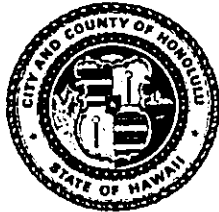


DEPARTMENT OF PUBLIC WORKS
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET
HONOLULU, HAWAII 96813

JEREMY HARRIS
MAYOR



RECEIVED

'95 DEC 13 AIO:25

KENNETH E. SPRAGUE
DIRECTOR AND CHIEF ENGINEER

IN REPLY REFER TO:

OFFICE OF ENVIRONMENTAL
QUALITY CONTROL

95-11-0252

December 11, 1995

Mr. Gary Gill
Office of Environmental Quality Control
State of Hawaii
220 South King Street, Fourth Floor
Honolulu, Hawaii 96813

Dear Mr. Gill:

Subject: Negative Declaration for Moanalua Hillside Stabilization, Honolulu, Oahu,
Hawaii, Tax Map Key: 1-1-44: Parcels 13 through 21

The City and County of Honolulu, Department of Public Works, has reviewed the comments received during the 30-day public comment period which began on September 23, 1995. The agency has determined that this project will not have a significant environmental effect and has issued a negative declaration. Please publish this notice in the December 23, 1995 OEQC Environmental Notice.

We have enclosed a completed OEQC Publication Form and four copies of the final EA.

Please contact Mr. Herbert Kido at 523-4042 if you have any questions.

Very truly yours,


KENNETH E. SPRAGUE
Director and Chief Engineer

Encl.

176

FILE COPY

**NOTICE OF DETERMINATION
NEGATIVE DECLARATION FOR THE PROPOSED
MOANALUA HILLSIDE STABILIZATION PROJECT**

A. Proposing Agency

Department of Public Works, City and County of Honolulu

B. Accepting Authority

Not applicable to a negative declaration.

C. Description of the Proposed Action

The City and County of Honolulu, Department of Public Works proposes to purchase six residential properties, and construct a retaining wall and buttress fill for the stabilization of earth movement in a Moanalua Valley residential subdivision.

D. Determination and Reasons Supporting the Determination

The proposed project would not have a significant effect on the environment and therefore preparation of an environmental impact statement is not required. The "Significance Criteria," Section 12 of Hawaii Administrative Rules Title 11, Chapter 200, "Environmental Impact Statement Rules," were reviewed and analyzed. Based on the analysis, the following were concluded:

1. *No irrevocable commitment to loss or destruction of any natural or cultural resource would result.* There are no significant natural resources which would be affected by the proposed project. The site has been graded and filled previously for construction of single family residences. If buried cultural resources are present, they would be further buried by the buttress fill. Adoption of appropriate erosion control measures will prevent off-site siltation.
2. *The action would not curtail the range of beneficial uses of the environment.* Further use of the site for residential purposes will be curtailed, however, the future use of the site will be to stabilize a landslide which, if allowed to grow unchecked, would undoubtedly continue to involve additional properties with concomitant public safety risks and economic hardship.
3. *The proposed action does not conflict with the state's long-term environmental policies or goals and guidelines.* Hawaii's environmental policy is contained in Chapter 344, HRS. Its purpose is to "...encourage productive and enjoyable harmony between man and his environment, promote efforts which will prevent

or eliminate damage to the environment and biosphere and stimulate the health and welfare of man...." The present situation cannot be described as a productive and enjoyable harmony between man and his environment, nor does it stimulate health and welfare. The proposed solution establishes an equilibrium in which surrounding properties are spared further damage, economic losses are minimized, and public safety is enhanced.

4. *The economic or social welfare of the community or state would not be substantially affected.* The proposed project would provide short-term economic benefits in the form of engineering and construction jobs, and long-term benefits to nearby residents in terms of public safety and protection of property. There will be economic losses incurred by both owners of the affected properties and taxpayers of the City and County of Honolulu. How these losses will be apportioned will be the subject of negotiations between the City and the owners.
5. *The proposed action does not substantially affect public health.* The project would provide a safer environment for area residents than under current conditions.
6. *No substantial secondary impacts, such as population changes or effects on public facilities, are anticipated.* The proposed action would not affect population growth, but would result in the relocation of the residents of six affected properties. The impact would be insignificant on public facilities outside the project area. Public facilities within the project area, including roads, sewer lines, water lines, storm drains and regulated utilities would be spared further damage by stabilization of the landslide.
7. *No substantial degradation of environmental quality is anticipated.* The proposed action is expected to result in minor short-term increases in noise, emissions of air pollutants from mobile sources, dust, and traffic congestion in the immediate project area during construction. These impacts will be temporary, and applicable standards will not be violated. The visual character of the site will be unavoidably altered, but this is a very localized impact which could be mitigated to some extent by planting of trees and groundcover.
8. *The proposed action does not involve a commitment to larger actions, nor would cumulative impacts result in considerable effects on the environment.* The proposed action is an isolated, self-contained remedy which involves no commitment to further actions. It is expected to be a solution to what could become a larger problem if allowed to proceed unabated.
9. *No rare, threatened or endangered species or their habitats would be affected.* The project site is in a fully developed residential community. No protected species or important habitat exist in the project area.

FINAL ENVIRONMENTAL ASSESSMENT
FOR
MOANALUA HILLSIDE STABILIZATION

Moanalua, Honolulu, Oahu, Hawaii
Tax Map Keys: 1-1-44:parcels 13 through 21

This Document is prepared pursuant to Chapter 343, HRS.

Proposing Agency:

**DEPT. OF PUBLIC WORKS
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET
HONOLULU, HAWAII 96813**

Responsible Official:


Kenneth E. Sprague
Director

12/12/95
Date

Prepared by

DAMES & MOORE
1050 Queen Street, Suite 204
Honolulu, Hawaii 96814

10. *Air quality, water quality or ambient noise levels would not be detrimentally affected.* Each of these environmental characteristics would be affected by the proposed action, but to insignificant degrees. Operation of heavy equipment and other vehicles associated with the action would temporarily elevate ambient noise and concentrations of exhaust emissions in the immediate vicinity of the site during construction. Construction documents will specify erosion control requirements to protect aquatic resources.
11. *The project would not affect environmentally sensitive areas, such as flood plains, tsunami zones, erosion-prone areas, geologically hazardous lands, estuaries, fresh waters or coastal waters.* The necessity for the project arises from geologically hazardous lands, and is intended to render them less hazardous. The slope of the affected land is such that erosion is a concern, and mitigation measures will have to be promptly implemented.

E. Supplementary Information


The Environmental Assessment (EA) for the proposed action and the results of the coordination undertaken with affected agencies and parties are attached to support the determination of a Negative Declaration.

F. Name, Address and Phone Number of Contact Person

Department of Public Works
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

Marvin Fukagawa, (808) 527-5056

RESPONSIBLE OFFICIAL


Kenneth E. Sprague
Director

12/12/95
Date

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1.0 INTRODUCTION

1.1 PURPOSE AND NEED FOR ACTION

A portion of the western hillside of Moanalua Valley is experiencing earth movements which are damaging residential properties, threatening public utilities and placing residents at considerable risk. The City and County of Honolulu Department of Public Works (DPW) proposes to purchase six residential parcels, construct retaining walls, and add a buttress fill to stabilize these earth movements, remove the active risks to residents, and stop expansion of the slide. The proposed use of county funds and land "triggers" the State environmental review process (HRS 343-5(1)), of which this Environmental Assessment is a critical component.

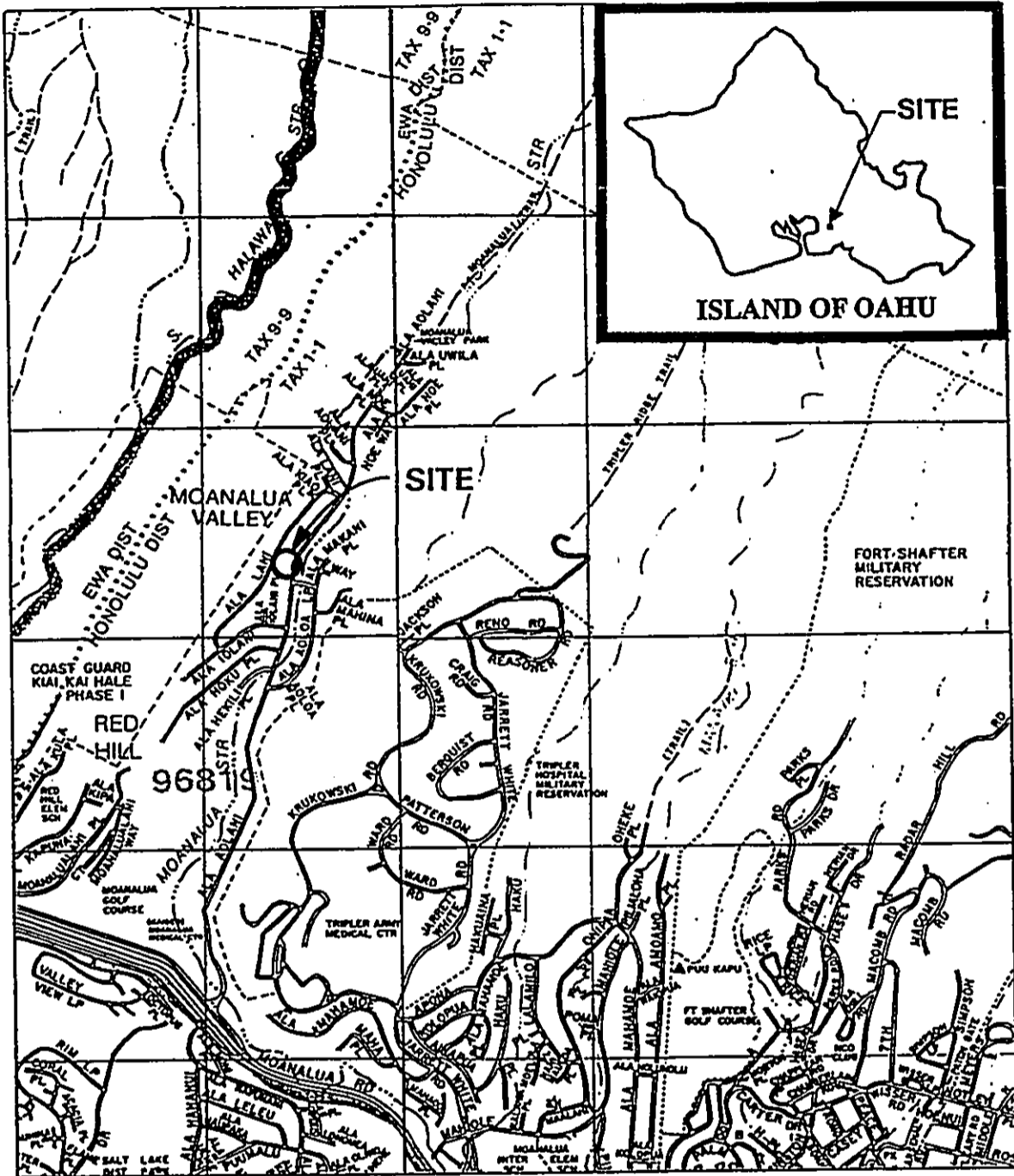
1.2 BACKGROUND

The project site is located in the Honolulu District on the island of Oahu, Hawaii (Figure 1) and is comprised of nine Tax Map Key (TMK) parcels, designated as TMK 1-1-44: parcels 13 through 21 as shown on Figure 2. The site measures approximately 325 feet by 200 feet, encompassing an area of approximately one and a half acres.

The project vicinity has a history of unstable soil conditions. Since 1974, two destructive rotational landslides have developed. The first of the two landslides occurred between 1534 and 1538 Ala Iolani Place, and 1553 and 1557 Ala Lani Street, approximately 700 feet makai of the site. It was evidently first reported in the winter of 1974, although after-the-fact airphoto analysis revealed evidence of the problem prior to construction of the houses in the area. That landslide was artificially stabilized.

The second landslide, the subject of the proposed action, first became evident in 1989, although the root causes may be traced back to the site work performed prior to home construction in that area. Essentially, what was a marginally stable natural colluvium slope was significantly destabilized by grading at the bottom (removal of the toe of the slope) and filling at the crown (STV/Lyon Associates, 1989).

The 1989 STV/Lyon Associates report described the type and extent of the slide, and defined exploration and monitoring actions for later implementation. At that time the landslide was about 150 feet wide, across the slope, and about 115 feet long in its longest downslope dimension. Its appearance was remarkably similar to the nearby 1974 slide. The toe was located under and behind 1618, 1622 and 1626 Ala Aolani Street, and the active crown scarp was underneath 1601 and 1605 Ala Lani Street. The slide was classified as a rotational slide, different in its geological basis from the translational slides which have damaged residences in Manoa Valley. Rotational slides slump at the crown and thrust upward at the toe. Typically, this type of slide sequentially adds segments of more than 20 feet to the head zone. At the time of the first investigations, it was recognized that the slide was extremely dangerous, and people and structures in the slide area were at risk, particularly during high intensity rainstorms and seismic events.



Reference:
 Bryan's Sectional Maps
 Oahu 1994 Edition
 Copyright J. R. Clere
 used with permission

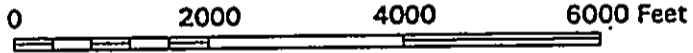
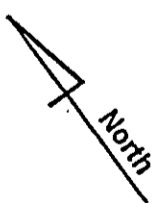


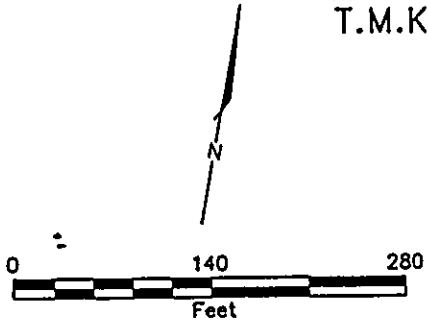
FIGURE 1
LOCATION MAP
 MOANALUA HILLSIDE STABILIZATION
 HONOLULU, OAHU, HAWAII



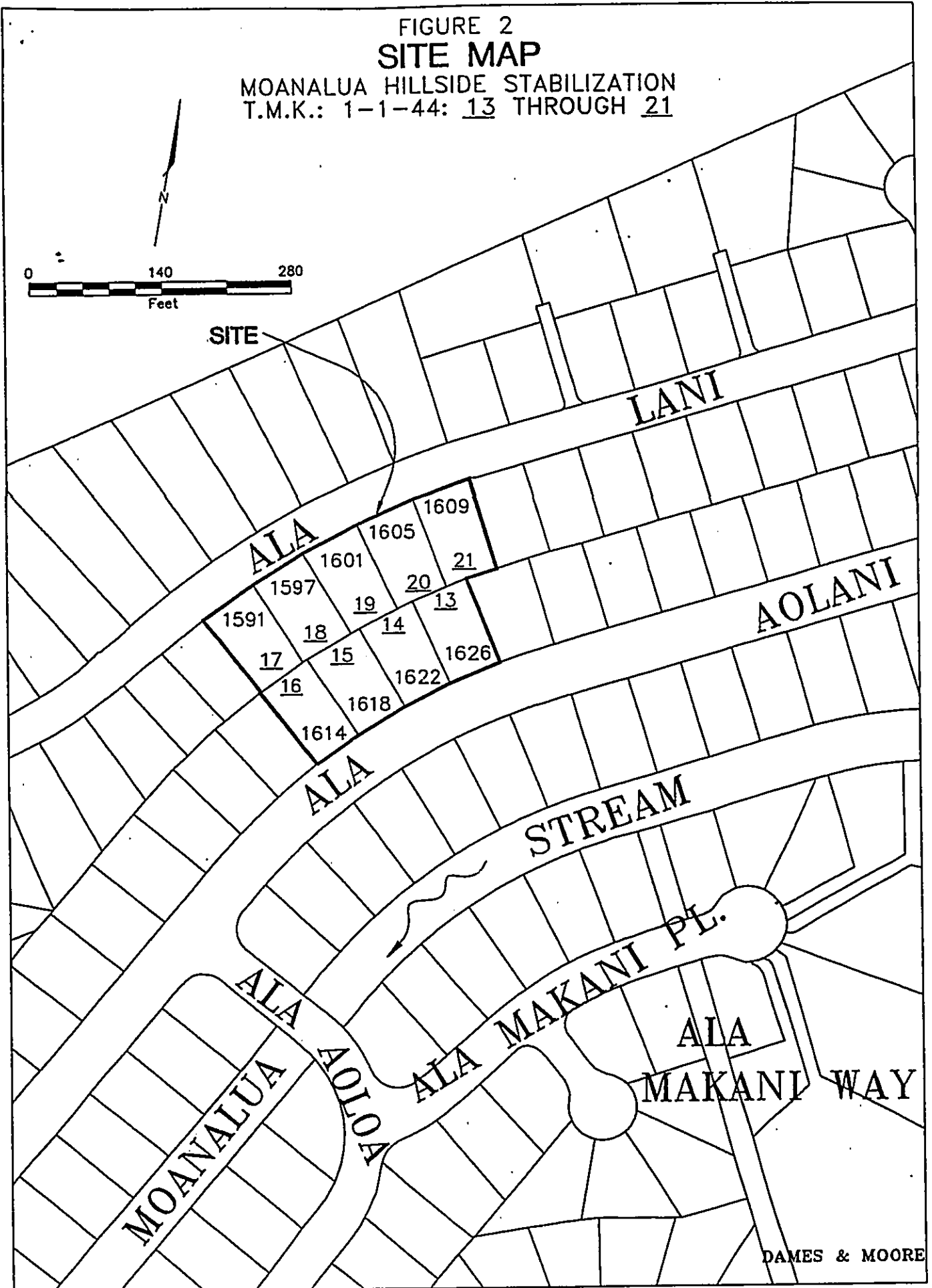
Dames & Moore

FIGURE 2
SITE MAP

MOANALUA HILLSIDE STABILIZATION
T.M.K.: 1-1-44: 13 THROUGH 21



SITE



DAMES & MOORE

MOANALUA HILLSIDE STABILIZATION (T.M.K. 1-1-44) PLOT SCALE 1"=140'

In 1990, the hillside was instrumented (piezometer, inclinometer, extensometer), and monitoring of hillside movements continued into 1991. During this time the active crown scarp advanced upslope, undermining the foundations of houses at 1605 and 1601 Ala Lani Street. At the same time, the upthrust of the active toe emerged within the driveway at 1618 Ala Aolani Street, and to the east, lifted the rear of the house at 1622 Ala Aolani Street by some ten feet. The monitoring program showed significant hillside movements after rainstorms. Displacements of 1.4 inches and 4.3 inches, respectively, were measured after storm events of December 14-27, 1990, and March 15-25, 1991. While these movements may be attributed to elevated pore water pressures and seepage pressures during the rainy season, the landslide continued to creep during the dry seasons after mild rainy seasons of 1989 and 1990 (STV/Lyon Associates, 1991). Mid-slide measurements revealed artesian pressures of from 7.5 to 11 feet. Factors seen as promoting hillside movement included: subsurface geometry, longitudinal steepness (30°), low soil strength and low permeability.

To reduce risks to residents and alleviate impacts of the active landslide on structures, including buried utilities, in 1990 the City purchased three properties most impacted by the slide (1601 and 1605 Ala Lani and 1622 Ala Aolani). The residences were demolished. This area is shown below on Figure 3.

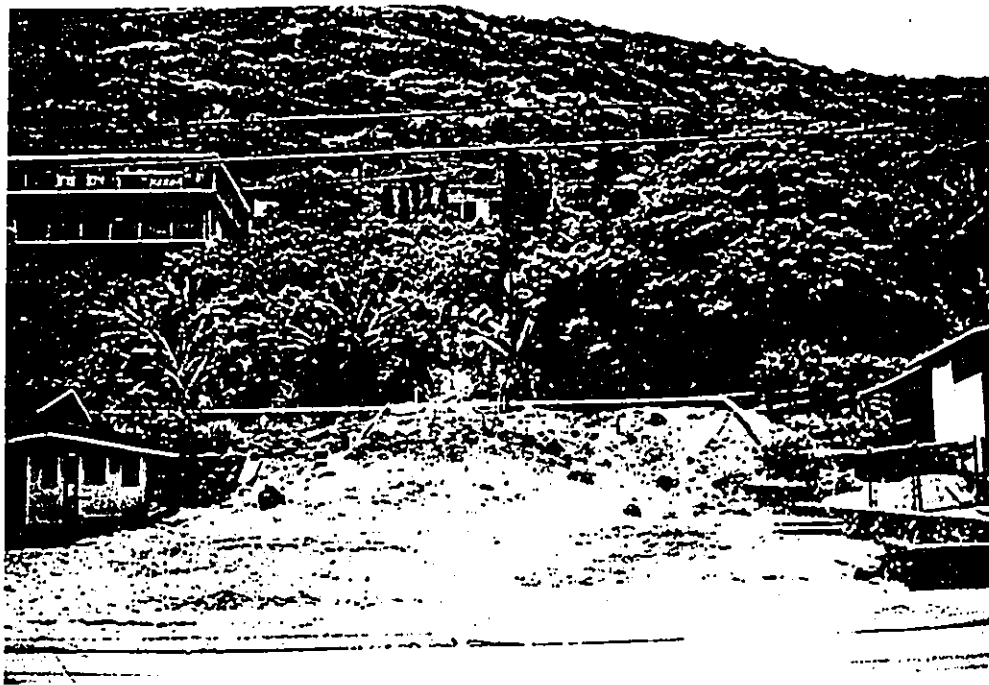


FIGURE 3. AREA OF PRIOR PROPERTY ACQUISITIONS

Subsequently, to reduce the pore water pressure within the hillside, 15 vertical drains were installed along portions of the crown scarp, which by that time had grown to lie adjacent to Ala Lani Street (DPW, 1992). Despite three consecutive drought years, the slide significantly expanded its outer boundaries, especially in the west and southwest margins (1597 and 1591 Ala Lani). Between the end of 1989 and late 1993, the slide grew in width by 70 feet, in area by 0.75 acre, and in volume by an estimated 10,000 cubic yards. At that time 10 lots were directly involved. Lateral expansion had occurred in lots 1597 and 1591 Ala Lani, with significant headward advance of the crown scarp throughout lots 1609, 1605, 1601, 1597 and 1591 Ala Lani (STV/Lyon Associates, 1993). The rate of migration of the slide slowed after installation of the vertical drains in 1992. Figures 4 and 5 are reproduced from the STV/Lyon Associates Final Evaluation Report (1993). Figure 4 shows in cross-section the progressive development of the landslide between 1968 and 1993. Figure 5 shows in plan view the status of the landslide in January, 1993.

It is important to note that there are no natural geologic or topographic limits to continued growth of the landslide. Until effective physical stabilization measures are in place, the landslide will continue to grow, placing the residents of the unstable area, their property and public facilities at considerable risk.

2.0 PROJECT DESCRIPTION

The major elements of work proposed are: (a) additional property acquisitions; (b) slide stabilization by construction of a retaining wall; and (c) adding a buttress fill over the slide area.

2.1 PROPERTY ACQUISITIONS

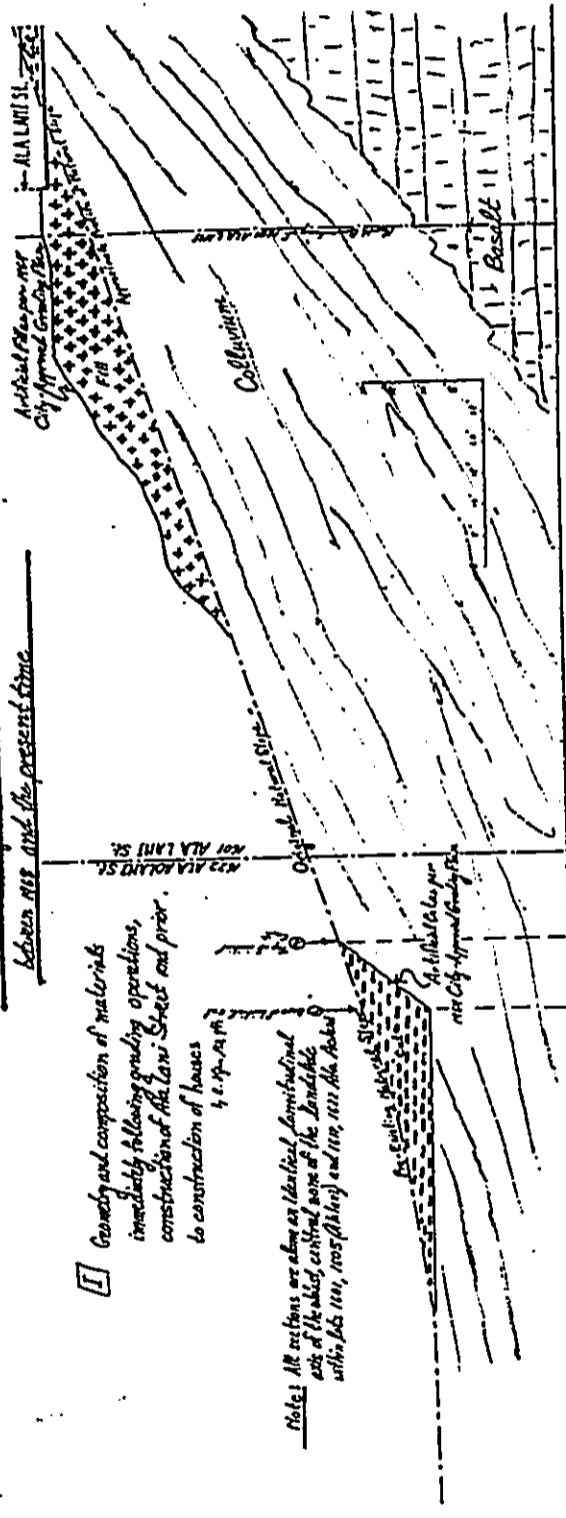
The City and County of Honolulu proposes to purchase the following six parcels:

- 1591 Ala Lani (TMK 1-1-44:17)
- 1597 Ala Lani (TMK 1-1-44:18)
- 1609 Ala Lani (TMK 1-1-44:21)

- 1614 Ala Aolani (TMK 1-1-44:16)
- 1618 Ala Aolani (TMK 1-1-44:15)
- 1626 Ala Aolani (TMK 1-1-44:13)

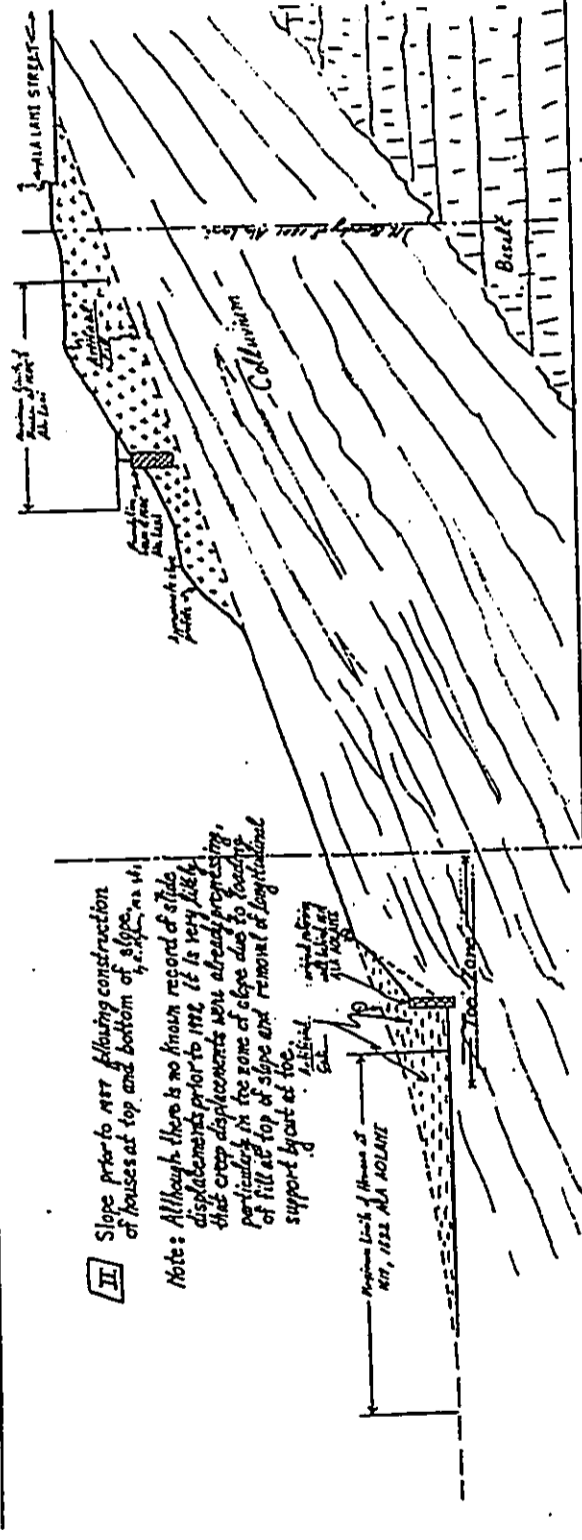
The terms of purchase have not yet been determined, and will be negotiated with the affected landowners. Acquisition of properties by the City is authorized under Chapters 46 and 101 of the Hawaii Revised Statutes and the Revised Charter of the City and County of Honolulu. The City follows guidelines for property acquisitions established by the federal government. A summary of these guidelines may be found in Section 4.7.

Initiation and progressive development of Mountain Landslide
between 1850 and the present time.



I Slope prior to 1857 following construction of houses at top and bottom of slope.

Note: Although there is no known record of slide displacements prior to 1852, it is very likely that creep displacements were already progressing, particularly in the zone of slope due to loading of fill at top of slope and removal of longitudinal support by cut of the



III Central longitudinal section of Mountain Landslide immediately after principal slippage event of 1857-1861

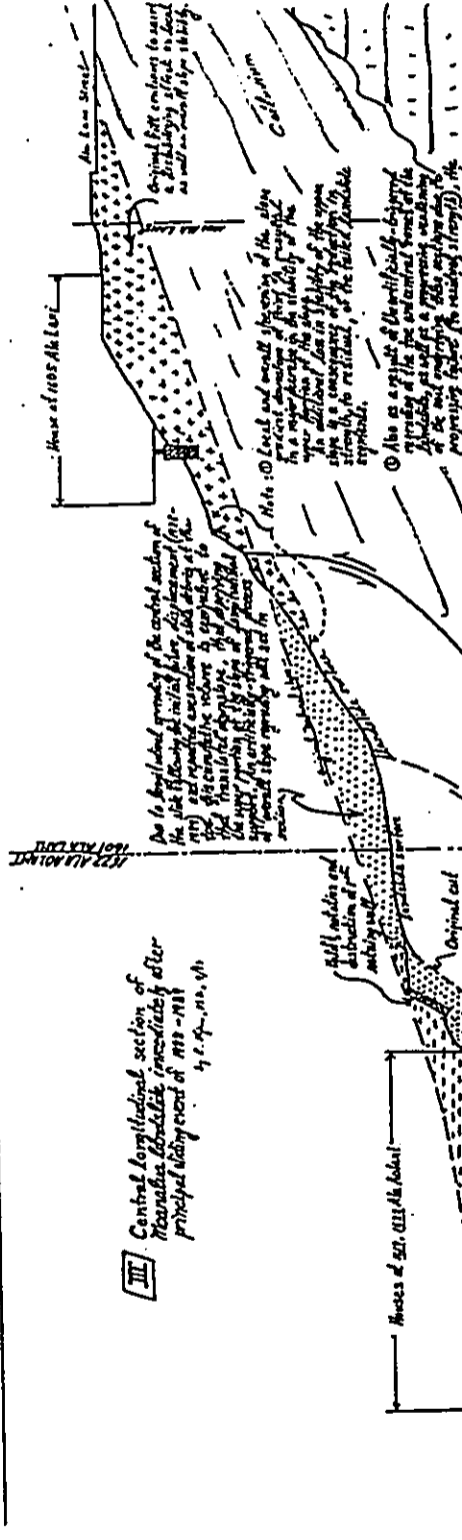
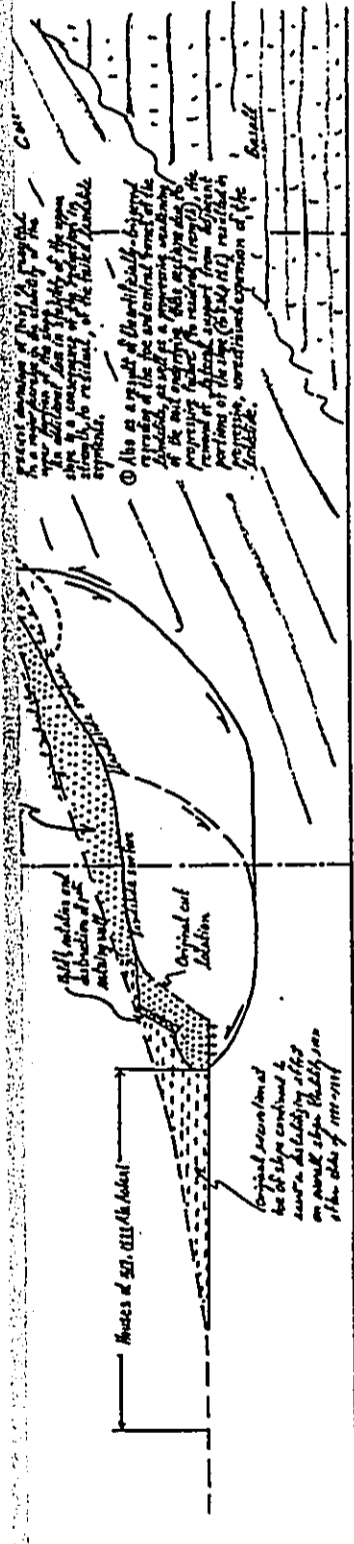
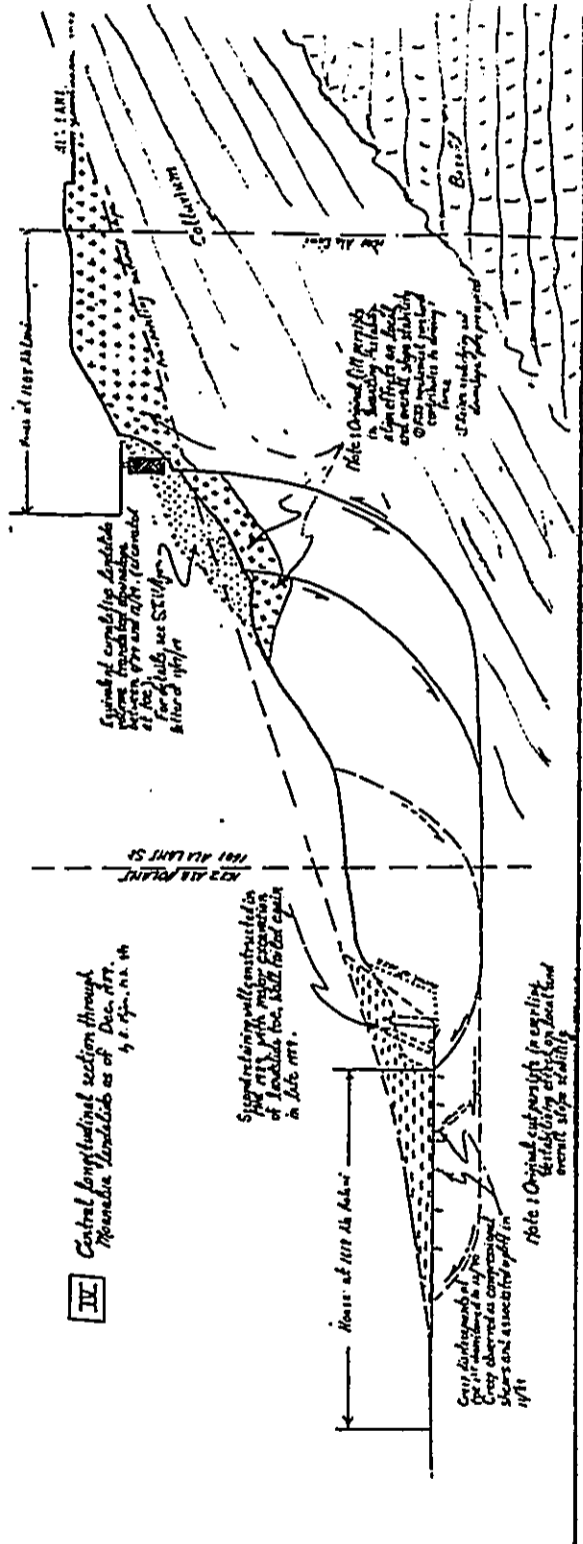


FIGURE 4. HISTORICAL DEVELOPMENT

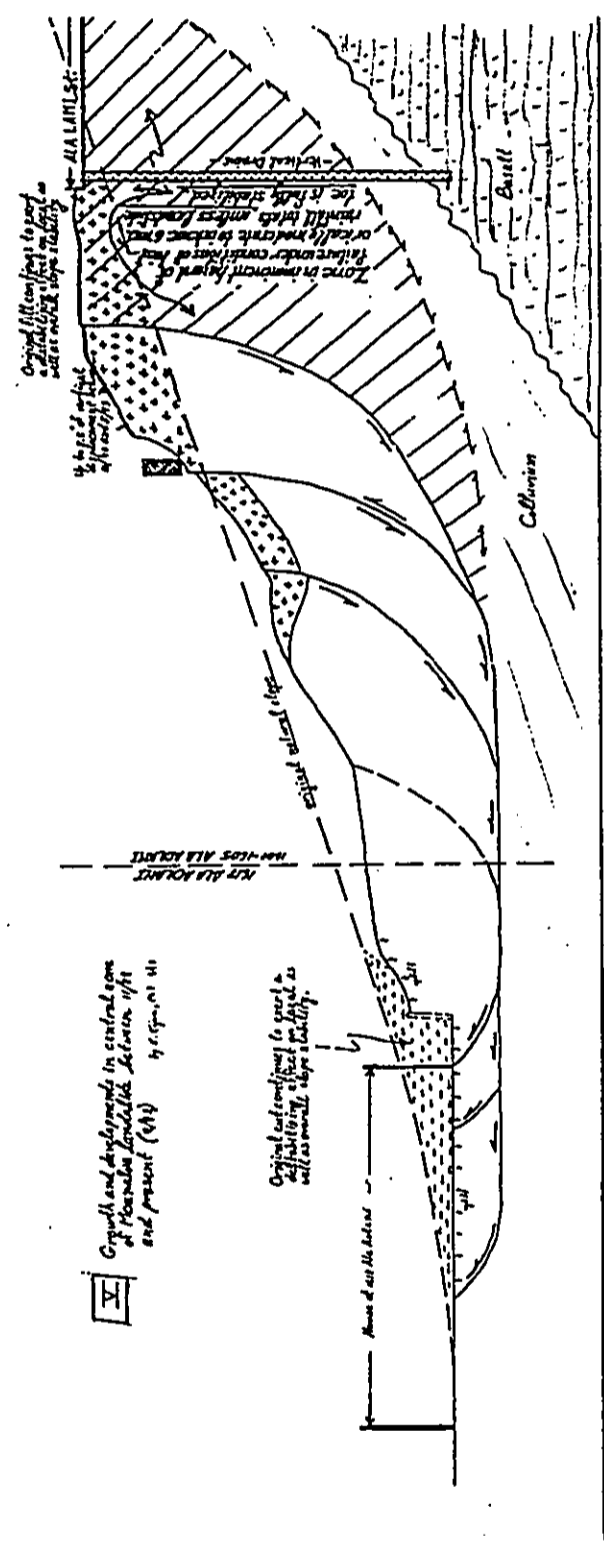
ELOPMENT OF LANDSLIDE



Present position of landslide
 The landslide has in the past been a stream to the westward of the present position of the landslide.
 Also as a result of the landslide a large quantity of the soil and gravel has been deposited in the present position of the landslide.
 The present position of the landslide is a result of the landslide which occurred in 1922 A.D. and is a result of the landslide which occurred in 1922 A.D.



Original cut proposed to prevent landslide
 The original cut proposed to prevent the landslide was a result of the landslide which occurred in 1922 A.D. and is a result of the landslide which occurred in 1922 A.D.



Original cut proposed to prevent landslide
 The original cut proposed to prevent the landslide was a result of the landslide which occurred in 1922 A.D. and is a result of the landslide which occurred in 1922 A.D.

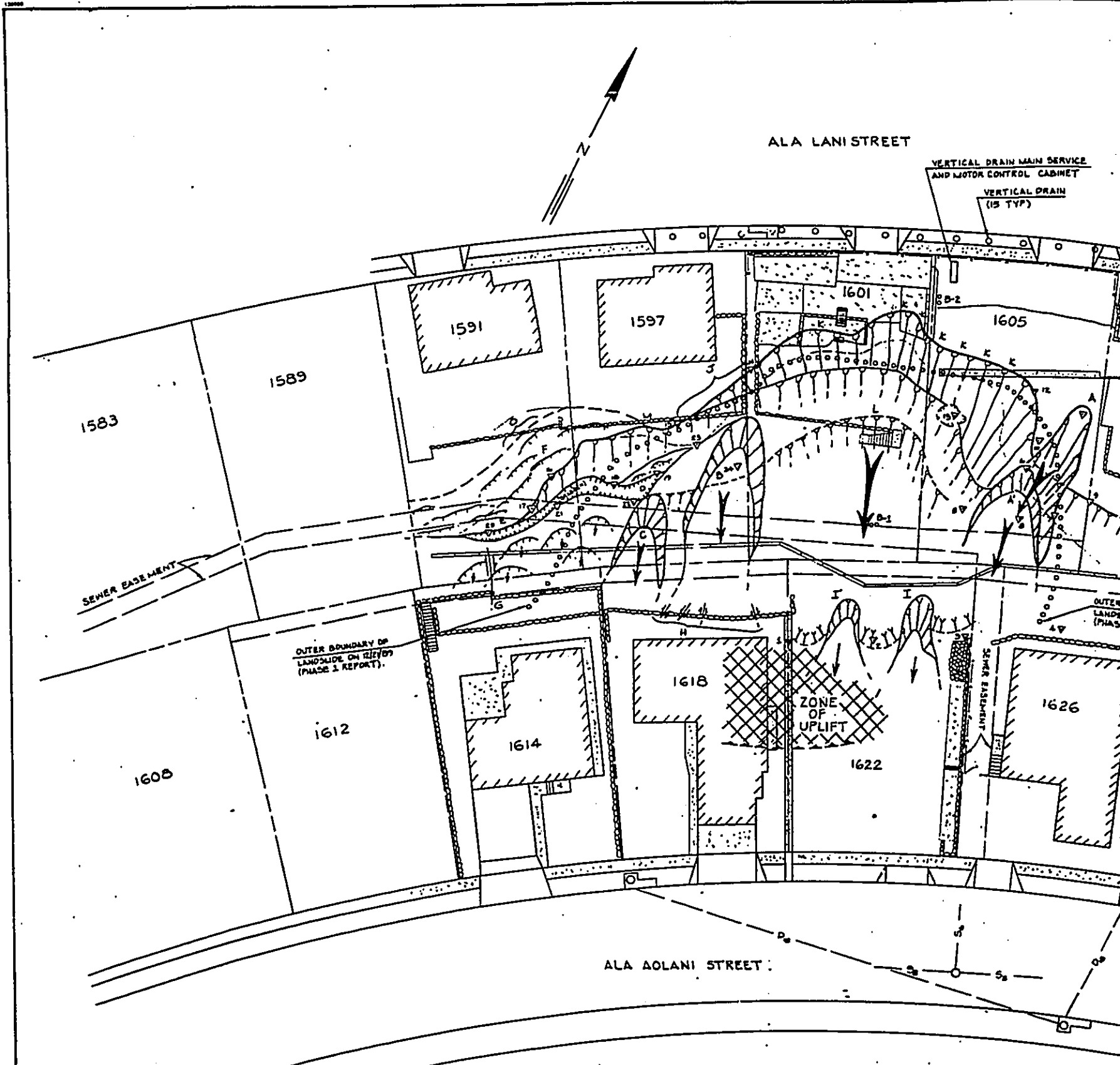
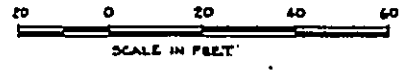
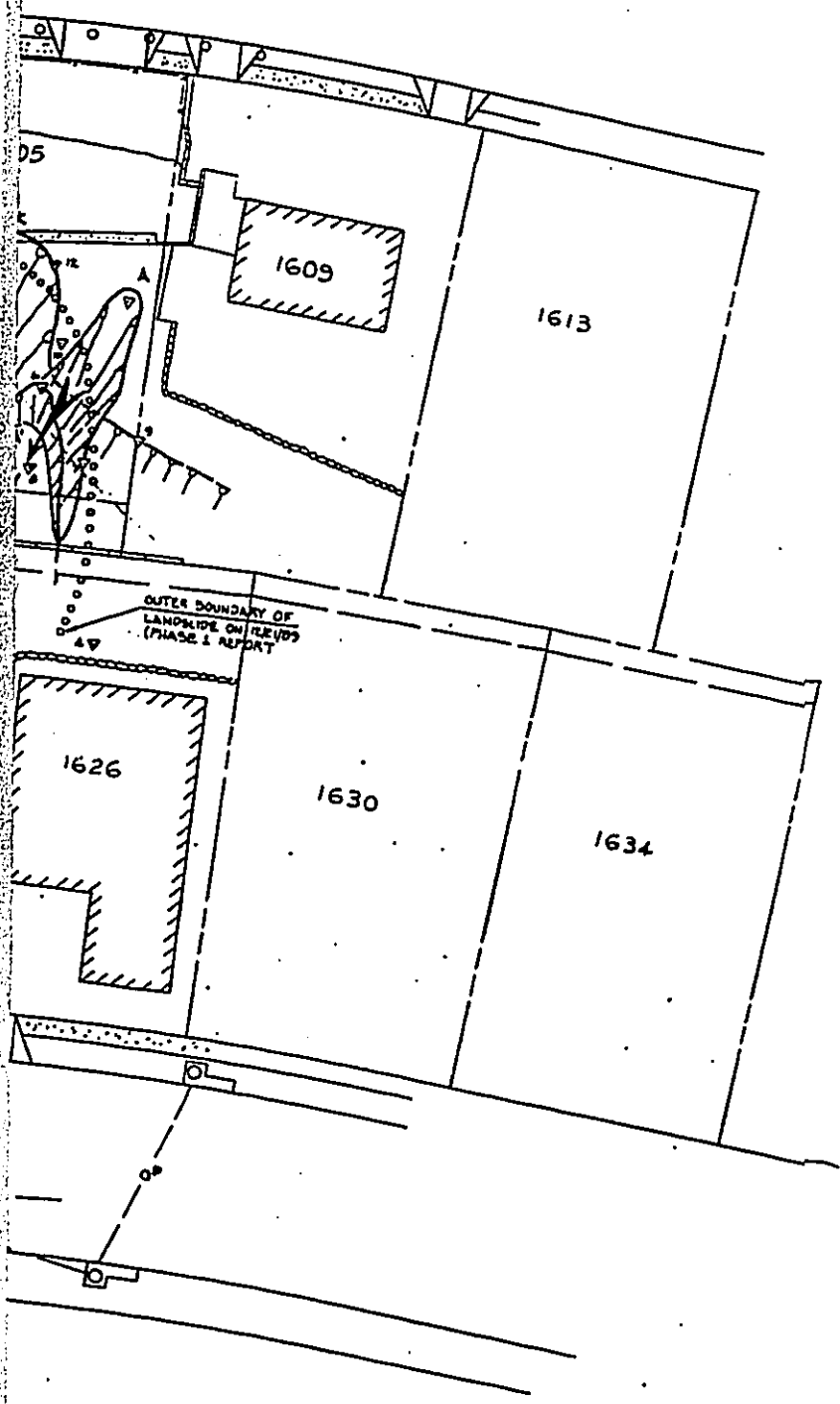


FIGURE 5
 STATUS OF STRUCTURE, MORPHOLOGY AND ACTIVITY OF
 MOANALUA LANDSLIDE (AS OF JANUARY 15, 1993)



MAIN SERVICE
 ROL CABINET
 CAL DRAIN
 (YP)



LEGEND

- TRANSLATIONAL LANDSLIDE CROWN SCARP
-FORM LINES INDICATE DIRECTION OF DISPLACEMENT ON SLIP SURFACE
- ROTATIONAL LANDSLIDE CROWN SCARP
- TENSION CRACK
- GRADEN (BOUNDED BY TENSION CRACKS)
- SHEAR SURFACE SHOWING DIRECTION OF DISPLACEMENT
- TOE OF LANDSLIDE
- TOPOGRAPHIC DEPRESSION OR NEAR DEPRESSION
- DOMINANT DIRECTION OF LANDSLIDE COMPONENT DISPLACEMENT
- REFERENCE STAKE USED IN LANDSLIDE MAPPING
- OUTER LIMITS OF LANDSLIDE AS OF 12/21/99 (3.3 YRS AGO)

OF

NO.	DATE	DESCRIPTION	ENGR.	SEPP. OR SW.	APPROV.
REVISIONS					
DEPARTMENT OF PUBLIC WORKS CITY AND COUNTY OF HONOLULU DIVISION OF ENGINEERING MOANALUA VALLEY HILLSIDE REPAIRS HONOLULU OAHU HAWAII					
DESIGNED BY		E. KOTAN		DATE 5-17-99	
DRAFTER		N. MAKALANA		CHECKED BY	
APPROVED					
EMP. OR OWNER OF ENGINEERING					

THIS WORK WAS PREPARED
 BY ME OR UNDER MY
 SUPERVISION

LYON ASSOCIATES, INC.
 An EITC Registered Professional Firm
 241 BERKELEY ST., SUITE 210
 HONOLULU, HAWAII 96813

JOB NO.

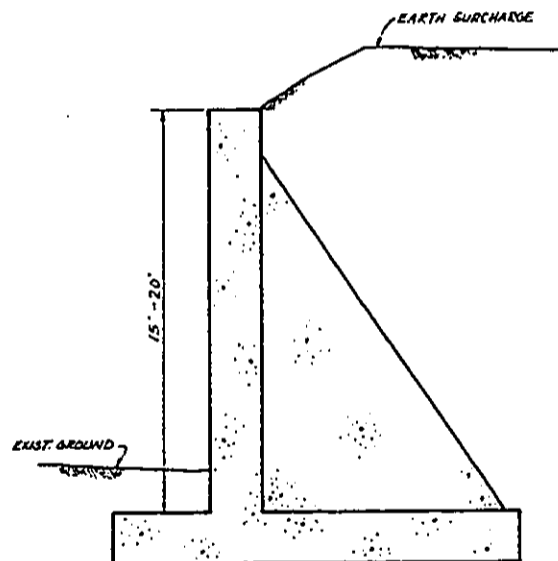
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2.2 RETAINING WALLS

Retaining walls would be constructed along the lateral boundaries of the site. Depending on the final design adopted, the lateral retaining walls could be constructed of reinforced earth. These walls would begin twenty to thirty feet back from the street, and rise to their maximum height where they join the hillside. There will be neither walls nor fill immediately adjacent to the street. The height of the walls will depend on the depth of fill necessary to stabilize the slide. Preliminary estimates are that the walls will be 15 to 20 feet high. The preliminary engineering design of the walls is shown on Figure 6. According to Honolulu's Land Use Ordinance (DLU, 1993), retaining walls should not exceed six feet in height, but the Director of the Department of Land Utilization (DLU) "...may adjust the maximum height of the retaining wall on a finding that additional height is necessary because of safety, topography...." A variance for retaining wall height will be required from DLU.

2.3 BUTTRESS FILL

Fill will be added between the retaining walls to cover the entire area of the active landslide to a height sufficient to stabilize the slide. Preliminary estimates are that as much as 22 feet of fill will be required adjacent to the hillside. From the active margins of the slide to the retaining walls, the fill will decrease in height at a 2:1 slope. The farther away from the wall the active margin of the slide is, the lower the wall will be.



PROPOSED REINFORCED CONCRETE
COUNTERFORT RETAINING WALL
MOANALUA HILLSIDE STABILIZATION PROJECT
N.T.S.

FIGURE 6. PRELIMINARY ENGINEERING DESIGN OF RETAINING WALLS

2.4 MAINTENANCE

The filled area will be mulched, a low-maintenance ground cover planted for erosion control, and fenced erected where necessary to restrict access. In similar circumstances elsewhere in Honolulu, the contractor was responsible for maintenance during the first 24 months after construction, and thereafter the City assumed the responsibility for maintenance.

2.5 PROJECT COST

The City and County of Honolulu Fiscal Year 1995 to 1996 Capital Budget for Project Number 91043 "Moanalua Valley Hillside Restoration" shows a \$2M appropriation for land acquisition and \$100,000 for design. Demolition of existing structures is expected to cost about \$500,000, and construction, including retaining walls, fill, and utilities relocations, will cost about \$1M (Ambrose, 1995).

2.6 PROJECT SCHEDULE

The estimated project schedule is as follows:

Begin Land Acquisition	January 1996
Begin Design	May 1996
Begin Construction	September 1996

3.0 ALTERNATIVES

3.1 NO ACTION

The No Action Alternative would continue the current situation. That is, homes within the slide area would continue to be undermined or thrust upwards, utilities lines would eventually be broken by lateral displacement, and residents would be imperiled by sudden earth movements, most likely during times of heavy rainfall or seismic events. The landslide would continue to expand laterally, as well as at the crown, perhaps undermining a portion of Ala Lani Street. Property values in the area would likely decrease.

3.2 DELAYED ACTION

Delay of the project would only serve to increase its ultimate cost, and continue to imperil lives and property. Delaying the project would not eliminate its necessity.

3.3 PREFERRED ALTERNATIVE

The preferred alternative would include the following actions:

- a. Remap the slide area.
- b. Design the buttress fill to maximize the stabilizing forces over that portion of the slide from its axis of rotation to its toe. The exposed fill slope would be 3:1 or 4:1 as available land permits. The height of the side retaining walls will depend on the location of the slide with respect to adjoining properties, but would be kept as low as possible.
- c. Remove structures.
- d. Construct walls and fill.

Figure 7 shows in plan view the approximate location of the buttress fill. Figure 8 shows in cross-section the position of the fill with respect to the rotational axis of the slide.

3.4 OTHER DESIGN ALTERNATIVES

The primary design alternative is construction of a tie-back retaining wall, rather than the lateral walls and buttress fill. A tie-back wall would be situated across the slide, just downhill of the property lines between the affected properties. The maximum height of such a wall would be about 12 feet. This alternative could avoid purchase of the affected properties and relocation of residents; it could be constructed within an easement. Major risks associated with this alternative include potential damage to existing structures during construction and uncertainty of its effectiveness. The estimated cost of this alternative is \$1.4M (Ambrose, 1995). Figure 9 shows a preliminary design for the tie-back wall alternative.

4.0 SUMMARY DESCRIPTION OF THE AFFECTED ENVIRONMENT, POTENTIAL ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

4.1 PROJECT REGION

The project area is located within the northwestern half of Moanalua Valley, between Ala Lani and Ala Aolani Streets as shown on Figures 1 and 2. The area is a residential subdivision constructed in the 1960s. Red Hill Naval Reservation lies less than 200 feet to the north; Moanalua Stream lies less than 150 feet to the south. Tripler Hospital Military Reservation sits atop the ridge south of Moanalua Stream less than a mile away, while the Moanalua Golf Course, the oldest course in Hawaii, lies at the foot of the valley, less than a half mile to the west.

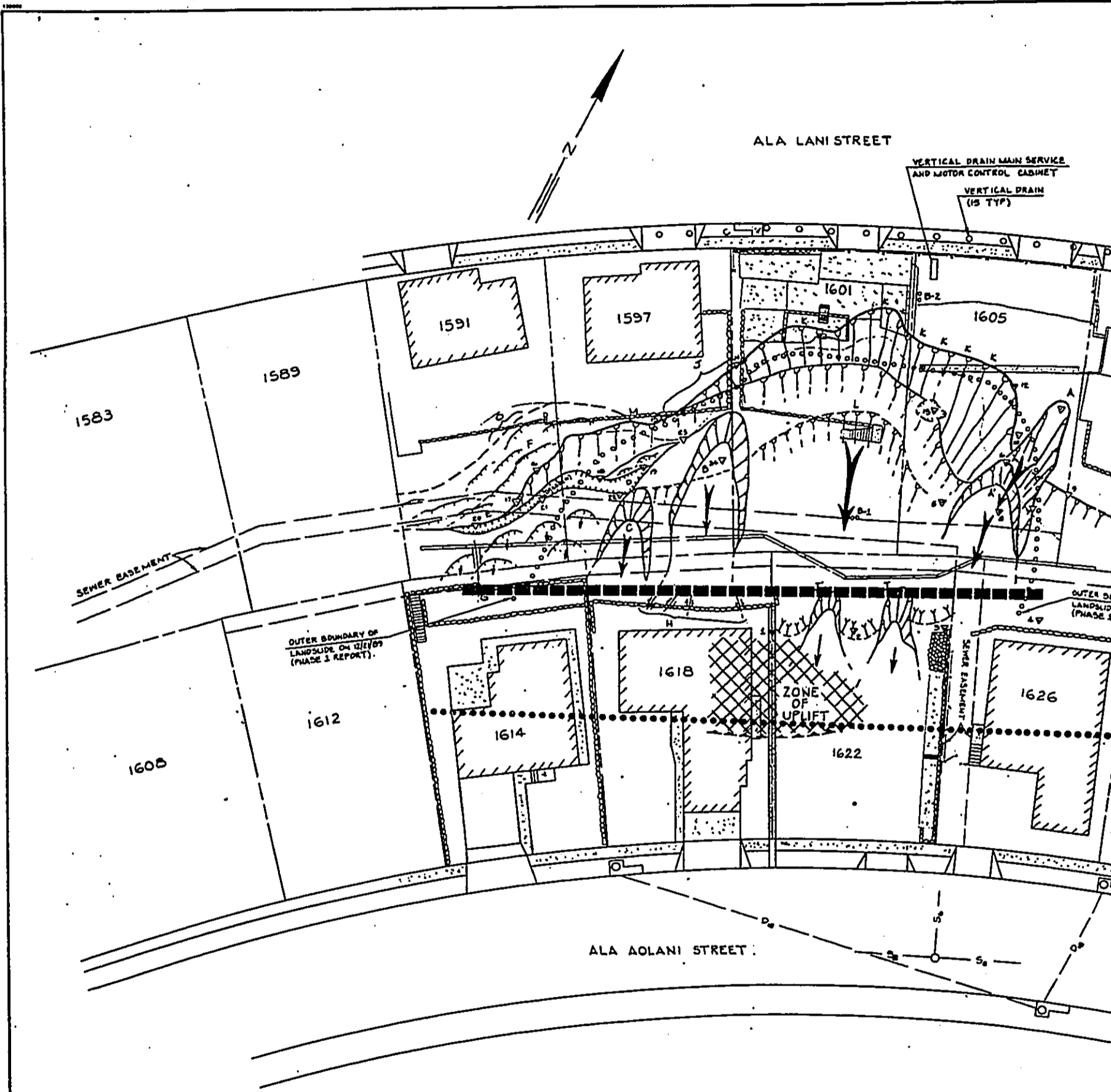
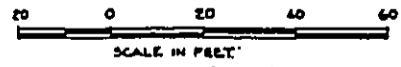


FIGURE 7. LOCATION OF BUTTRESS FILL



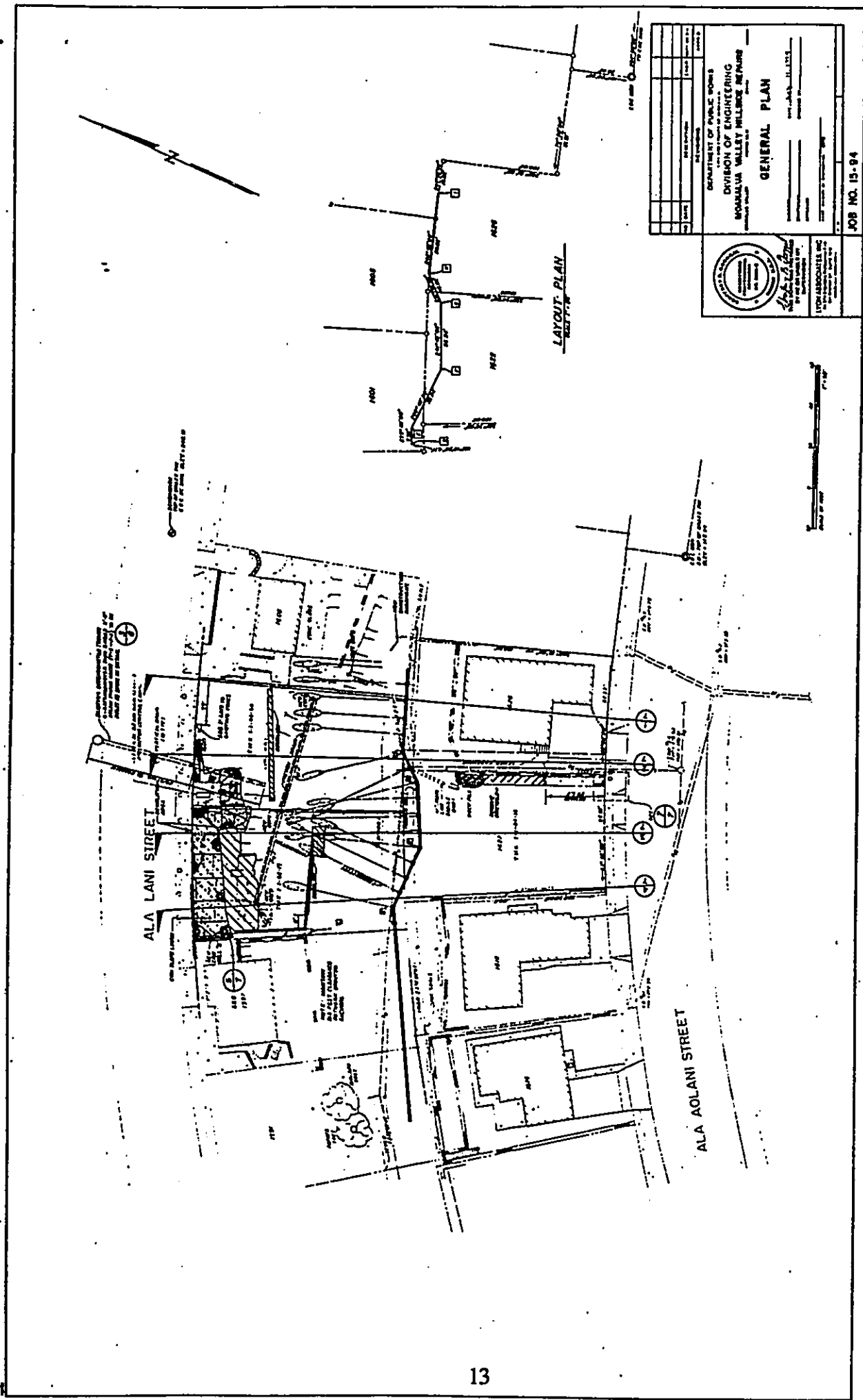


FIGURE 9. PLAN VIEW OF TIE-BACK RETAINING WALL ALTERNATIVE

4.2 LAND REGULATION AND USE

The entire project area is within the Urban State Land Use District; the nearest Conservation District land boundary is southeast of Moanalua Stream and approximately 0.125 mile southeast of the site (DLNR, 1969). No adverse impacts on Conservation District lands are anticipated to result from the proposed project.

The proposed site is designated as Tax Map Key 1-1-44, parcels 13 through 21. All parcels are within an area zoned R-5 and are designated residential on the Honolulu Development Plan Land Use Map. Neither the DLU nor the Planning Department had any comments to offer during the pre-consultation phase; and the Department of Housing and Community Development stated the project would not conflict with their plans (1995).

The site is within Flood Zone X, which is an area designated by the Federal Emergency Management Agency to be outside the 500-year flood plain (FEMA, 1990). Areas within the 100-year flood inundation zone, however, tend to follow the Moanalua Stream alignment, and lie within 200 feet of the southern border of the site. The Army Corps of Engineers did not have any specific concerns at the pre-consultation phase (U.S.COE, 1995), but requested an opportunity to review the Environmental Assessment to determine permit requirements. Subsequently, they concluded that no permit is required.

4.3 CLIMATE AND AIR QUALITY

The climate is characterized by the persistence of trade winds, a strong gradient of increasing rainfall from the coast to the mountains, a concomitant gradient from sunny coastal areas to persistent cloudiness over nearby mountain crests, equable temperatures from day to day and season to season, and the infrequency of severe storms. Northeasterly trade winds prevail throughout the year, although their average frequency varies from more than 90 percent during the summer to only 50 percent in January. Annual rainfall in the project area averages about 40 inches per year (University of Hawaii, 1983).

Air quality is generally very good due to the lack of stationary sources of pollutants and the effects of the tradewinds. During periods of light or calm winds, however, "hot spots"-where air pollutants may exceed short-term standards can occur in areas of traffic congestion. Such areas do not exist near the project site.

Exhaust emissions during construction would be generated from vehicles and construction machinery. Fugitive dust will be generated during earthmoving activities and as a result of vehicular traffic.

Impacts due to exhaust emissions will be minimized by keeping all equipment properly tuned and maintained, as well as by minimizing unnecessary idle time. The contractor will be required to comply with Department of Health Administrative Rules 11-60 "Air Pollution Control" which

contains restrictions on visible emissions from motor vehicles and fugitive dust generation. The relevant section reads as follows:

§11-60-4 Control of motor vehicles. (a) No gasoline-powered motor vehicle shall be operated which emits visible smoke while upon streets, roads, and highways.

(b) No diesel-powered motor vehicle shall be operated which emits visible smoke for a period of more than five consecutive seconds while upon streets, roads, and highways.

(c) No person shall cause, suffer, or allow to keep any engine in operation while the motor vehicle is stationary at a loading zone, parking, or servicing area, route terminal, or other off street areas, except:

(1) During adjustment or repairing of the engine at a garage or similar place of repair;

(2) During operation of ready-mix trucks, cranes, hoists, and certain bulk carriers, or other auxiliary equipment built onto the vehicle or equipment that require power take-off from the engine, provided that there is no visible discharge of smoke and the equipment is being used and operated for the purposes as originally designed and intended. This exception shall not apply to operations of air conditioning equipment or systems;

(3) During the loading or unloading of passengers, not to exceed three minutes;

(4) During the buildup of pressure at the start-up and cooling down at the closing down of the engine for a period of not more than three minutes.

(d) No person shall remove, dismantle, fail to maintain, or otherwise cause to be inoperative any equipment or feature constituting an operational element of the air pollution control system or mechanism of a motor vehicle as required pursuant to the provisions of the Clean Air Act except as permitted or authorized by law.

To reduce fugitive dust emissions, exposed surfaces will be kept watered whenever feasible. The City and County of Honolulu will include special provisions in the construction contract to minimize fugitive dust emissions and erosion from trenching, stockpiling and other operations. Control of fugitive dust is also regulated by Department of Health Administrative Rules 11-60 "Air Pollution Control." The relevant section reads as follows:

§11-60-5 Fugitive dust. (a) No person shall cause or permit any materials to be handled, transported, or stored; or a building, its appurtenances, or a road to be constructed, altered, repaired, or demolished without taking reasonable precautions, as approved by the director, to prevent particulate matter from becoming airborne. Examples of some reasonable precautions are:

- (1) *Use, where possible, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads, or the clearing of land;*
 - (2) *Application of asphalt, water, or suitable chemicals on roads, materials stockpiles, and other surfaces which can give rise to airborne dusts;*
 - (3) *Installation and use of hoods, fans, and fabric filters to enclose and vent handling of dusty materials. Adequate containment methods shall be employed during sandblasting or other similar operations;*
 - (4) *Covering, at all times when in motion, open-bodied trucks transporting materials likely to give rise to airborne dusts;*
 - (5) *Conduct of agricultural operations such as tilling of land, application of fertilizers, etc. in such manner as to minimize airborne dust;*
 - (6) *The paving of roadways and their maintenance in a clean condition; and*
 - (7) *The prompt removal of earth or other material from paved streets onto which earth or other material has been transported by trucking or earth moving equipment, erosion by water, or other means.*
- (b) *Except for persons engaged in agricultural operations or persons who can demonstrate to the director that best practical operation or treatment is being implemented, no person shall cause or permit the discharge of visible emissions of fugitive dust beyond the lot line of the property on which the emissions originate.*

4.4 SOIL AND WATER RESOURCES

The *Hawaii Stream Assessment* (Hawaii Cooperative Park Service Unit, 1990) represents Hawaii's first attempt to identify streams and rivers with significant natural and cultural qualities that may be appropriate for protection. Its centralized base of stream-related data provides a comprehensive evaluation of the aquatic, riparian, cultural and recreational resources of Hawaii's perennial streams. Moanalua Stream, which flows continuously to the sea year round, is less than 150 feet south of the project site. It originates in the Koolau Mountains, flows through Moanalua Valley and eventually discharges into Keehi Lagoon adjacent to the Keehi Lagoon Beach Park. The lagoon is an identified embayment with a water quality classification "A." Manaiki and Kahauiki Streams join Moanalua Stream well below the project area. Average annual flow rates for Moanalua Stream are about 3.26 cfs; it is classified a "small" stream. Moanalua Stream has "outstanding" cultural resources, including at least 53 archaeological sites which have been identified along its banks. Its recreational resources are rated "substantial," offering hiking, fishing, swimming, parks, hunting, nature study and scenic views along its length. Its riparian resources and its aquatic resources are not rated in the assessment, indicating they are insignificant to non-existent. This stream has not been identified as a candidate for protection.

At points closest to the project area, however, Moanalua Stream is completely channelized. It is visible only from private backyards and occasional road crossings. Figure 10 is a photograph of the stream in the immediate vicinity of the project site.



FIGURE 10. MOANALUA STREAM NEAR THE PROJECT SITE

Additional information about this stream is found in the now somewhat dated *Stream Channel Modification in Hawaii* (Timbol and Maciolek, 1978). Moanalua Stream is classified as altered; at the time of this survey, 34% of its length consisted of lined channels or revetments. There are no diversions for agricultural or potable uses. At the time of this work, there were 39 road crossings. Some native fish were present at lower reaches, but this may no longer be the case given the lack of a rating in the more recent *Hawaii Stream Assessment*. On a scale of

decreasing ecological quality from I to IV, Moanalua Stream was accorded status III, Exploitive-Consumptive. Characteristics of this category are: "Moderate to low natural and/or water quality (well exploited, modified or degraded): used for water-related recreational activities."

In the short term, during construction, there is the potential for increased erosion and transport of sediment to the southeast. If this were to occur, the sediment-laden waters would enter the stream through the storm drain system. Articles 13 through 16 of the Revised Ordinances of Honolulu, Chapter 14, "Public Works Infrastructure Requirements Including Fees and Services" provide guidance for site work. Article 13, "General Provisions for Grading, Soil Erosion and Sediment Control," establishes definitions and exclusions. Article 14, "Permits, Bonds and Inspection for Grading, Soil Erosion and Sediment Control," specifies the requirements for grading, grubbing and stockpiling permits. For areas of 15,000 square feet or more a grading plan prepared by an engineer is required. Article 14 states that:

In the event the area that is to be graded is more than one acre or in the event a proposed cut or fill is greater than 15 feet in height,...include a drainage and erosion control plan. The drainage and erosion control plan shall be prepared by an engineer in accordance with the erosion control standards and guidelines, department of public works, City and County of Honolulu, dated November, 1975...and shall show the general scheme for controlling erosion and disposal of runoff water, including drainage devices such as terraces, berms, ditches, culverts, subsurface drains, sedimentation basins and erosion control planting, mulching, sprigging, or sodding, and the estimated runoff quantities of the areas served by each drain and drainage structure. The permittee shall submit temporary erosion control procedures for the chief engineer's approval prior to grading, which shall include a statement of the sequence of construction operations....Where any operations are delayed for any reason, a revised schedule shall be submitted to the chief engineer together with such modifications of the temporary drainage and erosion control plan as the chief engineer may require. Plans shall provide that the area of bare soil exposed at any one time by construction operations be held to a minimum.

In establishing grading permit limitations, Article 14 specifies:

The chief engineer may attach such conditions as may be reasonably necessary ...to prevent creation of a nuisance or hazard to public or private property, health or welfare. Such conditions may include...: The requirement of retaining walls adequate to prevent loss of support to, erosion of, and interference with natural drainage patterns on adjacent properties....

Article 15, "Grading, Grubbing and Stockpiling," provides permit conditions relative to cut and fill heights and slopes. Of relevance to this project is that for fills greater than 15 feet in height, a terrace or bench of at least eight feet in width is required, and drainage provisions must be provided to control erosion on the slope face and bench surface. For a fill height of more than

15 feet, the horizontal distance from the top of the fill slope to the adjoining property line shall not be less than eight feet, although this requirement may be modified by the chief engineer when the fill is supported by a retaining wall. With respect to drainage, Article 15 specifies:

Adequate provisions shall be made to prevent surface waters from damaging the cut face of an excavation or the sloped surfaces of a fill. Positive drainage shall be provided to prevent the accumulation or retention of surface water in pits, gullies, holes or similar depressions. All drainage facilities shall be designed to carry surface waters to a street, storm drain inlet or natural watercourse and shall include an erosion and sedimentation control plan to prevent sediment-laden runoff from leaving the site, either during or following construction.

Article 16, "Violations, Penalties and Liabilities for Grading, Grubbing and Stockpiling," summarizes enforcement and prosecution procedures in the event of violation of provisions of Articles 13 through 15.

Following construction, the contractor will be required to remove from the site and properly dispose of any and all solid or liquid wastes or debris.

4.5 FLORA AND FAUNA

The project site is within an urbanized area developed for residential uses. During the pre-consultation phase, the U.S. Fish and Wildlife Service stated the area lacks "rare, threatened, or endangered species and wetlands or other areas of significant wildlife habitat" (USFWS, 1995). The introduced grasses, shrubs and trees which prevail in the area provide some degree of habitat for the typical array of birds and mammals that one would expect at this elevation and in this type of environment throughout the island.

4.6 ARCHAEOLOGY AND HISTORICAL SITES

The closest historic site is Pohaku Ka Luahine (80-10-93), part of the Samuel M. Damon Estate. It is listed in the 1988 edition of the Hawaii register of historic Places and is approximately 2,000 feet northeast of the project area (DPW, 1990). The State Historic Preservation Division was consulted during the pre-consultation phase, and concluded that this project will have "no effect" on historic sites.

4.7 SOCIAL AND ECONOMIC CHARACTERISTICS

According to *The State of Hawaii Data Book* (DBEDT, 1994), the Moanalua neighborhood encompasses 6,223 acres; has a resident population of 12,604; and 3,741 housing units. This neighborhood, however, includes more than just Moanalua Valley. The area is a pleasant, middle class neighborhood of single family homes with reportedly little turn-over of residents. As reported in the *Sunday Honolulu Advertiser and Star-Bulletin* of November 19, 1995:

Home prices in Moanalua Valley have remained fairly stable over the last five years. Prices increased 37 percent between 1988 and 1989, then showed modest gains, reaching a peak of \$480,000 in 1993. Since then, the median resale price has declined about 7 percent to the current year-to-date median resale price of \$447,500.

- Sales activity in Moanalua Valley historically has been very low for a neighborhood with approximately 575 homes. As in many neighborhoods, resales peaked in 1989 with eight homes sold. Since that time, sales have averaged five homes annually. Over the last 12 months there have been four resales; two occurred in 1995.*

Unlike most Oahu communities, this area is not represented by an official Neighborhood Board, but rather by its own association, the Moanalua Valley Community Association, Inc. (MVCA). The association has played an active role in communications with the City regarding the landslides in the valley. The social issue of concern with this project is obviously the relocation of residents of the homes the City intends to purchase. The MVCA and other private citizens who were consulted during the pre-consultation phase expressed concerns regarding permanent displacement of residents. If the project proceeds as proposed, the relocations will be unavoidable impacts, and these residents will likely be dispersed to other communities with concomitant changes reverberating throughout their lifestyles. Although formal price negotiations have not yet commenced, it may be assumed that values of the properties affected by the landslide are considerably less than what they would have been otherwise. According to Sprague (1995) "The amount paid by the City to acquire properties in past slide areas was approximately 50 to 60 percent of the undamaged appraised value." There will thus be economic impacts to the displaced residents in addition to the social changes in their lives. The magnitude of the economic impacts will depend on the outcome of price negotiations with the City, but litigation would not be unexpected.

Acquisition of properties by the City is authorized under Chapters 46 and 101 of the Hawaii Revised Statutes and the Revised Charter of the City and County of Honolulu. In such acquisitions, the City generally applies the guidelines developed for property acquisitions associated with federal-aid programs and projects (Sprague, 1995). These guidelines call for additional payments to the displacee beyond compensation for the fair market value of the property being acquired for incidental expenses associated with the acquisition (FHWA, 1992).

Incidental expenses are those reasonable expenses incurred as a result of transferring title to the City such as:

- Recording fees, transfer taxes, documentary stamps, evidence of title, surveys, legal description of the real property, and other similar expenses necessary to convey the property to the Agency. The Agency, however, is not required to pay costs required solely to protect [the] title (that is, to assure that the title to the real property is entirely without fault or defect).*

- *Penalty costs and other charges for prepaying any preexisting recorded mortgage entered into in good faith encumbering the real property.*
- *The pro rata share of any prepaid real property taxes that can be allocated to the period after the agency obtains title to the property or takes possession of it, whichever is earlier.*

Summarizing information received from the City Department of Housing and Community Development, Sprague (1995) writes:

The law providing for relocation rights for locally funded displacements is HRS-111, "Assistance to Displaced Persons." Since this statute designates the Housing Finance & Development Corporation, State of Hawaii, as the administering agency, this agency has also issued its regulations on the subject as Hawaii Administrative Rules, Title 15, Department of Business and Economic Development; Sub-Title 7, Housing Finance and Development Corporation; Chapter 87, "Assistance to Displaced Persons."

All displaced persons (families, individuals, businesses, farms, nonprofit organizations) are entitled by law to relocation services and payments. Services, in brief, include determining the relocation needs of each displacee and providing any assistance needed, such as market or rental information, referrals to replacement housing or business sites, etc.) to help these displacees relocate satisfactorily. Relocation payments are generally intended as compensation for the costs of moving caused by the displacement.

The Department of Public Works has provided the following summary of relocation payments to residential displacees for locally-funded projects.

I. *Displaced homeowners who occupied the displaced unit at least 180 days prior to initiation of negotiations to acquire the unit.*

A. Moving Expenses

1. *Reimbursement for all moving expenses incurred in moving whether by a professional mover or displacee. Proof of expenses such as receipts required; or*
2. *Fixed payment: A graduated scale of payments based on the number of rooms in a unit as follows:*

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>
\$65	\$100	\$135	\$175	\$215	\$255	\$295	\$300

In addition, a dislocation allowance of \$200.00 is provided.

- B. Replacement Housing Payment
If the displaced homeowner purchases a replacement dwelling he/she is entitled to a payment not to exceed \$15,000.
 - C. Rental Assistance Payment
If he/she instead rents a replacement dwelling, entitlement is up to \$4,000.
- II. *Displaced tenants and displaced homeowners who lived in the unit for at least 90 days but less than 180 days prior to initiation of negotiation.*
- A. Moving Expenses
Same as I.A.
 - B. Down Payment Assistance or Rental Assistance Payment
Up to \$4,000.
- III. *Displaced homeowners or tenants who lived in the unit less than 90 days prior to initiation of negotiation.*
- A. Moving Expenses
Same as I.A.

In addition to the direct costs associated with property acquisitions and the costs of the hillside stabilization, the City would be affected by a loss of property taxes and sewer fees. Property taxes assessed on the six properties proposed for acquisition are summarized in Table 1. The total property taxes due on the six parcels for fiscal year 1995 was \$5,632.06. Acquisition of the properties would result in a comparable annual loss of tax revenues to the City. Sewer service charges vary with water usage, but are typically in the range of \$35 per month for a single family residence. Loss of sewer service charges for the six properties proposed for acquisition would thus result in an annual loss to the City of about \$2520.

The proposed project would provide short-term economic benefits in the form of engineering and construction jobs, and long-term benefits to nearby residents in terms of safety and maintenance of property values. Construction expenditures and payrolls would increase state general excise tax and income tax revenues.

The social and economic impacts of the two design alternatives may be contrasted as follows. The Buttress Fill Alternative has maximum social impacts resulting from the required displacement of the residents of the six parcels to be acquired. It's probable that displacees would also suffer the economic consequences of reduced property values in the active slide area. Economic impacts to the City would include the costs of the properties to be acquired, incidental expenses associated with the acquisitions, the costs of displacement services and relocation payments, as well as long-term reductions of property tax and sewer fee revenues. In its support, the Buttress Fill Alternative is expected to be a very effective, passive solution to stabilize the hillside.

The Tie-Back Wall Alternative would have greatly reduced social and economic impacts to residents of the active slide area because they would retain their residences. There would be some temporary inconveniences associated with wall construction, and easements would have to be negotiated. Short-term economic impacts to the City would be reduced, although potential claims for construction-related damage represent an unknown quantity. The long-term liabilities of this alternative involve the effectiveness of this "mechanical" solution and the uncertainty of the economic impacts to the City resulting from future claims of damage resulting from less than complete stabilization of the landslide.

TABLE 1. PROPERTY TAXES BY PARCEL
(Values in Dollars)

PARCEL ¹	YEAR	LAND	EXEMPT	BLDG.	EXEMPT	TAXES ²
13	1995	193,700	32,900	87,100	87,100	501.70
	1994	176,900	35,700	84,300	84,300	440.54
	1993	196,900	17,100	82,900	82,900	560.98
15	1995	203,400	0	90,800	0	990.55
	1994	185,700	0	87,900	0	923.95
	1993	201,200	0	86,300	0	966.04
16	1995	244,000	23,700	56,300	56,300	687.34
	1994	222,800	5,300	54,700	54,700	678.60
	1993	241,300	6,900	53,100	53,100	731.33
17	1995	314,700	0	130,200	40,000	1,335.44
	1994	287,300	0	126,200	40,000	1,234.28
	1993	286,800	0	123,000	40,000	1,220.18
18	1995	318,600	12,700	107,300	107,300	954.41
	1994	290,900	14,500	105,500	105,500	862.37
	1993	288,500	18,200	101,800	101,800	843.34
21	1995	316,600	0	84,600	40,000	1,162.62
	1994	289,000	0	83,400	40,000	1,071.81
	1993	287,600	0	79,300	40,000	1,051.37

¹ TMK 1-1-1-44: (parcel)

² Tax rates for class A 1 property (improved residential) in Honolulu for 1993 through 1995 are: land - \$3.12 per \$1,000 of net assessed value, and building - \$3.92 per \$1,000 of net assessed value.

4.8 RECREATIONAL FACILITIES AND USES

There are no recreational facilities or uses which would be impacted by the proposed project.

4.9 UTILITIES

Preliminary coordination with all affected utilities (electrical, water, sewer, telephone, cable TV, and gas) was done during pre-assessment consultation. Both above ground and buried utility installations will be affected by the proposed work. Municipal water lines serve all affected parcels from mains located under Ala Lani and Ala Aolani Streets. A fire hydrant is located in front of 1591 Ala Lani Street. The Board of Water Supply, in its pre-consultation reply, noted that it has had to replace the mains in Ala Hoku Place and Ala Hekili Place, about 1,000 feet south of the site, because of breaks. The new mains incorporate telescopic sleeves and flex-joint couplings to allow movement in the pipeline.

Sewer lines enter the site directly from the street into 1614, 1618, and 1626 Ala Aolani Street. The remaining parcels in the site are served by sewer lines buried within an easement which runs through 1626 Ala Aolani into 1605 Ala Lani and there branches to serve the five Ala Lani parcels within the site and three additional parcels directly south of 1591 Ala Lani (1579, 1583, 1589). Removal or abandonment of the sewer lines through the site would necessitate provision of new lines to the three adjacent properties.

BHP Gas Company reports no facilities in the project area; Hawaiian Electric Company had no comment at either the pre-assessment or draft EA stage. Oceanic Cable has aerial facilities which would have to be removed at the time the structures are demolished. Hawaiian Telephone did not respond to the pre-assessment inquiry or comment on the draft EA, but also has aerial facilities at the site.

The contractor will be required to verify utility locations and coordinate any temporary or permanent displacement so as to insure no interruption of service to surrounding properties.

4.10 NOISE

The MVCA expressed concern during the pre-consultation phase (1995) that the retaining wall construction would generate considerable noise. The operation of construction equipment will unavoidably raise ambient noise levels in the project vicinity. Construction equipment and on-site vehicles or devices requiring an exhaust of gas or air would have to be equipped with mufflers. In addition, all construction-related vehicles traveling on roadways must meet the vehicle noise level requirements set by the State (Department of Health Administrative Rules Chapter 11-42 "Vehicular Noise Control for Oahu").

In the Residential Zoning District, the allowable noise level is 55 dBA at the property line during the day (7 a.m. to 10 p.m.) and 45 dBA at night. Permits are required when noise levels exceed the allowable levels for more than ten percent of the time within any twenty minute period (Department of Health Administrative Rules Chapter 11-43 "Community Noise Control for Oahu"). Required permit conditions for construction activities are as follows:

- (A) *No permit shall allow construction activities creating excessive noise when measured at or beyond the property line for the hours before 7:00 a.m. and after 6:00 p.m. of the same day.*
- (B) *No permit shall allow construction activities which emit noise in excess of ninety-five dBA at or beyond the property line of the construction site, except between 9:00 a.m. and 5:30 p.m. of the same day.*
- (C) *No permit shall allow construction activities which exceed the allowable noise levels on Sundays and on the following holidays: New Year's Day, President's Day, Memorial Day, Kamehameha Day, Independence Day, Labor Day, Discoverer's Day, Veteran's Day, Thanksgiving Day, and Christmas Day. Activities exceeding ninety-five dBA shall be prohibited on Saturdays.*

The environmental assessment for the drainage improvements implemented in the project area in 1992 (DPW, 1992) estimated sound levels from equipment noise at various distances from the work area, as shown in Table 2.

TABLE 2. ESTIMATED SOUND LEVELS

LOCATION	DISTANCE FROM PROJECT	SOUND LEVEL
Nearest residence	50 feet	85 dB
Nearest church	5,300 feet	44 dB
Nearest school	5,000± feet	45 dB
Nearest medical center	5,000± feet	45 dB
Nearest playground	2,400 feet	51 dB
Nearest library	5,000± feet	45 dB

4.11 TRAFFIC

During construction, vehicular access to adjoining roadways or driveways may be occasionally hampered; however, standard specifications for traffic control will be used. These requirements are found in Hawaii Administrative Rules Title 19, Department of Transportation, Subtitle 5, Motor Vehicle Safety Office, Chapter 129, "Use of Traffic Control Devices at Work Sites on or Adjacent to Public Streets and Highways." Provisions of Chapter 129 are based on the 1978 edition and revisions of "The Manual on Uniform Traffic Control Devices for Streets and Highways" published by the Federal Highway Administration. Appropriate signs and barriers will be required, and generally at least one lane will remain open during working hours (8:30 AM to 3:30 PM). It is not anticipated that off-duty police will be required for traffic control. Pedestrian traffic will be provided for.

4.12 VISUAL

The Moanalua Valley Community Association expressed concerns that the "unsightly mound of dirt will be an eyesore even if landscaped." The City will revegetate the site following placement of the fill. No significant public views, viewplanes, viewsheds or vistas would be encroached upon. It is true that the buttress fill alternative would be more visible from the street than the tie-back wall alternative. On the other hand, however, the visual impacts of the buttress fill alternative will be mitigated by several factors. Depending on the final design adopted, the lateral retaining walls could be constructed of reinforced earth. These walls would begin twenty to thirty feet back from the street, and rise to their maximum height where they join the hillside. There will be neither walls nor fill immediately adjacent to the street. The adjacent houses will block the lateral view of the fill area. The fill will be landscaped with an appropriate ground cover, and maintenance provided. Further mitigation of visual impacts could be realized by planting a row of street trees across the front of the site. The City has indicated a willingness to consider such a mitigation measure.

4.13 SUMMARY OF IMPACTS BY ALTERNATIVE

Table 3 provides an impact matrix for the project alternatives. Impacts are rated qualitatively from 1 (least or minimal impact) to 3 (greatest impact). Intermediate impact levels are given a 2, even though they may be relatively close to either level 1 or 3.

While it appears from this matrix that the No Action and Delayed Action Alternatives have the least impacts, neither of these alternatives provides the necessary solution to the landslide problem. Hence, they are not realistic alternatives. It is also apparent from this matrix that the Tie-Back Wall Alternative would have less impact on the environment and residents than would the Buttress Fill Alternative. The City, however, is under no obligation to pursue the alternative with the least apparent impacts, and has selected the Buttress Fill Alternative as its preferred course of action because it is technically sound and provides a greater degree of certainty with respect to future liabilities.

TABLE 3. IMPACT MATRIX

IMPACT	ALTERNATIVE			
	NO ACTION	DELAY ACTION	BUTTRESS FILL	TIE-BACK WALL
Land Use	1	1	3	2
Air Quality	1	1	3	3
Soil/Water	1	1	3	3
Biota	1	1	1	1
Archaeology	1	1	1	1
Social	1	1	3	2
Economic	1	1	3	2
Public Facilities	1	1	1	1
Utilities	1	1	3	1
Noise	1	1	3	3
Traffic	1	1	3	2
Aesthetics	1	1	3	2

5.0 SUMMARY OF MAJOR IMPACTS, PRELIMINARY DETERMINATION AND JUSTIFICATION

The proposed project would not have a significant effect on the environment and therefore preparation of an environmental impact statement is not required. The "Significance Criteria," Section 12 of Hawaii Administrative Rules Title 11, Chapter 200, "Environmental Impact Statement Rules," were reviewed and analyzed. Based on the analysis, the following were concluded:

1. *No irrevocable commitment to loss or destruction of any natural or cultural resource would result.* There are no significant natural resources which would be affected by the proposed project. The site has been graded and filled previously for construction of single family residences. If buried cultural resources are present, they would be further buried by the buttress fill. Adoption of appropriate erosion control measures will prevent off-site siltation.

2. *The action would not curtail the range of beneficial uses of the environment.* Further use of the site for residential purposes will be curtailed, however, the future use of the site will be to stabilize a landslide which, if allowed to grow unchecked, would undoubtedly continue to involve additional properties with concomitant public safety risks and economic hardship.
3. *The proposed action does not conflict with the state's long-term environmental policies or goals and guidelines.* Hawaii's environmental policy is contained in Chapter 344, HRS. Its purpose is to "...encourage productive and enjoyable harmony between man and his environment, promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man...." The present situation cannot be described as a productive and enjoyable harmony between man and his environment, nor does it stimulate health and welfare. The proposed solution establishes an equilibrium in which surrounding properties are spared further damage, economic losses are minimized, and public safety is enhanced.
4. *The economic or social welfare of the community or state would not be substantially affected.* The proposed project would provide short-term economic benefits in the form of engineering and construction jobs, and long-term benefits to nearby residents in terms of public safety and protection of property. There will be economic losses incurred by both owners of the affected properties and taxpayers of the City and County of Honolulu. How these losses will be apportioned will be the subject of negotiations between the City and the owners.
5. *The proposed action does not substantially affect public health.* The project would provide a safer environment for area residents than under current conditions.
6. *No substantial secondary impacts, such as population changes or effects on public facilities, are anticipated.* The proposed action would not affect population growth, but would result in the relocation of the residents of six affected properties. The impact would be insignificant on public facilities outside the project area. Public facilities within the project area, including roads, sewer lines, water lines, storm drains and regulated utilities would be spared further damage by stabilization of the landslide.
7. *No substantial degradation of environmental quality is anticipated.* The proposed action is expected to result in minor short-term increases in noise, emissions of air pollutants from mobile sources, dust, and traffic congestion in the immediate project area during construction. These impacts will be temporary, and applicable standards will not be violated. The visual character of the site will be unavoidably altered, but this is a very localized impact which could be mitigated to some extent by planting of trees and groundcover.

8. *The proposed action does not involve a commitment to larger actions, nor would cumulative impacts result in considerable effects on the environment. The proposed action is an isolated, self-contained remedy which involves no commitment to further actions. It is expected to be a solution to what could become a larger problem if allowed to proceed unabated.*
9. *No rare, threatened or endangered species or their habitats would be affected. The project site is in a fully developed residential community. No protected species or important habitat exist in the project area.*
10. *Air quality, water quality or ambient noise levels would not be detrimentally affected. Each of these environmental characteristics would be affected by the proposed action, but to insignificant degrees. Operation of heavy equipment and other vehicles associated with the action would temporarily elevate ambient noise and concentrations of exhaust emissions in the immediate vicinity of the site during construction. Construction documents will specify erosion control requirements to protect aquatic resources.*
11. *The project would not affect environmentally sensitive areas, such as flood plains, tsunami zones, erosion-prone areas, geologically hazardous lands, estuaries, fresh waters or coastal waters. The necessity for the project arises from geologically hazardous lands, and is intended to render them less hazardous. The slope of the affected land is such that erosion is a concern, and mitigation measures will have to be promptly implemented.*

6.0 LIST OF CONSULTED PARTIES

6.1 PRE-ASSESSMENT CONSULTATION

The list provided in the *OEQC Bulletin* was used as the basis for the pre-assessment consultation. Agencies obviously lacking jurisdiction or information about relevant environmental resources were deleted. The list was augmented by the Department of Public Works based on prior consultations with property owners and organizations about the slide. The following agencies, organizations, utilities and individuals were consulted prior to preparation of the assessment. Responding parties are identified with an asterisk in the list below, and copies of their responses are contained in Appendix A.

FEDERAL AGENCIES

- * U.S. Department of Agriculture, Soil Conservation Service
- * U.S. Army Corps of Engineers, Pacific Ocean Division
- * U.S. Department of the Interior, Fish and Wildlife Service

STATE AGENCIES AND ELECTED OFFICIALS

- Senate President Norman Mizuguchi
- Representative Nathan Suzuki
- * Department of Land and Natural Resources (Included SHPD comments)
- Department of Land and Natural Resources, State Historic Preservation Division
- Department of Health
- Department of Health, Environmental Management Division
- * Department of Transportation
- Office of State Planning
- University of Hawaii, Water Resources Research Center
- University of Hawaii, Environmental Center
- Salt Lake/Moanalua Public Library

COUNTY AGENCIES AND ELECTED OFFICIALS

- The Honorable Donna Mercado Kim
- * Board of Water Supply
- * Building Department
- * Department of Housing and Community Development
- * Department of General Planning
- Department of Land Utilization
- * Department of Parks and Recreation
- * Department of Transportation Services
- * Department of Wastewater Management
- Police Department

UTILITIES

- * Hawaiian Electric Company
- Hawaiian Telephone Company
- * GASCO, Inc.
- * Oceanic Cablevision

ORGANIZATIONS

- American Lung Association
- Sierra Club, Hawaii Chapter
- * Moanalua Valley Community Association

INDIVIDUALS

- Yoji and Lorraine M. Fujiwara
- * Robert K.S. and Mildred T. Lee
- Stephen T. and Natsue Nakano
- Chong Sun Mah and Sang Chun Mak
- Charles T. and Itsuko Ono
- Howard H. and Joanne C. Kaneshiro

6.2 DRAFT EA REVIEW

With several modifications, copies of the Draft EA are being provided to the same agencies, organizations and individuals included above. Agencies obviously lacking jurisdiction were deleted from the distribution list. Quantities were reduced to agencies which did not respond during pre-assessment consultation, or responded that there was little or no impact anticipated on their respective jurisdictions. Additional copies were provided to the Moanalua Valley Community Association for circulation among interested homeowners or residents outside of the site. The following agencies, organizations, utilities and individuals were provided review copies of the Draft EA. Parties responding, but having no substantive comments, are identified with an asterisk in the list below. Parties responding substantively are identified with a double asterisk in the list below, and copies of their comments and the Department's responses are contained in Appendix B.

FEDERAL AGENCIES

- ** U.S. Department of Agriculture, Soil Conservation Service
- U.S. Army Corps of Engineers, Pacific Ocean Division
- U.S. Department of the Interior, Fish and Wildlife Service

STATE AGENCIES AND ELECTED OFFICIALS

- Senate President Norman Mizuguchi
- Representative Nathan Suzuki
- * Department of Accounting and General Services
- ** Department of Land and Natural Resources
- * Department of Land and Natural Resources, State Historic Preservation Division
- Department of Health
- * Department of Transportation
- ** Office of Environmental Quality Control
- Office of State Planning
- University of Hawaii, Water Resources Research Center
- ** University of Hawaii, Environmental Center
- * Housing Finance and Development Corporation
- Salt Lake/Moanalua Public Library
- Pearl City Regional Public Library

COUNTY AGENCIES AND ELECTED OFFICIALS

- ** The Honorable Donna Mercado Kim
- ** Board of Water Supply
- * Building Department
- Department of Housing and Community Development
- * Planning Department
- ** Department of Land Utilization
- Department of Parks and Recreation
- ** Department of Transportation Services
- ** Department of Wastewater Management
- * Police Department
- ** Fire Department

UTILITIES

- * Hawaiian Electric Company
- Hawaiian Telephone Company
- Oceanic Cablevision

ORGANIZATIONS

- ** Moanalua Valley Community Association

INDIVIDUALS

Yoji and Lorraine M. Fujiwara

** Robert K.S. and Mildred T. Lee

** Stephen T. and Natsue Nakano

Chong Sun Mah and Sang Chun Mak

Charles T. and Itsuko Ono

Howard H. and Joanne C. Kaneshiro

7.0 LIST OF REFERENCES

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- Lee, Robert, 1995. Moanalua property owner. Personal Communication:letter. July 27.
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- University of Hawaii, Department of Geography, 1983. *Atlas of Hawaii.* University of Hawaii Press. Honolulu. 238 pp.
- USCOE (U.S. Army Corps of Engineers), 1995. Ray Jho, Director of Engineering. Personal Communication:Letter. July 21, 1995.
- USFWS (U.S. Fish and Wildlife Service), 1995. Brooks Harper, Field Supervisor of Ecological Services. Personal communication:letter. August 1.

APPENDIX A

PRE-ASSESSMENT CONSULTATION RESPONSES



DEPARTMENT OF THE ARMY
U. S. ARMY ENGINEER DISTRICT, HONOLULU
FT. SHAFTER, HAWAII 96834-5440

ATTENTION OF

July 21, 1995

Planning Division



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Pacific Islands Office

P.O. Box 60167

Honolulu, Hawaii 96850

Tel: (808) 541-3441 Fax: (808) 541-3470



AUG 0 1 1995

In Reply Refer To: CAW

AUG 0 1 1995

Mr. George Krasnick, Manager
Environmental Planning
Mid-Pacific Operations
Dames and Moore
1050 Queen Street, Suite 204
Honolulu, Hawaii 96814

George Krasnick
Manager of Environmental Planning
Dames & Moore
1050 Queen Street, Suite 204
Honolulu, Hawaii 96814

Dear Mr. Krasnick:

Re: Pre-Assessment Consultation for Moanalua Hillside Stabilization Project, Oahu, Hawaii.

Thank you for the opportunity to review and comment on the Pre-Assessment Consultation for the Proposed Moanalua Hillside Stabilization Project, Oahu. We do not have any comments to offer at this time due to the paucity of information. However, we will need to review the environmental assessment when completed to determine the Department of the Army permit requirements as well as flood hazard elevations as required by the Federal Emergency Management Agency. Any items regarding environmental impacts will need to be coordinated with the State Historic Preservation Office for the State of Hawaii.

The U.S. Fish and Wildlife Service (Service) has reviewed the information provided concerning the alternatives for stabilization of the landslide in the vicinity of Ala Lani and Ala Aolani Streets in Moanalua Valley, Oahu, Hawaii. The project applicant is the City and County of Honolulu Department of Public Works. Previous actions included acquisition of three residential properties and demolition of the houses and installation of vertical drains. Future alternatives may include a tieback retaining wall, adding a buttress fill over the slide area, or no action. The Service offers the following comments for your consideration.

The affected site occurs in an urbanized area that lacks rare, threatened, or endangered species and wetlands or other areas of significant wildlife habitat. Thus, the Service does not anticipate adverse impacts to fish and wildlife resources to result from implementation of the proposed stabilization project. We appreciate the opportunity to provide these comments. If you have any questions regarding these comments, please do not hesitate to contact Fish and Wildlife Biologist Christine Willis at 808/541-3441.

Sincerely,

Ray H. Jyo, P.E.
Director of Engineering

Sincerely,

Brooks Harper
Field Supervisor
Ecological Services

AUG 3 1995

HIGHWAYS DIVISION
169 Punchbowl Street
Honolulu, Hawaii 96813

RECEIVED
HWY 24-58
HWY-PS-2-6735

July 23, 1995

TO: Mr. George Krasnick
Director of Planning
1050 Queen Street, Suite 204
Honolulu, Hawaii 96814

FROM: State Highway Administration
Highways Division
Department of Transportation

SUBJECT: Pre-Assessment Consultation for Moanalua
Hillside Stabilization
Moanalua Valley, Oahu

Transmitted as follows:
 We have no objections. Project will not impact our state highway
Not applicable to State Highway System.
 Comments of Letter No. _____ dated _____ will stand.
 For review and comment to _____
 With comments shown below.

MORE INFORMATION NEEDED

Drainage plans and calculations.
 Traffic Impact Analysis Report (for review and approval).
 Traffic Assessment at the _____ intersection.
 Traffic Warrant Study _____

ACCESS COMMENTS/CONDITIONS:

Channelization of access intersection.
 Traffic signalization at _____
 Street lighting at _____
 No vehicle access _____
 Common access driveways for lots _____
 Show control of access along highway.
 No access will be allowed from the State Highway.
 Highway improvements required from this _____ shall be provided at no cost to the
State and shall conform to applicable Hawaii Statewide Uniform Design Manual for Streets and
Highways and the Specifications for Installation of Miscellaneous Improvements within State
Highways.

OTHER COMMENTS/CONDITIONS:

No additional storm runoff shall be allowed to discharge onto the State's right-of-way.
 Future highway corridor will affect _____
 Shall participate in their prorate share of future highway impacts and improvements.
 Require setback of _____ for future highway widening/improvements.
 Requires submittal of construction plans for review and approval of any work within the State
Highway Right-of-Way.

See Attachment.

Contact Person: Russell Lucas Phone No. (808) 531-1032
State Highway Project: _____

cc: HW-PS, cm

CITY AND COUNTY OF HONOLULU
HONOLULU MUNICIPAL BUILDING
800 SOUTH KING STREET
HONOLULU, HAWAII 96813



RANDALL Y. FUJIKI
DIRECTOR AND BUILDING SUPERINTENDENT
HONOLULU MUNICIPAL BUILDING
800 SOUTH KING STREET
HONOLULU, HAWAII 96813

July 21, 1995

B95-580

July 23, 1995

Mr. George Krasnick
Manager of Environmental Planning
Dames and Moore
1050 Queen Street, Suite 204
Honolulu, Hawaii 96814

Dear Mr. Krasnick:

Subject: Pre-Assessment Consultation for
Moanalua Hillside Stabilization

In response to your July 12, 1995 letter on the above
subject, we have no comments during this phase of the process.

Should you have any questions, please call Mr. Melvin Lee at
523-4651.

Very truly yours,

RANDALL Y. FUJIKI
Director and
Building Superintendent

BOARD OF WATER SUPPLY
CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HAWAII 96813



August 14, 1995

RECEIVED
AUG 16 1995
JAMES & MOORE

Dames & Moore
1050 Queen Street, Suite 204
Honolulu, Hawaii 96814

Gentlemen:

Subject: Your Letter Dated July 12, 1995 Regarding Pre-Assessment Consultation for Moanalua Hillside Stabilization

Thank you for giving us the opportunity to comment on the City's Moanalua Hillside Stabilization project.

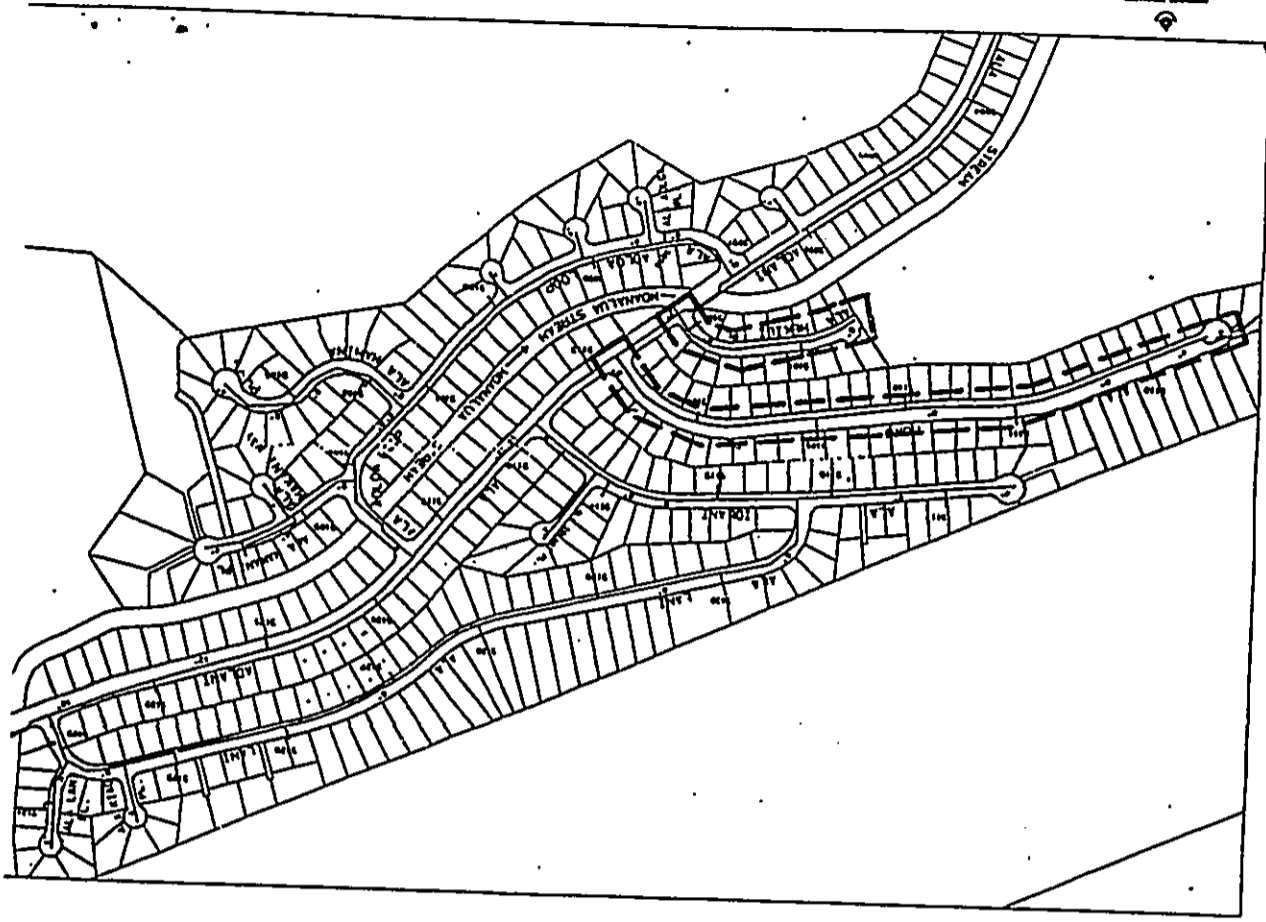
In the vicinity of the project area, the Board of Water Supply is currently replacing mains that have experienced breaks (see attached map). The design of the new mains has incorporated telescopic sleeves and flex-joint couplings to allow for movement in the pipeline.

If you have any questions, please contact Barry Usagawa at 527-5235.

Very truly yours,

Raymond H. SATO
RAYMOND H. SATO
Manager and Chief Engineer

Attachment



DEPARTMENT OF PLANNING AND COMMUNITY DEVELOPMENT
CITY AND COUNTY OF HONOLULU

610 SOUTH KING STREET, 8TH FLOOR
HONOLULU, HAWAII 96813
PHONE: (808) 523-4227 • FAX: (808) 527-6419



SECRETARIES
DIVISION

RONALD S. LIM
DIRECTOR
100 SOUTH KING STREET, 8TH FLOOR
HONOLULU, HAWAII 96813

DEPARTMENT OF PLANNING AND COMMUNITY DEVELOPMENT

CITY AND COUNTY OF HONOLULU

DEPARTMENT OF PLANNING AND COMMUNITY DEVELOPMENT
HONOLULU, HAWAII 96813



TH 7195-1351

July 26, 1995

August 2, 1995

Mr. George Krasnick, Manager
of Environmental Planning
Dames & Moore, Mid-Pacific Operations
1050 Queen Street, Suite 204
Honolulu, Hawaii 96814

Mr. George Krasnick
Manager of Environmental Planning
Mid-Pacific Operations
Dames & Moore
1050 Queen Street, Suite 204
Honolulu, Hawaii 96814

Dear Mr. Krasnick:

Dear Mr. Krasnick:

Subject: Pre-Assessment Consultation for Moanalua Hillside Stabilization

Pre-Assessment Consultation for the
Moanalua Hillside Stabilization Project

This is in response to your letter of July 12, 1995 requesting our comments on the Moanalua Hillside Stabilization. The proposed development does not conflict with any current or proposed City projects. The Department of Housing and Community Development (DHCD) has no comments to offer at this time. Nevertheless, the Department would like a copy of the Environmental Assessment (EA).

In response to your letter of July 12, 1995, we have no comments to offer at this time. We request that the Planning Department be included as a consulted party to the environmental review process.


Should you have any questions, please contact Jason Ching of our Planning and Analysis Division at 523-4368.

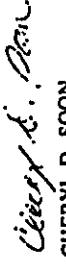
Thank you for the opportunity to comment on this matter. Should you have any questions, please contact Tim Hata of our staff at 527-6070.

Thank you for the opportunity to comment.

Sincerely,

Sincerely,


RONALD S. LIM
Director


CHERYL D. SOON
Chief Planning Officer

CDS:js

cc: Department of Public Works

7/1995

CITY AND COUNTY OF HONOLULU

DEPARTMENT OF PLANNING
520 SOUTH KING STREET
HONOLULU, HAWAII 96813



PLANNING
DIVISION

DONALD HANAIKE
DIRECTOR

RECEIVED
PLANNING DIVISION
AUG 2 1995

August 2, 1995

Mr. George Krasnick
Dames and Moore
1050 Queen Street, Suite 204
Honolulu, Hawaii 96814

Dear Mr. Krasnick:

Subject: Preassessment Consultation for Moanalua Hillside Stabilization

Thank you for providing us with the opportunity to comment on the Department of Public Work's (DPW) plans for the stabilization of the Moanalua Hillside.

We believe that any assessment of alternatives should include a complete discussion of the treatment of the property following stabilization of the hillside. We recommend that the DPW carefully consider the costs of maintenance following stabilization of the property.

Our department has found that it is a substantial drain on limited resources to maintain isolated, useless strips of land. Consequently, we are no longer willing to accept jurisdiction and maintenance responsibility for parcels of land which have no recreational value.

The final selection of the appropriate course of action should fully consider the costs that will accrue to the DPW for maintenance into the indefinite future.

We do not anticipate that this plan will have any impact on our department or our recreational resources in the area. However, we would like to continue to be a consulted party in the environmental assessment process.

We Add Quality to Life

Mr. George Krasnick
Page 2
August 2, 1995

If you have any questions, please contact Donald Griffin of our Advance Planning Branch at 527-6324.

Sincerely,

Donna P. Hanaike
DONNA P. HANAIKE
DIRECTOR

DLH:ei

CITY AND COUNTY OF HONOLULU

DIVISION OF PLANNING AND SERVICE CONTROL
510 SOUTH KING STREET
HONOLULU, HAWAII 96813



SEVENTEENTH FLOOR



Walter A. Borrell
Manager
Environmental Department

RECEIVED
JUL 19 1995

WALTER A. BORRELL

July 17, 1995

STONER & CHONG
ARCHITECTS
1000 KALANOAU AVE
HONOLULU, HI 96813

MPP 95-360

July 21, 1995

1995

Mr. George Krasnick
Manager of Environmental Planning
Mid-Pacific Operations
Dames & Moore
1050 Queen Street, Suite 204
Honolulu, Hawaii 96814

George Krasnick
Manager of Environmental Planning
Mid-Pacific Operations
Dames & Moore
1050 Queen Street
Suite 204
Honolulu, Hawaii 96814

Dear Mr. Krasnick:

Subject: Pre-Assessment Consultation for
Moanalua Hillside Stabilization

This letter is to inform you that the City and County of Honolulu, Department of Wastewater Management, has existing sewers in the vicinity of Ala Lani and Ala Aolani Streets in Moanalua Valley; and to request that we be on your distribution list for any engineering plans and Environmental Assessment (EA) as it affects the City's sewer system in the area.

I appreciate your letter of July 12 extending to HECO the opportunity to comment on Moanalua Hillside stabilization. We have no comment on this matter and no preference among the alternatives identified.

If there are any questions, please contact Mr. Richard Leong of the Planning Branch at 527-5863.

Very truly yours,

Stephen Chino
STEPHEN CHINO
Chief

Sincerely,

Walter A. Borrell



200 Alama Street • Makua, Hawaii 96749-3999 • Telephone: (808) 625-2100

August 2, 1995

BHP Hawaii

Dames & Moore
1050 Queen Street
Suite 204
Honolulu, Hawaii 96814

Dames & Moore
1050 Queen Street, Suite 204
Honolulu, Hawaii 96814

24 July, 1995

Attention: Mr. George Krasnick

DAMES & MOORE

Gentlemen:

Subject: Moanalu Hillside Stabilization
Pre-Assessment

Subject: Pre-Assessment Consultation for Moanalu Hillside Stabilization

Dear Mr. Krasnick:

This is in response to your letter dated July 12, 1995. BHP Gas Company has no gas facilities in the project area.

Enclosed you will find a copy of our map with Aerial facilities upon them. I hope this will be helpful to you in your consultation. If you have any questions, please feel free to call me at 625-8443.

Should there be any questions, or if additional information is desired, please call me at 594-5574.

Very truly yours,

Sincerely,
L. Brian Cooper
L. Brian Cooper,
Engineering Assistant

[Signature]
Keith K. Yamamoto
Supervisor, Engineering

KY/BCY/2m
94-116

cc: Engr. file

BHP Gas Company
515 Kamehameha Street, Honolulu, Hawaii 96813
PO Box 3333 Honolulu, Hawaii 96813
Telephone 808 547 3333 Facsimile 808 594 5561 Telex 941 5620 BHP



Moanalua Valley Community Ass'n. Inc.

1423 Ala Aolani Street
Honolulu, HI 96819
July 27, 1995

Dames & Moore
Mr. George Krasnick
Manager of Environmental Planning
1050 Queen Street, Suite 204
Honolulu, HI 96814

Dear Mr. Krasnick:

We are responding to your request for comments on the City and County of Honolulu Department of Public Works proposal to stabilize the soil movement in the vicinity of 1591 to 1609 Ala Lani Street and 1614 to 1626 Ala Aolani Street in Moanalua Valley.

As we understand from your letter, the three alternatives being considered by the City are (1) construction of a tie-back retaining wall, (2) placement of a large earth fill and (3) do nothing. Our last meeting with the City was on March 6, 1995, and, as of that date, only details for the tie-back retaining wall had been given to the MVCA Board and affected residents. No details on the earth fill alternative has been provided to us, despite our written request that we be kept informed of projects to remedy the soil movement problem. Therefore, our comments regarding the earth fill alternative will be based on a general understanding of what may be involved to implement that alternative.

Tie-Back Retaining Wall

Concerns: 1. Construction work may damage existing structures
2. May be the most costly option
3. Dust and noise generated by construction work
4. May not work

Benefits: 1. Residents will be only temporarily displaced and should be able to return to homes after construction completed

2. This alternative is supported by Community and probably will generate the least amount of complaints or community opposition
3. Completed wall could be blended in with surroundings with minimum amount of landscaping

Earth Fill

Concerns: 1. Residents will be permanently displaced
2. Cost to purchase the properties may be large--Residents are opposed to City's buyout of their property if at only 50% of market value
3. Dust and noise generated during construction
4. Value of surrounding property may decrease due to presence of earth fill
5. Cost of maintenance of the site
6. Unightly mound of dirt will be an eyesore even if landscaped
7. May not work

Benefits: 1. This alternative will put a definitive cost to the soil movement problem and the least amount of unknown future liability to the City

Do Nothing

Concerns: 1. Soil movement area will grow, affecting more properties and eventually closing Ala Lani Street
2. City may be liable for any injuries that occur due to soil movement
3. City may eventually have to remedy the soil movement problem but it will probably cost a lot more later

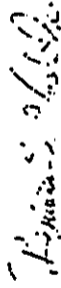
Benefits: None

We are also requesting that the surrounding residents be asked to submit comments on the three alternatives being considered by the City, since they also will be affected by whatever alternative is selected. If needed, we can assist you in generating a list of the names and addresses of these residents.

Above Ala Lani Street in the soil movement area are additional homes whose owners/residents are concerned about future soil movement problems. They are requesting that the City provide some kind of plan that details the City's preventive measures to stop soil movement from recurring in that vicinity.

If you have any questions regarding our comments, please call me at 834-8834.

Sincerely,



Brian Yoshida
President, MVCA

cc: Robert Lee 1618 Ala Aolani Street
Yoji Fujiwara 1626 Ala Aolani Street
Stephen Nakano 1614 Ala Aolani Street
Charlie Ono 1597 Ala Lani Street
Sang Chun Mah 1591 Ala Lani Street
Howard Kaneshiro 1609 Ala Lani Street

700 4400
JUL 27 1995

890 Upland Drive
Lafayette, CA 94549

July 21, 1995

George Krasnick
Manager of Environmental Planning
Mid-Pacific Operations
Dames & Moore
1050 Queen Street, Suite 204
Honolulu, Hawaii 96814

Dear Mr. Krasnick:

Thank you for the July 12 letter informing us of the environmental assessment to be prepared for the "Muanalus Hillside Project" and giving us the opportunity to respond. We hope the following is relevant at this time.

Our home is on 1618 Ala Aolani Street, one of six homes the City and County wants to condemn for its hillside stabilization project. Our home is currently occupied by tenants on a 1-year lease. It has been rented on that basis since May 1992, when we temporarily moved from Hawaii.

It should be noted that our property is basically level and stable, and sits below the unstable slope. The City and County of Honolulu assumed ownership of the slope when it condemned three adjoining properties (the homes were badly damaged and virtually unlivable) so that it could take steps, as we were told, to protect the infrastructure--the road (Ala Lani Street) and other common utilities.

Further acquisition of private properties by the City and County to complete its stabilization project should be according to the fair market value. The market value is just compensation according to the City and County's recently received handout "When the City Acquires Your Property" and Hawaii Revised Statutes 101. At prior meetings the City only mentioned a percentage--as low as 50%--of the "tax assessment value" or, as in the most recent correspondence, of the "undamaged appraised value". This is inappropriate compensation for the forced displacement from our home.

Sincerely yours,



Robert Lee

HIRSHAMIN J. CAYITANO
Governor of Hawaii



REF:OCEA:TES
STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

P.O. Box 621
Honolulu, Hawaii 96809

Commissioner
MICHAEL D. WILSON
Board of Land and Natural Resources

Deputy Director
GILBERT COLONA-AGANAH

Aquaculture Development
Aquatic Resources
Biology and Ocean Resources
Bureau of Community
Conservation and Environmental Affairs
Energy and Wildlife
Historic Preservation
Land Management
State Parks
Water and Land Development

File No.: 96-025
AUG 23 1995

Mr. George Krasnick
Manager of Environmental Planning
Dames & Moore
1050 Queen Street, Suite 204
Honolulu, Hawaii 96814

Dear Mr. Krasnick:

Subject: Pre-Assessment Consultation for Moanalua Hillside
Stabilization at Moanalua Valley, Oahu

Thank you for giving our Department the opportunity to comment on this matter. We have reviewed the materials you submitted and have the following comments.

Our Department's Division of Historic Preservation notes that there are no known historic sites at the project location. The project proposes alternative actions for hillside stabilization in an area that has been extensively developed by residential subdivisions. Therefore, they believe that this project will have "no effect" on historic sites.

Please transmit a copy of the draft environmental assessment for our review and comment once it has been completed.

We have no other comments at this time. Should you have any questions, please call Sam Lemmo at the Office of Conservation and Environmental Affairs at 587-0377.

Aloha,

Michael D. Wilson
MICHAEL D. WILSON

RECEIVED
AUG 25 1995

DAMES & MOORE

CITY AND COUNTY OF HONOLULU

111 ALLOLOA BOULEVARD SUITE 1200
HONOLULU, HAWAII 96813



Assistant
Director

CHARLES
REASON
Director

August 25, 1995

PL95.1.224
(TE-3445)

RECEIVED
AUG 30 1995

DAMES & MOORE

Mr. George Krasnick
Manager of Environmental Planning
Mid-Pacific Operations
Dames & Moore
1050 Queen Street, Suite 204
Honolulu, Hawaii 96814

Dear Mr. Krasnick:

This is in response to your letter dated July 12, 1995 requesting our comments on the subject project.

Based on discussions between you and members of my staff, we understand that the project will be constructed outside of the road right-of-way. We, therefore, have no objections or comments to offer at this time.

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

Respectfully,

Marvin Char

MARVIN CHAR
Acting Director

APPENDIX B

DRAFT ENVIRONMENTAL ASSESSMENT COMMENTS AND RESPONSES

DEPARTMENT OF LAND UTILIZATION
CITY AND COUNTY OF HONOLULU
 830 SOUTH KING STREET
 HONOLULU, HAWAII 96813 • (808) 523-4132



RECEIVED
 SEP 30 1995

PATRICK T. ONISHI
 DIRECTOR
 LORRY A. C. CHIE
 DEPUTY DIRECTOR
 DAMES & MOORE 95-06132 (ASK)

JEREMY HARRIS
 MAIL ROOM

September 29, 1995

Mr. George Krasnick
 Dames & Moore
 1050 Queen Street, Suite 204
 Honolulu, Hawaii 96814

Draft Environmental Assessment (DEA) for
 Moanalua Hillside Stabilization
 Tax Map Keys: 1-1-44: 13 through 21

We have reviewed the DEA for the Moanalua Hillside Stabilization Project which is being proposed by the City's Department of Public Works.

Major elements of the project include land acquisition, slide stabilization by construction of a retaining wall and the addition of buttress fill over the slide area. A waiver is required for aspects of the projects which do not meet the development standards of the Land Use Ordinance.

Should you have any questions regarding the above, please contact Ardis Shaw-Kim of our staff at 527-5349.

Very truly yours,

Patrick T. Onishi
 PATRICK T. ONISHI
 Director of Land Utilization

PTO:am
 Aikrasnick.eaf
 Gikrasnick.ask

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



KENNETH E. SPRAGUE
 DIRECTOR AND CHIEF ENGINEER
 IN REPLY REFER TO
 95-11-0236

November 28, 1995

MEMORANDUM

TO: MR. PATRICK T. ONISHI, DIRECTOR
 DEPARTMENT OF LAND UTILIZATION

FROM: *Kenneth E. Sprague*
 KENNETH E. SPRAGUE, DIRECTOR AND CHIEF ENGINEER
 DEPARTMENT OF PUBLIC WORKS

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT FOR MOANALUA
 HILLSIDE STABILIZATION, HONOLULU, OAHU, HAWAII,
 TMK: 1-1-44: PARCELS 13 THROUGH 21

Thank you for your comments on the subject environmental assessment. If hillside stabilization is affected by construction of a retaining wall and the addition of buttress fill, we will require a waiver from the development standards of the Land Use Ordinance for the height of the wall. As suggested, we will coordinate this with your staff. Depending on the final design adopted, the lateral retaining walls could be constructed of reinforced earth. These walls would begin twenty to thirty feet back from the street, and rise to their maximum height where they join the hillside. There will be neither walls nor fill immediately adjacent to the street.

If there are any questions, please call George Krasnick of Dames & Moor at 593-1116.

cc: STV/Lyon
 Dames & Moore (Mr. George Krasnick)



DEPARTMENT OF THE ARMY
U. S. ARMY ENGINEER DISTRICT, HONOLULU
FT. SHAFTER, HAWAII 96858-5440

NOTE TO
ATTENTION OF

October 2, 1995

Planning Division

Mr. George Krasnick, Manager
Environmental Planning
Dames and Moore
1050 Queen Street, Suite 204
Honolulu, Hawaii 96814

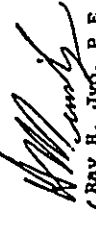
Dear Mr. Krasnick:

Thank you for the opportunity to review and comment on the Draft Environmental Assessment (EA) for the Moanalua Hillside Stabilization Project, Oahu (TMK 1-1-44: 13 through 21). The following comments are provided pursuant to Corps of Engineers authorities to disseminate flood hazard information under the Flood Control Act of 1960 and to issue Department of the Army (DA) permits under the Clean Water Act; the Rivers and Harbors Act of 1899; and the Marine Protection, Research and Sanctuaries Act.

a. Based on the information provided, no waters of the U.S. will be impacted; therefore, a DA permit will not be required for the project (NF95-130).

b. The flood hazard information provided on pages 8 and 9 of the EA is correct.

Sincerely,


Ray H. Jyo, P.E.
Director of Engineering

RECEIVED
OCT 3 1995

DAMES & MOORE

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



PERMIT NUMBER
N/A

KENNETH E. SPRAGUE
DIRECTOR AND CHIEF ENGINEER
IN REPLY REFER TO:

95-11-0241

November 28, 1995

Mr. Ray H. Jyo, Director of Engineering
Corps of Engineers
U.S. Army Engineer District, Honolulu
Department of the Army
Building T-1, Room 105
Fort Shafter, Hawaii 96858-5440

Dear Mr. Jyo:

Subject: Draft Environmental Assessment for Moanalua Hillside Stabilization,
Honolulu, Oahu, Hawaii. TMK: 1-1-44; Parcels 13 Through 21

Thank you for your comments on the subject environmental assessment. We understand that no Department of the Army permit will be required.

If there are any questions, please call George Krasnick of Dames & Moore at 593-1116.

Very truly yours,


KENNETH E. SPRAGUE
Director and Chief Engineer

cc: STV/Lyon
Dames & Moore (Mr. George Krasnick)

DEPARTMENT OF WASTEWATER MANAGEMENT
CITY AND COUNTY OF HONOLULU
830 SOUTH KING STREET
HONOLULU, HAWAII 96813



JEREMY HARRIS
MAYOR

FELIX B. LIMITIACO
DIRECTOR
CERES L. OKUMA-SEPE
DEPUTY DIRECTOR

October 4, 1995

WCC 95-10

Mr. George Krasnick
DAMES & MOORE
1050 Queen Street, Suite 204
Honolulu, Hawaii 96814

Dear Mr. Krasnick:

Subject: Draft Environmental Assessment (EA)
for Moanalua Hillside Stabilization
Tax Map Key: J-1-44: 13-21

RECEIVED
OCT 10 1995

DAMES & MOORE

Thank you for the opportunity to review the subject draft EA. At this time, we have two comments pertaining to the redesign of the sewer system.

- (1) All cut and abandoned in place lines should be plugged to prevent infiltration and inflow from entering the wastewater collection system.
- (2) Three properties, 1579, 1583, and 1589 Ala Lani Street are at the upstream end of a sewer line that passes through the proposed abandonment area which the City is contemplating condemnation. The downstream portion of the sewer line runs through the identified unstable zone and should be relocated to a stable zone to accommodate the three properties to the extent possible. Because of legal concerns which arise because of soil movement in this area, we request close coordination with our department in the relocation and redesign of the collection system.

If you have any questions, please contact Ms. Tessa Yuen of the Division of Planning and Service Control at 523-4956.

Very truly yours,

Felix B. Limitiaco
FELIX B. LIMITIACO
Director

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



JEREMY HARRIS
MAYOR

KENNETH E. SPRAGUE
DIRECTOR AND CHIEF ENGINEER
IN REPLY REFER TO:
95-11-0235

November 28, 1995

MEMORANDUM

TO: MR. FELIX B. LIMITIACO, DIRECTOR
DEPARTMENT OF WASTEWATER MANAGEMENT

FROM: *F. E. Sprague*
KENNETH E. SPRAGUE, DIRECTOR AND CHIEF ENGINEER
DEPARTMENT OF PUBLIC WORKS

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT FOR MOANALUA
HILLSIDE STABILIZATION, HONOLULU, OAHU, HAWAII,
TMK: J-1-44: PARCELS 13 THROUGH 21

Thank you for your comments on the subject environmental assessment. As you suggest, close coordination with your department will be required as we complete design and construct the stabilization project. We are aware that the properties at 1579, 1583, and 1589 Ala Lani are at the upstream end of the sewer line which runs through the project site, and future service to these properties will require an alternative route. Our design consultants, STV/Lyon Associates, will be in contact with you to determine how this might best be accomplished.

If there are any questions, please call George Krasnick of Dames & Moore at 593-1116.

cc: STV/Lyon
Dames & Moore (Mr. George Krasnick)

FIRE DEPARTMENT
CITY AND COUNTY OF HONOLULU
3178 KOAHIKA STREET, SUITE 204
HONOLULU, HAWAII 96814-1188



JERRY MARRS
MAYOR

ANTHONY J. LOPEZ, JR.
FIRE CHIEF
ATLAGE LEONARD
FIRE DEPARTMENT

JERRY MARRS
MAYOR

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



KENNETH E. SPRAGUE
DIRECTOR AND CHIEF ENGINEER
IN REPLY REFER TO:
95-11-0237

October 5, 1995

November 28, 1995

Mr. George Krasnick
Dames & Moore
1050 Queen Street, Suite 204
Honolulu, Hawaii 96814

Dear Mr. Krasnick:

Subject: Draft Environmental Assessment
Moanalua Hillside Stabilization Project

We have reviewed the subject material provided and have no objection or preference to the alternative proposals as long as emergency vehicle access and fire hydrant supply are maintained.

Should you have any questions, please call Assistant Chief Arthur Ugalde of our Administrative Services Bureau at 831-7774.

Very truly yours,

ANTHONY J. LOPEZ, JR.
Fire Chief

AJL/PHG:lm

RECEIVED
OCT 10 1995
DAMES & MOORE

MEMORANDUM

TO: MR. ANTHONY J. LOPEZ, JR., FIRE CHIEF
HONOLULU FIRE DEPARTMENT

FROM:
KENNETH E. SPRAGUE, DIRECTOR AND CHIEF ENGINEER
DEPARTMENT OF PUBLIC WORKS

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT FOR MOANALUA
HILLSIDE STABILIZATION, HONOLULU, OAHU, HAWAII,
TMK: 1-1-44: PARCELS 13 THROUGH 21

Thank you for your comments on the subject environmental assessment. We don't anticipate the necessity to disturb any existing water lines or fire hydrants in the construction of the improvements. Likewise, at least one traffic lane will remain open at all times during construction. Therefore, we don't expect any hampering of Fire Department operations as a result of the project.

If there are any questions, please call George Krasnick of Dames & Moore at 593-1116.

cc: STV/Lyon
Dames & Moore (Mr. George Krasnick)

BOARD OF WATER SUPPLY
CITY AND COUNTY OF HONOLULU
600 SOUTH BERETANIA STREET
HONOLULU, HAWAII 96813



October 11, 1995

JEREMY HARRIS, Mayor
WALTERO WATSON, JR., Chairman
LAURICE H. YAMASATO, Vice-Chairman
KAZUHAYASHIDA
BELISSA Y. LUI
FOREST C. MURPHY
KENNETH E. SPRAGUE
RAYMOND H. SATO
Manager and Chief Engineer

Mr. George Krasnick
Manager, Environmental Planning
Dames & Moore
1050 Queen Street, Suite 204
Honolulu, Hawaii 96814

Dear Mr. Krasnick:

Subject: Your Letter of September 20, 1995 on the Draft Environmental Assessment (EA) for the Proposed Moanalua Hillside Stabilization Project, TMK: 1-1-44: 13-21, Honolulu, Oahu, Hawaii

Thank you for the opportunity to review the Draft EA for the proposed project. Our pre-assessment comments of August 14, 1995 have been included in the document. We have the following additional comments:

1. Portions of the existing 8-inch water main on Ala Lani Street and 12-inch water main on Ala Aolani Street which are within the project vicinity should be replaced as part of the stabilization project. The replacement design should incorporate telescopic sleeves, flex-joint couplings, and fittings with built-in reducers to allow for pipeline movement.
2. Construction plans for the proposed project should be submitted for our review and approval.

If you have any questions, please contact Barry Usagawa at 527-5235.

Very truly yours,


RAYMOND H. SATO
Manager and Chief Engineer

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



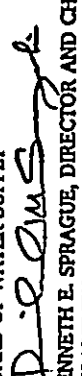
JEREMY HARRIS
MAYOR

KENNETH E. SPRAGUE
DIRECTOR AND CHIEF ENGINEER
IN HOLY REFERED TO:
95-11-0238

November 28, 1995

MEMORANDUM

TO: MR. RAYMOND SATO, MANAGER AND CHIEF ENGINEER
BOARD OF WATER SUPPLY

FROM: 
KENNETH E. SPRAGUE, DIRECTOR AND CHIEF ENGINEER
DEPARTMENT OF PUBLIC WORKS

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT FOR MOANALUA
HILLSIDE STABILIZATION, HONOLULU, OAHU, HAWAII,
TMK: 1-1-44: PARCELS 13 THROUGH 21

Thank you for your comments on the subject environmental assessment. The existing water mains on Ala Lani and Ala Aolani lie approximately in the middle of the respective streets. Neither line will be affected by the subject project. The intention of the hillside stabilization project is to eliminate earth movements in the project vicinity, thereby protecting existing infrastructure from future damage. If the project is successful, as we believe it will be, then replacement of the water lines would be an unnecessary expense.

As no Board of Water Supply facilities will be directly impacted by the project, your review and approval of the construction plans will not be necessary.

If there are any questions, please call George Krasnick of Dames & Moore at 593-1116.

cc: STV/Lyon
Dames & Moore (Mr. George Krasnick)

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

RECEIVED
NOV 29 1995



DADES ENGINEERING
HEREBY REFER TO

95-11-0230

JEREMY HARRIS
MAYOR

890 Upland Drive
Lafayette, CA 94549

RECEIVED
OCT 17 1995

October 10, 1995

George Krasnick
Dames & Moore
1050 Queen Street, Suite 204
Honolulu, HI 96814

DADES & ASSOCIATES

November 28, 1995

Mr. Robert Lee
890 Upland Drive
Lafayette, California 94549

Dear Mr. Lee:

Subject: Draft Environmental Assessment for Moanalua Hillside Stabilization,
Honolulu, Oahu, Hawaii. Tax Map Keys: 1-144; Parcels 13 through 21

Thank you for your comments on the subject environmental assessment. While all of the alternatives are currently under consideration, the City's preferred method of stabilization of the hillside involves purchase of the affected properties and constructing a buttress fill.

With respect to the valuation of the properties proposed for acquisition, please realize that the valuation process has not yet begun. While there have been various budgetary estimates produced for long-range planning purposes, no property assessments have been made and no formal offers have been extended. We expect to work with the affected residents to arrive at an equitable resolution of this issue.

If there are any questions, please call George Krasnick of Dames & Moore at 593-1116.

Very truly yours,

Sincerely,

Robert Lee
Robert Lee
(1618 Ala Aolani St.)

Kenneth E. Sprague
KENNETH E. SPRAGUE
Director and Chief Engineer

cc: STV/Lyon
Dames & Moore
(Attention: Mr. George Krasnick)

The Draft Environmental Assessment for the Moanalua Hillside Stabilization Project claims (top of page 12) that the "only mitigation now contemplated is financial" and the "values of the properties affected by the hillside are considerably less than what they would have been otherwise". This is an overly narrow view even within the limited context of the draft EA, which assumes the building of retaining and buttress walls. This is the City and County's preferred method of stabilization, but it is the one that requires the taking of six private parcels through condemnation.

In assessing this type of construction, the alternate method has been overlooked relative to its importance in providing a fair judgment of what the private properties are worth. The alternate construction design of building at mid-slope a tie-back retaining wall requires no condemnation. It would also remedy the properties' current unfavorable situation of being adjacent to an unstable slope. Market values would again be on an equal basis with others in the neighborhood. That this would be precluded by the other stabilization method deserves some consideration.

If endangered species or historic sites were present, a great deal of attention would be given to protect them, or to mitigate their displacement and loss of habitat. The forced displacement of people and the disruption of their lives, which could involve unwanted, drastic economic and social changes, seem to be of relatively insignificant concern in the environmental assessment process.

STEPHEN TOMIO AND NATSUE NAKANO
1614 Ala Aolani St.
Honolulu, HI 96819

October 16, 1995

Mr. George Krasnick
Manager of Environmental Planning Department
Dames & Moore
1050 Queen St., Suite 204
Honolulu, HI 96814

Dear Mr. Krasnick:

Thank you for the draft of the Environmental Assessment for Moanalua Hillside Stabilization and for an opportunity to respond.

Our home is 1614 Ala Aolani St., one of six homes the City and County wants to buy out for its hillside stabilization project. It should be noted that our home sits on a stable property and is undamaged by any of the land movement in the area. For this reason, our choice of design alternative is the construction of a tie-back retaining wall rather than the lateral walls/buttress fill and property "buy out."

In 1989, three families lost their homes in Moanalua Valley due to the hillside slide. The City bought and demolished the three homes so that they could stop the slide from getting worst. Since 1989, the City has done a poor job in stopping the slide.

In your Environmental assessment Section 1.2 (Background) our property (1614 Ala Aolani St.) is never mentioned as one of the properties affected by the landslide from the beginning (1989) to present. Also, no official study has been done on our property.

Therefore, if the City and County decides against the tie-back retaining wall, the acquisition of our property to complete its stabilization project should be at the fair market value. Our dwelling and property are currently unaffected by the slide. According to the City and County's handout, "When the City Acquires Your Property," the Hawaii Revised Statutes 101, and the U.S. Department of Transportation's handout, "Acquiring Real Property for Federal and Federal-Aid Programs and Projects," market value is just compensation for affected properties. The City's 50% of the "tax assessment value" or "undamaged appraised value" is insufficient compensation for the forced displacement of our undamaged home to save other homes, roadways, sewer lines, and water lines.

Sincerely,

Stephen Tomio Nakano

Stephen Tomio Nakano
Property Owner

c: Nathan Suzuki, State Representative
Jeremy Harris, Mayor of Honolulu
Donna Mercado Kim, City Councilmember

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



JEREMY HARRIS
MAYOR

KENNETH E. SPRAGUE
DIRECTOR AND CHIEF ENGINEER
IN REPLY REFER TO:

95-11-0234

November 28, 1995

Mr. and Mrs. Steven Nakano
1614 Ala Aolani
Honolulu, Hawaii 96819

Dear Mr. and Mrs. Nakano:

Subject: Draft Environmental Assessment for Moanalua Hillside Stabilization,
Honolulu, Oahu, Hawaii. Tax Map Keys: 1-1-44: Parcels 13 through 21

Thank you for your comments on the subject environmental assessment. Our studies indicate that the slide has widened and enlarged significantly between the time it was first mapped in 1989 and when it was remapped in January 1993. If stabilization measures are not implemented, this growth is likely to continue. As widening progresses and the head scarp continues to retreat toward Ala Lani, the toe will also advance and cause uplifting at 1618 Ala Aolani (where this process is already underway) and 1614 Ala Aolani.

All three properties along Ala Aolani, 1614, 1618 and 1626 will need to be acquired for the construction of the counterweight buttress fill. Failure to acquire these properties would allow only a narrow buttress fill which would not prevent continued lateral growth of the landslide which would, with time, severely damage or destroy these houses.

If you have any questions, please call George Krasnick of Dames & Moore at 593-1116.

Very truly yours,

KENNETH E. SPRAGUE
Director and Chief Engineer

cc: STV/Lyon
Dames & Moore
(Attention: Mr. George Krasnick)

BENJAMIN J. CAYETANO
Governor of Hawaii



REF:OCEA:TES
STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

P. O. Box 611
Honolulu, Hawaii 96809

MICHAEL D. WILSON
Board of Land and Natural Resources

Deputy Director
GILBERT COLOMA-AGARAN
Aquaculture Development
Agricultural Resources
Beaching and Ocean Recreation
Bureau of Cemeteries
Conservation and Environmental Aids in
Firearms and Wildlife
Historic Preservation
Land Management
State Parks

File No.: 96-12

OCT 19 1995

Mr. George Krasnick
Danes & Moore
1050 Queen Street, Suite 204
Honolulu, Hawaii 96814

RECEIVED
OCT 20 1995

Dear Mr. Krasnick:

DANES & MOORE

Subject: Draft Environmental Assessment (EA) for the Moanalua
Hillside Stabilization Project at Moanalua, Honolulu
Oahu, Hawaii, TRRS: 1-1-44: 13-21

Thank you for giving our Department the opportunity to review
this matter.

Division of Aquatic Resources:

According to DAR, significant impacts adverse to aquatic
resources values are not expected from the activities proposed.
However, as noted on page 11 of the draft EA, DAR also recommends
that construction activities be restricted to periods of minimal
rainfall and areas denuded of vegetation which could be
susceptible to wind or water erosion are appropriately
stabilized. Further, precautionary measures should be taken to
prevent construction materials, petroleum products, debris and
especially eroded soils from entering Moanalua Stream.

Commission on Water Resource Management:

CWRM strongly promotes the efficient use of our water resources
through water conservation measures and use of alternative non-
potable water resources whenever available, feasible, and if
there are no harmful effects to ecosystems. Also, CWRM
encourages the protection of water recharge areas which are
important for the maintenance of streams and the replenishment of
aquifers.

Also, based on the information provided, it does not appear that
the bed or banks of streams will be altered. Therefore, a Stream
Channel Alteration Permit pursuant to Section 13-169-50, HAR will
not be required.

Mr. G. Krasnick

-2-

File No.: 96-120

We have no other comments at this time. Should you have any
questions, please call Sam Leamo at the Office of Conservation
and Environmental Affairs at 587-0377.

Aloha,

MICHAEL D. WILSON

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



KENNETH E. SPRAGUE
DIRECTOR AND CHIEF ENGINEER
IN REPLY REFER TO:

95-11-0242

JEREMY HARRIS
MAYOR

November 28, 1995

Mr. Michael D. Wilson, Chairperson
Department of Land and Natural Resources
State of Hawaii
P. O. Box 621
Honolulu, Hawaii 96809

Dear Mr. Wilson:

Subject: Draft Environmental Assessment for Moanalua Hillside Stabilization,
Honolulu, Oahu, Hawaii. TMK: 1-1-44: Parcels 13 Through 21

Thank you for your comments on the subject environmental assessment. We understand that the primary concern of your Division of Aquatic Resources is protection of Moanalua Stream, especially from sediments eroded from the project site. Because of the need to stabilize the hillside as quickly as possible to reduce further risks to residents, their property and existing infrastructure, scheduling of work to coincide with dry weather periods may not be feasible. We note, however, that the project area is characteristically dry with annual rainfall averaging about 40 inches. The construction documents for the project will specify preparation and approval of an erosion control program, as well as contain specifications on solid and hazardous waste removal from the site.

The proposed project will not require work within or adjacent to Moanalua Stream, and we understand from the comments of the Commission on Water Resource Management that a Stream Channel Alteration Permit will not be required.

If there are any questions, please call George Krasnick of Dames & Moore at 593-1116.

Very truly yours,

KENNETH E. SPRAGUE
Director and Chief Engineer

cc: STV/Lyon
Dames & Moore (Mr. George Krasnick)



Moanalua Valley Community Ass'n. Inc.

1423 Ala Aolani Street
Honolulu, HI 96819
October 18, 1995

R
R E C E I V E D
OCT 20 1995

DAMES & MOORE

Mr. George Krasnick
Dames & Moore
1050 Queen Street, Suite 204
Honolulu, HI 96814

Dear Mr. Krasnick:

Thank you for allowing us to review your draft of the environmental assessment for the Moanalua Hillside Stabilization Project. The following are our comments.

Section 2.4 Disagree with statement "No program of active maintenance will be required." Project is located in a residential area and is bordered on all sides by existing homes. No maintenance program of the site raises community concerns about health and safety. Provide detailed justification to support this statement. Otherwise, a maintenance program for the site needs to be addressed. Reference City & County of Honolulu, Dept. of Parks and Recreation letter dated August 2, 1995.

Section 2.5 Cost factors cited pertain to design, right of way acquisitions and construction cost only. Missing are the long-term and socio-economic impact costs created by this project. Provide cost evaluation and estimates of long-term maintenance costs, lost revenues to City (property taxes, sewer fees, etc.) and lower property values of adjacent homes.

Section 3.0 Analysis of possible alternatives is inadequate. Provide a more detailed analysis which should include for each alternative: cost comparison (see comments for Section 2.5), environmental impact, impact on displaced residents and surrounding residents, aesthetics and effectiveness of alternative.

Section 4.3 Provide the special provisions City will include in contract to minimize dust migration during construction and post-construction period. Analysis of the effectiveness of these measures should also be included. Air quality sampling program may be needed.

Section 4.7 Disagree with statement "The magnitude of the economic impacts will depend on the outcome of price negotiations with the City, but litigation would not be expected." Explain how this conclusion was reached.

Last paragraph in this section is true of several of the alternatives available to the City, not only the proposed project. It is still a matter in question as to which alternative will provide the best "long-term benefits to nearby residents in terms of safety and maintenance of property values". This environmental assessment falls short in providing an adequate evaluation of the alternatives available to the City.

Section 4.12 Moanalua Valley has only one road that provides ingress and egress. This means that a good portion of residents/guests will pass by the site daily. The very presence of a 15 to 20 foot high buttress fill wall in a large vacant area will be a negative factor on surrounding properties. The tie-back retaining wall option does not share this effect because the existing homes would remain, thus obscuring the presence of a wall.

We are available to meet with you to discuss any of our comments. You may contact Brian Yoshida at 834-8834 to arrange a meeting.

Please provide a written response addressing our comments to the Draft Environmental Assessment for the Moanalua Hillside Stabilization Project. We also request that a copy of the final assessment be provided to us.

Sincerely,

Brian Yoshida
President, MVCA

cc: Robert Lee 1618 Ala Aolani Street
Yoji Fujiwara 1626 Ala Aolani Street
Stephen Nakano 1614 Ala Aolani Street
Charlie Ono 1597 Ala Lani Street
Sang Chun Mah 1591 Ala Lani Street
Howard Kaneshiro 1609 Ala Lani Street
Councilmember Donna Mercado Kim

DEPARTMENT OF PUBLIC WORKS
CITY AND COUNTY OF HONOLULU

890 SOUTH KING STREET
HONOLULU, HAWAII 96813



KENNETH E. SPRAGUE
DIRECTOR AND CHIEF ENGINEER

KENNETH E. SPRAGUE
DIRECTOR AND CHIEF ENGINEER
IN REPLY REFER TO:

95-11-0231

November 28, 1995

Moanalua Valley Community
Association, Inc.
1423 Ala Aolani Street
Honolulu, Hawaii 96819

Gentlemen:

Subject: Draft Environmental Assessment for Moanalua Hillside Stabilization,
Honolulu, Oahu, Hawaii. Tax Map Keys: 1-1-44; Parcels 13 through 21

Thank you for your comments on the subject environmental assessment. With regard to future maintenance of the site, the environmental assessment will be modified to indicate that there will be a maintenance program. The buttress fill will be mulched and a low ground cover planted for erosion control. The contractor will be responsible for maintenance during the first 24 months after construction, and thereafter, the City will assume the responsibility for maintenance.

With respect to maintenance costs, on a similar previous project, the contractor's cost was \$230 per square foot for the 24-month period. Maintenance was conducted on a monthly basis. Loss of property taxes and sewer fees will be addressed in the final environmental assessment; however, the property valuation process has not yet begun. Appraisals of the affected properties have not yet been commissioned; impacts to the values of adjacent homes cannot yet be estimated.

With regard to your comments on Section 3.0 of the environmental assessment, a summary matrix comparing the impacts of the alternatives will be added to the final document.

With regard to your comments on Section 4.3 of the environmental assessment, the final environmental assessment will summarize the dust control measures required by State law and the standard provisions of City construction contracts.

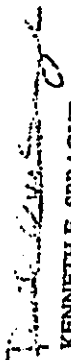
Moanalua Valley Community
Association, Inc.
Page 2
November 28, 1995

Your comment regarding Section 4.7 misquotes the environmental assessment. The actual sentence reads "... litigation would not be unexpected." The last paragraph will be reworded to contrast the relative benefits of the alternatives.

It is true that the buttress fill alternative would be more visible from the street than the tie-back wall alternative. On the other hand, however, the visual impacts of the buttress fill alternative will be mitigated by several factors. Depending on the final design adopted, the lateral retaining walls could be constructed of reinforced earth. These walls would begin twenty to thirty feet back from the street and rise to their maximum height where they join the hillside. There will be neither walls nor fill immediately adjacent to the street. The adjacent houses will block the lateral view of the fill area. The fill will be landscaped with an appropriate ground cover and maintenance provided.

If you have any questions, please call George Krasnick of Dames & Moore at 593-1116.

Very truly yours,


KENNETH E. SPRAGUE
Director and Chief Engineer

cc: STV/Lyon
Dames & Moore
(Attention: Mr. George Krasnick)



University of Hawai'i at Mānoa

Environmental Center
A Unit of Water Resources Research Center
Crawford 317 • 2550 Campus Road • Honolulu, Hawai'i 96822
Telephone: (808) 956-7381 • Facsimile: (808) 956-4900

Mr. Marvin Fukagawa
October 23, 1995
Page 2

surface water to prevent pore pressure buildup behind the retaining walls. Such drainage must be included or else elevated pore pressures may make the hillside even more unstable. Also, what provisions will limit surface water runoff access to the site? Such measures likewise are necessary to reduce the opportunity for sub-surface pore water pressure buildup.

The draft EA also lacks sufficient diagrams and maps to evaluate both present and future slide potential and to delineate the boundaries of the slide area. The List of References (Section 7.0, p. 19) cites three studies prepared for the Department of Public Works in 1989, 1991 and 1993. Presumably these reports contain valuable assessment data and should have been included in this draft EA as appendices. Without knowing the boundaries of the current slide area, we are left guessing as to whether the City has in fact isolated the problem and proposed a sufficiently extensive remedy for the hillside movement. Similarly, in the absence of comprehensive geologic and geophysical data, we cannot gauge the effectiveness of the City's proposal. What are the chances the slide will migrate both laterally and uphill? What are the implications should such a migration occur? What is the probable success of the City's currently proposed mitigation? These questions must be answered in the final EA in order to ensure both adequate review and project success.

October 23, 1995
EA: 0133

Mr. Marvin Fukagawa
City and County of Honolulu
Department of Public Works
650 South King Street
Honolulu, Hawaii 96813

Mr. Fukagawa:

Draft Environmental Assessment
Moanalua Hillside Stabilization
Honolulu, Oahu

The referenced project is intended to stabilize a portion of the western hillside of Moanalua Valley, an area experiencing earth movements which are damaging residential properties, threatening public utilities and placing residents at risk. The City and County of Honolulu proposes to purchase six residential parcels, construct retaining walls, and add a buttress fill to stabilize these earth movements, remove the active risk to residents and stop the expansion of the slide. Preliminary estimates indicate that the walls will be 15 to 20 feet high. The filled area will be planted with a low-maintenance ground cover and fenced where necessary to restrict access. The issue of social concern with this project is obviously the relocation of residents of the homes the City intends to purchase. If the project proceeds as proposed, relocations will be unavoidable impacts. The only mitigation now contemplated is financial.

This review was completed with the assistance of Frank Peterson, Geology and Geophysics and Tom Hawley, Environmental Center.

We are concerned that plans in the draft EA for the various alternatives under consideration are not sufficiently thorough. Our reviewers point out that it is difficult to assess either the environmental impacts or the engineering effectiveness of the two retaining wall alternatives without more detailed construction plans, especially an aerial plan view of the proposed structures. Similarly, no mention is made of provisions for draining sub-

We are also concerned about the lack of substantive discussion on the issue of land acquisition and homeowner displacement. Clearly this issue is central to the success of the project and as such warrants a far more detailed and in-depth discussion than it receives in this draft EA. As it stands, mention of this issue is limited to a brief discussion in the body of the Draft EA (Section 4.7, pp. 11-12), and to two letters, one from the Moanalua Valley Community Association, Inc. and another from an affected homeowner (Appendix A, Pre-Assessment Consultation Responses). No direct response from the City to the concerns raised in these letters is included in the draft EA, leaving us to speculate as to exactly how the City plans to proceed on this issue.

The letter from the Moanalua Valley Community Association (MVCA) raises what is arguably the most significant issue to potentially displaced homeowners--the price they will be paid for their homes. This question also bears significantly on the City's budget and timetable for the project. The letter suggests that the City intends to pay approximately 50% of market value for the six parcels of land it needs to acquire to complete the project. Both letters included in the Appendix, however, suggest that this amount is unacceptable to the affected homeowners and that they are seeking compensation in accordance with "fair market value." This is clearly a significant difference between the homeowners and the City and yet, as the City acknowledges, "formal price negotiations have not yet commenced" (Section 4.7, p.12). In the absence of a working agreement on this issue, we are concerned that much of the information presented in this EA may not prove accurate. While it is not our place to take sides in this debate, this exchange does raise two relevant concerns. First,

Mr. Marvin Fukugawa
October 23, 1995
Page 3

the price which the City intends to pay for these parcels should be explicitly included in the draft EA. Second, the importance of this issue between the City and the homeowners warrants a much more extended discussion in the draft EA, including responses to the letters received, greater consultation with affected homeowners and a detailed plan for the negotiations.

This situation raises the more philosophical question of whether the misfortune of a few should be widely distributed among many via the use of public funds. We note that there are presently no insurance companies in the state of Hawaii who insure against damages resulting from landform subsidence, an issue which itself warrants legislative review. In this case, six homeowners will most likely be faced with mortgage payments on a home which they no longer own. Clearly, the resources of a few are small in comparison with those of the City. It is our hope that the City will seek the most equitable means of adjudicating this dispute with a view toward both the potential hardship these homeowners could face and the immediate issue of public safety presented by the unstable hillside.

The absence of agreement on the issue of price affects not only area homeowners but also the City and its plan for the project. The City's budget for the project is listed in Section 2.5 of the draft EA (page 7), and includes a \$2 million appropriation for land acquisition. Absent, however, is any indication of how the City arrived at this figure and whether this appropriation reflects the City's intention to pay 50% of market value, as the homeowners' letter suggests, or whether this figure includes the possibility of paying higher prices. The City acknowledges, again without discussion, that "litigation would not be unexpected" (p. 12). Clearly, litigation would also raise project cost. Has a budget been formulated for this possibility? Given that negotiations on this issue have yet to even begin, it is not clear that this budget will in fact be adequate for the project. Will the City have sufficient money for the project if the anticipated \$2 million for land acquisition proves inadequate?

This issue is also related to the City's proposed timetable for the project. Section 2.6 on page 7 of the draft EA expects land acquisition to begin in January of 1996 with design and construction to follow in May and September of 1996, respectively. If the land acquisition is delayed by complicated negotiations, then a delay of the project is a reasonably foreseeable possibility. Does the City have a back-up plan to account for this circumstance? Given the rather pressing need to resolve the slide problem in the area, it would appear to be in everyone's best interest for the City to devise a back-up plan should this one prove unfeasible.

We are also concerned about the absence of direct input from neighbors surrounding the project area. Though we acknowledge that these residents have perhaps spoken through the Moanalua Valley Community Association, we nevertheless believe that neighbors not displaced by the project will be significantly impacted by its presence. Certainly the value

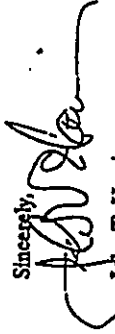
Mr. Marvin Fukugawa
October 23, 1995
Page 4

of their land and homes will be affected by the proposed project and should be discussed in the draft EA. Given that they also will have to live with the project on a daily basis, the City should also make an effort to consult with these neighbors in the design of the proposed project so as to minimize aesthetic and physical impacts as much as possible.

Finally, we are concerned that the Department of Public Works is both the proposing agency and the accepting authority for the proposed project. This clearly represents a conflict of interest and we suspect that some of the problems and absences within this draft EA could be the result of such overlap. Certainly, the process of objective review is ill-served by such a situation. Public concerns regarding any project must be allowed a fair hearing in as neutral a forum as possible and must be given an honest chance to be addressed. The current situation compromises that possibility.

Thank you for this opportunity to comment.

Sincerely,



John T. Harrison
Environmental Coordinator

cc: OEQC
Roger Fujjoka
Department of Public Works
Dames and Moore, Inc.
Frank Peterson
Tom Hawley

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



JEREMY HARRIS
201/908

KENNETH E. SPRAGUE
DIRECTOR AND CHIEF ENGINEER
IN REPLY REFER TO:

95-11-0243

November 30, 1995

Dr. John T. Harrison, Environmental Coordinator
University of Hawaii, Environmental Center
2550 Campus Road, Crawford 317
Honolulu, Hawaii 96822

Dear Dr. Harrison:

Subject: Draft Environmental Assessment for Moanalua Hillside Stabilization,
Honolulu, Oahu, Hawaii. JMK. 1-1-44; Parcels 13 Through 21

Thank you for your comments on the subject environmental assessment. As you know, the environmental process is mandated to be undertaken at the earliest possible time in project planning. In this particular instance, while we have conceptual alternatives, we have not yet completed final design drawings. The available preliminary drawings will be included in the final environmental assessment.

Both the buttress fill, which has not been designed, and the tieback retaining wall will have drainage provisions to preclude pore pressure buildup and remove surface water effectively. Pore pressures were recognized as a major contributing factor to slide instability and vertical drains were installed in 1992 as an early first measure in the overall stabilization. Pumping with submersible pumps within these 15 vertical drains has greatly alleviated pore pressures within the slide mass, as measured in piezometers, and greatly reduced the rate of movement along the sliding surface. Movement has not ceased, however, despite this partial control of pore pressure and seepage pressure buildup. Consequently, whatever stabilization measure is selected, drainage provisions will be incorporated to further control pore pressures and seepage pressures.

The limits of the slide were last mapped in 1993. The drawings prepared at that time, which show the historical development of the slide, will be included in the final environmental assessment. Over time, it is to be expected that this landslide will continue to grow, unless remediation measures are taken. Either of the alternative solutions proposed will stabilize this landslide. However, the City is confident that the buttress fill alternative is superior in this situation.

Dr. John T. Harrison
Page 2
November 30, 1995

Obviously, if the City acquires the properties involved in the landslide, the residents will be displaced. The City uses procedures adopted by the federal government for these types of actions. These procedures will be summarized in the final environmental assessment. With respect to the valuation of the properties proposed for acquisition, please realize that the valuation process has not yet begun. No property assessments have been made and no formal offers have been extended. We expect to work closely with the affected residents to arrive at an equitable resolution of this issue.

Your comment relative to the Department of Public Works being both the proposing agency and the accepting authority for this action is technically incorrect. The Department is the proposing agency. There is no accepting authority for an environmental assessment. An accepting authority only exists in the case of an environmental impact statement (EIS). In the case of an applicant (nonagency) EIS, there is an approving agency and an accepting authority. Current policies of the Office of Environmental Quality Control, however, seem to permit the approving agency to also act as the accepting authority. In the case of an environmental assessment for which a negative declaration is anticipated, the proposing agency, or in the case of an applicant action, the approving agency is responsible for the determination of the significance of the potential impacts.

If there are any questions, please call George Krasnick of Dames & Moore at 593-1116.

Very truly yours,


KENNETH E. SPRAGUE
Director and Chief Engineer

cc: STV/Lyon
Dames & Moore (George Krasnick)



CITY COUNCIL
CITY AND COUNTY OF HONOLULU
 HONOLULU, HAWAII 96813-3066 / TELEPHONE 847-7000

DONNA MERCADO KIM
 COUNCILMEMBER
 (808) 547-7947
 (808) 523-3778

October 23, 1995

RECEIVED
 OCT 24 1995

DAMES & MOORE

Mr. George Krasnick
 Dames & Moore
 1050 Queen Street, Suite 204
 Honolulu, HI 96814

Dear Mr. Krasnick:

I have reviewed the Draft Environmental Assessment for the Moanalua Hillside Stabilization Project and I take this opportunity to comment.

In the event that the City opts to pursue the purchase of the affected properties, build a retaining wall, and add a buttress fill over the slide area as a stabilization measure, I ask that the Moanalua Community be provided with more information on the design and plans for the area following the purchase option. Additionally, I concur with the Department of Parks and Recreation that the maintenance of the property, after stabilization measures have taken place need to be addressed.

If you have any questions, please call Hiroko Nakamura of my staff at 527-5580.

Sincerely,

Donna

DONNA MERCADO KIM
 Councilmember
 Council District VII

cc: Moanalua Valley Community Association

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



PERMIT MARKING
 DIVISION

KENNETH E. SPRAGUE
 DIRECTOR AND CHIEF ENGINEER

95-11-0240

November 28, 1995

The Honorable Donna Mercado Kim
 Councilmember
 City Council
 City and County of Honolulu
 Honolulu, Hawaii 96813-3065

Dear Councilmember Kim:

Subject: Draft Environmental Assessment for Moanalua Hillside Stabilization, Honolulu, Oahu, Hawaii. IMK: J-1-44; Parcels 13 Through 21

Thank you for your comments on the subject environmental assessment. As you may know, the environmental review process is mandated to begin as early as practicable in project planning. As a consequence, while we presently have conceptual alternatives, we have not yet completed design of the buttress fill alternative. This information will be shared when it becomes available.

With regard to future maintenance of the site, the environmental assessment will be modified to indicate that there will be a maintenance program. We expect this will be designed in a manner similar to that implemented in Woodlawn. The buttress fill will be mulched and a low ground cover planted for erosion control. In Woodlawn, the contractor was responsible for maintenance during the first 24 months after construction, and thereafter the City assumed the responsibility for maintenance.

If there are any questions, please call George Krasnick of Dames & Moore at 593-1116.

Very truly yours,

Kenneth E. Sprague

KENNETH E. SPRAGUE
 Director and Chief Engineer

cc: STV/Lyon
 Dames & Moore (Mr. George Krasnick)
 Managing Director

Provide brand fax transmittal memo 7871 (of pages 1)

To: Gary Krasnick	From: H. G. LA
By: Dames & Moore	Date: 5/27/95
File: 593 119 J	Page: 27 6103

DEPARTMENT OF PUBLIC WORKS
CITY AND COUNTY OF HONOLULU



KENNETH E. SPRAGUE
DIRECTOR AND CHIEF ENGINEER
IN REPLY REFER TO
95-11-0239

JEREMY HARRIS
ATTORNEY

GARY GILL
DIRECTOR

STATE OF HAWAII
OFFICE OF ENVIRONMENTAL QUALITY CONTROL
220 SOUTH KING STREET
FOURTH FLOOR
HONOLULU, HAWAII 96813
October 18, 1995

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DIV OF ENVIRONMENTAL CONTROL
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ENV. DIV.
TNG

November 28, 1995

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

Mr. Gary Gill
Office of Environmental Quality Control
State of Hawaii
220 South King Street, Fourth Floor
Honolulu, Hawaii 96813

Dear Mr. Sprague,

Subject: Draft Environmental Assessment for Moanalua Hillside Stabilization,
Honolulu, Oahu, Hawaii, DMK. 1-1-44; Parcels 13 Through 21

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

1. Please provide preliminary plan and profile sketches showing:
 - a) present earth movement and drainage pattern; b) proposed retaining wall and fill; and c) future drainage pattern after the improvements. The drawings must show the location of the wall in relation to existing features.
2. Please provide a visual description of the proposed wall and fill. What specific mitigation measures will be implemented to minimize the visual impact of the wall and fill?
3. Please provide a list of applicable regulations governing condemnation of property for this type of project.

If you have any questions, please call Jeyan Thirugnanam at 586-4185. Mahalo.

Sincerely,
Gary Gill
Director

Thank you for your comments on the subject environmental assessment. The limits of the slide were last mapped in 1993. The drawings prepared at that time, which show the historical development of the slide, will be included in the final environmental assessment. As you know, the environmental process is mandated to be undertaken at the earliest possible time in project planning. In this particular instance, while we have conceptual alternatives, we have not yet completed final design drawings. The available preliminary drawings will be included in the final environmental assessment. Depending on the final design adopted, the lateral retaining walls could be constructed of reinforced earth. These walls would begin twenty to thirty feet back from the street, and rise to their maximum height where they join the hillside. There will be neither walls nor fill immediately adjacent to the street. The adjacent houses will block the lateral view of the fill area. The fill will be landscaped with an appropriate ground cover, and maintenance provided.

The City uses procedures adopted by the federal government for property acquisitions of this nature. These procedures will be summarized in the final environmental assessment.

If you have any questions, please call George Krasnick of Dames & Moore at 593-1116.

Very truly yours,

P. E. Moore
KENNETH E. SPRAGUE
Director and Chief Engineer

cc: STV/Lyon
Dames & Moore (Mr. George Krasnick)

TOTL P. 81

DEPARTMENT OF TRANSPORTATION SERVICES
CITY AND COUNTY OF HONOLULU

PACIFIC PALMS PLAZA
1050 QUEEN STREET, SUITE 1500
HONOLULU, HAWAII 96813



JEREMY HARRIS
MAYOR

CHARLES O. SWANSON
DIRECTOR

October 24, 1995

10/95-04519R

RECEIVED
OCT 26 1995
DAMES & MOORE

Mr. George Krasnick
Dames & Moore
1050 Queen Street, Suite 204
Honolulu, Hawaii 96814

Dear Mr. Krasnick:

Subject: Draft Environmental Assessment
Moanalua Hillside Stabilization Project

This is in response to your letter of September 20, 1995 requesting comments on the above subject project. Our traffic concerns are as follows:

1. Traffic control and/or road detour plans to mitigate anticipated traffic impacts will be required as the project would affect nearly 200 residences situated beyond the 9-lot site (including lower Ala Lani Street, Ala Lani Place, and Ala Kiao Place). The proposed restriction of work involving lane closures to the non-peak hours, 8:30 a.m. to 3:30 p.m., to maintain circulation would be acceptable.
2. In addition to the above plans, construction drawings for any work within the City Right-of-way must be provided for DTS review and approval prior to issuance of a building and/or roadway permit(s).

Thank you for providing us this opportunity to review and comment on the draft environmental assessment.

Respectfully,

Charles O. Swanson
CHARLES O. SWANSON
Director

DEPARTMENT OF PUBLIC WORKS
CITY AND COUNTY OF HONOLULU

890 SOUTH KING STREET
HONOLULU, HAWAII 96813



JEREMY HARRIS
MAYOR

KENNETH E. SPRAGUE
DIRECTOR AND CHIEF ENGINEER
IN REPLY REFER TO
95-11-0246

November 30, 1995

MEMORANDUM

TO: MR. CHARLES SWANSON, DIRECTOR
DEPARTMENT OF TRANSPORTATION SERVICES

FROM: KENNETH E. SPRAGUE, DIRECTOR AND CHIEF ENGINEER
DEPARTMENT OF PUBLIC WORKS

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT FOR MOANALUA
HILLSIDE STABILIZATION, HONOLULU, OAHU, HAWAII,
TMK: 1-1-44: PARCELS 13 THROUGH 21

Thank you for your comments on the subject environmental assessment. A traffic control plan will be prepared according to the following:

- Administrative Rules of Hawaii (DOT) governing the Use of Traffic Control Devices at Work Sites on or Adjacent to Public Streets and Highways, and
- The Federal Highway Administration's "Manual on Uniform Traffic Controls for Street and Highway Construction and Maintenance Operations."

Relevant parts of these documents will be summarized in the final environmental assessment.

Construction drawings will be submitted for review and approval as part of the permitting process.

cc: STV/Lyon
Dames & Moore (Mr. George Krasnick)