



STATE OF HAWAII
 DEPARTMENT OF LAND AND NATURAL RESOURCES
 LAND DIVISION
 P.O. BOX 621
 HONOLULU, HAWAII 96809

AQUACULTURE DEVELOPMENT PROGRAM
 AQUATIC RESOURCES
 BOATING AND OCEAN RECREATION
 CONSERVATION AND RESOURCES ENFORCEMENT
 CONVEYANCES
 FORESTRY AND WILDLIFE
 HISTORIC PRESERVATION
 LAND DIVISION
 STATE PARKS
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SEP 11 1998 OEO. OF ENVIRONMENTAL QUALITY CONTROL

File: OA-2891

MEMORANDUM

To: Gary Gill, Director
 Office of Environmental Quality Control

From: Dean Y. Uchida, Administrator
 Land Division, Department of Land and Natural Resources

Subject: Final Environmental Assessment (EA)/Finding of No Significant Impact (FONSI) for Steele Residence, Nuuanu, Honolulu, Oahu, TMK parcel: (1)2-3-31:12

The Department of Land and Natural Resources has reviewed the comments received during the 30-day public comment period that began on June 23, 1998 for the subject project. We have determined that this project will not have significant environmental effects, and have therefore issued a FONSI. Please publish this notice in the September 23, 1998 OEQC Environmental Notice.

We have enclosed a completed OEQC Bulletin Publication Form and four copies of the Final EA for the project. The summary for this project has not changed from that noted in Publication Form for the draft EA. Please contact Tom Eisen of our Land Divisions's Planning Branch at 587-0386 if you have any questions.

Enclosures

c: Julie Abcede

1995-09-23-0A-FA - Steele Residence Conservation District
Use Permit

SEP 23 1998

FILE COPY

FINAL ENVIRONMENTAL ASSESSMENT

STEELE RESIDENCE

Nuuanu Valley, Honolulu, Oahu, Hawaii
Tax Map Key: 2-2-31:12

*Prepared In Partial Fulfillment of the Requirements
of the Conservation District Use Permit*

Prepared for

Mr. and Mrs. Richard Dwayne Steele
2529A Pali Highway
Honolulu, Hawaii 96817

Prepared by

Philip K. White & Associates Architects Ltd.
851 Pohukaina Street Suite C-1
Honolulu, Hawaii 96813

September 1998

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Note: Revisions to the text of the Draft Environmental Assessment appear in **bold italic** type. Deleted text are shown in brackets.

**FINAL
ENVIRONMENTAL ASSESSMENT
[CONSERVATION DISTRICT USE APPLICATION]
NUUANU VALLEY, HONOLULU, OAHU, HAWAII
TAX MAP KEY: 2-2-31:12**

SUMMARY INFORMATION

Project: *Steele Single Family Residence*

Applicant: Mr. and Mrs. Richard D. Steele
2529A Pali Highway
Honolulu, Hi 96817
544-8362 (Mr. Steele's downtown office)

Approving Agency: Office of Conservation and Environmental
Affairs, Department of Land and Natural
Resources

Land Area: *4.84 Acres, Lot B*
Area of Proposed Use: *24,920 Square Feet or 0.57 acre*
Land Owner: *Mr. and Mrs. Richard D. Steele*

Conservation District Subzone: *General*
County General Plan Designation: *Preservation*
Zoning: *P-1, R-10*

Special Management Area: *Not Within SMA*

Need for Assessment: *Conditional Use Permit in
Preservation Area*

Agencies and organizations consulted in making the environmental assessment:

*Notice of the Draft Environmental Assessment for the Steele Residence was published in the Office of Environmental Quality Control Environmental Notice of June 23, 1998. Publication in the Environmental Notice initiated a 30-day public comment period which ended on July 23, 1998. An asterisk * identified agencies or organizations that submitted written comments to the Draft Environmental Assessment. Comment letters and responses can be found in Appendix A of the Final Environmental Assessment.*

Federal:

Dept. of the Army, US Army Engineer District, Honolulu

State of Hawaii:

Office of Conservation and Environmental Affairs, Dept. of Land and Natural Resources

Commission on Water Resource Management, Dept. of Land and Natural Resources, State of Hawaii

****Division of Forestry and Wildlife, Dept. of Land and Natural Resources, State of Hawaii***

****State Historic Preservation Division, Dept. of Land and Natural Resources, State of Hawaii***

****Office of Planning, Dept. of Business, Economic Development & Tourism***

****Office of Hawaiian Affairs, State of Hawaii***

****Engineering Branch, Dept. of Land and Natural Resources, State of Hawaii***

****Office of Environmental Control, State of Hawaii***

****Na Ala Hele (Hawaii Trail and Access System)***

City and County of Honolulu:

Dept. of Land Utilization, City and County of Honolulu

****Planning Dept., City and County of Honolulu***

Others:

****Nuuanu/Punchbowl Neighborhood Board No. 12***

SECTION 1

GENERAL DESCRIPTION OF THE ACTION'S TECHNICAL, ECONOMIC, SOCIAL, AND ENVIRONMENTAL CHARACTERISTICS:

A. Technical:

Construction of a one story residential dwelling with a two-car garage attached, site improvement work which includes a paved driveway and motor court, retaining walls, landscaping, grading, and connection to existing public utilities are also part of the proposed project.

The residence will cover [approximately] 4,341 square feet of *building area, including 224 square feet of water features, which is less than the 5,000 square feet maximum permitted for a single family residence in the conservation district. The building will* be used for single-family dwelling, it will have a living room, dining, kitchen, a library/study, three bedrooms and three and a half bathrooms, roofed lanais and breezeways and a laundry room.

The driveway and motor court will be paved with asphalt concrete. Retaining walls will be of moss rocks. [Landscaping is shown in the Landscape Plan and described later in this application.] *Landscape design will emphasize preservation and enhancement of the existing site features.*

An existing bridge crossing the Nuuanu Stream, which has now been damaged, shall be removed and replaced. This bridge will provide access to the project site from Pali Highway. Existing abutments will be utilized to support the new bridge.

See Figures 1.1 through 1.5 for project graphic descriptions.

B. Economic:

The proposed project will play a role in stimulating employment in the construction industry of the county.

Project commencement date: *November 1998*
Project completion date: *October 1999*

C. Social:

The proposed project site is within an established single-family area. It adjoins other residential properties zoned R-10 and R-5 in Nuuanu on the west and north sides and also a residential area in Pacific Heights on the east side.



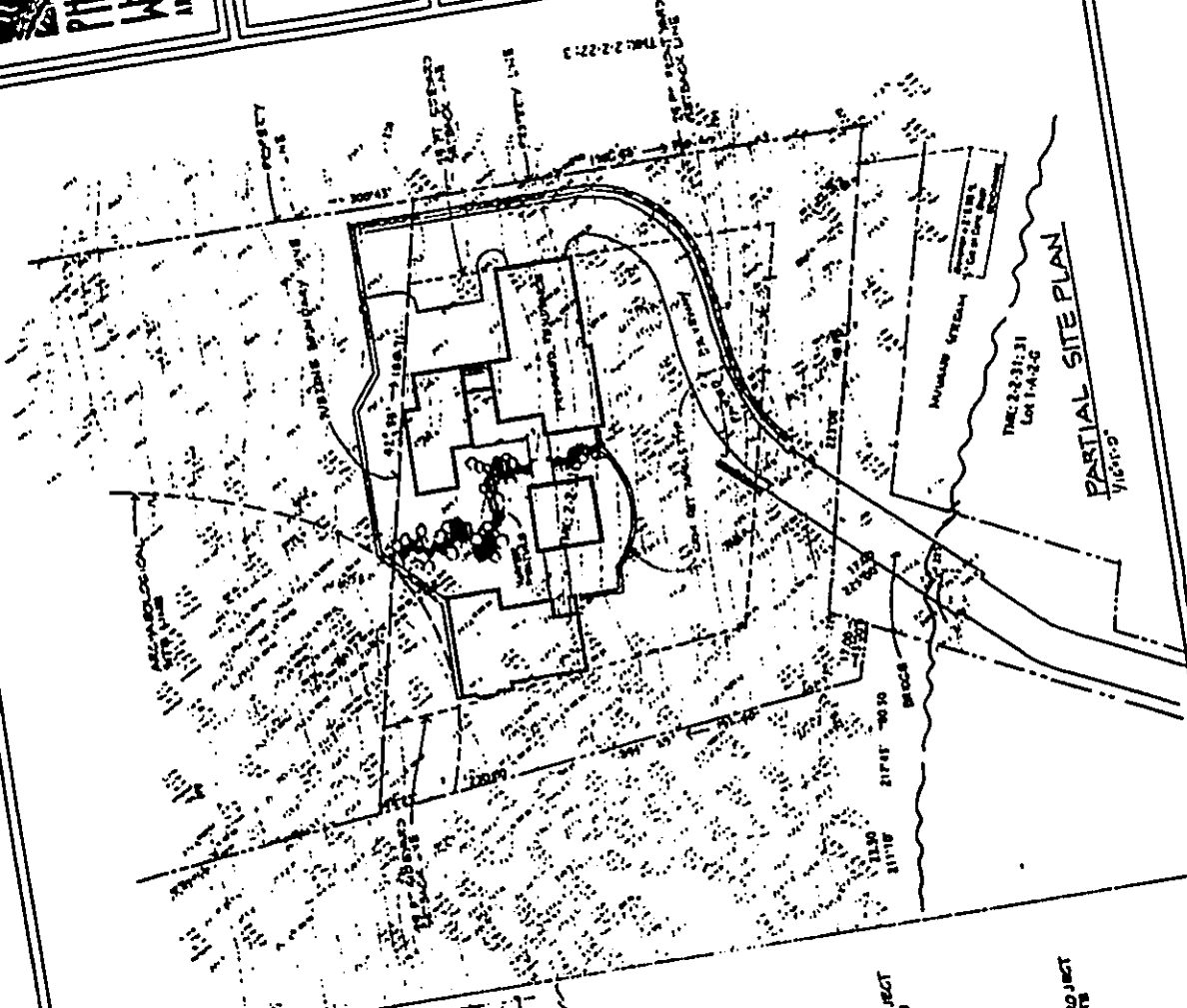
PHILIP WHITE ARCHITECTS

STEELE RESIDENCE
CDUL
TMK 2-2-312

72 CITY MAPS
ALUAKA MAPS
MAPSAL 478 1/4" = 1"

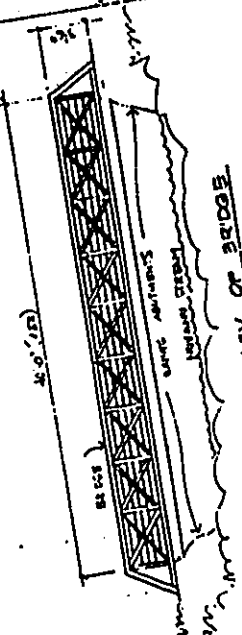
BRIDGE BLN

EXHIBIT NO.
12



PARTIAL SITE PLAN
TMK 2-2-312
Lot 1-A-2-C
1/16" = 1'

STEELE RESIDENCE
2529A PAHAIAHWAY
HONOLULU HAWAII 96817
TMK 2-2-312



SCHEMATIC ELEV. OF BRIDGE
1/4" = 1'



OAHU



VICINITY MAP

LOCATION MAP

Figure 1.1
SITE PLAN

CORRECTION

THE PRECEDING DOCUMENT(S) HAS
BEEN REPHOTOGRAPHED TO ASSURE
LEGIBILITY
SEE FRAME(S)
IMMEDIATELY FOLLOWING

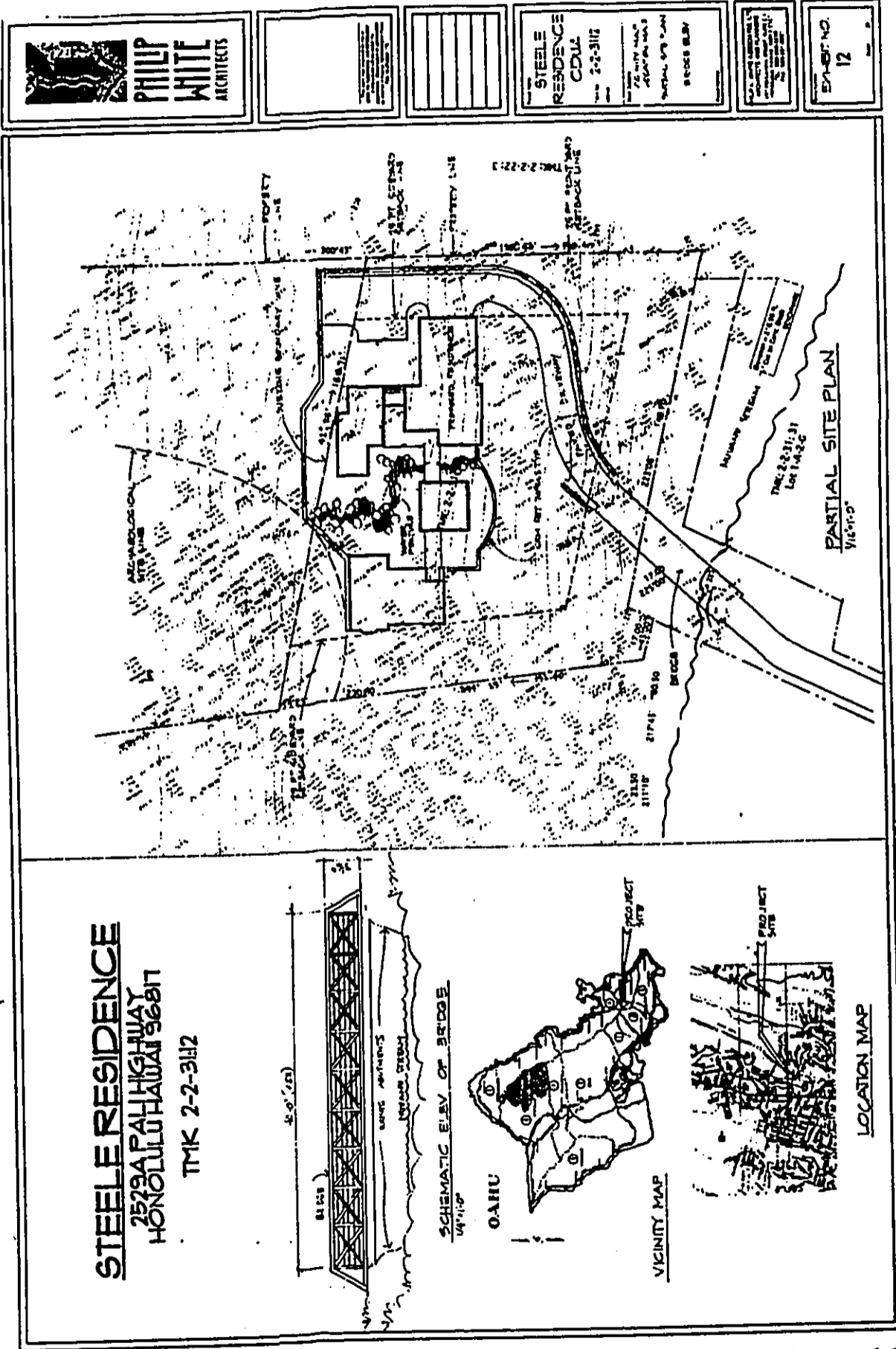


Figure 1.1
 SITE PLAN

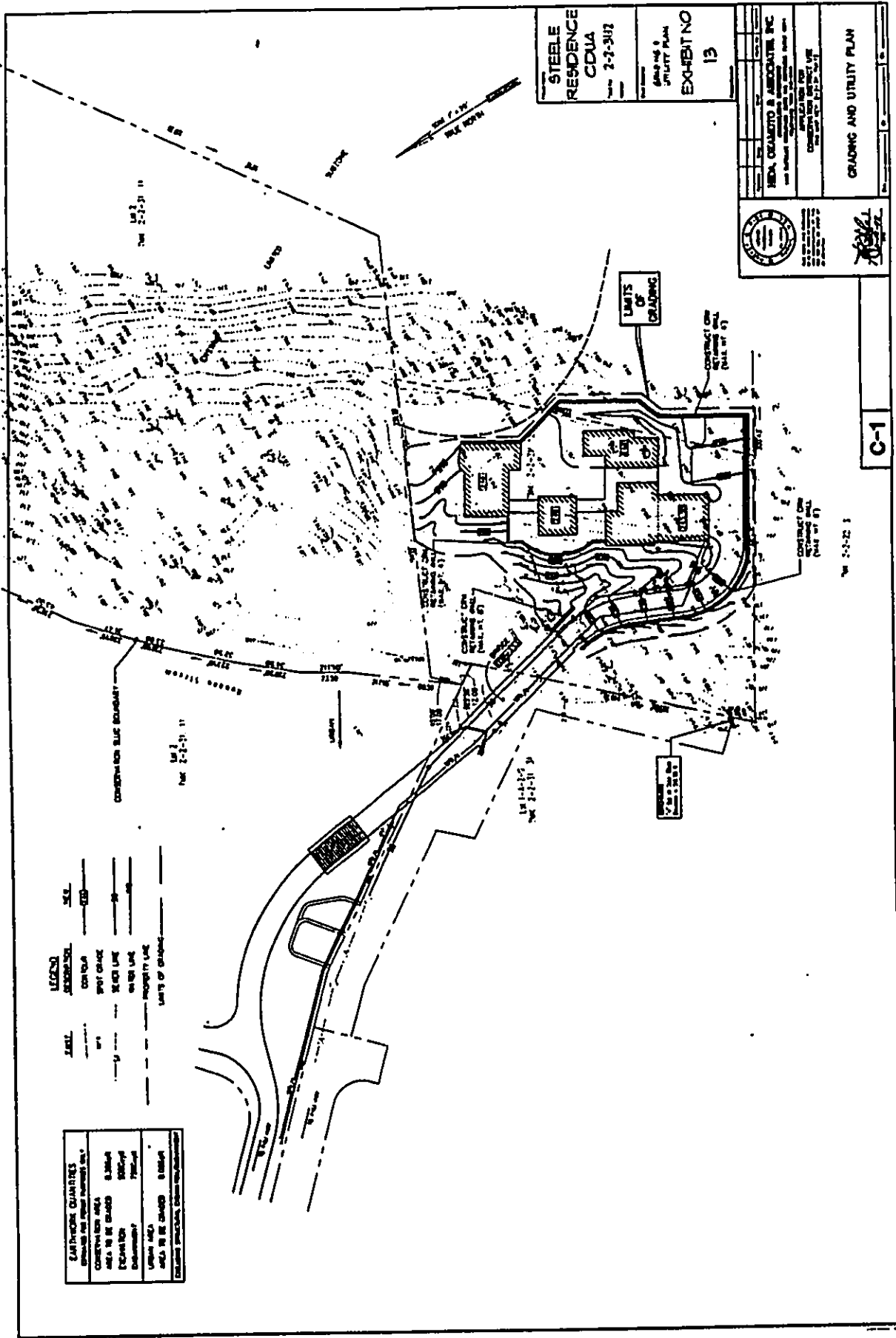



Figure 1.2
 GRADING AND UTILITY PLAN

 PHILIP WHITE ARCHITECTS	1100 L Street, N.W. Suite 400 Washington, D.C. 20004 Telephone: (202) 638-1100 Fax: (202) 638-1101 www.philipwhite.com	STEELE RESIDENCE CDUA Phase 2-2-3/2 Landscape Plan	PHILIP WHITE ARCHITECTS ARCHITECTS	EXHIBIT NO. 14
	THIS PLAN IS THE PROPERTY OF PHILIP WHITE ARCHITECTS. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREON. IT IS NOT TO BE REPRODUCED, COPIED, EITHER WHOLLY OR IN PART, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, WITHOUT THE WRITTEN PERMISSION OF PHILIP WHITE ARCHITECTS.			PHILIP WHITE ARCHITECTS ARCHITECTS

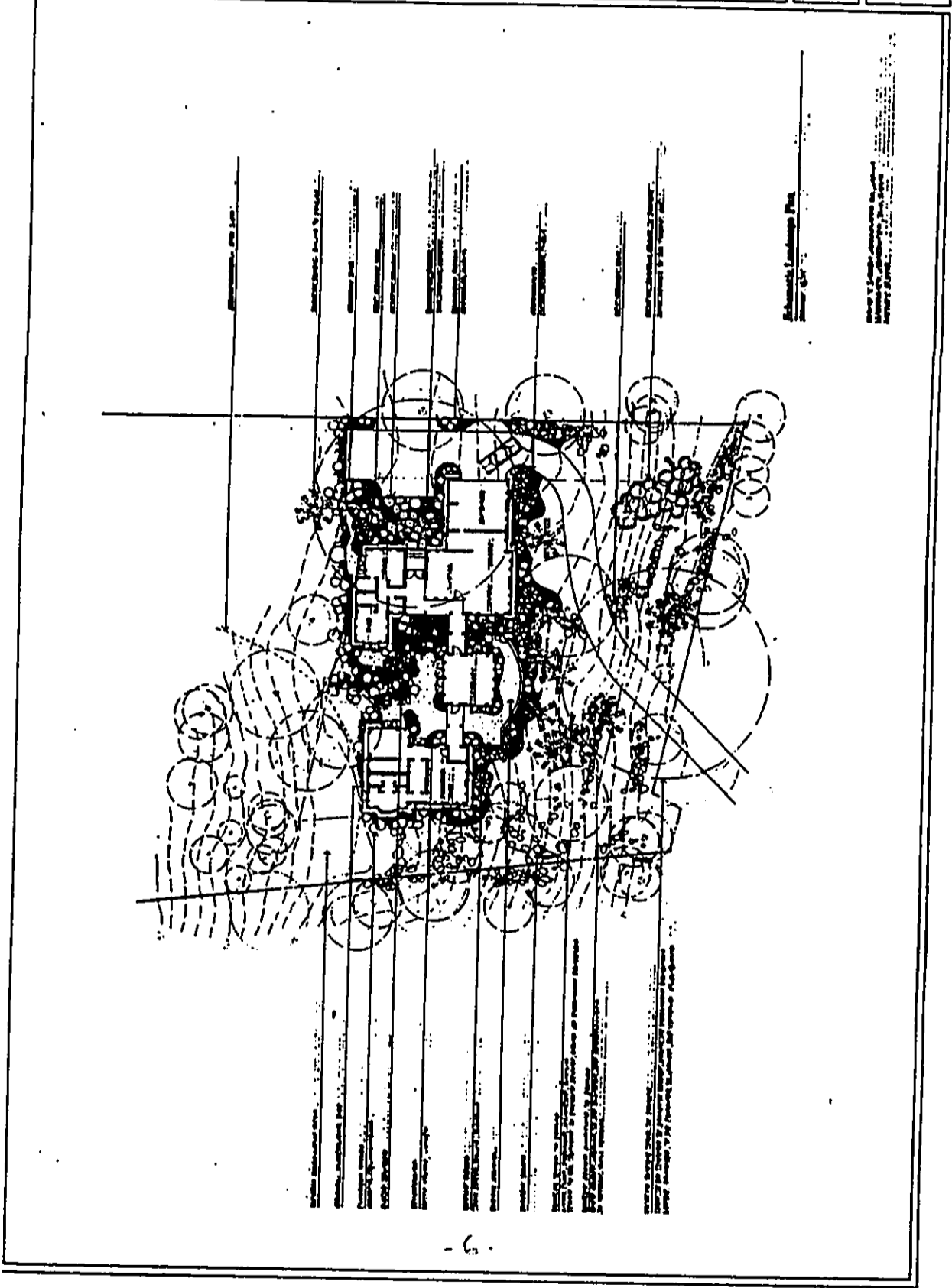


Figure 1.3
LANDSCAPE PLAN

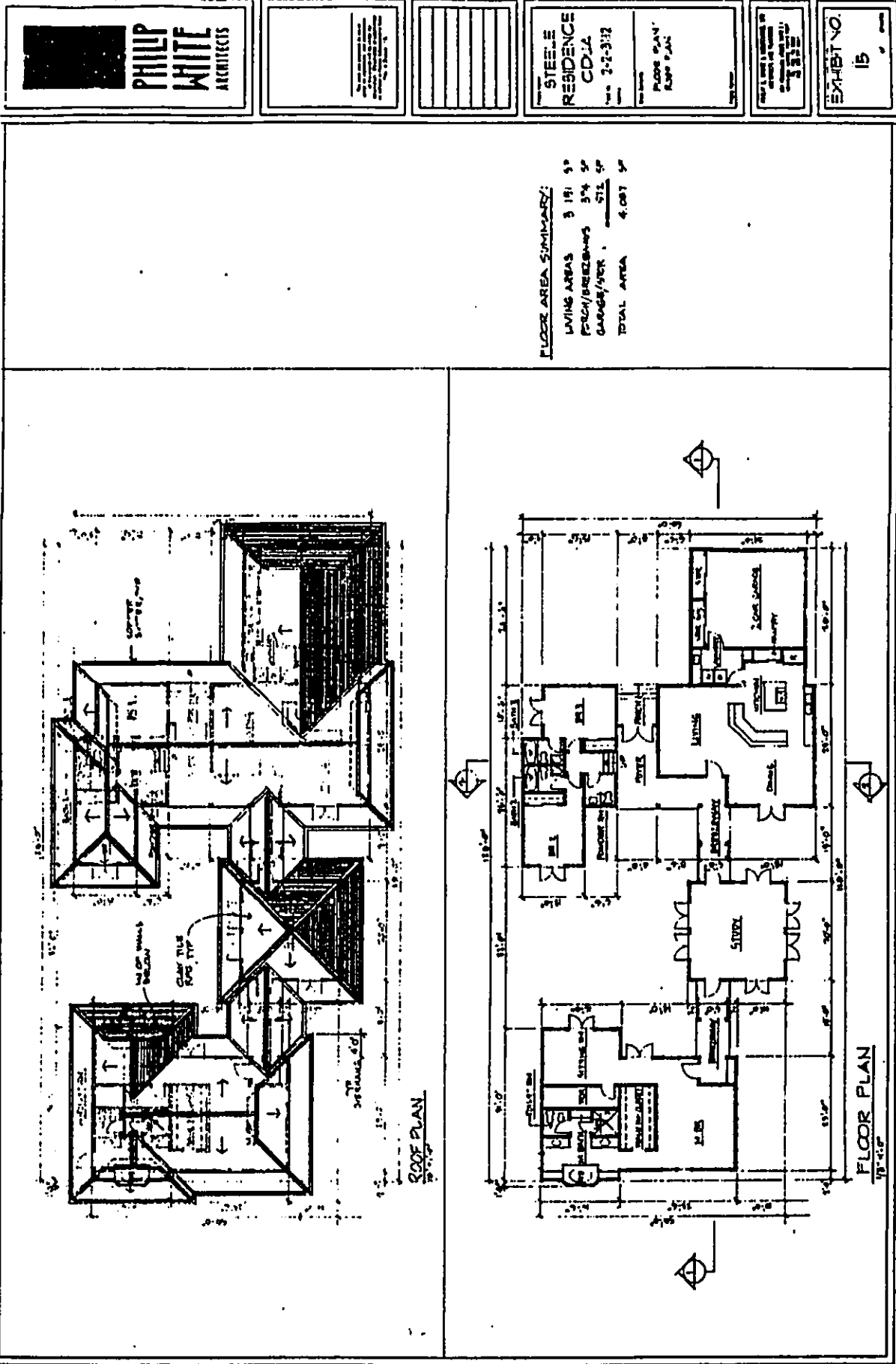


Figure 1.4
FLOOR PLAN AND ROOF PLAN

Available for the occupants family recreational use are the Puunui Playground and Nuuanu Valley park which are approximately half a mile from the project site. The Lanakila Playground located some almost two miles away can also be used for active recreational needs.

Public schools close to the project site are Nuuanu Elementary, Maemae Elementary, Kawanakoa Intermediate, and Roosevelt High School.

Population density will not be affected since the proposed house will be occupied by a small family with the wife, husband and two growing kids.

D. Environmental:

The attractive and healthy environment will be maintained. Maintenance of the site will include:

The trimming to keep the trees in healthy condition as well as opening the upper story of the forest to allow air flow and sun penetration.

Irrigation of the landscape during dry periods.

Monitoring of insects and diseases on plants.

Removal of debris from plants and the possible reuse of this material in the form of mulch.

The project will not generate air pollution, traffic congestion in the area nor will it raise the existing noise levels. There will also be no effects on the water quality in the area.

SECTION II

SUMMARY DESCRIPTION OF THE AFFECTED ENVIRONMENT, including suitable and adequate location and site maps:

A. Site:

The project area is located along the lower hillside of Nuuanu Valley adjacent to Nuuanu Stream. It is heavily vegetated with both introduced and native species of plants which are not considered rare or endangered.

Much of the forest floor is bare dirt due to the limited amount of sunlight. Rocks of different sizes are scattered throughout the site creating a very interesting and exciting land form with trees.

Access to the property is via the access and utility easement "d" from Pali Highway of the property Tax Map Key 2-2-31:11 also owned by Mr. and Mrs. Richard Steele.

See Figures 2.1 through 2.3 for Vicinity Map, Zoning Map and Parcel Plan.

B. Topography:

The project site area lies on the east side of Nuuanu Stream between the 215 and 250 foot elevations. The slope analysis of the property is based on actual field topography. The map indicates that only 2,700 square feet, or some 11 percent of the project site area, has a slope of over 40 percent, and the average slope is 24 percent.

See Figures 3.1 and 3.2 for Topographic Survey Map and Slope Analysis.

C. Soil Reconnaissance Survey:

The geotechnical engineering evaluation conducted by Geolabs Hawaii in January 1998 determined that the proposed residential development is feasible. The study reveals that the project site is generally underlain by a surficial layer of highly expansive "adobe" clays overlying stiff alluvial deposits and hard basalt rock formation at shallow depths. [It is recommended that:]

It is anticipated that the project site may be mantled with an upper slope wash deposit of expansive clays over alluvial deposits at greater depths. Weathered basalt formation is anticipated below the upper soil horizons.

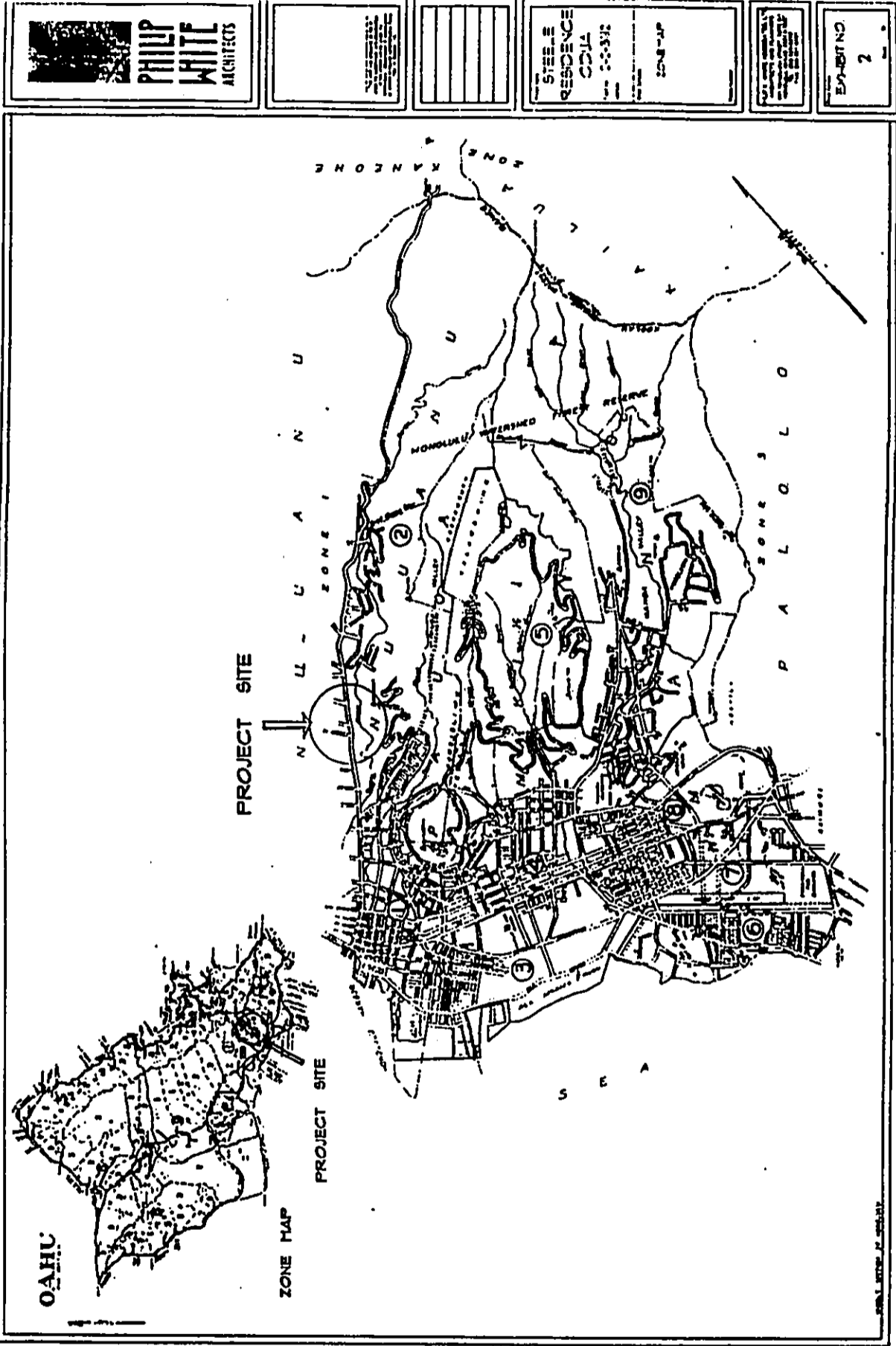
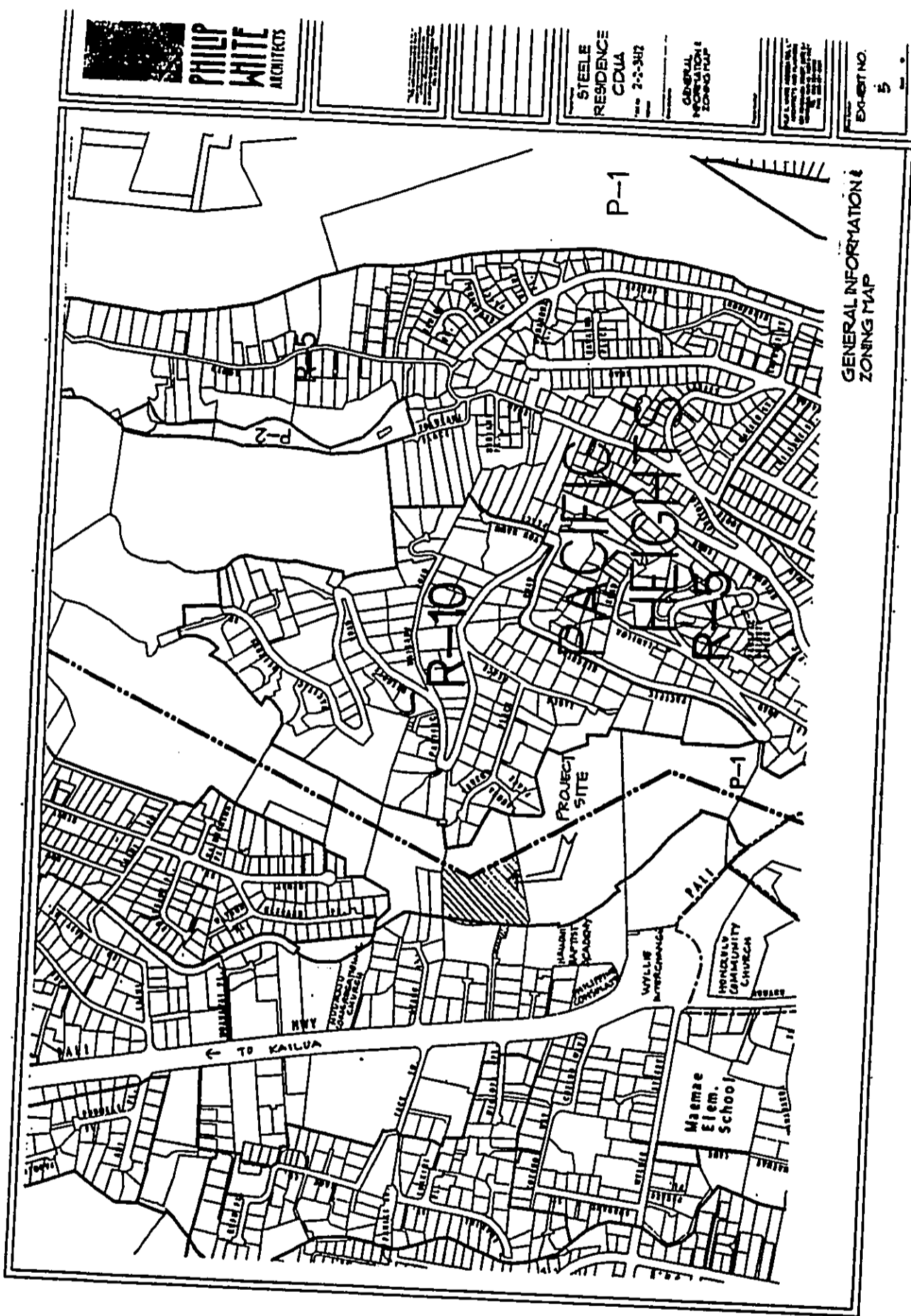


Figure 2.1
VICINITY MAP

PHILIP WHITE ARCHITECTS



PHILIP WHITE ARCHITECTS

STEELE RESIDENCE CDUA 2-2-312

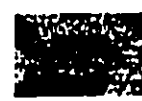
GENERAL INFORMATION ZONING MAP

EXHIBIT NO. 5

GENERAL INFORMATION & ZONING MAP

Figure 2.2

GENERAL INFORMATION AND ZONING MAP

 PHILIP WHITE ARCHITECTS	<p>DATE: 10/15/03 DRAWN BY: [Name] CHECKED BY: [Name]</p>	<p>NO. 1 OF 1</p>	STEELE RESIDENCE CDLA 100% 20-030 PARCEL PLAN	<p>SCALE: AS SHOWN DATE: 10/15/03 DRAWN BY: [Name]</p>	EXHIBIT NO. 9
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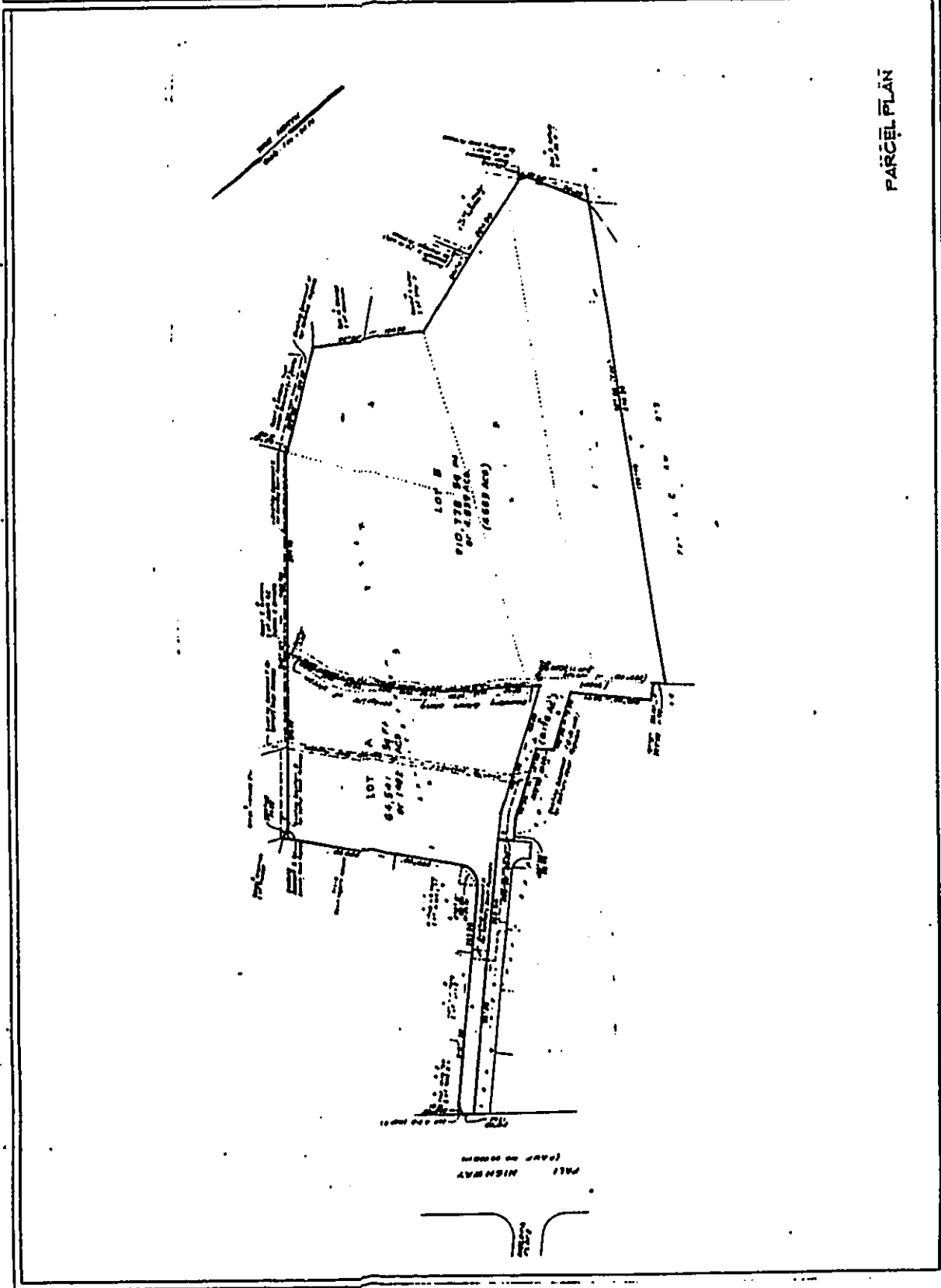


Figure 2.3
PARCEL PLAN

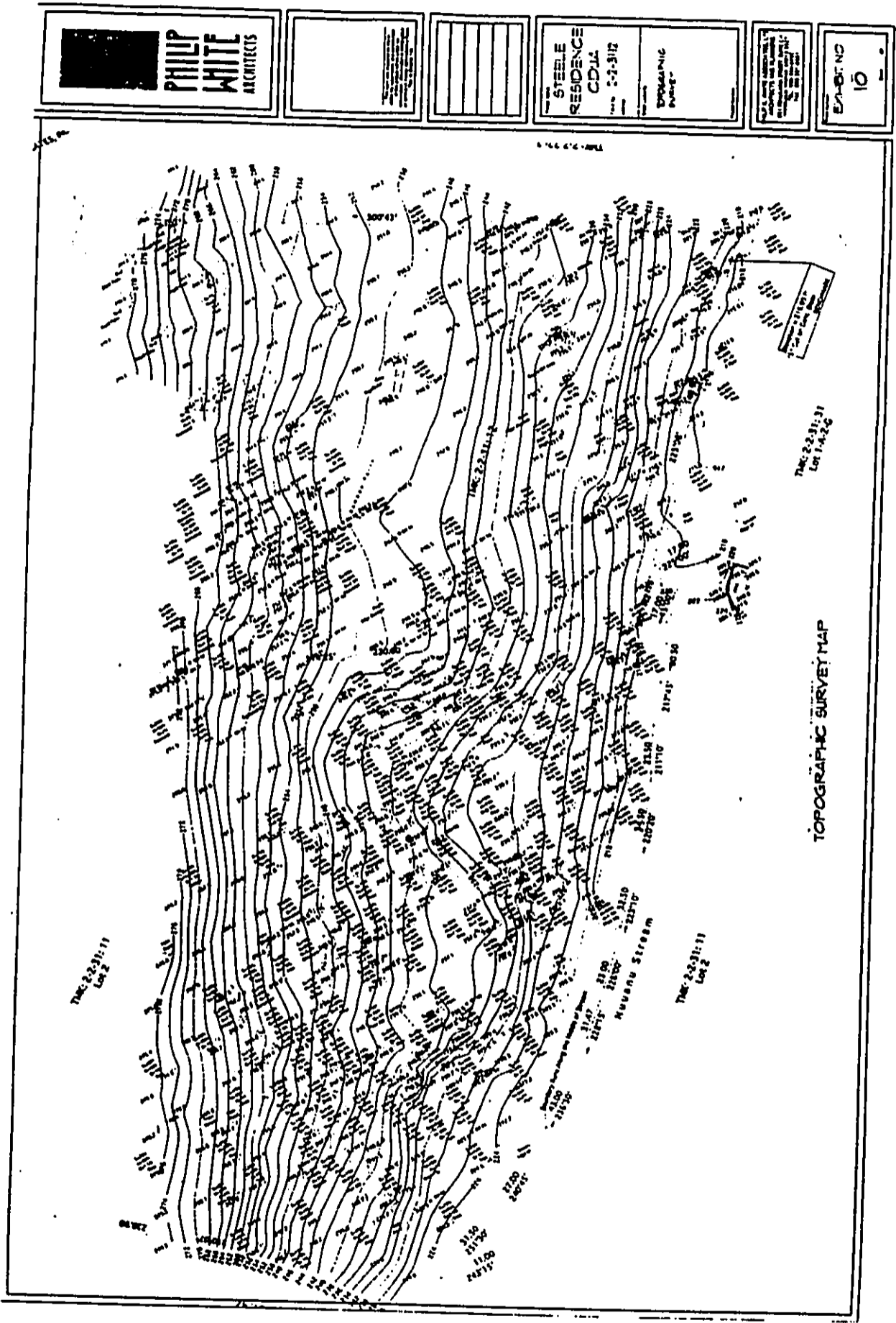


Figure 3.1
TOPOGRAPHIC SURVEY MAP

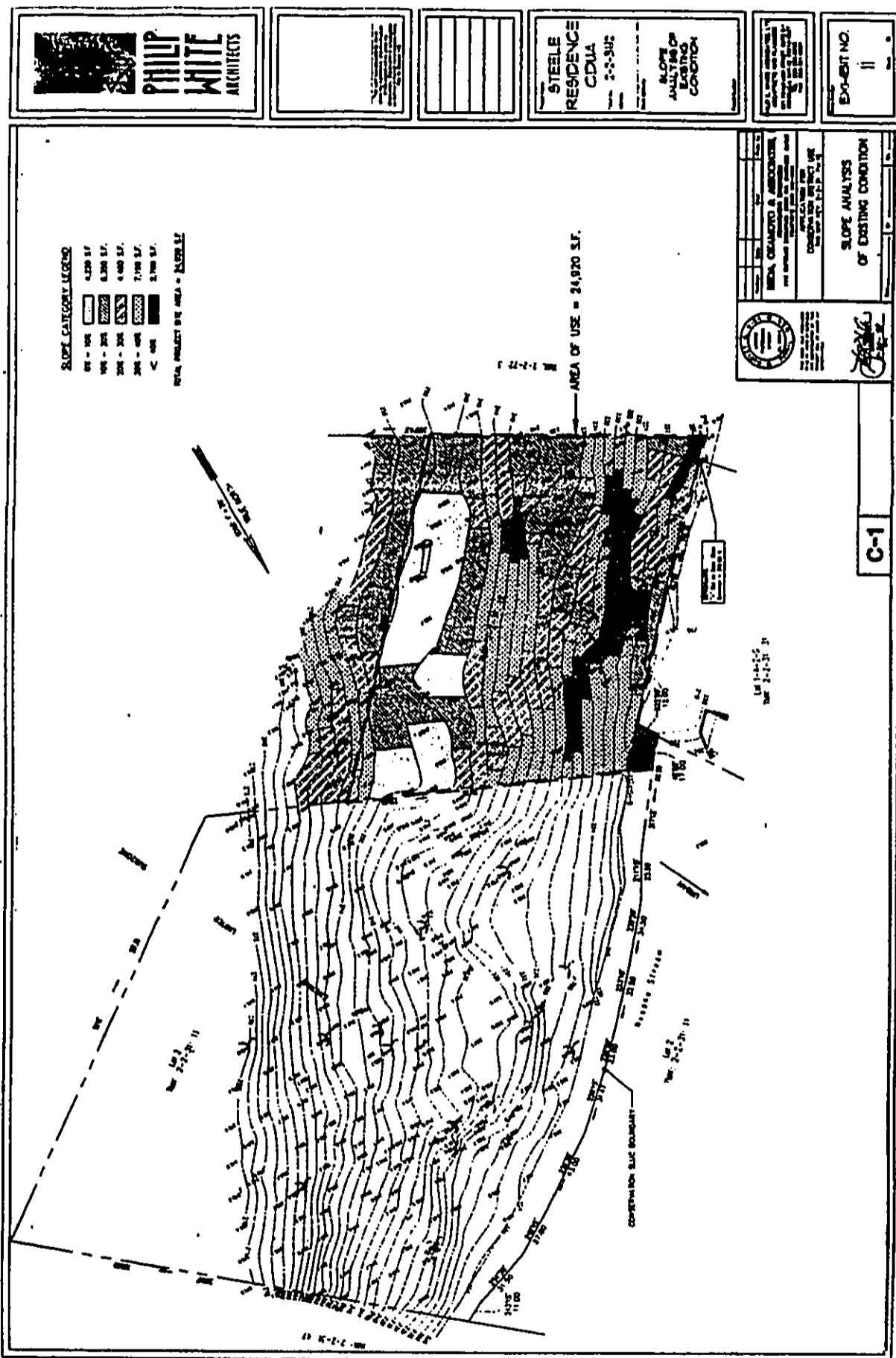


Figure 3.2

SLOPE ANALYSIS OF EXISTING CONDITION

D. Slope Stability:

We understand that many homes located along the hillsides in the valleys on the eastern side of Oahu have experienced landslide movements. These homes are generally located on slopes underlain by highly plastic clay soils, which is a major component in the driving forces for slope failures. According to the "Soil Conservation Services Soil Survey of the islands Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii", the soil conditions at the project site are classified as a "Kaena Series" clay soil, which raises concerns regarding the potential for landslide or slope instability.

First, it should be noted that the landslide problems experienced by the many homes in the valleys of Kuliouou, Aina Haina, Manoa, and Palolo, have occurred primarily in the "Lualualei Series" clay, which is different from the "Kaena Series" clay as classified by the Soil Conservation Services for the subject site.

Secondly, it should be noted that the classifications presented in the Soil Conservation Services publication generally apply to the near-surface soils, which is on the order of about 3 to 5 feet thick. Geologic maps of the area indicate that the predominant soil deposit in the project area consists of "Older Alluvium", which is a stable soil deposit. An on-site exploration of the subsurface soil conditions conducted in 1989 by Geolabs Hawaii confirmed the information provided by the Soil Conservation Service survey and the geologic maps. The field exploration disclosed that the project site was generally underlain by a thin surface layer of clay, about 1 to 3 feet thick, over the more stable alluvial soils and dense basalt rock formation at shallow depths.

Based on the above findings and evaluation, it is the opinion of Geolabs Hawaii in their Geotechnical Engineering Evaluation Report dated January 15, 1998, that the project site is stable and does not have the landslide potential of other valley sites with thick deposits of highly plastic clay soils.

E. Drainage System:

Nuuanu Stream, as it flows through the parcel, drains 2,710 acres of Nuuanu Valley. The upper area is reserved as a watershed which includes the Board of Water Supply's Nuuanu Reservoir. The reservoir, a flood control project, stores water from heavy rains and releases it gradually to the Nuuanu Stream which passes through downtown and empties into Honolulu Harbor. The US Geological Survey's surface and ground water data collection revealed maximum discharge of 6,990 cfs recorded at the gage located on Nuuanu Stream near Old Pali Road for the years between 1913 and 1983.

Except for the Nuuanu Stream, there are no known hydrological hazardous areas located on or adjacent to the project site. According to the Federal Emergency Management Agency's Flood Insurance Rate Map, Panel 150001-0120-C-0135-C, dated September 4, 1987, the project site is

located in Zone X (areas determined to be outside of the 500-year flood plain). See Figure 4 for Flood Hazard Map.

F. Existing Utilities:

Water Service: 24-inch main in Pali Highway

Sewer Service: 16-inch main traverse through the western portion of the property

Electrical and Telephone: Pole line located in 20-foot wide private roadway which provides access to the property.

Cable TV Service : Overhead pole line located in existing access driveway

G. Existing Covenants, Easements, Restrictions:

Sanitary sewer easement across Lot 1-A-2-G, as shown on Map 20, Land Court Application 167.

Any and all existing rights to the State of Hawaii, and of any and all other persons in and to the Nuuanu Stream.

H. Archaeology:

Two inventory-level archaeological surveys were conducted for the project site. The first survey, conducted in 1992, was focused on a smaller, half-acre part of the project area and identified 23 surface features. The more recent survey in 1996 covered the entire area, relocating the features identified earlier and locating an additional 19 surface and subsurface features. These features include four terraces interpreted as dry land agricultural features, three slope retention terraces, two water control terraces, one clearing mound, one animal pen, three boundary walls, 16 varied features (terraces, enclosures, alignments, steps, a subsurface pavement, and artifact concentrations) that are interpreted as habitation-related, four possible burial features, one modern bridge, and seven features that are either natural or undetermined in function. These 42 total features are labeled as one site, State Site 50-80-14-2464 (Bishop Museum Site 50-0a-A5-18).

The four agricultural terraces may be from late pre-Contact period; charcoal from one of the terraces was radiocarbon dated to between the late seventeenth and twentieth centuries. Excavation of one of the large slope retention terraces and one of the habitation terraces produced a very limited array of indigenous-type lithic flakes, which may also place the use of these features in the late pre-Contact period. Most of the features at the site, especially the habitation, possible burial, and boundary wall features in the east central area of the site, indicate post-Contact habitation and use from the late 1800s. These features represent incorporation of foreign, post-Contact building materials such as metal nails and window glass into a traditional pre-Contact style habitation, a situation that has been noted in other post-Contact-era archaeological sites in Nu'uuanu.

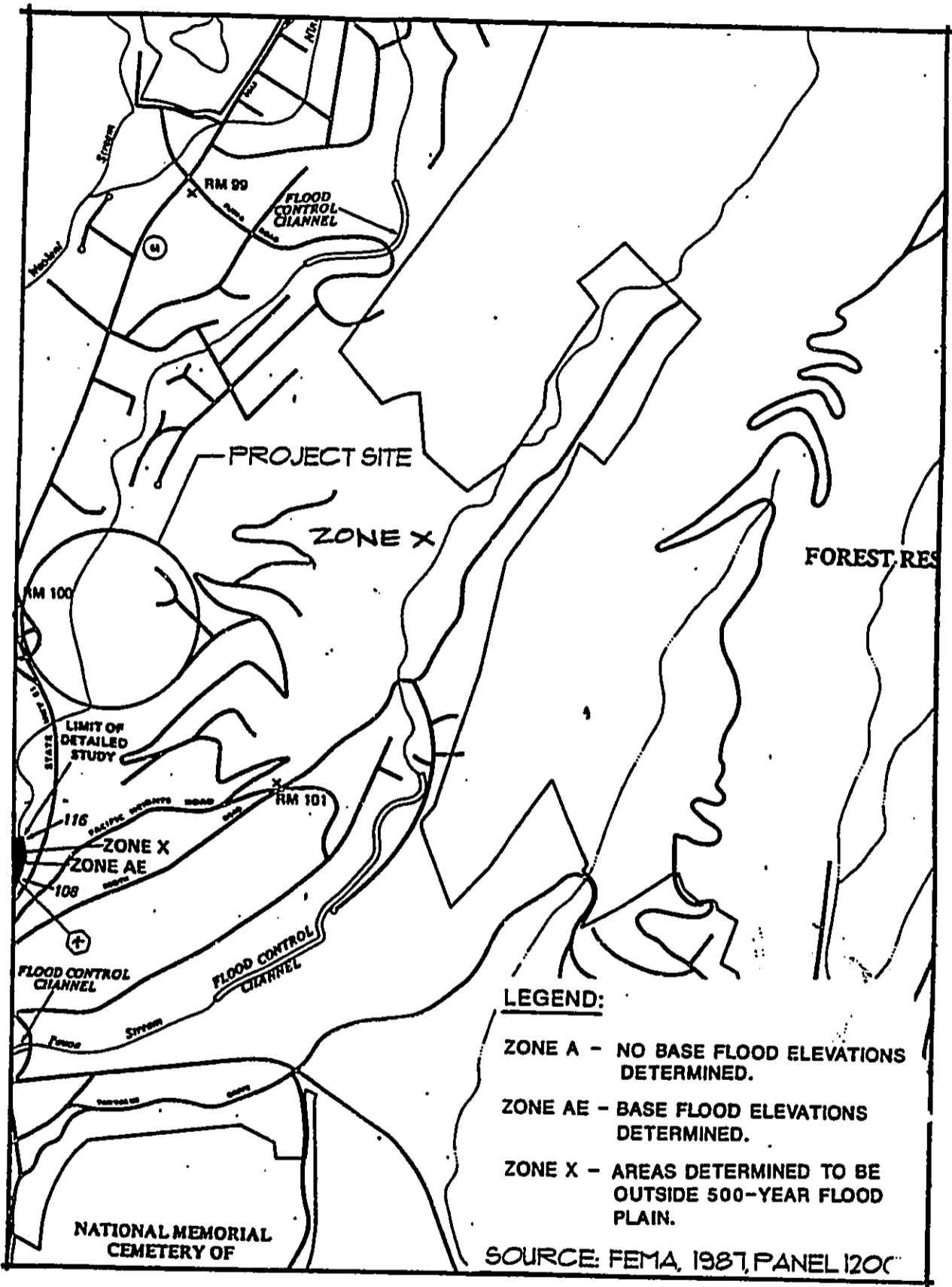


Figure 4
FLOOD HAZARD MAP

The four possible burial sites are in features 19, 26, 27 and 28 clustered in the northeast corner of TMK 2-2-31:12 in the proposed preservation buffer zone along with numerous habitation features.

I. Botanical:

A botanical survey of the site conducted in August 1996 by Evangeline Funk, Ph D, Botanical Consultants indicates that the wooded property supports a dense forest of introduced trees, Royal Palm and Ironwood being the emergent trees fifteen to twenty meters in height, and clumps of bamboo.

There are also layers of canopy type trees varying from 10 to 12 meters in height and largely composed of cinnamon, Blume, African tulip, octopus trees with some Java plum, rose apple and autograph trees.

The Hawaiian Bamboo is the only one that may be indigenous or may be a Polynesian introduction out of the thirty Five plant species found on the site. The rest are alien species.

There are no endangered species of plants known or present on the site.

J. Vertebrae/Fauna:

A fauna survey was conducted on December 6, 1997 and December 9, 1997 by Evangeline J. Funk, Ph. D.

Fauna observed in the project area include a variety of non-native species. A total of fourteen bird species were seen, some in large numbers including Japanese white-eyes, Old World Sparrows, Waxbills, Mannikins, and Parrot finches, Cardinals, Bulbuls, Pigeons and Doves, Starlings and Mynas. All except the golden plover, a migratory bird, are introduced.

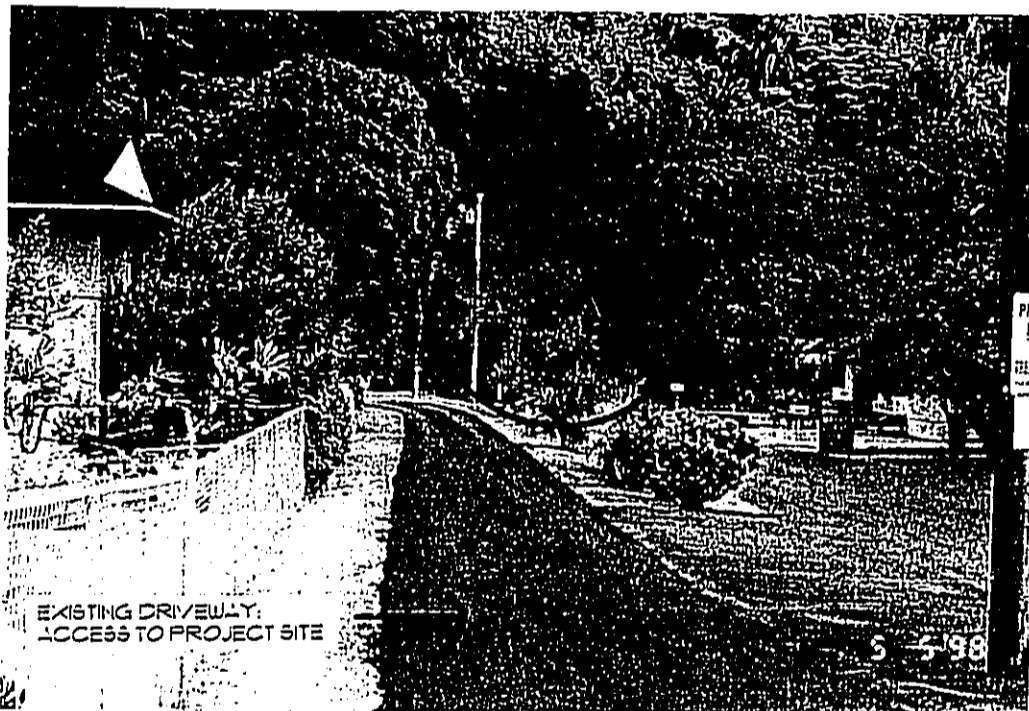
SECTION III

IDENTIFICATION AND SUMMARY OF MAJOR IMPACTS AND MITIGATION MEASURES [ALTERNATIVES CONSIDERED, IF ANY]:

The scope of the project was discussed with different technical consultants. Federal, State and County agencies were contacted for information relative to their areas of expertise. Time was spent in the field noting site conditions and conditions within the vicinity of the site. The sum total of consultations and field reconnaissance observations and investigations helped to identify existing conditions and features which could affect or be affected by the project.

There is no foreseeable major or long term social or environmental change or adverse impacts to be created on the subject property or its surrounding areas as a result of the proposed use.

- 1. The site is within the established single-family area and therefore will not impact the city's land use and general plan.*
- 2. The proposed house will not be visible from public view along Pali Highway since it will be behind the existing trees that will remain as shown on the photographs of the site taken from the different vantage points in Figures 5.1 through 5.3.*
- 3. The proposed bridge crossing will utilize the existing bridge abutments. One of the abutments will be restored to its original configuration. Any grading work and the construction of the bridge crossing is not anticipated to take place within the stream. The existing stream channel will not be altered in any way.*
- 4. The wetland was originally delineated in November 1992. There is no discharge to the stream or adjacent wetland anticipated. A redelineation of the wetland, therefore, will not be required.*
- 5. The site is not located within a flood hazard area.*
- 6. Existing road, water, waste water, electrical and cable TV systems can accommodate the proposed use.*
- 7. The actual building site of the project will not affect the known surface archaeological features and potential subsurface archaeological deposits of State Site 5--80-14-1464 that lie within the proposed buffer zone in the northeast corner of TMK 2-2-31:12 and the southeast corner of TMK 2-2-31:11.*



VIEW FROM SIDEWALK,
KAILUA BOUND SIDE OF PALI HIGHWAY



STEELE RESIDENCE
CDUA
TMK 2-2-3112

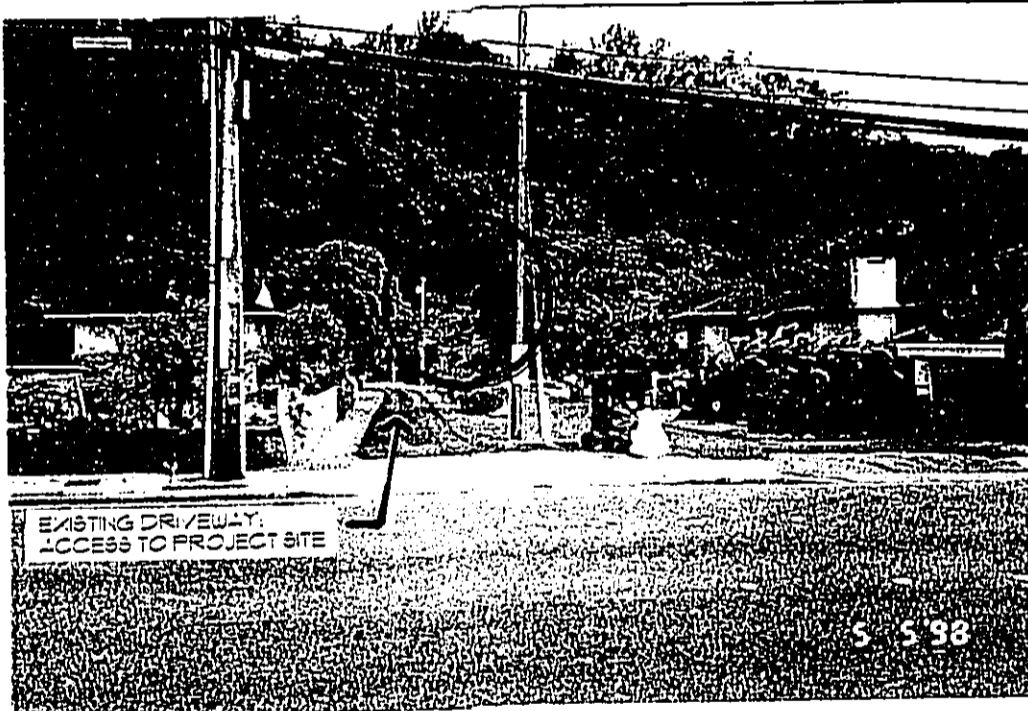
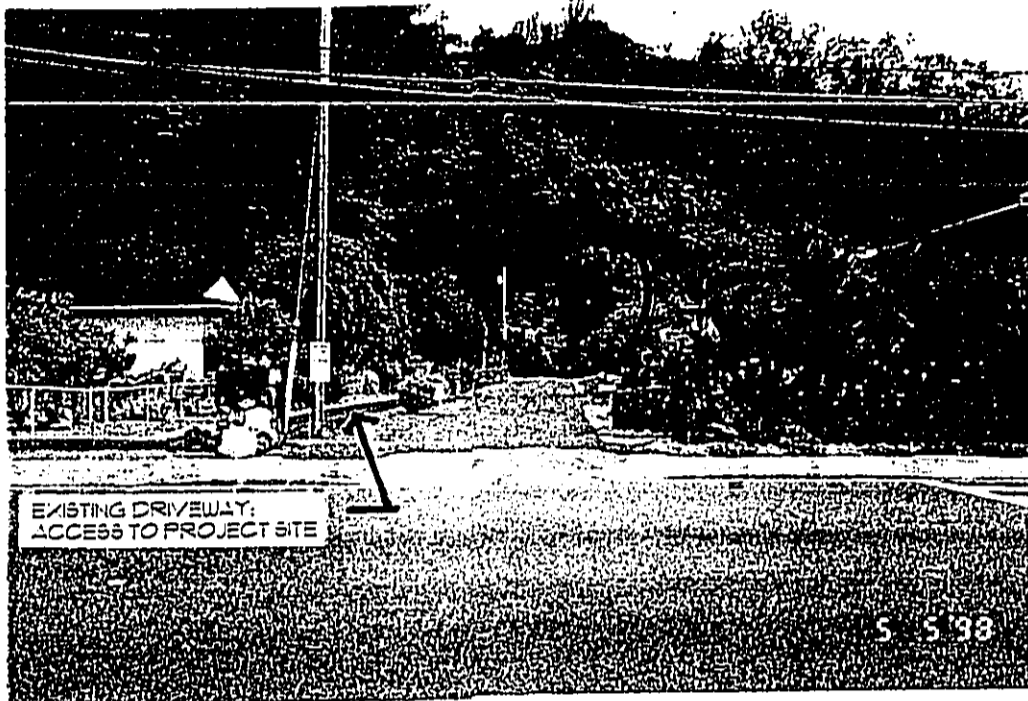
PHILIP K. WHITE ASSOCIATES, LTD.
ARCHITECTS AND PLANNERS
851 POHUKAUNA STREET, SUITE C-1
HONOLULU, HAWAII 96813-5327
TEL: (808) 596-0260 FAX: (808) 591-6661

Date:
5-7-98

Sheet No:
EXHIBIT
NO. 19A
Sheet: Of:

Figure 5.1

VIEWS OF SITE FROM PALI HIGHWAY



VIEW FROM MEDIAN STRIP
OF PALI HIGHWAY



STEELE RESIDENCE
CDUA
TMK 2-2-312

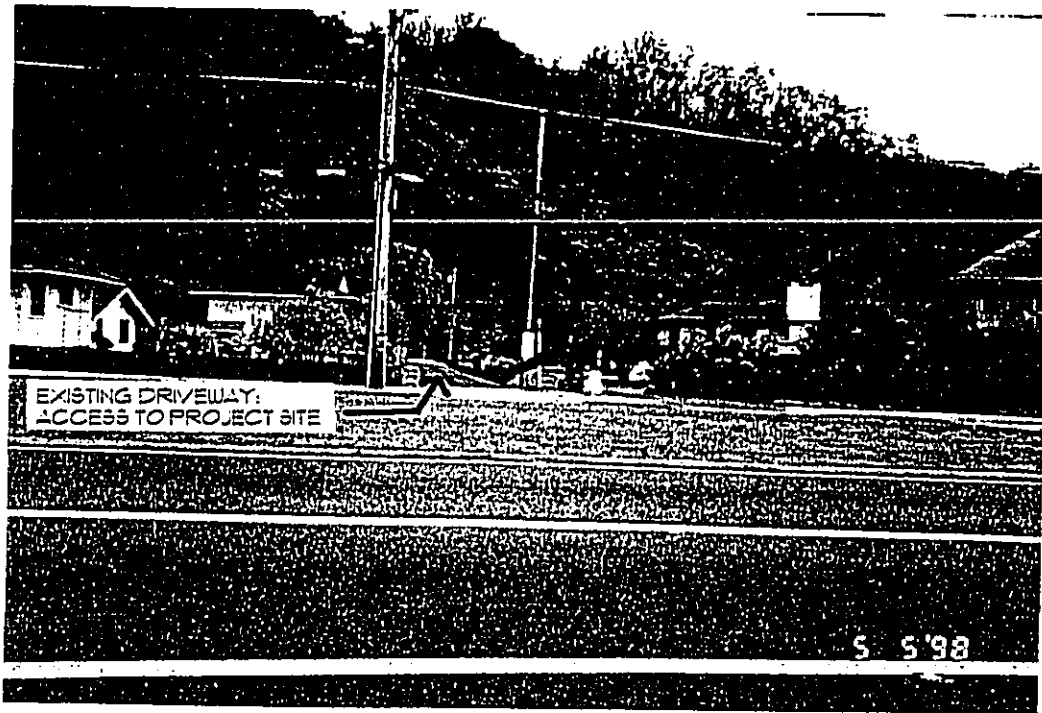
PHILIP K. WHITE ASSOCIATES, LTD.
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HONOLULU, HAWAII 96813-5327
TEL: (808) 596-0260 FAX: (808) 591-6661

Date:
5-7-98

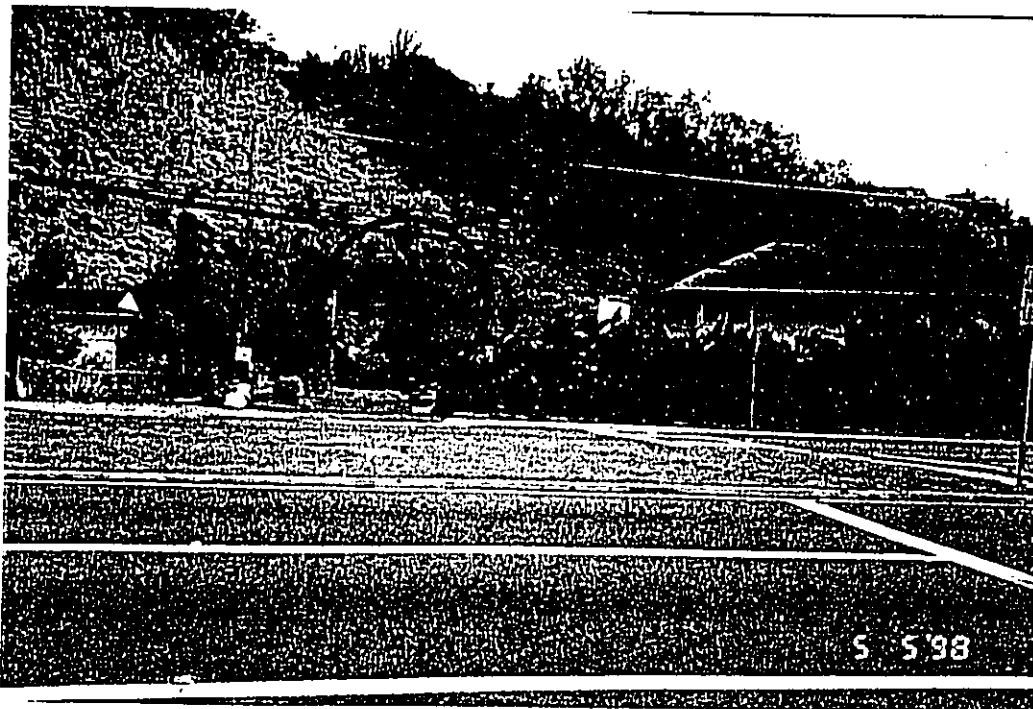
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Figure 5.2

VIEWS OF SITE FROM PALI HIGHWAY



EXISTING DRIVEWAY:
ACCESS TO PROJECT SITE



VIEW FROM SIDEWALK,
HONOLULU BOUND SIDE OF PALI HIGHWAY



STEELE RESIDENCE
CDUA
TMK 2-2-3112

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TEL: (808) 596-0250 FAX: (808) 591-6661

Date:
5-1-98

Sheet No:
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Sheet: Of:

Figure 5.3

VIEWS OF SITE FROM PALI HIGHWAY

8. *Construction of the house will remove all or portions of the following surface features and any underlying subsurface deposits in other areas of TMK 2-2-31:12:*

*Feature 1, a rock mound
Feature 2, a rock-faced, soil-surfaced terrace
Feature 4 and 5, natural rock terraces within a drainage
Feature 6, a rock-faced, soil-surfaced terrace
Feature 6.2, an enclosure
Feature 16, a rock-faced, soil-surfaced terrace
Feature 17, a twentieth-century concrete and metal bridge*

The eight features noted above have been mapped, measured and described. In addition, excavations have been conducted on Features 2, 6 and 16. As noted in the "Proposed Mitigation Treatment" section of the 1997 draft inventory survey archaeological report, which is on file at the State Historic Preservation Division, these features are not considered likely to yield significant new information about the Site 2464, and no further archaeological work is recommended for these features.

9. *There are no rare, threatened or endangered flora or fauna found on the site. It is not likely for the day-to-day activities of a single family to adversely affect the non-native birds that frequent the area.*
10. *The house will not be air conditioned and will not have any motorized equipment of any kind. No noise pollution is anticipated.*

Short Term Impacts and Mitigation Measures:

Site work and construction of the house will probably be the most disruptive to the existing environment. These activities will entail grading the site to design elevations, grubbing vegetation, excavation for foundations and utility lines and construction of foundation system consisting of spread and/or continuous footings to support the house.

1. *Site work will expose the soil thus creating opportunities for run-off and erosion during construction. Grading will be performed complying with the erosion control requirements of the City and County of Honolulu and approved grading plans.*
2. *Site work and construction will be sources of dust and noise. The Contractor will be required to maintain stringent dust controls. Given the size of the building area and the type and scale of the project, frequent water sprinkling will probably be the most effective dust control measure. The Contractor will also be responsible for general housekeeping of the site, keeping land areas and stream free of mud, sediment and construction litter and debris. Construction waste shall be reduced to a minimum.*
3. *Construction noise, though cannot be avoided, will be kept to a minimum. Considering the size of the project, it is not likely that construction will produce excessive noise and disrupt the neighbors. The trees around the project area that will be maintained and preserved will act as buffer to filter noise and absorb dust.*

4. *Vehicles used for construction may contribute to traffic on Pali Highway. Deliveries for construction materials will be scheduled during non-peak traffic hours to minimize impact on local traffic.*

[PROPOSED MITIGATION MEASURES:]

The following *additional* mitigation measures are proposed:

A. Soil:

[The geotechnical engineering evaluation conducted by Geolabs Hawaii determined that the proposed residential development is feasible. The study reveals that the project site is generally underlain by a surficial layer of highly expansive "adobe" clays overlying stiff alluvial deposits and hard basalt rock formation at shallow depths.] *Based on the subsurface conditions anticipated at the project site, it is recommended that:*

1. *Shallow foundations consisting of spread and/or continuous footings be used to support the proposed new residence. [based on the subsurface conditions anticipated at the project site.]*
2. *The footing bottoms be embedded a minimum of 3 feet below the lowest adjacent finish grade in order to reduce the effects of the expansive clay soils due to moisture fluctuations. The concrete slab-on-grade required for the project be supported on at least 24 inches of non-expansive select granular fill materials to reduce the potential for distress to the slab resulting from swelling of the near-surface expansive soils.*
3. *Drilled shaft foundations be used for the support of the bridge abutments due to the potential for stream scour at the Nuuanu Stream crossing. Alternatively, a shallow foundation system may be considered provided that the footings are set-back far enough from the stream bank, or the channel floor and stream bank at the bridge crossing are lined with rip-rap facing.*

Due to the proximity of the proposed residence to Nuuanu Stream, special attention shall be given to the subgrade preparation work to reduce the potential for pumping subgrade conditions resulting from the high in-situ moisture contents of the subsoils anticipated at the proposed design subgrade elevations.

Rock and rock formations will be checked for stability and will be supported up as needed. Planting around rocks will help stabilize the soil around the rocks. Rocks from the construction areas will be salvaged and utilized in the new gardens planned adjacent to the house.

B. Grading and Storm Runoff:

The existing drainage patterns will be maintained and preserved as much as possible. Grading will be limited to approximately 0.38 acre of the conservation area and 0.08 acre on the west side of Nuuanu Stream as shown on the Access, Utility and Grading Plan. It is estimated that there will be 900 cubic yards of excavation and 750

CORRECTION

THE PRECEDING DOCUMENT(S) HAS
BEEN REPHOTOGRAPHED TO ASSURE
LEGIBILITY
SEE FRAME(S)
IMMEDIATELY FOLLOWING

4. *Vehicles used for construction may contribute to traffic on Pali Highway. Deliveries for construction materials will be scheduled during non-peak traffic hours to minimize impact on local traffic.*

[PROPOSED MITIGATION MEASURES:]

The following *additional* mitigation measures are proposed:

A. Soil:

[The geotechnical engineering evaluation conducted by Geolabs Hawaii determined that the proposed residential development is feasible. The study reveals that the project site is generally underlain by a surficial layer of highly expansive "adobe" clays overlying stiff alluvial deposits and hard basalt rock formation at shallow depths.] *Based on the subsurface conditions anticipated at the project site*, it is recommended that:

1. Shallow foundations consisting of spread and/or continuous footings be used to support the proposed new residence. [based on the subsurface conditions anticipated at the project site.]
2. The footing bottoms be embedded a minimum of 3 feet below the lowest adjacent finish grade in order to reduce the effects of the expansive clay soils due to moisture fluctuations. The concrete slab-on-grade required for the project be supported on at least 24 inches of non-expansive select granular fill materials to reduce the potential for distress to the slab resulting from swelling of the near-surface expansive soils.
3. Drilled shaft foundations be used for the support of the bridge abutments due to the potential for stream scour at the Nuuanu Stream crossing. Alternatively, a shallow foundation system may be considered provided that the footings are set-back far enough from the stream bank, or the channel floor and stream bank at the bridge crossing are lined with rip-rap facing.

Due to the proximity of the proposed residence to Nuuanu Stream, special attention shall be given to the subgrade preparation work to reduce the potential for pumping subgrade conditions resulting from the high in-situ moisture contents of the subsoils anticipated at the proposed design subgrade elevations.

Rock and rock formations will be checked for stability and will be supported up as needed. Planting around rocks will help stabilize the soil around the rocks. Rocks from the construction areas will be salvaged and utilized in the new gardens planned adjacent to the house.

B. Grading and Storm Runoff:

The existing drainage patterns will be maintained and preserved as much as possible. Grading will be limited to approximately 0.38 acre of the conservation area and 0.08 acre on the west side of Nuuanu Stream as shown on the Access, Utility and Grading Plan. It is estimated that there will be 900 cubic yards of excavation and 750

cubic yards of embankment. *Excavated material shall be used for embankment except for structural.* The excess excavated material will be hauled off-site to a disposal area.

Cement rubble masonry (CRM) walls is planned for retaining the access driveway near the bridge abutments and the front of the new home. CRM walls are also proposed in developing a yard/lawn area at the back of the new home, and also to divert the off-site storm runoff around the new home.

Although there is a slight increase in storm runoff due to the construction of the paved driveway and home, the impact on the area and Nuuanu Stream is insignificant. *Mitigating measures will include compliance with the City Grading Ordinance which imposes requirements for erosion control during construction.*

The new bridge crossing the stream will be constructed above the previously computed water surface elevation of Nuuanu Stream. *Building permit for the bridge will be obtained from the City and County of Honolulu prior to construction.*

No grading work is planned within the wetland limit and Nuuanu Stream beyond the existing bridge abutments.

Grading will be done in accordance with the City and County of Honolulu's Grading Ordinance, Board of Health's Rules and Regulations and other conditions required by the Department of Land and Natural Resources. *Studies for grading, layout of the house and driveway and utility alignments were made with the goal of retaining as much native vegetation as possible.*

C. Building:

The final development of the 4.84 acre lot uses approximately .2 acre for building, driveway and related site elements. This leaves 4.64 acres untouched and preserved.

The plan is configured with separate elements joined into one dwelling by covered breezeways, which permitted more flexibility in placing the building's footprint on the site and allowed the design to minimize disturbance to the existing terrain. This configuration lends itself to the existing topography and the structure's connection to the landscape makes its impact on drainage patterns minimal.

The house is designed to blend visually with the natural characteristics of the site and to provide occupants with open views of the forest. The design is simple, with low-pitched roofs and broad eaves, wood windows and doors. The house will be wood framed with tile roof and stucco finished walls. The use of subdued colors both on the exterior and interior will have a mitigating effect on the site. The proposed project will not impair view planes or corridors from public vantage points.

D. Landscaping:

Wherever possible existing site features such as trees, shrubs, groundcover, rocks, rock formations and land forms will be retained. Preservation of this landscape will include work to improve the site such as:

Clearing areas of accumulated debris.

Trimming to remove dead, dying, diseased and unhealthy growth. This work will open the site for better air circulation and allow sunlight to the forest floor.

Planting of bare areas on the ground with shrubs and groundcovers to minimize soil erosion.

E. Sanitary Sewer Service:

Approximately 320 gallons per average day of waste water will be generated by the planned single-family residence. The sewage will be conveyed by an on-site 6-inch pipe from the new home to connect with an existing municipal sewer manhole located in the property's driveway on the west side of Nuuanu Stream approximately 250 linear feet from the house. At the crossing of Nuuanu Stream, the pipe will be strapped to the inside portion of the bridge girder. Although the pipe at this point will be lower than the invert of the existing sewer manhole, wastewater will be pushed through the low point by subsequent flow from the much higher elevation of the home and its plumbing fixtures. The addition of the wastewater from the new residence should have an insignificant impact on the existing municipal system.

The new 6-inch sewer lateral will remain a private system to be maintained by the Owner.

F. Water Service:

The potable water demand for the new residence is approximately 500 gallons per average day. Water for the home and irrigation of landscaping will be conveyed in a 1-1/4 inch pipe along a 20 foot wide private roadway (Tax Map Key: 2-2-31:01) from a BWS meter to be installed within the Pali Highway Right-of-Way. At the crossing of Nuuanu Stream, the pipe will be strapped to the underside face of the bridge girder. The additional water demand for the new home should have any insignificant impact on the existing municipal system. *In addition, water conservation measures will be implemented such as using low-flow plumbing fixtures and water-efficient clothes washers and dishwashers.*

The 1-1/4 inch pipe line from the meter to the new home will remain a private system to be maintained by the Owner.

G. Electrical, Telephone and CATV Services:

Electric, telephone and CATV service will be extended underground from a overhead pole line located in the existing access driveway. At the crossing of Nuuanu Stream the ducts will be strapped to the inside of the bridge girder. The additional services should have an insignificant impact on the existing public utilities.

H. Archaeological Features:

State Site 50-80-14-2464 (Bishop Museum Site 50-0a-A5-18) as a whole is considered eligible for listing on the National Register of Historic Places under 36 CFR 60.4, criteria d and e. Proposed mitigation treatment includes preservation of selected features (Features 7-11.2, a portion of Feature 12, Features 18-22 and 25-30), monitoring of construction work at features 15 and 15.01, and creation of preservation and burial treatment plans. The preservation plan should include interim and long-term components. An element of such a plan could be a buffer zone of 8 m (roughly 27 ft) around the groups of features recommended for preservation.

A written archaeological monitoring plan and interim preservation plan will be prepared and submitted to the State Historic Preservation Division for review and acceptance prior to the onset of construction activities. Also, a long-term preservation plan dealing with aspects of rehabilitation, restoration or adaptive reuse will be submitted to SHPD prior to any work in the preservation area. In addition, excavations will be monitored at selected features by a qualified professional archaeologist who will record the occurrence of any archaeological deposits encountered and take appropriate action should significant deposits be unearthed.

I. Botanical Features:

Vegetation in the project area includes numerous introduced, naturalized species. Notable in the southern portion of the project area are extensive stands of bamboo. The highly diverse and exotic nature of the vegetation in the project area is perhaps related to a large estate garden of the early twentieth century known in the vicinity.

The existing site can be considered landscaped with its rock arrangements and the mature trees, which create serene yet exciting landscape spaces. The landscape concept is the preservation of this landscape, wherever possible, and the integration of the new landscape into this environment.

The proposed house would be situated to take advantage of the site's unique landscape resources and the new gardens would follow this landscape character. The house site would become "the clearing in the forest".

SECTION IV

ALTERNATIVES TO PROPOSED ACTION:

1. Site:

Two areas of the site were considered for the house, one was the west side of the property closer to the stream. The other was the particular location shown on the drawings which has the flattest area on the property, this was selected primarily because of its topography. The choice of this location eliminated the need for extensive regrading which would disrupt the existing drainage patterns.

2. Building:

A two-story house was originally planned, but it would have been higher and more visible from the neighboring properties. The final design opt for an open plan concept to lower the visual impact of the house, a cluster of smaller buildings connected by covered breezeways that sits lightly on the site than a large single structure.

SECTION V

DETERMINATION OF SIGNIFICANCE:

Chapter 200 (Environmental Impact Statement Rules) of Title 11, Administrative Rules of the State Department of Health, establishes criteria for determining whether an action may have significant effects on the environment (11-200-12). Since no significant effects on the environment are expected for the proposed use in the General subzone, the applicant requests that a Finding Of No Significant Impact (FONSI) determination for this action be made with respect to the need for an environmental impact statement.

[IX.] Findings and reasons supporting determination: [and]

The applicant has been made aware of the sum of effects on the quality of the environment and has evaluated the overall cumulative effects of the proposed action in considering the potential environmental effects of this proposed project. As a result of these considerations and purposes, the applicant has determined that:

- 1) *Involves an irrevocable commitment to loss or destruction of any natural or cultural resource;*

The proposed action will not involve an irrevocable commitment to loss or destruction of any significant natural or cultural resource. Any significant cultural resource on the property will be treated with an approved preservation plan. Other cultural resources not in the preservation category have been mapped and information about them have been gathered and reported. A monitoring plan will be implemented during construction.

- 2) *Curtails the range of beneficial uses of the environment;*

The proposed project will not curtail the range of beneficial uses of the environment. The property, which is bordered by existing residential uses, is in itself suitable for residential use. Most of the archaeological features of the site indicate post-contact habitation and use from the late 1800's.

Existing features of the site such as the stream, vegetation and archaeological features will be maintained and preserved.

- 3) *Conflict's with the State's long-term environmental policies or goals and guidelines as expressed in Chapter 344, HRS; and any revisions thereof and amendments thereto, court decisions, or executive orders;*

The proposed action is in keeping with the State and County's long-term environmental policies, goals and guidelines as expressed in Chapter 344 HRS, and any revisions and amendments thereto, court decisions and executive orders.

- 4) *Substantially affects the economic or social welfare of the community or State;*

The proposed action will not adversely affect the economic or social welfare of the community or state.

- 5) *Substantially affects public health;*

The proposed action will not affect public health in any way. *The condition will not adversely affect the health and safety of the public at large or the residents of the surrounding area. Applicable statutes and regulations imposed by the State of Hawaii and the City and County of Honolulu will be complied with in order to minimize any adverse short term impact that the construction of the project will cause.*

- 6) *Involves substantial secondary impacts, such as population changes or effects on public facilities;*

The proposed action will not involve secondary impacts, such as population changes or effects on public facilities that are not already contemplated. *The house will be occupied by a small family of four. The property will not be subdivided.*

- 7) *Involves a substantial degradation of environmental quality;*

The proposed action will not involve degradation of environmental quality. *The existing physical and environmental aspects of the site, such as natural beauty and open space characteristics, will be preserved and improved upon as much as possible .*

- 8) *Is individually limited but cumulatively has considerable effect upon the environment or involves a commitment for larger actions;*

The proposed action is individually limited and cumulatively will not have any effect upon the environment.

- 9) *Substantially affects a rare, threatened, or endangered species, or its habitat;*

No endangered plant or animal species are located within the project site. The proposed action will not adversely affect any rare, threatened, or endangered species or habitat in the area.

- 10) *Detrimentially affects air or water quality or ambient noise levels;*

The proposed action will not include anything that will affect air or water quality or ambient noise levels *in the long term. Ambient air quality may be affected by fugitive dust and combustion emissions during*

construction but can be controlled by measures stipulated in this Assessment. Construction noise will be pronounced during site preparation work but should be eliminated when the house is erected. All construction activities will comply with air quality and noise pollution regulations of the State Department of Health.

- 11) *Affects or is likely to suffer damage by being located in environmentally sensitive area such as a flood plain, tsunami zone, beach, erosion-prone area, geological hazardous land, estuary, fresh water, or coastal waters;*

The proposed action is not in an environmentally sensitive area such as flood plain, tsunami zone, erosion-prone area, geologically hazardous land, estuary or coastal waters.

- 12) *Substantially affects scenic vistas and view planes identified in county or state plans or studies; or,*

The proposed project will not substantially affect scenic vistas and view planes identified in county or state plans or studies. Nestled in the existing vegetation which will be preserved as much as possible, the proposed structure will be unobtrusive, it will not be visible from public view along Pali Highway.

- 13) *Requires substantial energy consumption.*

The proposed project will not require substantial energy consumption. The house will have energy efficient light fixtures and appliances.

Further, the proposed action is compatible with the locality and surrounding residential areas and appropriate to the physical conditions and capabilities of the area to be served; the existing physical and environmental aspects of the project site will be preserved; the proposed action will not result in any adverse effects to the existing environment; and the proposed action is in keeping with the objectives and purposes of the project site and its surrounding areas. The applicant will comply with all applicable statutes, ordinances and rules of the federal, state and county governments.

[X.] Agencies to be consulted in the preparation of the EIS, if applicable.

Not applicable.

SECTION VI

LIST OF PERMITS AND APPROVALS:

The land use and construction permits will require approvals from different State and County agencies. The list below are indicative of rather than a comprehensive listing of these agencies:

State of Hawaii

Department of Land and Natural Resources

City and County of Honolulu

Department of Land Utilization

Division of Engineering

Wastewater Management

Fire Department

Transportation

Board of Water Supply

SECTION VII

REFERENCES

- Towill Shigeoka Associates, Topographical Survey Map, TMK: 2-2-31:12, October 15, 1996*
- Geolabs Hawaii, Geotechnical Engineering Evaluation, Steele Residence CDUA, 2525 Pali Highway, Honolulu, Oahu, Hawaii*
- Evangeline J. Funk, Ph. D., Botanical Survey Report for the Proposed Steele Residence Site, 1996*
- Evangeline J. Funk, Ph. D., Fauna Survey Report for the Proposed Steele House Site, 1997*
- Helen Higman Leidemann, Department of Anthropology, Bishop Museum, A Nu'uaniu House Site, Inventory Survey of Portions of TMK 2-2-31:11 and 12, Nu'uaniu Ahupua'a, Kona District, Island of O'ahu, Hawai'i, January 1998*
- Hawaii State, Department of Health, Hawaii Administrative Rules, Title 11, Chapter 200, "Environmental Impact Statement Rules"*
- Hawaii State, Department of Health, Hawaii Revised Statutes, Chapter 344, "State Environmental Policy"*
- RYM Nuuanu Partners, Inc., CDUA Application and Final Environmental Assessment, TMK: 2-2-31: Por 32, 1992*
- Hawaii State, Hawaii Revised Statutes, Chapter 205A, Coastal Zone Management*
- Soils Erosion Standards and Guidelines, Department of Public Works, City and County of Honolulu, November 1975*
- Hida Okamoto Associates, Grading and Utility Plan , 1998*
- The American Institute of Architects, Environmental Resource Guide, 1998*
- Helen Higman Leidemann, Department of Anthropology, Bishop Museum, Preservation and Monitoring Plans, Site 50-80-14-2464, August 1998*

APPENDIX A

Comment Letters and Responses

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

STATE OF HAWAII



DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSIONER ON WATER RESOURCE MANAGEMENT
HONOLULU, HAWAII

RECEIVED
FEB 25 1998

PHILIP WHITE ARCHITECTS
MICHAEL B. WELTON
CHRISTOPHER G. GRAY
DANIEL A. HARRIS
LAWRENCE R. LEE
JENNIFER M. ROBERTSON, JR.
EDWIN T. SAKODA
ACTING DEPUTY DIRECTOR

September 8, 1998
Mr. Edwin T. Sakoda
Acting Deputy Director
Commission on Water Resource Management
Department of Land and Natural Resources
PO Box 621
Honolulu, HI 96809

Subject: Proposed Construction of a Vehicular Access Bridge
Across Nuuanu Stream Using Existing Abutments
at TMK: 2-2-31, por 12, Honolulu, Oahu

Dear Mr. Sakoda,

Thank you for your response to the letter from Hida Okamoto & Associates, Inc. dated January 8, 1998 indicating that a stream channel alteration permit pursuant to Hawaii Revised Statutes 174C-71 will not be required because the Nuuanu Stream channel will not be altered.

The proposed work will include the use of the existing abutments and restoration of one of the abutments to its original configuration. No heavy equipment or materials will be driven or transported thru the stream channel, and no construction work will occur in the stream channel.

Your letter will be included in the Final Environmental Assessment. We appreciate the participation of the Commission on Water Resource Management in the environmental assessment process.

Truly Yours,
Philip K. White
Philip K. White, AIA

cc: Hida Okamoto Assoc.

Mr. Harvey K. Hida, P.E., President
Hida, Okamoto & Associates, Inc.
1440 Kapiolani Boulevard, Suite 1440
Honolulu, Hawaii 96814

Dear Mr. Hida:

Proposed Construction of a Vehicular Access Bridge
Across Nuuanu Stream Using Existing Abutments
at TMK: 2-2-31, por 12, Honolulu, Oahu

This is in response to your letter, dated January 8, 1998, inquiring as to whether proposed reconstruction of a bridge superstructure across Nuuanu Stream using existing abutments requires a stream channel alteration permit.

A site visit was conducted by our staff on January 16, 1998 and photographs of the stream channel were taken. It is our understanding that the proposed work will include the use of the existing abutments and restoration of one of the abutments to its original configuration. No heavy equipment or materials will be driven or transported across the stream channel, and no construction work will occur in the stream channel. If the foregoing is correct, a stream channel alteration permit pursuant to Hawaii Revised Statutes 174C-71 will not be required because the Nuuanu Stream channel will not be altered.

Thank you for your inquiry. If you have any questions, please call David Higs at 587-0249.

Sincerely,
Edwin T. Sakoda
EDWIN T. SAKODA
Acting Deputy Director

DK:fc



DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, HONOLULU
FT. SHAFTER, HAWAII 96814-5440

ATTENTION OF

February 19, 1998

PHILIP
WHITE
ARCHITECTS

Operations Branch

Mr. Harvey K. Hida
Hida, Okamoto and Associates, Inc.
1440 Kapiolani Boulevard, Suite 915
Honolulu, Hawaii 96814

Dear Mr. Hida:

This is in regards to your request for clarification as to whether construction of a bridge crossing at Nuuanu Stream (TMK 2-2-31: For. 12) will require a redelineation of the wetland boundary. It was noted that the wetland was originally delineated in November 1992.

A redelineation of the wetland will not be required, as long as the scope of the original project has not changed and no discharge to the stream or adjacent wetland is anticipated.

If you have any further questions, please contact Mr. Alan Everson of my staff at 438-9258, extension 11 and refer to File No. 930060036.

Sincerely,

Linda M. Hihara-Endo, Ph.D., P.E.
Acting Chief, Operations Branch

September 8, 1998

Ms. Linda M. Hihara-Endo, Ph.D., P.E.
Acting Chief, Operations Branch
US Army Engineering District, Honolulu
Fort Shafter, Hawaii 96814-5440

Subject: Single-Family Residence
Nuuanu, Oahu, Hawaii
at TMK: 2-2-31, por 12, COE File No. NP93-036

Dear Mr. Hihara-Endo,

Thank you for your response to the letter from Hida Okamoto & Associates, Inc. dated January 8, 1998 indicating that a redelineation of the wetland will not be required as long as the scope of the original project has not changed and no discharge to the stream or adjacent wetland is anticipated.

The wetland was originally delineated in November 1992. Similar to the previous project, the proposed bridge crossing will utilize the existing bridge abutment, no discharge to the stream or adjacent wetland is anticipated.

Your letter will be included in the Final Environmental Assessment. We appreciate the participation of the Department of the Army in the environmental assessment process.

Truly Yours,

Philip K. White, AIA

cc: Hida Okamoto Assoc.

**PHILIP
WHITE
ARCHITECTS**

September 8, 1998

Mr. Don Hibbard
Administrator
State Historic Preservation Division
Department of Land and Natural Resources
33 South King Street, 6th Floor
Honolulu, HI 96813

Subject: (File No. OA-2891) Chapter 6E-42 Revised Historic Preservation
Review - Conservation District Use Permit for a Single Family
Residence: Steele Residence 2529A Pali Highway
Nu'uuanu, Kona, O'ahu TMK: 2-2-031:012

Dear Mr. Hibbard,

Thank you for reviewing the archaeological report for the above parcel. Per your letters dated June 5, 1998 and August 19, 1998, interim and long-term preservation plans and an archaeological monitoring plan will be submitted to the State Historic Preservation Division (SHPD) for review and approval. The approved interim preservation plan and archaeological monitoring plan will be executed prior to construction. The long-term preservation plan will be implemented after review and approval by SHPD.

Your letters will be included in the Final Environmental Assessment. We appreciate the participation of the State Historic Preservation Division in the environmental assessment process.

Truly Yours,

P. J. White
Philip K. White, AIA

Division of Forestry & Wildlife

1151 Punchbowl Street, Rm. 325 • Honolulu, HI 96813 • (808) 587-0144 • Fax: (808) 587-0140

June 1, 1998

MEMORANDUM

TO: Tom Eisen, Planner
Division of Land Management

THRU: Dean Uchida, Administrator
Division of Land Management

FROM: Michael G. Buck, Administrator
Division of Forestry and Wildlife

MGB

SUBJECT: CDUA (Board Permit) File #OA-2891, Single Family Residence, Nuuanu Valley, Honolulu, Oahu TMK 2-2-31:12, 4.84 acres, Lot B, General subzone.

We have reviewed this proposal with respect to its impacts on the natural resources and endangered species in particular and have no objections to the development of a single family residence in general subzone.

C: Oahu DOFAW

JUN 3 3 48 PM '98

**PHILIP
WHITE
ARCHITECTS**

September 8, 1998

Mr. Michael G. Buck
Administrator
Division of Forestry and Wildlife
Department of Land and Natural Resources
1151 Punchbowl Street, Rm 325
Honolulu, HI 96813

Subject: CDUA (Board Permit) File #OA-2891, Single-Family Residence
Nuuanu Valley, Honolulu, Oahu TMK 2-2-31:12, 4.84 acres,
Lot B General Subzone

Dear Mr. Buck,

Thank you for your letter dated June 1, 1998 indicating that you have no objections to the development of a single-family residence in the general subzone after having reviewed the proposal with respect to its impacts on the natural resources and endangered species in particular.

Your letter will be included in the Final Environmental Assessment. We appreciate the participation of the Commission on Water Resource Management in the environmental assessment process.

Truly Yours,

Philip K. White

Philip K. White, AIA

PLANNING DEPARTMENT
CITY AND COUNTY OF HONOLULU

830 SOUTH KING STREET, 8TH FLOOR, HONOLULU, HAWAII 96813-2017
PHONE: (808) 523-4323 FAX: (808) 523-4490



REGISTRATION
NO. 11100

PATRICK ONISHI
Chief Planning Officer
DONALD W. HARRIS
Senior Chief Planning Officer

RR 698-1106

**PHILIP
WHITE**
ARCHITECTS

June 17, 1998

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

Dear Mr. Wilson:

Conservation District Use Application, (CDUA #OA-2891),
Steele Family Residence, TMK: 2-2-31:12

We have reviewed the application for a Conservation District Use Application board permit. We have examined the request in light of the City and County's General Plan and its Primary Urban Center Development Plan and Special Provisions. The nature of the permit—the construction of a single-family residence within an established single-family area—does not involve any impacts that may be detrimental to the City's land use policies nor does it require any changes to the General Plan nor the Primary Urban Center Development Plan.

Should you have any questions, please contact Robert Reed of our staff at 523-4402.

Yours very truly,

Patrick T. Onishi
PATRICK T. ONISHI
Chief Planning Officer

FTO:js

September 8, 1998

Mr. Patrick Onishi
Chief Planning Officer
Department of Land Utilization
City and County of Honolulu
650 South King Street, 7th Floor
Honolulu, HI 96813

Subject: Conservation District Use Application (CDUA #OA-2891)
Steele Family Residence TMK: 2-2-31:12

Dear Mr. Onishi,

Thank you for your letter dated June 17, 1998 indicating that the construction of a single-family residence within an established single-family area does not involve any impact that may be detrimental to the City's land use policies nor does it require any change to the General Plan nor the Primary Urban Center Development Plan.

Your letter will be included in the Final Environmental Assessment. We appreciate the participation of the Department of Land Utilization in the environmental assessment process.

Truly Yours,

Philip R. White
Philip R. White, AIA

RECEIVED
JUN 24 10:27

DEPARTMENT OF LAND AND NATURAL RESOURCES
STATE OF HAWAII

DEPARTMENT OF LAND UTILIZATION
CITY AND COUNTY OF HONOLULU

630 SOUTH KING STREET, 7TH FLOOR • HONOLULU, HAWAII 96813
PHONE: (808) 521-5416 • FAX: (808) 527-6743



JANUARY 1998

JANUARY 1998
LORETTA S.C. CHOI
PROPERTY MANAGER
98-00881 (02)

PHILIP
WHITE
ARCHITECTS

February 13, 1998

Ms. Julie Abcede, AIA
Philip White & Associates Architects, Ltd.
851 Puhukaina Street, Suite C-1
Honolulu, Hawaii 96813-5327

Dear Ms. Abcede:

Special Management Area Review

Tax Map Key : 2-2-31: 12
Type of Project: New dwelling, two-car garage, and
other site improvements

The proposed project on the above-referenced tax map key has been reviewed. We find that it:

- Is not within the Special Management Area.
- Is within the Special Management Area, but is not defined as "development" and is therefore, exempt (Section 25-1.3 [2]), Chapter 25, Revised Ordinances of Honolulu).

Should you have any questions, please contact the Environmental Review Branch at 523-4077.

Very truly yours,

For JAN NAOE SULLIVAN
Director of Land Utilization

JNS:am
0:00011000011.djt

September 8, 1998

Ms. Jan Naoe Sullivan
Director
Department of Land Utilization
City and County of Honolulu
650 South King Street, 7th Floor
Honolulu, HI 96813

Subject: Special Management Area Review
TMK: 2-2-31:12
New dwelling, two-car garage, and other site improvements

Dear Ms. Sullivan,

Thank you for your letter dated February 13, 1998 indicating that the proposed project on the subject tax map key is not within the Special Management Area.

A copy of your letter will be included in the Final Environmental Assessment. We appreciate your participation in the environmental assessment process.

Please call if you have any question.

Truly Yours,

Julie Abcede, AIA



**DEPARTMENT OF BUSINESS,
ECONOMIC DEVELOPMENT & TOURISM**

OFFICE OF PLANNING

235 South Beretania Street, 8th Fl., Honolulu, Hawaii 96813
Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96804

Ref. No. P-7491

BENJAMIN J. CARTER
GOVERNOR
BRADLEY J. MOSES
DEPUTY GOVERNOR
ROCK E. BOZED
DIRECTOR, OFFICE OF PLANNING

Tel: (808) 587-2846
Fax: (808) 587-2824

**PHILIP
WHITE
ARCHITECTS**

June 12, 1998

MEMORANDUM

TO: Michael D. Wilson, Chairperson
Department of Land and Natural Resources

ATTN: Dean Uchida, Administrator
Land Division

FROM: Rick Egged
Director, Office of Planning

SUBJECT: Conservation District Use Application for Richard Steele Single-Family Dwelling,
Nuuanu Valley, Oahu, OA-2891

The parcel on which the proposed dwelling for Mr. and Mrs. Richard D. Steele will be situated is bounded on the west by Nuuanu Stream and contains areas of cross slopes over 40%. There exists an approximate 70' difference in elevation between the east and west boundaries of the property. According to the soil report, shallow groundwater may be encountered in areas of the parcel near the stream and some pumping may be needed in the process of applying suitable backfill as foundation for the dwelling.

While the applicant notes that grading will be limited to 0.46 acres involving 900 cubic yards of excavation and 750 cubic yards of fill, no information is provided on methods that will be used to contain potential runoff. Measures to prevent or minimize polluted runoff into the stream especially during site preparation and construction of both the bridge and dwelling should be required as conditions of approval for this application. Assurances against possible violation of Coastal Zone Management (CZM) policies and objectives dealing with point and non-point pollution should be incorporated into this application.

Additionally, if construction of the bridge requires a Department of the Army permit, a CZM Federal consistency review by our office may also be needed. If there are any questions, please contact Howard Fujimoto of our CZM Program at 587-2898.

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STATE OF HAWAII

September 8, 1998

Mr. Rick Egged
Director, Office Planning
Department of Business,
Economic Development & Tourism
235 South Beretania Street, 6th Floor
Honolulu, HI 96813

Subject: Ref. No. P-7491
Conservation District Use Application for Richard Steele Single-Family Dwelling, Nuuanu Valley, Oahu, OA-2891

Dear Mr. Egged,

Thank you for reviewing the Draft Environmental Assessment prepared for the above subject project. We offer the following response to your concerns.

1. With regards to containing potential run-off, the project will comply with the City Grading Ordinance which imposes requirements for erosion control during construction. An erosion control plan will be submitted for approval prior to start of construction. The plan will consist of both permanent and temporary erosion control measures.

Methods of permanent erosion control measures to contain potential run-off and minimize soil erosion will include but not be limited to the following:

Ground cover and landscaping will be provided for the exposed and graded areas and top of slopes.

All permanent cut and fill slopes will be designed with an inclination of 2H:1V or flatter. For the upper slope wash "adobe" clay layer, a flatter slope ratio of 3H:1V will be used for the upper 3 feet of cut slopes. All fills placed on slopes with an inclination steeper than 3H:1V will be keyed and benched into the existing slope to provide stability of the new fill against sliding.

The site is carefully sculpted so that run-off water is filtered through a series of basins before going into a catchment area and finally to the stream. Drainage swales will be provided and maintained to drain all surface run-off and terminate into the catchment area. A gutter system will be provided around the house and connect to an underground drainage system which will also terminate in the catchment area.

Temporary erosion control measures to prevent and minimize polluted run-off into the stream during construction and grading work will include but not be limited to the following:

Temporary silt fences around the site and along the stream will be constructed to control run-off within the site.

Graded areas will be kept moist or a granular blanket will be provided for dust control.

2. The project will comply with the Coastal Zone Management (CZM) policies and objectives dealing with point and non-point pollution.

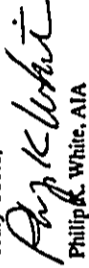
A solid waste management and environmental protection plan will be developed for implementation during construction. Construction requirements will include minimizing construction site waste during construction. Discharge to the stream and adjacent wetland will not be permitted.

3. Construction of the bridge will require a building permit from the City and County of Honolulu. According to Mr. Alan Everson of the Department of the Army in my telephone conversation with him on August 25, 1998, since the property has no tidal influence, a permit from them will not be required, however, plans for the removal process of the collapsed bridge girder and construction of the new bridge will need to be submitted to them for review prior to start of work.

If a CZM Federal consistency review will be required by your office, requirements will be submitted before any construction begins.

A copy of your comment letter and this response will be included in the Final Environmental Assessment. Thank you for participating in the environmental assessment process. Should you have further questions, please call me at 596-0260.

Truly Yours,


Philip K. White, AIA

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
Land Division
Planning and Technical Services Branch
Honolulu, Hawaii

MAY 29 1998

Re: PBTHE

File Number: CDUA OA-2891
Acceptance Date: May 18, 1998
180-Day Exp. Date: Nov 14, 1998
SUSPENSE DATE: 21 Days from stamped date

MEMORANDUM

TO: Engineering Branch; Oahu District Land Agent; Aquatic Resources; Conservation and Resource Enforcement; Forestry & Wildlife; Historic Preservation

FROM: Dean Y. Uchida, Administrator
Land Division

SUBJECT: REQUEST FOR COMMENTS
Conservation District Use Application

APPLICANT: Mr. & Mrs. Richard D. Steele

FILE NO: OA-2891

REQUEST: Single Family Residence

LOCATION: Nuuanu Valley, Honolulu, Oahu

TMK: 1/2-2-31:12

PUBLIC HEARING: YES NO

DOCARE: Please conduct field inspection

Should you require additional information, please call Tom Eisele at 587-0386.

If no response is received by the suspense date, we will assume there are no comments.

Attachment

(2) Comments Attached
Signed: *Philip K. White*
Philip K. White, Chief Engineer
Date: 7/1/98

ENGINEERING BRANCH

COMMENTS

We suggest that the proposed bridge be designed according to City and County of Honolulu rules and regulations.

Per 8.3.98

PHILIP
WHITE
ARCHITECTS

September 8, 1998

Mr. Andrew M. Monden
Chief Engineer
Engineering Branch
Land Division
Department of Land and Natural Resources
State of Hawaii
Honolulu, Hawaii

Subject: Proposed Construction of a Vehicular Access Bridge
at TMK: 2-2-31, por 12, Honolulu, Oahu
File No. OA-2891

Dear Mr. Monden,

Thank you for your comments on the Draft Environmental Assessment for the above project. The proposed bridge will be designed to conform to the City and County of Honolulu rules and regulations. A permit for the bridge will be acquired before construction begins.

Your comments will be included in the Final Environmental Assessment. We appreciate the participation of the Engineering Branch in the environmental assessment process.

Truly Yours,

Philip K. White
Philip K. White, AIA

PHONE (808) 594-1888



STATE OF HAWAII
OFFICE OF HAWAIIAN AFFAIRS
711 KAPOLANI BOULEVARD, SUITE 500
HONOLULU, HAWAII 96813

FAX (808) 594-1885

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Letter to Mr. Dean Y. Uchida
June 24, 1998
Page 2

Furthermore, there is a problem of potential land slides due to the intrinsic nature of the prevailing soils. The applicant argues that land slides will not happen in Nuuanu because the Kaena series are different from the Luualai series (See page 6 of Soils Report). But the applicant fails to substantiate why these series are different. OHA is concerned that if the clay fraction of the Kaena soils is dominated by expanding clay materials, then there exists a high likelihood of land slide occurrence in the area.

The Office of Hawaiian Affairs is also concerned about the applicant's intent to build a residence in an area with a high density of archaeological resources. OHA acknowledges the applicant's efforts to survey and document existing cultural resources (See Archaeological Survey). But OHA seriously questions the feasibility of (i) implementing mitigation procedures to conserve and preserve cultural resources, and (ii) at the same time conducting irreversible land clearing procedures and building operations. In the final analysis, perhaps the best alternative is to forgo construction plans and leave the land untouched.

Please contact Colin Kippen (594-1938), LNR Officer, or Luis Manrique (594-1758), should you have any questions on this matter.

Sincerely yours,

Rasdall Ogata
Administrator

Colin Kippen
Officer,
Land and Natural
Resources Division

cc: Board of Trustees
OEQC

June 24, 1998

Mr. Dean Y. Uchida
Land Division
DLNR
P.O. Box 621
Honolulu, HI 96809

Permit No. 78

Subject: Conservation District Use Permit Application and Draft Environmental Assessment (DEA) for the Steele Residence, Island of Oahu

Dear Mr. Uchida:

Thank you for the opportunity to review the Conservation District Use Permit Application and DEA for the Steele Residence, Island of Oahu. The applicant is seeking to construct a one story residence in an area of approximately 4,000 square feet located along the lower hillside of Nuuanu Valley adjacent to Nuuanu Stream.

The Office of Hawaiian Affairs (OHA) has reviewed the Conservation Use Permit Application and the companion DEA and has some serious concerns at this time. The subject property is located in a high rainfall area and the dominant soils belong to the Kaena stony clay (12-20%) and Kaena very stony clay series (10-35%). These soils are described as heavy textured of gentle to steep slopes and intrinsic poor drainability. OHA is concerned that land clearing and building operations will drastically increase runoff and soils losses in an area which already possesses all the characteristics of an ecosystem highly vulnerable to runoff and soil erosion.

**PHILIP
WHITE
ARCHITECTS**

September 8, 1998

Mr. Randall Ogata
Administrator
Land and Natural Resources Division
Office of Hawaiian Affairs
711 Kapiolani Blvd Suite 500
Honolulu, Hawaii

Subject: Conservation District Use Permit Application and Draft
Environmental Assessment (DEA) for the Steele Residence,
Island of Oahu

Dear Mr. Ogata,

Thank you for reviewing the Draft Environmental Assessment prepared for the Steele Residence. We offer the following response to your comments.

Concerning the likelihood of landslide in the area. This issue is addressed in the Final EA. Although the Soil Conservation Service classifies the soil at the site as Kaena clay soil, historically, these soils have not had serious landslide problems. More importantly, these surface clay soils are very thin at the site, and are underlain by competent alluvial soils. Therefore the landslide potential is very small.


Concerning the alternative of foregoing construction plans and leaving the land untouched. The proposed house and related improvements are outside the preservation area as shown on the Archaeological site map prepared by Bishop Museum and the site plan prepared by us.

An interim preservation plan and a monitoring plan to protect certain archaeological features and mitigate adverse construction impacts to others will be submitted to the State Historic Preservation Division for review and approval prior to construction.

A long term preservation plan will be submitted to SHPD as well for review and approval prior to its implementation.

Your comments and our response will be included in the Final Environmental Assessment. We appreciate the participation of the Office of Hawaiian Affairs in the environmental assessment process.

Truly Yours,



Philip K. White, AIA



Pip White



NIIHAU/PUNCHBOWL NEIGHBORHOOD BOARD NO. 12
CH NEIGHBORHOOD COMMISSION • CITY HALL, ROOM 400 • HONOLULU, HAWAII 96813

25 July 1998

Mr. Dwayne Steele
2529A Pali Highway
Honolulu, HI 96817

SUBJECT: Conservation District Use Application, CDUA OA-2891, TMK: 2-2-31:12

Dear Mr. Steele:
Thank you for appearing before the Niihau-Punchbowl Neighborhood Board on July 21, 1998 and presenting your proposed plans for a single story residence to be developed within the General subzone of the Conservation District. Notification of your CDUA application has been posted in our agenda during the months of June and July.

Based on your presentation and a review of the information provided, the Niihau-Punchbowl Neighborhood Board No. 12 has taken action through a majority vote of its members to support your petition to the Department of Land and Natural Resources for a Conservation District Use Application permit. This action will be reflected in the minutes of our July meeting. You may obtain a copy of the minutes by contacting the Neighborhood Commission at 527-5749. It should be available to you in approximately 3 weeks.

We look forward to welcoming your new residence into our community. Please feel free to call me if you have any questions or if our Board may be of service.

Yours Truly

cc: Dean Uchida,
Administrator, Land Division

MICHAEL S. CHU, CHAIRPERSON

September 8, 1998

Mr. Michael S. Chu
Chairperson
Niihau/Punchbowl Neighborhood Board No. 12
Neighborhood Commission
City Hall, Room 400
Honolulu, Hawaii 96813

**Subject: Conservation District Use Application, CDUA OA-2891,
TMK: 2-2-31:12**

Dear Mr. Chu,

Thank you for your letter of July 25, 1998 to Mr. Dwayne Steele regarding the above project, indicating your support of our petition to DLNR for a CDUA permit. We appreciate your welcoming the Steele residence into your community.

A copy of your letter will be included in the Final Environmental Assessment.

Truly Yours,

Philip K. White, AIA

**PHILIP
WHITE**
ARCHITECTS



Oahu's Neighborhood Board System - Established 1973



NA ALA HELE
Hawaii Trail & Access System

MEMORANDUM

July 30, 1998

TO: Tom Eisen, Land Management Division
FR: Curt Cottrell, DOFAW - Na Ala Hele Trail and Access Program
RE: Steele Family Residence, TMK 2-2-31:12, Nuuanu, Oahu

This memorandum is pursuant to our telecon on Tuesday, July 27, regarding the CDUA for the proposed grading and construction of the Steele residence in Nuuanu Valley. The deadline for comment on the DEA for this project has expired, but I am compelled to provide information on the potential effect on future public access along the Nuuanu stream corridor.

Background

In the 1970's there were planning documents generated that delineated potential trail corridors along several of Honolulu's principal streams, including Nuuanu. These plans were never implemented. In the early 1990's, community organizations again focussed attention on these stream corridors and their lingering potential for formal recreational development. I attended a meeting in the early 1990's with several interested individuals, including then City Council member Gary Gill, on exploring the opportunity of implementing the plan for formal recreational development of the Nuuanu stream corridor. No action came out of this initiative. Nevertheless, informal public use of the Nuuanu stream corridor occurs - especially at Kapena pool.

Malamo O Manoa is currently engaged in this effort for Manoa stream, and has contacted the University of Hawaii with a conceptual plan. I recently attended a meeting coordinated by representatives of Hawaii's Thousand Friends that again focussed on the recreational potential of Nuuanu stream. Both of these stream ways provide feasible recreational corridors adjacent a high density urban population, and I suspect that there is suppressed public demand for access to these stream corridors.

Conclusion

I concur that including lateral stream access as a condition for the aforementioned CDUA would not be reasonable. I offer these comments only in an effort to explore the possibility to allow for access and continuity for a potential route along Nuuanu stream, and in so doing maintain the public's access options and the feasibility of formal trail development in the future.

cc: Mike Buck, DOFAW
Aaron Lowe, ONAH
Philip K. White Associates Ltd.
OEQC

PHILIP WHITE
ARCHITECTS

September 8, 1998

Mr. Curt Cottrell
Na Ala Hele Trail and Access Program
DOFAW
Department of Land and Natural Resources
1151 Punchbowl Street
Honolulu, Hawaii 96813

Subject: Steele Family Residence, TMK: 2-2-31:12, Nuuanu, Oahu

Dear Mr. Cottrell,

Thank you for your memorandum of July 30, 1998 regarding the CDUA for the above proposed project. We offer the following response to your concerns.

In your memorandum, you stated that plans for trail corridors along principal streams, including Nuuanu, were never implemented. Subsequent efforts by Council Member Gary Gill to explore the implementation of a plan for recreational development of the Nuuanu stream corridor also resulted in no action.

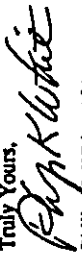
While there appears to have been public discussion about the recreational potential of Nuuanu stream, the State Na Ala Hele program does not have long term plans to connect the hiking trail on the ridge above Pacific Heights to Kapena falls. Until such plans have been developed and approved by the appropriate State and County authorities, the applicant would have no way of assessing the potential impact of an easement across his property. The land and terrain is steep and wet. Substantial maintenance would be required. Liability issues need to be addressed as well.

When specific plans have been developed, approved by all necessary governmental agencies, and funded, the applicant would have the opportunity to engage in meaningful discussion regarding such an easement. In addition, the applicant's neighbors and adjoining landowners would have an opportunity to review those plans and to provide comments to the applicant on such a proposed use upon applicant's property. Without the benefit of such specific plans and a formal state program, it would be difficult for the applicant to discuss such issues with his neighbors.

You also referred to a condition in the CDUA application for lateral stream access. Such a condition on non-public property must bear a rational nexus to the purpose for which the governmental approval is sought. Here, approval for a residence is being sought on private lands. The statewide public trail system is an entirely different program, not currently associated with the Nuuanu stream. Again, until a formal program has been developed in the future, it would be premature to assess the viability and impact of such a use on applicant's property.

A copy of your memorandum and this response will be included in the Final Environmental Assessment. Should you have any question, please contact me at 596-0260.

Truly Yours,



Philip K. White, AIA

13
BENJAMIN L. CAVETANG
Director



STATE OF HAWAII

OFFICE OF ENVIRONMENTAL QUALITY CONTROL

200 SOUTH BOWENIA STREET
SUITE 202
HONOLULU, HAWAII 96813
TELEPHONE: 521-1100
FACSIMILE: 521-1110

JUL 21 4 03 PM '98
GARY GILL
DIRECTOR

2037

July 16, 1998

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

Dear Mr. Wilson:

Subject: Draft Environmental Assessment for the Steele
Residence, Oahu (CDUA OA-2891)

This is in response to the review of the subject document. We have the following questions and comments.

1. This project involves grading activities next to the Nuuanu Stream. Please describe the specific mitigation measures that will be implemented to prevent stormwater runoff carrying sediments from entering the stream.
2. The soil study recommends several alternative improvements to support the bridge across Nuuanu Stream. Please describe the impacts of the potential improvements on the stream. Consult with the Commission on Water Resources Management regarding this matter and document the consultation in the final environmental assessment.
3. If known, please describe the previous use of the collapsed bridge across Nuuanu Stream.
4. Please describe any known plans for the abutting parcels. What are the cumulative impacts of this project?
5. From an archaeological standpoint, this site is eligible for inclusion on the National Register of Historic Sites. Please consult with the State Historic Preservation Division regarding the archaeological issues and document the consultation in the final environmental assessment.

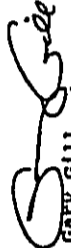
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Mr. Wilson
Page 2

6. Please list nearby groups and individuals who were consulted regarding this project and document the consultation in the final environmental assessment.
7. Please list all federal, state and county permits that would be required for this project.
8. Please discuss the different alternatives that were considered for this project.
9. Please note that the term "negative declaration" has been replaced by the term "finding of no significant impact" (FONSI).
10. Please discuss the findings and reasons for supporting the FONSI determination based on all significant criteria listed in §11-200-12 of the EIS rules. Please see the enclosed example.
11. The parcel makai of the project contains a number of foundations and architectural remains. Please identify the ownership of this site, its past, present and any known future use. Aerial photographs may provide information on this matter. The only access to this makai parcel would be along the reconstructed bridge and Steele Residence driveway. Is there or will there be any right of easement granted to the makai parcel to provide for ingress or egress?
12. The State Na Ala Hele program may have plans in the long-term to connect the hiking trail on the ridge above Pacific Heights to Kapana Falls. Such a trail would require an easement across the Steele property. Will the Steele's grant such an easement? Please consult with Na Ala Hele on this issue.

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

Sincerely,


Gary Gill
Director
Enclosure

c: Philip White and Associates Architects Ltd.

September 8, 1998

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

Subject: Draft Environmental Assessment for the Steele Residence,
Oahu (CDUA OA-2891)

Dear Mr. Gill,

Thank you for your letter dated July 16, 1998 regarding the Draft EA for the subject project. We appreciate your efforts in reviewing the document and offer the following response to your comments.

1. *This project involves grading activities next to the Nuuanu Stream. Please describe the specific mitigation measures that will be implemented to prevent storm water runoff carrying sediments from entering the stream.*

The project will comply with the City Grading Ordinance which imposes requirements for erosion control during construction. An erosion control plan will be submitted for approval prior to start of construction. The plan will consist of both permanent and temporary erosion control measures.

Methods of permanent erosion control measures to contain potential run-off and minimize soil erosion will include but not be limited to the following:

Ground cover and landscaping will be provided for the exposed and graded areas and top of slopes.

All permanent cut and fill slopes will be designed with an inclination of 2H:1V or flatter. For the upper slope wash-adobe clay layer, a flatter slope ratio of 3H:1V will be used for the upper 3 feet of cut slopes. All fills placed on slopes with an inclination steeper than 5H:1V will be keyed and benched into the existing slope to provide stability of the new fill against sliding.

The site is carefully sculpted so that run-off water is filtered through a series of basins before going into a catchment area and finally to the stream. Drainage swales will be provided and maintained to drain all surface run-off and terminate into the catchment area. A gutter system will be provided around the house and connect to an underground drainage system which will also terminate in the catchment area.

Temporary erosion control measures to prevent and minimize polluted run-off into the stream during construction and grading work will include but not be limited to the following:

Temporary silt fences around the site and along the stream will be constructed to control run-off within the site.

Graded areas will be kept moist or a granular blanket will be provided for dust control.

2. *The soil study recommends several alternative improvements to support the bridge across Nuuanu Stream. Please describe the impacts of the potential improvements on the stream. Consult with the Commission on Water Resources Management regarding this matter and document the consultation in the final environmental assessment.*

No heavy equipment or materials will be driven or transported across the stream channel and no construction work will occur in the stream channel. A stream channel alteration permit will not be required because the Nuuanu stream channel will not be altered. The Commission on Water Resources Management has been consulted regarding this matter. A copy of their letter is included in the Final EA.

3. *If known, please describe the previous use of the collapsed bridge across Nuuanu Stream.*

Enclosed are some background information on the roadway connected to the Feature 17 bridge, which was prepared by Gwen Hurst, M.A., for the Flood and Dixon 1992 inventory survey. Any documentary evidence, construction permits or taxation records for the bridge is not available. It is interesting to note that the Client Health estate, downstream of the project area and on the Ewa side of the stream, was built of concrete and completed c. 1911. Dams across the stream, also of concrete, were constructed a year later. It is possible that the concrete Feature 17 bridge was also built at that time. The enclosed photocopy shows an illustration from *Honolulu 100 Years Ago* by Else Waldron, owner of the Client Health property. The photo ("Top right. The dams during construction") show what might be a bridge-like structure, the darker line in the middle of the scene.

4. *Please describe any known plans for the abutting parcels. What are the cumulative impacts of this project?*

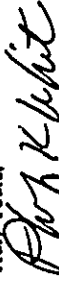
There are no known plans for the abutting parcels. The proposed action is individually limited and cumulatively will not have any effect on neighboring properties.

5. *From an archaeological standpoint, this site is eligible for inclusion on the National Register of Historic Sites. Please consult with the State Historic Preservation Division regarding the archaeological issues and document the consultation in the final environmental assessment.*

Interim and long-term preservation plans and archaeological monitoring plans will be submitted to the State Historic Preservation Division for review and approval. The approved interim preservation plan and archaeological monitoring plan will be executed prior to construction. The long-term preservation plan will be implemented after review and approval by SHPD. Copies of the letters from SHPD are included in the Final EA.

A copy of your letter and this response will be included in the final EA. Should you have any questions, please contact me at 596-0760.

Truly Yours,



Philip K/White, AIA

6. *Please list nearby groups and individuals who were consulted regarding this project and document the consultation in the final environmental assessment.*
A list of groups and agencies consulted regarding the project and the consultation are included and documented in the Final EA.
7. *Please list all federal, state and county permits that would be required for this project.*
The list of permits and approvals can be found in Section VI of the Final EA.
8. *Please discuss the different alternatives that were considered for this project.*
The alternatives that were considered for this project are discussed in Section IV of the Final EA.
9. *Please note that the term "negative declaration" has been replaced by the term "finding of no significant impact" (FONSI).*
Thank you for this correction. The negative declaration mentioned in the Draft EA has been changed to FONSI in the Final EA.
10. *Please discuss the findings and reasons for supporting the FONSI determination based on all 13 significant criteria listed in SSI-200-12 of the EIS rules. Please see the enclosed example.*
Thank you for sending us an example of the 13 significant criteria. The findings and reasons supporting the FONSI determination are discussed in Section V of Final EA.
11. *The parcel makai of the project contains a number of foundations and architectural remains. Please identify the ownership of this site, its past, present and any known future use. Aerial photographs may provide information on this matter. The only access to this makai parcel would be along the reconstructed bridge and Steeie Residence driveway. Is there or will there be any right of easement granted to the makai parcel to provide for ingress or egress?*
The parcel in question is part of TMK: 2-2-22:03 which is owned by the Hawaii Baptist Convention. Entry to the property is from the Pali Highway Ramp "P". See attached tax map.
12. *The State Na Ala Hele program may have plans in the long-term to connect the hiking trail on the ridge above Pacific Heights to Kapena falls. Such a trail would require an easement across the Steeie property. Will the Steeie's grant such an easement? Please consult with Na Ala Hele on this issue.*
Please refer to our letter to Mr. Curt Cottrell of Na Ala Hele which is included in the Final EA regarding this issue.

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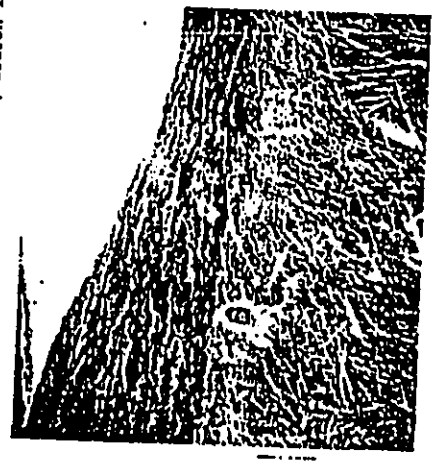
Department of the Interior land record files from 1828-1900, building permit records, and several maps detailing the site area from 1888 through 1933 were consulted. No records of permits for construction of roads or bridges appear in these sources for this section of Nu'uano, and no structures, roads, or improvements to the site appear on the maps consulted (Alexander 1888; Monsarrat 1896; Newton 1902; Honolulu Tax Office 1923, 1933). Fire insurance maps (Sanborn) for 1914 and 1927 simply mark the area as being "vacant".

In summary, the Nu'uano hillside site area was used as cattle pasturage in the 1840's, and was barren with a few cattle on the land in 1910. Documented land improvements include reforestation of the hillside directly south of the site by the Waldron's between 1923 and 1933/35, and the construction of a private roadway first taxed in 1927. Currently the abandoned roadway and bridge, and the site area is overgrown with vegetation. Development impacts to the site appear to be confined to the road construction and disbursement of trees and plants after 1923.

MS Arthur
676
Bx 133
PJ 418

Following automobile accidents, in about 1923 Jack and Elise Waldron:

"...decided automobiling was not for us and that we would in the future concentrate on the forestation of the hillside. So this was our first project and we began on it without delay. The ground on the mountain was so hard that we used dynamite to start the holes for the trees... For the next ten or twelve years we spent many an interesting week end on our hillside..." (Waldron 1967:91, 96).



MU'UANU STREAM AND HILLSIDE 1890's

(Waldron 1967)

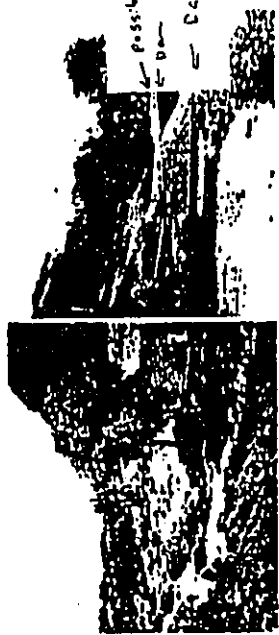
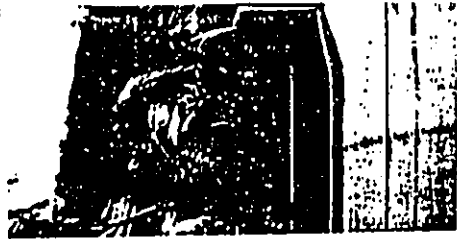
On the site area remnants of a 2.8 to 3.0 meter wide bridge crosses Nu'uano Stream from Parcel 34 (TKX 2-2-31) to the northern boundary of Parcel 32. The bridge superstructure is made of a lattice-work girder of cast iron which is exfoliating, with three meter high concrete piers at each end of the bridge. The bridge appears to have been planked with 2" x 6" boards using common 20d nails, and is overgrown with vines and vegetation. Large fragments of the ironwork and concrete rubble are found in the Nu'uano Stream and on the bank. The bridge is an extension of a overgrown asphalt roadway on the ewa side (Parcels 1 and 34 of TKX 2-2-31) and connects with a paved roadway having a concrete retaining wall on the waikiki side in Parcel 32. The Honolulu tax records state that the roadway on Parcel 1 was taxed between 1927 and 1931 at 1/6 interest each to various owners, and that Parcel 34 was created from Parcel 32 in 1947 as a sewer easement (Honolulu Tax Office, TKX 2-2-31:1, 32, 34).



Possible bridge?



Watching boat jump, 1911



Possible Dam

The left mountain before it was leveled a
the stream below the dam were put across
Top right. The dams during construction
Left. A trench at Nuanu Stream near Client
1911



Nuanu Stream after the dams were out in about 1912



