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SOIL INVESTIGATION

PAUL T. Y. AND MAVIS C. WONG'S SUBDIVISION

TMK 2-2-49:62

MUNICIPAL REFERENCE & RECORDS CENTER
City & County of Honolulu
City Hall Annex, 558 S. King Street
Honolulu, Hawaii 96813

WILLIAM

SUBSURFACE SOIL ANALYSIS
Paul T. Y. & Mavis C. Wong's Subdivision
TMK 2-2-49:62

Introduction

Prior to submitting the plans to the city, it was determined that a portion of the parcel fell under preservation use. An application was made to have the General Plan amended including a section covering the various physical characteristics concerning the site. The planning department, in preparing their material for the hearing, also investigated the site. Attached is a copy of the final application less the attachment.

Surface Investigations

The soil series and symbol found on the site is Lolekaa: LoD, as classified by the Soil Conservation Service in their "Soil Survey of Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii," dated August, 1972. The area was graded approximately 23 years ago, thus exposing in places the dark yellowish-brown loam underlayer.

The Lolekaa series is classified as:

From 0 to 42 inches - Silty Clay (MH)

From 42 to 65+ inches - Loam (ML - MH)

Shrink-swell potential being:

Moderate for the silty clay (MH) and

Low for the Loam (ML - MH)

Surface investigation indicates that most of the silty clay in the vicinity of the proposed road and lots to be graded have already been removed. The new road (166.33 feet in length) will result in from 2± to 6± feet of additional excavation thereby definitely placing the roadbed in the loam. The same condition is also true for the lots to be excavated.

The Soil Conservation Service Soil Survey further identifies Lolekaa Series as:

"This series consists of well-drained soils on fans and terraces on the windward side of the island of Oahu. These soils developed in old, gravelly colluvium and alluvium. They are gently sloping to very steep. Elevations range from nearly sea level to 500 feet. The annual rainfall amounts to 70 to 90 inches and is well distributed throughout the year. The mean annual soil temperature is 71° F. Lolekaa soils are geographically associated with Alaeloa and Waikane soils.

"These soils are used for pasture, homesites, orchards, and truck crops. The natural vegetation consists of guava, Christmas berry, california grass, hilo grass, and rice grass."

¹ "Soil Survey of Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii," Soil Conservation Service, August, 1972, page 83.

Attachment.

FINAL APPLICATION

Amendment No. 265/C1/10
Application to Amend the General Plan
Detailed Land Use Map for Nuuanu Dowsett
Area: 1.53 acres or 49,996 square feet

Preface

The subject parcel is designated for Preservation/Residential use by the General Plan, Detailed Land Use Map, and Urban use by the State Land Use Commission. The applicant intends to subdivide the parcel into six lots for residential purposes. In order to proceed with his plan, it is most appropriate that lands in question be redesignated from Preservation to Residential use.

A. Discussion of the appropriateness of the land for residential use:

1. Topographic considerations: The average slope of the site from the westernmost corner to the southeast corner at Kahawalu Drive is 18.6% (See attachment 1). There are sections adjacent to the east and west boundaries where slopes exceed 20%, however, there are ample areas on the affected lots to build upon (See attachment 1).

2. Soil, drainage and other engineering considerations:
 - a) The soil encountered on the property based on surface observation, is very stiff brown clayey silt and decomposed rock and not the slide-prone adobe.

 - b) The drainage area contributing flow onto the property is 6.9 acres. Adequate underground drainage structures will be constructed to safely transmit the 50 year flood through the property. In addition, freeboard will increase the maximum capacity of the system by a substantial amount—perhaps to the order of the 1000+ year flood. As further evidence that no drainage problems will occur, there presently exists a system that will essentially be duplicated in the final design which has been in place for 21 years. The

owner has stated that even during the heaviest rainfall during this period, no more than six to twelve inches of water depth was observed at the entrance of the culverts.

- c) The proposed subdivision has been submitted or brought to the attention of the City's engineering, traffic, and sewer divisions; to the Board of Water Supply and to the Hawaiian Electric Company. Except for a few rectifiable comments, all agreed that the necessary utility and grading requirements could be met.

B. Discussion of the inappropriateness of retaining the preservation designation:

1. Because the average slope, excluding certain areas along the edges of the property line, is less than 20%, and because the property involved is "prime", it is not considered too steep to economically accommodate building sites.
2. The land involved is being used by the owner and has been cleared and graded in the past to accommodate his greenhouses. Any wildlife of consequence (principally birds) are import species capable of relocating to adjacent preservation lands.

There are no indigenous forests and plants of any consequence on the property. The lot is principally overgrown with California and other grasses.

There are no significant natural assets or historic sites on the lot.

3. The area is not subject to floods and ample structures will be built to preclude water-borne damage to the property and adjacent lands. The area is also not subject to earth slides.

C. Other considerations:

1. The development will provide for six residential lots, however, since the owner is presently occupying one lot, only five new residences will be provided for.
2. The area is within or proximate to a residential development presently being serviced by public facilities and utilities. Public transportation is situated approximately 0.3 miles from the site at the intersection of Kimo Drive and Old Pali Highway while electricity, telephone, water and sewer systems are located on or adjacent to the lot.
3. The area is zoned R-3 (10,000 sq. ft. lots). Most lots in the vicinity occupy 8,000 to 12,000 sq. ft. The minimum size lot of the proposed subdivision will be 10,000 sq. ft., which is in keeping with the sizes of the adjacent lots and the R-3 zoning requirement. The lot is also surrounded for approximately 75% of its perimeter by other residences, which makes the appearance of the lot under its present zoning incongruent with its surroundings.
4. Presently approximately 25% of the lot is designated residential under the General Plan (See attachment 2). The impact of the proposed development on the surrounding neighborhood, based on the above discussions will be slight.

D. Inadequacy of the General Plan

1. There is ample land available and presently designated for preservation use in the area, consequently the land in question is not needed for preservation use.
2. The land in question is suitable for residential use.
3. The use of the site for residential purposes is the best alternative scheme.
4. The General Plan should be amended to permit the residential use of this land.