required, a negative declaration would have been filed. This course of action follows closely the intent of the Environmental Quality Commission's EIS regulations. Please note that Section 1:30 of these regulations states "agencies are to assess proposed actions at the earliest practicable time in order to assure thoughtful and deliberate evaluation in determining the significance of various environmental impacts".

We thank you for your comments and trust that they have been answered.

Very truly yours,

RIKIO NISHIOKA
State Public Works Engineer

RY:jnt

C-10

DEPARTMENT OF PUBLIC WORKS
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET
HONOLULU, HAWAII 96813

RECEIVED
SEP 9 8 49 AM '77
DIV. OF PUBLIC WORKS
DAGS

FRANK F. FASI
MAYOR

WALLACE MIYAHIRA
DIRECTOR AND CHIEF ENGINEER

ENV 77-454

September 6, 1977

Department of Accounting and
General Services
Division of Public Works
State of Hawaii
P. O. Box 119
Honolulu, Hawaii 96810

Gentlemen:

Subject: Your Letter (P)1899.7, Dated August 24, 1977
Relating to the Draft EIS for the Crater
Elementary School, Moanalua, Honolulu, Hawaii

We have reviewed the draft document and have the following comments.

1. Wastewater (page 12). It is our understanding that the Army wastewater in Aliamanu Crater will be conveyed to the Army's Fort Shafter sewage pump station and will in turn be pumped into the Sand Island sewage treatment plant. The statement that a new plant will be constructed does not appear to be correct.

2. Sewer Service Charge. The U.S. Army will be required to pay a sewer service charge in accordance with the applicable rates in the City's sewer ordinance (Chapter 11-6.4) as amended. The amount of the service charge will be based on the recorded pumping quantities (by volume) at the Fort Shafter station. Since the school flows will be handled by the Army sewer system, arrangements for the school pro-rata service charge should be coordinated with the Army and the City's Division of Sewers (523-4408)

3. Drainage (page 12). The drainage plans for the school site should be coordinated with the Drainage Section of the Division of Engineering. The peak flows into the drainage tunnel are limited by agreement to 399 cubic feet per second at a water surface elevation in the crater of 55.35 feet, mean sea level.

Very truly yours,

Wallace Miyahira

WALLACE MIYAHIRA
Director and Chief Engineer

cc: Div. of Engineering(Drainage Section)
Div. of Sewers (Public Contact Section)

GEORGE R. ARIYOSHI
GOVERNOR

HIDEO MURAKAMI
COMPTROLLER

MIKE N. TOKUNAGA
DEPUTY COMPTROLLER

STATE OF HAWAII
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
DIVISION OF PUBLIC WORKS
P. O. BOX 119, HONOLULU, HAWAII 96810

LETTER NO. (P)2318.7

DEC 16 1977

Mr. Wallace Miyahira
Director and Chief Engineer
Department of Public Works
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

Dear Mr. Miyahira:

Subject: Crater Elementary School
Environmental Impact Statement
Consultation Phase

This is in response to your letter of September 6, 1977 regarding the subject statement. Our response to your comments follows:

1. Wastewater - Your comment that a new plant will not be constructed is correct. Accordingly, the sentence on page 12 will be corrected to read, "Thus, a new sewer system will be constructed and connected to the Fort Shafter lift station".

2. Sewer Service Charge - The Department of Education will be working with the Federal Government on the matter of utility services charges.

3. Drainage - The drainage plans for the school site will be coordinated with the Drainage Section of the Division of Engineering. We will be seeking your expertise in establishing the minimum site elevation relative to the ponding area that will be developed by the military during the design phase of this project.

We thank you for your comments and trust that they have been answered.

Very truly yours,

RIKIO NISHIOKA
State Public Works Engineer

RY:jnt

DEPARTMENT OF PARKS AND RECREATION
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET
HONOLULU, HAWAII 96813

RECEIVED
Sep 9 8 41 AM '77
DAGS

YOUNG SUK KO
DIRECTOR

FRANK F. FASI
MAYOR

September 7, 1977

Department of Accounting and
General Services
Division of Public Works
State of Hawaii
P. O. Box 119
Honolulu, Hawaii 96810

Attention: Henry Yasuda

Gentlemen:

SUBJECT: DRAFT EIS -- CRATER ELEMENTARY SCHOOL
TMK 1-1-11: POR 1
PROJECT REFERENCE NUMBER (P)1099.7

We have reviewed the Environmental Impact Statement for the Crater Elementary School to be located in the Aliamanu Military Reservation in Honolulu and have no comments to offer.

Sincerely,

For YOUNG SUK KO, DIRECTOR

DEPARTMENT OF TRANSPORTATION SERVICES
CITY AND COUNTY OF HONOLULU
MONOLULU MUNICIPAL BUILDING
650 SOUTH KING STREET
HONOLULU, HAWAII 96813

RECEIVED
Sep 16 8 41 AM '77
CITY OF PUBLIC WORKS
DAGS

KAZU HAYASHIDA
DIRECTOR

TE8/77-3685

September 15, 1977

Department of Accounting and
General Services
Public Works Division
State of Hawaii
P. O. Box 119
Honolulu, Hawaii 96810

Gentlemen:

Draft Environmental Impact Statement
Crater Elementary School
Moanalua, Honolulu, Hawaii

We have reviewed the draft Environmental Impact Statement for the Crater Elementary School project and are satisfied with your assessment of the traffic impact resulting from the project.

Thank you for the opportunity to comment on this project.

Very truly yours,

KAZU HAYASHIDA
Director

ENVIRON
General
NV/R

HAWAIIAN ELECTRIC COMPANY, INC.

Box 2750 / Honolulu, Hawaii / 96803

RICHARD E. BELL
MANAGER, ENVIRONMENTAL DEPARTMENT

September 6, 1977

RECEIVED
SEP 8 8 23 AM '77
DIV. OF PUBLIC WORKS
DEPT. OF ACCTG. & GEN. SERVICES

State of Hawaii
Department of Accounting &
General Services
Division of Public Works
P. O. Box 119
Honolulu, Hawaii 96810

Gentlemen:

Subject: Draft EIS Crater Elementary School

This is in response to your letter of August 24, 1977 requesting comments on subject EIS.

Since this project will be served entirely from the military electrical distribution system, it is anticipated that it will have no impact on the Hawaiian Electric Company system.

Sincerely yours,

REB:cm

HAWAIIAN TELEPHONE COMPANY

P.O. BOX 2200 • HONOLULU, HAWAII 96841 • TELEPHONE (808) 537-7111 • CABLE: TELHAWAII

September 29, 1977

RECEIVED
SEP 30 8 37 AM '77
DIV. OF PUBLIC WORKS
DEPT. OF ACCTG. & GEN. SERVICES

Mr. Hideo Murakami
State Comptroller
Department of Accounting and
General Services
Division of Public Works
P.O. Box 119
Honolulu, Hawaii 96810

Dear Mr. Murakami:

Thank you for the opportunity to review the draft environmental impact statement for Crater Elementary School. We find that the project will have no adverse effect on our company's operations.

Sincerely,

Tom Yoshioka (for)
Engineering Manager
Land and Buildings

GASCO, INC.
A PACIFIC RESOURCES, INC. COMPANY
P. O. Box 3379, Honolulu, Hawaii 96842

RECEIVED
AUG 30 10 59 AM '77
DIV. OF PUBLIC WORKS
GAGS

August 26, 1977

Mr. Hideto Murakami, State Comptroller
Department of Accounting
and General Services
Post Office Box 119
Honolulu, Hawaii 96810

Dear Mr. Murakami:

Subject: Draft Environmental Impact Statement
Crater Elementary School

Gasco, Inc., has no comments to make on the Draft Environmental Impact Statement on Crater Elementary School.

Very truly yours,

Francis T. Tanaka
Manager, Environmental Affairs

FTT:si