FINAL
ENVIRONMENTAL ASSESSMENT for the

PAHEEHEE RIDGE SUBDIVISION
Lualualei, Island of Oahu, Hawaii

November 1997

PREPARED FOR:
Department of Hawaiian Home Lands
State of Hawaii

RMTC
R. M. Towill Corporation
420 Waiauakamilo Road, Suite 411
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November 21, 1997

Mr. Gary Gill, Director
Office of Environmental Quality Control
235 South Beretania Street, Suite 702
Honolulu, Hawaii 96813

Dear Mr. Gill:

SUBJECT: Environmental Assessment for the Paheehee Ridge Subdivision, Lualualei, Island of Oahu

Enclosed are four (4) copies of the Final Environmental Assessment (Negative Declaration) for the proposed Paheehee Ridge Subdivision. Based on the analysis of the conditions and impacts presented in the Final Environmental Assessment, we have concluded that the proposed project will have no significant effect on the environment. Therefore, we are filing a Negative Declaration for the proposed project.

We request that this Negative Declaration be published in the next OEQC Bulletin. A completed OEQC Bulletin Publication Form is enclosed as required.

Should you have any questions, please have your staff call Mr. Patrick K.M. Young, Land Development Division, 586-3818.

Aloha,

Gerald Lee, Branch Chief
Design & Construction Branch

Enclosure
TITLE OF PROJECT: Paheeehe Ridge Subdivision

LOCATION: ISLAND Oahu DISTRICT Lualualei

TAX MAP KEY: 8-6-03-08, 24, 25, 27 (por.)

PLEASE CHECK THE FOLLOWING CATEGORIES:

Type of Action: AGENCY X APPLICANT

Applicable State or Federal Statute: X Chapter 342, HRS Chapter 205A, HRS NEPA (Federal Actions Only)

Type of Document:

Draft Environmental Assessment (Negative Declaration anticipated) Draft EIS NEPA AOP

Final Environmental Assessment (Negative Declaration) Final EIS NEPA Draft EIS

Final Environmental Assessment (EIS Preparation Notice) NEPA FONSI NEPA Final EIS

Type of Revision (if applicable): Revised Supplemental Addendum Other (please explain)

Prior to general distribution, please submit to DEQC: 4 copies of the Draft EIS, Final EA (Negative Declaration or EIS Preparation Notice), 4 copies of the Draft EIS or Final EIS (For Draft and Final EISs an additional copy is mailed to DEQC.)

PROPOSING AGENCY OR APPLICANT SHOULD SUBMIT COPIES OF THE DOCUMENTS TO THE APPROVING AGENCY OR ACCEPTING AUTHORITY PRIOR TO SUBMITTING COPIES TO DEQC.

APPROVING AGENCY OR ACCEPTING AUTHORITY: Department of Hawaiian Home Lands

ADDRESS: Old Federal Building
335 Merchant St.
Honolulu, HI 96813

CONTACT: Gerald Lee PHONE: 586-3815

PROPOSING AGENCY OR APPLICANT: same

ADDRESS:

CONTACT: same PHONE:

CONSULTANT: R.N. Towill Corporation
420 Waikamilo Rd., #411
Honolulu, HI 96817

CONTACT: Colette Sakoda PHONE: 842-1133

COMMENT PERIOD END DATE:

OEGC Bulletin Publication Form - Revised 8/92
CONDITIONS WHICH TRIGGERED THE EIS LAW: PLEASE CHECK ALL THAT APPLY TO THE PROPOSED ACTION.

X Use of State or County lands or funds
   HRS 343-5(a)(1)

        Use of Conservation District Lands
        HRS 343-5(a)(2)

        Use of Shoreline Setback Area
        HRS 343-5(a)(3)

        Use of Historic Site or District
        HRS 343-5(a)(4)

        Use of lands in the Wai'ale-Kai Special District
        HRS 343-5(a)(5)

        Amendment to a County General Plan
        HRS 343-5(a)(6)

        Reclassification of Conservation Lands
        HRS 343-5(a)(7)

        Construction or modification of helicopter facilities
        HRS 343-5(a)(8)

OTHER CONDITIONS:

        Use of Special Management Area (City & County of Honolulu)

        Other*

* If the project does not trigger HRS 343, please explain why document is being submitted to OECQ.

SUMMARY of the proposed action or project to be published in the OECQ Bulletin. Please submit it as a summary ready for publication. The description should be brief (300 words or less), yet provide sufficient detail to convey the full impact of the proposed action.

See attached (WP 5.1 file included)

NOTE: Since the deadline for EIS submittal is so close to the publication date for the OECQ Bulletin, please assist us by bringing the Document for Publication Form and a computer disk with the project description (size 3 1/2" or 5 1/4" disk are acceptable; preferably WordPerfect 5.1 or ASCII text format) to the Office of Environmental Quality Control as early as possible. Thank you.
The Department of Hawaiian Home Lands (DHHL) is planning to develop 12 lots on 35 acres along Paheehee Ridge in the Waianae district on the south western side of the island of Oahu. The site contains a total of 14 lots. However, only 12 of the 14 lots will be subdivided into parcels ranging from 2.5 to 4.0 acres each. The remaining two lots on either side of the subdivided lots will not be developed due to high costs relative to the number of potential subdividable lots. The 12 lots were awarded during the acceleration period of 1985-86. This project is intended to provide long-term benefits to native Hawaiian people by providing them houselots on which to build their own homes.

The subdivision will be developed with the infrastructure necessary for an agricultural-residential development. Lessees will be responsible for development of agricultural crop systems, residential and other improvements.
PAHEEHEE RIDGE SUBDIVISION
Environmental Assessment
Luaualei, Island of Oahu

Prepared For:
Department of Hawaiian Home Lands
State of Hawaii

NOVEMBER 1997

Prepared By:
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Honolulu, Hawaii 96817-4941
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SUMMARY INFORMATION

Project: Paheehee Ridge Subdivision

Proposing Agency: State of Hawaii
Department of Hawaiian Home Lands

Accepting Authority: State of Hawaii
Department of Hawaiian Home Lands

Tax Map Key No. and Area: 8-6-03:08, 24, 25, 27 (por.)
(approx.) 234 acres

Location: Waianae, Oahu, Hawaii

Owner: State of Hawaii
Department of Hawaiian Home Lands

Agent: R. M. Towill Corporation
420 Waiakamilo Road, Suite 411
Honolulu, HI 96817
Phone: 842-1133
Contact: Colette Sakoda

Existing Land Use: Some lots in use

State Land Use District: Conservation (C) and Agriculture (A)

Conservation District Subzone: Preservation (P)

Development Plan
Land Use Designation: Preservation

County Zoning: P-1, AG-1
SECTION 1
INTRODUCTION

1.1 PURPOSE OF PROPOSED ACTION
The Hawaiian Homes Commission Act of 1920 (HHCA) was enacted by the U. S. Congress on July 9, 1921 to distribute benefits to native Hawaiians. These benefits include establishing a government-sponsored homesteading program. The Hawaiian Homes Commission was established to administer the provisions of the HHCA and to establish broad operating policies for the State of Hawaii Department of Hawaiian Home Lands. Included in the Act is the authority to:

1. lease, not sell, land to native Hawaiian beneficiaries for 99-year periods at a rental rate of $1 per year;

2. offer financial assistance to individual homesteaders through low-interest loans for agricultural development and home construction; and,

3. provide agricultural and other experts to aid the beneficiary homesteaders in developing their farms and ranches."

The HHCA set aside approximately 200,000 acres of public land located on the five major Hawaiian Islands to return native Hawaiians to the land and to the mode of their ancestors.

The Department of Hawaiian Home Lands (DHHL) is now planning to develop 12 lots on 35 acres along Paheehee Ridge in the Waianae district on the south western side of the island of Oahu. The site contains a total of 14 lots. However, only 12 of the 14 lots will be subdivided into parcels ranging from 2.5 to 4.0 acres each. The remaining two lots on either side of the subdivided lots will not be developed due to high costs relative to the number of potential subdividable lots. The 12 lots were awarded during the acceleration period of 1985-86.

The subdivision will be developed with the infrastructure necessary for an agricultural-residential development. Lessees will be responsible for development of agricultural crop systems, residential and other improvements.

This Environmental Assessment (EA) has been prepared pursuant to Chapter 343 of the Hawaii Revised Statutes, as amended and in accordance with Section 200 rules and regulations of the State Office of Environmental Quality Control due to use of State of Hawaii funds.
1.2 PROJECT LOCATION

The project site is situated in Lualualei along the side of a ridge that begins on the makai end at Puu Paheehee and continues in a northerly or mauka direction to two peaks at the northermost end—Mauna Kuwale at 865 feet and Kauaopauu at 1,054 feet. The ridge slopes down in an easterly direction providing views towards Diamond Head and overlooking Lualualei valley. The location of the lots at the high elevation is desired by the lessees because of the need to use the greatest amount of arable land for agricultural production.

The 35-acre project site is located along Paheehee Ridge in the Waianae District, the southwest area on the island of Oahu, approximately three miles mauka of Lualualei Beach Park (Figure 1). The Paheehee Ridge Subdivision project is located on Tax Map Key numbers 8-6-03:08, 24, 26, 27 and 09 (por.). Paheehee Ridge is situated between Mailii and Kaupuni Streams and separates the U. S. Naval Reservation in Mailii to the east from Waianae Valley to the west (Figure 2). The elevation of this 2.27-mile long ridge ranges from approximately 360 to 400 feet. The proposed project site is mauka of Farrington Highway, the major coastal highway along the leeward side of the island.

Access to the project site will be via Farrington Highway (State Route 93) which is a four lane highway, each measuring 11-feet. The Right-of-Way varies between 61- and 130-foot width (personal conversation with Ron Tsuiki, Planning Dept., DOT, 1/14/97). From Farrington Highway the project site can be reached by traveling mauka on Lualualei Homestead Road. Lualualei Homestead Road Right-of-Way is approximately 30 feet (personal conversation with Lance Watanabe, City and County of Honolulu, Highways-Planning Department, 1/14/97). Approximately 1.5 miles from Farrington Highway, Lualualei Homestead Road forks into Halona Road and Lualualei Homestead Road. To access the project site, one must travel on Halona Road which leads to Puhawai Road. The project site can then be reached by turning onto Hakalina Road, which connects to Paheehee Road. All roads to the project site, including the portion of Paheehee Road fronting the proposed lots, are paved. However, they are poorly maintained. Road improvements will be made conforming to agricultural standard roadway requirements of the City and County. Requirements for agricultural roadways states that the Right-of-Way will need to be minimum of forty-four (44) feet in width and twenty (20) feet of pavement and two (2) feet paved swales on both sides of the roadway along with ten (10) feet of grassed shoulders.
1.3 PROJECT DESCRIPTION

Construction will include all infrastructure improvements necessary for the 12 lots on approximately 35 acres of the total 211 acres along the ridge (Figure 3). Construction will entail construction of road improvements, installation of water laterals, extension of existing drain lines, and connection of electrical and telephone lines to the existing system.

Lessees will construct their own homes on the lots. Lot sizes will range from 2.5 to 4.0 acres. Two large lots will remain undivided on either side of the 12-lot subdivision as remnant parcels because of the high improvement costs relative to the number and potential additional lots.

Access to the 12 lots will be provided by Pahehehe Road. Road sections will be constructed to City and County of Honolulu agricultural standard.

Storm water runoff resulting from the creation of impervious surfaces will be disposed of by existing intake boxes within the roadway shoulders, some of which may need to be relocated and modified to fit the new roadway section. This will be determined prior to the start of construction. Natural storm water runoff will be routed to the existing gulches and drainageways in the vicinity of the project area to maintain the natural drainage pattern in the area.

Existing water service is currently supplied through an existing municipal 8-inch line. Necessary upgrades will be implemented to supply potable water. Water service laterals will be installed requiring a small amount of trenching and backfill. The area will be restored, as much as possible, to its preconstruction conditions.

Because there is no City and County sewerage system in the vicinity of the proposed project site, septic tanks will be used to receive wastewater. Septic tanks will be installed by each lessee.

Solid waste is currently handled by the Department of Public Works. Combustible rubbish is disposed of at the H-Power facility at Campbell Industrial Park. Non-combustible rubbish is disposed of at the Waimanalo Sanitary Landfill.

Power will be provided by the Hawaiian Electric Company (HECO) via an existing overhead distribution system that runs along the road. Street lights will be installed according to City and County standards. Communication lines will be provided via the existing overhead telephone line system and service will be provided by GTE Hawaiian Tel or another provider. Line extension will be included as part of the infrastructure system improvements.

This subdivision will be developed with the water, drainage and utilities infrastructure necessary for
an agricultural-residential development, however, lessees will be responsible for residential and other improvements to their lots. Two large undivided, undeveloped parcels will remain on either side of the 12-lot subdivision as remnant parcels.

1.4 ESTIMATED DEVELOPMENT COST DEVELOPMENT SCHEDULE
This area will require on-site infrastructure improvements to drainage, water source, and road improvements. The construction time for the proposed infrastructure improvements is projected at approximately 210 days. The estimated total construction cost is $750,000.
SECTION 2
DESCRIPTION OF THE AFFECTED ENVIRONMENT, IMPACTS AND MITIGATION MEASURES

2.1 PHYSICAL ENVIRONMENT
2.1.1 CLIMATE
The Waianae region is one of Hawaii's driest localities. Mean annual rainfall along the coast averages 20 inches per year but increases to as much as 80 to 100 inches at the higher elevations (elevations greater than 400 feet) of the Waianae Mountain Range. Much of the annual rainfall can be accounted for by the few severe storms such as the “kona” storms that approach Oahu from the south or west, usually between the months of December and March. Approximately two-thirds of the Waianae region, including the project site, receive annual average rainfall of between 20 and 30 inches. Temperatures average between 72 and 80 degrees Fahrenheit. Usually, tradewinds prevail from the northeast, with wind speeds exceeding 15 knots 50 percent of the time. However, on many occasions, sea breezes are dominant along the Waianae coast.

Impacts and Mitigation Measures
The project is not expected to have an adverse impact on climatic conditions; therefore, no mitigation is necessary.

2.1.2 TOPOGRAPHY, GEOLOGY, AND SOILS
The Waianae district consists of a coastal plain (20-foot mean sea elevation) and intruding valleys and plains. The major part of the land area is comprised of the Waianae Mountain Range with its rugged topography of nearly vertical cliffs and amphitheater-headed valleys.

The Waianae Mountain Range, forming the western part of the Island of Oahu, is the eroded remnant of the Waianae Volcano. The leeward (western) side of the Waianae Mountain Range geologically consists of three major groups of lava flows that erupted during the Tertiary Period and several subsequent secondary eruptions. The lava flows and cinders of this era have been deeply weathered. On top of this basalt layer are alluvial deposits and coral.

According to the U. S. Department of Agriculture Soil Conservation Service's Soil Survey, 1972, the project site is underlain with three soil types. These soil types are listed below in the order of occurrence as elevation increases.
MnC Mamala stony silty clay loam, 0-12% slopes
LPE Luualuai extremely stony clay, 3-35% slopes
rRK Rock land on the ridge

The geology of the proposed project site consists of post-erosional lavas from shield volcanoes that make up the Waianae Mountain Range. The lava flows from these have formed the southwestern portion of Oahu's central plain, the Leilehua plateau, and a raised coral reef forms the south shore of the island and parts of the remaining coast. The post-erosional lavas of Oahu include alkalic basalts, basanites, and nephelinites. The proposed project is not expected to have any impact on the geology and soils because no new fill material will be used. A soils investigation is going to be conducted for the project roadway.

**Impacts and Mitigation Measures**
The proposed development will change the topographic conditions of the land. Paving the roadway will result in an impervious surface. However, the natural drainage pattern in the area will be maintained. Storm water runoff created by the development will be retained on site by routing the flows to the existing intake boxes. Water will then infiltrate into the ground and contribute to groundwater recharge. Natural flows will use existing drainageways to maintain the natural drainage pattern.

2.1.3 HYDROLOGY
Paheehe Ridge lies between two major streams: Kaupuni Stream, and Mailiili Stream. The nearby reservoirs include Luualuai Reservoir and Niulii Reservoir.

**Impacts and Mitigation Measures**
With respect to the 12-lot subdivision, no long-term impacts are anticipated. The small scale of the project will be limited to short-term impacts generally those associated with construction activities such as grading, utility installations, and increased traffic at the site.

During construction, and particularly during grading and excavation for foundations, soil will be exposed and potentially susceptible to runoff in the event of heavy rain. By adhering to City and County grading ordinances, soil runoff will be controlled. The runoff effluent will be directed to existing drainage channels. Mitigation of storm discharge during construction should include installation of appropriate Best Management Practices measures such as installation of siltation berms and/or straw bale sediment barriers, sand bag sediment barriers, filter berms, filter fences, filter inlets or flexible downdrains.
2.1.4 NATURAL HAZARDS

**FLOOD:** The project area is not located within any flood prone areas.

**TSUNAMI:** The Lualualei Paheehe Ridge project site is not located within any vulnerable inundation area.

**EARTHQUAKE:** All of the island of Oahu is rated as seismic zone 2A, according to standards established in the 1988 Uniform Building Code (UBC). There are four zones (1 through 4) in the range, with Zone 1 as the rating given to areas least prone and Zone 4 as the most prone to earthquake hazards. The project site is not expected to be susceptible to earthquakes.

2.1.5 FLORA AND FAUNA

There are no sensitive species or wetlands in the immediate vicinity of the proposed project site. The U.S. Fish and Wildlife Service visited the project site on January 31, 1997, while in the area reviewing another project. Conclusions drawn from the visit revealed that the site has been previously disturbed and is dominated by non-native vegetation, including koa haole (*Leucaena leucocephala*) trees and an unidentified grass understory. Since no native or rare habitats were identified, the Service does not believe that the proposed project will adversely impact any Federal trust resources, including endangered and threatened species, migratory birds, or wetlands.

**Impacts and Mitigation Measures**

The proposed project is not expected to have a significant negative impact on the biological or botanical resources of the site. The vegetation on the site consists of common, introduced species and there are no known or endangered species of flora present in the area.

Any loss of vegetation as a result of clearing and grubbing of the site will be offset by appropriate agricultural crop development in the area.

The proposed site is not known to contain any threatened or endangered animal species; and the relatively dry climate and sparse vegetation in the area does not provide good habitat for such species. Therefore, impacts on rare animals are not expected.

2.1.6 AIR QUALITY

Because of the lack of significant stationary sources of air pollutants and the relatively low level of vehicular traffic in the project area, it is presumed that the air quality of the project area is good and meets all applicable Federal and State standards.
Impacts and Mitigation Measures
Short-term impacts on the ambient air quality will occur during the infrastructure system construction period. Construction activities will increase concentrations of air pollutants in the vicinity of the project. The entire project site will not be cleared, grubbed, and graded. Construction will be limited to the roadways that will house the utilities and provide access to each of the lots. The lessees will be responsible for obtaining their own building permits for development of the lots.

To mitigate impacts on air quality during construction, dust control measures will be implemented in accordance with Department of Health (DOH) regulations and applicable County ordinances. Dust control measures stipulated by DOH regulations will be employed during the construction period. These controls consist of wetting down loose soil areas with water, oil, or suitable chemicals; good housekeeping on the job site; and paving or landscaping bare soils as quickly as possible. EPA recommends that watering twice daily will reduce the amount of fugitive dust by 50 percent.

Exhaust emissions generated from construction equipment will be dispersed by the prevailing winds. The contractor will be responsible for ensuring that construction equipment is maintained and operated properly to minimize exhaust emissions.

Long-term impacts on ambient air quality will occur from the increase in traffic from the 12-lot subdivision, however, the relatively small number of vehicle trips that will be generated from the increase in motor vehicles is not expected to significantly impact air quality.

2.1.7 NOISE
The present noise quality of the proposed project site is primarily affected by traffic generated noise in the vicinity of Farrington Highway and the residential neighborhood and the sounds from wind moving through the vegetation on site. There are no significant man-made noise sources within the project boundaries or in the neighboring area. Ambient sound levels are typical of rural areas.

Impacts and Mitigation Measures
Short-term noise impacts will occur during construction. Construction related noise will be generated by the use of heavy equipment that will occasionally exceed allowable noise levels. Because the project site is situated in such a remote location along the top of a ridge at approximately 360 to 400 feet elevation, the impacts from construction noise will be minimal. Any short-term noise impacts will be mitigated by the use of mufflers on construction equipment and vehicles, and by designating specific start and curfew times in accordance with the State Department of Health Regulations.
2.1.8 VISUAL CHARACTER
The predominant scenic feature in the area is the panoramic ocean view. The steep slopes of the Waianae Mountain Range provide a backdrop to the expansible Lualualei Valley.

The proposed project will have no adverse impacts on existing views in this area as the intended agricultural-residential use will be in character with the rural Lualualei/Waianae setting.

Impacts and Mitigation Measures
A potential impact would be the visibility of the new structures. To minimize this potential impact, the subdivision will reflect the regional environmental features as well as convey a response to the physical and social character of the community. The proposed project will not obstruct the views of the Waianae Mountain Range or the valley.

2.1.9 HISTORIC, CULTURAL AND ARCHAEOLOGICAL RESOURCES
An archaeological survey and excavation was conducted in 1991 for DHHL by the State Department of Land and Natural Resources (DLNR) State Historic Preservation Office. Two sites, determined to be ritual sites, were noted in the vicinity of the proposed project site. One significant site (4432), a small shrine, was located within the project area. The other (4433), a similar shrine, was found nearby in Waianae Valley, outside the project area. It was determined that development of the proposed subdivision will have "no significant effect" on significant sites if site 4432 was preserved (Log No. 4564, Doc. No. 3344C) with interpretation. It has been recommended that a buffer zone around site be installed around the site to preserve the site and its surroundings. The buffer zone should be 30 meters on either side of the site, 70 meters up the mauka cliffs behind the site and include the land down to the current road (Lualualei Trail Road). Because the site is located no more than 10 meters on the upslope side would most likely damage the site. Any modifications to the road would have to be done on the downslope side of the road in the area of this site." (letter from DLNR dated Jan. 28, 1997.)

Impacts and Mitigation Measures
According to the State Historic Preservation Office, development of this project will have "no adverse affect" on significant historic sites. No short or long-term impacts are anticipated as a result of the 12-lot subdivision. However, should any unidentified cultural remains be uncovered during construction, work in the immediate area will cease and the appropriate governmental agencies will be contacted for further instructions.

2.2 SOCIO-ECONOMIC CONDITIONS AND PROJECT IMPACTS
2.2.1 POPULATION
The Waianae area along the leeward coast contains the communities of Makaha, Waianae, Māili,
and Nanakuli. The present population in the Waianae area is approximately 37,000 (Department of Business, Economic Development and Tourism, 1995).

The population of this area increased 18.8 percent from 1980 to 1990, nearly double the population growth of 9.7 percent for the entire island. The 1980 population for the region was 31,487 and 37,411 in 1990.

2.2.2 ECONOMIC CONDITIONS
The economy of the area was at one time based primarily on agriculture. With the decline of the sugar industry, has come the decline of the economy in the area.

**Impacts and Mitigation Measures**
The establishment of this new community will benefit the Hawaiian community and provide educational and cultural benefits. The inclusion the Hawaiian cultural features will provide a unique learning opportunity for the area, which has a large Hawaiian population.

The proposed project will not have any adverse affects on the economy of the area. If anything, the proposed development will assist families in the area with availability of agricultural resources. Individuals will also benefit from additional income from the agricultural development by each lot.

2.2.3 SURROUNDING LAND USE
The area is relatively rural in character with a mix of land uses including residential, urban/commercial, agriculture, and military. The parcels immediately adjacent to the project area are mostly privately owned. The commercial land uses are scattered along Farrington Highway, surrounded primarily by single family residential development. Agriculture-zoned lands mauka of the denser urban development contain both residential and agricultural land uses on two-to-five acre lots.

The majority of the urban and agricultural lands are privately owned, however, a significant amount of the land in the area is under the administration of the Department of Hawaiian Home Lands (DHHL) and is currently or proposed for residential use. Limited industrial land uses exist along Lualualei Naval Road, south of the proposed project area. The Lualualei Naval reservation encompasses the majority of the Nanakuli-Maili land area, extending from the agricultural lands to the ridge of the Waianae Mountain Range. The United States Government owns the Naval Reservation.
2.3 PUBLIC FACILITIES AND SERVICES

2.3.1 FLOODING AND DRAINAGE
Storm water runoff resulting from the creation of impervious surfaces will be handled by routing the water to intake boxes within the roadway shoulders. Natural storm water runoff will be routed to the existing gulches and drainageways in the vicinity of the project area to maintain the natural drainage pattern in the area.

Impacts and Mitigation Measures
Increased on-site drainage caused by the creation of impervious surfaces will be routed to existing intake boxes within the roadway shoulders. Storm water runoff will continue to use existing drainageways in areas that will be retained as open space.

Because the project will not increase runoff discharging into the coastal waters, no impact on the existing drainage pattern is expected. The drainage system within the project will maintain the natural drainage pattern in the area.

2.3.2 POTABLE WATER
Existing water service is being supplied through an existing municipal 8-inch line. The necessary upgrades will be implemented to supply sufficient amounts of potable water to the lots.

Impacts and Mitigation Measures
Impacts to the existing water source are not expected; therefore no mitigation is necessary.

2.3.3 WASTEWATER TREATMENT AND DISPOSAL
Residential development in the region relies primarily on private septic tanks, cesspools or private sewage treatment plants. The nearest municipal wastewater treatment facility for the Waianae region is the Waianae Wastewater Treatment Plant. Because the Department of Health regulations prohibit the use of cesspools, septic tanks are planned. Installation of the septic tanks will be the responsibility of the lessee.

Impacts and Mitigation Measures
Most of the wastewater generated by the individual lots will remain in the septic tank as septage. The Waianae Wastewater Treatment Plant has adequate capacity to accommodate the septage that will be generated by the subdivision at complete occupancy. Thus, no impacts on regional wastewater treatment facilities are expected.

2.3.4 SOLID WASTE
Solid waste is currently handled by the Department of Public Works. Combustible rubbish is
disposed of at the H-Power facility at Campbell Industrial Park. Non-combustible rubbish is disposed of at the Waimanalo sanitary landfill.

**Impacts and Mitigation Measures**

The proposed subdivision is relatively small in scale and the current disposal system is adequate to accommodate additional waste. In addition, resource recovery methods, such as recycling will encouraged to minimize solid waste impacts. Impacts, are therefore expected to be minimal.

2.3.5 TRANSPORTATION

Access to the proposed project site is via State Route 93, Farrington Highway, which is the principal roadway in the area and along the entire leeward coast. It is the only roadway for through traffic along the Waianae Coast and links with the H-1 Freeway near Kapolei. From Nanakuli to the project site, it is heavily congested, passing through several commercial areas. Lualualei Homestead Road connects to Farrington Highway and travels mauka to the project site, the site is accessible from Puhawai Road, to Paheehee Road. Road improvements will be made to Paheehee Road. However, due to the rural nature of the area, curbs and gutters are not required and will therefore not be installed.

**Impacts and Mitigation Measures**

No long-term impacts to roadways in the area are anticipated. The new subdivision will generate additional traffic on the roadways in the vicinity. Since access to the proposed site is via Farrington Highway, which currently has adequate capacity, the new subdivision is not expected to require major improvements to this highway. The small scale of the project will be limited to short-term impacts generally those associated with construction activities such as increased traffic at the site. Because impacts are insignificant, no mitigation is required.

2.3.6 POWER AND COMMUNICATION

Power will be provided by the Hawaiian Electric Company (HECO) from the Wai'alua substation. Street lights will be installed according to City and County standards. Communication lines will be provided via the existing overhead telephone line system and service will be provided by GTE Hawaiian Tel or another provider.

**Impacts and Mitigation Measures**

The proposed project will tie into existing overhead electric and telephone lines through line extension. Street lights will also be provided according to County standards. Both the existing electric substation and nearby telephone switching station have adequate capacity.
to accommodate this subdivision. No significant impact on the present electric/telephone system is expected.

2.3.7 FIRE, POLICE, SCHOOL AND MEDICAL SERVICES
Fire protection for the area is provided by the Waianae Fire Station on Farrington Highway near Waianae Intermediate School and the Nanakuli station located on Haleakala Avenue. The Nanakuli Station has one fire engine and one tanker, with a total of six personnel available at any one time. The Waianae station has one fire engine and one hook-and-ladder each with five personnel assigned to each. Also, the Lualualei Station - Fire Unit, a part of the military unit, is available for neutral assistance if needed. They are located on Lualualei Naval Road, south of the project site.

**Impacts and Mitigation Measures**
With regard to the increase in population in the area, it is a relatively small subdivision. The additional residents in the area will not impact the response or coverage by the district fire stations (personal communication with Battalion Chief John Clark 1/14/97).

Police protection in the project area is provided by the Waianae Police substation in Waianae. The station is located at 85-939 Farrington Highway. There are approximately 150 personnel assigned to this station. At any one time, there is always one lieutenant, two police sergeants, and 13 officers on duty.

**Impacts and Mitigation Measures**
With regard to the increase in population in the area, it is a relatively small subdivision. The additional residents in the area will not impact the response or coverage by the district police station (personal communication with Lieutenant Gray 1/14/97).

There are ten schools within the study area. These are Makaha Elementary School, Waianae Intermediate and High School, Maili Elementary School, Leihoku Elementary School, Kamaili Elementary School, Nanakuli Elementary School, and Nankuli High and Intermediate School. Children living in the subdivision will be served by Leihoku Elementary, Waianae Intermediate or Waianae High School. Currently, Leihoku Elementary serves 766 children, Waianae Intermediate serves 1200 students, and Waianae High School serves 2200 students.

**Impacts and Mitigation Measures**
All schools in the district are large and capable of serving additional students, therefore, no impacts are expected to the existing facilities (personal communication with Superintendent Wendell Staszkow 1/16/97).
Medical Services are provided to the leeward coast by the Waianae Coast Comprehensive Health Center, located north of Mailiili Channel, and its satellite Nanakuli Clinic, located across from Nanakuli Elementary School. The next closest medical facility is St. Francis Medical Center-West in Ewa. The Health Center offers a full-range of primary care and support services, as well as 24 hour emergency care. It is the largest employer on the coast, employing close to 400 people.

Impacts and Mitigation Measures
The facility serves approximately 20,000 patients annually and is capable of accommodating more, therefore, there would be no impact to existing services within the facility (personal communication with Joyce O'Brien, Associate Director of the Health Center 1/14/97).

Overall Impacts
Increased demand on community services such as fire and police protection, emergency medical services, and schools can be expected, but would be minimal.

2.3.8 RECREATIONAL FACILITIES
Recreation facilities in the area consist primarily of beach parks makai of Farrington Highway, and neighborhood parks/playgrounds adjacent to some existing elementary schools. Several beach parks line the Waianae Coast. They include from north to south, Makaha Beach Park, Mauna Lahihi Beach Park, Waianae Regional Park, Pokai Bay Beach Park, Lualualei Beach Park, and Maili Beach Park.

At the far north end of Farrington Highway lies Kaena Point State Park. Kaena Point is located in an unincorporated portion of the island near the community of Waianae. In the past Farrington Highway continued around Kaena Point and connected with the north shore. However, in 1989, the state closed the road beyond the turnoff to Kaena Point State Park, to protect the natural areas on Kaena Point. Kaena Point has been designated by the state as a Natural Area Reserve; thereby limiting recreational activities. Conversely, recreational activities such as hiking, hunting, and camping are allowed on the state forest land to the east of Kaena Point.

Impacts and Mitigation Measures
Due to the relatively small-scale of the proposed development, additional recreational facilities are not part of the development of the DHHL lands. Thus, residents will be utilizing the existing recreational facilities in the region.
SECTION 3
RELATIONSHIP TO STATE AND COUNTY LAND USE PLANS AND POLICIES

3.1 THE HAWAII STATE PLAN
The Hawaii State Plan was developed to serve as a guide for future development of the State of Hawaii in areas of population growth, economic benefits, enhancement and preservation of the physical environment, facility system maintenance and development, and socio-cultural advancement. The Plan identifies, in general, the goals, objectives, policies, and priorities for the development and growth of the State.

The Lualualei Paheehee Ridge subdivision project is consistent with the objectives and policies of the Hawaii State Plan. The following discussion describes the relationship and/or compatibility of the proposed project with the overall plans for the State of Hawaii, as set forth in the Hawaii State Plan.

3.1.1 Population (HRS, Section 226-5)
The project area has been reserved for the development of homestead lots for native Hawaiians by the Hawaiian Homes Commission Act of 1920. It is in compliance with the objective of the Hawaii State Plan to guide population growth. The development of 12 lots will serve to increase the opportunity for Hawaiian people to pursue their physical, social and economic aspirations. The project will provide house lots with roadways that contain the necessary infrastructure for settlement.

3.1.2 Economy (HRS, Sections 226-6, 7 and 10)
The project is consistent with the economic objective of improving the standard of living for Hawaii's people by providing an agricultural subdivision wherein future lessees will be able to conduct limited agricultural activities on the land. Settlement in this relatively undeveloped area will result in an indirect growth in the economy, through the expected development of other uses that will be necessary to support the growing population in the area.

3.1.3 Physical Environment (HRS, Sections 226-11, 12, and 13)
The development takes into account the physical attributes of the land and as part of the development will reflect the regional environmental features as well as convey a response to the physical and social character of the community. Storm water runoff will be routed to existing gulches and drainageways to maintain the natural drainage pattern in the area.
The ag-residential nature of this subdivision also serves as a greater educational and cultural act to encourage proper design and construction practices that enhance the physical qualities of the community.

3.1.4 Facilities Systems (HRS, Sections 14 to 18)
The facilities system objectives are met by developing the lots in consonance with State and County Plans.

Reuse and recycling methods will be encouraged to minimize impacts on solid waste facilities and to conserve resources.

The new water distribution system is planned to be developed in accordance with Chapter 20, Title 11, Administrative Rules.

3.2 STATE FUNCTIONAL PLANS
The twelve State Functional Plans were adopted by the State Legislature in April 1984. These plans were formulated to specify in greater detail the policies, guidelines and priorities set forth in the Hawaii State Plan. The twelve functional plans include: Energy, Transportation, Water Resources, Historic preservation, Health, Education, Housing, Conservation Lands, Higher Education, Agriculture and Tourism.

The project is consistent with the policies and objectives of the State Functional Plans. It will provide much needed infrastructure improvements, which in turn will afford housing development opportunities to people of native Hawaiian ancestry and return them to their land and their desired mode of living.

3.3 STATE LAND USE LAW
Pursuant to Section 204, Hawaiian Homes Commission Act, 1920, as amended and to State Attorney General's Opinion 72-21, Hawaiian Home Lands holdings are not subject to controls regulated by the State Land Use Commission (LUC) district boundary classifications nor be county zoning codes. However, for this assessment, the proposed subdivision of agricultural lots is consistent with existing LUC district classifications and county zoning as indicated.

The State Land Use Commission designation of this project site is Conservation and Agriculture (Figure 4). The Conservation District Subzone of the project site is Preservation (P) (Figure 5). The Department of Hawaiian Home Lands is exempt from land reclassification requirements for homestead development purposes.
3.4 COUNTY ZONING
The Land Use Ordinance (L.U.O) map designates the parcels within the Paheehee Ridge site as AG-1 (Figure 6). The intent of the AG-1 restricted agricultural district is to conserve and protect important agricultural lands for the performance of agricultural functions by permitting only those uses that perpetuate the retention of these lands in the production of food, feed, forage, fiber crops, and horticultural plants.

3.5 DEVELOPMENT PLAN PUBLIC FACILITIES
The Development Plan Public Facilities Maps (DPPFM) depict land use categories which reflect the type of permitted development within designated areas. The proposed project site is designated on the development plan public facilities map as Agriculture (Figure 7). The proposed project is consistent with Chapter 24, Article 1, Development Plan Common Provisions:

Section 24 - 1.3 Land Use Categories:
(h) Agricultural.
"Agricultural areas are those areas suitable for crop growing, grazing and the raising of livestock, flower gardening, nurseries or orchards, aquaculture, or similar activities. This classification also includes areas surrounded by or contiguous to such lands but not well suited to agricultural or accessory activities due to topography, soils or similar constraints, and areas otherwise identified by the City as implementing related general plan objectives and policies. In such areas, uses complementary to agricultural uses may be permitted."

3-5
SECTION 4
ALTERNATIVES TO THE PROPOSED ACTION

4.1 NO ACTION
Taking no action will continue the present conditions where awarded homestead lots cannot be fully utilized because of lack of infrastructure support. Without the proposed roadway and utilities improvements, lessees will not be able to develop their lots without great expense.

4.2 ALTERNATIVES CONSIDERED
As part of the implementation of the Hawaiian Homes Commission Act (HHCA) of 1920, various alternative locations and priorities were considered. Thus, alternatives were not considered as part of this environmental assessment. This environmental assessment is one of the many actions being implemented by DHHL to carry out the goals as defined by the HHCA.
SECTION 5
NECESSARY PERMITS AND APPROVALS

The following is a list of permits and approvals required prior to implementation of this project:

5.1 STATE
none

5.2 CITY AND COUNTY

<table>
<thead>
<tr>
<th>Authority</th>
<th>Approval Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building Department</td>
<td>Building Permit</td>
</tr>
<tr>
<td>Department of Public Works</td>
<td>Grading Permit</td>
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<tr>
<td></td>
<td>Erosion Control Permit</td>
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</table>
SECTION 6
Determination

This environmental assessment indicates that there are no significant long-term impacts that would result from implementation of the 12-lot subdivision. Short-term impacts will occur as a result of construction activities. These impacts include increases in soil erosion, noise, and air pollution. However, the impacts will be temporary in nature and are expected to be mitigated as described in the previous sections. This project will provide long-term benefits to native Hawaiian people by providing them house lots on which to live with the necessary infrastructure systems.

Design and construction activities will be performed in accordance with State and County rules and regulations. The proposed action was determined to have no significant impact according to Section 11-200-12 of the Environmental Impact Statement Rules. The criteria and findings are as follows:

1. **Criteria:** Involves an irrevocable commitment to loss or destruction of any natural or cultural resources.
   **Finding:** The proposed 12-lot subdivision is located along Paheehee Ridge. The area was found to be previously disturbed containing no known rare, threatened, or endangered species of plants or animals. The historical sites found in the vicinity of the proposed project site will be protected by the recommended buffer zone implemented around the specific site.

2. **Criteria:** Curtails the range of beneficial uses of the environment.
   **Finding:** There will be no known beneficial use of the environment that will be curtailed. There will be no long-term degradation of existing ambient air or noise levels.

3. **Criteria:** Conflicts with the State’s long-term environmental policies or goals and guidelines as expressed in Chapters 343 and 344, Hawaii Revised Statutes, and revisions thereof and amendments hereto, court decisions, or executive orders.
   **Finding:** There will be no known conflict.

4. **Criteria:** Substantially affects the economic or social welfare of the community or state.
Finding: The proposed action will improve the welfare of the community, resulting in an improvement to the social and economic welfare of the community. Further, no residences or businesses will be displaced.

   Finding: No adverse effect.

6. Criteria: Involves substantial secondary impacts, such as population changes or effects on public facilities.
   Finding: There will be no conflict; existing facilities will be upgraded to provide a more reliable distribution of necessary infrastructure.

   Finding: Construction will take place on previously disturbed ground. No endangered, threatened, or rare flora or fauna were found in the area.

8. Criteria: Is individually limited but cumulatively has a considerable effect upon the environment or involves a commitment for larger actions.
   Finding: This is not the case.

9. Criteria: Substantially affects rare, threatened, or endangered species, or its habitat.
   Finding: Construction will take place entirely within the proposed project area. No endangered wildlife or flora are found in the affected area.

10. Criteria: Detrimentally affects air or water quality or ambient noise levels.
    Finding: The impacts to air, water quality and ambient noise levels are associated with construction activities. The impacts will be short-term and temporary. Construction will required to conform to all applicable laws and regulations to mitigate construction-associated impacts.

11. Criteria: Affects or is likely to suffer damage by being located in an environmentally sensitive area such as a flood plain, tsunami zone, erosion prone zone, geologically hazardous land, estuary, fresh water, or coastal waters.
    Finding: The project site is not located within an environmentally sensitive area.

12. Criteria: Substantially affects scenic vistas and viewplanes identified in county or state plans or studies.
Finding: The proposed project will have no adverse impact on existing views as the agricultural-residential use will be in character with the rural setting.

13. Criteria: Requires substantial energy consumption.
Finding: The impact the proposed project will have on energy requirements is expected to be minimal.

Based on these criteria and this assessment, the proposed subdivision at Pahehee Ridge on the island of Oahu will not result in any significant adverse environmental impacts and an Environmental Impact Statement is not required. Therefore, in accordance with Chapter 343, Hawaii Revised Statutes, this notice is being considered as a Finding of No Significant Impact (FONSI).
SECTION 7
PARTIES CONSULTED IN PREPARATION OF DRAFT
ENVIRONMENTAL ASSESSMENT

Department of Land and Natural Resources - Forestry Section
Carolyn Corn, Botanist

Department of Land and Natural Resources- State Historic Preservation Office
Don Hibbard, Historic Preservation Division

U.S. Department of the Interior, Fish and Wildlife Service
Brooks Harper, Field Supervisor/ Ecological Services
SECTION 8
COMMENTS AND RESPONSES TO DRAFT ENVIRONMENTAL ASSESSMENT DURING PUBLIC REVIEW PERIOD
Mr. Kali Watson, Chair
Department of Hawaiian Homelands
335 Merchant Street
Honolulu, Hawaii 96813

Dear Mr. Watson,

Subject: Draft Environmental Assessment for the Paheehee Ridge Subdivision, Lualualei, Oahu

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

1. According to the environmental assessment, a small shrine (significant archaeological site # 4432) is located within the project area. The site is recommended for "preservation with interpretation." Please describe in detail the steps DHHL and/or other responsible parties will be taking to ensure that the site is protected during and after construction.

2. According to the tax map, a 25-foot wide flume right-of-way belonging to the State of Hawaii crosses the project area. What is the status of the flume right-of-way? How does the right-of-way impact the project? What effect would the project have on the right-of-way?

3. The list of significant criteria discussed in section 6 of the EA does not include the two new points and other changes made to the EIS rules in August of 1996. Please refer to §11-200-8 of the new EIS rules and make the appropriate changes.

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

Sincerely,

Gary Gill
Director

c:  RMTC
October 28, 1997

Mr. Gary Gill, Director
Office of Environmental Quality Control
235 South Beretania Street, Suite 702
Honolulu, Hawaii 96813

Dear Mr. Gill:

SUBJECT: Draft Environmental Assessment for the Paheehee Ridge Subdivision, Lualualei, Island of Oahu

We have received your comment letter dated October 6, 1997, regarding the subject project. The following has been prepared in response to your comments and concerns:

1. Archaeological site # 4432 is located within the larger project vicinity, but outside the boundary of the final project subdivision consisting of 12 lots, as shown in Figure 3 Proposed Subdivision. The lot where site #4432 is located is not expected to be included in the construction impact area. Because the site will not be adversely affected by either short or long-term construction activity, there will be no need to develop plans to preserve the site.

2. As the 25-foot wide flume referred to is no longer in use and considered inactive, it will not have any impact on the proposed project nor will it have any adverse effect to the right-of-way.

3. The significance criteria rule discussed in Section 6 (Section 11-200-8) of the EIS will be revised to include the change made to it in August of 1996.

We appreciate and thank you for your participation in reviewing this draft.

Aloha,

[Signature]

KALI WATSON, Chairman
Hawaiian Homes Commission

RMTC
Ms. Colette Sakoda
R.M. Towill Corporation
420 Waiakamilo Road, Suite 411
Honolulu, Hawaii 96817

Dear Ms. Sakoda:

Subject: Paheehee Ridge Subdivision

The Department of Education has no comment on the proposed subdivision.

Thank you for the opportunity to respond.

Sincerely,

Herman M. Aizawa, Ph.D.
Superintendent

cc: A. Suga, OBS
    W. Staszkow, LDO

AN AFFIRMATIVE ACTION AND EQUAL OPPORTUNITY EMPLOYER
REFERENCES


Ordinance No. 84-54, as amended. Chapter 24, Development Plans, Article 1.