



DEPARTMENT  
**HUMAN CONCERNS**  
COUNTY OF MAUI

LINDA CROCKETT LINGLE

~~XXXXXXXXXXXX~~

Mayor

STEPHANIE AVEIRO ~~XXXXXXXXXXXX~~

Director

HENRY OLIVA ~~XXXXXXXXXXXX~~

Deputy Director

200 SOUTH HIGH STREET, WAILUKU, HAWAII 96793

(808) 243-7805

January 29, 1991

STATE OF HAWAII  
Office of Environmental Quality Control  
465 South King Street, Room 104  
Honolulu, Hawaii 96813

RE: SPECIAL MANAGEMENT AREA PERMIT APPLICATION  
FOR THE COUNTY OF MAUI, KAUNOA SENIORS  
CENTER CLASSROOM BUILDING AT SPRECKELSVILLE,  
MAUI, HAWAII TMK: 3-8-01:08

Dear OEQC:

We wish to file a negative declaration with your office for publication in the OEQC Bulletin, relative to the subject project.

Four copies of the Environmental Assessment for the project were previously submitted to your office by the project consultants, Hiyakumoto & Higuchi, Architects, Inc.

Should you have any questions about this letter, please contact us at (808) 243-7805.

Respectfully submitted,

*Stephanie Aveiro*

STEPHANIE AVEIRO  
Director, Human Concerns

SA:RT:kkw

cc: County of Maui, Dept. of Public Works, L.U.&C. Admin.  
Robin Tanaka, Dept. of Human Concerns; Senior Services  
Gerald N. Hiyakumoto, A.I.A.

~~XXXXXXXXXXXX~~  
Housing Division  
~~XXXXXXXXXXXX~~

~~XXXXXXXXXXXX~~  
Senior Services Division  
~~XXXXXXXXXXXX~~

~~XXXXXXXXXXXX~~  
Youth Services Division  
~~XXXXXXXXXXXX~~

~~XXXXXXXXXXXX~~  
Economic Development  
Division  
Coordinator

~~XXXXXXXXXXXX~~  
Immigrant Services  
Division  
Coordinator

~~XXXXXXXXXXXX~~  
Volunteer Action Division  
Coordinator

~~XXXXXXXXXXXX~~  
Office on Aging  
~~XXXXXXXXXXXX~~

1991-02-08-MA-FEA

\*  
**KAUNOA  
SENIORS  
CENTER**

**CLASSROOM  
BUILDING**

SPRECKLESVILLE\*  
MAUI HAWAII

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SPECIAL MANAGEMENT AREA  
PERMIT APPLICATION

DEPT. OF HUMAN CONCERNS  
COUNTY OF MAUI



COUNTY OF MAUI  
PLANNING DEPARTMENT  
200 South High Street, Wailuku, Hawaii 96793

SPECIAL MANAGEMENT AREA PERMIT  
APPLICATION FORM

I. APPLICANT INFORMATION

NAME: County of Maui Dept. of Human Concerns

ADDRESS: 200 South High Street

Wailuku, Maui, Hawaii 96793

TELEPHONE NO.: (Bus.) 243-7805 (Residence) \_\_\_\_\_

Applicant's Interest if Not the Owner: \_\_\_\_\_

APPLICANT NAME(S): Department of Human Concerns

APPLICANT SIGNATURE(S): Miriam K. Kahaloa

II. DESCRIPTION OF PROPERTY

Tax Map Key: 3-8-01:8 Acreage: 4.54 Ac.

Location(s): Corner of Hana Highway and Laulea Place, Spreckelsville

Current State Land Use District Boundary Designation:

U-Urban

Community Plan Designation:

P-Public/Quasi-Public

Maui County Zoning Designation, if Applicable:

R-3-Residential

Other Special Designation, if Applicable: \_\_\_\_\_

III. DESCRIPTION OF REQUEST

Briefly Describe the Existing Use of the Property:

The former Kaunoa School site is currently used as facilities for senior citizen programs and activities.

Briefly Describe the Proposed Development:

The proposed development is a new three (3) classroom building and offices for additional program requirements.

COMPUTER LOG # \_\_\_\_\_

SPECIAL MANAGEMENT AREA USE PERMIT APPLICATION  
REQUIRED SUBMITTALS

1. Evidence that the applicant is the owner or lessee of record of the real property.
- N/A 2. A notarized letter of authorization from the legal owner if the applicant is not the owner.
- N/A 3. Provide documentation that full compliance with Chapter 343, Hawaii Revised Statutes (HRS) and the Environmental Impact Statement (EIS) Rules of the State Department of Health have been met. If required pursuant to Chapter 343, HRS or by the Planning Director, six (6) sets of an EIS shall be submitted.
- X 4. Ten (10) copies of a written description of the proposed action, including but not limited to the use, length, width, height, depth, and building material of the proposed action and an assessment addressing the objectives, policies and guidelines set forth in Part II, Section 2-8 of the Rules and Regulations of the Planning Commission. (Environmental Assessment)
- N/A 5. Three (3) sets of a certified shoreline survey (one original). Survey shall be the actual field location of the shoreline or prepared by a land surveyor registered in the State of Hawaii. The survey maps developed by the registered land surveyor shall bear the surveyor's signature and date of field survey and the certifying signature and date of the chairman of the Board of Land and Natural Resources. (Survey to be recorded and valid within six months.)
- X 6. List of owners and lessees of real property within a 500 feet radius of the subject parcel should be obtained from the most current available list at the Maui County Department of Finance, Real Property Division. This list should include the Tax Map Key numbers and the names and addresses of all owners and lessees to be notified, including a map drawn to scale, clearly defining the 500-foot notification boundary and the parcels affected.
- X 7. Ten (10) sets of a preliminary drainage plan.
- X 8. Ten (10) sets of a plot plans of the land on which the proposed action is to occur. The plot plan shall be prepared to scale and be based upon an accurate instrument survey, and shall define and show the design of the proposed action and the existing physical conditions of the land, including but not limited to property boundaries, topography, natural and man made features, trees and structures.
- X 9. Ten (10) sets of a preliminary plan of the development designating in dimensions the location of the proposed action on the land. If structures are included in the action, the plan of the development shall also show a dimensional floor plan, sections, elevations, and other features.
- X 10. Ten (10) sets of a preliminary landscape planting and irrigation plan defining tree and shrub locations as well as landscape lighting and graphics.

\*ADDITIONAL SETS OF PLANS MAY BE REQUIRED BY THE PLANNING DEPARTMENT

- 11. Photographic Analysis (consisting of photographic slides) of the site, surrounding properties, and relationship of the site to the nearest public roadway.
- 12. Colored Rendering
- 13. Valuation of Project: \_\_\_\_\_
- 14. A \$150.00 non-refundable filing fee.
- 15. Any other information and documentation required by the Director. (i.e. traffic impact analysis, archaeological reconnaissance, etc.)

\*DOES THE PROJECT FALL UNDER ANY OF THE FOLLOWING:

- 1. The use of State or County funds or lands;
- 2. The use within any land classified as Conservation District by the State Land Use Commission under Chapter 205, Hawaii Revised Statutes;
- 3. The use within the shoreline area as defined in Section 205-31, Hawaii Revised Statutes;
- 4. The use within any Historic Site as designated in the National Register or Hawaii Register.

NOTE: Two (2) additional copies for projects located on Molokai.  
One (1) additional copy if the project fronts a State Highway.

TO: \_\_\_\_\_ DATE \_\_\_\_\_

Please be informed that the undersigned has applied to the County of Maui Planning Commission for a Special Management Area Permit Application pursuant to the Special Management Area Rules and Regulations of the County of Maui for the following parcel:

1. Project Name: Kaunoa Senior Center Classroom Building
2. Location: In the vicinity of Corner of Hana Highway and  
Street: Laulea Place in Spreckelsville
3. Tax Map Key: 3-8-01:8
4. Land Area of Project: 4.54 Ac.
5. Zone(s): \_\_\_\_\_
6. Proposed Development: A new three (3) classroom building and  
offices for additional senior program requirements.
7. No. of Stories: One (1)
8. No. of Buildings: One (1)
9. No. of Units: Four (4)
10. No. of Proposed Parking Stalls: \_\_\_\_\_

THIS SECTION TO BE COMPLETED BY THE PLANNING DEPARTMENT:

Public Hearing Date: \_\_\_\_\_

Time: \_\_\_\_\_

Place: \_\_\_\_\_

The hearing is held under the authority of Chapters 205A and 91, Hawaii Revised Statutes, and the Maui Planning Commission's rules. The particular sections of the Statute and rules involved are Sections 205A-26, 205A-27, 205A-28, and 205A-29, Hawaii Revised Statutes and Article I, Parts I, II, III and Article II, Parts I and II, Maui Planning Commission Rules.

Any person seeking to be admitted as a party must do so at least fifteen (15) days prior to said hearing and comply with the other provisions of Article I, Part II, Section 1-13 of the Maui County Planning Commission rules pertaining to intervention.

Any party may be represented by Counsel or other representative.

Information relative to the application is available for review at the Planning Department, 3rd Floor, County Building, Wailuku, Maui, Hawaii, Telephone 244-7735.

Testimony relative to this request may be submitted in writing to the Maui Planning Commission, 200 South High Street, Wailuku, Hawaii 96793, or presented in person at the time of the Public Hearing.

Miriam Kahalekai  
for Director of Human Concerns  
Name of Applicant \_\_\_\_\_

*Miriam K. Kahalekai*  
Signature \_\_\_\_\_

Department of Human Concerns  
200 South High Street, Wailuku  
Address \_\_\_\_\_

243-7805  
Phone Number \_\_\_\_\_

NOTARIZED AFFIDAVIT OF MAILING

oath, deposes and says that: \_\_\_\_\_, being first duly sworn on

1. Affiant is the applicant for a \_\_\_\_\_  
for land situated at \_\_\_\_\_  
TMK: \_\_\_\_\_.
2. Affiant did on \_\_\_\_\_, 19\_\_\_\_, deposit in the  
United States mail, post paid, by certified or registered  
mail and delivery to addressee, a copy of a Notice of  
Hearing, a copy of which is attached hereto as "Exhibit A"  
and made a part hereof, addressed to each of the persons  
identified on "Exhibit B", attached hereto and made a part  
hereof.
3. Thereafter there was returned to the Office of Affiant the  
United States Post Office Certified or Registered Mail  
Receipts, which are attached hereto as "Exhibit C" and made  
a part hereof.

Further Affiant sayeth naught:

\_\_\_\_\_

SPECIAL MANAGEMENT AREA  
ENVIRONMENTAL ASSESSMENT

KAUNOA SENIOR CENTER  
IMPROVEMENTS

INTRODUCTION

The County of Maui Department of Human Concerns is seeking a Special Management Area (SMA) permit for a proposed three (3) classroom building, constructed in relationship with the existing facilities that offer programs for the senior members of the community.

GENERAL INFORMATION

The proposed building will be located on the west side of the existing parking area, in proximity of the existing cafetorium building. The existing parking area will be expanded and resurfaced to provide additional parking for the proposed facility. The existing driveway entrance to the parking area, off of Alakapa Place, will be shifted to the north for a direct, one-way vehicular circulation pattern.

SITE CONDITIONS

The Community Plan designates this site for Public/Quasi-Public (P) use. The State Land Use Commission designates this area within the State Urban District. The parcel is currently zoned R-3 (Residential) in the Maui County Zoning Maps.

A cafetorium building, ceramics classroom building, office/classroom building, toilets, and caretaker residence exist on the site.

The total land area is 4.54 acres.

The ground slopes slightly in the northwesterly direction from elevation 15 feet to elevation 10 feet, in the general area of the building site and parking lot. Surface water runoff from the site is minimal, naturally sheet flowing along the existing topography, towards the northwest corner and adjacent pasture land. This drainage pattern will be maintained.

The prevailing wind direction is from the northeast.

There is no visual evidence that the site contains any historical, archaeological or cultural sites and artifacts.

Large monkey pod trees and palm trees remain on site, probably established when the facility served as the Kaunoa Elementary School. None of the plant, animal, or bird species usually found at the site are considered rare or on the endangered species list.

The site area is within Zone 'C' of the Flood Insurance Rate Map. Zone 'C'-designated areas are subject to minimal flooding and outside of the designated flood plain area.

Views of the coastline from the site are obstructed by natural terrain and residential development along the coastline. Scenic type views from existing public roadways will not be affected by this development.

#### NEIGHBORHOOD CHARACTERISTICS AND LAND USE

Adjacent properties on the west and north boundaries are undeveloped parcels of keawe and pasture land. Lands across Alakapa Place and Hana Highway are cultivated for sugar cane.

Alakapa Place intersects with Laulea Place, north of the parcel. Beachfront residential properties occur along Laulea Place.

#### THE PROPOSED DEVELOPMENT

Maui County Department of Human Concerns proposes the construction of a single story, three (3) classroom building with offices, lounge, and toilet/shower facilities on the west end of the existing parking area, adjacent to the existing cafeteria.

The development consists of a concrete masonry structure with a hip style roof design, compatible with the existing cafeteria structure.

The existing parking area will be expanded, resurfaced and rearranged to accommodate fifty-four (54) automobiles, accessible stalls for the disabled, and a drop-off area for vans.

Walkways and paved terrace areas are planned to better define gathering areas, circulation, and identity of the Kaunoa Senior Complex.

Landscape planting includes flowering shrubs, ground cover, shade trees and hedges in the parking area, gathering areas and around the proposed building. An automatic landscape irrigation system will be provided within all new planting areas.

ENVIRONMENTAL IMPACT EVALUATION

1. Involves an irrevocable commitment to loss or destruction of any natural or cultural resources?

There are no significant historical or cultural resources known to exist on the site.

2. Curtails the range of beneficial uses of the environment?

This proposed development will not curtail the range of beneficial uses of the environment. Water runoff, noise, and dust control measures will be provided to minimize the short-term effects which may result from this project during construction.

3. Conflicts with the County's or State's long-term environmental policies or goals and guidelines?

The proposed action is consistent with the Wailuku-Kahului Community Plan. The development does not appear to conflict with the long-term environmental policies or goals and guidelines of the State and County.

4. Substantially affects the economic or social welfare and activities of the Community, County or State?

The proposed development expands the existing facilities for greater recreational and social program opportunities for the senior community.

5. Involves substantial secondary impacts such as population changes and effects on public facilities?

The proposed development is a public facility offered to the senior population of the community and available to other community groups for gatherings, etc., within the existing Kaunoa Senior Complex.

6. Involves a substantial degradation of environmental quality?

The proposed development will not degrade the environmental quality.

7. Substantially affects a rare, threatened or endangered species, or its habitat?

There are no known rare, threatened or endangered species of animals or plants on the project site.

8. Detrimentially affects air or water quality or ambient noise levels?

This proposed action will have little, if any, effects on the ambient noise level, air, and water quality of the site area.

9. Affects an environmentally sensitive area, such as flood plains, tsunami zone, erosion prone areas, geologically hazardous lands, estuaries, fresh waters or coastal waters?

The property is within Zone 'C' of the Flood Insurance Rate Map classification. Areas in Zone 'C' are subject to minimal flooding. No other environmentally sensitive area exists in the immediate area of the proposed project.

10. Alters natural land forms and existing public views to and along the shoreline?

The proposed development is away from the shoreline. Public view opportunities to and along the shoreline are not available from the project area.

#### SUMMARY

In assessing possible impacts of the proposed project, it does not appear that the proposed action will have significant adverse environmental impacts.

This development is consistent with the objectives and policies set forth in the Rules and Regulations of the Planning Commission, Special Management Area, and the Wailuku-Kahului Community Plan.

KAUNOA SENIOR CENTER  
T.M.K.: 3-8-01:8

List of Property Owners within 500' of Project

3-8-01:2  
A&B Properties, Inc.  
Alexander & Baldwin, Inc.  
P. O. Box 156  
Kahului, HI 96732

3-8-01:24  
A&B-Hawaii, Inc.  
Society/Crippled Children  
Alexander & Baldwin, Inc.  
P. O. Box 156  
Kahului, HI 96732

3-8-02:6  
Robert J. Woods  
(Hawn. Trust Co., Ltd.)  
461 Laulea Place  
Paia, HI 96779

3-8-02:34  
Alexander McBarnet  
467 Laulea Place  
Paia, HI 96779

3-8-02:49  
A&B Properties, Inc.  
Alexander & Baldwin, Inc.  
P. O. Box 156  
Kahului, HI 96732

3-8-02:81  
A&B Properties, Inc.  
Christian Lassen  
Alexander & Baldwin, Inc.  
P. O. Box 156  
Kahului, HI 96732

3-8-02:84  
A&B-Hawaii, Inc.  
Alexander & Baldwin, Inc.  
P. O. Box 156  
Kahului, HI 96732

3-8-01:3  
A&B-Hawaii, Inc.  
Alexander & Baldwin, Inc.  
P. O. Box 156  
Kahului, HI 96732

3-8-01:64  
A&B Properties, Inc.  
Alexander & Baldwin, Inc.  
P. O. Box 156  
Kahului, HI 96732

3-8-02:7  
Willie Hugh Nelson  
P. O. Box 2689  
Danbury, CT

3-8-02:41  
A&B Properties, Inc.  
Alexander & Baldwin, Inc.  
P. O. Box 156  
Kahului, HI 96732

3-8-02:72  
Worley Lumber Co. Inc.  
600 West Penn. Ave.  
Wernersville, PA

3-8-02:82  
Samuel E./Carolyn J. Damon  
320 Paani Place  
Paia, HI 96779

3-8-02:85  
A&B-Hawaii, Inc.  
Alexander & Baldwin, Inc.  
P. O. Box 156  
Kahului, HI 96732

3-8-01:7  
A&B-Hawaii, Inc.  
Alexander & Baldwin, Inc.  
P. O. Box 156  
Kahului, HI 96732

3-8-02:5  
Louis A. Siracusa  
453 Laulea Place  
Paia, HI 96779

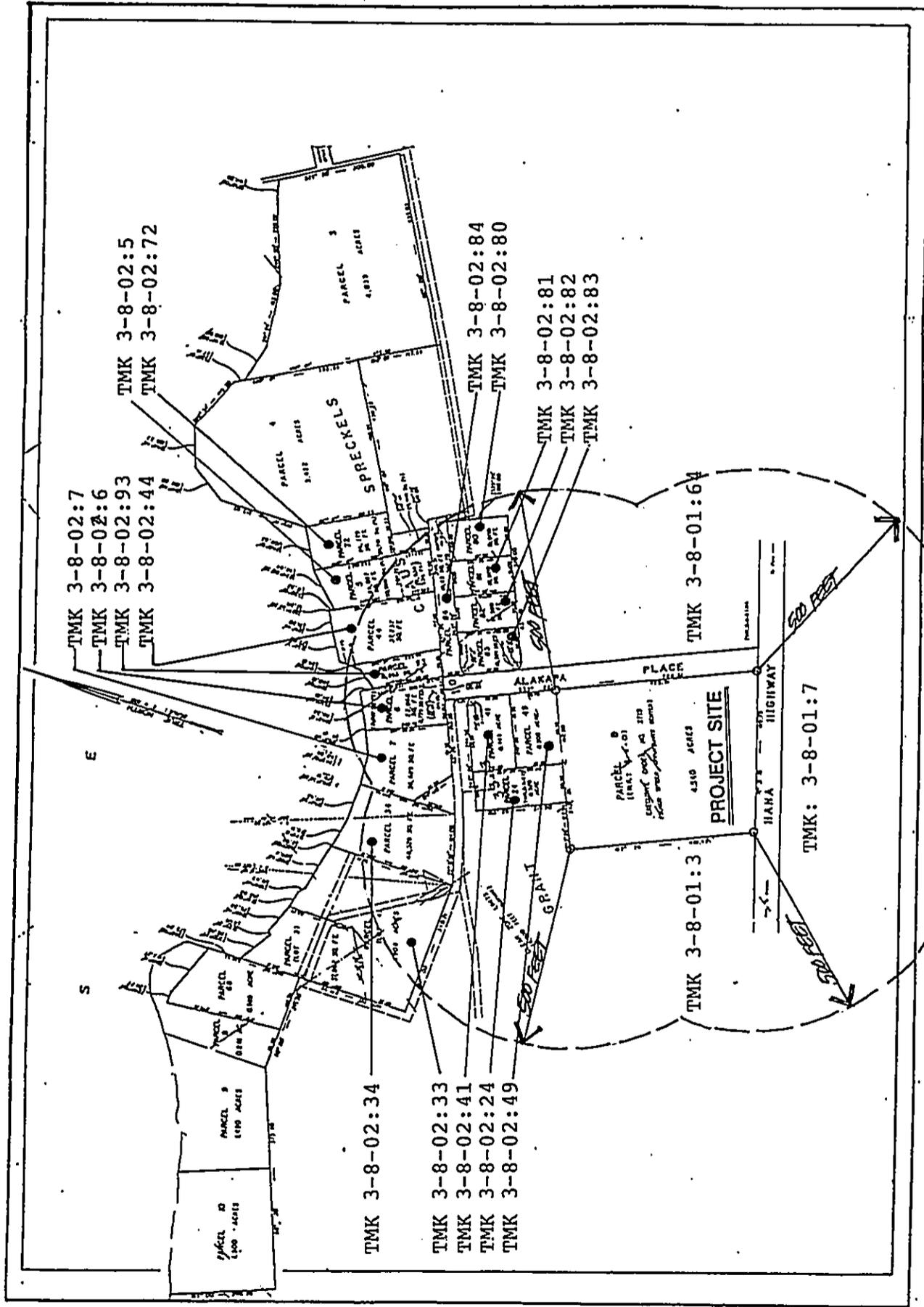
3-8-02:33  
Kurt R. Ulmer  
7500 St. Moritz  
Hauptstrasse, Switzerland

3-8-02:44  
James/Susan Bendon  
451 Laulea Place  
Paia, HI 96779

3-8-02:80  
A&B Properties, Inc./  
John & Doris Fitzgibbon  
Alexander & Baldwin, Inc.  
P. O. Box 156  
Kahului, HI 96732

3-8-02:83  
A&B Properties, Inc./  
Kathryn L. Janion  
Alexander & Baldwin, Inc.  
P. O. Box 156  
Kahului, HI 96732

3-8-02:93  
Stephen J. Pitt  
459 Laulea Place  
Paia, HI 96779

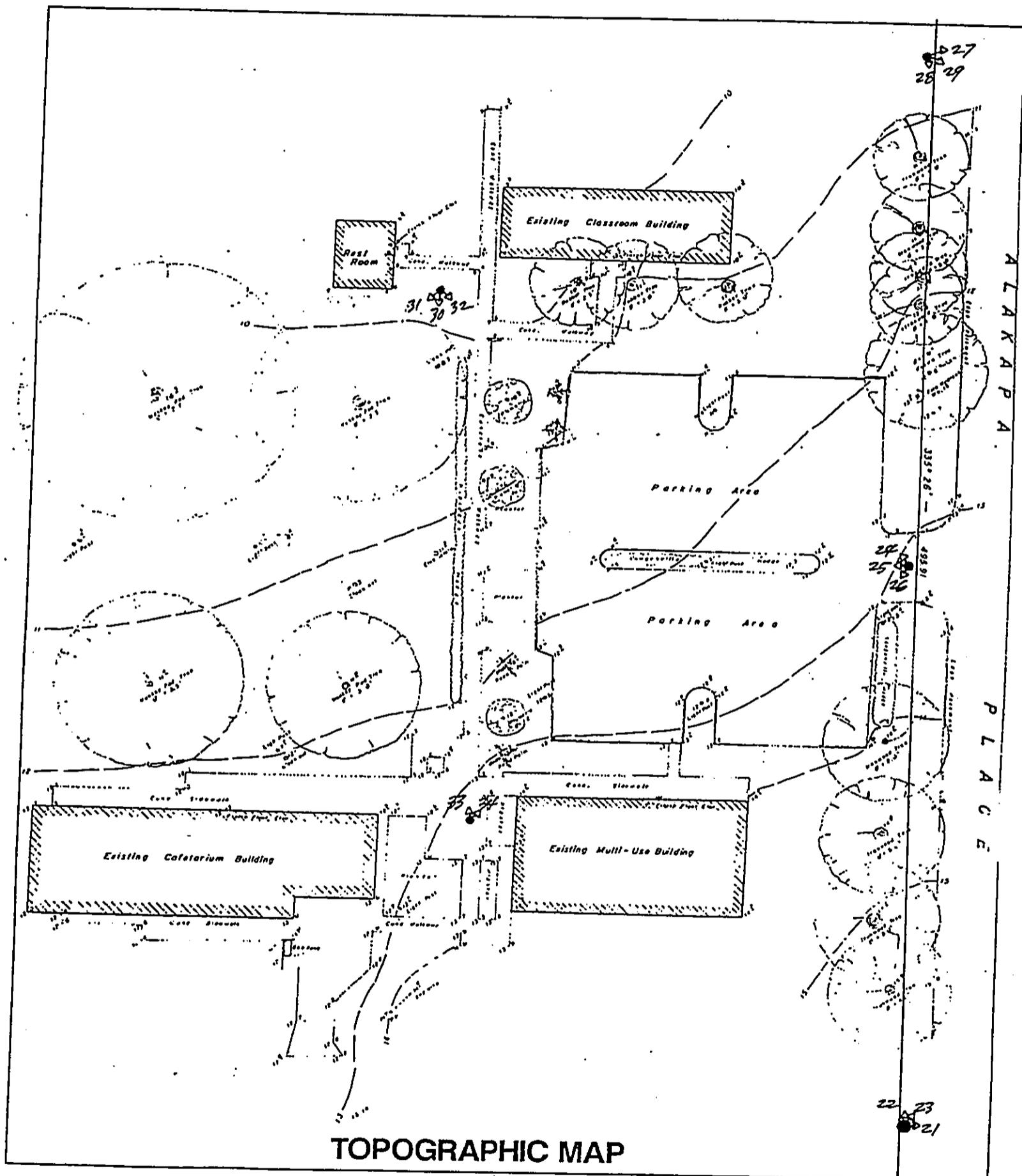


KAUNOA SENIORS CENTER  
 PROPERTY OWNERS - 500 FEET  
 T.M.K.: 3-8-01 : 8

KAUNOA SENIORS CENTER  
SMA PHOTOGRAPHIC ANALYSIS  
DESCRIPTION OF SLIDES

<u>SLIDE NO.</u>	<u>DESCRIPTION</u>
23	View along Alakapa Place looking north from the southeast corner of the project parcel.
22	View along Alakapa Place looking northwest.
21	View from the southeast corner of the project parcel looking across Alakapa Place at the existing cane cultivated land.
26	View from the existing driveway entrance off of Alakapa Place looking towards the existing classroom/office building (south direction).
25	View from the existing driveway entrance off of Alakapa Place looking towards the existing parking area (southwest direction).
24	View from the existing driveway looking towards the existing wooden building used for ceramics classes (northwest direction).
29	View along Alakapa Place from the northeast corner of the project parcel looking in the southeast direction.
28	View along Alakapa Place from the northeast corner of the project looking south.
27	View across Alakapa Place from the northeast corner of the project parcel.
32	View from existing restrooms looking towards the existing parking area (southeast direction).
31	View from existing restrooms looking towards the existing cafetorium building (south direction).
30	View from the north end of the project site facing south.
34	View from south end of the project site facing north.
33	View from south end of the project site facing northwest, across the length of the proposed classroom building site.

DOCUMENT CAPTURED AS RECEIVED



KAUNOA SENIORS CENTER

PHOTOGRAPHIC ANALYSIS

PRELIMINARY  
DRAINAGE & SOIL EROSION CONTROL STUDY  
FOR  
KAUNOA SENIOR CENTER  
AT SPRECKELSVILLE, MAUI, HAWAII  
TMK: 3-8-01:08

PREPARED FOR:  
HIYAKUMOTO & HIGUCHI ARCHITECTS AIA  
1860 MAIN STREET  
WAILUKU, MAUI, HAWAII - 96793

PREPARED BY:  
R. T. TANAKA ENGINEERS, INC.  
871 KOLU STREET, SUITE 201  
WAILUKU, MAUI, HAWAII - 96793

DECEMBER 1990

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  - FIGURE 3 - VICINITY MAP
  - FIGURE 4 - TOPOGRAPHIC MAP
  - FIGURE 5 - SITE PLAN
  - FIGURE 6 - SOIL SURVEY OF THE ISLAND OF MAUI

I. INTRODUCTION:

The purpose of this preliminary study is to comply with the requirements of the Special Management Area permit application for the proposed Kaunoa Senior Center Classroom Addition.

The proposed project site, identified as Parcel 08 of Tax Map Key 3-8-01, is located makai of Hana Highway and west of Alakapa Place at Spreckelsville, Maui, Hawaii. The 4.54 acre site, Executive Order No. 2715, is bordered by residential lots to the north, Hana Highway to the south, Alakapa Place to the east and a large vacant lot owned by A & B to the west. Access to the site is from Alakapa Place (see Figures 3 and 4).

The proposed project consists of a one-story classroom building with office, lounge and restroom with appurtenant paved parking areas, landscaping and additional concrete walkways. When completed, this project will provide a total of three (3) additional classrooms and appurtenant areas (see Figure 5).

II. PRELIMINARY DRAINAGE STUDY:

A. Existing Conditions:

The proposed project site has presently four (4) buildings and a paved parking area with concrete walks and landscaping. The remaining area is open with grass areas and miscellaneous farming activities. The existing ground slopes from an approximate elevation of 16.0' at the mauka boundary (corner of Hana Highway and

Alakapa Place) to 8.0' at north-west boundary. It slopes downward in a mauka to makai direction at an average of 2%.

Present drainage conditions of the lot are characterized by surface runoff sheet flowing in a northwesterly direction into the adjacent open lot and eventually into the ocean (see Figure 4).

B. Flood Hazard Conditions:

According to the "Flood Insurance Rate Map", 1989, for the County of Maui, the proposed project site lies within Zone C (areas of 100-year flood), where minimal flooding is expected (see Figure 2).

C. Storm Runoff:

The rational method,  $Q = CIA$ , was used to estimate storm runoff. The factors used in the application of this method were based on applicable graphs and tables in the Maui County Drainage Master Plan, 1971. Storm flows were based on a 10-year storm intensity.

1. Runoff Coefficient, C:

Existing Conditions:

Infiltration (high)	= 0.0
Relief (flat)	= 0.0
Vegetal Cover (good)	= 0.03
Development Type (apartment)	= <u>0.45</u>

C = 0.48

Developed Conditions:

Infiltration (high)	= 0.0
Relief (flat)	= 0.0
Vegetal Cover (good)	= 0.03
Development Type (apartment)	= <u>0.45</u>
	C = 0.48

2. Drainage Flow Calculations:

The estimated runoff for this proposed project is as follows:

Existing Conditions:

The estimated total onsite runoff under existing conditions from the proposed project site is 8.4 c.f.s.

Developed Conditions:

The estimated total onsite runoff under developed conditions from the proposed project site is 8.6 c.f.s.

Estimated runoff is based on a 10-year storm frequency of one-hour duration (2.5 inches). Calculations are shown as follows:

a. Existing Conditions:

Area = 4.54 acres

Length of Flow = 570 ft.

Average Slope = 2%

Character of Ground = Paved and Ave. Grass

Tc = 25 min.

C = 0.48

Tm (years) = 10 years

Rainfall = 2.5

I = 3.85

$Q = AiC = 4.54 \times 3.85 \times 0.48 = \underline{8.4 \text{ c.f.s.}}$

b. Developed Conditions:

Area = 4.54 acres

Length of Flow = 570 ft.

Average Slope = 2%

Character of Ground = Paved and Ave. Grass

Tc = 22 min.

C = 0.48

Tm (years) = 10 years

Rainfall = 2.5

I = 3.95

$Q = AiC = 4.54 \times 3.95 \times 0.48 = \underline{8.6 \text{ c.f.s.}}$

No drainage improvements will be anticipated since the increase in runoff is so small. Proposed drainage will be to sheet flow the runoff across the site as it exists under the present conditions. Swales will be designed to carry runoff around existing and proposed structures.

D. Effect on Adjacent and Downstream Properties

Based on this preliminary study, the proposed project will generate an additional runoff of 0.2 c.f.s. However, with this minimal increase, the runoff will be conveyed through the site under the existing conditions and is not anticipated to produce adverse effects to adjacent and downstream properties.

III. PRELIMINARY SOIL EROSION CONTROL STUDY:

A. Existing Soils:

According to the "Soil Survey of the Islands of Kauai, Oahu, Maui, Molokai and Lanai, State of Hawaii", August 1972, the existing type of soil present at the site is Molokai Silty Clay Loam (MuA). Molokai Silty Clay Loam is characterized by moderate permeability, slow runoff and slight erosion hazard where vegetation has been removed (see Figure 6).

B. HESL Soil Loss:

1. Allowable Erosion Rate:

Coastal Water Hazard (D) = 2 (Class A)

Downstream Hazard (E) = 4

Duration of Site Work (T) =  $\frac{1}{2}$  year

Maximum Allowable Construction Area x Erosion Rate  
= 3,571 tons/year

Consider Grading Entire Area at Once: A = 1.0 acres

Allowable Erosion Rate = 3,571/1.0

= 3,571 tons/acre/year

2. Estimated Erosion Rate:

Erosion rate, as set forth by the County of Maui Ordinance:

E = RKLSCP

Where:

E = Uncontrolled Erosion Rate (Soil Loss) in  
tons/acre/year

R = Rainfall Factor = 150 tons/acre/year

K = Soil Erodibility Factor = 0.10

L = Slope Length (Feet) = 570 ft.  
S = Slope Gradient (Percent) = 2.0% (average)  
LS = Topographic Factor = 0.492  
C = Cover Factor (Bare Soil) = 1  
P = Control Factor = 1

Thus:

$$E = 150 \times 0.10 \times 0.492 \times 1 \times 1 = 7.4 \text{ tons/acre/year}$$

Therefore, the estimated erosion rate is well within the limits of the allowable erosion rate.

3. Severity Number (H):

$$H = (2 F T + 3 D) A E$$

Where:

H = Severity Number

F = Unit Downslope - Downstream Factor = 4

D = Coastal Water Hazard = 2

T = Time of Distribution (years) = 1

A = Area of Disturbance = 1.0 acres

E = Estimated Soil Loss Rate from HESL  
= 7.4 tons/acre/year

$$H = (2 \times 4 \times 1 + 3 \times 2) \times 1.0 \times 7.4 = 104$$

The severity number as computed for this project is well within the maximum allowable value of 50,000.

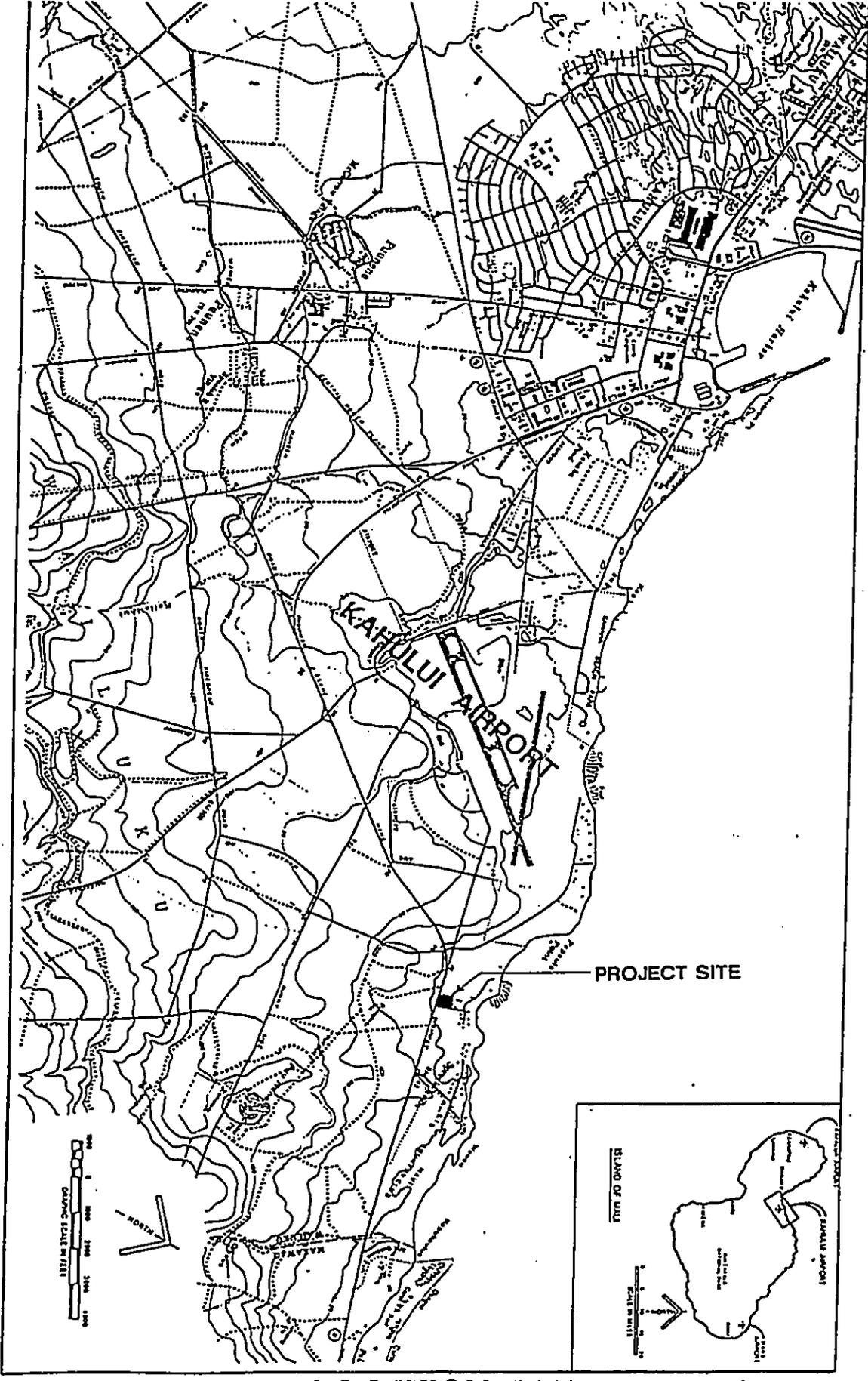
C. Erosion Control Measures:

Temporary and permanent erosion control measures include the following:

1. Control dust by means of waterwagon or by installing temporary sprinkler systems, or both if

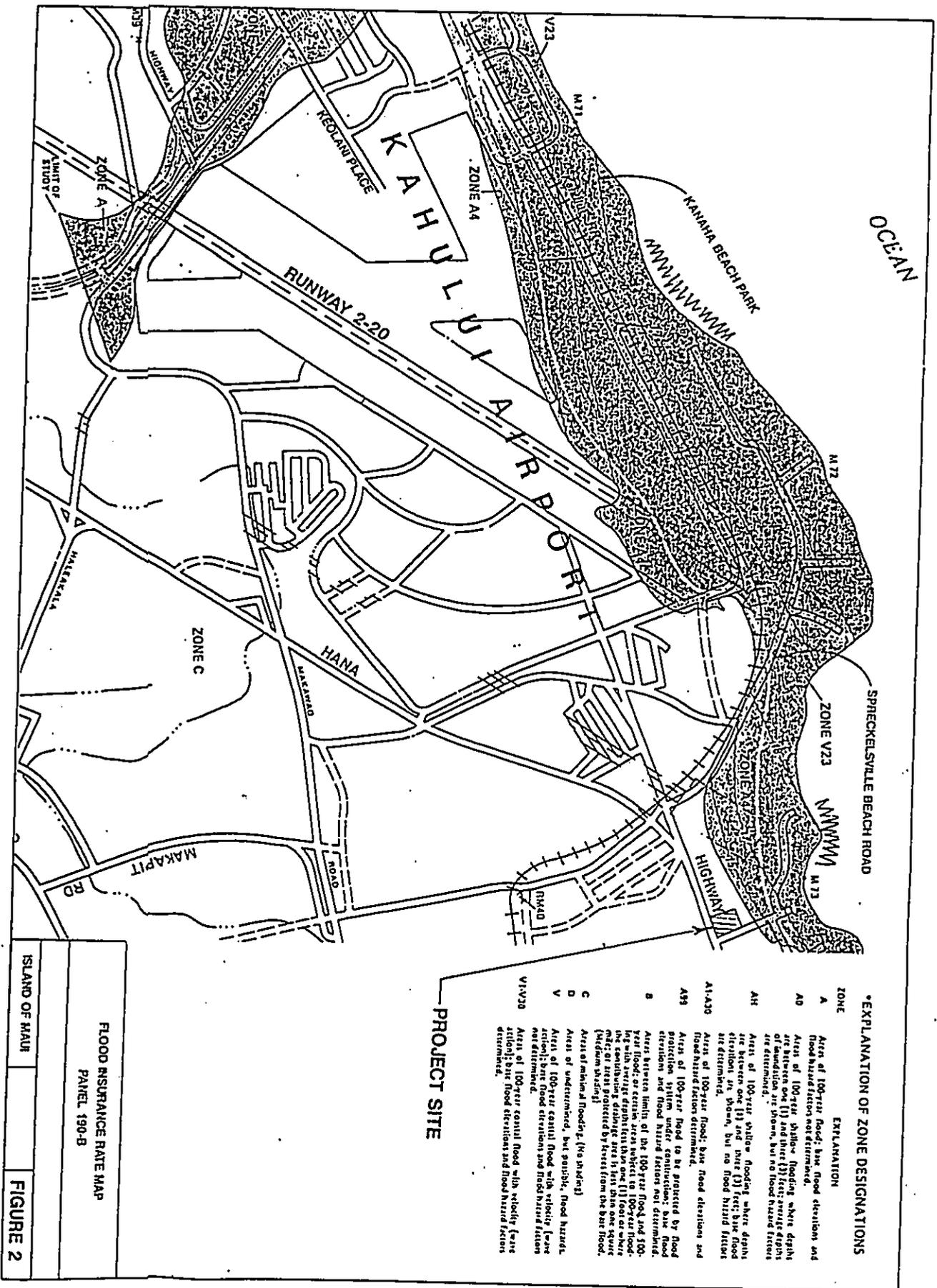
necessary.

2. Graded areas will be thoroughly watered after construction activity has ceased for the day and for weekends and holidays.
3. Early construction of drainage swales.
4. All exposed graded areas shall be grassed and/or landscaped immediately upon completion of finish grading.
5. Construct temporary diversion swales away from exposed areas to natural drainageways during construction.



LOCATION MAP

FIGURE 1



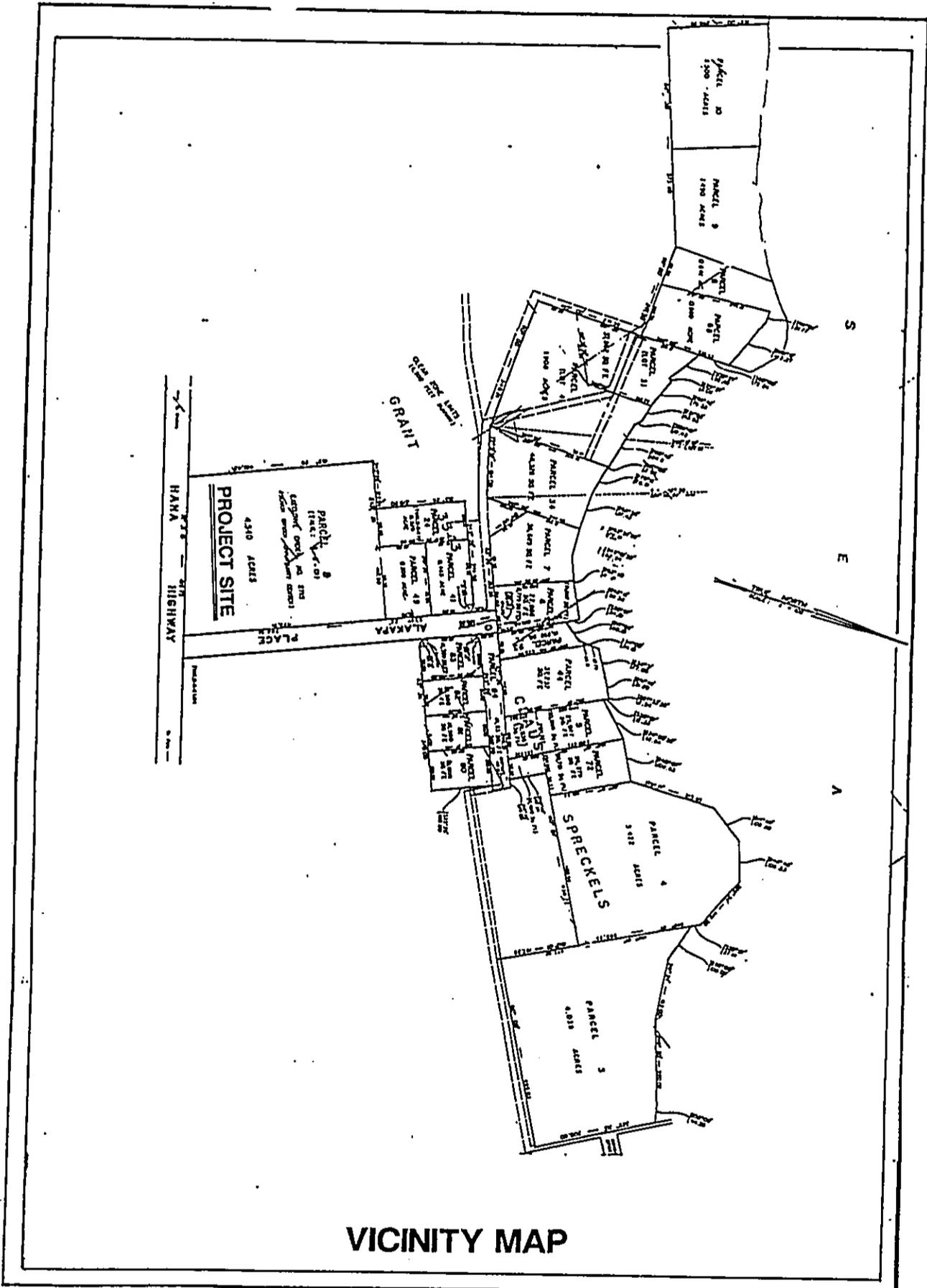
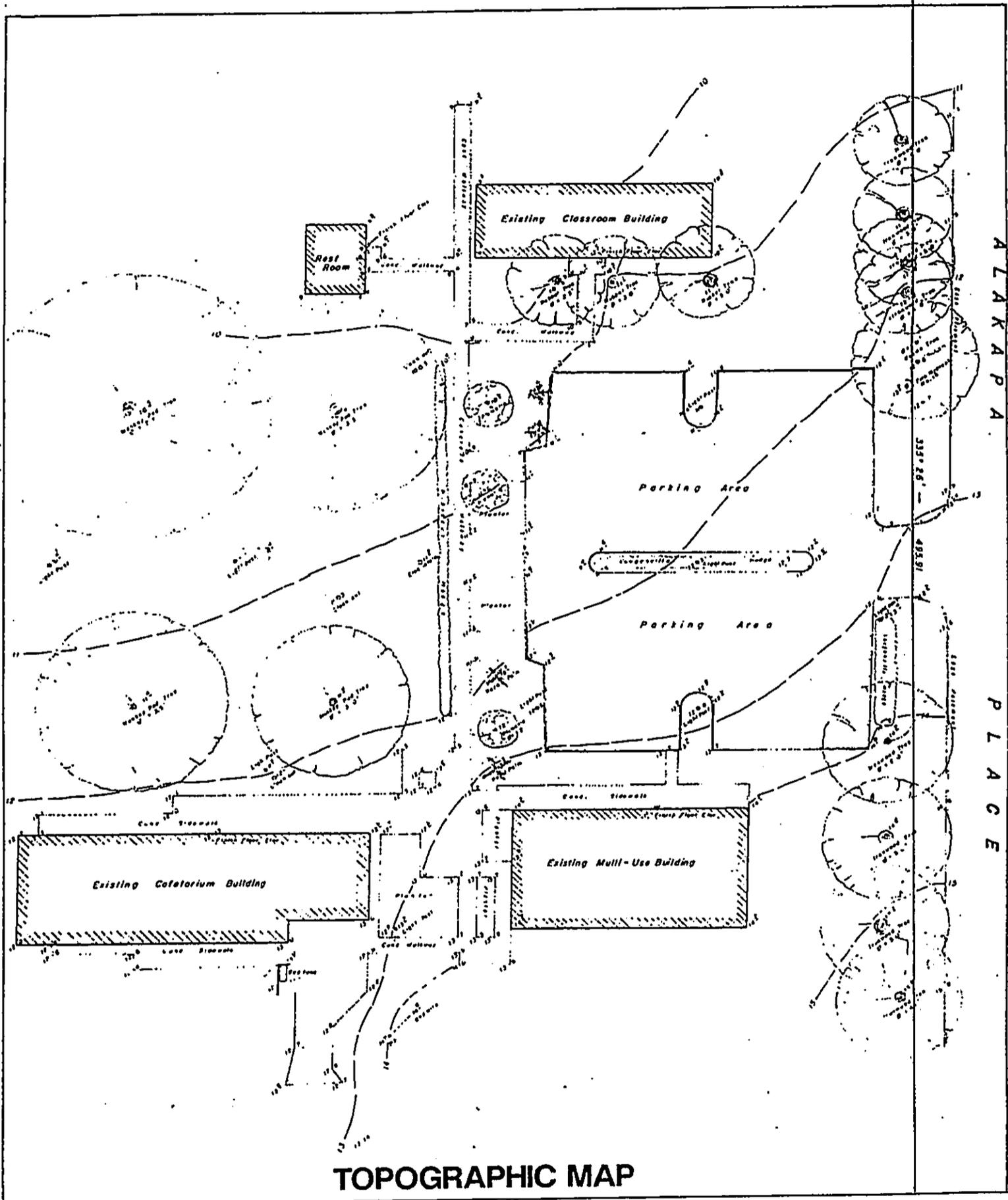


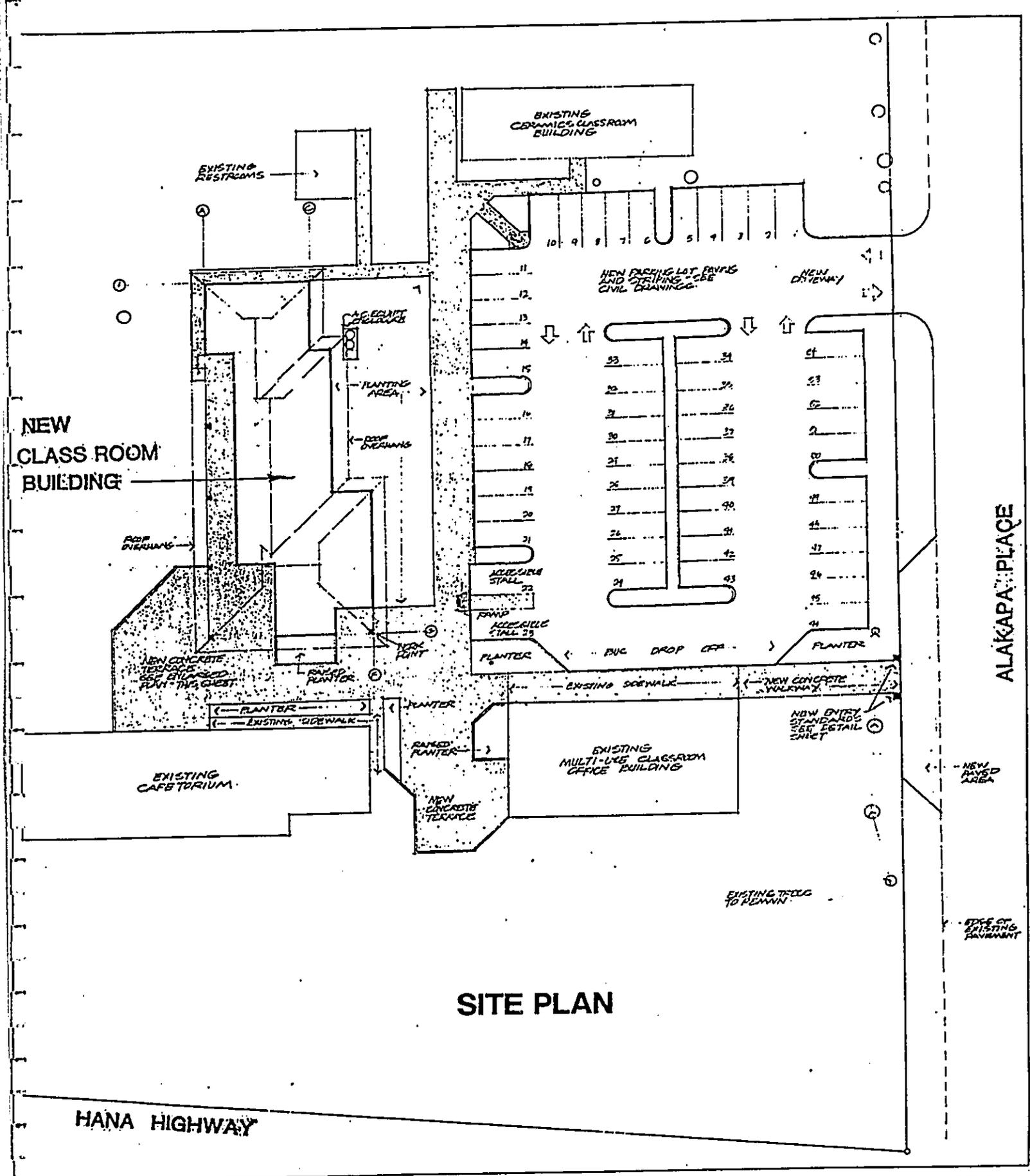
FIGURE 3



TOPOGRAPHIC MAP

FIGURE 4

DOCUMENT CAPTURED AS RECEIVED



SITE PLAN

FIGURE 5

