

Office Of Environmental Quality Control

Office Of The Governor

550 Halekaunila Street

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Honolulu, Hawaii 96813

ENVIRONMENTAL IMPACT STATEMENT

BOAT LAUNCHING RAMP

MAHA, MAUI, HAWAII

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PROPOSED BOAT LAUNCH

RAMP FACILITY

MAIWA, MAUI

October 23, 1975

ENVIRONMENTAL IMPACT STATEMENT

by

Harbors Division
Hawaii State Department of Transportation

prepared for the Harbors Division by

Oceanic Institute
Waimanalo, Hawaii
Contract No. 5168, Job H. C. 4035

DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII

Prepared by

Harbors Division

ENVIRONMENTAL IMPACT STATEMENT

ADMINISTRATIVE ACTION

for

PROPOSED BOAT LAUNCH RAMP FACILITY, MALA, MAUI

THIS STATEMENT FOR IMPROVEMENT WAS DEVELOPED IN ACCORDANCE WITH THE ENVIRONMENTAL
IMPACT STATEMENT REGULATIONS, STATE OF HAWAII, AND IS SUBMITTED PURSUANT TO:

Chapter 343
Hawaii Revised Statutes

AUG 18 1976

Date



MELVIN E. LEPINE
Chief, Harbors Division

REVIEWED FOR CONTENT AND ACCEPTED BY STATE DOT

AUG 18 1976

Date



for E. ALVEY WRIGHT
Director

FINAL

ENVIRONMENTAL IMPACT STATEMENT.

BOAT LAUNCHING RAMP

MALA, MAUI, HAWAII

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ENVIRONMENTAL IMPACT STATEMENT

**Boat Launching Ramp
Mala, Maui, Hawaii**

SUMMARY

Construction of a two-lane boat launching ramp, with minimum ancillary facilities, is proposed on State-owned land at Mala, near Lahaina, Maui.

The effects of surge on usability of the proposed ramp is a primary concern. Analysis herein indicates that with breakwater protection of modest dimensions, the ramp will be usable over 314 days per year, on the average.

Development of parking facilities will require the removal of a number of gravesites on an existing sand dune. During archaeological reconnaissance for this impact statement, no direct evidence of items of archaeological interest was found, but trenching and/or salvage has been recommended prior to construction.

The proposed ramp is compatible in this area, which has been planned for recreational use.

No adverse effects of water quality, surfing, or other water activities will result from the proposed use.

The proposed facility will have beneficial social and economic impact.

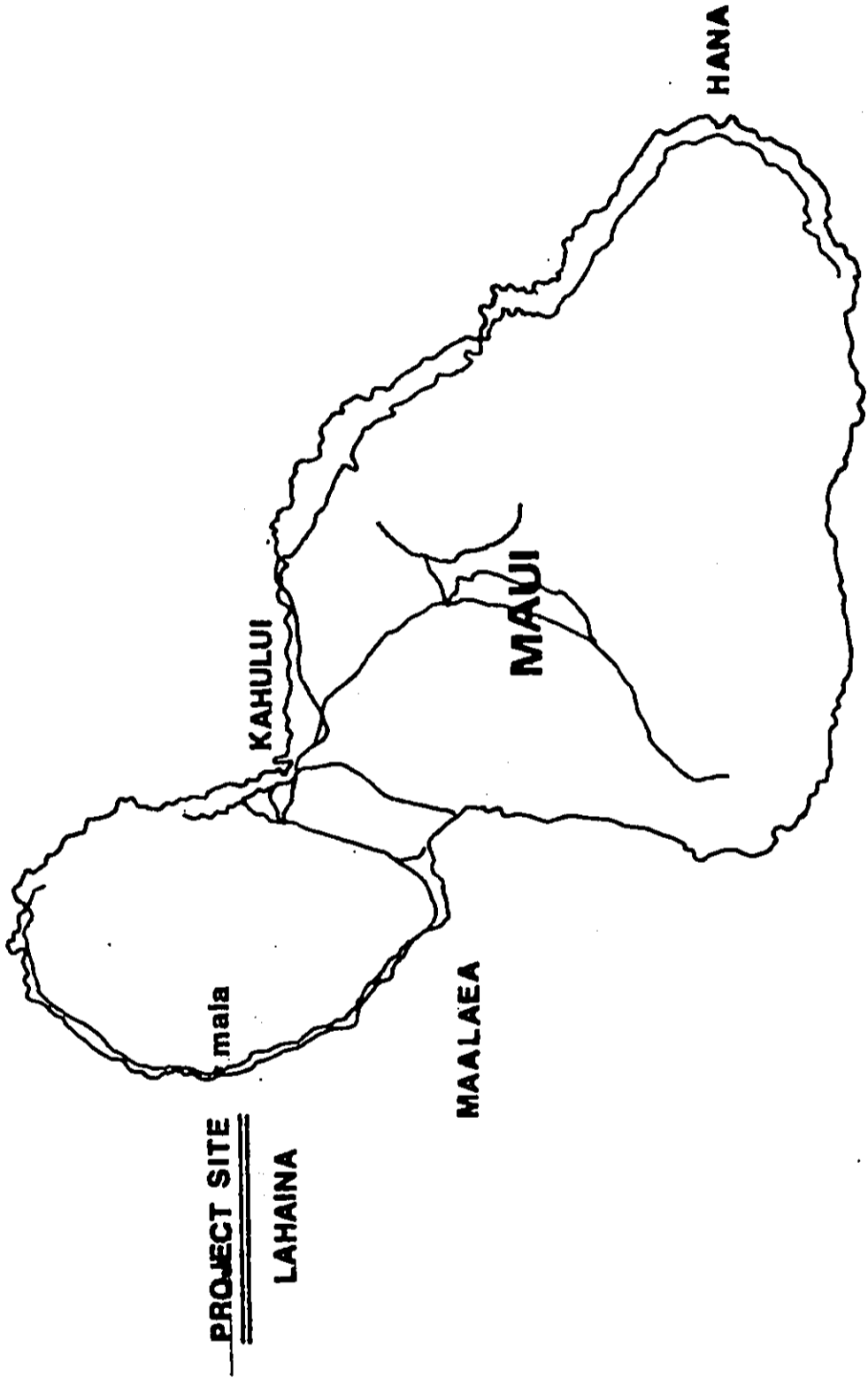
I. PROJECT DESCRIPTION

It is proposed to construct a two-lane boat launching ramp near the old Mala Wharf at Lahaina, Maui. See Figures 1 and 2 for location.

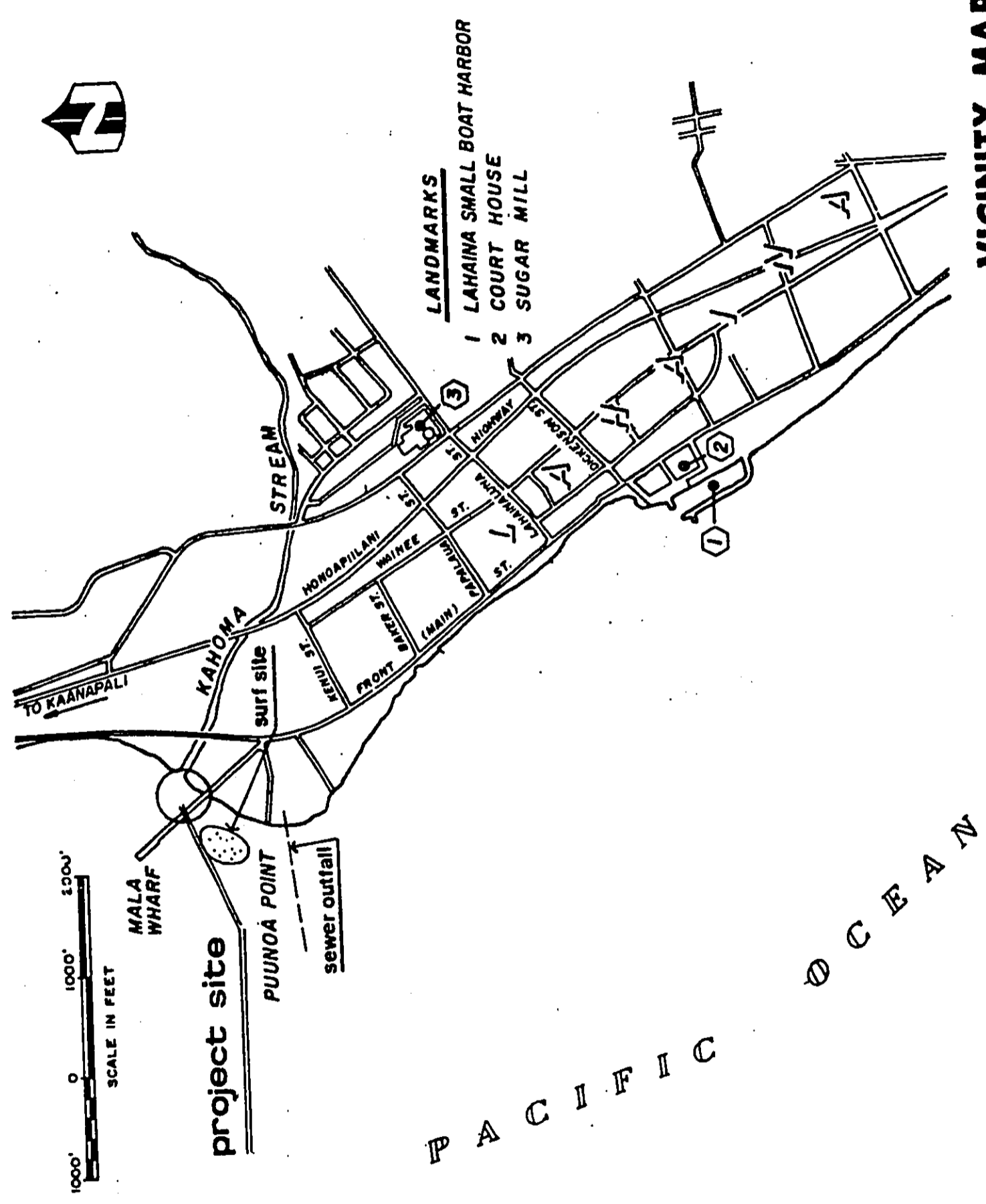
The facility to be constructed will include:

- 2 launching lanes with a rigging dock
- Structures for wave protection
- Parking
 - about 50 car/trailer spaces
 - about 20 car spaces
- Boat washdown area
- Appropriate car/trailer maneuvering area
- Comfort station
- Utilities - water, electricity (including lighting), sewage line, telephone
- Landscaping

(some of these items may be incremental depending on availability of funds)



REGIONAL MAP
FIGURE 1



- LANDMARKS**
- 1 LAHAINA SMALL BOAT HARBOR
 - 2 COURT HOUSE
 - 3 SUGAR MILL

VICINITY MAP
FIGURE 2

Land area requirement for the above minimum facility is about 1-1/2 acres. About 3/4 acres of water space is required for such a facility.

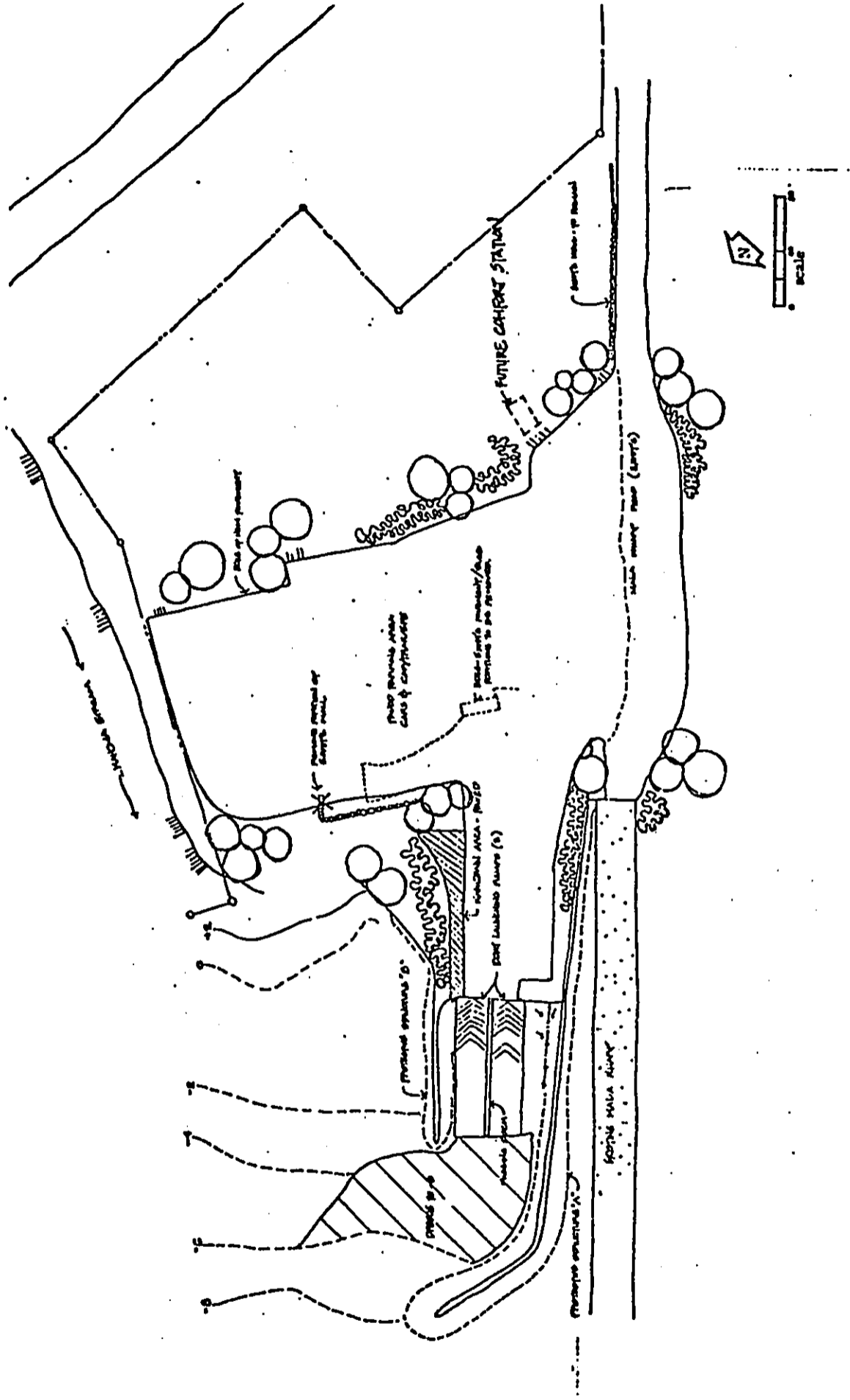
Figure 3 shows one concept for the facility. Other options and desirable amenities are discussed in the section on Alternatives.

Needs, Objectives, Requirements

It is intended that the Mala facility meet a current need for boat launching in the Lahaina District. It will supplement the existing ramp at Lahaina whose severe deficiencies

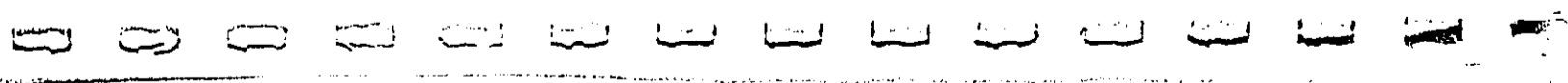
include:

1. restricted turning area and parking
2. narrow ramp width
3. inadequate loading dock
4. traffic - both ashore and in the adjacent water area



mala boat launch facility.
 conceptual plan.

OCEANIC INSTITUTE & W. E. SPENCER & ASSOCIATES, INC. AUG. 1975



COST ESTIMATE
MALA BOAT LAUNCH FACILITY
MALA, MAUI

Description	Quantity	Unit	Unit Cost	Total Cost
1. Mobilization & Demobilization	1	job		\$8,000
2. Relocation of graves	1	job		10,000
3. Clearing/Removals 1.5 Ac.				9,000
4. Grading 1.5 Ac.				15,000
5. Paving 2" Ac., 6" Base	62,000	S.F.	0.65	40,300
6. Water (washdown only)	1	job		1,500
7. Dredging	1,100	CY	7.00	7,700
8. Protective Structure "A"		L.S.		75,000
9. Protective Structure "B" (including revetment)		L.S.		37,400
10. Obstruction Light etc.		by others (U.S.C.G.)		
11. Channel Markers				1,500
12. Launch Ramps - 2	1	job		38,000

Description	Quantity	Unit	Unit Cost	Total Cost
(Sum of Items 1 through 12)				243,400)
13. Rigging Dock		L.S.		9,000
14. Misc. Work: Traffic Stripping Signs & Roll Curbs	1	job		4,000
15. Conting. Allowance				20,000
Total - Phase I				276,400
Future Work:				
16. Comfort Station*	1	Ea.		30,000
17. Landscaping	1	job		10,000
18. Area Lighting	1	job		5,000
Sum of Items 16 -18				45,000
TOTAL ITEMS 1 - 18				\$321,400

* with on-site sewage disposal

The planned double ramp at Mala should be adequate to meet launching requirements until sometime in the 1980's. At such time as additional launch lanes are necessary in the Lahaina District, it is desirable that other sites be sought for reasons of dispersal. However, there is adequate shoreline and parking area at the Mala site to accommodate four lanes ultimately. Each of two lanes will accommodate about 40 launchings per day maximum. With allowance for turnover, there is a requirement for about 50 car/trailer parking spaces. An estimated 20 car parking spaces should be provided for boat crew, other boating participants, and visitors.

The Statewide Boat Launching Facilities Master Plan (1972) provides a basis for estimating facility requirements. Recent planning for the Lahaina Boat Harbor corroborates the need for boat launching facilities in this district of Maui.

II. THE EXISTING ENVIRONMENT (Setting)

Unique environmental assets of the area include the warm sunny climate of the leeward coast of Maui, the excellent adjacent calm waters for fishing, boating, diving, etc., and the nearby National Historic Landmark features in Lahaina.

A. Physical Characteristics

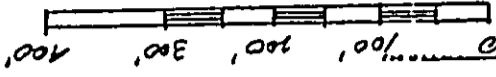
Topography

The peninsula immediately adjacent to Mala Wharf is partly flat (elevation 10 feet) just mauka of proposed ramp site, with a sand dune (to elevation 14 feet) and a depressed area (to elevation 3-1/2 feet) further mauka.

The coastal plain near the site is characterized by reddish brown silt four to sixteen feet thick, overlying brown silty sand. Beneath the site and the near-shore reef lie layers of hard coral, sand, and broken coral to at least -50 feet, as shown by borings taken in 1920. See Figure 4, a and b.

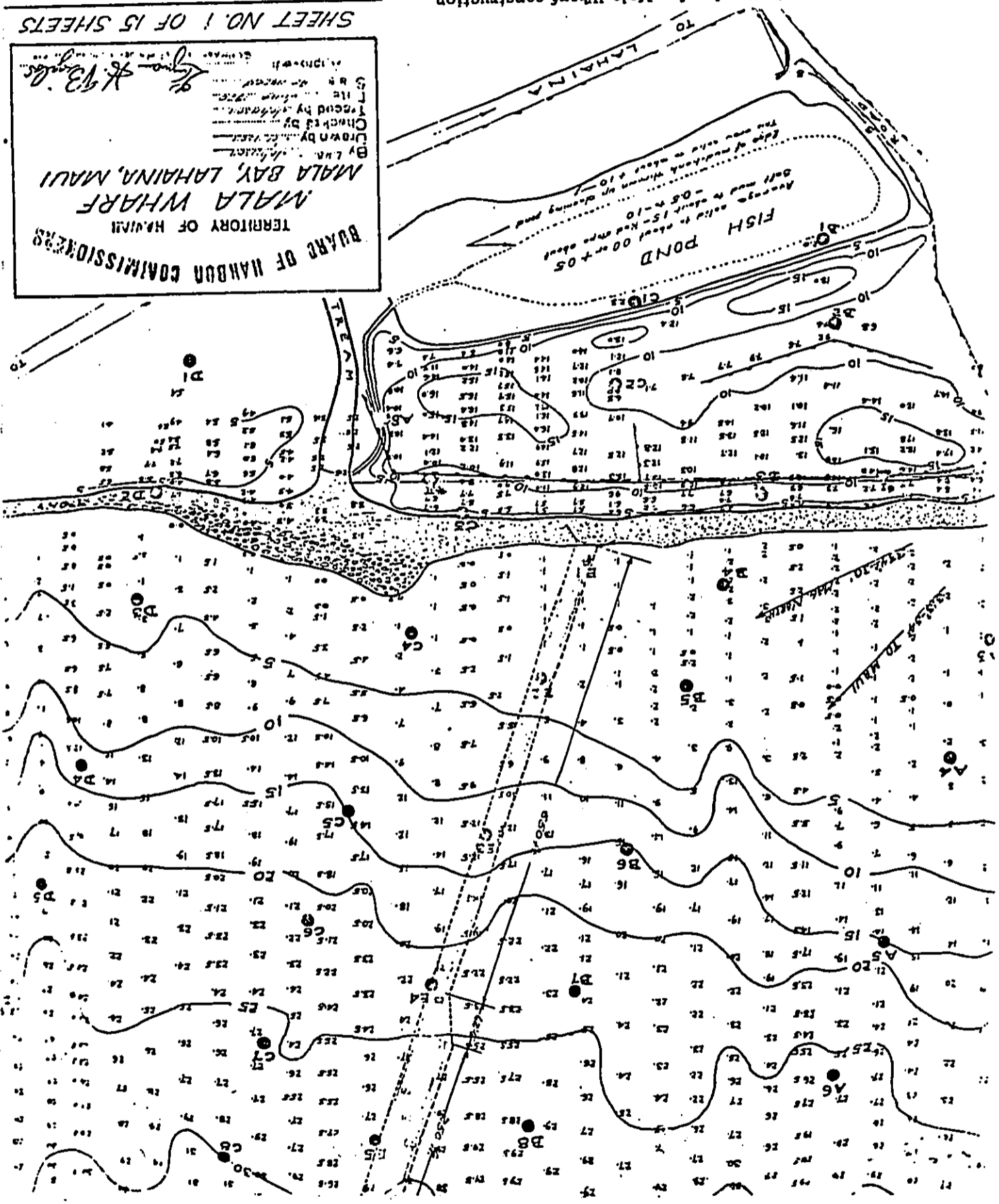
At the mouth of Kahoma Stream, a narrow sand bar forms along the north side during the dry season, but is washed away during periods of heavy rain.

FIGURE 4A : Detail site plan for Mala Wharf construction



SHEET NO. 1 OF 15 SHEETS

BOARD OF HARBOR COMMISSIONERS
 TERRITORY OF HAWAII
 MALA WHARF
 MALA BAY, LAHAINA, MAUI
 Drawn by [Signature]
 Checked by [Signature]
 By L.M.A. [Signature]



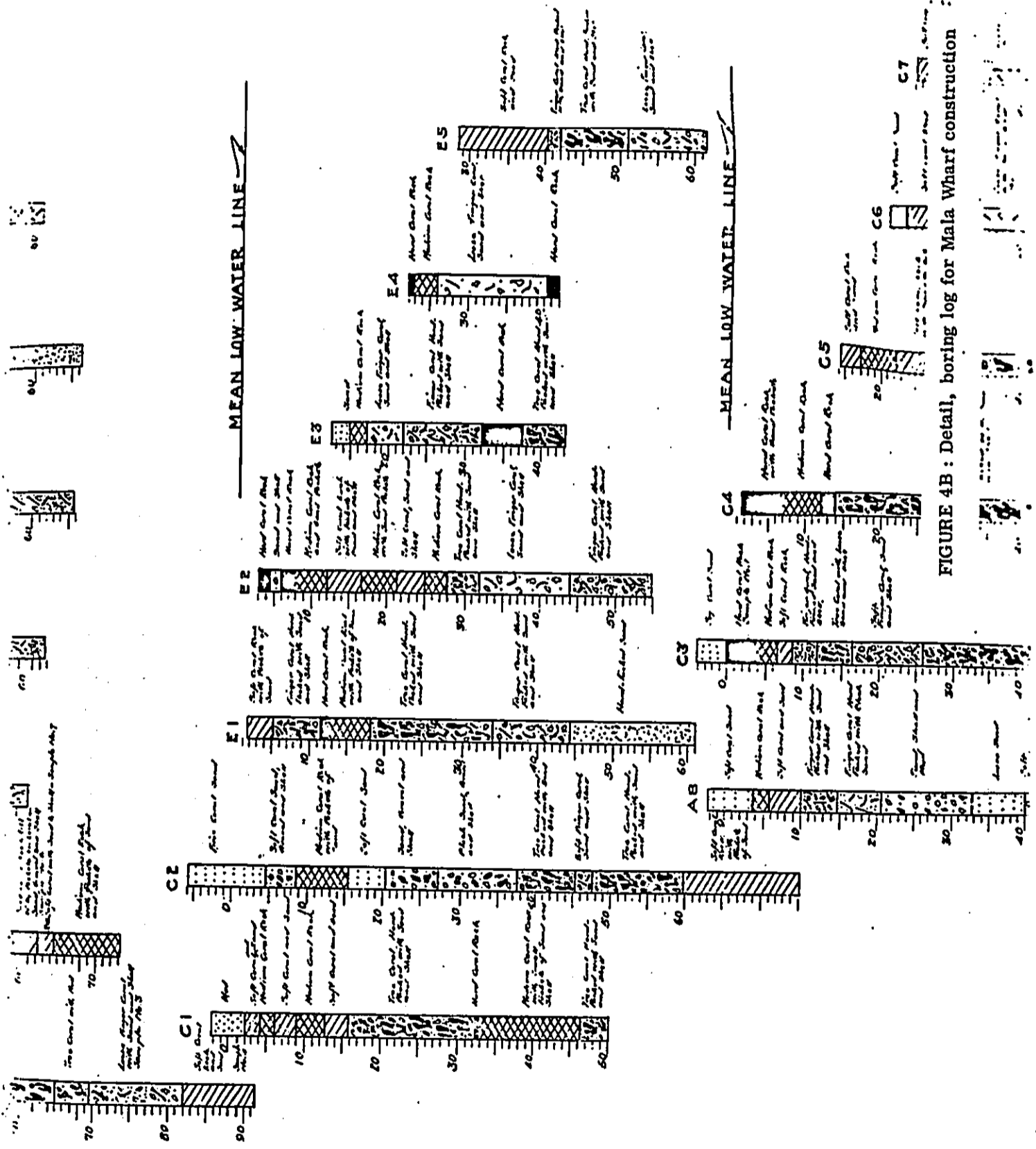


FIGURE 4B : Detail, boring log for Mala Wharf construction

Along the beach, piles of gravel and cobble-sized pieces of basalt washed down from the mountains are deposited in the tidal zone. See photos in Figures 5 and 6.

Extending a few hundred feet off shore is a flat-surfaced, coral limestone reef with shallow depressions filled with calcareous sand and gravel fragments mixed with pieces of basalt derived from land erosion. See photo in Figure 7 showing reef at low tide just south of Mala Wharf.

The line of potential tsunami inundation is just mauka of Honoapiilani Highway in this section of coast line. Observed runup for the 1946, 1957, and 1960 tsunamis was 12, 6 and 9 feet.

The mouth of Kahoma Stream is a flood-prone area which is discussed later in this E. I. S. At least 19 damaging floods have occurred since 1879. The stream is normally stagnant at its mouth due to upstream diversions for irrigation.

A peak flow of 7,750 cfs was recorded in a May, 1960 flood which was well documented.

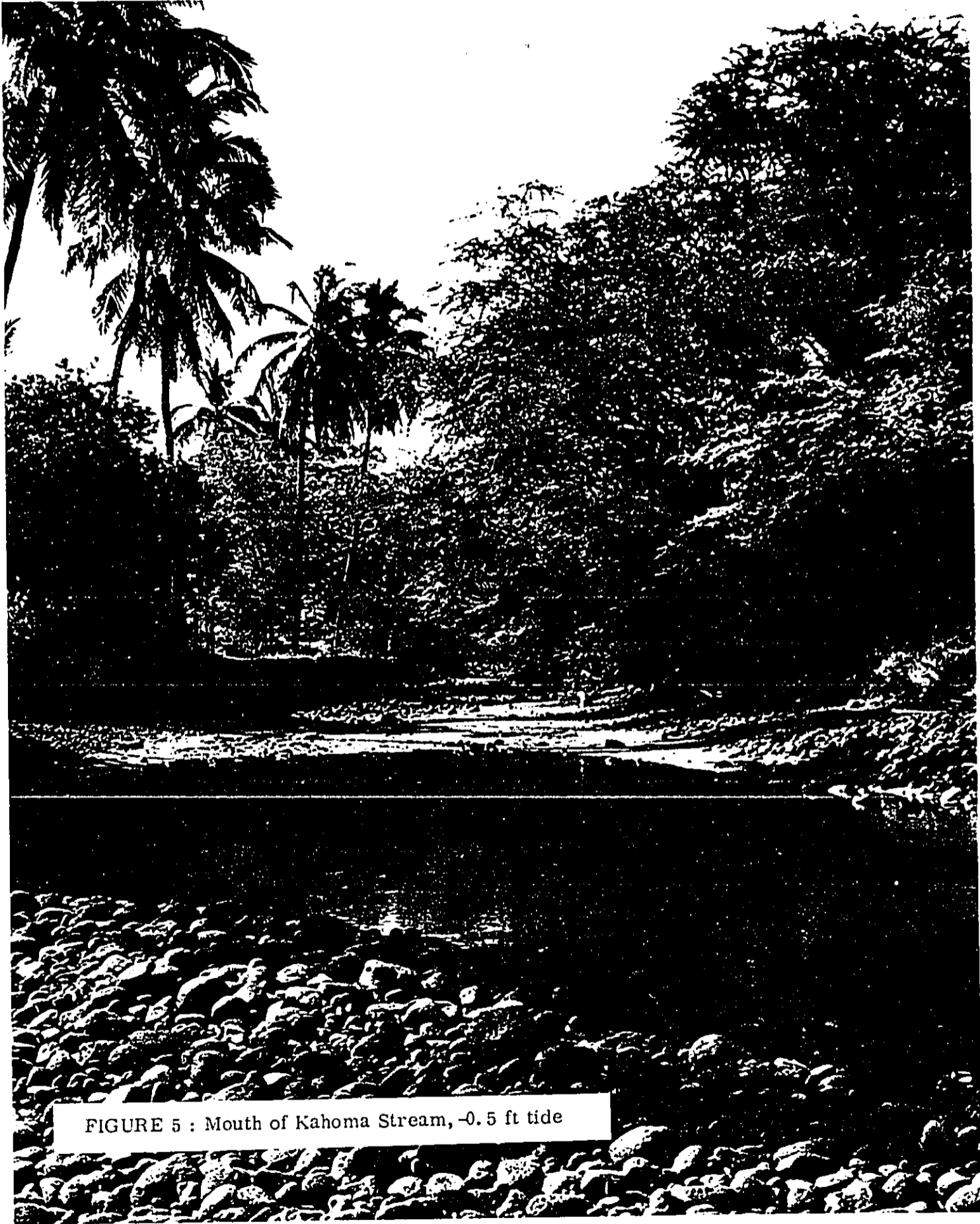


FIGURE 5 : Mouth of Kahoma Stream, -0.5 ft tide

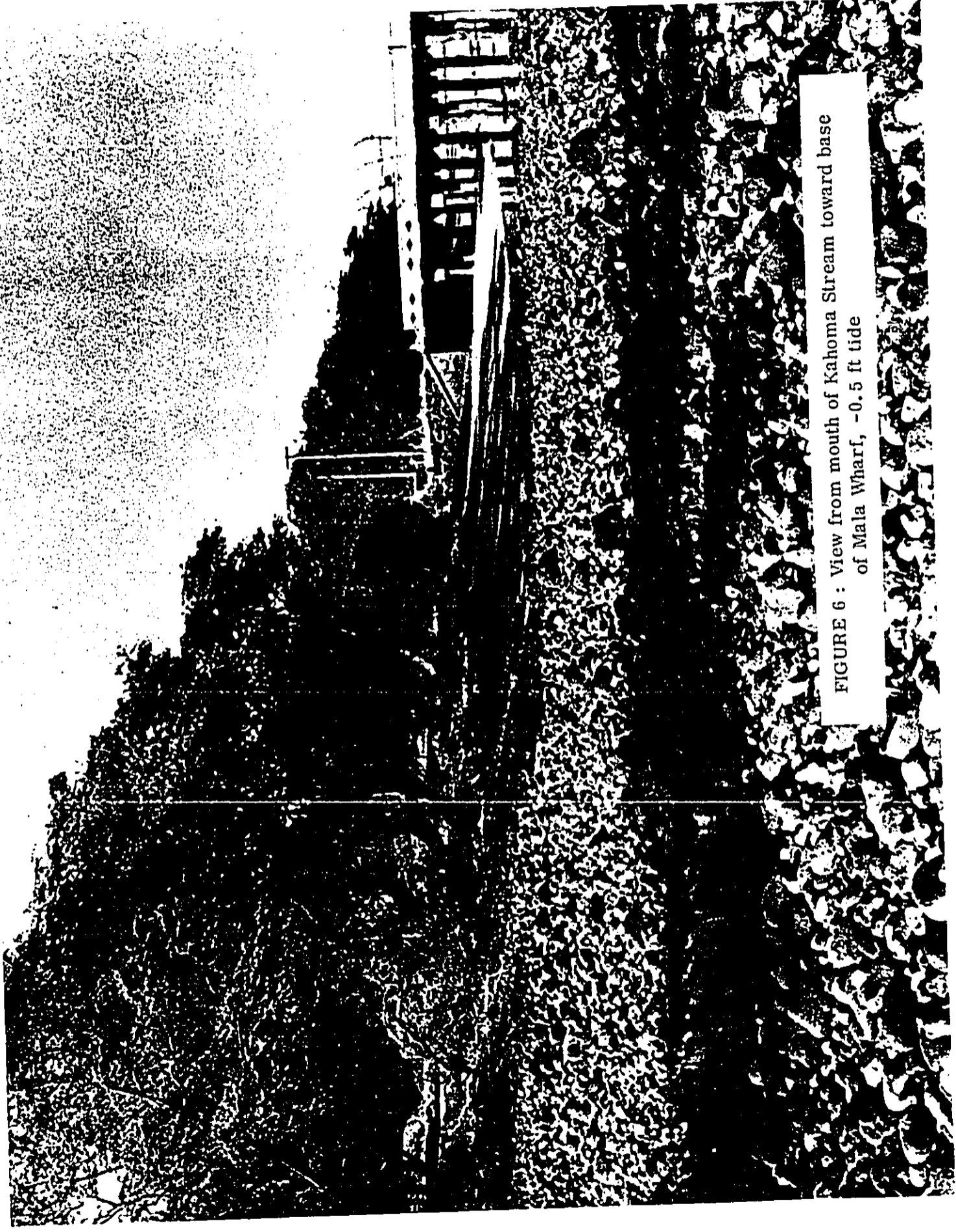


FIGURE 6 : View from mouth of Kahoma Stream toward base
of Mala Wharf, -0.5 ft tide

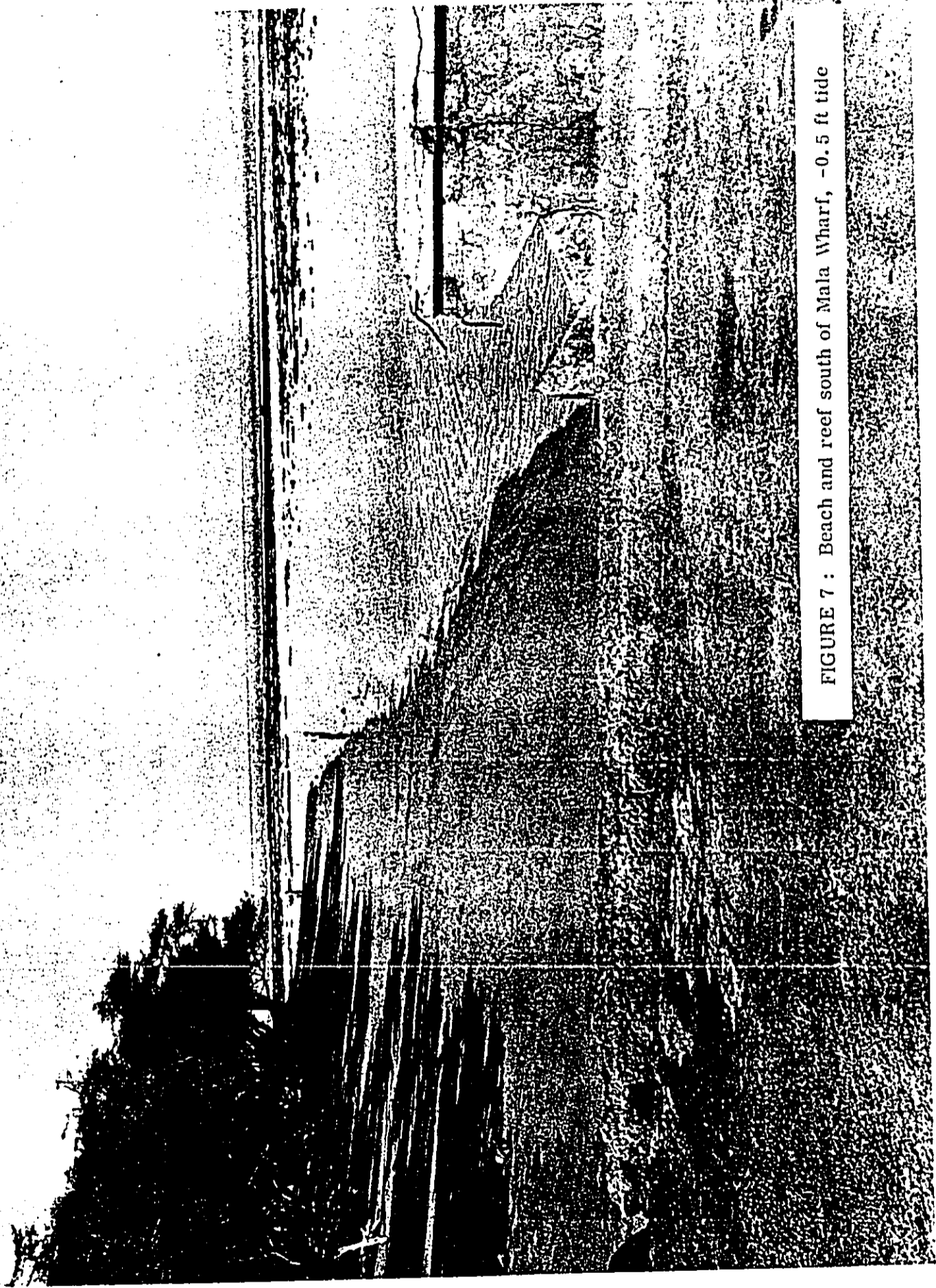


FIGURE 7 : Beach and reef south of Mala Wharf, -0.5 ft tide

Mala Wharf

Mala wharf is a reinforced concrete structure 950 feet long, resting on concrete pilings, carrying on its deck a narrow-gauge railway spur. It was built in 1922. Its outer end is in 25 feet of water. Originally it had an extensive fender system on both sides, for the outer 250 feet. Today it is in very poor condition: either from incorrect control of concrete quality or insufficient cover for reinforcing, the deck, deck beams and stringers, and the exposed portions of many of the pilings have suffered serious corrosion of reinforcing, spalling of concrete cover, and loss of section. Portions of the deck slabs have fallen away. See figures 8 and 9. Though this structure has been condemned by the State Division of Harbors as unsafe, it is used as a recreational facility by fishermen, sightseers, and picknickers, and is considered a landmark by local people. From our examination of the wharf, we conclude that it should not be used as a trestle for construction of protective structures for the launch facility, unless it is strengthened. Furthermore, removal or incorporation into a protective breakwater presents substantial cost problems in relation to the current budget for this project. We have accordingly provided a concept design which does not depend on the presence of the wharf. As an alternative, at extra cost, it is feasible to demolish the wharf, and to use some of the material in the core of the new breakwater.

If demolished, the outer portion of the wharf would contribute additional substrate and cover to the area, which would allow noticeable increase in marine life. The inner portion could, after reworking to remove projecting reinforcing steel and other hazards to swimmers, contribute almost one thousand cubic yards of material to the breakwater core. If additional funds should become available, this alternate should be looked into.

Eventually the State will be required to demolish the structure in any case.



FIGURE 8 : Deck of Wharf is in very poor condition. Missing 100 ft of railing is reported by local residents as due to Kona storm waves

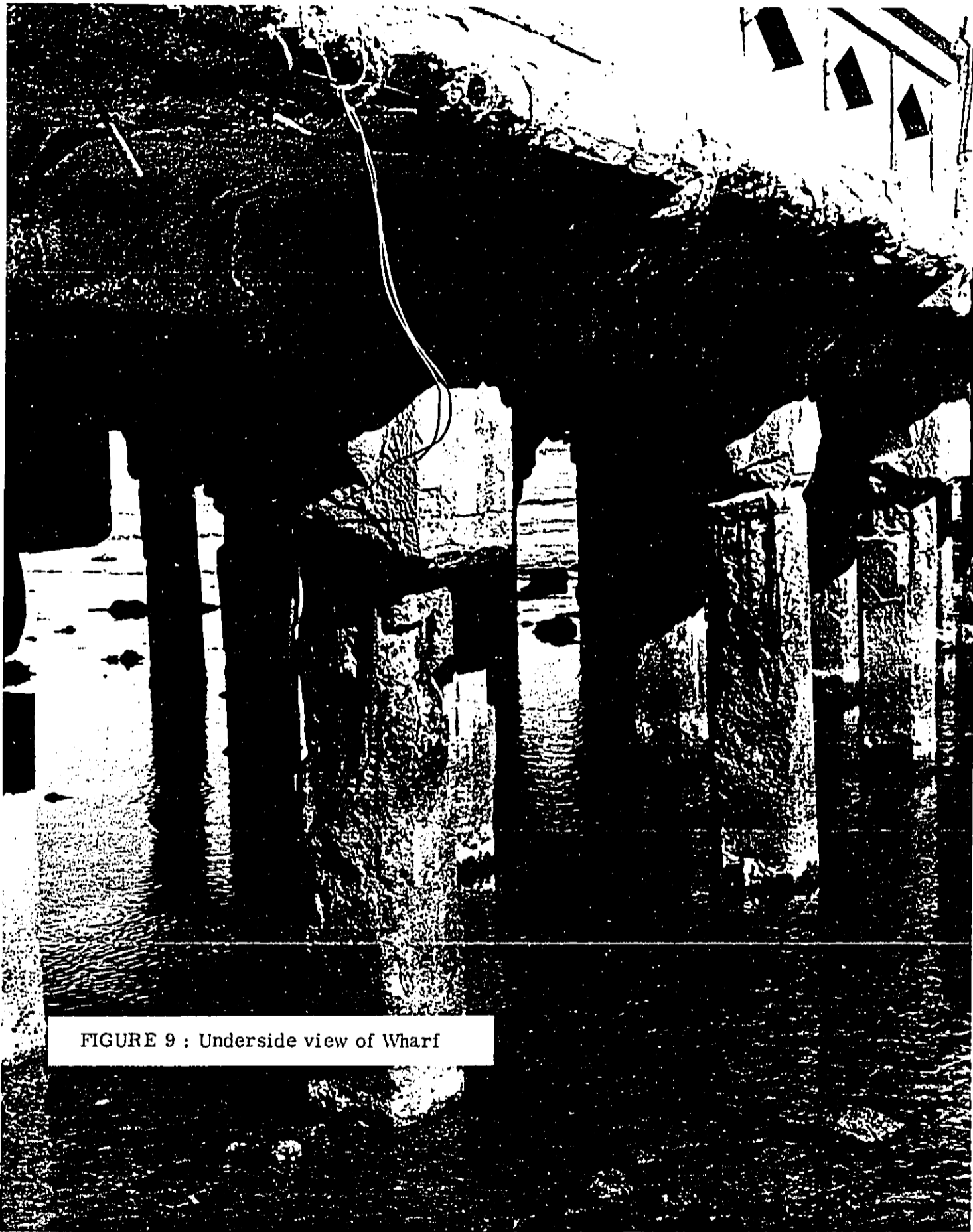


FIGURE 9 : Underside view of Wharf

Climate

Mala enjoys a warm, dry, sunny climate with gentle, variable winds. The area is well sheltered from prevailing trade winds by the West Maui mountains. As a result, a diurnal convective wind pattern is seen on a typical day. The site does receive strong winds during Kona storms, however. Average annual rainfall near the coastline is 14.5 inches, varying in recent years from 6.6 inches in 1960 to 48.9 in 1968. Average temperature for the coldest month is 71.2 degrees, for the warmest 77.7, with extreme temperatures of record 52 and 93 degrees. Though figures for airborne particulate matter, sulfur oxides, and other contaminants are not available for the district the air quality appears excellent. No significant amounts of airborne pollutants were observed near the site.

Waves and swell

The sea adjacent to the site overlies a shallow marine plateau which extends entirely across the Auau Channel to Lanai, and only reaches depths of 100 fathoms to the north in the Pailolo Channel, and to the south between Lanai and Kahoolawe. See Figure 10. A well protected area of fairly uniform depth is thus bounded by the islands of Molokai, Lanai and Kahoolawe, along with

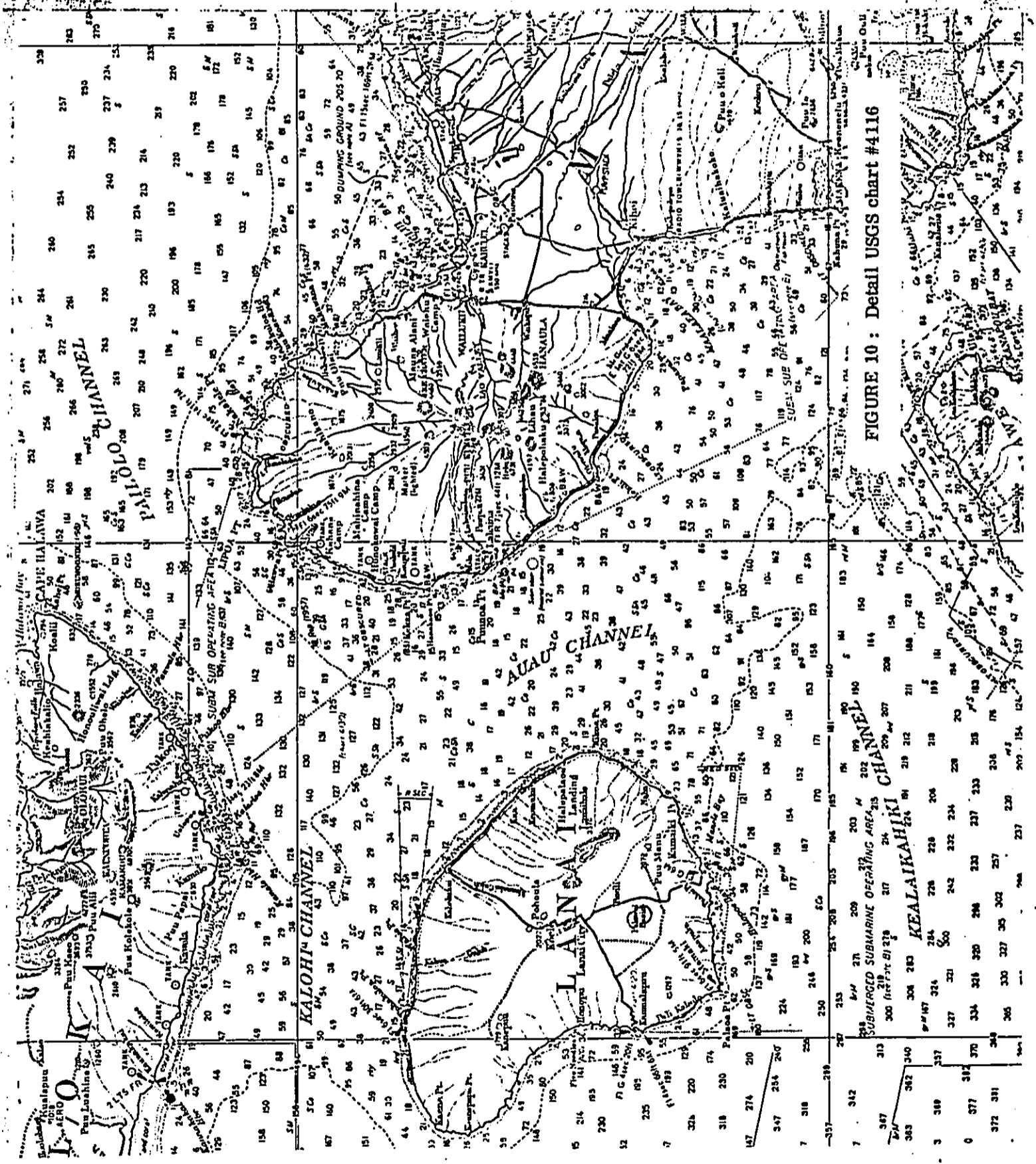


FIGURE 10: Detail USGS chart #4116

the landmass of Maui. Winds over the short fetches of this area tend to be light, usually generating only mild seas. Long period swell is effectively blocked or diminished from all directions but the south-southwest.

Because southerly swell is a summer phenomenon, and the area is protected from northerly winter swell, only two types of waves are important in determining the wave climate at the launch ramp site. These are long period southerly swell, and kona storm waves. The former are present to some degree continuously for more than half the year, but the latter are present zero to fifteen days per year, during Kona storms. Summer swell at the site is usually small, i. e., less than two feet, but interviews with local fishermen and other boaters who use the existing Lahaina Boat Harbor suggest that swell appreciably greater than three feet is present for one or two days a month during the summer months.

Surge

Mala is widely known in the Islands as a place of strong surge. In fact the existing wharf, built in 1922, has had limited use over its lifetime because of the hazard involved in bringing barges or ships alongside it. One of the principal concerns of this study was to assess the nature of this surge and estimate its effect on usability of the proposed boat launching ramp. Observations and measurements of surge currents were made from the wharf on several occasions during the months of June, July and August, 1975. The surge was found to be associated with observed southerly swell of periods ranging from 10 to 16 seconds, of height from less than one-half foot to 2.5 feet. The surge direction was remarkably uniform, between 45 and 65 degrees true. This averages 30 degrees from perpendicular to the faces of the wharf. Hence, the prevailing swell generates a current that cycles back and forth under the wharf, tending to slam any moored vessel into the wharf on one phase of the surge, and to break its mooring lines during the opposite phase. The problem is thereby revealed as one of orientation of the wharf, coupled with the peculiar bathymetry of the area,

and not especially intense or concentrated wave action.

Figure 10 shows that there are two possible directions for incident winds which allow long fetches, and one direction for unimpeded incident swell.

To help visualize the behavior of wind waves and swell at the site, refraction diagrams were constructed for southerly swell at 12 and 16 seconds, southerly wind waves at 8 seconds, and northwesterly wind waves at 8 seconds. Inasmuch as the bottom topography was simplified to facilitate construction of the orthogonals, these diagrams should be considered illustrative only, and not quantitative with respect to dispersion and concentration of wave energy.

Figure 11: southerly swell, 16 seconds. High incident energy at Puunoa Point, low incident energy for 3/4 mile northward. Orthogonal makes large angle (60°) with long axis of wharf.

Figure 12: southerly swell, 12 seconds. Similar to Figure 11. Incident energy at Lahaina Boat Harbor shown for comparison, is concentrated somewhat.

FIGURE 11: Southerly swell, 16 seconds.

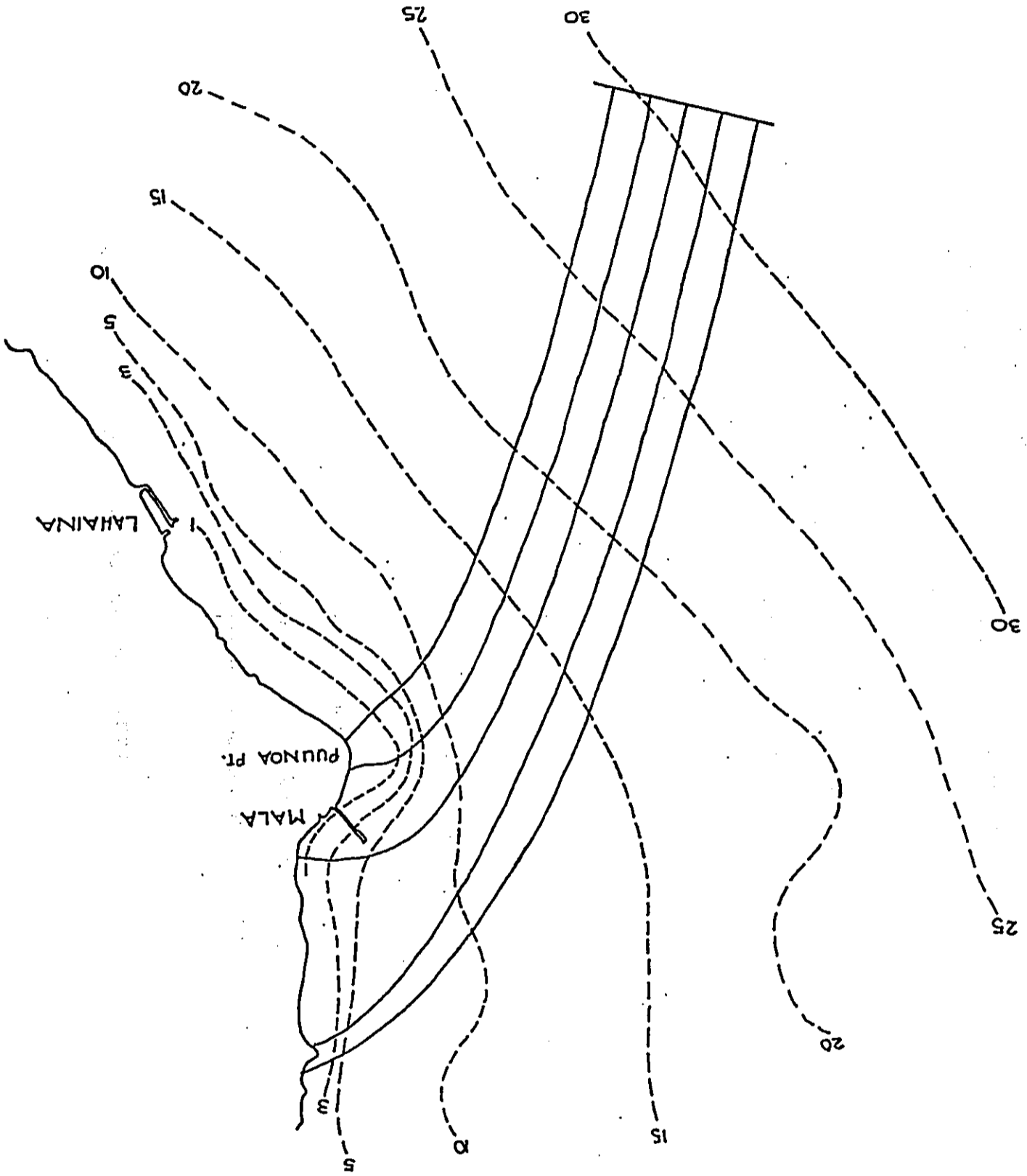
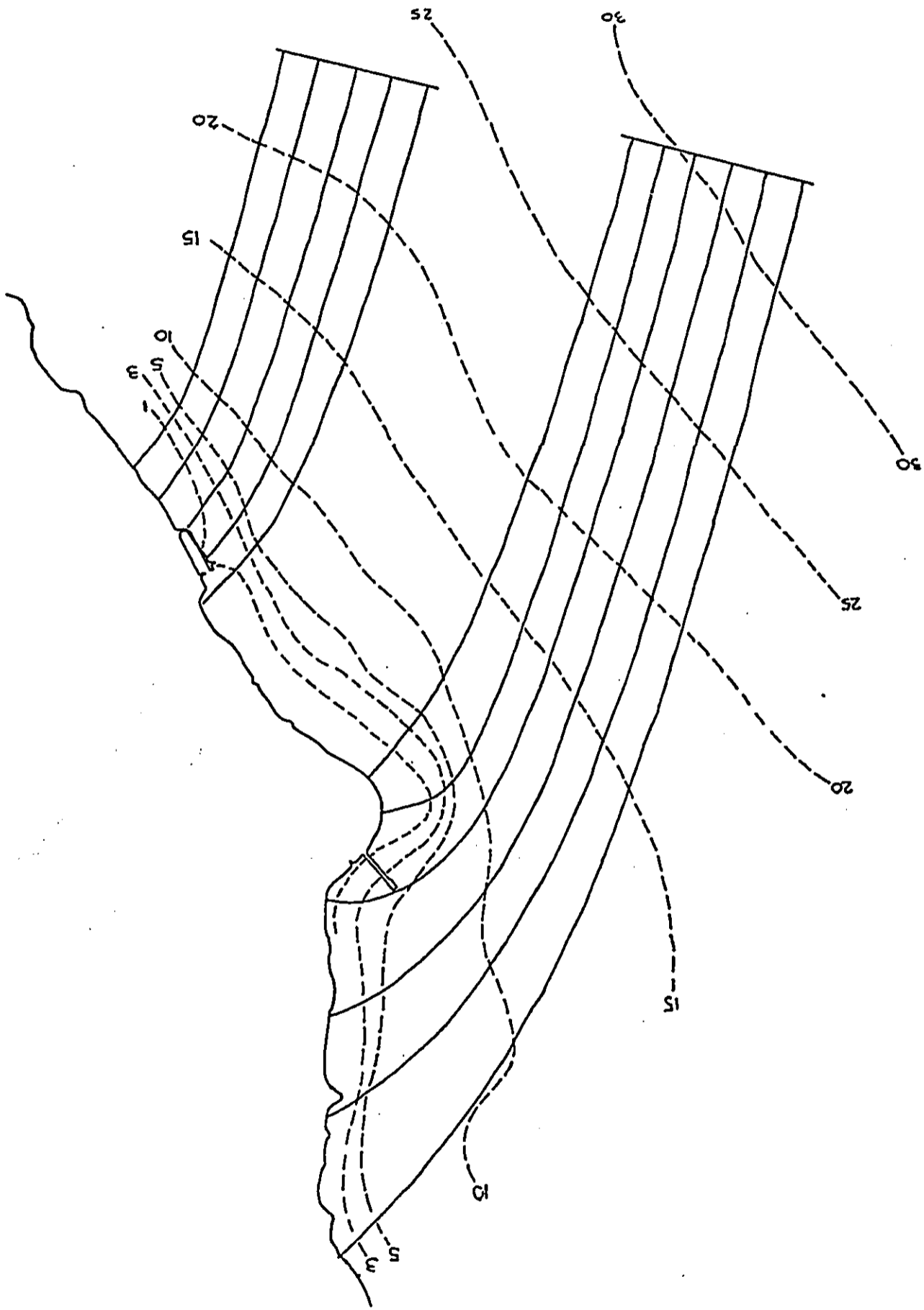


FIGURE 12 : Southerly swell, 12 seconds.



CORRECTION

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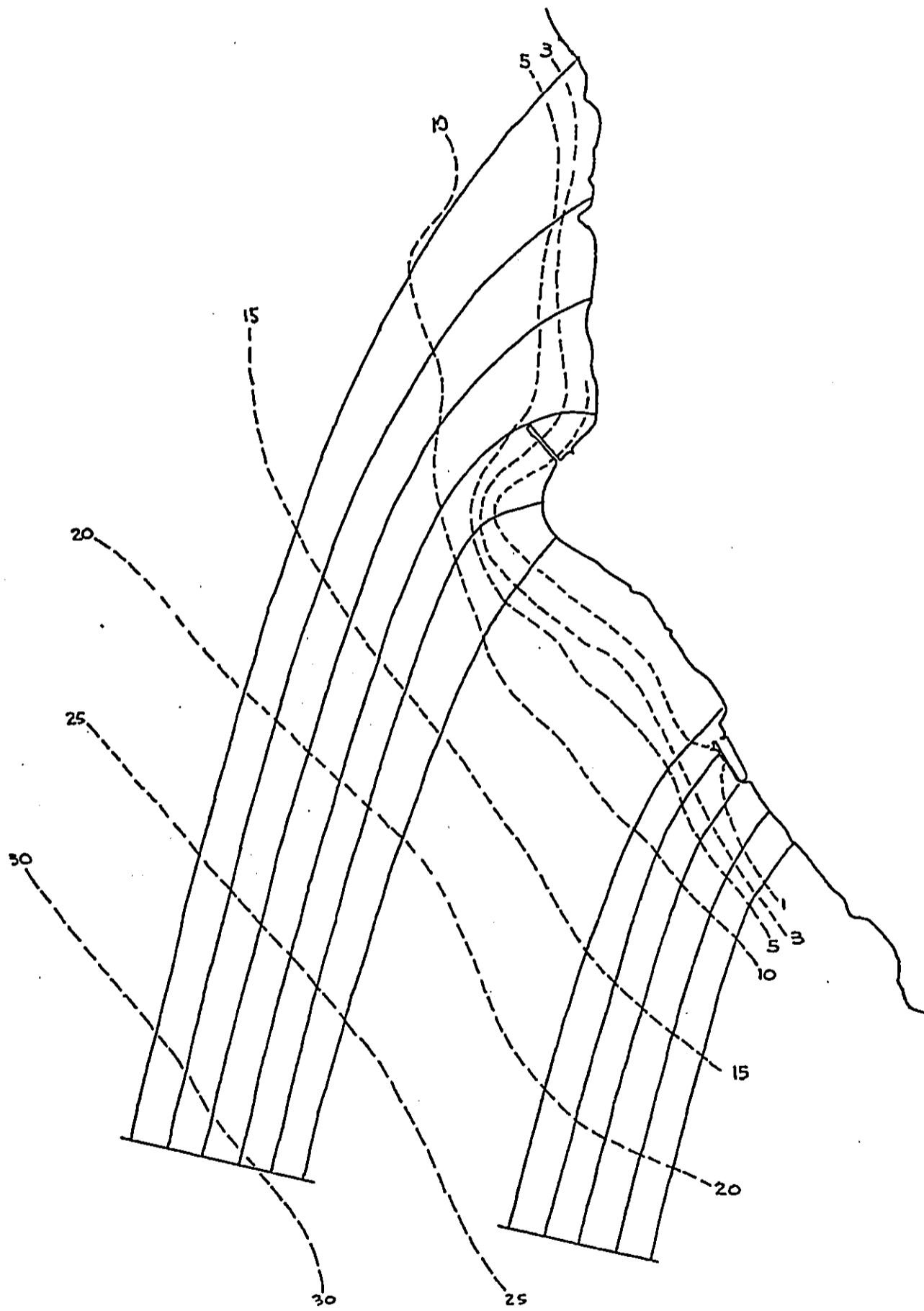


FIGURE 12 : Southerly swell, 12 seconds.

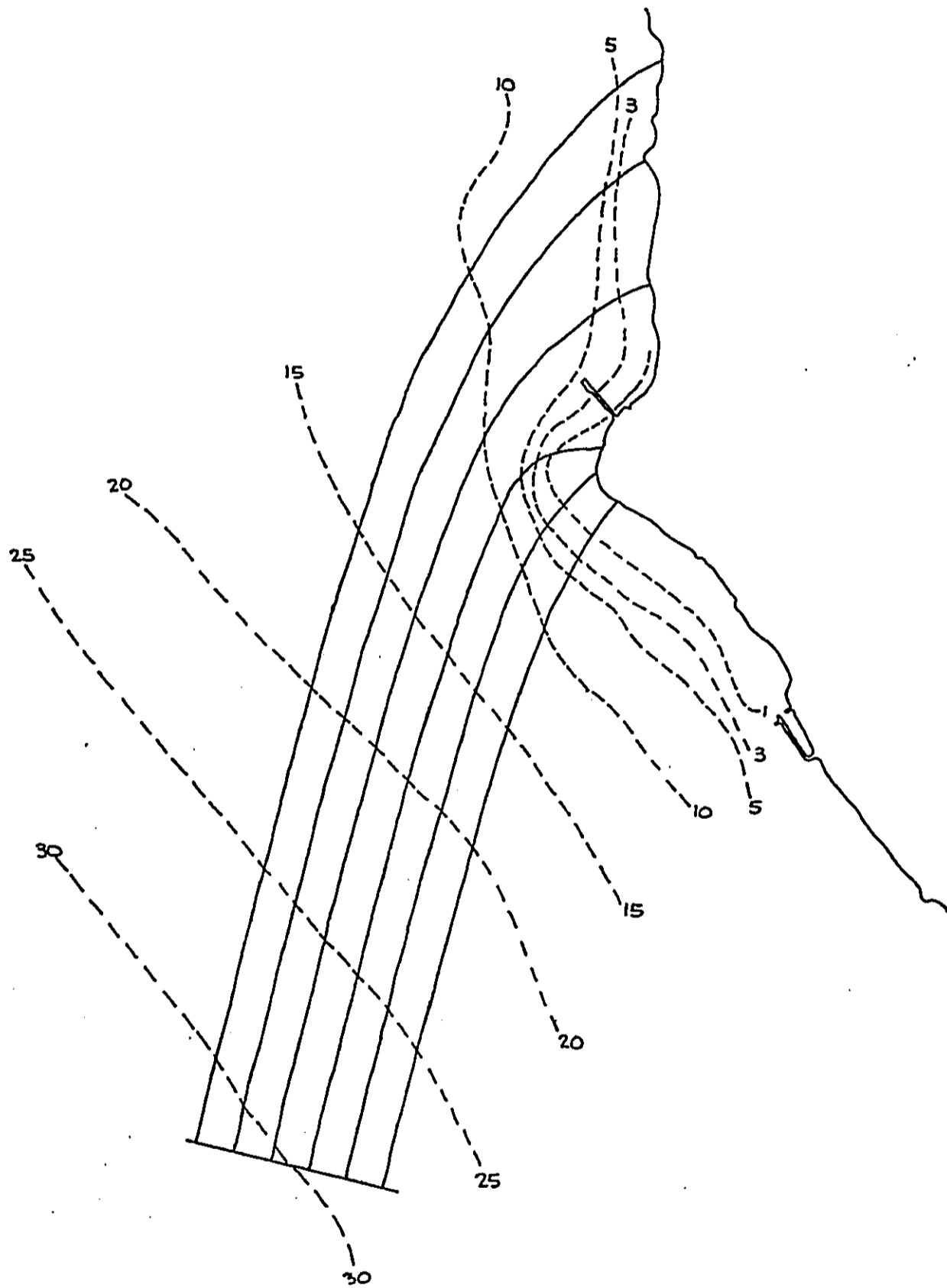


FIGURE 13 : Southerly swell, 8 seconds.

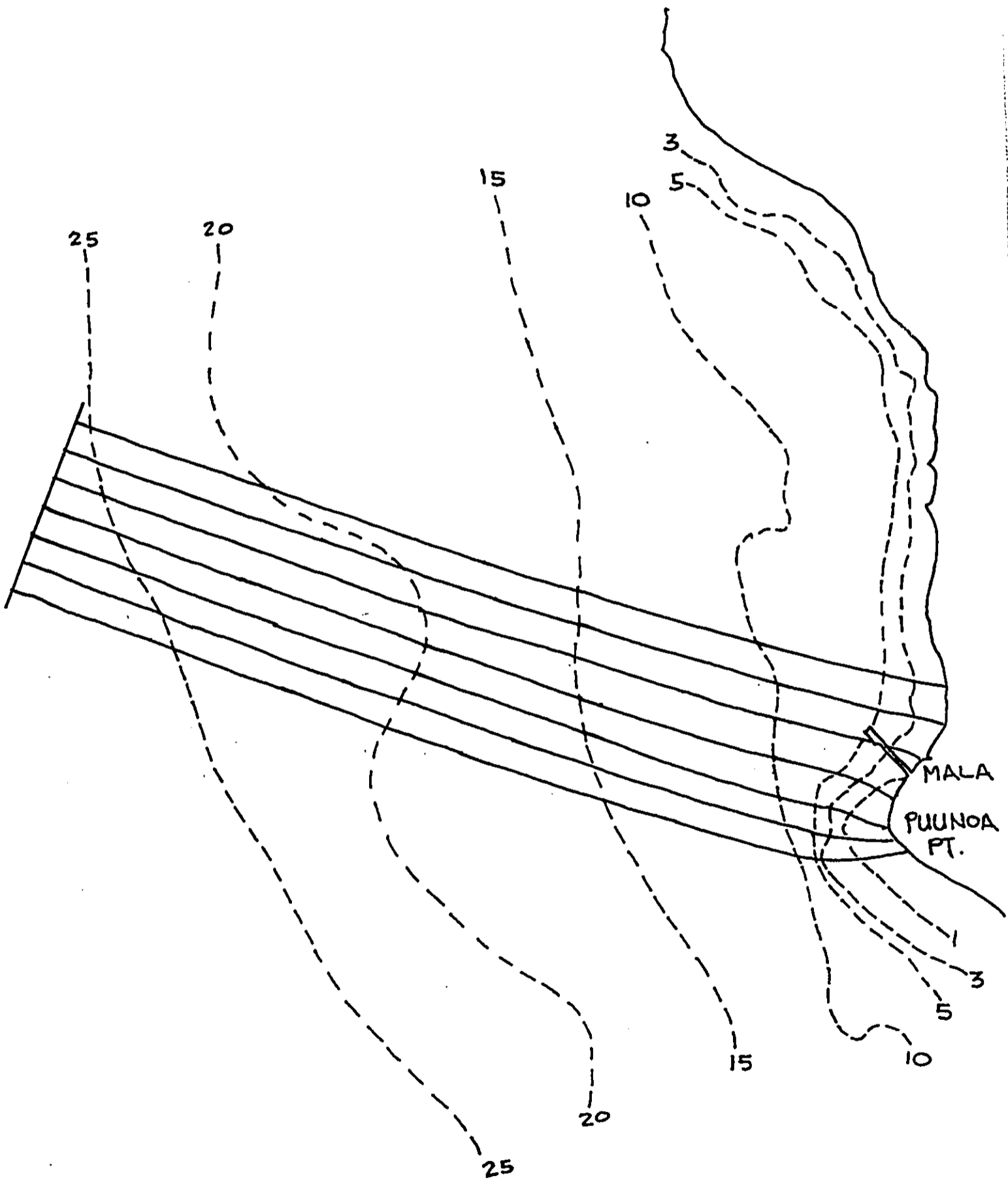


FIGURE 13A: Northwesterly waves, 8 sec.

Figure 13: southerly wind waves, 8 seconds. Puunoa Point and its shoal reef still provide energy dispersion for the Launch Ramp Site.

Figure 13A: northwesterly wind waves, 8 seconds. Topography provides no shelter, but on the other hand does not focus wave energy at the site.

Water Turbidity, Temperature and Salinity

Measurements were made on three transects near the site by means of a Temperature-Salinity-Turbidity Probe, as described in Appendix A. The data indicate that the area is spatially homogeneous with respect to turbidity, i. e., light transmission (see Figure 21, Appendix A). All measured values were in the 99 - 100% range with one exception: a surface measurement of 97.5% at Station 4. No significance can be attributed to this single deviation from a persistent pattern indicating very clear water.

Salinity, and especially temperature, showed greater variation. The range for salinity was from 34.7 ‰ to 35.2 ‰. With the exception of the first transect

(Station 1, sewer outfall, 2 and 3; see also Figure 18, Appendix A), values measured at depth less than 2 meters were generally higher: .1 ‰ for the offshore locations to .4 ‰ for the nearshore locations. The salinity profiles along the three transects are presented in Figure 20, Appendix A.

The temperature data showed also a surprising variation, with the same pattern of the salinity findings but much more clearly defined. Temperature ranged from 25.7° C to 27.3° C with the lower values, i. e., 26.0° C and colder, found at depth greater than 2 meters and offshore. The nearshore and surface water temperatures were the highest and this pattern was evident along all transects, it being most pronounced due north of the spot where the coral reef boundary meets the shoreline. At the time these measurements were taken a weak northerly current existed, evidenced by the slick from the sewer outfall and the presence of sewage particles in the water near the wharf. The warm spot is probably an eddy fed by water that had undergone warming and evaporation during its passage over the reef. (See Figure 19, Appendix A)

Beach Processes

Sand samples were taken at six locations, shown in Figure 22, Appendix A. The

results of the analyses for size distribution and organic content are shown in Tables 2 and 3 , Appendix A. Sample 1, taken north of the pierhead in 10 meters depth, is weakly bimodal but has predominantly fine sand. Sample 2 in 4 meters depth is strongly bimodal, with slightly more coarse than fine sand. Sample 3, in shallow water, is composed entirely of coarse sand and granular material. Sample 4, taken in shallow water south of the pier, is mostly pebbles and coarse sand, with some medium and fine material. Sample 5, south of the pier in 4 meters depth, is well-sorted medium sand. Sample 6, south of the pier in 10 meters, is mostly medium and fine sand. None of the samples showed significant amounts of silt or very fine material. In all samples finer materials were very dark on the sieve and coarse materials were light colored. Examination with low-powered microscope verified that most of the material in all samples was terrigenous and most of this was contained in the medium and fine fractions.

It appears from this evidence and the distribution of cobbles, gravel and sand on the beach, that there are two sources of sediments: Kahoma Stream and the reef fronting and adjacent to the site. Stream sediments comprise the majority of the sediment volume at and offshore from the beach. Over the past 55 years the shape and size of the beach has changed little. Compare the photo in Figure 6 , taken in July, 1975,

with Figure 4A. Conversations with three fishermen who have lived in the area for at least 40 years support the finding of small beach movement. However, with increasing development of upland areas in the watershed of Kahoma Stream and the proposed channelization of the Stream by the Army Corps of Engineers, sediment loads and discharge patterns may change.

Chemistry and Biology (see Appendix B)

Nutrient quantities, phytoplankton standing stocks and primary productivity, and zooplankton biomass were found to be low, as is normal for Hawaiian coastal waters. Elevated ammonium and phosphate concentrations and very high levels of coliforms, fecal coliforms, and fecal streptococcus associated with the sewer outfall reflect the untreated condition of the sewage. Two distinct habitats exist for fish and bottom-dwelling forms; a nearshore area of vigorous coral growth where fish density and diversity are high and a deeper offshore area of sand and coral rubble bottom, with somewhat lower fish density. An encrusting algae, *Dictosphaera* sp., was observed on many of the corals within the inshore area.

A mild eutrophication trend is suggested by the presence of high ammonium levels in the water column, and of the encrusting algae or "bubble algae" on the inshore corals. Both are probably due to the increased discharge of sewage into the area.

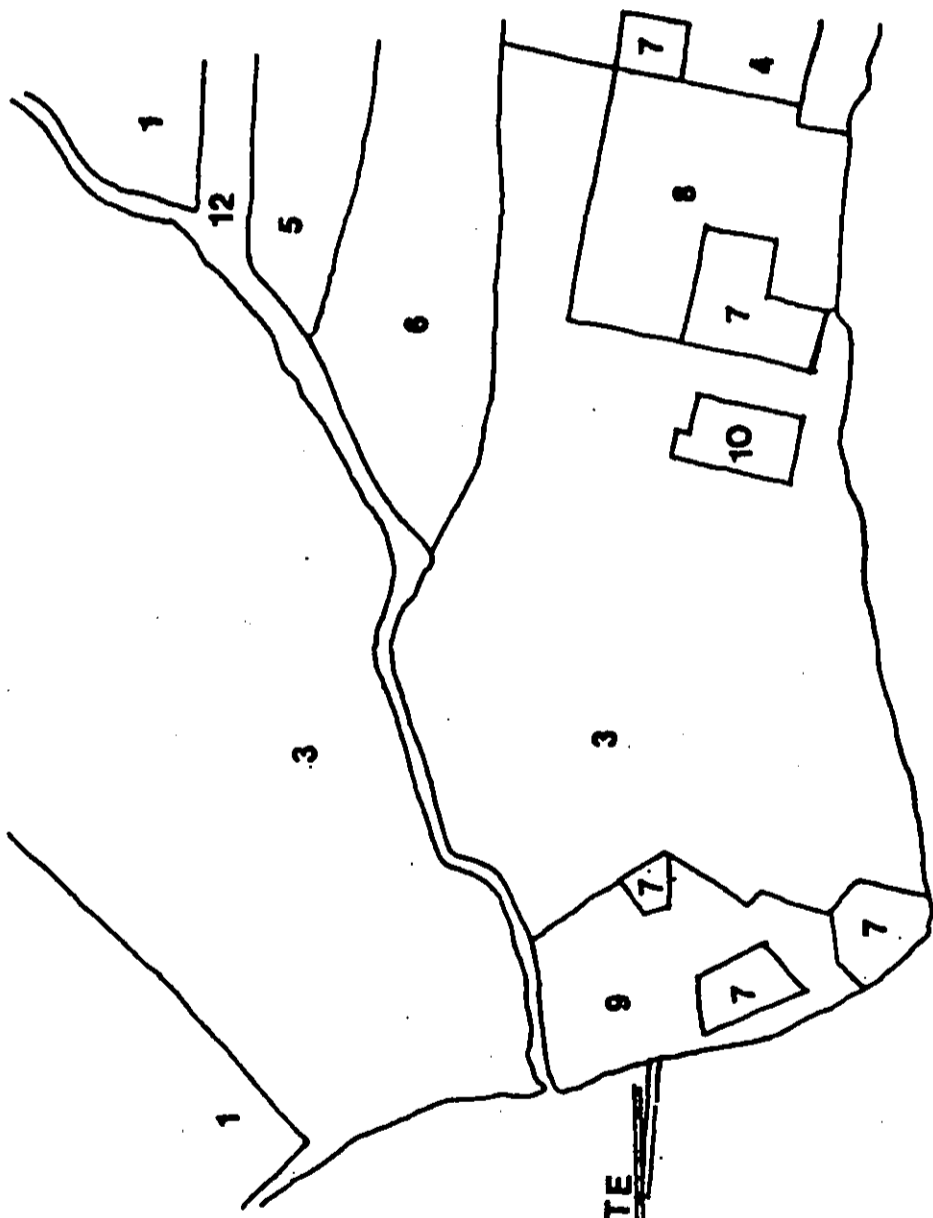
B. Land Use, Infrastructure, Other Planning

Land Use

State Land Use Designation for the area surrounding Mala Wharf is Urban. Figure 14 shows proposed land uses in the vicinity of Mala Wharf based on Maui County's General Plan for the Lahaina District.

In the County General Plan about 11 acres near Mala Wharf between Front Street and the ocean are designated for park/public use. Specific public uses (on about four acres of this) include the Lahaina Jodo Mission, the adjacent Puupiha Cemetery and a sewage pumping plant.

The park/public area is surrounded by an area generally designated for future apartment development. Except for the old pineapple cannery, the future apartment area mauka of Front Street is presently in active cane cultivation.



PROJECT SITE

LEGEND

- 1. Residential
- 2. Duplex
- 3. Apartment
- 4. Commercial (General & Neighborhood)
- 5. Industrial (heavy)
- 6. Industrial (light)
- 7. Public
- 8. Hotel
- 9. Park
- 10. Historic District 1 & 2
- 11. Agriculture
- 12. Open

DETAILED LAND USE MAP

FIGURE 14

The future apartment areas makai of Front Street are currently occupied by single family dwellings on small lots.

Figure 15 shows County Use Zones as proposed in the Lahaina Community Development Plan. In the strip designated B-1 along Front Street there are currently two small stores with food and general merchandise. The P-6 parcel is occupied by a church.

Figure 16 shows land ownership in the vicinity as of mid-1975. The photo in

Figure 8 looking mauka along the axis of Mala Wharf shows the access and the proposed area for launch ramp parking.

Within the area designated for park use, the State Department of Land and Natural Resources has not yet made specific plans nor commitments. However, some concepts have been discussed for possible mini-park development along the Mala Wharf extension road. One possible concept is included in the current Lahaina Community Development Plan.

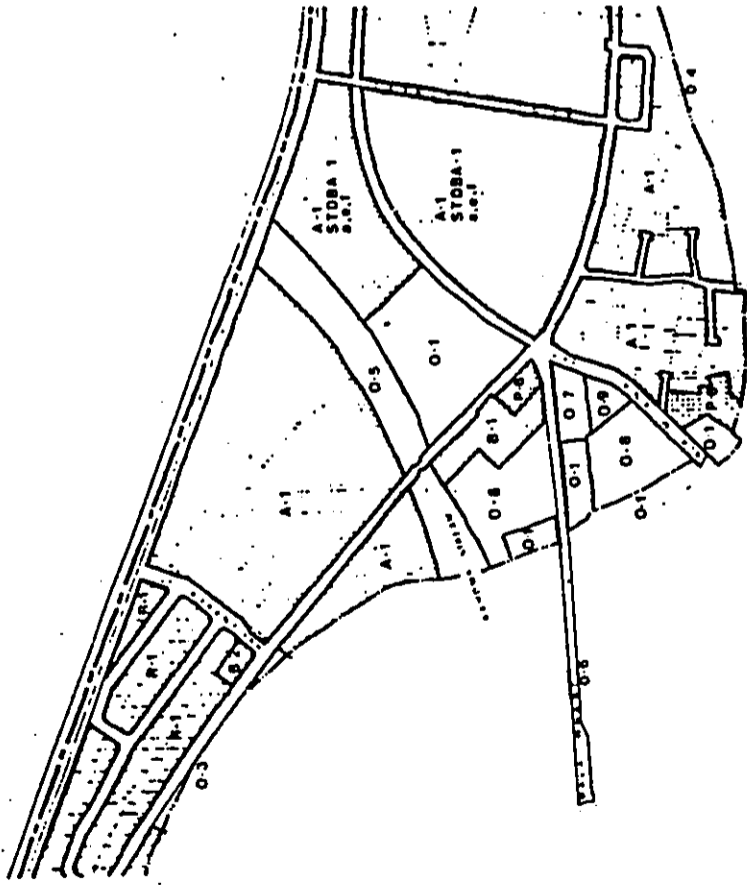
LAHAINA COMMUNITY DEVELOPMENT PLAN

STATE LAND USE DISTRICT: project within urban district

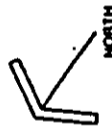
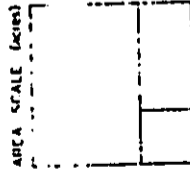
- COUNTY ZONING DISTRICTS:**
- proposed special treatment district boundary
 - - - historic district boundary
 - project boundary
 - - - shoreline setback approximate boundary

COUNTY USE ZONES

- | | |
|----------|------------------------|
| R | residential |
| R-1 | 6000 s.f. |
| R-2 | 7500 s.f. |
| R-3 | 10,000 s.f. |
| D | two-family, duplex |
| A | apartment |
| A-1 | apt. |
| A-2 | apt. |
| H | hotel |
| H-1 | hotel |
| H-M | hotel |
| B | business |
| B-1 | neighborhood |
| B-2 | community |
| P | public facility |
| P-1 | historical or cultural |
| P-2 | governmental |
| P-3 | school |
| P-4 | utility |
| P-5 | recreational |
| P-6 | religious |
| P-7 | health |

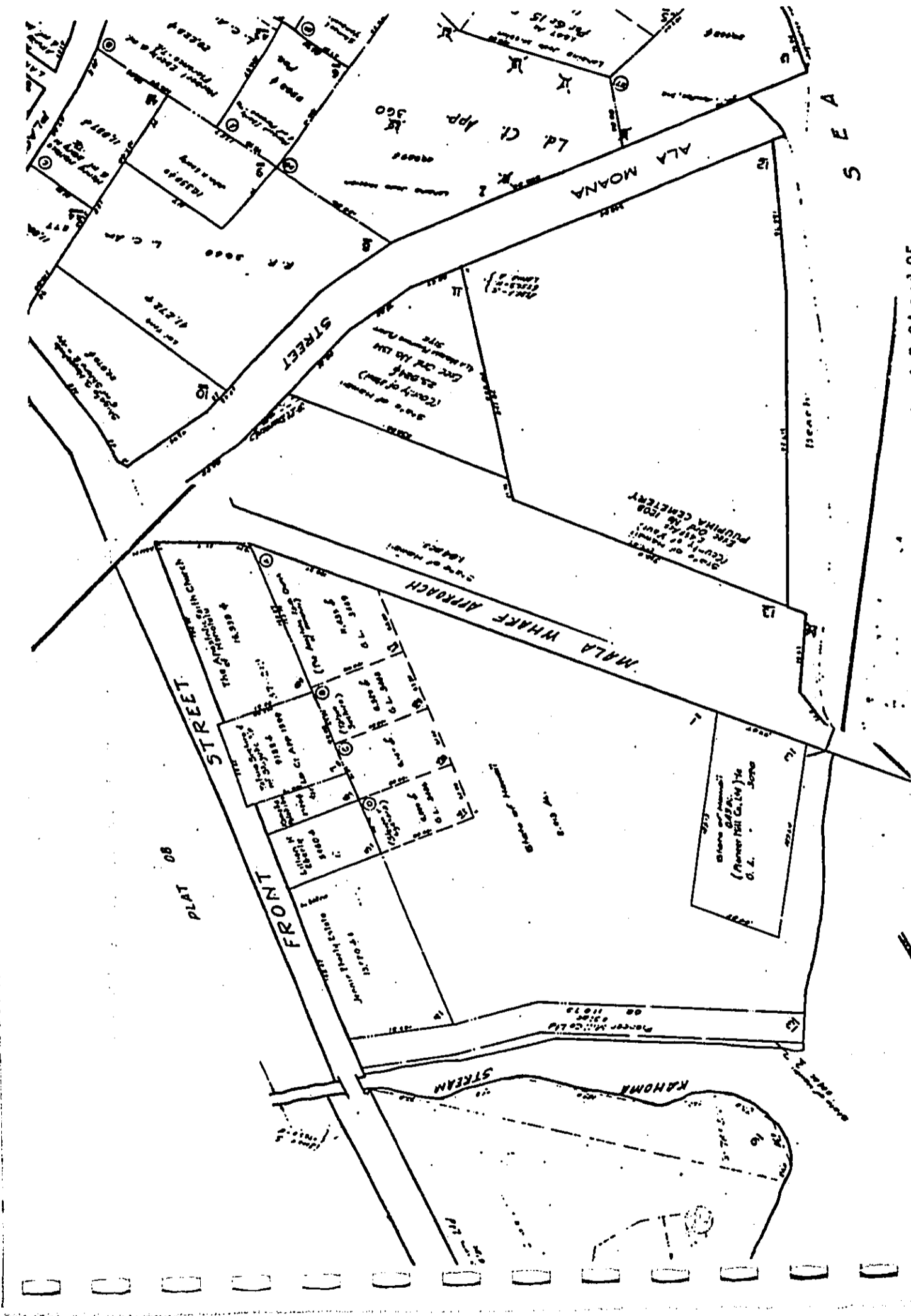


SCALE:



COUNTY USE ZONES

FIGURE 15



TAX MAP KEY: 4-5-04 and 05

LAND OWNERSHIP
FIGURE 16

Except for the launch ramp, no county or state funds have as yet been programmed for recreational facilities.

There is a desire for inclusion of the old wharf (e.g. for fishing and sightseeing) into plans for this public recreation site. However, the wharf is in unsound structural condition and cost estimates for rehabilitation schemes have so far appeared prohibitively high.

There is general concurrence with the thought of launch ramp installation, so long as facilities can be planned that provide compatibility with shoreside fishing, surfing and related recreation activities. In December, 1974, the Maui County Council adopted a resolution unanimously endorsing the Mala location for a launch ramp. In April, 1975, the Historic Lahaina Development Committee enthusiastically endorsed the Mala ramp location.

Domestic sewage from Lahaina (about 1 MGD now) is presently disposed of untreated through a 16" outfall pipe extending 1500 feet from Ala Moana Street to a depth of about 40 feet. The nearby pumping station serves this outfall.

The County has planned a new sewage collection system and waste water reclamation plant (to be located about four miles north of Mala Wharf) to serve this and adjacent communities. Design is underway, and use of the Ala Moana outfall will be discontinued in several years.

Water and electricity service are adequate to meet the minor needs of a launch ramp facility.

Access to the area is immediately from Front Street, from Honoapiilani Highway serving more distant points. The most recent traffic counts in the vicinity were at the intersection of Front Street and Honoapiilani Highway in 1972, showing an average 12,000 vehicles entering this intersection daily.

Traffic trends are shown by similar counts as follows:

1963 - 2,100
1966 - 4,400
1969 - 7,300

The 12,000 count in 1972 shows about a 2/3, 1/3 split for Honoapiilani Highway (south) and Front Street, respectively.

Plans for Flood Control and Allied Purposes

The proposed launch facilities are within the flood prone area of adjacent Kahoma Stream. Concept plans for channelization of the stream have been prepared by the Corps of Engineers, partly for prevention of flooding of lands already developed and partly in anticipation of development of the area in accordance with the County's General Plan for the area. Design authorization is expected in 1976 with construction about 1980.

C. Social/Cultural/Economic Characteristics

The region to be served by the proposed Mala launch ramp is primarily the Lahaina District of Maui, although users also come from other parts of the island.

Recreational fishing is the principal activity of the boaters here, although the State-Wide Boat Launching Facilities Master Plan (BLFMP, p. 116) indicates much boating activity also involves commercial fishing, sailing, water skiing and crabbing, in that order. A substantial use of boats for scuba diving has also been observed.

The BLFMP projects population growth of Maui County from 46,000 in 1970 to 64,000 in 1990 and Lahaina District from 5,500 to 10,000 for those years. With this base, requirements for one launch ramp lane now, and for two by 1980 are projected.

(Note there are other population projections substantially higher for the next two decades.) Because of congestion and lack of land for parking, etc. the ramp site at the present Lahaina boat harbor cannot satisfactorily meet the requirement for boaters.

The launch ramps are intended to provide primarily recreational benefits. However, as pointed out by Hoffman & Yamauchi in their 1972 report on the economic impact of recreational fishing, expenditures by fishermen for equipment and supplies, etc., make significant contributions to community income, as do the sales of fish catches which are incidental to this boating activity. Specifically, Table 16 of their report indicates that on Maui in 1970 recreational fishing expenditures of about \$1,600,000 resulted in an increase in income to the local economy of about \$1,100,000.

The 1971 inventory of surfing sites lists the area about 1,000 yards south of Mala Wharf as a surfing site, with comments that indicate its undesirability because of the proximity of Lahaina's present sewage outfall.

Historical/Archaeological Aspects

Bishop Museum archaeologists have made a reconnaissance survey of the proposed launch ramp site in August, 1975. Their report is given in Appendix C. In brief, the report establishes the presence of fifty-four historical graves, but does not establish the presence of prehistoric artifacts. The report does, however, present arguments for the possibility that the site was inhabited in prehistoric times. State laws for the preservation of antiquities may require excavation and salvage during or before earthmoving operations, and in any case the existing burials must be moved in accordance with regulations of the State Board of Health.

III. ENVIRONMENTAL IMPACT

Environmental impact of the launch ramp will be partly related to the number of persons using/visiting the facility. For an austere two lane facility it is estimated that usage on a peak day will involve 60 launchings and about 200 boaters. Annually, usage by boaters is estimated at about 20,000 user-days. (Note by comparison, there are about 20 launchings on a peak day at the Lahaina Boat Launch Ramp with perhaps 70 persons associated with these 20 launchings.)

A. Physical Impacts

The site will be re-graded. This will destroy many of the keawe trees now growing there. To an extent this lost foliage will be replaced by landscaping. Other than that, there will be no significant impact on terrestrial flora or fauna.

The existing graves will have to be moved. Provisions are contained in State laws for proper accomplishment of this, and sites are available to which to move them.

The visual impact of the boat ramp is compatible with the recreational land use in the area. The breakwater, 5 to 8 feet above sea level, constructed of local stone, will not obscure the horizon, and in fact will not be as high as the deck of the existing wharf.

There will be no significant effects on air quality. There will be some noise generated by the motors of power boats, but not within a distance annoying to a concentration of people.

There will be short term impacts during construction including dust and noise, especially during the time when breakwater stones are being delivered to the site by truck.

Construction of the breakwater and dredging of the turning basin will destroy a small area of living coral, with its attendant bottom-dwelling communities. Dredging and filling operations will generate a plume of fine sediment which may have a temporary inhibiting effect on coral growth. The biota in the area are those which have survived periodic inundations by silt and sediment from Kahoma Stream. Therefore in view of the small amount of dredging contemplated, its effect will be minimal. After construction is all in place, the breakwater will provide additional substrate and cover for marine life, which will partially compensate for the loss of substrate covered up. Sand movement along the beach will be interdicted by the breakwater and launching ramp, and will form small reservoirs against the north side or south side of the new construction, depending on the season. In neither case will the sand deposits be large or permanent. A hazard

exists from Kahoma Stream, which is likely to be full at the same time as Kona winds and waves are present. The combination will have some tendency to deposit silt in the shelter of the breakwater, in the proposed dredged area. The concept design presented in this study attempts to minimize this possibility by 1) restricting the area to be dredged, 2) keeping the angle of the breakwater fairly open, and 3) placing the ramp so as to disturb the existing seaward slope as little as possible. In spite of these precautions, some siltation of the dredged area may be expected.

The recommendation is here made that the Harbors Division coordinate with the Army Corps of Engineers on design and orientation of the outlet, slope of the stream flowline, and other features of the planned stream improvements to minimize the impact of that project upon this one.

Because of the open nature of the breakwater shape, and the small size of the sheltered area, no significant increase in residence time of water behind the breakwater is expected, hence eutrophication will not occur. In addition, the County of Maui plans to relocate the existing sewer outfall to a site several miles away, thus removing the major source of nutrient input as well as the major source of infectious micro-organisms.

The presence of outboard motorboats will produce a periodic release of various hydrocarbons into the water. This will be comparable to the case at other launch facilities around the State, where it is not considered objectionable. Activities on shore connected with boating are not expected to have any effect on marine life or water quality.

The effect of this small boat launching facility upon fishing pressures in the region is not easy to assess. Interviews with boaters in the Lahaina area indicate that the majority of those who will use this launch facility will be fishermen. Because the practice of sport fishing is already well-established in the area, the increased availability of launching facilities will increase the actual number of man-hours spent fishing, but to an unknown extent. The proximity of Mala to the existing Lahaina Boat Harbor, where a ramp is now in operation, suggests that no new fishing grounds will be opened up by this project.

B. Land (and Water) Use, Infrastructure, and Related Planning

The proposed use is well suited to a segment of shoreline which is in a flood-prone area, and therefore negated for some other uses. The use is compatible with other recreational uses which might be envisioned for the area. This is true whether or not Mala Wharf

remains as is, is demolished, or is possibly improved for fishing. The estimated 100 cars (200 trips) of boaters on a peak day of ramp usage is significant, but this boater traffic will not result in a major impact on the adjacent access roads where the daily traffic count is over 4,000/8,000 (i. e. Front Street/Honcapilani Highway respectively).

There will be no significant impact on utility systems, nor on other required governmental services (although some minor concerns for occasional fire protection and police may rise).

C. Social/Economic/Cultural Impacts

The type of boating facility proposed is accepted as one which caters to "local" boaters, including the "leisure time" activities market which is becoming the prime economic base of the Lahaina district. Accordingly, the impact of such a facility is considered beneficial. In addition to recreation benefits, the economic impact of expenditures by fishermen and of sale of fish catches (incidental to recreational fishing) is considered as a positive return on investment of public (State) funds.

The corollary use of boats for recreational diving can also be enhanced by this facility.

No adverse impact on surfing or other water sports is anticipated.

For maximum parking it will be necessary to relocate the existing graves in accordance with State regulations on burial sites. Inasmuch as the grave sites apparently are from some time of the 1800's, this relocation is considered reasonable if treated with appropriate sensitivity for those who may have direct or indirect concerns. See Appendix C.

Although no evidence of items of archaeological interest has been located at the site, it may be desirable to consider trenching/salvage activity at such time as construction in the sand dune area is contemplated.

IV. MITIGATION MEASURES

Appropriate landscaping, grave re-location, and any necessary archaeological salvage, and the generally low key scope of development are considered to be mitigating measures offsetting any adverse impacts.

V. ALTERNATIVES

A. Alternate Launch Ramp Sites

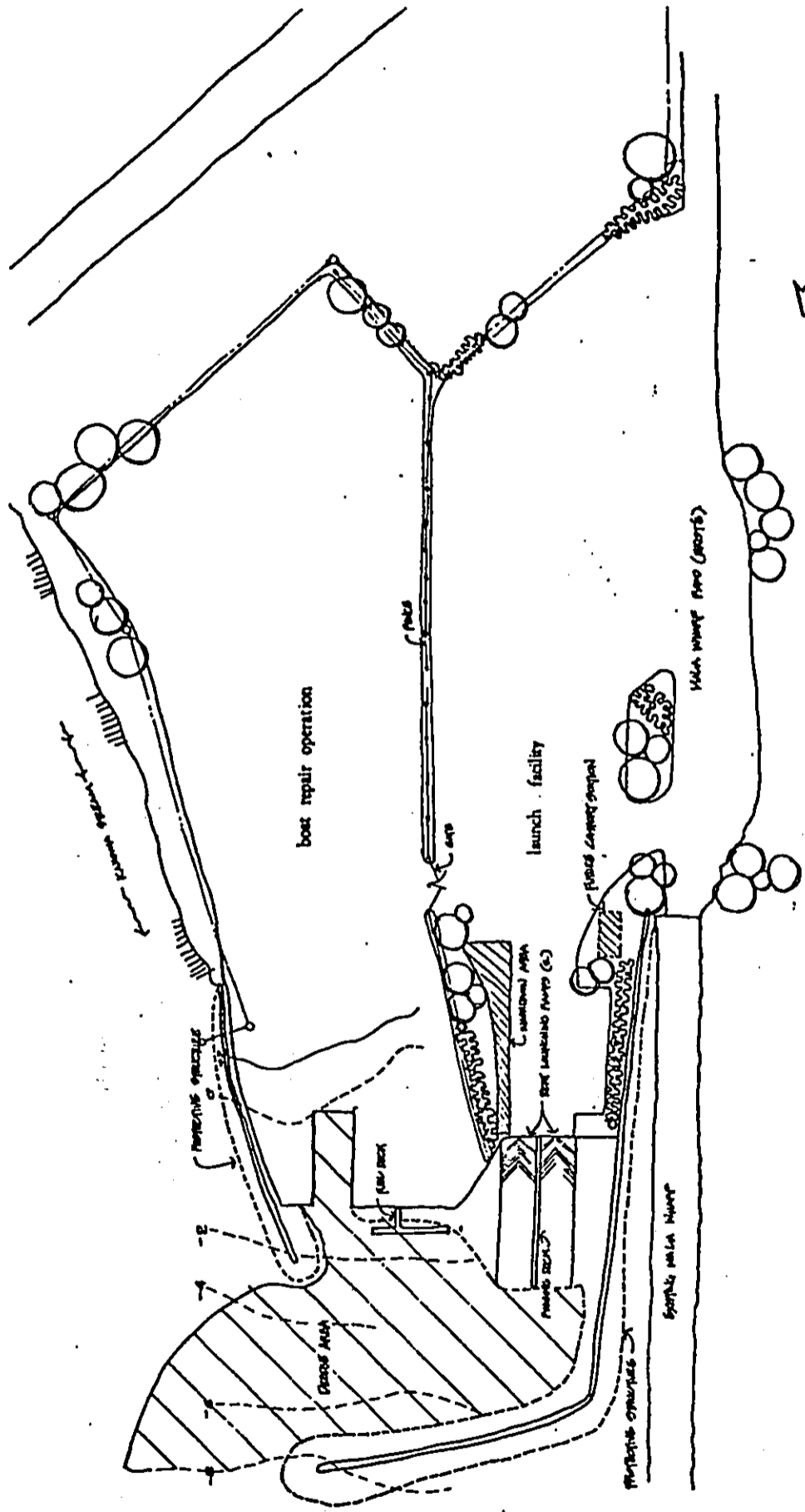
At this time, the central location of the Mala site on State-owned land, appears to be most desirable. When additional ramps are needed (forecast for 1980's), the next priority for the Lahaina district appears to be at some separate site - preferably south of Lahaina, for dispersal. Such a site would lessen traffic through Lahaina and still be within reasonable distance of population centers.

B. Alternate Uses for the Property

Park use, as depicted in the Lahaina Community Development Plan, is a compatible use for this flood prone area. However, the shoreline itself is not as attractive at this location as at some other shoreline locations in this district.

C. Alternate Scope of Development

It would be possible to include ancillary facilities such as fueling, boat repair, and boat storage within State land available at this site. However, these facilities would require additional expense for more waterfront protective structures and the additional scope is not desirable according to local fishermen. Figure 17 presents a concept for such



mala boating facility
conceptual plan.

FIGURE 17

development. These additional facilities would provide for activities which might otherwise be desirable at Lahaina Boat Harbor, but which cannot be located there for reasons of congestion, incompatibility with historic sites, etc.

AGENCIES FROM WHICH APPROVAL MUST BE SECURED:

1. U.S. Army Engineer District, Honolulu
Building 230, Fort Shafter
APO San Francisco 96558
2. Maui County Planning Department
200 South High Street
Wailuku, Maui, Hawaii 96793
3. Maui County Public Works Department
200 South High Street
Wailuku, Maui, Hawaii 96793
4. State Department of Land
and Natural Resources
P. O. Box 621
Honolulu, Hawaii 96809

AGENCIES AND PERSONS CONSULTED:

Maui County - Planning Department
Public Works Department
Kamaa'ima Fishing Club of Lahaina
Corps of Engineers - Karl Keller
John Pulowski

PARTICIPANTS:

Oceanic Institute - Guy Rothwell, Planning & Engineering
Paul Bienfang
Wendy Brandt
Craig Pelton
Rosine Koningsberger
Bill Madden
Consultants - Bill Spencer, Planning & Engineering
Wayne Mitter, Environmental

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ENVIRONMENTAL IMPACT STATEMENT

BOAT LAUNCHING RAMP

MALA, MAUI, HAWAII

APPENDICES

APPENDIX A

Physical Data

Temperature, Salinity and Transmission

Temperature, salinity and transmission were measured at 13 sampling locations (stations) near the Mala Wharf and the sewer outfall during the July, 1975 field trip. Trade wind conditions prevailed, winds were light and variable, the skies were clear to partly cloudy, there was no precipitation, and a weak northerly current was present along the coast. The station locations are shown in Figure 18.

The three variables under consideration were measured from the surface to the bottom at 2 meter intervals at each sampling station. The sampling stations divided into three transects. The first transect, located south of the wharf and perpendicular to the coastline, included Station 1, the sewer outfall, Station 2 and Station 3. The second transect, perpendicular to the wharf, about 300-350 yards offshore, extending slightly south and seaward of the sewer outfall, included Stations 1, 4, 5, 6 and 13. The third transect, parallel to and about 50 yards north of the wharf included Stations 7, 8, 9, 11 and 12. Depth ranged from 1.2 meters inshore to 12.5 meters offshore.

The profiles of temperature, salinity and transmission along the three transects are shown in Figures 19 to 21. The sampling station is indicated on the horizontal axis above each profile. Units are °C for temperature, ‰ for salinity and % for transmission.

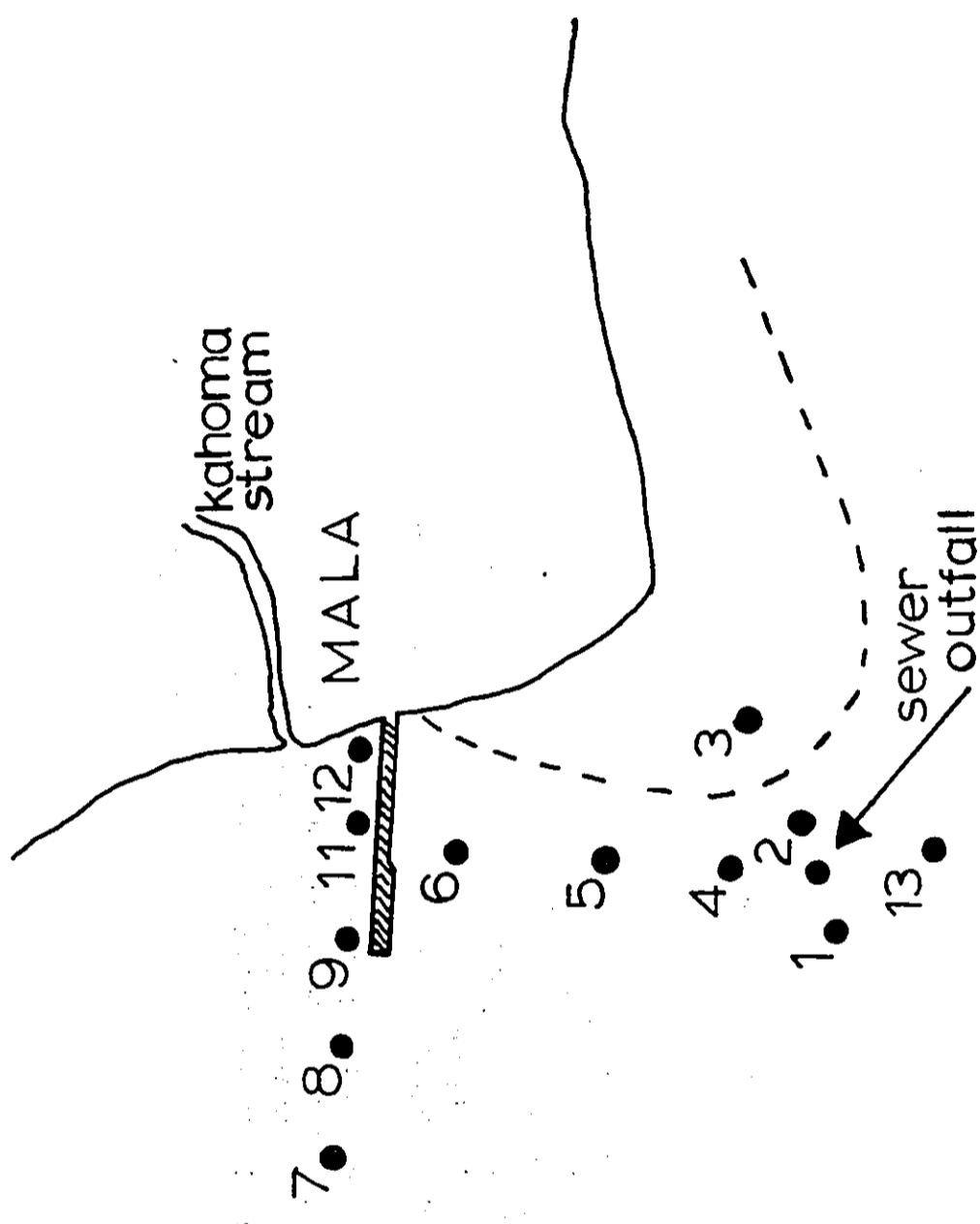


FIGURE 18: Temperature, salinity and transmission stations,
July 1975 field trip

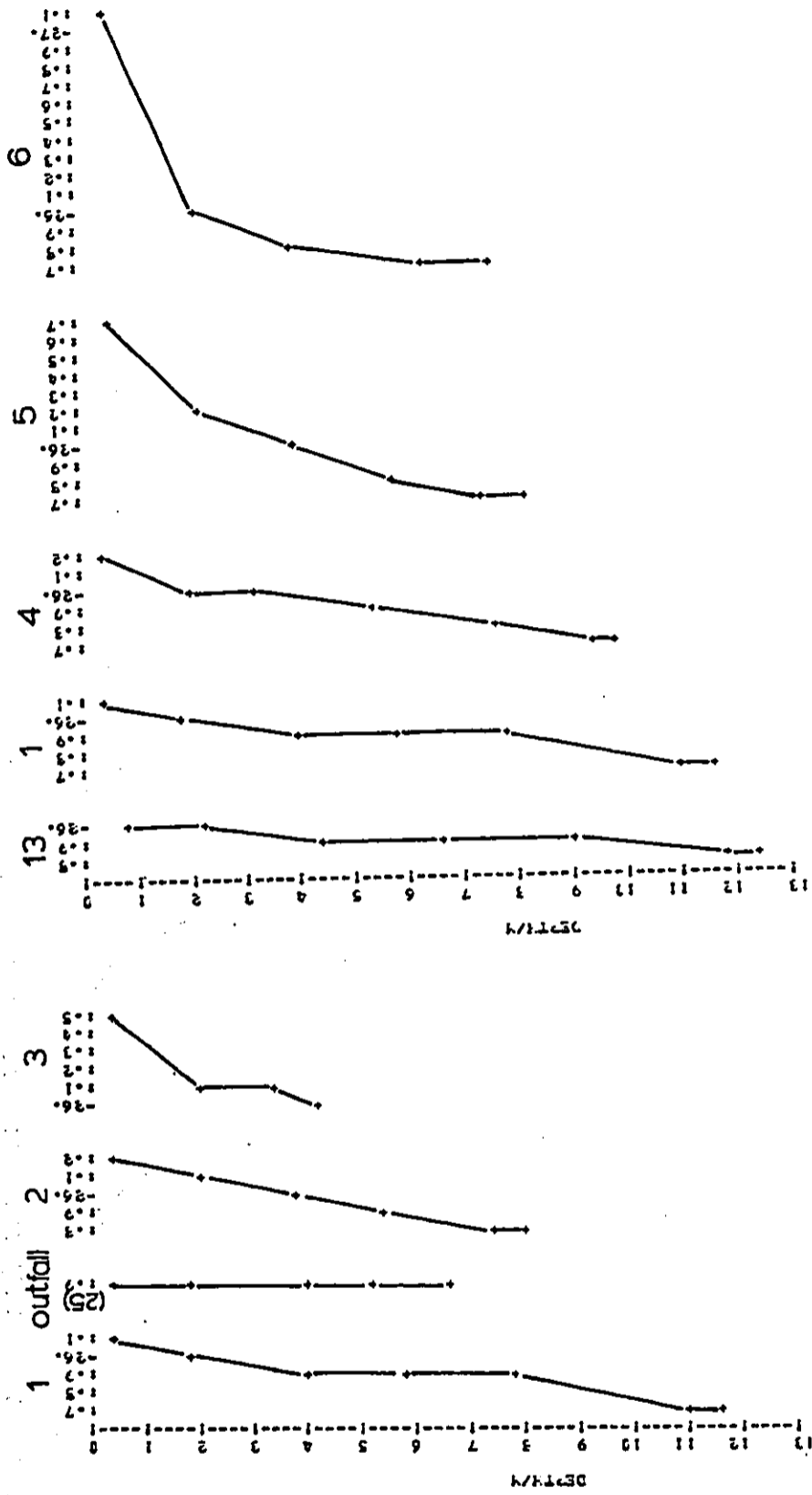


FIGURE 19A : Temperature profile along transect 1 and transect 2, July 1975
field trip

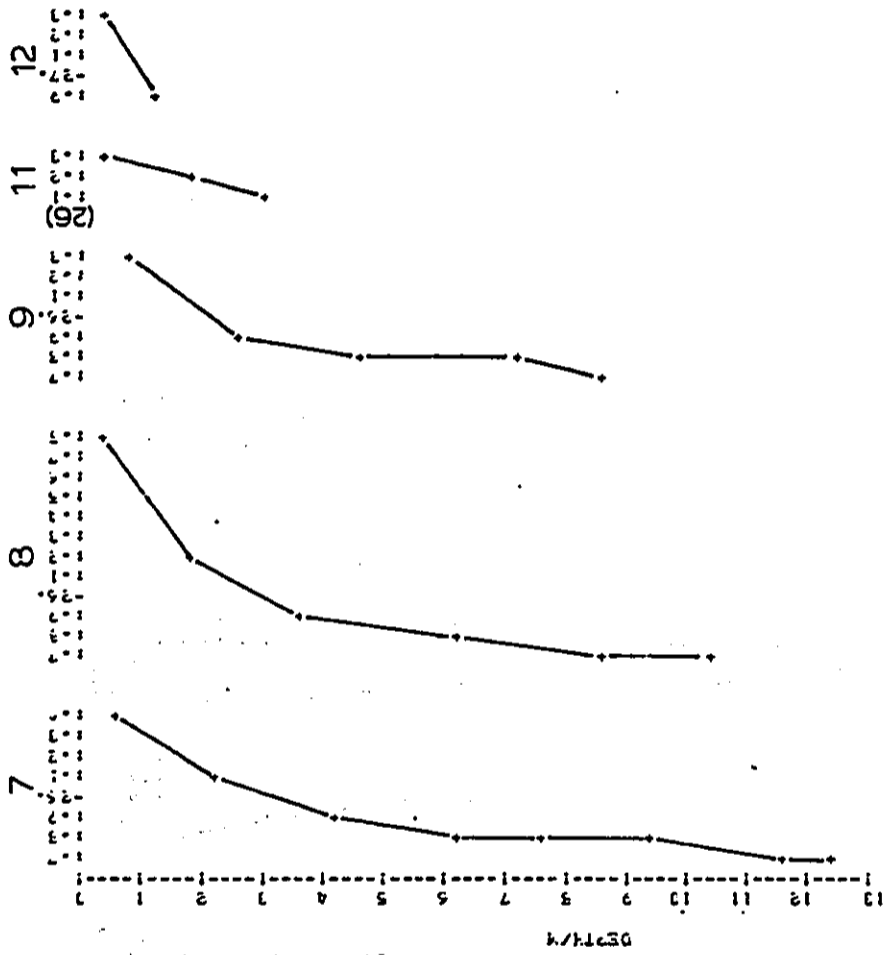


FIGURE 19B : Temperature profile along transect 3,
July 1975 field trip

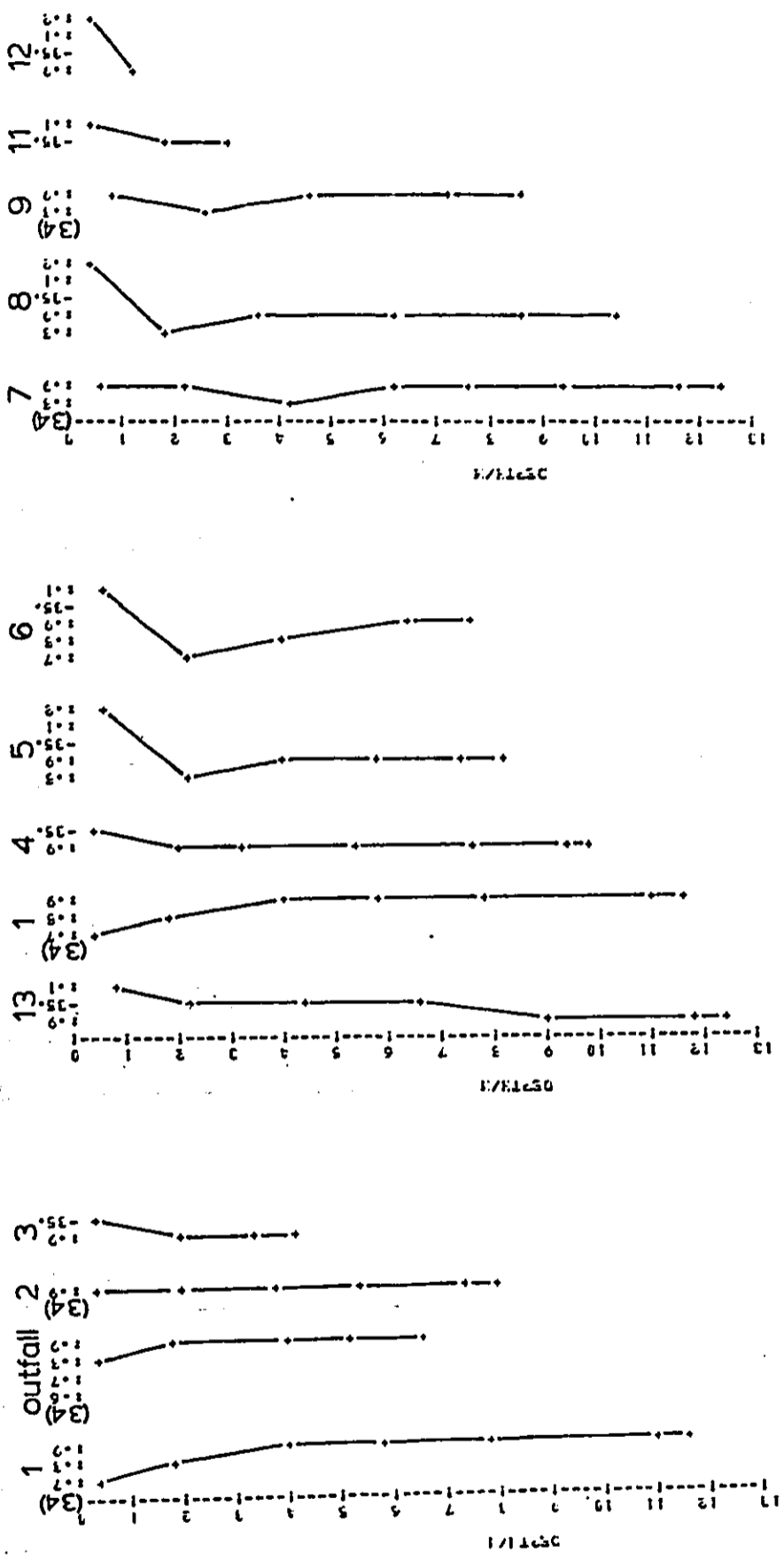


FIGURE 20 : Salinity profile along transect 1, 2 and 3, July 1975 field trip

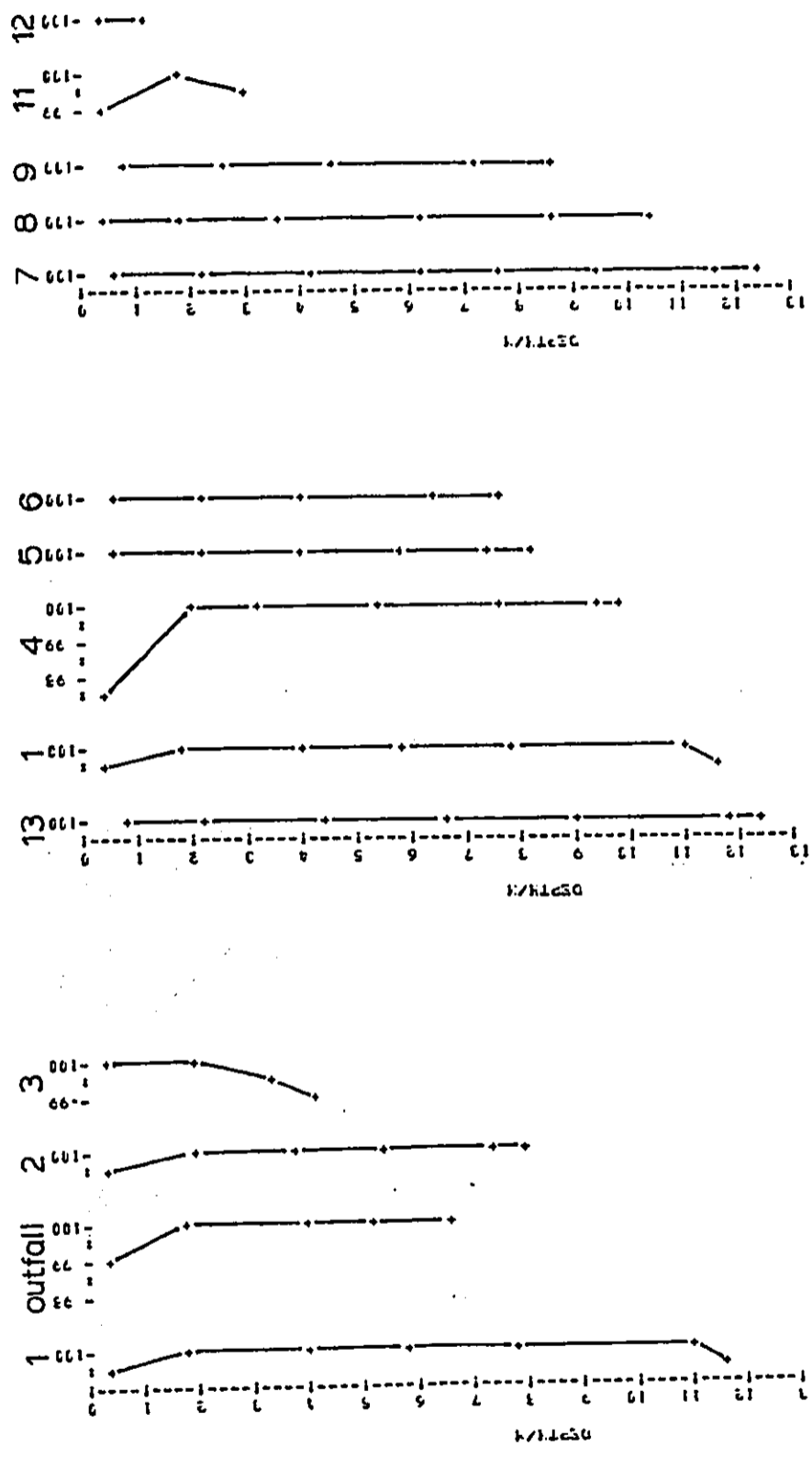


FIGURE 21: Transmission profile along transect 1, 2 and 3, July 1975 field trip

Sediment Analysis

Six sand samples were taken in the vicinity of Mala Wharf during the July, 1975 field trip. The samples were collected north and south of the wharf at about 50 yards distance from the structure. The sampling locations with the corresponding sample number are indicated in Figure 22. The samples were collected by hand and loaded into small plastic zipperbags.

The samples were first dried and then put through U. S. standard mesh sieves #5, 10, 18, 35, 60, 120 and 230, corresponding to a grain size of 4, 2, 1, 0.5, 0.25, 0.125 and 0.063 mm. According to the Wentworth table, these numbers classify the particles as pebble, granule, very coarse sand, coarse sand, medium sand, fine sand, and very fine sand. Table 1 presents the sieve analysis results for the samples.

To determine the particle size distribution, the method of Inman (1952) was used. By this procedure the mm grain size values are converted to phi-units ($\phi = -\log_2$ diameter in mm). For the grain sizes here, this corresponds to a grade scale of -2 to +4 phi-units at 1-phi interval. The cumulative size frequency distribution in phi-units of each sample was then plotted on probability paper to derive the parameters of phi-median, phi-mean, phi-deviation (the sorting measure σ_ϕ), phi-skewness (α_ϕ) and phi-kurtosis (β_ϕ). Figure 23 (pages A-11 to A-13) gives the cumulative percent size distribution in phi-units with the phi-parameters. Table 2 presents the numerical results of the particle size distribution analysis. The percentage of organic material in the sand samples is given in Table 3.

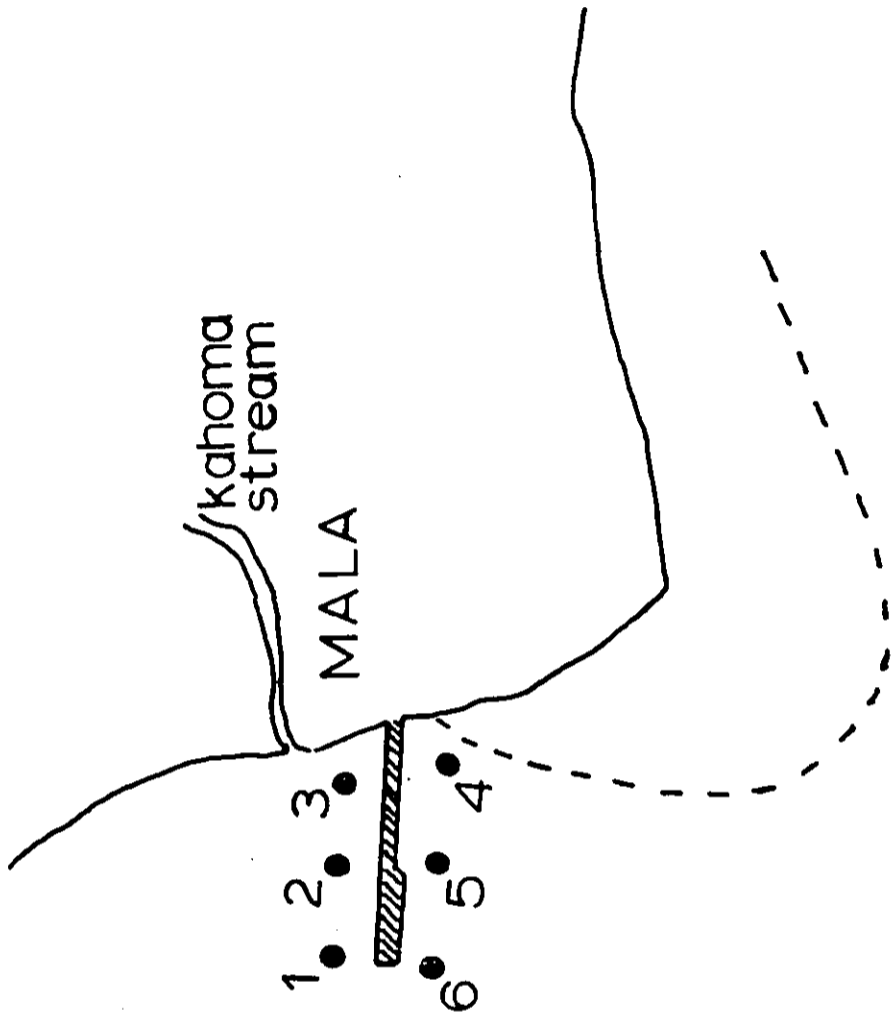


FIGURE 22 : Sand sample locations, July 1975 field trip

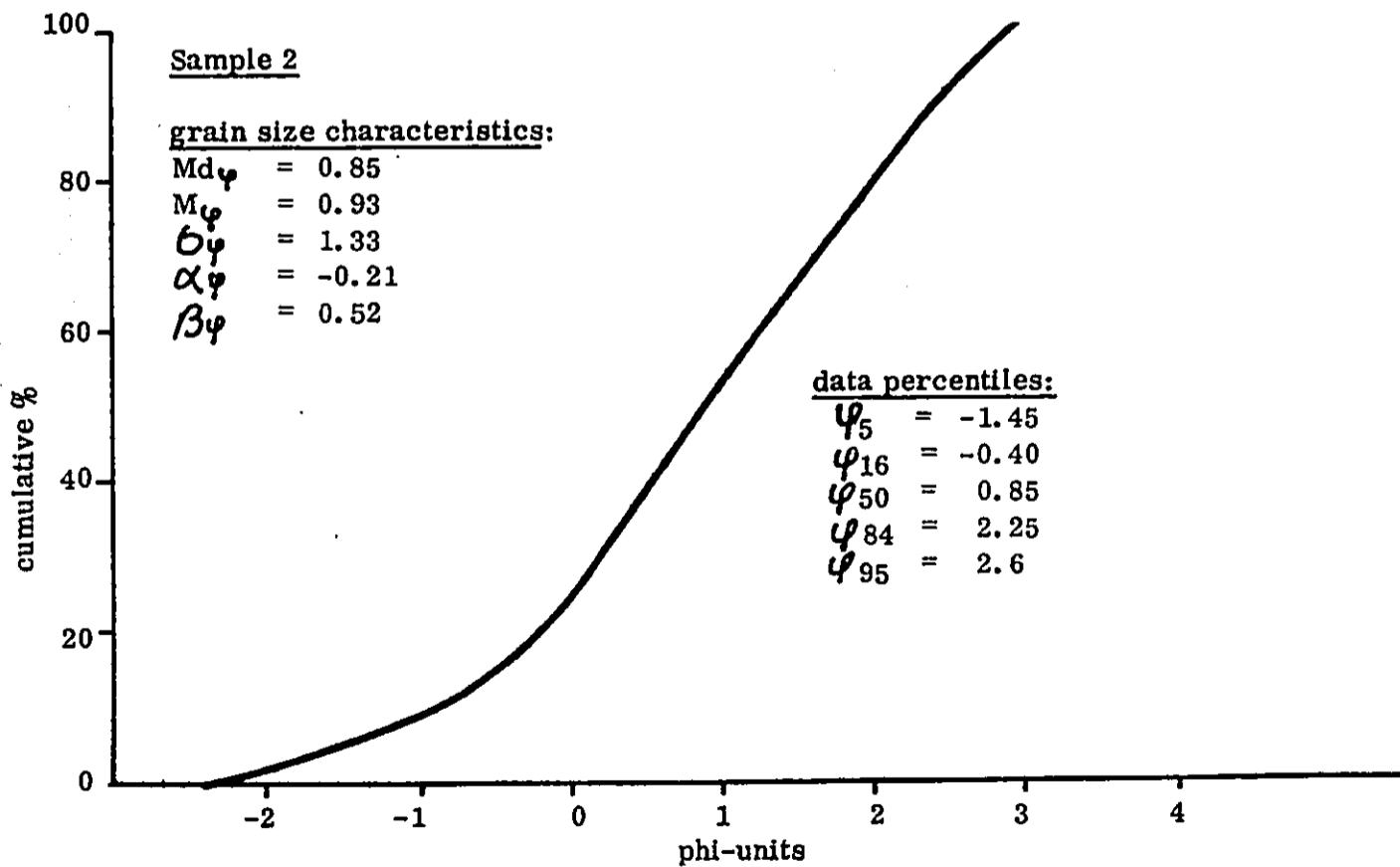
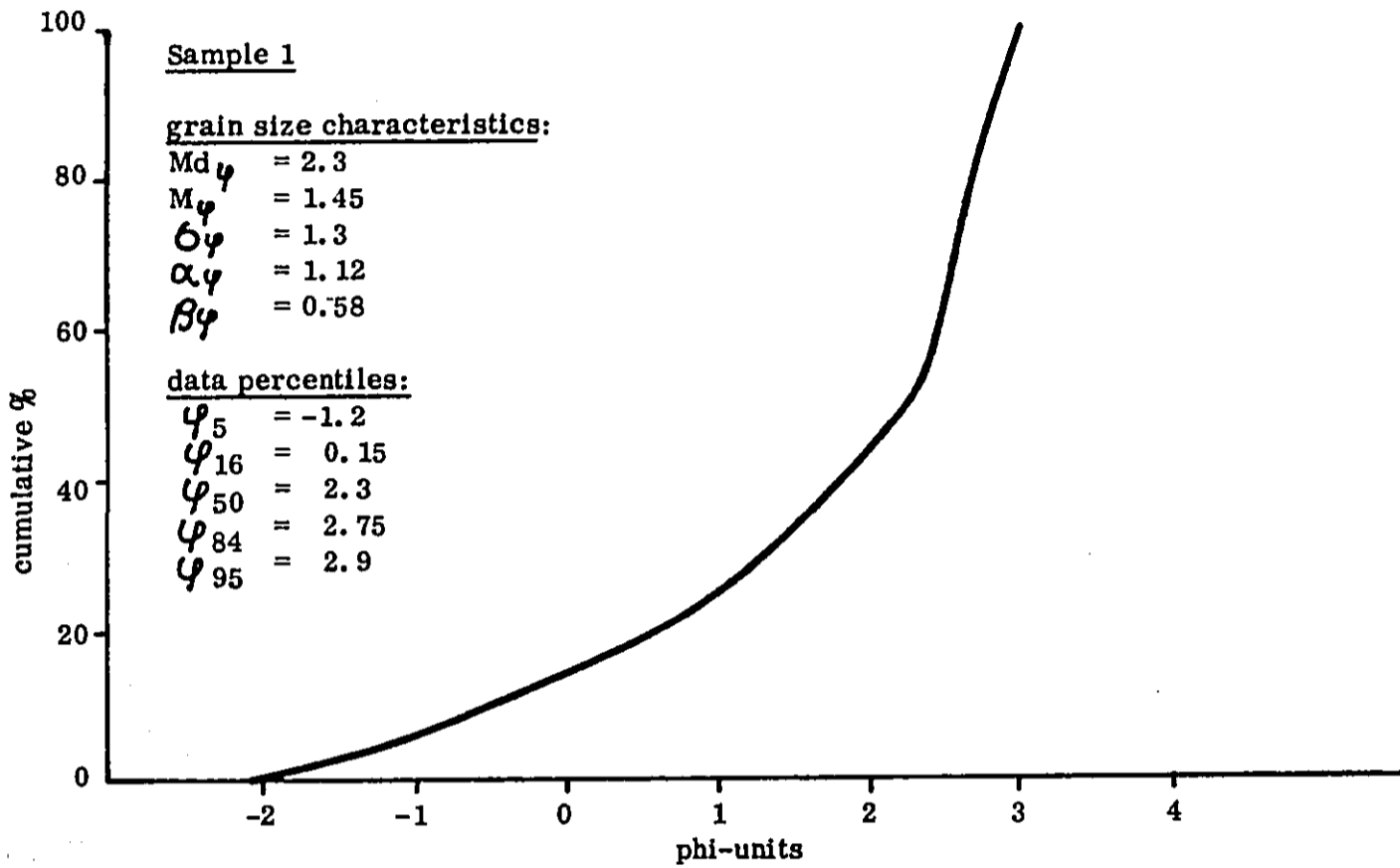
U. S. Standard Mesh #.

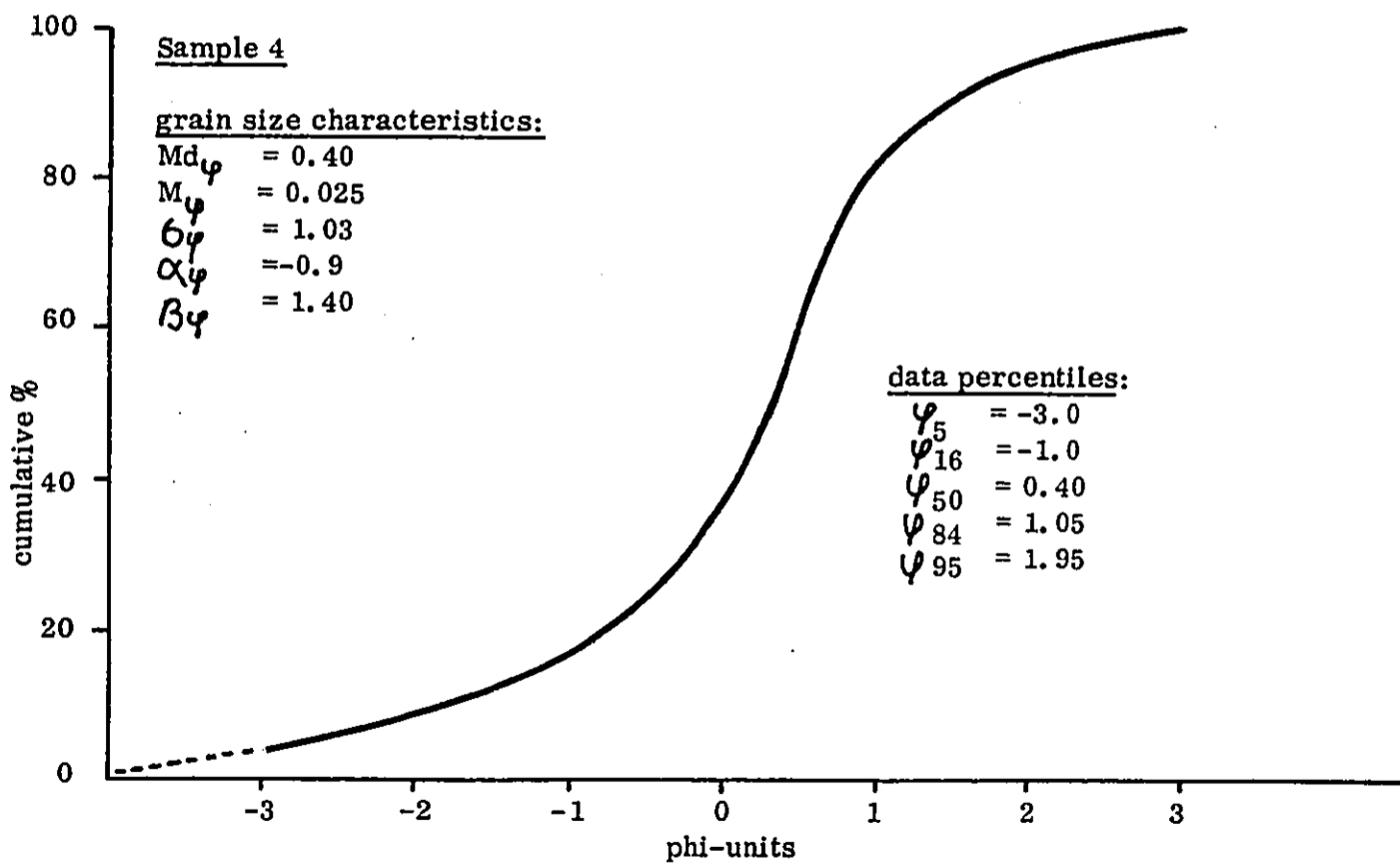
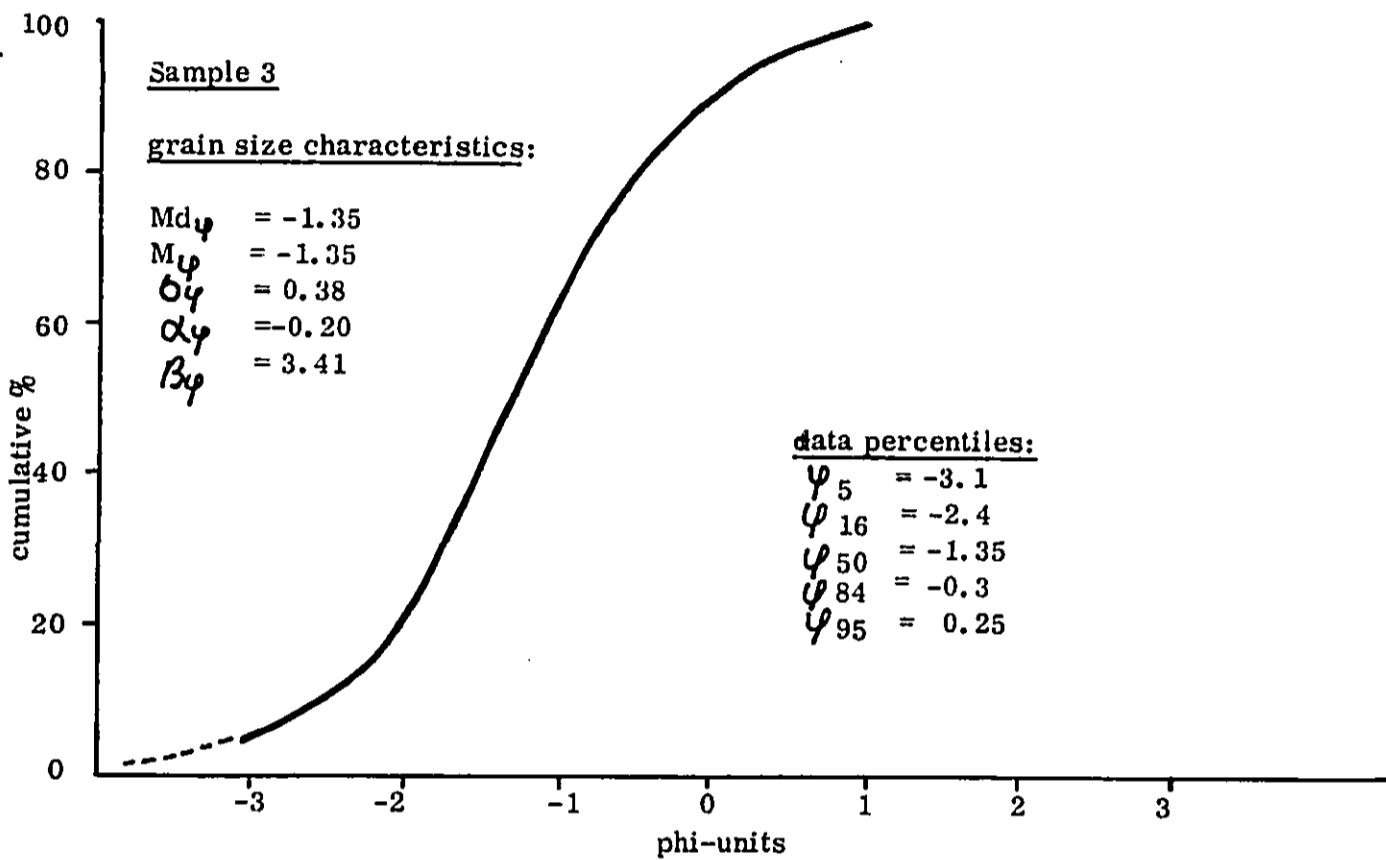
Sample #	Total Weight	5 (4mm)		10 (2mm)		18 (1mm)		35 (0.5mm)		60 (0.25mm)		120 (0.125mm)		230 (0.063mm)	
		g	%	g	%	g	%	g	%	g	%	g	%	g	%
1	97.34	1.27	1.3	4.91	5.04	8.03	8.25	10.91	11.21	4.67	4.79	67.45	69.30	0.1	0.11
2	113.63	1.93	1.7	8.11	7.14	16.9	14.87	36.60	32.21	21.63	19.04	28.46	25.04	-	-
3	1.48	.41	27.70	.52	35.14	.4	27.03	.15	10.13	-	-	-	-	-	-
4	79.4	7.94	10.0	4.76	5.99	9.99	12.58	47.78	53.88	10.26	12.92	3.67	4.63	-	-
5	74.37	-	-	.28	.38	.61	.82	12.45	16.74	58.36	78.47	2.67	3.59	-	-
6	108.99	.40	.37	2.56	2.35	3.69	3.38	15.31	14.05	39.78	36.50	47.20	43.30	.05	.05

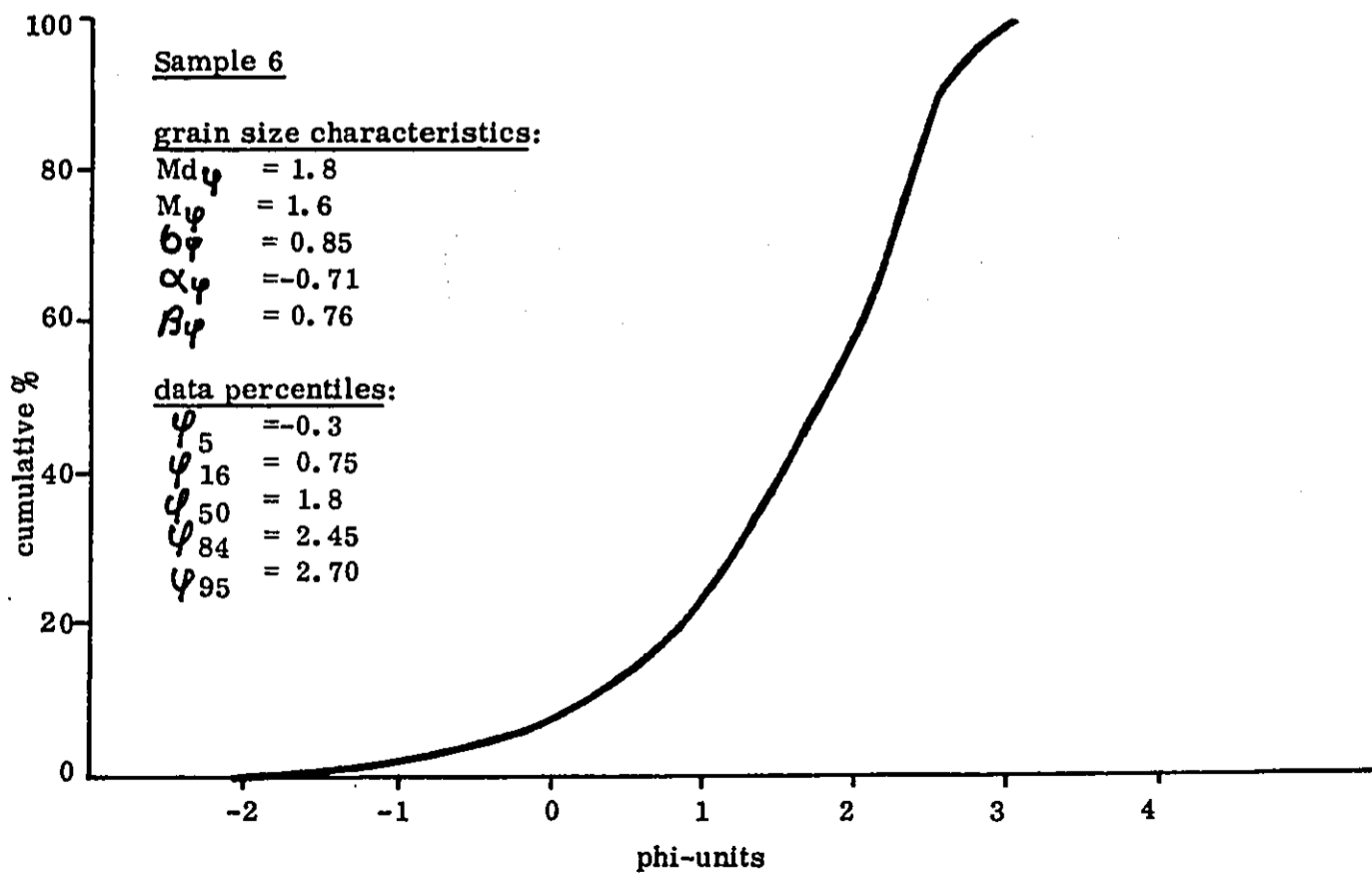
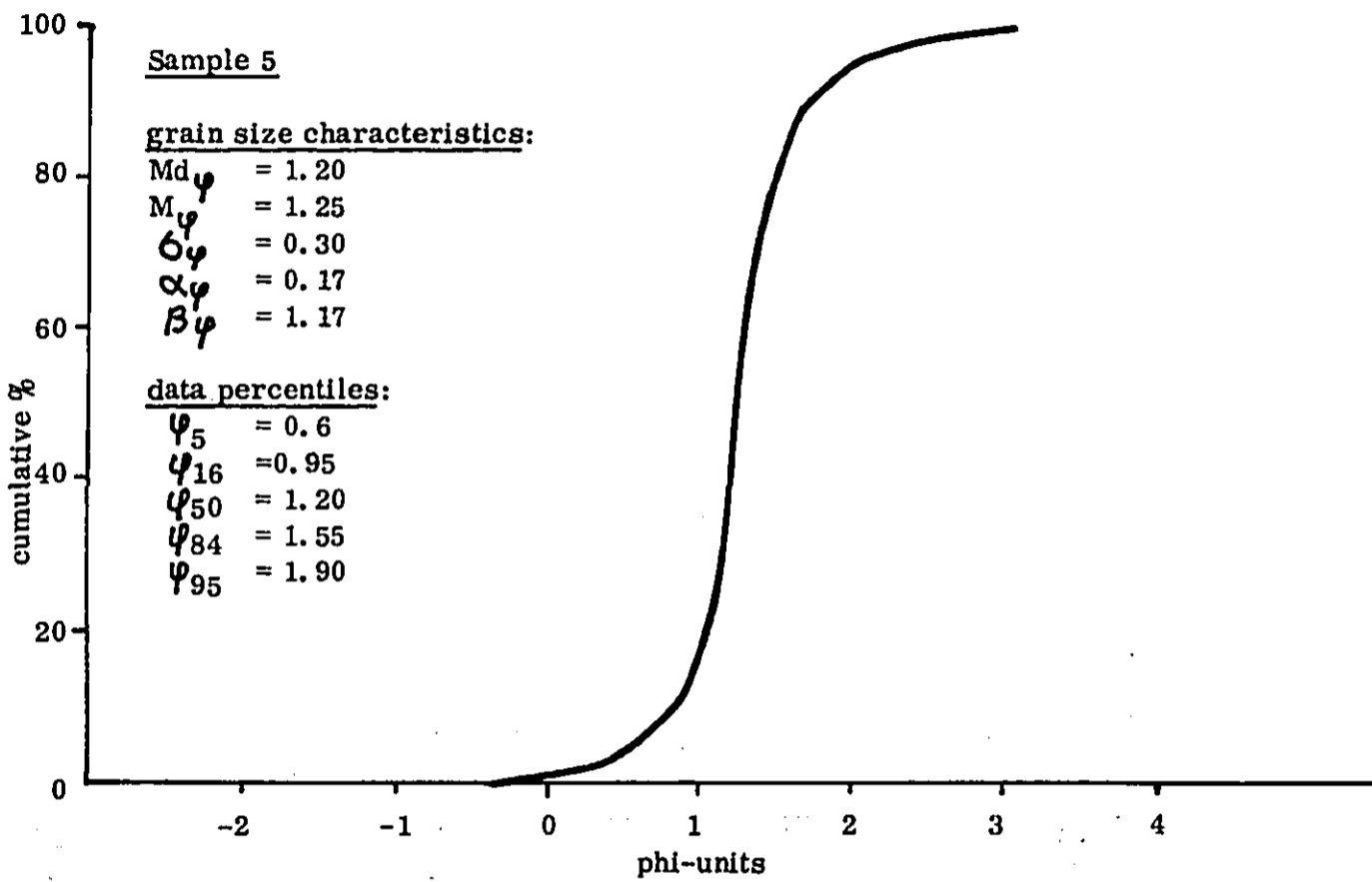
TABLE 1: Sieve analysis results of sand samples

FIGURE 23 : Cumulative percent size distribution of sand samples
collected at Mala Wharf, July 1975 field trip

A-10







Sample #	% of particle size in sample									
	$\phi \leq -2$ pebble & larger	$-2 < \phi \leq -1$ granule	$-1 < \phi \leq 0$ very coarse sand	$0 < \phi \leq 1$ coarse sand	$1 < \phi \leq 2$ medium sand	$2 < \phi \leq 3$ fine sand	$3 < \phi \leq 4$ very fine sand	$4 < \phi$	6ϕ sorting	
1	1.3	5.04	8.25	11.21	4.79	69.30	0.11	0	1.3	
2	1.7	7.14	14.87	32.21	19.04	25.04	0	0	1.33	
3	27.7	35.14	27.03	10.13	0	0	0	0	0.38	
4	10.0	5.99	12.58	53.88	12.92	4.63	0	0	1.03	
5	0	.38	.82	16.74	78.47	3.59	0	0	0.30	
6	.37	2.35	3.38	14.05	36.05	43.3	0.05	0	0.25	

TABLE 2: Particle size analysis results for sand samples

Sample #	Dry Weight	Weight after 4 hours at 500° C	% Organic
1	20.758 g	19.868 g	4.29 %
2	24.970 g	23.729 g	4.97 %
3*	-	-	-
4	16.282 g	15.701 g	3.57 %
5	25.269 g	23.927 g	5.31 %
6	30.888 g	29.681 g	3.91 %

* No determination made

TABLE 3: Percentage organic material in sand samples

APPENDIX B
Chemical and Biological Data

Chemistry

Chemical parameters for the surface waters near the Mala pier are shown in Table 4 ; corresponding station locations are shown in Figure 24.

Water temperature was reasonably constant at all neritic stations. The elevated temperature in the adjacent stream (Station 6) is undoubtedly due to solar heating and reflects the lack of stream outflow at the time of investigation (August, 1975). With the exception of Station 6, salinity was constant at all stations, reflecting the dominantly oceanic character of the area. The near oceanic salinity value at the outfall (Station 1) indicates that considerable mixing of the sewage effluent with adjacent seawater occurs by the time it reaches the surface.

Surface waters at the outfall station showed high levels of ammonium and phosphate. Nitrate and nitrite values were not conspicuously high at the outfall, suggesting that there is not appreciable input of these radicals via the sewage effluent. Nitrate and nitrite levels showed little areal variation and ambient values were comparable to other Hawaiian coastal areas. Ammonium levels at the various stations suggest that the Mala pier area may be receiving nutrient inputs from the sewage outfall. Under the prevailing wind, tide and surface current conditions there were visual indications that the effluent plume transversed the pier at its seaward end; the enhanced ammonium concentration at that station (3), confirmed that observation. High ammonium levels in Station 6 suggest that the stream may be an important nutrient contributor when it is flowing into the sea. With the exception of Station 1, phosphate values were generally low throughout the area. Low phosphate levels at Station 6 probably reflect the stream's stagnant character. During periods of rain-induced runoff, however, the phosphate levels in the stream water might increase by an order of magnitude.

Bacteriology

Despite considerable mixing suggested by the salinity data, the surface waters at the outfall showed total coliform levels approaching 10^6 coliforms/100 ml, a density indicative of raw to dilute sewage. Fecal coliform levels were also high, and the fecal coliform/fecal streptococci ratio of 13 provides verification that the bacterial input is derived from human wastes. Bacterial levels at the neritic stations were quite low under the prevailing plume direction. It is felt, however, that the bacterial levels of this area fluctuate radically in response to changing surface currents. It is not possible to explain the elevated bacterial levels at Station 4 on the basis of this limited data, but the concomitant

fecal coliform/fecal streptococci ratio suggests that the contamination was derived from the outfall. High bacterial levels in the stream, accompanied by a low fecal coliform/fecal streptococci ratio, suggest surface runoff and possibly seepage from adjacent cesspools as the bacterial contributors.

Plankton

Phytoplankton standing stocks in the area were generally low (Table 6). Low turbidity conditions prevailed at all stations, suggesting that mixing and advective forces in the area were generally adequate to prevent eutrophication within the water column. Primary productivity rates were also low and comparable with other Hawaiian coastal systems. The values reported in Table are believed to be minimum values, due to the sampling procedure wherein water was taken from the very surface where light inhibition and photodestruction of cells may occur.

The biomass and species composition of zooplankton in the vicinity of the pier are given in Table 7. The standing stock levels, determined with a 212 mm mesh net, are somewhat low but generally typical of similar environments. An outstanding attribute of the zooplankton community in this area is the abundance of mysid shrimps. Diver observations detailed "swarms" of these small crustaceans (near the substrate) in and around the coral of the area. The net-towing method of collection employed here undoubtedly underestimates the actual mysid standing stocks.

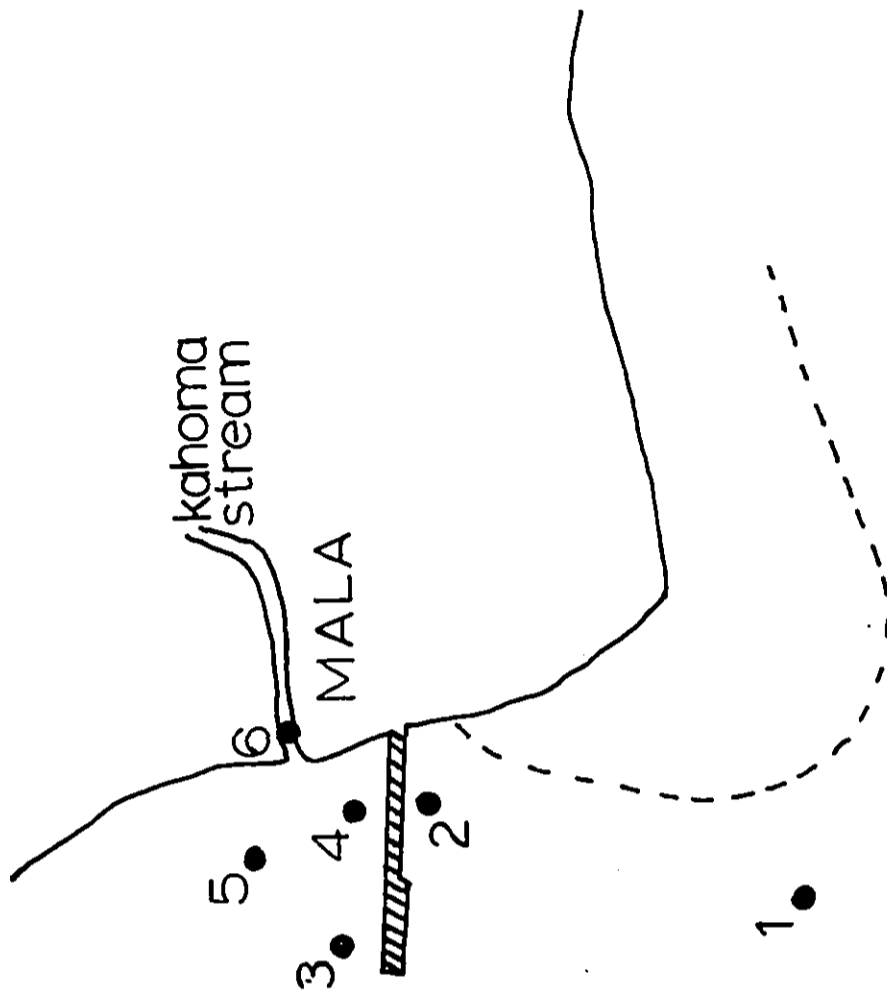


FIGURE 24 : Water chemistry sampling stations, August 1975 field trip

Station	Temperature °C	Salinity ‰	Ammonium ($\mu\text{g-at NH}_4^+/l$)	Nitrate ($\mu\text{g-at NO}_3^-/l$)	Nitrite ($\mu\text{g-at NO}_2^-/l$)	Phosphate ($\mu\text{g-at PO}_4^{3-}/l$)
1	26	34	37.21 ± 0.57	.35 ± 0.00	.03	3.12 ± 0.01
2	25	35	0.85 ± 0.11	.18 ± 0.02	.03	0.17 ± 0.10
3	25	35	4.97*	.33 ± 0.00	.03	0.17 ± 0.04
4	26	35	0.61 ± 0.00	.30 ± 0.03	.09	0.10 ± 0.00
5	26	35	0.69 ± 0.00	.27 ± 0.02	.03	0.12 ± 0.00
6	30	21	17.41 ± 0.00	.13 ± 0.02	.03	0.12 ± 0.03

Table 4: Water chemistry in the vicinity of the pier at Mala, Maui. Values represent the mean of duplicate analysis of a single surface sample. * replicate sample lost during analysis; value represents a solitary analysis. See Figure 24 for station locations.

Station	Total Coliforms (Number/100 ml)	Fecal Coliforms (Number/100 ml)	Fecal Streptococci (Number/100 ml)	Fecal Coliform Fecal Streptococci (Ratio)
1	872,500 ± 166,170	125,500 ± 14,850	9,575 ± 1,819	13
2	4.0 ± 0	3.3 ± 0	0 ± 0	--
3	52 ± 68	0 ± 0	4 ± 4	0
4	801 ± 145	65 ± 12	22 ± 8.5	2.95
5	12 ± 6	5 ± 5	14 ± 2.8	0.36
6	110,700 ± 990	5,700 ± 236	9,475 ± 955	0.60

Table 5: Enteric bacterial levels in the vicinity of the Mala Pier, Maui. All samples were taken from the surface waters while falling tide conditions prevailed. See Figure 24 for station locations.

Station	Chlorophyll-a (mg chl-a/m ³)	Phaeophytin (mg/m ³)	Primary Production (mgC · m ⁻³ · hr ⁻¹)
1	0.12	0.37	2.49
2	0.10	0.46	2.18
3	0.02	0.12	2.08
4	0.05	0.33	1.51
5	0.02	0.15	2.36
6	0.02	1.40	--

Table 6: Phytoplankton biomass (chlorophyll-a) and productivity rates in the surface waters near the pier at Mala, Maui. See Figure 24 for station locations. -- means analysis not conducted in the stream.

Taxonomic Group	Numbers per m ³	
Copepods	27.55	Zooplankton dry weight: 1.54 mg/m ³ Zooplankton density: 36.09 organisms/m ³
Chaetognaths	0.46	
Polychaetes	0.08	
Crab zoea	0.17	
Mysids	3.02	
Amphipods	0.08	
Gastropod larvae	0.67	
Bivalve larvae	0.34	
Fish eggs	2.94	
Fish larvae	0.78	
Total organisms	36.09	

Table 7: Composition and abundance of zooplankton in the vicinity of the pier at Mala, Maui, August 1975.

Fish and Bottom-dwelling Forms

Area 1

This area adjacent to the wharf and extending northward parallel to the shore at a depth of 6 meters was characterized by coral rubble, sand and isolate, living corals (principally *Pocillipora* sp. and *Porites* sp.). While the area held little cover and was of low relief, 46 species of fish were observed.

Sewage particles were seen floating in the water and adhering to the bottom. *Tripneustes*, a sea urchin, were observed using this material, e. g. toilet tissue and cotton wads, as camouflage.

One fish, an angler fish (*Antennarius molluscenses*) was seen with a large, tumorous growth on the side of the body. As these fish are poor swimmers, it is likely that this individual is and has been a permanent resident of the area.

Area 2

This area adjacent to the wharf and extending parallel to shore to the north, was characterized by contiguous living corals (*Porites*, *Montiposa*, *Pocillipora*, and *Pavona* species) having high relief. Isolated pockets of sand were interspersed throughout the area. Fish density and diversity were high.

An encrusting algae, *Dictosphaera* sp., was observed on many of the corals here. As in Area 1, sewage particles were visible both in the water and on the bottom.

In both areas, swarms of small mysid shrimp were observed adjacent to the bottom. These swarms were continuous throughout both areas.

On the south side of the wharf, in 6 meters of water, grey beach sand was observed overlying larger and coarser coral sands. A sharp demarcation of these sands parallel to the beach and extending for several hundred yards suggested a building and removal of this submerged sand reservoir.

Area 1: Mala Wharf 8/5/75 - 10:30 A. M. 10 meters deep. Live coral, coral rubble & sand.

Classification	Rare	Common	Abundant
Gymnothorax melatremus	x		
Fistularia petimba		x	
Aulostomus chinensis		x	
Myripristis sp.		x	
Adioryx lacteoguttatus		x	
Adioryx xantherythrus		x	
Foa brachygrammus		x	
Upeneus arge		x	
Parupeneus pleurostigma		x	
Parupeneus multifasciatus		x	
Parupeneus porphyreus		x	
Centropyge potteri		x	
Forcipiger flavissimus	x		
Chaetodon miliaris		x	
Chaetodon unimaculatus		x	
Paracirrhites forsteri		x	
Dascyllus albisella			x
Plectroglyphidodon johnstonianus			x
Pomacentrus jenkinsi			x
Chromis vanderbilti			x
Labroides phithiophagus		x	
Pseudocheilinus octotaenia		x	
Thalassoma duperreyi		x	
Stethojulis baleata		x	
Scarus dubius		x	
Acanthurus olivaceus		x	
Acanthurus xanthopterus		x	
Acanthurus nigrofuscus		x	
Acanthurus nigroris		x	

Area 1: continued

Classification	Rare	Common	Abundant
<i>Ctenochaetus strigosus</i>			x
<i>Zembrasoma flavescens</i>	x		
<i>Naso lituratus</i>	x		
<i>Naso unicornis</i>			x
<i>Naso brevirostris</i>	x		
<i>Scorpaena coniorta</i>		x	
<i>Caracanthus maculatus</i>		x	
<i>Sufflamen bursa</i>		x	
<i>Rhinecanthus rectangulus</i>	x		
<i>Melichthys vidua</i>	x		
<i>Pervagor spilosoma</i>			x
<i>Pervagor melanocephalus</i>		x	
<i>Canthigaster jactator</i>	x		
<i>Arthron hispidus</i>	x		
<i>Antennarius moluccensis</i>	x		
<i>Pranesus insularium</i>		x	
<i>Decapterus pinnulatus</i>		x	

Area 2: Mala Wharf 8/5/75 12:30 P. M. 2-5 meters.

Classification	Rare	Common	Abundant
Synodus sp.	x		
Fistularia petimba		x	
Aulostomus chinensis		x	
Adioryx diadema		x	
Apogon maculiterus			x
Apogon snyderi	x		
Mulloidichthys samoensis	x		
Parupeneus chryserydros	x		
Parupeneus pleurostigma		x	
Parupeneus multifasciatus		x	
Parupeneus porphyrens		x	
Chaetodon miliaris		x	
Chaetodon ornatissimus		x	
Chaetodon multiciactus		x	
Chaetodon unimaculatus	x		
Chaetodon auriga		x	
Paracirrhites arcatus		x	
Cirrhitis pinnulatus	x		
Dascyllus albisella		x	
Plectroglyphidodon johnstonianus		x	
Pomacentrus jenkinsi		x	
Abudefduf abdominalis		x	
Chromis vanderbilti		x	
Labroides phthirophagus		x	
Pseudocheilinus octotaenia	x		
Thalassoma duperreyi		x	
Thalassoma fuscus		x	
Thalassoma umbrostigma		x	
Thalassoma purpurum		x	

Area 2 continued

Classification	Rare	Common	Abundant
<i>Cirripectus variolosus</i>	X		
<i>Cirripectus obscurus</i>	x		
<i>Exallias brevis</i>	x		
<i>Scorpaena conioria</i>		x	
<i>Caracanthus maculatus</i>		x	
<i>Rhinecanthus aculeatus</i>	x		
<i>Pervagor spilosoma</i>			x
<i>Pervagor melanocephalus</i>	x		
<i>Ostracion meleagris camurum</i>	x		
<i>Canthigaster jactator</i>		x	
<i>Canthigaster amboinensis</i>	x		
<i>Gomphosus varius</i>		x	
<i>Coris gaimardi</i>		x	
<i>Stethojulis baleata</i>		x	
<i>Anampses cuvieri</i>	x		
<i>Scarus dubius</i>		x	
<i>Calotomus sandvicensis</i>		x	
<i>Zanclus canescens</i>		x	
<i>Acanthurus olivaceus</i>		x	
<i>Acanthurus sandvicensis</i>		x	
<i>Acanthurus nigrofuscus</i>		x	
<i>Acanthurus nigroris</i>		x	
<i>Acanthurus achilles</i>		x	
<i>Ctenochaetus strigosus</i>		x	
<i>Naso lituratus</i>			x
<i>Naso unicornis</i>			

APPENDIX C

Archeological Study

**Submitted with Environmental Assessment, Proposed Boat Launch
Ramp Facility, Mala, Maui.**

AN ARCHAEOLOGICAL RECONNAISSANCE
OF THE MALA WHARF BOAT-LAUNCH RAMP AREA,
LAHAINA, MAUI

by

Aki Sinoto
Department of Anthropology
Bernice P. Bishop Museum

Prepared for
The Oceanic Institute
Waimanalo, Oahu, Hawaii

A reconnaissance and site-location survey of the Mala Wharf Boat-launch ramp area was conducted by the Department of Anthropology, B. P. Bishop Museum at the request of the Oceanic Institute. The fieldwork was carried out on Monday, August 4, 1975, by Richard Hughes and the author. The existence of sand dune burials (Bishop Museum Site Number Ma-D5-8) has been known prior to this survey--they are noted on a 1919 Government Survey Map (Board of Harbor Commissioners, Borings and Soundings, Mala Bay) and more recently have been recorded by other museum personnel [Connolly, Ms. (1974)]. The present survey is the first time, however, that the burials have been counted and their individual locations mapped.

The burials are situated atop a sand dune with approximate dimensions of 360 x 120 ft (110 meters N-S by 37 meters E-W), and located roughly 100 ft (30 meters) southeast of the ocean at Mala Wharf (see attached map). The dune stands 12 to 14 ft (3.7 to 4.3 meters) in elevation and the dominant vegetation is *kiawe* (*Prosopis pallida* (Humb. and Bonpl. ex Willd.) HBK.) with *'ilima* (*Sida fallax* Walp.) and various low-lying weeds. The long axis of the dune is oriented roughly N/S and the major concentrations of burials occur at the northern portion of the dune, close to Kahoma Stream. Of the 54 features located, 53 are burials (including three with concrete tombstones, one large

tomb, one recent) and one a possible *imu*. The northern concentration consists of 29 burials within an area 80 ft (25 meters) in diameter. The type of burial appears quite homogenous, with stone-outlined platforms ranging in size from 3 x 4 ft (1.0 x 1.2 meters) to some elongated 4 x 12 ft (1.2 x 3.7 meters) features. The 53 burials are all surface evidenced, and appear to be historic, as indicated by pieces of concrete in the fill and remnants of wooden fences. No signs of pre-historic burials or occupation were seen on the surface or exposed by fresh bulldozer cuts into the dune. The entrance to the concrete tomb has been destroyed and the remains have been vandalized.

Construction of the Mala Wharf boat-launch ramp will entail destruction of the entire sand dune site, and therefore the destruction of both the known burial features and any subsurface burials or prehistoric remains that might be present. On the basis of the site type and its proximity to a fishpond, freshwater stream, and coastal area (similarities to known significant Hawaiian sites such as 018-Bellows Beach, A1-3-Halawa Valley on Molokai, Mokapu Burial Ground), there are sufficient grounds to suspect the subsurface presence of potentially significant archaeological remains. Furthermore, the destruction of the known surface-exposed burials and any subsurface remains will have to be investigated and salvaged by excavations prior to any on-site construction work, both to recover data of scientific importance and in conformance with State and Federal antiquities laws.

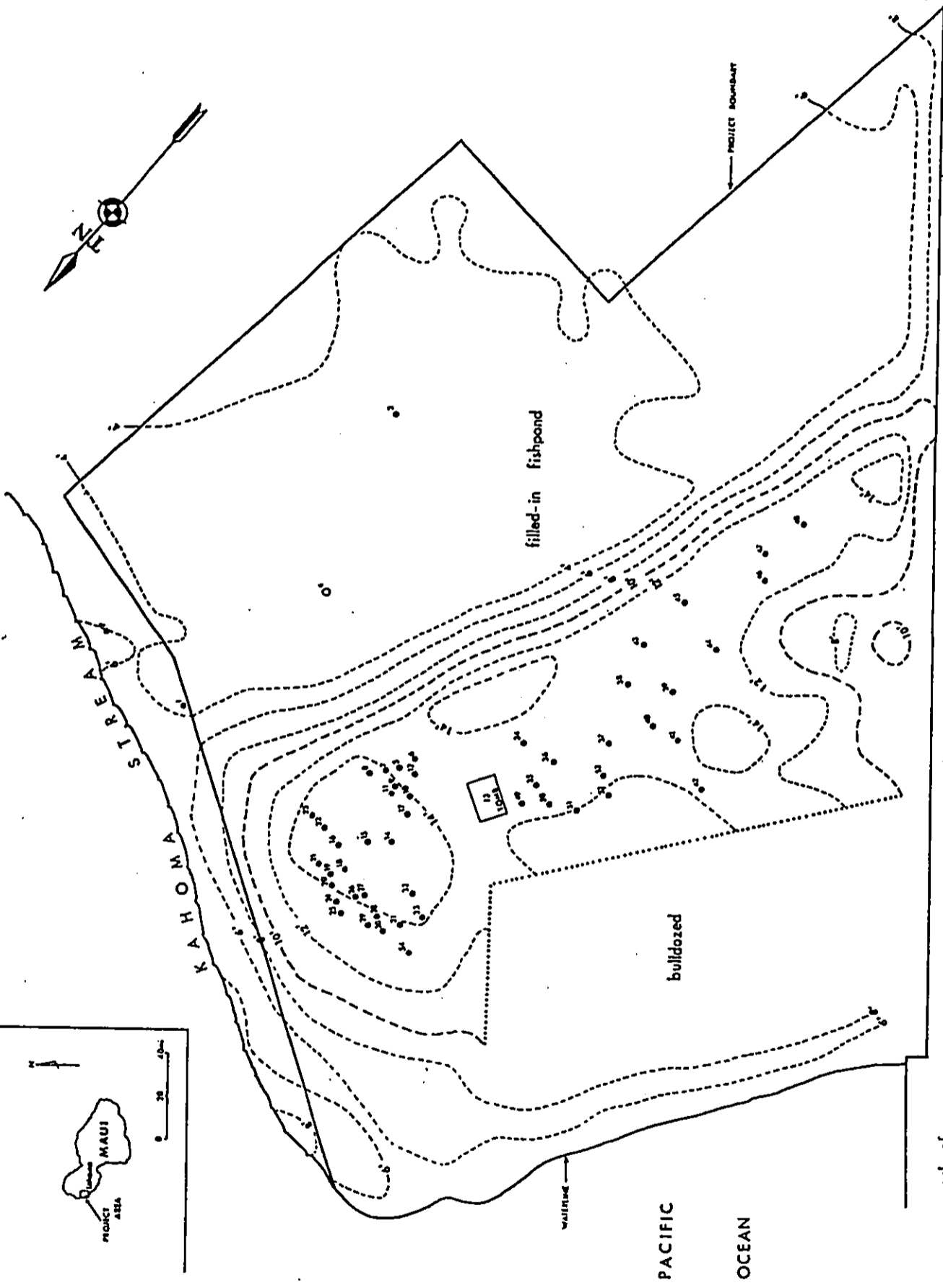
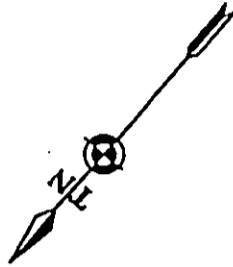
The appropriate action at this point is the conduct of a Phase I Survey--intensive on-site work including detailed recording and plotting of all features, and test excavations constituting a valid subsurface sampling of the sand dune. Also included would be attempts made to contact any next-of-kin or other relatives or individuals with knowledge of the burials located to-date. This Phase I Survey work will permit evaluation of the overall significance of the dune site, and formulation of specific recommendations regarding the nature and scope of necessary salvage work (Phase II Excavations).

The State Department of Health and the State Historic Preservation Officer should be consulted regarding the proper procedures for the removal and subsequent deposit of burial remains.

Connolly, Robert D., III

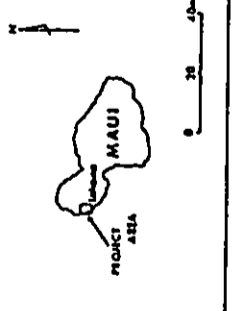
Ms.

Phase I archaeological survey of Kahoma Stream flood-control project area, Lahaina, Maui. (For National Park Service and U.S. Army Corps of Engineers) Ms. Rept. 100774, Dept. of Anthropology. B. P. Bishop Museum.



MA-D5-8 Burial Complex
 Mala Wharf
 Lahaina, Maui
 B. P. Bishop Museum
 Aug. 4, 1975
 base topo map courtesy Norman Saibo
 Engineering Consultants, Inc.

- burials (center points)
- burials with headstone
- possible imu



APPENDIX D

Need for Protective Breakwater

Waves and Swell: Need for a Protective Breakwater

The Mala site is exposed to storm waves and swell from the South through the northwest, modified and partly blocked by Kahoolawe to the southwest, Lanai to the West, and Molokai to the North. No wave records are available for the site, which forced reliance on local knowledge, observations by engineers on the consultant's staff during the summer of 1975, and wave refractions for the principle directions of wave arrival. The fishermen, small boat owners, and Harbors Division Maui personnel who were interviewed, without exception, stated their belief that a breakwater would be required in order to make the launch ramp safe and useful. Observations during the summer of 1975 showed persistent low amplitude, long-period southerly swell, which in the observer's judgement would render an exposed ramp unsafe a substantial percentage of the time for the average boatman. The wave refractions shown as Figures 11, 12, 13, and 14, suggest that waves are not concentrated at Mala, and in fact those arriving from the South are dispersed somewhat, demonstrating that the reef at Puunoa Point affords some protection for the site. However, southerly swell is the most persistent, and it will arrive at the launch ramp site with a large coastwise component. These diagrams fully bear out the observations of summer 1975. It is the carefully considered judgement of the consultant that a breakwater is necessary for safe operation of the launch ramp, and further that if a breakwater can not be provided, then the facility should not be built.

WAVE TYPE	WITHOUT BREAKWATER	
	H _{sig} greater than 3'	H _{sig} equal or greater than 1'
Northerly Swell 50% values: 70 aperture	5.4%	10.4%
Southerly Swell 50% values: refraction	8.1%	15.3%
Kona storm waves 50% values: refraction	0.5%	0.8%
Total unusable time unusable days	14.0% 51	26.5% 97
Usable days/year	314	269

Note: These values are derived from Homer (1964), Ho & Sherretz (1969) and St. Denis (1974).

TABLE 8 : Percent disabling waves

APPENDIX E

Responses to Comments

GEORGE R. ARIYOSHI
GOVERNOR



JOHN FARIAS, JR.
CHAIRMAN, BOARD OF AGRICULTURE

YUKIO KITAGAWA
DEPUTY TO THE CHAIRMAN

3980

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

May 7, 1976

DIRECTOR'S OFFICE
MAY 11 12 42 PM '76
DEPT. OF
TRANSPORTATION

MEMORANDUM

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

SUBJECT: Boat Launching Ramp, Mala, Maui, Hawaii

The Department of Agriculture has reviewed the EIS and finds no impact on agriculture. The problem of sediment deposit in the dredged area has been noted. This may prove to be a problem, and some further consideration of the circulation patterns may be warranted.

The EIS is returned since no further use is expected.

John Farias, Jr.
Chairman, Board of Agriculture

Enclosure

cc: Mr. E. Alvey Wright, DOT ✓

RECEIVED MAY 18 1976

GEORGE R. ARIYOSHI
GOVERNOR



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

August 11, 1976

E. ALVEY WRIGHT
DIRECTOR

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

IN REPLY REFER TO:

HAR-EP 681

MEMORANDUM

TO: HONORABLE JOHN FARIAS, JR.

FROM: E. ALVEY WRIGHT

SUBJECT: REVIEW OF DRAFT EIS FOR BOAT LAUNCHING RAMP, MALA,
MAUI, HAWAII - JOB H. C. 4035

This memo is in response to yours of May 7, 1976, expressing concern over the possibility of sediment deposit in the dredged area of the project.

We are aware of the possibility, as discussed on page 30 of the EIS under Beach Process. This problem will be minimized by the relatively open alignment of the breakwater and the small size of the dredged area. The Department of Transportation will maintain close coordination with the Army Engineer Corps, Honolulu District, during the design by that agency of proposed improvements to Kahoma Stream.

Thank you for your comments.

E. Alvey Wright
E. ALVEY WRIGHT

3986



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

07 MAY 1976

AFZV-FE-EE

Director
Dept of Transportation
State of Hawaii
869 Punchbowl Street
Honolulu, Hawaii 96813

DIRECTOR'S OFFICE
MAY 12 12 47 PM '76
DEPT. OF
TRANSPORTATION

Gentlemen:

Reference is made to the Environmental Impact Statement Boat Launching Ramp Facility, Mala, Maui.

We have reviewed the EIS and have no comments to offer.

Thank you for the opportunity to review this document.

Sincerely yours,

Charles S. Varnum
CHARLES S. VARNUM
Colonel, CE

Director of Facilities Engineering

CF:
Office of Environmental Quality Control
State of Hawaii
550 Halekaiwila Street
Room 301
Honolulu, Hawaii 96813



GEORGE R. ARIYOSHI
GOVERNOR



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

August 11, 1976

E. ALVEY WRIGHT
DIRECTOR

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

IN REPLY REFER TO:

HAR-EP 674

Colonel Charles S. Varnum
Director of Facilities Engineering
Department of the Army
Headquarters United States Army Support
Command, Hawaii
APO San Francisco 96558

Dear Colonel Varnum:

Subject: Review of Draft EIS for Boat Launching
Ramp, Mala, Hawaii - Job H. C. 4035

We appreciate your review of the subject draft EIS.

Very truly yours,

E. Alvey Wright
E. ALVEY WRIGHT
Director

GEORGE F. AMICCHI
65-1-1-1-1



VALENTINE A. SIEFERMANN
MAJOR GENERAL
ADJUTANT GENERAL

STATE OF HAWAII
DEPARTMENT OF DEFENSE
OFFICE OF THE ADJUTANT GENERAL
FORT RUGER, HONOLULU, HAWAII 96816

HIENG

7 MAY 1976

Environmental Quality Commission
550 Halekauwila Street, Room 301
Honolulu, Hawaii 96813

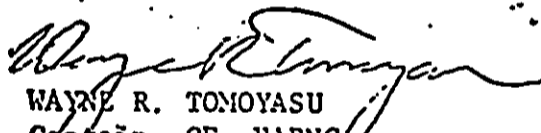
Gentlemen:

Boat Launching Ramp, Mala, Maui, Hawaii

Thank you for sending us a copy of the Environmental Impact Statement for the proposed "Boat Launching Ramp Project." We have reviewed the publication and have no comments to offer.

We are returning the Environmental Impact Statement for the proposed project per your request.

Yours truly,


WAYNE R. TOMOYASU
Captain, CE, HARNG
Contr & Engr Officer

Enclosure

GEORGE R. ARIYOSHI
GOVERNOR



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

August 11, 1976

F. ALVEY WRIGHT
DIRECTOR

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

IN REPLY REFER TO:

HAR-EP 674

Captain Wayne R. Tomoyasu
Contr. & Engr. Officer
Department of Defense
Office of the Adjutant General
Fort Ruger, Honolulu, Hawaii 96816

Dear Captain Tomoyasu:

Subject: Review of Draft EIS for Boat Launching
Ramp, Mala, Hawaii - Job H. C. 4035

We appreciate your review of the subject draft EIS.

Very truly yours,

E. Alvey Wright
E. ALVEY WRIGHT
Director



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

May 10, 1976

DIRECTOR'S OFFICE
MAY 12 8 03 AM '76
DEPT. OF
TRANSPORTATION

MEMORANDUM

TO: Environmental Quality Commission
550 Halekauwila St., Room 301
Honolulu, Hawaii 96813

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

SUBJECT: EIS on the Proposed Boat Launching Ramps, Mala, Maui, Hawaii

We are returning the attached EIS for your use.

We have no comment except that this proposal appears to fill a definite need for additional small boat launching facilities in the Lahaina area.

DIRECTOR

cc: DEQC
E. Alvey Wright - DIR, DOT

GEORGE R. ARIYOSHI
GOVERNOR



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

August 11, 1976

E. ALVEY WRIGHT
DIRECTOR

DEPUTY DIRECTORS
WALLACE AOKI
HYOKICHI HIGASHIONNA
DOUGLAS S. SAKAMOTO
CHARLES O. SWANSON

IN REPLY REFER TO:

HAR-EP 674

Mr. Andrew I. T. Chang, Director
Department of Social Services
and Housing
P. O. Box 339
Honolulu, Hawaii 96809

Dear Mr. Chang:

Subject: Review of Draft EIS for Boat Launching
Ramp, Mala, Hawaii - Job H. C. 4035

We appreciate your review of the subject draft EIS.

Very truly yours,

E. Alvey Wright
E. ALVEY WRIGHT
Director



DEPARTMENT OF PLANNING
AND ECONOMIC DEVELOPMENT

Kamamalu Building, 250 South King St., Honolulu, Hawaii • Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96804

GEORGE R. ARIYOSHI
Governor

HIDETO KONO
Director

FRANK SKRIVANEK
Deputy Director

May 19, 1976

Ref. No. 1119

MEMORANDUM

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

FROM: Hideto Kono, Director *Hideto Kono*

SUBJECT: Environmental Impact Statement for Boat Launching Ramp, Mala, Maui,
Hawaii

We have reviewed the subject statement and wish to offer the following comments at this time.

In view of the possibly significant historical/archaeological findings in the project area, we suggest close coordination be undertaken with the State Historic Preservation Officer, Department of Land and Natural Resources.

We have no other comments to offer at this time.

GEORGE R. ARIYOSHI
GOVERNOR



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

E. ALVEY WRIGHT
DIRECTOR

DEPUTY DIRECTORS
WALLACE AOKI
RYUKICHI HIGASHIMURA
DOUGLAS S. SAKAMOTO
CHARLES O. SWANSON

IN REPLY REFER TO:

August 11, 1976

HAR-EP 680

MEMORANDUM

TO: HONORABLE HIDETO KONO
FROM: E. ALVEY WRIGHT
SUBJECT: REVIEW OF DRAFT EIS FOR BOAT LAUNCHING RAMP, MALA,
MAUI, HAWAII - JOB H. C. 4035

This memo is in response to yours of May 19, 1976, subject as above, your Reference #1119.

The Harbors Division will maintain close coordination with the State Historic Preservation Officer concerning appropriate measures beyond grave removal.

Thank you for your comments.

E. Alvey Wright
E. ALVEY WRIGHT

GEORGE P. ANIYOSHI
GOVERNOR OF HAWAII



CHRISTOPHER COBB, CHAIRMAN
BOARD OF LAND & NATURAL RESOURCES

EDGAR A. HAMASU
DEPUTY TO THE CHAIRMAN

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
P. O. BOX 521
HONOLULU, HAWAII 96808

DIVISIONS:
CONVEYANCES
FISH AND GAME
FORESTRY
LAND MANAGEMENT
STATE PARKS
WATER AND LAND DEVELOPMENT

May 21, 1976

Environmental Quality Commission
550 Halekauwila Street, Rm. 301
Honolulu, Hawaii 96813

Gentlemen:

We have reviewed the EIS for the Mala boat ramp and have the following comments to offer:

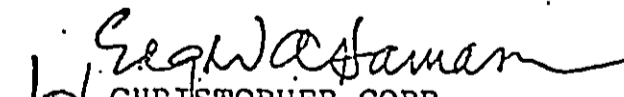
1. There are known historic sites in the project area which are listed in Appendix C of the EIS.

The project cost (p. 8) includes \$10,000 for relocating graves. An addendum to the contract for this job should be made to provide for an adequate program of subsurface sampling of the sand dune to be destroyed. The contract for relocating the graves should be carried out before construction of the boat ramp.

The Historic Preservation Office (Ph. 548-6408) is available to assist in preparing a scope of work which would address archaeological concerns.

2. The meaning of the unit "L.S." as used on pages 8 and 9 should be explained.
3. The cost of utilizing the old wharf as a base for a breakwater should be presented and compared with the cost of the alternative selected.

Very truly yours,


for CHRISTOPHER COBB
Chairman of the Board

cc: Historic Sites
Fish & Game

GEORGE R. ARIYOSHI
GOVERNOR



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

August 11, 1976

E. ALVEY WRIGHT
DIRECTOR

DEPUTY DIRECTORS
WALLACE AOKI
RYUKICHI HIGASHIONNA
DOUGLAS S. SAKAMOTO
CHARLES O. SWANSON

IN REPLY REFER TO:

HAR-EP 679

MEMORANDUM

TO: HONORABLE CHRISTOPHER COBB
FROM: E. ALVEY WRIGHT
SUBJECT: REVIEW OF DRAFT EIS FOR MALA BOAT LAUNCHING RAMP,
MALA, MAUI, HAWAII - JOB H. C. 4035

This memo is in response to your letter of May 21, 1976,
to Environmental Quality Commission, subject as above.

Comment #1.

The graves located within the project boundaries are not prehistoric, but belong to the last century. They will be relocated according to applicable regulations of the State Board of Health, and by coordination with the State Historic Preservation Officer. We do not feel that the report by the Bishop Museum establishes a basis for archeological excavation of the site before construction, as no evidence was brought forth for the presence of prehistoric artifacts, but only supposition. However, an effort will be made to acquire the services of an archaeologist to observe the grading operations to insure no archaeological remnant is lost or unrecorded.

Comment #2.

The unit L.S. stands for lump sum, a common term used in construction estimating.

Honorable Christopher Cobb
Page 2
August 11, 1976

HAR-EP 679

Comment #3.

No quotations from private contractors have been requested for demolition, rework, cleanup, and disposal of Mala Wharf. However, a preliminary estimate indicates that use of Mala Wharf for breakwater material will be more expensive than use of local stone.

Thank you for your comments.

E. Alvey Wright
E. ALVEY WRIGHT

Planning Department
County of Maui
200 South High St.
Wailuku, Maui 96793

DIRECTOR'S OFFICE

MAY 25 1 35 PM '76

DEPT. OF
TRANSPORTATION

May 24, 1976

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

Gentlemen:

Re: Environmental Impact Statement,
Mala Boat Launching Ramp, Lahaina, Maui

We have reviewed the subject EIS and have the following comments:

1. Since the construction of the proposed project will detrimentally affect approximately 53 burials and possible subsurface prehistoric remains, it is highly recommended that the Phase I Survey and Phase II Excavations plan of the B. P. Bishop Museum archaeological report be given serious consideration.

2. On page 9 the EIS, landscaping work has been designated as future work in the total magnitude of the project. While we have not seen any landscaping plans nor do we know the scope of landscaping work to be done, it is recommended that landscaping work be included with the Phase I construction of the proposed project.

3. The EIS does not cover the type of regulations or measures that will be taken to prevent fuel, detergent, fish entrails, etc. from entering the waters from the proposed boat washdown area.

4. The section on mitigation measures should be broadened to include measures that will be taken for dust control, sedimentation control, traffic control and all other construction-related adverse impacts. Also, what is the proposed construction schedule of the project?

5. Section V, Alternatives, should be broadened in scope to include the alternatives of no action and incorporation of a beach park along with the boat launching facilities. It should be noted that a white sand beach is not a pre-requisite for a beach park. Launiupoko Park, which has extensive usage by local residents and visitors, existed prior to park development as a rocky shoreline area.

Office of Environmental Quality Control
May 24, 1976
page 2

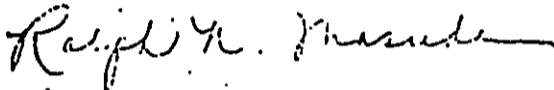
Inclusion of a fueling deck, boat repair, and boat storage as ancillary facilities could be incorporated into the new Lahaina Small Boat Harbor presently under study by the Corps of Engineers.

6. The proposed project is subject to the Interim Coastal Zone Management Rules and Regulations of the County of Maui.

7. Since the proposed project area is only part of an area designated for park uses in the Lahaina General Plan and Community Development Plan, the Department of Parks and Recreation should have been a consulted party on this matter.

Thank you for the opportunity to express our comments on the subject EIS. Please contact me should you have any questions.

Very truly yours,



RALPH N. MASUDA
Environmental Planning Coordinator
(See by at front page for address)

cc: E. Alvey Wright

244 7735

GEORGE R. ARIYOSHI
GOVERNOR



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

August 11, 1976

E. ALVEY WRIGHT
DIRECTOR

DEPUTY DIRECTORS
WALLACE AOKI
HIYOKICHI HIGASHIONNA
DOUGLAS S. SAKAMOTO
CHARLES O. SWANSON

IN REPLY REFER TO:

HAR-EP 678

Mr. Ralph N. Masuda
Environmental Planning Coordinator
Planning Department
County of Maui
200 South High Street
Wailuku, Hawaii 96793

Dear Mr. Masuda:

Subject: Review of Draft EIS for Boat Launching
Ramp, Mala, Maui, Hawaii - Job H. C. 4035

This letter is in response to your comments on the
Environmental Impact Statement for Mala Boat Launching Ramp,
Lahaina, Maui.

Comment #1.

Please be assured that this matter will be fully investi-
gated, in coordination with the State Historical Preservation
Officer.

Comment #2.

We agree that landscaping should be included in the initial
construction contract, funds permitting. At this time, funding
projections appear adequate to cover landscaping, comfort stations
and area lighting.

Comment #3.

Existing Coast Guard and Public Health regulations prohibit
actions by boaters that would pollute the receiving waters.

Comment #4:

Because the magnitude of the project is quite small, no
extraordinary measures are felt to be necessary beyond those
normally required for county and A.C.O.E. construction permits,
and the State industrial safety and Board of Health regulations.
Construction contract specifications will reflect these require-
ments. Tentatively, construction is scheduled to be initiated
in late 1976 or early 1977.

Mr. Ralph N. Masuda
Page 2
August 11, 1976

HAR-EP 678

Comment #5.

We agree that 1) no action; and 2) a park in conjunction with the launching facility are logical alternatives to the proposed plan. However, if no action is taken, then the requirement for small boat launching facilities in West Maui will not be met. The present launching ramp in Lahaina Small Boat Harbor is completely inadequate due to crowded conditions there, the presence only of a single ramp, and the almost complete absence of parking for cars or car/trailers within a reasonable distance from the ramp. With regard to providing a park in conjunction with the launching facility, the two uses are not incompatible. On the contrary, the planned landscaping and comfort station will provide a park-like atmosphere, although the space available for grass areas, picnic tables, and the like will be extremely limited. If the site were larger, e.g., including the parcel south of the wharf access road, this alternative would be extremely attractive and feasible.

Comment #6.

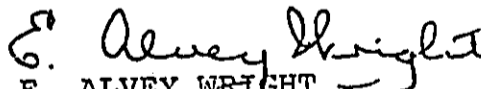
Thank you for this information.

Comment #7.

The plans have been coordinated with the State Division of Parks since the area is under State jurisdiction and preliminary park plans had been prepared. However, if there are any additional comments and/or recommendations you feel are pertinent to the ramp project, please do not hesitate to submit them directly to the Harbors Division for consideration.

We appreciate your comments on this matter.

Very truly yours,


E. ALVEY WRIGHT
Director

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 15th AIR BASE WING (PACAF)
APO SAN FRANCISCO 96353



REF: DEEE (Mr. Nakashima, 4492158)

27 MAY 1976

SUBJECT: Environmental Impact Statements

TO: Environmental Quality Commission
550 Halekauwila Street, Rm 301
Honolulu, Hawaii 96813

1. This headquarters has no comments to render relative to the environmental impact statements listed below:

- a. Boat Launching Ramp, Mala, Maui, Hawaii
- b. St. Louis Chaminade Education Center, Honolulu, Oahu, Hawaii
- c. Proposed Kuhio Avenue Widening Project, Honolulu, Oahu, Hawaii

2. We greatly appreciate your cooperative efforts in keeping the Air Force apprised of your development projects throughout the state and the opportunity to review the subject statements.

A handwritten signature in black ink, appearing to read "Ben D. Kosa".

BEN D. KOSA
Dep. Dir. of Civil Engineering



GEORGE R. ARIYOSHI
GOVERNOR



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

August 11, 1976

E. ALVEY WRIGHT
DIRECTOR

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

IN REPLY REFER TO:

HAR-EP 674

Mr. Ben D. Kosa
Dep. Dir. of Civil Engineering
Department of the Air Force
Headquarters 15th Air Base
Wing (PACAF)
APO San Francisco 96553

Dear Mr. Kosa:

Subject: Review of Draft EIS for Boat Launching
Ramp, Mala, Hawaii - Job H. C. 4035

We appreciate your review of the subject draft EIS.

Very truly yours,

E. Alvey Wright
E. ALVEY WRIGHT
Director

University of Hawaii at Manoa

Water Resources Research Center

MEMORANDUM

May 28, 1976

MEMO TO: Environmental Quality Commission

FROM: Frank L. Peterson *F.L. Peterson*
Acting Asst. Director, WRRRC

SUBJECT: EIS for Boat Launching Ramp, Mala, Maui, Hawaii

This EIS has been reviewed by F. Peterson, E. Murabayashi and H. Gee, and the following comments summarize our reactions.

We feel there are several questions of major significance which must be raised. First, in light of the fact that wave surge at this site presents such a problem that construction of two breakwater structures at a cost of \$112,400 (approximately one-third of the total project cost) is required, and furthermore, since the problem of surge is not particularly widespread along this section of the Maui coastline, but rather appears to be a problem associated with local conditions at Mala ("the problem is thereby revealed as one of orientation of the wharf, coupled with the peculiar bathymetry of the area, and not especially intense or concentrated wave action." from EIS, p. 24-25), has adequate attention been given to exploring other alternative sites? In other words, are the benefits of placing the proposed boat ramp at Mala sufficient to justify the large additional costs of the breakwater structures?

Furthermore, a problem of related significance to the above question of siting the boat ramp at Mala is posed by possible sedimentation problems at this site. Although on the bottom of p. 44 of this EIS it is stated "sand movement along the beach In neither case will the sand deposits be large or permanent," no documentation is provided to support this conclusion. In fact, on the top of p. 45 of the EIS it is stated "A hazard exists from Kahoma Stream, which is likely to be full at the same time as Kona winds and waves are present. The combination will have some tendency to deposit silt in the shelter of the breakwater, in the proposed dredged area," and on the top of p. 32, "with increasing development of upland areas in the watershed of Kahoma Stream and the proposed channelization of the stream by the Army Corps of Engineers, sediment loads and discharge patterns may change." Consequently, owing to the uncertainty of the magnitude and effects of sedimentation associated with siting the boat ramp at Mala, the question is again raised, has adequate attention been paid to possible alternative sites?

On p. 41 reference is made to a 1971 inventory of surfing sites and comments that indicate its undesirability because of the existing sewage

Environmental Quality Commission

Page 2

May 28, 1976

outfall. However, the EIS does not indicate whether the site is actually being used by surfers at the present. If, in fact, the effects of the sewage outfall are sufficient enough to discourage surfers from being in the area, maybe the boat ramp should not be built until the adjacent outfall is moved as reported.

A final comment of rather major significance is that there is no statement on how, or whether or not the launching area will affect the designated state Water Quality Standards. In fact, there is no statement on what the standard is for this area.

There are also several other points of lesser significance, but which still merit concern, that we would like to comment on. Figure 1 on p. 7 shows a "future comfort station" and the discussion on p. 3 indicates that some of the facilities will be done in increments. Perhaps the comfort station should be built during the initial stage to eliminate possible unsanitary conditions on land or in the water. Furthermore, the type of on-site sewage disposal (p. 9) is not indicated, thus, it is not possible to assess its effects on the groundwater and seepage into the ocean.

On p. 36, Figure 15, the proposed launching area is in an "0" designated area. However, the legend does not indicate what "0" signifies. Control measures for sediment abatement during construction (dredging and ramp grading) are not addressed. Similarly there is no indication of the type of surfacing, whether gravel or more impermeable materials to be used on the parking lot; this will affect the runoff. Also, the type of landscaping is not detailed. Consequently, it is impossible to judge its effectiveness in controlling erosion. On the bottom of p. 31 the EIS states "Compare the photo in Figure 6, taken in July 1975, with Figure 4A." It is difficult, if not impossible, to compare these figures with any semblance of accuracy as Figure 4A is a map (overhead view) and Figure 6 is a horizontal photo with a very limited field of vision.

FLP:jmn

cc: Ed Murabayashi
Henry Gee

GEORGE R. ARIYOSHI
GOVERNOR



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

E. ALVEY WRIGHT
DIRECTOR

DEPUTY DIRECTORS
WALLACE AOKI
HYOKICHI HIGASHIONNA
DOUGLAS S. SAKAMOTO
CHARLES O. SWANSON

IN REPLY REFER TO:

August 11, 1976

HAR-EP 677

MEMORANDUM

TO: STEPHEN LAU, DIRECTOR
WATER RESOURCES RESEARCH CENTER

FROM: E. ALVEY WRIGHT, DIRECTOR
DEPARTMENT OF TRANSPORTATION

SUBJECT: REVIEW OF DRAFT EIS FOR BOAT LAUNCHING RAMP, MALA,
MAUI, HAWAII - JOB H. C. 4035

This is in response to Mr. Frank L. Peterson's memo. of
May 28, 1976, subject as above:

Comment #1.

The design of a small boat launching facility represents a compromise among a number of factors, because the funds available for such a facility are very limited if it is not associated with a full-sized harbor. First, a launching ramp, in order to be justified at all, must be usable for a large percentage of all the days each year. Second, a fact not generally realized, all of the really favorable sites for harbors have long since been occupied, leaving only relatively exposed locations from which to choose. Third, the cost to the public of acquiring private coastal land for boating purposes is so high as to be prohibitive for projects of this small magnitude. We are, therefore, faced with a limited choice among relatively unattractive sites. Mala represents the best alternative that is realistically available in West Maui. The presence of the breakwater improves the usability of this site from an unacceptable to an acceptable number of days per year. If the facility cannot be provided with a sheltering breakwater, we believe it should not be built.

Mr. Stephen Lau
Page 2
August 11, 1976

HAR-EP 677

Comment #2.

With regard to sedimentation, the beach at Mala is relatively stable; as noted in the EIS, sedimentation in the dredged area is not expected to be a serious problem. Depending on the behavior of stream discharges in the future, after the proposed stream improvements are completed, occasional maintenance dredging may be required. The Department of Transportation will maintain close coordination with the Army Corps of Engineers, Honolulu District, during the design phase of the stream improvement project.

Comment #3.

Regarding the suggestion to delay construction of the launching ramp because surfers have complained about the nearby sewer outfall; first, the surf is 1/2 mile from the proposed launch facility, whereas the outfall is immediately adjacent to it; second, the exposure of surfers to polluted water is much more severe than that of boaters.

Comment #4.

All coastal areas on Maui except Malaea, Kahului, and Lahaina Harbors are classified class A. The Mala launching ramp area may be reclassified to class B.

Comment #5.

At present, the entire project is scheduled for construction at once. All necessary permits will be obtained before any construction is initiated.

Comment #6.

The land-use designations "0" were inadvertently left off the land-use map on page 36. They are peculiar to the Lahaina Community Development Plan:

- | | |
|-----|---------------------|
| 0 | indicates open |
| 0.1 | park |
| 0.2 | historical/cultural |
| 0.3 | beach/access |
| 0.4 | shoreline setback |

Mr. Stephen Lau
Page 3
August 11, 1976

HAR-EP 677

- 0.5 surface drainage
- 0.6 harbor/wharf/breakwater
- 0.7 offstreet parking/loading
- 0.8 cemetery
- 0.9 sewage treatment
- 0.10 potential tsunami inundation area

Comment #7.

Detailed information such as type of pavement and landscaping to be provided is not available at this time. Because of the relatively small magnitude of this project, no significant adverse impact is expected to be generated by these aspects of the project. Should any occur, you can be assured mitigating measures will be promptly instituted.

We appreciate your comments on this matter.

E. Alvey Wright
E. ALVEY WRIGHT



DEPARTMENT OF TRANSPORTATION
UNITED STATES COAST GUARD

546-5532

Address reply to:
COMMANDER (MCP)
Fourteenth Coast Guard District
677 Ala Moana
Honolulu, Hawaii 96813

5922

1 JUN 1976

DEPT. OF
TRANSPORTATION

DIRECTOR'S OFFICE

Admiral E. Alvey Wright
Director
Department of Transportation
State of Hawaii
869 Punchbowl Street
Honolulu, Hawaii 96813

Dear Admiral Wright:

Staff review of the "EIS for the Proposed Boat Launch Ramp Facility, Mala, Maui" has been completed, and the Coast Guard has no objections to implementing the project as stated therein.

The following comments are submitted:

a. Page 8 refers to obstruction lights and channel markers. It is requested that there be coordination on this matter with our District Aids to Navigation Branch, phone 546-7130. Any requirements for Coast Guard navigational aids should be submitted early in order to program for necessary funding and installation.

b. Some dredging activity is discussed in the EIS. It is assumed that any dredge spoils will be used as fill material in connection with the project or disposed of on land. Although this is a matter of direct concern to the U. S. Army Corps of Engineers, the Coast Guard would have further interest in this matter if any other ocean dumping of the dredge spoils is being considered.

c. The EIS lists various items which the new facility will have including certain utilities, a boat washdown area, parking, a comfort station, etc. No mention is made, however, of any vessel pumpout facilities for sewage and oily wastes. In the interest of the marine environment and current pollution prevention regulations this matter should be considered based on the type of vessels which might be involved and anticipated use.

The opportunity to review and comment on the EIS is appreciated.

Sincerely,

EDMOND JANCZYK
Captain, U. S. Coast Guard
Chief of Staff
Fourteenth Coast Guard District
Acting

*Coordinate w/
Low High ASAP*

*No problem
to ocean dumping*

*to vessel anticipated
if arises, it can
be provided*

1003

GEORGE R. ARIYOSHI
GOVERNOR



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

E. ALVEY WRIGHT
DIRECTOR

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

IN REPLY REFER TO:

August 11, 1976

HAR-EP 676

Commander (mep)
Fourteenth Coast Guard District
677 Ala Moana
Honolulu, Hawaii 96813

Attention: Captain Edmond Janczyk

Dear Sir:

Subject: Review of Draft EIS for Boat Launching
Ramp, Mala, Maui, Hawaii - Job H. C. 4035

In response to your comments on the subject draft EIS,
the following is offered:

- a. Coordination with the District Aids to Navigation branch will be maintained. Our request for Coast Guard Navigational aids will be submitted in the near future.
- b. No ocean dumping is proposed.
- c. The facility will accommodate only relatively small trailered boats and the need for pump-out was thus deemed unnecessary. Should the need arise later, however, it can be provided at that time.

Thank you for your comments.

Very truly yours,

E. Alvey Wright
E. ALVEY WRIGHT
Director



11096

DEPARTMENT OF THE ARMY
U. S. ARMY ENGINEER DISTRICT, HONOLULU
BLDG. 230, FT. SHAFTER
APO SAN FRANCISCO 96550

PODED-PV

3 June 1976

Mr. E. Alvey Wright, Director
Department of Transportation
State of Hawaii
869 Punchbowl Street
Honolulu, Hawaii 96813

DIRECTOR'S OFFICE
 JUN 7 8 05 AM '76
 DEPT. OF
 TRANSPORTATION

Dear Mr. Wright:

We have reviewed the Environmental Impact Statement for Boat Launching Ramp, Mala, Maui, Hawaii, and offer the following comments for your consideration.

a. As noted under Required Approvals, page 51, the proposed project will require a Department of the Army permit under Section 10 of the River and Harbor Act of 1899 and Section 404 of the Federal Water Pollution Control Act Amendments (P.L. 92-500).

b. The Pacific Ocean Division, Corps of Engineers, has two studies underway in the Lahaina area which may be affected by the launching ramp plans. The Lahaina Small Boat Harbor study is examining alternative harbor development sites, including Mala. We will continue to coordinate the site locations and the types of shoreside development for a new boat harbor and for the launching facility through the Harbors Division. The Kahoma Stream Flood Control Project, page 40, is currently awaiting Congressional action for project authorization. Design and construction schedules are subject to action by Congress and are uncertain at this time. Two gravesites along the left bank of Kahoma Stream are likely to be affected by the flood control project. Our office would like to be kept informed of the plans to conduct a Phase I Intensive Survey of the burial complex, as recommended by Bishop Museum, and the eventual relocation of the gravesites for the launch facility. It would be appropriate to include the two burials, labelled numbers 1 and 2 on the Appendix C map, in any future studies and actions regarding the total burial complex. Please contact our Planning Branch so that we may work with your Harbors



PODED-PV
Mr. E. Alvey Wright

3 June 1976

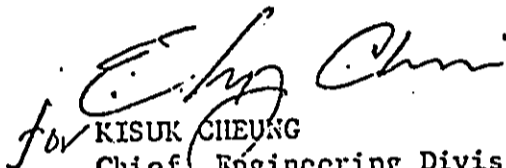
Division to assure that full consideration is given to the preservation or mitigation of historic-cultural resources affected by both projects.

c. The possible shoaling in the launch area is recognized on page 44. An estimate of the need for maintenance dredging of the shoaled material should be addressed.

d. The titles of the tables on pages B9 through B12 should be clarified. Only fish species are listed, although the caption mentions coral and the discussions on page 8 mention bottom-dwelling organisms.

Thank you for the opportunity of reviewing this statement.

Sincerely yours,


for KISUK CHEUNG
Chief, Engineering Division

Copy furnished:
Office of Environmental Quality
Control
550 Halekauwila Street
Honolulu, Hawaii 96813

GEORGE R. ARIYOSHI
GOVERNOR



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HARBORS DIVISION

79 SO. NIMITZ HIGHWAY
HONOLULU, HAWAII 96813

August 11, 1976

E. ALVEY WRIGHT
DIRECTOR

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

IN REPLY REFER TO:

HAR-EP 675

Mr. Kisuk Cheung
Chief, Engineering Division
Department of the Army
U. S. Army Engineer District,
Honolulu
Building 230, Fort Shafter
APO San Francisco 96558

Dear Mr. Cheung:

Subject: Review of the Draft EIS for Boat Launching
Ramp, Mala, Maui, Hawaii - Job H. C. 4035

In response to your comments on the subject draft EIS, the following is offered:

- a. A Department of the Army permit will be applied for before construction is initiated.
- b. The Harbors Division is well-aware of both the Kahoma Stream Flood Control Project and the alternative Lahaina Boat Harbor site study. Since the ramp facility is likely to be operating well in advance of the Corps' projects, the Corps' planners should coordinate with and allow the Harbors Division to review any plans which may affect the launching ramp operations.

Regarding grave sites, it is possible for the State's disinternment plans to include the two grave sites located on the bank of the Kahoma Stream. To this end, the Corps' Planning Branch will be kept apprised on the progress of this aspect of the project. In addition, close coordination will be maintained with the State's Historic Preservation Officer to insure that full consideration is given to the historic-cultural resources of the affected area.

- c. The Mala facility has been designed to minimize the possibility of shoaling. At this time, it is difficult to estimate maintenance needs; however, the channel and basin will be kept navigable by providing the periodic maintenance dredging required which is expected to be minimal.

Mr. Kisuk Cheung
Page 2
August 11, 1976

HAR-EP 675

- d. At the top of pages B9 and B11, the wording indicates the conditions under which the fish transect study was conducted. The description was not intended to be titles for the table.

Thank you for your comments.

Very truly yours,

E. Alvey Wright
E. ALVEY WRIGHT
Director

GEORGE R. ARIOYOHII
GOVERNOR



DIRECTOR OF OFFICE AND, PH.D.
DIRECTOR

TELEPHONE NO.

JUN 16 8 10 AM '76

STATE OF HAWAII
OFFICE OF ENVIRONMENTAL QUALITY CONTROL
OFFICE OF THE GOVERNOR
550 HALEKUANILA ST.
ROOM 351
HONOLULU, HAWAII 96813

DEPT. OF
TRANSPORTATION

June 14, 1976

MEMORANDUM

TO: E. Alvey Wright, Director
Department of Transportation

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

SUBJECT: Environmental Impact Statement for the Proposed
Boat Launching Ramp, Mala, Maui

A handwritten signature in cursive script, appearing to read "Richard E. Marland".

We have received a substantive comment on the subject
EIS from the Water Resources Research Center. Please amend
our letter of June 7, 1976 on this topic.

Your attention on this matter is appreciated.

Attachment

GEORGE H. ANNE
GOVERNOR



RICHARD E. MARLAND, PH.D.
DIRECTOR

TELEPHONE NO.
548-6915

JUN 9 7 53 AM '76

DEPT. OF
TRANSPORTATION

STATE OF HAWAII
OFFICE OF ENVIRONMENTAL QUALITY CONTROL
OFFICE OF THE GOVERNOR

550 MALEKAUOLA ST.
ROOM 301
HONOLULU HAWAII 96813

June 7, 1976

MEMORANDUM

TO: E. Alvey Wright, Director
Department of Transportation

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

SUBJECT: Environmental Impact Statement for the Proposed
Boat Launching Ramp Facility, Mala, Maui

This Office has reviewed the environmental impact statement for the proposed Mala Boat Launching Ramp Facility and offers the following comments:

1. The actual size of the breakwater structures, the area to be filled and the resultant contours from the grading should be stated in the EIS. Will these structures significantly affect the long-shore currents of the area?
2. A description of the terrestrial flora and fauna found at the site should be included. Are there any threatened or endangered species of flora or fauna in the area?
3. Where will the dredged material be deposited? What mitigation measures will be utilized during the construction phase of the project?
4. What are the projected operational costs of the facility? Does this figure include the potential maintenance dredging due to sediment deposition from Kahoma Stream?)
5. What are the irreversible and irretrievable commitments of resources that would be involved in the proposed action should it be implemented?

6. We suggest a revision of the EIS with respect to the EIS content requirement subsections (1:42 m & o) concerning the reproduction of comments and responses during the consultation phase and the list of necessary approvals.
7. In order to avoid undue cross-reference by readers of the EIS, the park concept which is included in the current Lahaina Community Development Plan, as stated on p. 35, should be shown. The key for figure 15, p.36, should include the 0 designations.
8. The discussion of the relationship between the proposed facility, the proposed new Lahaina Boat Harbor and the Statewide Boat Launching Facilities Master Plan needs expansion. We are aware of the delay in siting the new boat harbor for Lahaina and that in recent months the Corps of Engineers and the Lahaina community have narrowed the proposed site choices to three locations. One of the three locations is Mala Wharf, the site of this proposed boat launching facility. As stated on p. 123 in the Statewide Boat Launching Facilities Master Plan, "the launching facilities should be located at the new Lahaina harbor site when constructed." Is the Mala facility, as proposed, to be considered an interim relief measure, or the permanent site for boat launching facilities in the Lahaina area for the foreseeable future? Will the proposed use, especially the siting of the breakwaters, preclude the use of this site for the new Lahaina Boat Harbor?
9. Although entitled "Alternate Launch Ramp Sites," there is no actual discussion of where these alternate sites are, the impacts associated with utilizing those sites, or the reasons why they were not chosen.

This matter should be discussed, especially since the Mala site is not recommended in the Statewide Boat Launching Facilities Master Plan.
10. In general terms, this statement fails to provide necessary consideration of the content requirements as established in Section 1:42, Regulations of the Environmental Quality Commission. We recommend that more careful attention be paid to that regulation, and that the revised statement reflect such cognizance.

This Office has received a total of nine (9) comments on the EIS for the Proposed Boat Launching Facility, Mala, Maui as indicated on the attached list.

page 3

The EIS Regulations allow the accepting authority or his authorized representative to consider responses received after the fourteen day response period. This office will exercise the option and will consider responses after the fourteen day period.

Thank you for the opportunity to review the Environmental Impact Statement. We will look forward to the revised statement.

Attachment

List of Commentors for the Environmental Impact Statement
for the Proposed Boat Launching Facility, Mala, Maui by DOT.

<u>STATE AGENCIES</u>	<u>DATE OF COMMENT</u>
Dept. of Agriculture	5/7/76
Dept. of Land and Natural Resources	5/21/76
Dept. of Planning and Economic Development	5/19/76
*Dept. of Defense	5/7/76
Dept. of Social Services and Housing	5/10/76
 <u>FEDERAL AGENCIES</u>	
*15 ABWg/DEE	5/27/76
*Army - DAFE	5/7/76
U.S. Coast Guard	6/1/76
 <u>COUNTY AGENCIES</u>	
Planning Department, County of Maui	5/24/76
 *No comments	

GEORGE R. ARIYOSHI
GOVERNOR



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

E. ALVEY WRIGHT
DIRECTOR

DEPUTY DIRECTORS
WALLACE AOKI
HYOKICHI HIGASHIMURA
DOUGLAS S. SAKAMOTO
CHARLES O. SWANSON

IN REPLY REFER TO:

August 11, 1976

HAR-EP 682

MEMORANDUM

TO: HONORABLE RICHARD E. MARLAND
FROM: E. ALVEY WRIGHT
SUBJECT: REVIEW OF DRAFT EIS FOR BOAT LAUNCHING RAMP, MALA,
MAUI, HAWAII - JOB H. C. 4035

This office has received two letters from O.E.Q.C. containing comments or enclosures. We respond here to the comments in your letter of June 7, 1976. Responses to the enclosures have been prepared separately and sent directly to each resposdee.

Comment #1.

The EIS was prepared at the concept design stage of the project. The exact area to be filled, size of the breakwater, etc., will be determined during final design. The breakwater is not expected to significantly affect longshore currents.

Comment #2.

The terrestrial flora at the site consists of a grove of keawe trees and some grasses. No threatened species of plants or animals have been observed.

Comment #3.

The small amount of dredged material will be deposited within an adjacent fill area near and on the beach, in shallow water. No special mitigating methods are necessary, since the volume of material to be moved is small.

Honorable Richard E. Marland
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Comment #4.

The facility will be operated and maintained by the Lahaina Boat Harbor attendant and maintenance staff of the Harbors Maui District Office. Only a small utility cost is expected. The cost of maintenance dredging will be mainly a factor of the design of the proposed improvements to Kahoma Stream. The Department of Transportation will maintain close coordination with the U. S. Army Corps of Engineers, Honolulu District, during the design of these improvements. All costs associated with the operations and maintenance of the proposed facility are unknown but will be absorbed by the Harbors Division.

Comment #5.

In addition to expenditures of fuel and the permanent dedication of land and water area, labor, concrete, steel reinforcing, form materials, paving material, and construction materials will be utilized in quantities to be specified in the final plans and specifications.

Comment #6.

During the course of the field investigations, conversations were had with many persons in the Lahaina area. These included boat owners, fishermen, long-time residents, neighbors, and persons concerned with the graves on the site, as well as Maui County officials concerned with planning, and State officials connected with harbor facility operations. No detailed records of these conversations were kept. A public hearing was held and transcripts of this hearing and lists of those attending are available.

Comment #7.

Inclusions of the entire park concept, and reproduction of the Lahaina Community Development plan are not necessary for an understanding of the proposed launching facility. Omissions of the "0" classification was an oversight. It is now included as a response to comments by the Water Resources Research Center.

Honorable Richard E. Marland
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Comment #8.

The problem of providing a boat harbor for Lahaina is complicated and sensitive. In fact, at this time, it is by no means certain that a harbor will ever be built there. In the meantime, the construction of a launching facility at Mala should go ahead because a) the community desires it, b) both land and launching are available, and c) the launching facility can be incorporated into the design of a future harbor should that location be chosen for a harbor.

Comment #9.

The Harbors Division made exhaustive alternate site investigations. Due to limited State lands and the scarcity of feasible launching sites, the alternatives were narrowed down to 3 sites: 1) Wahikuli State Park, 2) Olowalu, and 3) Mala. Objections by State Parks Division eliminated the Wahikuli site. Olowalu, although oceanographically superior to the other sites, did not have State lands available and access to the site was a problem. The costs involved to develop the Olowalu site were determined to be prohibitive; consequently, the Olowalu site was dropped from consideration. By the process of elimination, the Mala site was chosen to locate a launching facility. This site has been unanimously accepted.

Comment #10.

In responding to the previous 9 items, we feel the content requirements as established in Section 1:42, Regulations of the Environmental Quality Commission have been met.

Thank you for your comments.


E. ALVEY WRIGHT



DIRECTOR'S OFFICE

University of Hawaii at Manoa Honolulu 21 PM '76

Environmental Center
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Telephone (808) 955-7351

DEPT. OF
TRANSPORTATION

June 7, 1976

Office of the Director

TO: E. Alvey Wright, Director
Department of Transportation

FROM: Doak C. Cox

RE: Review of Draft Environmental Impact Statement for
Boat Launching Ramp, Mala, Maui, Hawaii

The Environmental Center's review of the above cited EIS has been prepared with the assistance of Brent Gallagher (Oceanography), Harold G. Loomis (Joint Tsunami Research Effort), and Jacquelin Miller and Clare Shinsato (Environmental Center).

Pp. 11-14. A. Physical Characteristics.

We note that the design of this project is based on hydrographic and topographic surveys dated 1920. Are conditions sufficiently static to permit the use of such dated surveys?

Pp. 18-19. Mala Wharf.

"Though this structure has been condemned by the State Division of Harbors as unsafe, it is used as a recreation facility by fishermen, sightseers, and picnickers." The construction of the boat launching ramp will bring more people to this area further increasing the number of people exposed to this hazard. The DEIS fails to address what precautionary or safety measures will be taken. This section should be expanded and fully addressed in the final EIS. What improvements if any will be made? What safety measures will be implemented to protect the public against possible accidents.

Pp. 35-39

In the EIS, landscaping and comfort station (p.3) are included under future work. What this amounts to is destruction of a natural beach area for the construction of the launching ramps and parking area without any of the compensating landscaping. In fact, construction of adequate comfort stations, to accommodate increased usage of the area, should be provided in the initial construction phase to prevent unsanitary onshore and off shore conditions.

AN EQUAL OPPORTUNITY EMPLOYER

With the new sewage collection system and waste water reclamation planned by the county perhaps construction of this project should be postponed until construction of the new sewage plant is completed and when funds are available to either improve or demolish the existing Mala Wharf.

The Mala boat launching site is also designated for park use but "... the State Department of Land and Natural Resources has not yet made specific plans nor commitments." Improvements to this area, existing Mala Wharf, boat launching ramps, park and recreational facilities as well as comfort stations and landscaping would seem more desirable if done as one project or if at least construction activities were done simultaneously.

Pg. 42. Historical/Archaeological Aspects.

Although there are legal provisions for moving the historical cemetery in the area, people concerned with Hawaiian Antiquities may consider the removal of at least 53 burials to build a parking lot a significant environmental change.

As suggested by the Bishop Museum (Appendix C. Pg. 2):

"The appropriate action at this point is the conduct of a Phase I Survey--intensive on-site work including detailed recording and plotting of all features, and test excavations constituting a valid subsurface sampling of the sand dune...attempts...to contact any next-of-kin or other relative or individuals with knowledge of the burials located to-date. This Phase I Survey work will permit evaluation of the overall significance of the dune site and formulation of specific recommendations regarding the nature and scope of necessary salvage work (Phase II Excavations)."

Will a phase I survey be conducted prior to construction of the parking facility? The final EIS should include a statement whether the above recommendation will be undertaken. If a Phase I Survey is not undertaken by the Bishop Museum what plans and procedures for the removal of the "historic graves" will be followed? These on site operations should be thoroughly outlined in the final EIS.

Pp. 43-45. III. Environmental Impact.

If the present use of the Lahaina Boat Launch Ramp is 20 launchings on peak days and if a portion of this is diverted to the new facility at Mala, the estimate of 20,000 user-days annually seems to be too high.

Breakwater.

The most serious problem we foresee is the effect of the proposed breakwater on surge and sand deposition. The breakwater may create a silting problem and may even exacerbate the surge problems. The launching ramp may be satisfactory without the breakwater. Since fewer boats would be going out in heavy weather, the existing Lahaina Boat Launching Ramp would probably be adequate for that traffic so that the need for a breakwater is further in question.

These concerns should be looked at carefully by experts and addressed in the final EIS.

The EIS does not point out clearly that considerable filling in of the shallow water is envisaged. From the small map (pg.) it looks as though the shoreline is extended some distance seaward by the project. The effect of filling on long-shore currents, sand deposition, and marine life should be fully discussed and included in the final EIS.

Appendix D. Need for Protective Breakwater.

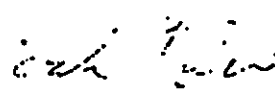
There are serious reservations, two in particular, about whether Appendix D is accurate:

1) The table on page D-2 appears misleading. The breakwater seems to have been made to look favorable by using bigger, less frequently occurring waves in the "with breakwater" column than were used in the "no breakwater" column.

2) It is questionable to use wave frequency data from Oahu to infer what percentage of the time the Mala site would be disabled by waves over a certain height. Without direct measurements it is very hard to say how deep water wave data will translate into breaker height data at a particular spot such as Mala.

Oceanic Institute has been contacted by one of our reviewers concerning the above questions and objections. It is our understanding that Appendix D will be revised in the final EIS.

We appreciate the opportunity to review this DEIS and request a copy of the Final Environmental Impact Statement.



Doak C. Cox, Director

GEORGE R. ARIYOSHI
GOVERNOR



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IN REPLY REFER TO:

August 11, 1976

HAR-EP 157

MEMORANDUM

TO: DOAK C. COX, DIRECTOR
UNIVERSITY OF HAWAII ENVIRONMENTAL CENTER

FROM: E. ALVEY WRIGHT, DIRECTOR
DEPARTMENT OF TRANSPORTATION

SUBJECT: REVIEW OF DRAFT EIS FOR BOAT LAUNCHING RAMP, MALA,
MAUI, HAWAII - JOB H. C. 4035

This memo is in response to yours of 7 June, 1976, on the subject draft EIS:

Comment pp. 11 - 14.

Physical Characteristics: In addition to the hydrographic and topographic surveys and soil borings made for the construction of the Mala Wharf, the project has a topographic and bathymetric survey which was made in 1975 as part of this contract.

Comment pp. 18 - 19.

"What safety measures will be implemented?" Erecting appropriate hazard signs and maintaining a physical barrier to discourage use of the wharf are presently contemplated until such time as a decision is made to demolish the structure or to refurbish it.

Comment pp. 35 - 39.

- a. Comfort stations and landscaping are now included in the initial construction schedule.
- b. The launch facility, as designed, can be completed and operated without reference to future changes in the status of the sewer outfall or Mala Wharf. Therefore, it does not seem reasonable to deprive Maui citizens of the use of this facility for an indefinite number of years.
- c. We agree that joint interagency planning is a desirable goal. Your comment is noted.

Mr. Doak C. Cox
Page 2
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Comment page 42.

With regard to the appropriate actions to be taken for moving the modern graves, and for investigating any possible pre-historic materials, this matter is being coordinated with the State Historical Preservation Office.

Comment pp. 43 - 45.

Once the Mala boat launching facility is in operation, the Lahaina ramp will be closed to trailered boat use. Presently, the 20 launchings associated with the Lahaina ramp translates into approximately 7,000 user-days. Thus, the estimate of 20,000 user-days annually is not felt unrealistic when considering a three-fold increase in boat launchings is projected to occur at the Mala facility by the year 1990.

Breakwater.

The reasons for employing a breakwater at Mala were not clearly presented in the Draft EIS. They are:

a. Persistent low-intensity swell from the south and southwest, especially during the summer half of the year, produces frequent small surf at the launch ramp site, which would constitute a serious hazard to ramp users and their boats, even in good weather, were a breakwater not provided.

b. The launch ramp needs protection during mild Kona weather, and other periods when wind waves are present at the site.

c. There is overwhelming agreement among local boaters that a breakwater is necessary for high percentage useability.

We agree that the application of wave data from Honolulu to this site leaves much to be desired. No data is available for the Lahaina area; however, Appendix D will be revised.

Thank you for your comments.

Very truly yours,

E. Alvey Wright
E. ALVEY WRIGHT
Director