

Office Of Environmental Quality Control
Office Of The Governor
550 Halekiauwila Street
Tani Office Building, Third Floor

Revised

ENVIRONMENTAL IMPACT STATEMENT
FOR
EXCAVATION AND QUARRYING USE
AT
WAIHEE, OAHU

Jan 75

December, 1974

Office of Environmental Quality Control
Office of the Governor
550 Halekiauwila Street
Tani Office Building, Third Floor
Honolulu, Hawaii 96813

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I. Description of the Proposed Project

The proposed excavation, grading, and quarrying project involves removing 554,000 cubic yards of dirt from a ridge above the end of Waihee Place at Waihee, Oahu, thus eliminating the hazardous precipice on the ridge and reshaping the ridge into a uniform gentle slope. In 1969, following a prolonged period of rain, a landslide occurred on the south side of the ridge, killing one person and partially demolishing a home. The implementation of the proposed grading plan will result in a rounded natural hillside configuration, instead of a flat planar cut bank. Figure 1 shows the location of the proposed project. The excavation will remove a layer of dirt up to 100 feet thick, and will be accomplished by bulldozers and other conventional earth-moving equipment. No blasting is anticipated. Figure 2 shows the existing contours and the contours after completion of the project. A 6-inch layer of loose soil will be left on top of the graded surface, and will be planted with Pangola grass sprigs in 4-inch deep holes spaced 30 inches apart. The excavation, grading, and landscaping will proceed from top to bottom, with planting taking place immediately after grading on a daily basis. It is estimated that the grading will be completed within 24 months of the granting of permission to conduct the work by DLNR.

The excavated dirt will be used as fill for construction projects in the Kahaīuu area, with the owners of the land to be paid royalties of \$0.25 per cubic yard for fill soil and \$1.00 per cubic yard for screened soil.

The proposed ridge will be cut to the following finished slopes:

<u>Elevation</u>	<u>Slope</u>
160 to 200 feet	7:1
200 to 230 feet	3:1
230 to 410 feet	2-1/2:1
410 to 450 feet	2:1
450 to 590 feet	1-1/2:1

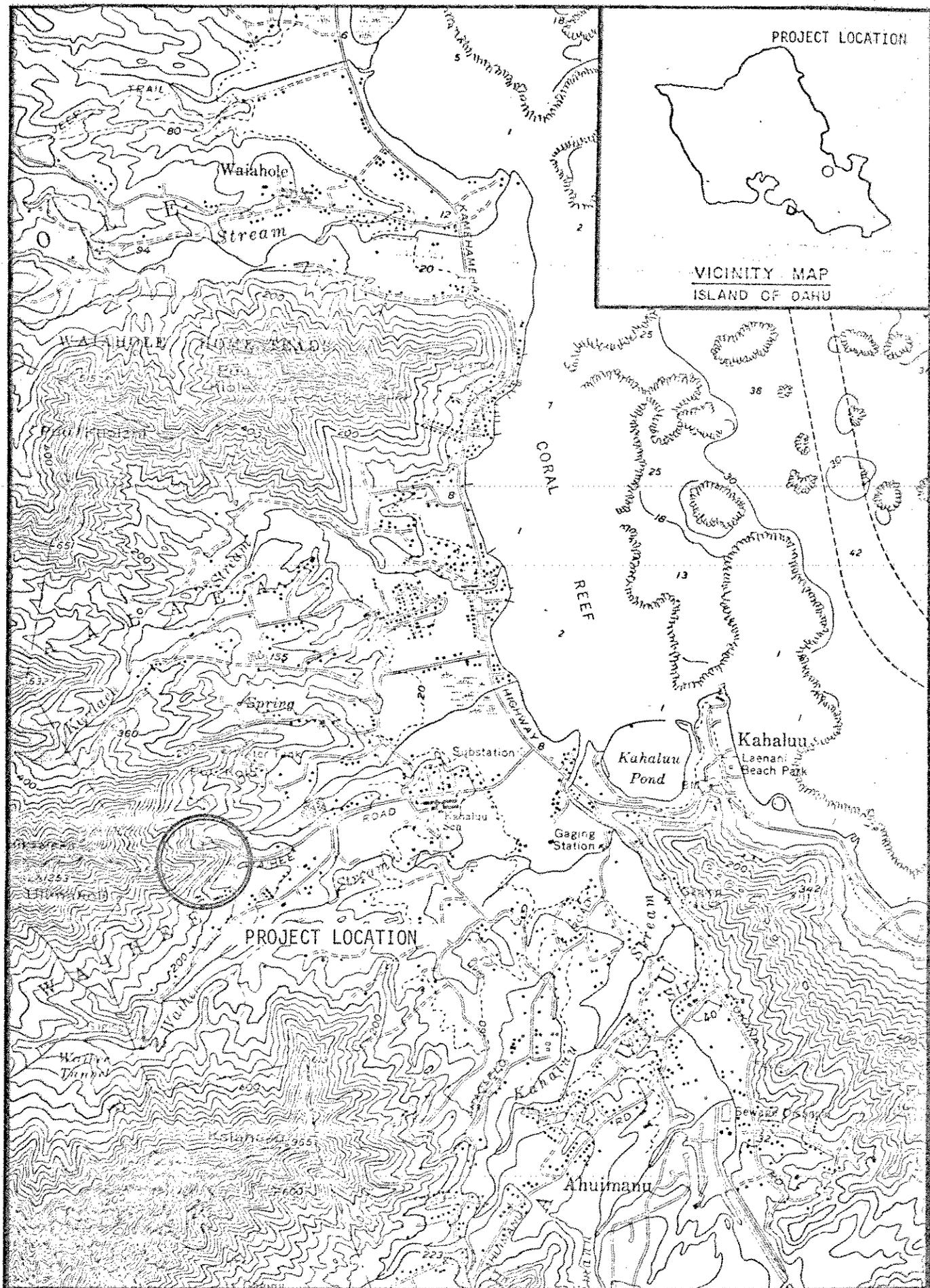


FIGURE 1: LOCATION OF PROPOSED PROJECT

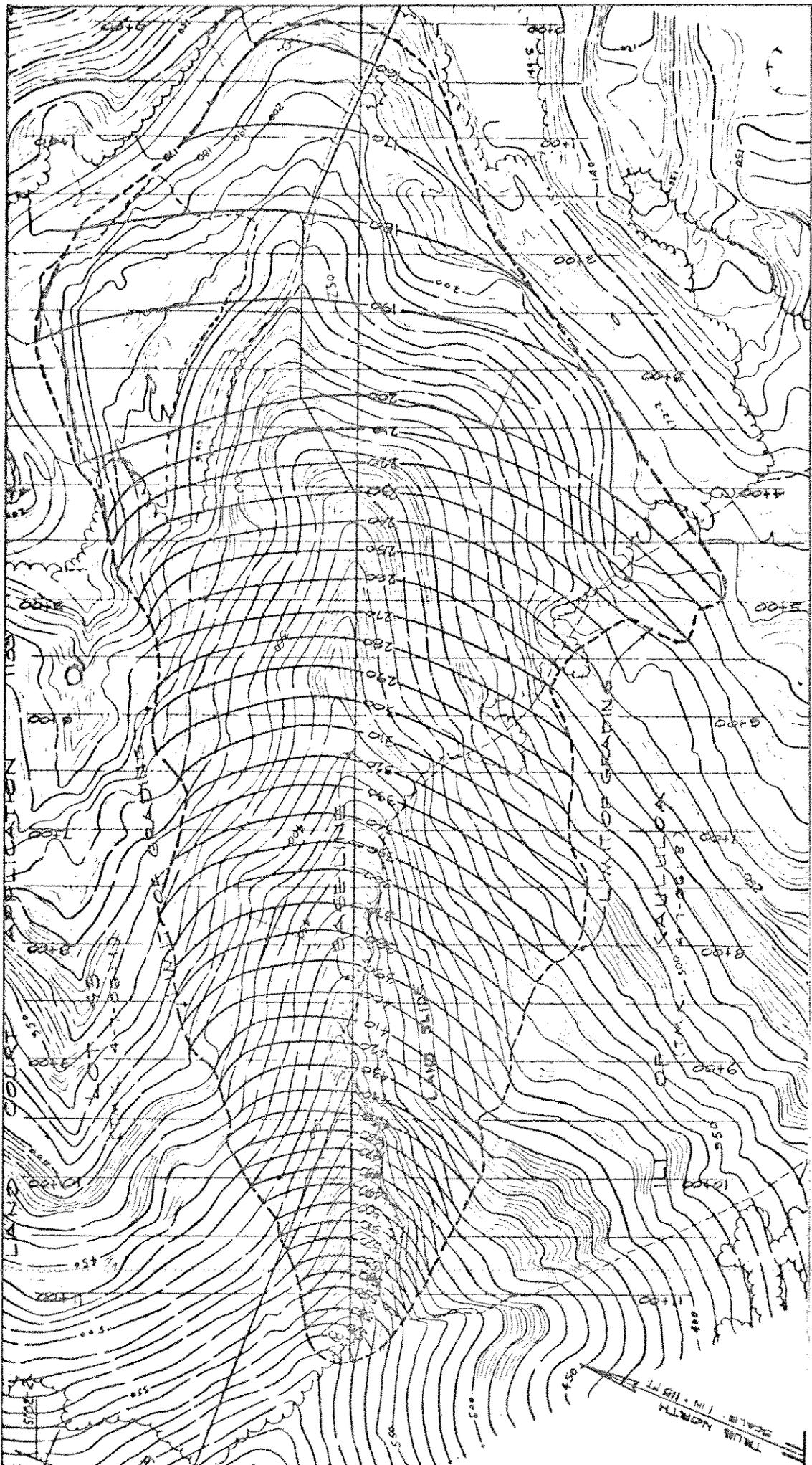


FIGURE 2: EXISTING CONTOURS AND FINAL GRADING CONTOURS

II. Present Environmental Conditions

A. Physical Factors

The proposed excavation site is located on a ridge at the end of Waihee Road, (Fig. 1) about one mile from the ocean. The ridge slopes toward the ocean at about 25% to 50% gradients. The sides of the ridge slope in northerly and southerly directions at about 60% to 100% gradients with steeper slopes in localized areas. The site is generally covered with scrub grass, Java plums, and brush.

A large landslide area is located along the southwest slope of the ridge. The upper scarp for the slide nearly reaches the top of the ridge. A previous borrow site is located on the northeast slope of the ridge. Vegetation is essentially absent from these locations.

A brief soil reconnaissance which was conducted (Ref. 1) found fractured, decomposed rock exposed in the slide scarps and cut slopes of the borrow site. Soils in the area are generally described as thin layers of silty clays over fractured lava rock flows.

Rainfall in the area is 60-100 inches per year.

B. Land Use

General land use in the surrounding area is for farming and homes. The county general plan calls for agricultural use within the subject area. The ridge is classified as a conservation district; therefore, a conservation use application has been filed at the Department of Land and Natural Resources.

The only existing structures on the two parcels involved (Lots 1 & 8 TMK: 4-07-06), are a home and barn on parcel 1 north of the borrow site, and an agricultural storage shed on parcel 8 to the south. A private coral roadway provides access to the site. There are no utility lines in the excavation area. There are no existing easements, covenants, or restrictions on either of the properties. There are no known historic or archaeological sites that will be affected by the excavation.

Wildlife in the area appears to be characteristic of brush and grassy areas. Since the effects on wildlife should not be significant, no official survey has been made; the only animals noted have been small rodents such as rats and mongoose. Several species of birds have been noted; but, no unique habitats were found.

III. Environmental Impact of Proposed Action

A. Air Quality

There should not be significant effects on air quality during the excavation activities. Dust will be controlled by watering, both at the excavation area and along the coral roadway leading to the site. Occasionally some higher than normal dust may be generated, but will not exceed the State of Hawaii standard for 24-hour average particulate matter concentration (100 micrograms per cubic meter). Minor exhaust emissions from bulldozers, trucks, or other construction equipment should not result in significant effects on the overall air quality.

B. Noise

There is not expected to be any noise disturbance due to the proposed project. Some noise will be generated on the excavation site by earth-moving equipment, but will not disturb any residences, due to the isolated nature of the project location. No blasting is expected to be necessary.

C. Traffic

The road leading from Kamehameha Highway to the site will experience a slight increase in traffic due to the presence of construction vehicles, primarily trucks. The roads are lightly traveled, however, and there should not be any inconvenience caused to the users. There will be no road blockages due to the project.

D. Drainage and Erosion

Drainage from the site will not be significantly altered during the construction period. To reduce erosion care will be taken to plant

newly cut areas immediately. Some minor sediment runoff may occur during rainy periods although it should not exceed present silt runoff from the landslide area. This material will enter Waihee Stream, but should not significantly increase the sediment load in the stream, which is already sediment-laden during rainy periods.

After completion of the project, erosion will be significantly reduced, since the exposed cliff at the landslide area will be reshaped to a stable slope and covered with vegetation. Surface runoff will likely also decrease slightly, because more infiltration will occur on the flatter slope. Groundwater will not be affected.

E. Ecology

In the process of excavating the hillside, vegetation, consisting mainly of scrub grass and brush, will be destroyed and some bird habitats will be lost. The total area affected will be about 10 acres. Few birds or animals are likely to be killed, since they can move to adjacent, suitable locations. No economically important or rare or endangered species are known to exist in the project area. There should not be any effects on the overall amount or diversity of organisms in the area, since there exists an abundance of similar environmental conditions in Waihee Valley.

F. Land Use

The most significant affect on land use in the area will be the creation of conditions under which the owners of the two parcels can more fully utilize the property. Landslide hazards will be removed; and, a residence may be reestablished on parcel 8.

There will be no impact on land use in the surrounding area. This region is presently used for agriculture, although several housing developments are planned for the Kahaluu-Waihee area. This project should not in any way affect future plans for the area.

There are no known archaeological or historical sites in the excavation area. Likewise, no parks or recreation areas will be affected. Religious and educational institutions are at least one mile away, and will not be affected by the proposed project.

The material removed from the ridge will be used as fill at selected construction sites in the windward area. Although this will provide a good source of relatively inexpensive fill, there is no evidence to indicate that the availability of this material will have any effect on development on the windward shore.

G. Aesthetics

The implementation of the proposed project will enhance the visual appearance from the present situation, since the reshaping and landscaping planned will give the hill a natural look. The existing raw landslide area and steep scarps will be replaced by a rounded hillside with grass covering initially, and eventually with diverse natural vegetation.

IV. Alternatives to the Proposed Project

Several alternatives to the project have been considered, including alternate grading plans, alternate landscaping programs, and the alternative of leaving the situation as it is. These alternatives are discussed below.

A. Alternate Grading Plans

It is apparent that a great many grading plans are possible that would achieve the basic goal of stabilizing the slope. The excavation could cover a greater or lesser area, and variations in the depth of the cuts, and therefore the slopes, have been suggested. The objective for development of the proposed plan was to create a stable slope with as little alteration of the present situation as possible. The proposed slopes were recommended by a soils consultant, (Ref. 1) based on analysis of soil conditions in the area. Any steeper slopes would create less stability, increased hazards, and difficulty in reestablishing vegetation, while flatter slopes would result in increased and unnecessary excavation. The decision to excavate from elevation 160 feet to elevation 575 feet was based on consideration of the area that needed stabilization to the prescribed slopes. The horizontal limits of the excavation were defined by the intersection of the desired slopes with the present contours.

Another alternative is to cut and grade the ridge in benches. However, this would give the hillside a stepped, unnatural appearance, with bare vertical slopes. Therefore, the varying slope, with flatter gradients near the bottom to build up resistive forces at the top of the slope, is recommended.

B. Alternative Landscaping Plans

Several alternative plans to the proposed planting of Pangola grass on an incremental basis concurrent with excavation have been considered. The loose soil on top of the slope could be eliminated; however, this would not provide a median within which the Pangola runners could establish a root system. This approach would require application of commercial fertilizer every six months. Other species of vegetation could be planted; but, none seem to offer any advantages over the hardy, natural appearing Pangola grass.

The alternative of creating benches discussed above would also result in a different landscaping scheme, with vegetation on the plateaus and bare slopes exposed.

C. Alternative of No Project

The present soil conditions could be allowed to remain as is, thereby retaining the steep slopes and landslide areas. This alternative would do nothing to alleviate the erosion and unsightly and potentially hazardous soil conditions on the ridge. The present landowners will not regain full use of their land until the ridge is stabilized in the slide area.

V. Unavoidable Adverse Environmental Effects

The project will inevitably have some adverse environmental effects. The presence of construction vehicles on the ridge and in the project area will be a temporary impairment of the aesthetics of the area. Some higher than normal dust may be generated by the earth-moving equipment, although watering will keep dust levels well within the State standards for average 24-hour particulate concentration (100 mg/m^3).

Vegetation and animal habitats on the ridge will be destroyed, but very little wildlife will be harmed. The vegetation will reestablish itself in time; and, the surrounding area provides abundant similar habitats for animals.

Some erosion of soil may occur during the excavation period, although it is doubtful whether this will represent a significant increase over present conditions, since there is presently a large area of exposed soil.

After completion of the project the only significant effect on the environment will be in the physical appearance of the ridge, where a rounded grassy hillside will replace a steep ridge with exposed scarps. This change will be an aesthetic benefit to the area.

VI. Relationship Between Short-term Uses of the Environment and Long-term Productivity

The completed project will have little overall effect on either the short-term or long-term uses in the area. During construction, the use of the excavation area will be limited; but, this land is presently unused anyway. The long-term productivity of the land, in terms of residential use by the owners, will certainly be enhanced by the removal of the landslide area and potential hazards from slope instability.

VII. Irreversible and Irretrievable Commitments of Resources

The project will commit, irreversibly and irretrievably, labor, material, and financial resources during the excavation and grading of the ridge. Approximately 550,000 cubic yards of material will be removed irretrievably and committed to other uses.

Some vegetation and possibly a few animals will be irretrievably lost; but, no economically important or endangered species will be affected. Recolonization of the area will occur within a few years.

VIII. Coordination with Agencies and the Public .

The plans for the proposed project have been coordinated with the State Department of Land and Natural Resources, the Environmental Quality Commission, and the City and County of Honolulu Department of Land Utilization. All required permits and approvals will be obtained prior to initiating excavation.

This Draft Environmental Impact Statement (EIS) will be sent to all pertinent agencies, and be available to the public; and, all comments will be discussed and incorporated into the planning process and the final EIS.

References

1. Walter Lum and Associates, Inc. "Soil Reconnaissance Report, Proposed Borrow Site, Waihee Valley," September, 1974.

APPENDIX A

COMMENTS RECEIVED ON ENVIRONMENTAL IMPACT STATEMENT

List of Commenting Agencies

Federal

Department of the Army
Department of the Air Force
Army Corps of Engineers
Soil Conservation Service

State

Office of Environmental Quality Control
Department of Accounting and General Services
Department of Health
Department of Planning and Economic Development
Department of Transportation
Department of Education
Department of Agriculture
Hawaii Water Resources Regional Study

University of Hawaii

Environmental Center

City and County of Honolulu

Department of Land Utilization
Board of Water Supply
Department of Transportation Services
Department of Public Works
Department of General Planning



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

3 January 1975

HCSG-E

Richard E. Marland, PhD
Interim Director
Office of Environmental Quality Control
State of Hawaii
Room 301, 550 Halekauwila Street
Honolulu, Hawaii 96813

Dear Dr. Marland:

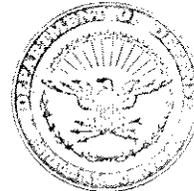
The Environmental Impact Statement for Excavation and Quarrying Use at
Maui, Oahu, and the draft Environmental Impact Statement for the State
Judiciary Complex Site Selection, Honolulu, Oahu were reviewed by this
office. We have no comments to offer.

Thank you for the opportunity to review these statements.

Sincerely,

LEE C. HERWIG, JR.
Colonel, MSC
Environmental Consultant to Commander
U.S. Army Support Command, Hawaii

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 15th AIR BASE WING (PACAF)
APO SAN FRANCISCO 96553



14 JAN 1975

REPLY TO DEEE (Mr Kimura, 4492158)
ATTN OF:

SUBJECT: Draft Environmental Impact Statement

TO: Office of Environmental Quality Control
Office of the Governor
550 Halekauwila Street
Tani Office Building, Third Floor
Honolulu, Hawaii 96813

We have no comment to render relative to the draft environmental impact statement for the following projects:

1. Waianae Valley Road Homestead Subdivision
- ✓ 2. Excavation and Quarrying Use at Waihee, Oahu
3. Heeia Kea-Pine Tree Junction Rights-of-Way

A handwritten signature in cursive script, reading "Allan M. Yamada", is positioned above the typed name.

ALLAN M. YAMADA
Asst Dep Comdr for Civil Engrg



DEPARTMENT OF THE ARMY

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

PODED-PV

9 January 1975

Dr. Richard E. Marland, Interim Director
Office of Environmental Quality Control
State of Hawaii
550 Halekauwila Street
Honolulu, Hawaii 96813

Dear Dr. Marland:

We have reviewed the draft environmental impact statement for Excavation and Quarrying Use at Waihee, Oahu, and have the following comments:

a. The impacts upon water quality, both in Waihee Stream and Kaneohe Bay, should be addressed in greater detail. Although the statement describes a grassing program and states that soil erosion should not significantly increase over present conditions, the susceptibility of the cuts to erosion and the increase in water turbidity until the vegetation is firmly established should be discussed. Measures to minimize the amount of eroded soil entering the waterways should be included.

b. The location of the stockpiling area for the excavated material prior to final disposal should be described. Erosion control measures for the stockpile area should be considered.

Sincerely yours,


KISUK CHEUNG
Chief, Engineering Division

UNITED STATES DEPARTMENT OF AGRICULTURE

SOIL CONSERVATION SERVICE

440 Alexander Young Building, Honolulu, Hawaii 96813

January 8, 1975

Dr. Richard E. Marland
Office of Environmental
Quality Control
550 Halekauwila St. - Room 301
Honolulu, Hawaii 96813

Dear Dr. Marland:

Subject: Environmental Impact Statement for Excavation and
Quarrying Use at Waihee, Oahu

The proposal described is located in the Kahaluu watershed area, which, as you may be aware, is a PL-566 watershed project that the Soil Conservation Service is providing assistance on.

This particular area was the site of a landslide several years ago, and there is still a chance of additional slides causing further damage to property in the area. The proposal, as described, with proper erosion control measures applied, could stop an existing erosion problem and remove the threat of future slides. However, the area is located just above one of the proposed debris basin sites in the watershed project.

If the proposal were in operation during the time the watershed works of improvement were being installed, it could be detrimental to the watershed project. Sediment from the hillside could prevent the debris basin from protecting the area it is designed to protect.

We feel that the proposal could be compatible with the flood control project and also provide sediment reduction benefits if it were completed before construction begins on the flood control project. The 24-month period that the excavation would require could place the two projects in conflict. If the period could be shortened, possibly to 6 to 12 months, we feel the two projects would be compatible.

In light of the preceding background information, we offer the following comments specific to the proposal for consideration:



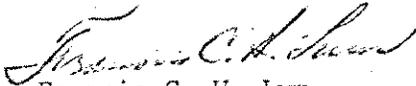
The area in question is actively eroding at the present time. The rate of erosion can be expected to increase significantly during excavation, unless adequate erosion control measures are employed. A desilting basin should be constructed between the site and Waihee Stream.

The 6-inch layer of loose soil to be left could cause serious erosion problems. A firm seedbed should be established to reduce the erosion hazard until the vegetation is established. Reshaping of the slopes, as called for in the impact statement, will be necessary to adequately stabilize the slopes and establish the pangolagrass.

No mention is made of fertilization. An initial application of fertilizer (in the holes where the sprigs are planted), followed by another application a year later, will be necessary. Otherwise, there will not be sufficient vegetative cover to control erosion.

Thank you for the opportunity to review this draft.

Sincerely,



Francis C. H. Lum
State Conservationist

cc: Mr. Koizumi, EPA, Honolulu, HI

OFFICE OF ENVIRONMENTAL QUALITY CONTROL
OFFICE OF THE GOVERNOR
550 Halekiauila Street
Tan Office Building, Third Floor
Honolulu, Hawaii 96813

DATE	1/10/75	STY	879
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CA		WA	
REC'D JAN 13 1975 RMTG			
VK		RDP	
MY		DKA	

-FW-

January 10, 1975

MEMORANDUM

TO: Christopher Cobb, Director
Department of Land & Natural Resources

FROM: Richard E. Marland, Director *Richard E. Marland*
Office of Environmental Quality Control

SUBJECT: Applicant Action Environmental Impact Statement for
Excavation and Quarrying Use at Waihee, Oahu, Hawaii

In the thirty day review period, this Office has received seven comments on the above subject. Copies of the comments have been forwarded to both your department and the applicant, R. M. Towill Corporation. An attached sheet lists the responding agencies.

In our review of the EIS, we have the following comments:

OWNERSHIP

The ownership of the site is not discussed in the EIS.

WATER RUN-OFF

Since grading of the site will involve the removal of vegetation, will planting pangola grass reduce water run-off? What other conservation measures will be incorporated to reduce water run-off and erosion?

WILDLIFE

The grading plan will cause the removal of vegetation and consequently, the removal of natural habitats for wildlife. Thus, this Office recommends a discussion concerning the project's effect on the wildlife.

Also, on page 6, the statement, "Several species of birds have been noted; but no unique habitats were found," should be documented.

DRAINAGE AND EROSION

Under Drainage and Erosion, what is the justification that sediment will not exceed present silt run-off and surface run-off will decrease? This project could divert water run-off to unexpected areas. Thus, a worse condition may result.

Also, what immediate precautions will be taken to avoid erosion after grading?

PANGOLA GRASS

Will fertilizer be used to enhance the growth of the pangola grass? If so, how will this effect the stream's water quality?

SHORT-TERM USES VS. LONG-TERM PRODUCTIVITY

Discussion should be expanded to include the effects in terms of social and economic aspects. Will this project lead way for development in the area below?

KAHALUU WATERSHED PROJECT

This Office wishes to point out that a joint effort has been made between City and County of Honolulu and Soil Conservation Service in this area. We have processed the draft EIS. A final EIS is forthcoming. We strongly recommend coordination with these agencies before further action is taken.

RECOMMENDATIONS

Although this Office did not attempt to summarize other comments, we recommend that each reviewer be given careful consideration.

We further recommend that (1) applicant's responses be sent to all commentors including this Office, indicating how specific concerns were considered, evaluated, and disposed; (2) your comments and evaluation be sent to this Office; and (3) the notification of approval or non-approval be sent to this Office for publication.

We trust that comments will prove helpful to you in your decision. Thank you for the opportunity to review the EIS.

Attachments

cc: R. M. Towill Corporation

LIST OF RESPONDING AGENCIES

FEDERAL

Department of the Army	January 3, 1975
Soil Conservation Service	January 9, 1975
Department of the Army (Corps of Engineers)	January 9, 1975

STATE

*Department of Agriculture	December 23, 1974
*Department of Education	December 27, 1974

UNIVERSITY OF HAWAII

Environmental Center	January 10, 1975
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CITY AND COUNTY OF HONOLULU

*Department of Public Works	December 19, 1974
*Board of Water Supply	December 23, 1974
*Department of General Planning	December 30, 1974
Department of Transportation Services	January 8, 1975

*comments forwarded to DLNR and R. M. Towill

GEORGE R. ARIYOSHI
GOVERNOR



HIDEO MURAKAMI
COMPTROLLER

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

JAN 10 1975

Dr. Richard Marland
Interim Director
Office of Environmental
Quality Control
550 Halekauwila Street
Honolulu, Hawaii

Dear Dr. Marland:

Subject: EIS for Excavation and Quarrying
Use at Waihee, Oahu

We have reviewed the EIS for the subject project and have the following comments to make:

Page 7

A. Air Quality and B. Noise

The potential dust and noise generation along the Waihee Road fronting Kahaluu Elementary School should be discussed in terms of its effect on the school and how they will be alleviated or controlled.

B. Traffic

The additional danger to walking students from the increased truck traffic should be discussed and the precautionary measures to offset this additional danger indicated. Additionally, projects of this type generally leave the roadways leading to the site strewn with mud which increases the chance of accidents. Therefore, measures proposed to be taken to

Dr. Richard Marland
Page 2

Ltr. No. (P)1050.5

alleviate this potential danger should also be discussed.

If you have any questions, please advise us.

Very truly yours,



HIDEO MURAKAMI
State Comptroller

GEORGE R. ARIYOSHI
GOVERNOR OF HAWAII



GEORGE A. L. YUEN
DIRECTOR OF HEALTH

STATE OF HAWAII
DEPARTMENT OF HEALTH
P. O. BOX 3378
HONOLULU, HAWAII 96801

In reply, please refer to:
File: EPHSD-SS

January 14, 1975

MEMORANDUM

To: The Honorable Richard E. Marland, Interim Director
Office of Environmental Quality Control

From: Chief, Environmental Protection & Health Services Division

Subject: Draft Environmental Impact Statement (EIS) for Excavation and
Quarrying Use at Waihee, Oahu

Thank you for allowing us to review and comment on the subject
EIS. 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.

A handwritten signature in black ink, appearing to read "Shinji Soneda", is written over a horizontal line.

SHINJI SONEDA



DEPARTMENT OF PLANNING
AND ECONOMIC DEVELOPMENT

250 South King St. / Honolulu, Hawaii 96813 / P. O. Box 2359 / Honolulu, Hawaii 96804

George R. Ariyoshi
Governor

Hideto Kono
Director

Frank Skrivanek
Deputy Director

January 15, 1975

Ref. No. 2776

MEMORANDUM

TO: Dr. Richard E. Marland, Interim Director
Office of Environmental Quality Control

FROM: Hideto Kono, Director

SUBJECT: Environmental Impact Statement for Excavation and Quarrying Use
at Waihee, Oahu

We have reviewed the subject report and find that it has adequately assessed the environmental concerns that can be expected from the proposed project.

We have no comment to offer at this time but appreciate the opportunity to review the subject statement.

GEORGE R. ARIYOSHI
GOVERNOR



E. ALVEY WRIGHT
DIRECTOR

LAWRENCE F. O. CHUN
DEPUTY DIRECTOR

MUNNY Y. M. LEE
DEPUTY DIRECTOR

DOUGLAS S. SAKAMOTO
DEPUTY DIRECTOR

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

869 PUNCHBOWL STREET
HONOLULU, HAWAII 96813

IN REPLY REFER TO:

ATP 8.2788

January 10, 1975

Dr. Richard E. Marland
Interim Director
Office of Environmental
Quality Control
550 Halekaiwila St., Room 301
Honolulu, Hawaii 96813

Dear Dr. Marland:

Subject: Environmental Impact Statement for
Excavation and Quarrying Use at Waihee, Oahu

In reference to the subject environmental statement, we have no
comments to offer as it relates to and affects our transportation program.

Sincerely,

Douglas S. Sakamoto
for E. ALVEY WRIGHT
Director



STATE OF HAWAII
DEPARTMENT OF EDUCATION
P. O. BOX 2380
HONOLULU, HAWAII 96804

OFFICE OF BUSINESS SERVICES

December 27, 1974

MEMO TO: Dr. Richard E. Marland, Director
Office of Environmental Quality Control

F R O M: Teichiro Hirata, Superintendent
Department of Education

SUBJECT: Review of Environmental Statements for:
a) Heeia Kea-Pine Tree Junction Rights-of-Way
b) Excavation and Quarrying Use at Waihee

The following project environmental impact statements have been received and reviewed:

- a. Heeia Kea-Pine Tree Junction Rights-of-Way for High-Voltage Transmission Circuits in the Conservation District at Kaneohe, Island of Oahu, Hawaiian Electric Co., Incorporated, December 11, 1974.
- b. Excavation and Quarrying use at Waihee, Oahu, December, 1974.

Our departmental review of the proposed projects showed no adverse effects to the general welfare of the Department of Education.

Your continued submittal of future environmental impact statements for our review will be appreciated.

Teichiro Hirata

GEORGE R. ARIYOSHI
GOVERNOR



JOHN FARIAS, JR.
CHAIRMAN, BOARD OF AGRICULTURE

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

December 23, 1974

MEMORANDUM

To: Dr. Richard E. Marland, Interim Director
Office of Environmental Quality Control

Subject: EIS for Excavation and Quarrying Use at Waihee, Oahu

The Department of Agriculture appreciates the opportunity to review this statement.

The primary area affected is in a conservation district. The proposed grading profile and pangola grass planting will improve erosion control.

No significant agricultural impacts are anticipated unless residential use develops as is stated on page 13.

John Farias, Jr.
Chairman, Board of Agriculture

JF:d:h



HAWAII WATER RESOURCES REGIONAL STUDY

SUITE 645 • 150 SOUTH KING STREET
HONOLULU, HAWAII 96813

Telephone 548-2312

January 10, 1975

MEMORANDUM

TO: Office of Environmental Quality Control

FROM: Manabu Tagomori

SUBJECT: EIS for Excavation and Quarrying Use at Waihee, Oahu

The proposed actions when completed should result in improved appearance and slope stability. However, the extended period of two years planned for the quarrying and excavation of soil will require close control to minimize sediments from entering stream courses and finally depositing in near shore waters.


MANABU TAGOMORI
Study Manager

MT:jts

Enc.



University of Hawaii at Manoa

Environmental Center
Maile Bldg. 10 • 2540 Maile Way
Honolulu, Hawaii 96822
Telephone (808) 948-7361

Office of the Director

January 10, 1975

MEMORANDUM

TO: Richard E. Marland
FROM: Doak C. Cox, Director *DC*
RE: Review of Draft EIS for a Quarrying Project in Waihee, Oahu

The following members of the University of Hawaii have contributed to the Environmental Center review of this DEIS:

Andrew Berger, Zoology
Doak C. Cox, Environmental Ctr.
Ruth Gay, Botany
Hawaii Environmental Simulation Laboratory (HESL)
Jacquelin N. Miller, Environmental Ctr.

pg. 1. I. Description of the Proposed Project

The description of the intent of the proposed project stresses the elimination of the "hazardous precipice on the ridge and reshaping the ridge into a uniform gentle slope" (pg. 1). The basic goal of the project is further stated as "stabilizing the slope," and "The objective for development of the proposed plan was to create a stable slope with as little alteration of the present situation as possible" (pg. 10). To accomplish this goal, some 554,000 cubic yards of material will be removed over a period of 24 months. "The excavated dirt will be used as fill for construction projects in the Kahaluu area, with the owners of the land to be paid royalties of \$0.25 per cubic yard for fill soil and \$1.00 per cubic yard for screened soil" (pg. 1).

The primary emphasis of this DEIS is on the "elimination of the hazardous precipice" etc. However, at present there are apparently no buildings or people endangered by this ridge, and according to the DEIS (pg. 8) "a residence may be re-established on parcel 8," if the project is permitted. It does not seem reasonable to justify moving 554,000 cubic yards of material to allow construction of one residence.

In fact, it would appear that this project is primarily designed as a source of fill which will be sold and used by developers.

In addition to the comments presented below, we note that the plans to reshape the hazardous slope seem generally satisfactory if the actual grading work follows closely with the engineering plans as presented in this report. Partly completed grading work that offers potential hazard should not be left standing very long without being made safe through remedial grading work.

pg. 5. II. Present Environmental Conditions

A. Physical Factors

Reference is made to a landslide area on the southwest slope and a previous borrow site on the northeast slope of the ridge which lacks vegetation. It would be helpful if this area could be delineated on figure 2.- What are the run-off characteristics for this area? How long has it been devoid of vegetation? Is the steepness of the slope, lack of soil quality, or some other factor responsible for its lack of revegetation? How does this area compare with the final configuration proposed in the subject project.

Excavation plans call for the removal of a layer of dirt up to a depth of 100 feet in some areas of the site, but there is a lack of sufficient information as to the geology of this subsurface. Soil borings have been confined only to the "surface" level. Is it to be assumed that there have been no deeper borings in the area?

B. Land Use

Is there any existing agricultural use of this property or the property adjacent to the ridge area?

pg. 7. III. Environmental Impact of Proposed Action

B. Noise

C. Traffic

Transporting the fill material from the site will lead to increased truck traffic on Waihee Road that will generate noise pollution. Some individuals (Kahaluu Coalition Office) who work adjacent to Waihee Road have already complained about noise generated by construction vehicles using that road.

The soil consultant noted that "Some boulders, decomposed to fresh lava rocks, may be anticipated in the deeper excavation." Without more detailed soil borings, blasting should not be ruled out for this project.

D. Drainage and Erosion

According to the Department of Agriculture's Soil Survey, for WpF soils (Waikane silty clay, 40-70 percent slopes) "runoff is rapid to very rapid and the erosion hazard is severe."

Increased runoff may occur in the area resulting from: (1) the grubbing of existing vegetation such as scrub grass, Java plums and brush; and (2) the compacting of the subsurface soils by heavy equipment that destroy natural air pockets in the ground. Compacted soils will reduce the infiltration rate for the area and as a result lead to increased surface runoff. Recovery of the soil structure will not be immediate.

A 6-inch veneer of loose soil on a slope compacted by heavy equipment will be stable only during light rainfall. Sediment contributions to Waihee Stream will increase significantly over existing rates until the entire disturbed slope is revegetated.

One of the many causes of landslides is the extra weight added to soils located on steep slopes by rainfall that infiltrates the natural air pockets of the soils. Compaction of the subsurface material will destroy these air pockets and make the soil more resistant to erosion and landslides. However, if compaction of subsoils creates an impervious layer, groundwater may seep through the slope and may aggravate a slide hazard.

Stockpiling of screened soil should be protected from erosion if it is located on the site where rainfall averages between 75" to 100".

As mentioned in the soil consultant's report, a silting pond may be necessary for this area.

E. Ecology

It is not likely at the elevations concerned that there be any rare and endangered birds, however, was any ornithological survey taken?

With respect to the flora of the area we suggest expansion in the description of the vegetation to answer the following:

- a. What types of brush, scrub grass and woodland are found on the site? (Such types might include the uluhe-ohia woodland, the akia-guava scrub, and the Java plum-broomsedge savannah, all found in the vicinity.)
- b. What is the estimated acreage of each of these types?
- c. What are the most valued plant species now found at the site in terms of soil stability, ornamental, ethnic or botanical value?
- d. Will any of the specimens of valued plant species be transplanted?
- e. What method of disposal is planned for the cleared vegetation?

It takes approximately three months for pangola grass to provide good protection as ground cover (Bessel D. van't Woudt and Goro Uehara, Erosion Behavior and Control on a Stripmined Latosolic Soil, Technical Bulletin No. 46, Hawaii Agricultural Experiment Station, University of Hawaii, October, 1961,

p. 33). If a heavy rainfall washes off the loose topsoil before the pangola grass has had a chance to establish itself on the slope, extra topsoil should be added to guarantee the growth of the grass sprigs.

In addition to the proposed replanting of the cleared site with grass, we suggest consideration of reforestation with Java plum specimens removed from the site. If feasible, this reforestation could increase soil stability, improve the landscape aesthetically and perhaps give some protection from the recurrent fires which maintain the grass communities in this humid area and contribute to the sedimentation problems in the makai areas.

F. Land Use

What utilization will be made of the property by the owners after completion of the grading project? Will the area be suitable for housing development or agriculture? If the latter, how will the proposed new usage compare economically with the present?

Has an archaeological reconnaissance of the area been conducted?

Some mention should have been made as to where in the Windward region the fill material will be used. According to Joe Harper of the Kahaluu Coalition, he was told that the fill material was planned for the Alexander and Baldwin land located at the corner of Waihee Road and Kam Highway.

G. Aesthetics

It is very doubtful whether the proposed rounded hillside will offer "a natural look" in an area where steep ridges are typical.

pg. 10. IV. Alternatives to the Proposed Project

See comments on I. Description of the Proposed Project, pg. 1. of our review.

V. Unavoidable Adverse Environmental Effects

See comments on D. Drainage and Erosion, pp. 2-3, and G. Aesthetics, p. 4, of our review.

VI. Relationship Between Short-Term Uses of the Environment and Long-Term Productivity

The statement is made that "long-term productivity of the land, in terms of residential use by the owners, will certainly be enhanced by "the removal of the landslide area"

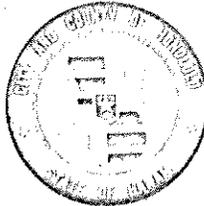
Does this imply housing development in the area and if so how many units might be possible?

We appreciate the opportunity to comment on this DEIS.

cc: A. Berger, R. Gay, HESL

DEPARTMENT OF LAND UTILIZATION
CITY AND COUNTY OF HONOLULU

SUITE 2180 PACIFIC TRADE CENTER
190 SOUTH KING STREET
HONOLULU, HAWAII 96813



FRANK F. FASI
MAYOR

PAUL DEVENS
MANAGING DIRECTOR

GEORGE S. MORIGUCHI
DIRECTOR

WILLIAM E. WANKET
DEPUTY DIRECTOR

EIS (RH)

JANUARY 13, 1975

MEMORANDUM

TO : DR. RICHARD E. MARLAND, INTERIM DIRECTOR
OFFICE OF ENVIRONMENTAL QUALITY CONTROL

FROM : GEORGE S. MORIGUCHI, DIRECTOR OF LAND UTILIZATION

SUBJECT: ENVIRONMENTAL IMPACT STATEMENT FOR EXCAVATION
AND QUARRYING USE AT WAIHEE, OAHU
APPLICANT: R.M. TOWILL CORPORATION

We have reviewed the above and offer the following comments:

As noted in our letter to Mr. Sunao Kido, former Chairman of the Department of Land and Natural Resources, dated December 11, 1974 (copy attached) commenting on a Conservation District Use Application for this project, most of the proposed activity falls within the State Conservation District. Any quarrying activity which falls within the Urban District (R-6 or AG-1 zoning districts) under our jurisdiction can only be permitted under a Conditional Use Permit. We continue to feel that joint review of City and State permits would be most effective.

Section I, Description of the Proposed Project: We have some concern about the proposed 24-month period of work and by necessity, period of nuisance (i.e., noise, dust, and truck traffic). We would prefer to see a shorter schedule and one which does not appear to be tied to the demand for fill material or the rate of sale of the excavated dirt, if feasible.

DR. RICHARD E. MARLAND
PAGE TWO
JANUARY 13, 1975

Section C, Traffic: We have recently granted tentative approval for a proposed 166 lot residential subdivision at the mauka end of Waihee Road. This is a potential traffic generator which should be considered in projecting trips and possible conflicts on the access roads.

Section D, Drainage and Erosion: Drainage and temporary erosion control measures are not presented in the report.

Section IV, Alternatives to the Proposed Project: Has a non-grading alternative been evaluated as a possible solution to the problem? We are concerned that major grading and reshaping may produce a rounded slope which is out of character with the natural, sharper ridges in the area.

Section IV, A., Alternate Grading Plans: Alternative plans are mentioned but not attached. We would like to see alternate proposals submitted for review and comment. We support the basic goals of stabilizing the slope. We are interested in the minimum amount of grading to achieve this goal.

Section IV, B., Alternative Landscaping Plans: We recommend the inclusion of some trees and other plants with the proposed pangola grass.

Thank you for the opportunity to review and comment on this document.


GEORGE S. MORIGUCHI
Director of Land Utilization

GSM:fm
Attach.

Mr. Sunao Kido, Chairman
and Member of the Board
Page 2

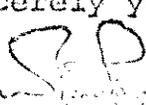
Applicant should also be required to obtain a City and County grading permit, which his application indicates he plans to do. This permit should contain provisions to handle possible exigencies such as those posed by the soils engineer, Walter Lum Associates, Inc., under the titles "Unforeseen Conditions" and "Site Regrading" on page five of their soil reconnaissance report dated September 26.

We have noted several discrepancies in the papers submitted by applicant:

1. The tax map key should refer to Parcels 1 and 8, rather than 1 and 18, as shown by applicant's soil engineer.
2. Proposed grading plan should refer to Revised Ordinances of 1969 rather than 1961.

Thank you for the opportunity to comment on this application. Should you have any questions, please contact Johan Ronningen of our staff at 546-8042.

Sincerely yours,


WILLIAM E. WANKET
Deputy Director

WEW:nt

Encl.

cc: Mr. Ray Tabata, Office of
Environmental Quality Control

Dept. of Land Utilization

LUL1/74-4094 (JR)
LUL1/74-4076

DECEMBER 11 1974

Mr. Sunao Kido, Chairman
and Member of the Board
Department of Land and Natural
Resources
State of Hawaii
Honolulu, Hawaii

Dear Mr. Kido:

Conservation District Use Application
Excavation and Quarrying at Waihee
Paradise Industries, Inc., 686 Ahua Street,
Honolulu 96819. TMK: 4-7-06: 1, 8.
Your File No. OA-10/11/74-603

This is in response to your request for comments.

We have examined this proposal under the Comprehensive Zoning Code of the City and County of Honolulu. Most of the site, being in the State Conservation District, falls within the City and County P-1 Preservation District. However, portions of the site shown on the grading plan are obviously within the State Urban District, an area zoned R-6 Residential and AG-1 Restricted Agricultural. In all of the City and County zoning districts involved, the proposed use requires a conditional use permit in order to proceed. The general conditions of such a permit are found in Section 21-248 of the Comprehensive Zoning Code, a copy of which is attached. Since the portions of the site within the Urban District will require a conditional use permit, it would appear prudent that we review jointly the conditions of the proposed City and State permits before final approvals are made. This procedure has been effectively utilized between this Department and the State Land Use Commission under other similar permit situations.

We have received a copy of your letter of October 29 to the applicant requiring the preparation of an environmental impact statement under the provisions of Act 246. We fully support this decision.

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU

630 SOUTH BERETANIA

POST OFFICE BOX 3410

HONOLULU, HAWAII 96843



JOHN HENRY FELIX, Chairman
STANLEY S. TAKAHASHI, Vice Chairman
GEORGE APDUHAN
YOSHIE H. FUJINAKA
KAZU HAYASHIDA
WALTER D. HOWARD
E. ALVEY WRIGHT

EDWARD Y. HIRATA
Manager and Chief Engineer

December 23, 1974

Dr. Richard E. Marland
Interim Director
Office of Environmental Quality Control
550 Halekauwila Street
Honolulu, Hawaii 96813

Dear Dr. Marland:

SUBJECT: Environmental Impact Statement for
Excavation and Quarrying Use at Waihee, Oahu

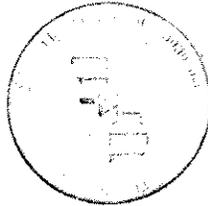
The proposed project is not anticipated to adversely affect potable groundwater resources or water supply facilities in the area.

Thank you for sending us the environmental impact statement for our review and comments. Should further information be required on this matter, please contact Mr. Michael Shigetani at 548-5221.

Very truly yours,


For Edward Y. Hirata
Manager and Chief Engineer

DEPARTMENT OF TRANSPORTATION SERVICES
CITY AND COUNTY OF HONOLULU
CITY HALL ANNEX
HONOLULU HAWAII 96815



FRANK F. FASI
MAYOR

PAUL DEVENS
MANAGING DIRECTOR

GEORGE C. VILLEGAS
DIRECTOR

ROY A. PARKER
DEPUTY DIRECTOR

January 8, 1975

PL-6022-74

Office of Environmental Quality Control
550 Halekauwila St., Rm. 301
Honolulu, Hawaii 96813

Gentlemen:

Subject: Environmental Impact Statement for Excavation
and Quarrying Use at Waihee, Oahu

The Department of Transportation Services feels that Waihee Road is adequate to handle the slight increase in truck traffic.

However, inconvenience to other motorists will occur on Kamehameha Highway at Waihee Road by left-turning vehicles especially during the peak-traffic hours.

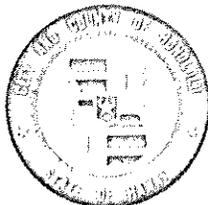
Very truly yours,

A handwritten signature in cursive script that reads "Clifford Y. Nohara".

CLIFFORD Y. NOHARA
Chief, Traffic Engineering

DEPARTMENT OF PUBLIC WORKS
CITY AND COUNTY OF HONOLULU

HONOLULU, HAWAII 96813



FRANK F. FASI
MAYOR

KAZU HAYASHIDA
DIRECTOR AND CHIEF ENGINEER

ENV 74-325

December 19, 1974

Office of Environmental Quality Control
Office of the Governor
State of Hawaii
550 Halekauwila Street, Room 301
Honolulu, Hawaii 96813

Gentlemen:

Subject: Environmental Impact Statement
for Excavation and Quarrying Use
at Waihee, Oahu

We have reviewed the statement and have the following comments.

1. A grading permit is not required because the earthmoving activity is basically a quarrying operation. However, if a grading permit is made a condition of the Conditional Use Permit, the Department will review and process the grading plan.
2. A plan of erosion control should be submitted to the department. Swales on both sides and on the top of the excavated area should be provided to divert storm water from draining directly onto the newly exposed face of the ridge. Loose excavated material, if not properly handled and stored during the operation could be easily carried into the stream and hence into Kaneohe Bay. Certain soil in the area belonging to the Waikane Series (WpE, WpF, WpF2, WpaE) exhibit medium to very rapid runoff characteristics and erosion hazards are severe. To preclude sediments losses to the stream, some sort of a silting basin should be planned below the face of the ridge.

Very truly yours,

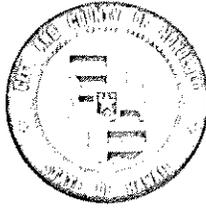
Kazu Hayashida
For KAZU HAYASHIDA
Director and Chief Engineer

cc: Div. of Engineering

DEPARTMENT OF GENERAL PLANNING
CITY AND COUNTY OF HONOLULU
SUITE 2100 PACIFIC TRADE CENTER
190 SOUTH KING STREET
HONOLULU, HAWAII 96813

FRANK F. FASI
MAYOR

PAUL DEVENS
MANAGING DIRECTOR



ROBERT R. WAY
CHIEF PLANNING OFFICER

DONALD A. CLEGG
DEPUTY CHIEF PLANNING OFFICER

DGP12/74-3027 (JB)

December 30, 1974

Dr. Richard E. Marland, Interim Director
Office of Environmental Quality Control
State of Hawaii
550 Halekauwila Street, Room 301
Honolulu, Hawaii 96813

Dear Dr. Marland:

Excavation and Quarrying Use at Waihee, Oahu,
Draft Environmental Impact Statement

Thank you for the opportunity to examine the above-captioned draft environmental impact statement.

We wish to note that the Departments of Public Works and Parks and Recreation of the City and County of Honolulu and the U. S. Soil Conservation Service jointly are in the process of programming a flood control/recreational improvements project for the Kahaluu Watershed. In this regard, the proposed excavation activity, therefore, should be coordinated with the aforementioned public agencies.

The organization or individual(s) responsible for undertaking the proposed operations should be indicated in the final EIS.

Sincerely,

Robert R. Way
ROBERT R. WAY
Chief Planning Officer

RHW, cmL

APPENDIX B

RESPONSES TO SUBSTANTIVE AGENCY COMMENTS

R. M. TOWILL CORPORATION

Honolulu

Yokohama

Mexico

CIVIL ENGINEERS
SURVEYORS
HYDROGRAPHERS
PHOTOGRAMMETRIC ENGINEERS
AERIAL PHOTOGRAPHERS

January 24, 1975

Dr. Richard E. Marland, Director
Office of Environmental Quality Control
Office of the Governor
550 Hale Kaula Street, Room 301
Honolulu, Hawaii 96813

Dear Dr. Marland:

SUBJECT: Environmental Impact Statement for
Excavation and Quarrying Use at Waihee, Oahu

Reference is made to your letter submitted to the office of Environmental Quality Control, subject as above, dated January 10, 1975. Your specific comments are addressed below.

Ownership

The ridge in question is also a property line with approximate half of the affected property owned by Mr. Satoru Kinoshita (Parcel 8 on south side of ridge) and the other half is owned by Mr. Richard Towill (Parcel 1 on north side).

Water Run-off

The planting of pangola grass, combined with the flatter slope, is expected to reduce runoff from the ridge which is now partially (approximately 15%) without vegetation. During the excavation, erosion will be controlled by enlarging an existing sedimentation basin on Parcel 8, which collects runoff from the entire ridge.

Wildlife

The project will remove, temporarily, some natural habitats for wildlife. However, as indicated in the University comments, there are probably no unique habitats, and no rare or endangered species of wildlife. The few animals or birds in the area which are affected can temporarily move to adjacent, similar locations. Following completion of the project, similar habitats will again be available.

Drainage and Erosion

Runoff from the ridge presently flows to a natural depression on Parcel 8. (Drainage from Parcel 1 is conveyed there by a small ditch at the base of the hill.) The grading plan shows that future drainage will also flow to this area. Surface runoff should decrease because the flatter slopes will permit increased infiltration. Much of the present silt runoff comes from the bare landslide area on Parcel 8; therefore, coverage of the hill with vegetation should decrease the amount of erosion.

January 24, 1975

Pangola Grass

Fertilizer will be applied at planting and again one year later. Significant quantities of nutrients are not expected to reach Waihee Stream. The fertilizer will be applied in the holes, and should not be removed by surface erosion. The Soil Conservation Service has indicated that the probability of fertilizer leaching to the surface and draining off during rainy periods is very small.

Short-term Uses vs. Long-term Productivity

The project will not have significant effects on the social or economic situation in the area. Several developments are already planned for the nearby Waihee vicinity. The availability of fill material from this project site will not have any influence on the future development of the area. Construction of housing on the graded ridge is precluded by the slope of the hill and its classification as a Conservation District.

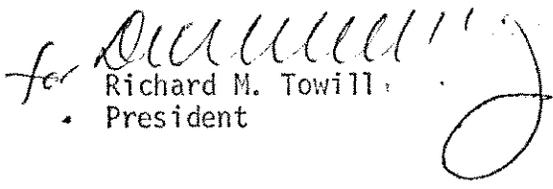
Kahaluu Watershed Project

The Department of Agriculture Soil Conservation Service has been contacted regarding the Kahaluu Watershed Project and no conflict between the two projects is anticipated.

We have enclosed a copy of a revised Environmental Impact Statement including the responses to all commenting agencies as an appendix. Your review and comments on this Environmental Impact Statement are appreciated.

Very truly yours,

R. M. TOWILL CORPORATION

for 
Richard M. Towill,
President

JWA:e1/07-08

cc: Department of Land and Natural Resources

R. M. TOWILL CORPORATION

Honolulu

Yokohama

Mexico

CIVIL ENGINEERS
SURVEYORS
HYDROGRAPHERS
PHOTOGRAMMETRIC ENGINEERS
AERIAL PHOTOGRAPHERS

January 24, 1975

Mr. Kisuk Cheung, Chief
Engineering Division
Department of the Army
U. S. Army Engineer Division,
Pacific Ocean
Bldg. 230, Fort Shafter
APO San Francisco, California 96558

Dear Mr. Cheung:

SUBJECT: Environmental Impact Statement for
Excavation and Quarrying Use at Waihee, Oahu

Reference is made to your letter submitted to the office of Environmental Quality Control, subject as above, dated January 9, 1975. Your specific comments are addressed below.

The impacts on water quality in Waihee Stream and Kaneohe Bay should not be significant. The freshly cut areas will be immediately planted with Pangola grass, although some erosion may occur for several weeks until the vegetation is firmly established. The area of erosion at any given time will be fairly small. It should be noted that there are presently steep barren landslide areas which are presently eroding on the ridge.

The drainage of the Southeast side of the ridge flows down to a natural siltation basin on parcel 8 and then to Waihee Stream via a small tributary. This basin will be enlarged to prevent turbid water from flowing to Waihee Stream. The runoff from the north slope flows to a small ditch at the base, and is conveyed over to the siltation basin area.

The excavated material will be stockpiled on parcel 8, although most of the dirt will be hauled away soon after removal from the ridge. Runoff from the stockpile area will flow to the siltation pond. Care will also be taken to avoid building up large quantities and steep slopes in the stockpile.

Your review and comments on the Environmental Impact Statement are appreciated.

Very truly yours,

R. M. TOWILL CORPORATION

for 
Richard M. Towill
President

JWA:e1/11

cc: Office of Environmental Quality Control
Department of Land and Natural Resources

R. M. TOWILL CORPORATION

Honolulu

Yokohama

Mexico

CIVIL ENGINEERS
SURVEYORS
HYDROGRAPHERS
PHOTOGRAMMETRIC ENGINEERS
AERIAL PHOTOGRAPHERS

January 24, 1975

Mr. Francis C. H. Lum, State Conservationist
United States Department of Agriculture
Soil Conservation Service
440 Alexander Young Building
Honolulu, Hawaii 96813

Dear Mr. Lum:

SUBJECT: Environmental Impact Statement for
Excavation and Quarrying Use at Waihee, Oahu

Reference is made to your letter submitted to the office of Environmental Quality Control, subject as above, dated January 8, 1975.

Your comments on the relationship of our project to the Kahaluu Watershed project are of particular importance. From the information obtained from the Kahaluu Watershed Work Plan Report, the draft EIS on the subject, and your conversation with our office on January 23, 1975, it appears that the two projects should be compatible. Since your construction on the project will not begin for at least 1-1/2 years, the grading of the ridge should be very close to completion. Every effort will be made to complete the project in 12-18 months. The 24 month period proposed in the EIS was chosen to avoid stockpiling of material in the area.

Even if the construction of the debris basins begins before the grading is complete, silt runoff from the ridge will not reach the watershed project area. Drainage from the ridge will flow to a natural silting basin, which will be enlarged to insure that sediment laden water does not enter Waihee Stream. All water runoff from the project will reach Waihee Stream well above the watershed project limits.

As you commented, fertilizer will be applied in the holes during planting and again one year later. Fertilizer placed in the holes should not have any effect on the water of Waihee Stream, or Kaneohe Bay.

A seedbed will be established which will provide good growing conditions and minimize erosion potential.

Mr. Francis C. H. Lum

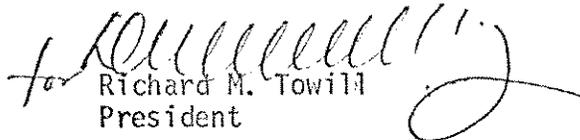
-2-

January 24, 1975

Your review of the Environmental Impact Statement and your recommendations regarding the proposed project are appreciated. We feel that this project will complement the Kahaluu Watershed project in providing erosion control for the area.

Very truly yours,

R. M. TOWILL CORPORATION


Richard M. Towill
President

JWA:a2/14

cc: Office of Environmental Quality Control
Department of Land and Natural Resources

R. M. TOWILL CORPORATION

Honolulu

Yokohama

Mexico

CIVIL ENGINEERS
SURVEYORS
HYDROGRAPHERS
PHOTOGRAMMETRIC ENGINEERS
AERIAL PHOTOGRAPHERS

January 24, 1975

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

Dear Mr. Murakami:

SUBJECT: Environmental Impact Statement for
Excavation and Quarrying Use at Waihee, Oahu

Reference is made to your letter submitted to the office of Environmental Quality Control, subject as above, dated January 10, 1975. Your specific comments are addressed below.

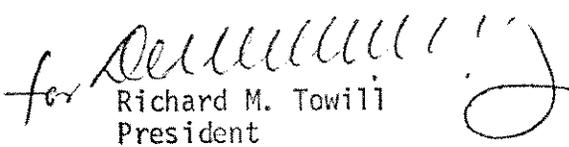
Regarding the potential for dust and noise generation near Kahaluu Elementary School, it does not appear that objectionable dust or noise will be produced by the trucks. Dust control measures, such as watering, will be implemented if dust problems arise. The contractor, including the truck drivers, will be required to minimize noise disturbance.

Truck drivers will also be advised of the school location and the school signs erected to alert vehicle operators. Every attempt will be made to keep the road clear of mud, primarily by avoiding overloading of trucks and the resultant spillage.

Your review and comments on this Environmental Impact Statement are appreciated.

Very truly yours,

R. M. TOWILL CORPORATION

for 
Richard M. Towill
President

JWA:el/09

cc: Office of Environmental Quality Control

R. M. TOWILL CORPORATION

Honolulu

Yokohama

Mexico

CIVIL ENGINEERS
SURVEYORS
HYDROGRAPHERS
PHOTOGRAMMETRIC ENGINEERS
AERIAL PHOTOGRAPHERS

January 24, 1975

Dr. Doak C. Cox, Director
Environmental Center
University of Hawaii
Maile Building 10
2540 Maile Way
Honolulu, Hawaii 96822

Dear Dr. Cox:

SUBJECT: Environmental Impact Statement for
Excavation and Quarrying Use at Waihee, Oahu

Reference is made to your letter submitted to the Office of Environmental Quality Control, subject as above, dated January 10, 1975. Your specific comments are addressed below.

The project has been designed to alleviate potential landslide hazards in the area, and to permit the landowners to regain full use of the property, including the reconstruction of one owner's home, destroyed by the landslide. The money paid to the landowners will be used primarily to pay for the excavation and grading operations and the reconstruction of the home. There are no plans for additional residential development or increased agricultural use on these properties. In fact, the steepness of the final regraded slopes, in addition to the classification of the land as a conservation district, would preclude the development of additional housing on this land. Grassing will immediately follow grading to minimize erosion.

The landslide area on the southwest slope of the ridge is delineated on figure 2, but the xerox reproduction made it difficult to read. An improved copy is enclosed. This area has been devoid of vegetation since 1969, when the landslide occurred. The steepness of the slope is the reason no vegetation has been able to regenerate. Runoff from the landslide area flows down to a natural sedimentation basin on parcel 8. Considerable erosion is presently occurring in this landslide area and will be corrected by the proposed project.

Although no deep soil borings have been taken, the soil consultant believes from his extensive soils experience that the material encountered will be predominantly soft, and may be removed by conventional earth-moving equipment. In the event that blasting is necessary, all applicable rules and regulations will be followed.

Regarding the question of agricultural use in the area, the owner of parcel 1 grows a few fruits and vegetables, for consumption by his own family. No commercial agriculture is practiced on these two parcels.

It is true, as you commented, that Waihee Road will experience some increase in truck traffic, with the resultant noise. This minor nuisance is not expected to disturb residents, or individuals who work or attend school adjacent to the road, since the frequency of truck passage during the day will be low.

As you pointed out, increased runoff may occur during the excavation and for a short time thereafter, due to removal of vegetation and compacting of soil. However, the area exposed to erosion at any one time over the two-year period will be minimal. Excavated areas will be promptly graded and grassed. Some minor erosion may also occur until the pangola grass is established. All runoff from the ridge flows to a natural sedimentation basin on parcel 8. This pond will be enlarged to prevent sediment-laden water from reaching Waihee Stream.

After completion of the grading program, runoff and erosion should be decreased by the flatter slope and complete cover of grass. The area is presently eroding, because of the ridge landslide area. The final design slopes should insure stability of the ridge under all conditions.

Soil stockpiles will be limited in size and steepness of slopes, with provision for runoff to the silting pond.

A detailed survey of the flora and fauna in the area was not considered necessary since the effects will be short-term, and abundant similar conditions are present in surrounding areas. As you confirm, rare or endangered birds are not likely to be at these elevations, and no unique animal habitats are on the ridge. The vegetation acreage on the hill consists exclusively of molasses pili and pangola grass, interspersed with a few java plum trees. None of these species has any unique ethnic, botanical, or ornamental value. Several java plums will be replanted on the ridge, and the vegetation reestablished will be very similar to that removed. The cleared grass will simply be removed with the dirt, since it is such a small amount. Trees not replanted will be ground up and used as mulch.

There has not been an archaeological reconnaissance conducted at the site. The owners have found no artifacts in the area. Although it is unlikely that any items of archaeological significance would be present on such steep slopes, the excavators will be instructed to contact the landowners if any are found. They will then contact the State Archaeologist for guidance on possible removal of the items.

With regard to the destination of the material removed from the hill, there are several potential sites requiring such fill in the vicinity, but no commitments have been made to any specific site.

Dr. Doak C. Cox

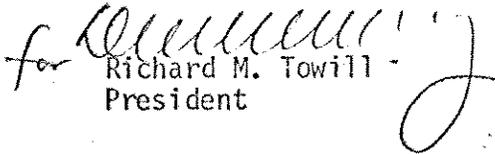
-3-

January 24, 1975

The reference to residential use by the owners is applicable only to the replacement of the single residence which was destroyed by the landslide several years ago. There is no other development planned, or possible because of the Conservation District designation.

Very truly yours,

R. M. TOWILL CORPORATION

for 
Richard M. Towill
President

JWA:e1/04-06

cc: Office of Environmental Quality Control
Department of Land and Natural Resources

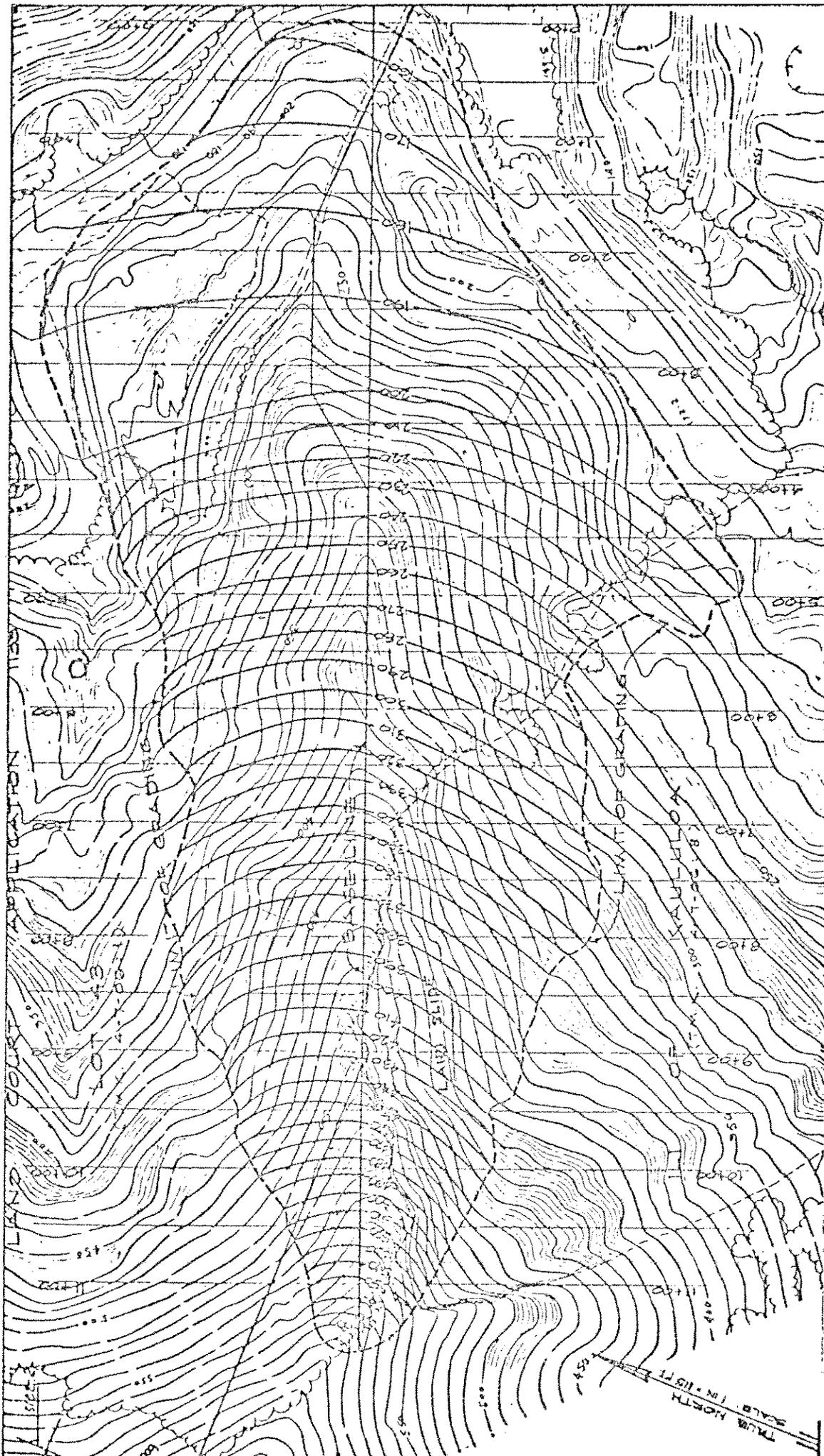


FIGURE 2: EXISTING CONTOURS AND FINAL GRADING CONTOURS

R. M. TOWILL CORPORATION

Honolulu Yokohama Mexico

CIVIL ENGINEERS
SURVEYORS
HYDROGRAPHERS
PHOTOGRAMMETRIC ENGINEERS
AERIAL PHOTOGRAPHERS

January 24, 1975

Mr. Manabu Tagomori
Study Manager
Hawaii Water Resources
Regional Study
Suite 645
190 South King Street
Honolulu, Hawaii 96813

Dear Mr. Tagomori:

SUBJECT: Environmental Impact Statement
for Excavation and Quarrying
Use at Waihee, Oahu

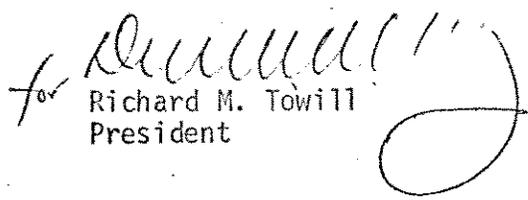
Reference is made to your letter submitted to the office of Environmental Quality Control, subject as above, dated January 10, 1975. We appreciate your review and general approval of the proposed project.

The 24-month period planned for the excavation and grading is designed so that removed material can be promptly used at fill sites, thereby minimizing the stockpiling of dirt and subsequent erosion. The grading effort will proceed from the top of the ridge, and newly graded areas will be immediately planted with Pangola grass. The drainage from the ridge flows to a natural siltation basin on parcel 8 and then to Waihee Stream via a small tributary. The siltation basin will be enlarged to ensure that sediment-laden water does not reach the stream. There should not be any significant effects on water quality in either Waihee Stream or Kaneohe Bay.

Your comments on the Environmental Impact Statement are appreciated.

Very truly yours,

R. M. TOWILL CORPORATION

for 
Richard M. Towill
President

JWA:d4/04

cc: Office of Environmental Quality Control
Department of Land and Natural Resources

R. M. TOWILL CORPORATION

Honolulu

Yokohama

Mexico

CIVIL ENGINEERS
SURVEYORS
HYDROGRAPHERS
PHOTOGRAMMETRIC ENGINEERS
AERIAL PHOTOGRAPHERS

January 24, 1975

Mr. Clifford Y. Nohara
Department of Transportation Services
City and County of Honolulu
City Hall Annex
Honolulu, Hawaii 96813

Dear Mr. Nohara:

SUBJECT: Environmental Impact Statement for
Excavation and Quarrying Use at Waihee, Oahu

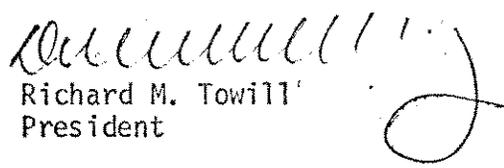
Reference is made to your letter submitted to the office of Environmental Quality Control, subject as above, dated January 8, 1975.

It is possible that some minor inconvenience will result to motorists at the intersection of Waihee Road and Kamehameha Highway from trucks turning left onto the highway. However, the trucks will for the most part avoid peak traffic hours, and only occasional short delays should occur.

Your review and comments on this Environmental Impact Statement are appreciated.

Very truly yours,

R. M. TOWILL CORPORATION

for 
Richard M. Towill
President

JWA:eI/10

cc: Office of Environmental Quality Control
Department of Land and Natural Resources

R. M. TOWILL CORPORATION

Honolulu

Yokohama

Mexico

CIVIL ENGINEERS
SURVEYORS
HYDROGRAPHERS
PHOTOGRAMMETRIC ENGINEERS
AERIAL PHOTOGRAPHERS

January 24, 1975

Mr. Robert R. Way
Chief Planning Officer
Department of General Planning
City and County of Honolulu
190 South King Street
Suite 2100
Honolulu, Hawaii 96813

Dear Mr. Way:

SUBJECT: Environmental Impact Statement
for Excavation and Quarrying
Use at Waihee, Oahu

Reference is made to your letter submitted to the Office of Environmental Quality Control, subject as above, dated December 30, 1974.

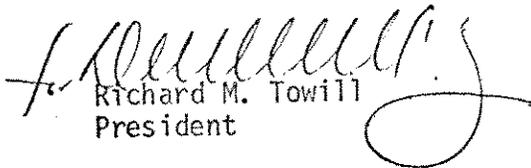
The proposed excavation and grading operation has been discussed with Mr. Lum of the Soil Conservation Service. He indicated that construction of the Kahaluu Watershed Improvements would not begin for at least 1-1/2 years, by which time the grading project would be mostly, if not completely, finished. The runoff from the ridge will be controlled by a silting basin on parcel 8 and no effects on the watershed project are anticipated by the applicant or the Soil Conservation Service.

The proposed operations are being undertaken by the owners of parcel 8 (Mr. Satoru Kinoshita) and parcel 1 (Mr. Richard Towill).

Your review and comments on the Environmental Impact Statement are appreciated.

Very truly yours,

R. M. TOWILL CORPORATION


Richard M. Towill
President

JWA:d4/05

cc: Office of Environmental Quality Control
Department of Land and Natural Resources

R. M. TOWILL CORPORATION

Honolulu

Yokohama

Mexico

CIVIL ENGINEERS
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PHOTOGRAMMETRIC ENGINEERS
AERIAL PHOTOGRAPHERS

January 24, 1975

Mr. Kazu Hayashida
Director and Chief Engineer
Department of Public Works
City and County of Honolulu
Honolulu, Hawaii 96813

Dear Mr. Hayashida:

SUBJECT: Environmental Impact Statement
for Excavation and Quarrying
Use at Waihee, Oahu

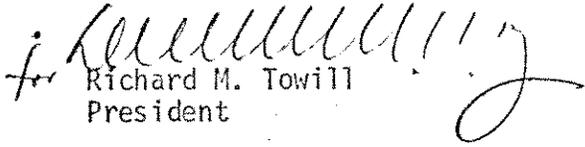
Reference is made to your letter submitted to the office of Environmental Quality Control, subject as above, dated December 19, 1974.

All runoff from the ridge will be conveyed to an enlarged natural silting basin on parcel 8. This will prevent sediment-laden runoff from entering Waihee Stream. The pangola grass planted immediately after grading will help reduce silt runoff. Swales will be provided on the top and sides of the ridge to prevent water from adjacent areas from reaching the newly exposed surfaces.

Your review and comments on the Environmental Impact Statement are appreciated.

Very truly yours,

R. M. TOWILL CORPORATION


Richard M. Towill
President

JWA:d4/01

cc: Department of Land and Natural Resources
Office of Environmental Quality Control

R. M. TOWILL CORPORATION

Honolulu Yokohama Mexico

CIVIL ENGINEERS
SURVEYORS
HYDROGRAPHERS
PHOTOGRAMMETRIC ENGINEERS
AERIAL PHOTOGRAPHERS

January 24, 1975

Mr. George S. Moriguchi
Director of Land Utilization
Department of Land Utilization
City and County of Honolulu
Suite 2180, Pacific Trade Center
190 South King Street
Honolulu, Hawaii 96813

Dear Mr. Moriguchi:

SUBJECT: Environmental Impact Statement
for Excavation and Quarrying
Use at Waihee, Oahu

Reference is made to your letter submitted to the office of Environmental Quality Control, subject as above, dated January 13, 1975. Your specific comments are addressed below.

A permit for conditional use of the conservation zone has been filed with the Department of Land and Natural Resources.

The 24-month work period is proposed to avoid the need for stockpiling large amounts of material, and thereby creating additional erosion potential. Although a longer "period of nuisance (noise, dust, and truck traffic)" would result, the magnitude of the disturbance would be considerably reduced. Fewer trucks over a longer time may very well be less disturbing than a greater concentration of activity in 6-12 months, particularly with regard to traffic problems.

The subdivision plans for the mauka end of Waihee Road should not conflict with the proposed grading operation. It is unlikely that the subdivision development would be completed and generate significant residential traffic until the grading is nearly complete. It appears that the roads could handle traffic from both sites without inconvenience.

The drainage patterns in the area should not be significantly altered from present conditions. During construction, some increased erosion may occur as discussed on pages 7-8 of the EIS. A natural siltation basin exists on parcel 8 and will be enlarged to ensure that sediment-laden water will not reach Waihee Stream. The north slope of the ridge drains into a small ditch which conveys the water around to the siltation basin area. The south slope drains directly to the basin.

Mr. George S. Moriguchi

-2-

January 24, 1975

Because of the steep, raw and erosion-prone scarp presently existing, a reshaping of the ridge appears to be the only solution to reduce the landslide hazard and return the hill to a more normal appearance. While it is true that a rounded hillside will look different than the other sharp ridges in the area, the present appearance of the ridge is very unnatural because of the large scarp area of raw earth on the south slope.

Alternative grading plans were considered, but none would meet the basic objectives of the project. The proposed slopes to stabilize the ridge from just above the previous landslide to the toe were recommended by the soils consultant, Walter Lum and Associates. The alternative of excavating only part way down the hill or the implementation of steeper slopes would result in landslide hazards at the lower elevations. According to the soil consultant's investigation, the proposed plan would provide the desired slope stabilization with the minimum amount of grading.

Your suggestion that some trees and other plants be included in the landscaping plan is a good one. Java plums and perhaps other plants native to this area will be planted, either with the Pangola grass, or shortly after the grass takes hold.

Your review and comments on the Environmental Impact Statement are appreciated.

Very truly yours,

R. M. TOWILL CORPORATION


Richard M. Towill
President

JWA:d4/02-03

cc: Office of Environmental Quality Control
Department of Land And Natural Resources