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LAND
STATE PARKS

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

AUG 27 2002

REF:LD:AJ
PSF:01od-322

MEMORANDUM

TO: Ms. Genevieve Salmonson, Director
Office of Environmental Quality Control

FROM: Gilbert S. Coloma-Agaran, Chairperson
Board of Land and Natural Resources

SUBJECT: Finding of No Significant Impact for Hawaii Baptist Academy, TMK 2-2-22:19

The Department of Land and Natural Resources, Land Division, has reviewed the comments received during the 30-day public comment period that began on June 23, 2002. The department has determined that this project will not have significant environmental effects and has issued a FONSI. Please publish this notice in the September 8, 2002, Environmental Notice

We have enclosed a completed OEQC Bulletin Publication Form and four (4) copies of the final environmental assessment.

Should you have any questions, please contact Al Jodar of our Land Division staff at 587-0424.

Enclosures

cc: Land Board Member
Central Files
District Files

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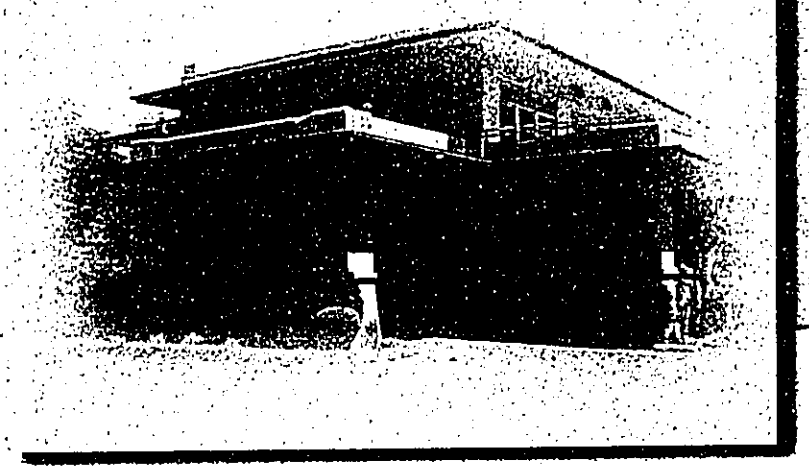
OFC. OF ENVIRONMENTAL
QUALITY CONTROL

88

2002-09-08-OA-FEA-

HAWAI'I BAPTIST ACADEMY



Final Environmental Assessment
(TMK 2-2-22:19)

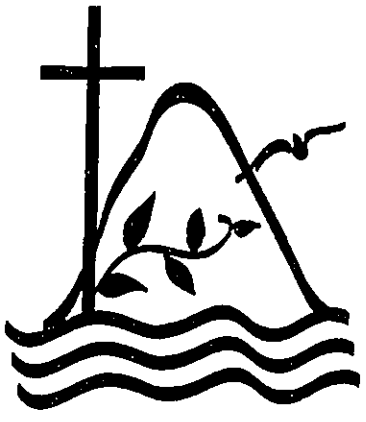
Prepared for:
Hawai'i Baptist Convention

Prepared by:

PBR HAWAII

August 2002

HAWAI'I BAPTIST ACADEMY



Final Environmental Assessment
(TMK 2-2-22:19)

Prepared for:
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Prepared by:

PBR HAWAII

August 2002

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LIST OF FIGURES

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1.0 INTRODUCTION

This environmental assessment is prepared in accordance with Chapter 343, *Hawai'i Revised Statutes* for proposed improvements to the Hawai'i Baptist Academy Stan Sagert Campus, located in Nu'uanu Valley. Hawai'i Baptist Academy is a private school for grades kindergarten - 12. Instruction for students in grades 7 to 12 is provided at the Stan Sagert Campus. Instruction for students in grades kindergarten to 6 is provided at a separate location, the Bates Street Campus.

1.1 PROJECT SUMMARY

Project Name:	Hawai'i Baptist Academy
Applicant:	Hawai'i Pacific Baptist Convention and its related entity, Hawai'i Baptist Academy
Landowner:	State of Hawai'i, Department of Land and Natural Resources
Leasee:	Hawai'i Pacific Baptist Convention and Hawai'i Baptist Academy
Location:	2429 Pali Highway Honolulu, Hawai'i 96817
Tax Map Key:	2-2-22: 19
Existing Use:	Parking and recreation for Hawai'i Baptist Academy
Proposed Project:	Classroom and Administration Building.
Area of Project Site:	Gross Area: 4.971 acres; Useable Area: 2.5 acres
Land Use Designations:	State Land Use: Urban Development Plan: Public Facility Zoning: R-10 Residential; P1 Restricted Preservation
SMA:	The subject property is not in the Special Management Area (SMA)
Actions Requested:	Compliance with Chapter 343, *Hawai'i Revised Statutes*
Approving Agency:	Department of Land and Natural Resources
Anticipated Determination:	Finding of No Significant Impact (FONSI)

1.2 LOCATION

The property subject to this environmental assessment (TMK 2-2-22: 19) is generally bounded by Pali Highway (including "Ramp P") to the west, Nu'uanu Stream and vacant land to the south, preservation land to the east and the main portion of Hawai'i Baptist Academy to the North (Figure 1). Nu'uanu Stream flows through the property near the eastern edge. Access is from "Ramp P" from Pali Highway.

The property is in Nu'uanu Valley and within the City and County of Honolulu Primary Urban Center. The property is contiguous to the main campus of Hawai'i Baptist Academy (TMK 2-2-22: 3), which provides classes for grades 7 to 12. Another Hawai'i Baptist Academy campus, about a half mile away from the main campus, provides classes for grades kindergarten to 6.

1.3 LAND OWNERSHIP

The landowner of the property is the State of Hawai'i, Department of Land and Natural Resources. The property consists of the parcel identified as TMK 2-2-22: 19 which contains a gross area of approximately 4.971 acres and a useable area of approximately 2.5 acres (Figure 2).

1.4 IDENTIFICATION OF THE APPLICANT

Hawai'i Baptist Convention and its related entity, Hawai'i Baptist Academy is the project applicant. Correspondence to the applicant may be addressed to:

Mr. Richard T. Bento, President,
Hawai'i Baptist Academy
21 Bates Street
Honolulu, Hawai'i 96817

1.5 IDENTIFICATION OF APPROVING AGENCY

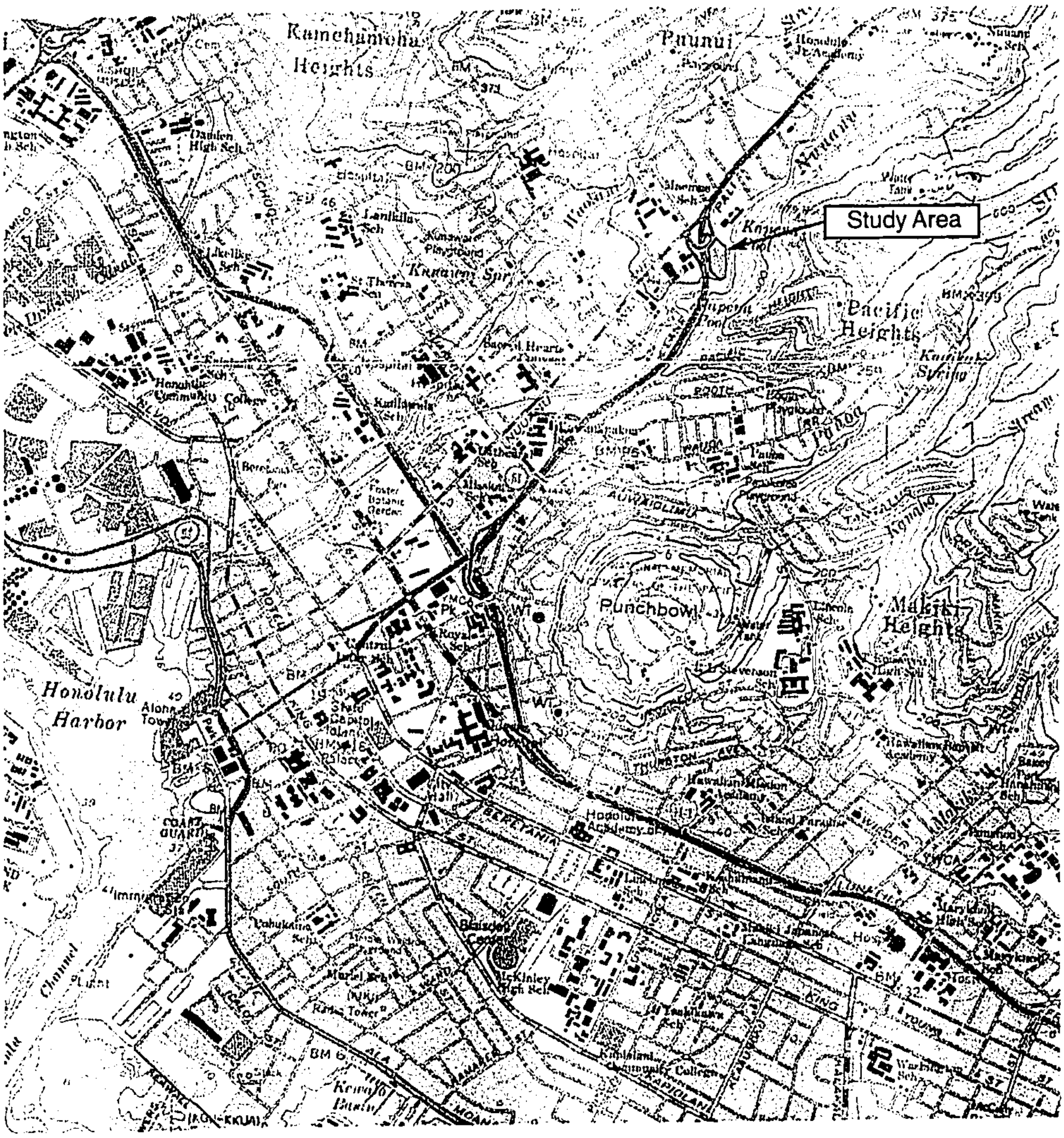
The approving agency is the State of Hawai'i, Department of Land and Natural Resources.

1.6 IDENTIFICATION OF AGENCIES, ORGANIZATIONS AND INDIVIDUALS CONSULTED

In the course of planning for this project, agencies (or agency documents), community individuals and organizations were consulted and/or provided information for the preparation of this draft environmental assessment:

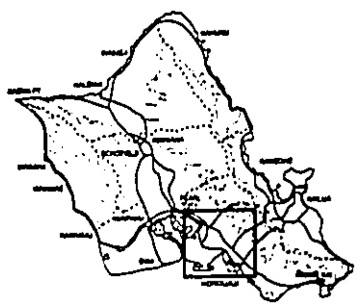
Federal Agencies

Army Corps of Engineers
National Weather Service
United States Department of the Interior Fish and Wildlife Service



LEGEND

Study Area



Source: USGS Topographical Map

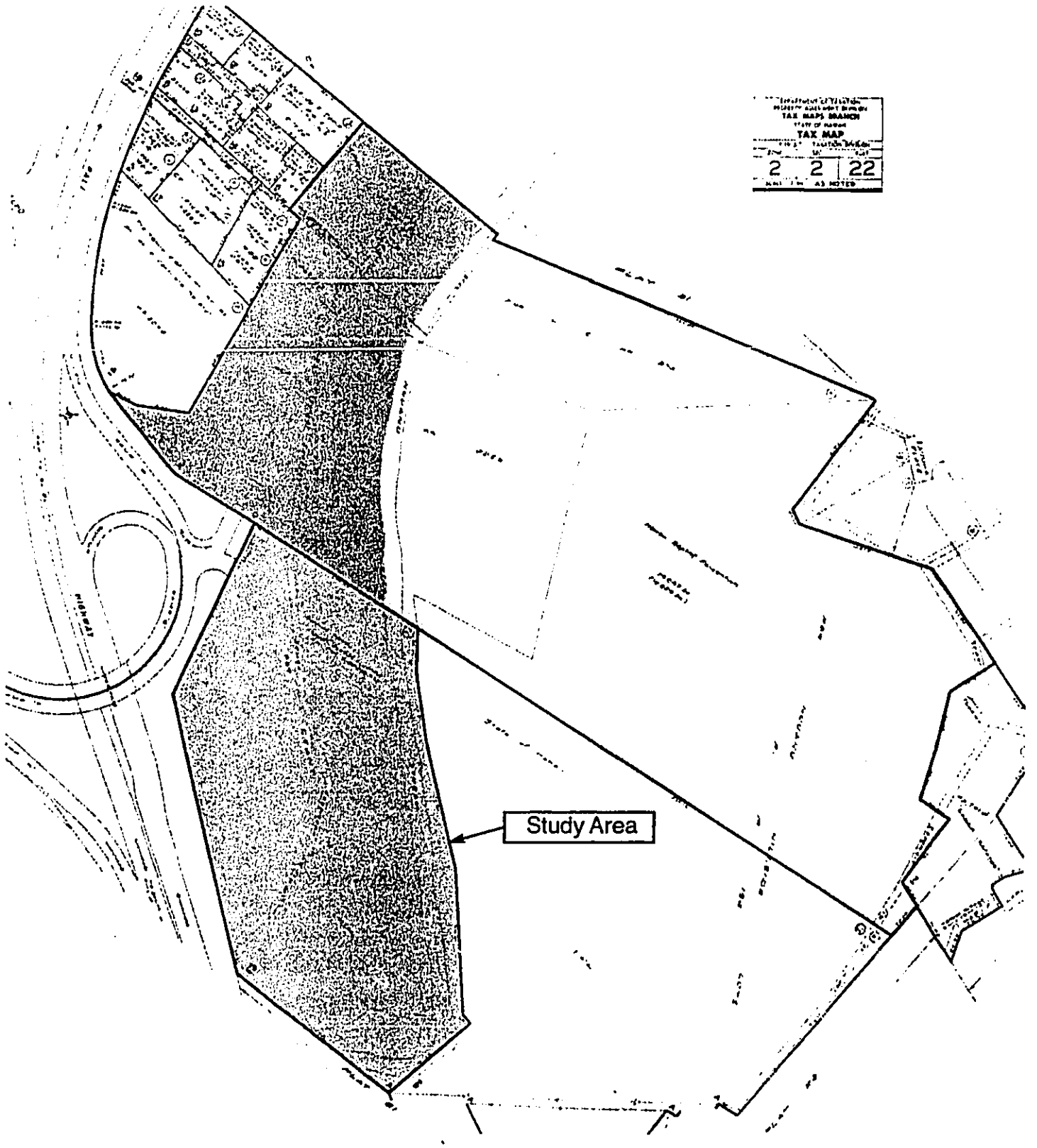
FIGURE 1

Regional Location Map

Hawai'i Baptist Academy

0 1000 2000 FEET

May 2002



LEGEND

- Study Area
- Site of HBA Campus on HBA-Owned Property
- Undeveloped HBA Land (Steep Slope)

Source: Tax Map Key

FIGURE 2

Tax Map Key / Land Ownership Map

Hawai'i Baptist Academy

Not to scale

May 2002

State of Hawai'i Agencies

Department of Business, Economic Development and Tourism, Land Use Commission
Department of Business, Economic Development and Tourism, Office of Planning
Department of Education
Department of Health, Office of Environmental Quality Control
Department of Land and Natural Resources
Department of Land and Natural Resources - Historic Preservation Division
Department of Transportation

City and County of Honolulu Agencies

Department of Planning and Permitting
Department of Transportation Services
Fire Department
Police Department

Community Individuals and Organizations

Lisa Chock
Rolando D. Gregorio, Philippine Consulate General
George and Robyn Hara
Sandy Ironside
Ann Ito
Vanessa Ito
Senator Rod Tam

1.7 COMPLIANCE WITH THE STATE OF HAWAI'I ENVIRONMENTAL IMPACT STATEMENT LAW (CHAPTER 343, HRS)

This document has been prepared in accordance with the provisions of *Hawai'i Revised Statutes* (HRS) Chapter 343 and *Hawai'i Administrative Rules* Title 11, Department of Health, Chapter 200, Environmental Impact Rules. Section 343-5, HRS, establishes eight "triggers" that require an environmental assessment (EA). Use of State or County lands is the trigger applicable to this project, as the proposed improvements will be on land leased from the State. (Although Hawaii Baptist Academy already leases the project area from the State, the Hawaii Baptist Academy is seeking to: 1) expand the school's uses under the lease; and 2) extend the lease term.)

This environmental assessment has been prepared to identify whether "significant environmental effects" will result from the proposed improvements. According to Chapter 343, HRS, if "significant environmental effects" are not identified by an environmental assessment, preparation of a full environmental impact statement is not required, and a "finding of no significant impact" (FONSI) is issued by the Accepting Authority. Otherwise, a Notice of Preparation is issued and processing of a full environmental impact statement is required.

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2.0 PROJECT DESCRIPTION, PURPOSE & NEED

This section provides background information, describes the proposed improvements, and delineates construction activities and approximate development costs.

2.1 BACKGROUND INFORMATION

Established in 1949, Hawai'i Baptist Academy, a college preparatory elementary, middle, and high school, has grown to be one of the top private schools in the state, both in size and academic reputation. The school provides instruction for children in kindergarten through grade 12. Classes for grades kindergarten to 6 are held at the Bates Street Campus located at 21 Bates Street in Nu'uanu Valley. Classes for grades 7 - 12 are held at the Stan Sagert Campus located at 2429 Pali Highway in Nu'uanu Valley.

The Hawai'i Baptist Academy Stan Sagert Campus site was purchased in 1972. The Academy began operating its secondary school on the property in 1975 with the completion of a four-story classroom building. A multipurpose building, which includes a gymnasium, classrooms, and cafeteria, was added in 1984. The school acquired a neighboring single-family dwelling to the north in 1986 and converted it for use as an art building. Other buildings include a two-story administration building, a shower room, and a caretaker's cottage.

Until recently, some 7th grade classes had to be held at an off-campus location, due to a lack of space at the Stan Sagert Campus. Recent improvements have provided more classroom space, allowing all instruction to take place on-campus, however to reduce class size, a need still exists for more classrooms and other facilities at the Stan Sagert Campus.

The State-owned property subject to this environmental assessment is contiguous to the Stan Sagert Campus. As recently as 1983, a large portion of the subject property was held in reserve by the State Department of Transportation (DOT) for potential highway needs. In January 1983, DOT declared most of the subject property as surplus and possible for disposal. A review of DLNR records in 1983 indicated that, historically, the State-owned property is directly related to the parcel owned by Hawai'i Baptist Academy. The Academy's administration building, Lanihuli, was originally the Waldron residence. There are a number of features on the undeveloped portion of the State parcel that relate to its use as part of the Waldron residence (ca. 1911-1933). These features include a royal palm-lined driveway, a concrete-lined *'auwai* (irrigation ditch) on the west side of Nuuanu Stream, and numerous landscaping features on the east side of the stream (another concrete 'auwai, rock and concrete steps and walkways, and stacked rock terraces). Hawai'i Baptist Academy has occupied this parcel from the State since 1982 (through a revocable permit from DOT 1982-1986 and a long-term lease from DLNR since 1986), but campus-related facilities on the property are limited to a parking lot and tennis courts. The property is a logical location for additional campus facilities.

2.1.1 Description of the Property

The Hawai'i Baptist Academy Stan Sagert Campus is situated on a 14.007-acre property (TMK 2-2-22: 3). The property subject to this environmental assessment is a 4.971-acre parcel (TMK 2-2-22: 19) adjoining the main campus parcel to the south (Figure 2).

The subject parcel is generally bounded by Pali Highway (including "Ramp P") to the west, Nu'uanu Stream and vacant land to the south, preservation land to the east and the main portion of Hawai'i Baptist Academy to the North (Figure 1). Nu'uanu Stream flows through the property near the eastern edge. Access is from "Ramp P" from Pali Highway.

While the site has a gross area 4.971 acres, the net useable area is approximately 2.5 acres. The useable area is relatively flat and graded to accommodate an open paved parking area with 51 stalls, landscaping (lawn area), two paved, fenced, tennis courts, and one practice court. The remaining 2.471 acres includes slopes, a sanitary sewer easement, and a portion of Nu'uanu Stream. See Figure 3 for photographs of the property.

2.1.2 Operating Times

Hawai'i Baptist Academy is in session from early August through early June, Mondays through Fridays from 7:45 am to 2:45 pm. After school activities are generally completed by 10:00 pm. Summer school sessions are offered from mid-June through late July.

2.1.3 Enrollment and Capacity

Current enrollment at the Stan Sagert Campus is approximately 630 students. After the proposed improvements on the adjoining State-owned property are completed, enrollment is projected to increase to approximately 650 students.

The total enrollment capacity of Hawaii Baptist Academy on both the elementary school and the middle/high school campuses is 1,200 students. Current total enrollment is 1,035 students.

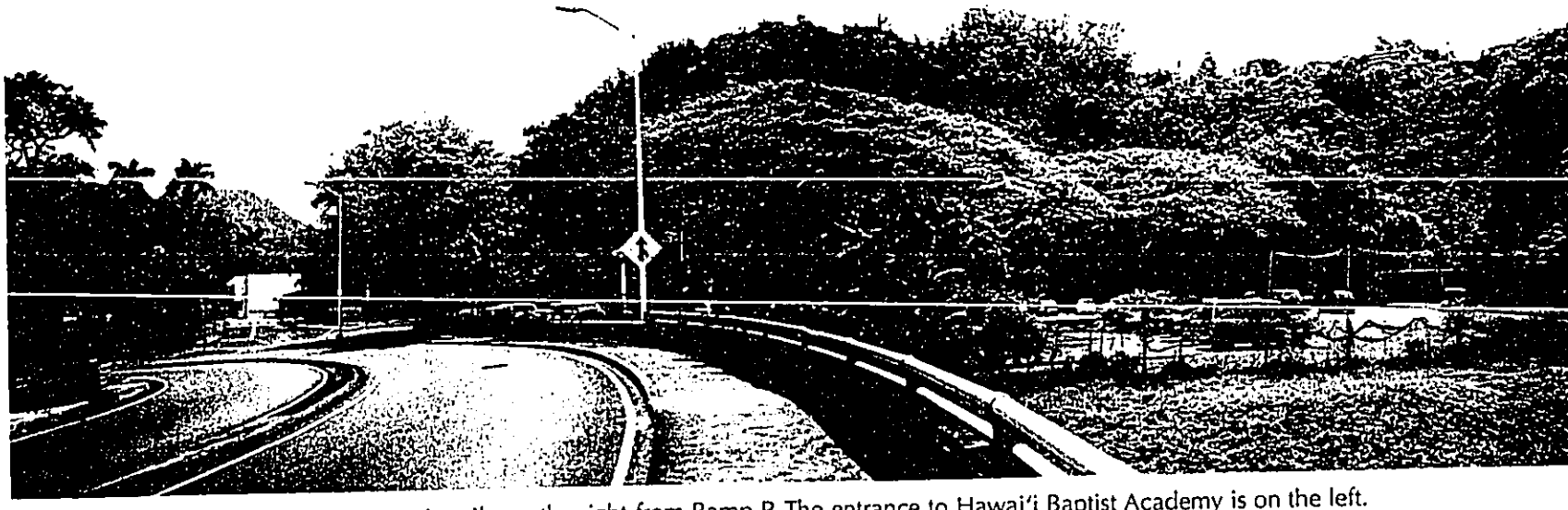
Since the Stan Sagert Campus has a larger portion of the total Academy enrollment, it is reasonable to conclude that a larger portion of the available capacity could be allocated to the Stan Sagert Campus. However, because the goal of the proposed improvements is to reduce class size and not significantly increase enrollment, it is unlikely additional students would be admitted up to the campus capacity.

2.1.4 Staff

The main campus of Hawai'i Baptist Academy currently operates with a staff of 69 employees, which includes faculty and other staff. When the proposed improvements are completed up to 10 new staff members may be employed at the main campus.

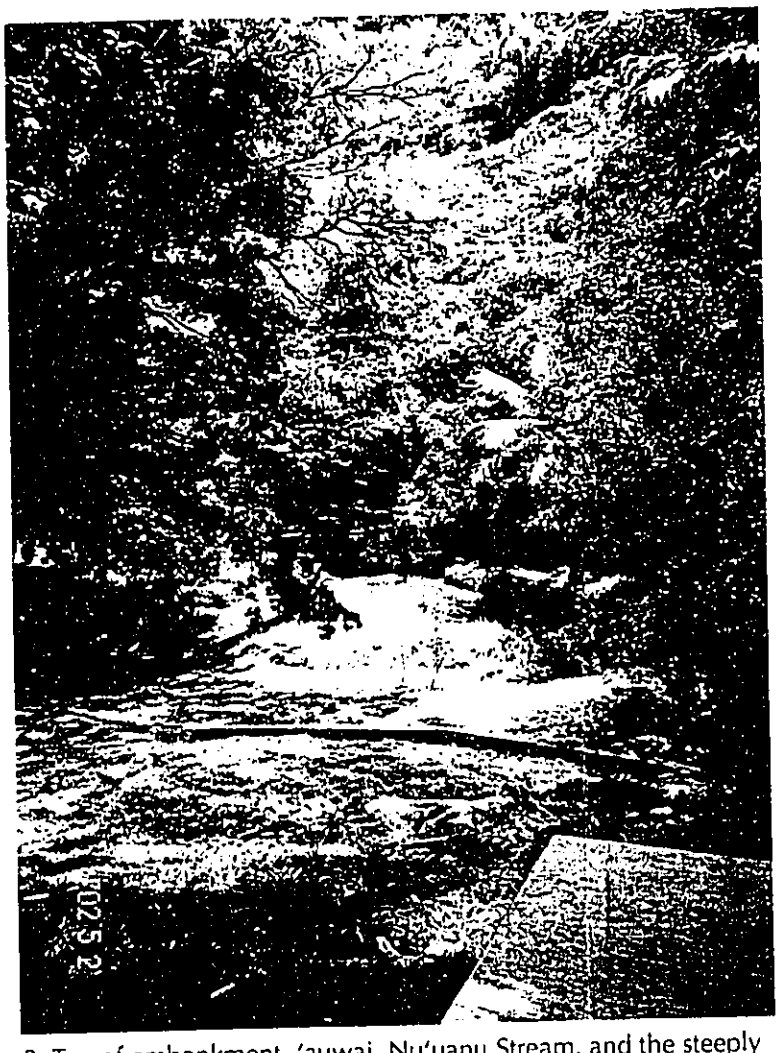
2.1.5 Community Meeting

On April 1, 2002, Hawai'i Baptist Academy hosted a "coffee hour" on the Stan Sagert Campus to discuss the future of Hawai'i Baptist Academy with area neighbors. Invitations to the meeting were sent to 18 nearby residents. Six neighbors attended the meeting. Hawai'i Baptist Academy President, Mr. Richard Bento opened the meeting by explaining that he wanted to talk to the school's neighbors before proceeding with any plans for the school. It was explained that until recently, Hawai'i Baptist Academy had been renting space at a nearby church to conduct seventh grade classes part of the day, but could no longer afford the additional cost. Beginning this year, 110

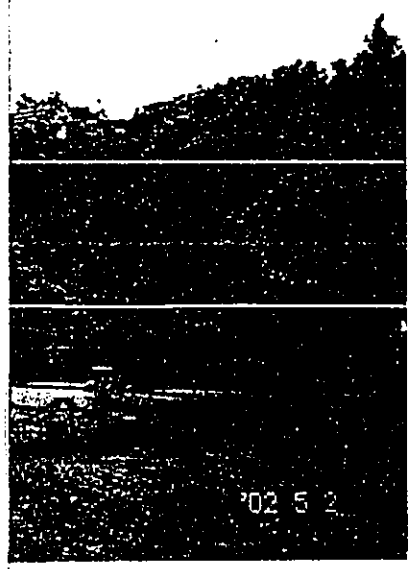


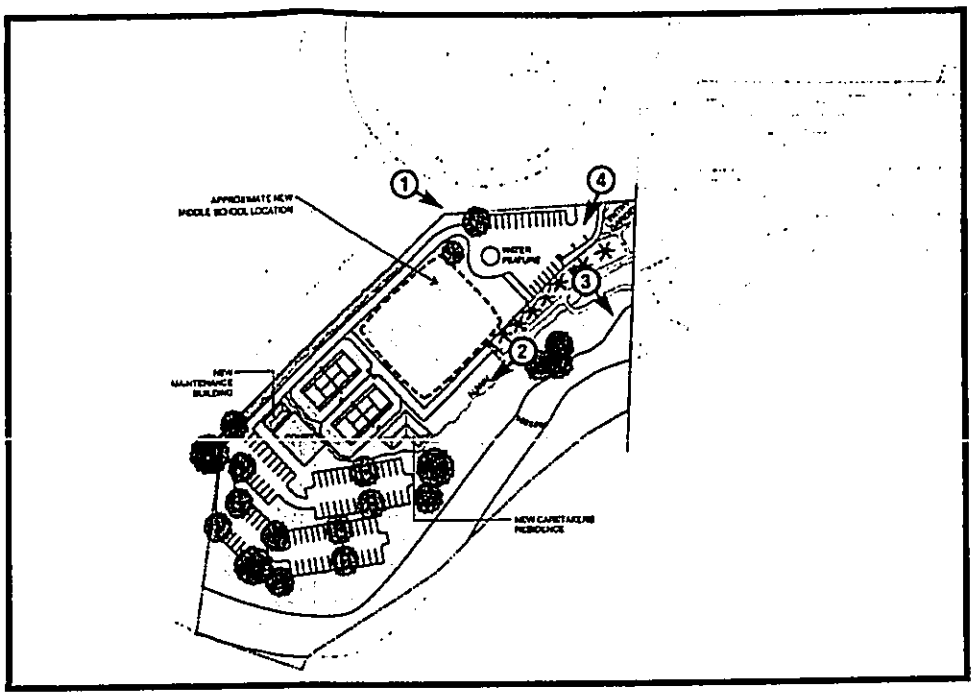
1. The State-owned property is seen primarily on the right from Ramp P. The entrance to Hawai'i Baptist Academy is on the left.

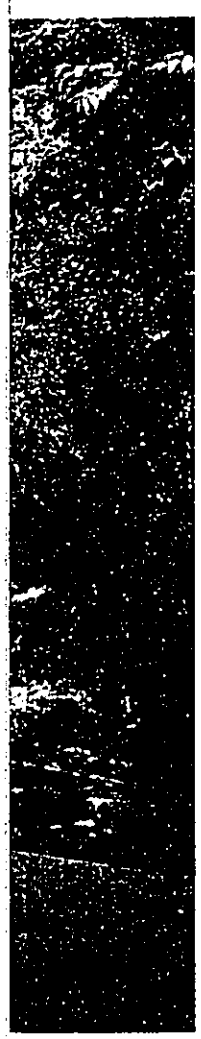
2. A portion of the 'auwai (typical appearance).



2. Top of embankment, 'auwai, Nu'uanu Stream, and the steeply sloped land across the stream.







and the steeply

4. The existing parking lot. The tennis courts are in the background.

Figure 3
Site Photographs
Hawai'i Baptist Academy

May 2002

seventh graders that had been attending classes at the church for part of the day were brought onto the Hawai'i Baptist Academy campus full-time. While this is providing an immediate solution, the long-term goal is to reduce class size. To reduce class size additional classroom space is required. For both campuses, combined, Hawai'i Baptist Academy has a total enrollment capacity of 1,200 students. Current enrollment is 1,035 students.

The campus planning consultant then presented elements of the campus master plan proposed for the State-owned parcel. It was explained that the general area for the new classroom building has been decided, but a final design has not been determined. The new building will contain 12-16 classrooms, plus administrative space. One wing of the building may be two stories. To reduce the chance of flooding there will be no structures close to the stream, but the parking lot would be relocated toward the stream at the south end of the property. The existing *'auwai* on the property will be retained and it will be periodically maintained. Landscaping will be attractive and will serve an educational purpose.

The environmental consultant then explained the environmental assessment process, including the public comment period for the draft environmental assessment.

During the discussion that followed, the neighbors present expressed concerns about parking, traffic, noise, students walking through the neighborhood, liability, and real estate values. It was explained that Hawai'i Baptist Academy prohibits students from trespassing on neighboring property and that students who do trespass are punished. Hawai'i Baptist Academy has also attempted to mitigate concerns about noise by moving noisy activities away from neighboring properties or by limiting the times of the activities. It was agreed by both Hawai'i Baptist Academy officials and neighbors that traffic and parking are issues of concern. Regarding parking, Mr. Bento said there are only 22 parking spaces on campus for students and these are reserved for seniors. No additional student parking is planned.

At the conclusion of the meeting, one resident stated: "aside from a few incidents, you have been wonderful neighbors." Mr. Bento thanked all for attending and stated "we are committed to working with you as neighbors."

2.2 PROJECT GOAL AND OBJECTIVES

The goal of the proposed improvements is to maintain the school's accreditation by the Western Association of Schools and Colleges (WASC). A 1999 WASC Visiting Committee Report noted that one of the "Schoolwide Critical Areas for Follow-up" was "The current facilities limit future program growth." To address this comment the objectives of the proposed improvements are to improve academic standing of the school by reducing class size, building more classrooms, and hiring more instructors.

2.3 PROPOSED IMPROVEMENTS

The improvements proposed for the State-owned parcel include:

- A new middle school building with 14 to 16 new classrooms and 2 to 4 speciality rooms (computer and science labs)
- A new maintenance building

- A new caretaker's residence
- Additional parking

A site plan of the proposed improvements on the State-owned parcel is shown in Figure 4.

2.4 SUSTAINABLE BUILDING DESIGN

The Office of Environmental Quality Control has issued "Guidelines for Sustainable Building Design in Hawai'i: A planner's checklist" (OEQC May 1999) and has requested that consideration be made in applying sustainable building techniques to projects. The OEQC Guidelines state that "[a] sustainable building is built to minimize energy use, expense, waste and impact on the environment. It seeks to improve the region's sustainability by meeting the needs of Hawai'i's residents and visitors today without compromising the needs of future generations."

In support of sustainable design, as recommended by the Office of Environmental Quality Control in their comment letter on the draft environmental assessment:

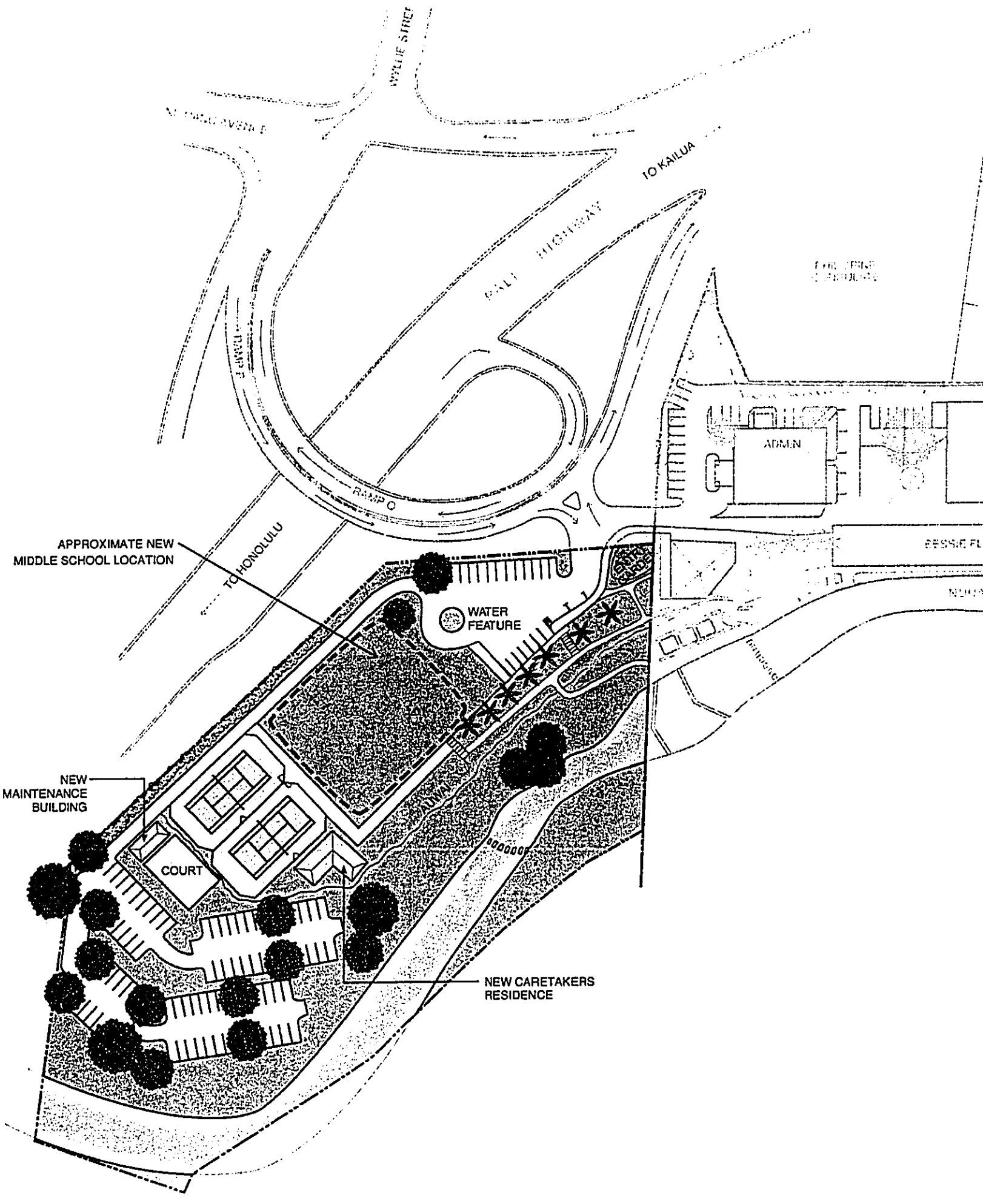
1) The use of glass-asphalt ("glasphalt") will be considered in the design of impervious surfaces; and

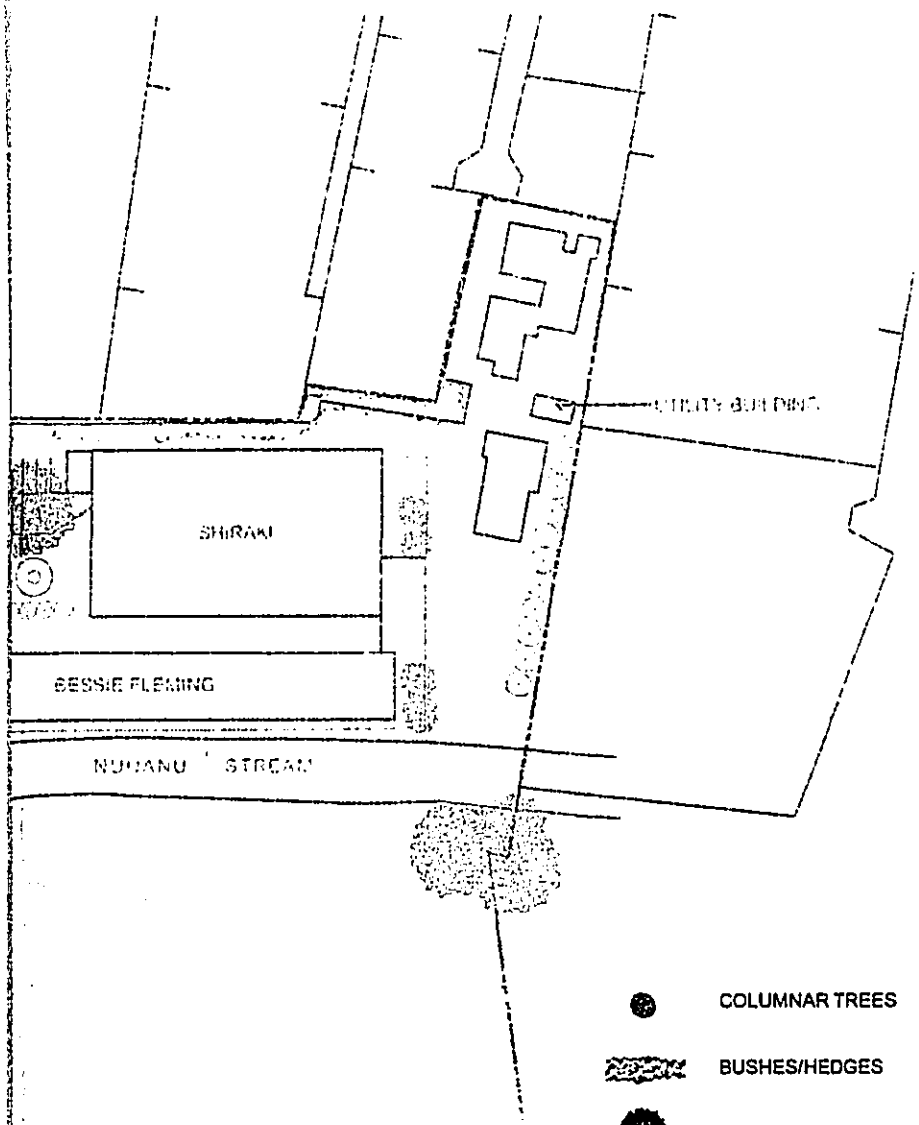
2) Indigenous and Polynesian introduced plants will be considered for use in landscaping.

Where appropriate, other techniques from "Guidelines for Sustainable Building Design in Hawai'i: A planner's checklist" will be suggested for inclusion in the proposed Hawai'i Baptist Academy improvements.

2.5 APPROXIMATE COSTS AND DEVELOPMENT SCHEDULE

For planning purposes, the total cost of the project is estimated to be $5.2 million. Current plans are for design and construction to start after all regulatory requirements have been satisfied. Design of the proposed facilities will take up to a year to complete, with construction taking approximately 2 years.


WILLIE STREET
TO KAILUA
PALI HIGHWAY
RAMP C
ADMIN
APPROXIMATE NEW
MIDDLE SCHOOL LOCATION
TO HONOLULU
WATER
FEATURE
NEW
MAINTENANCE
BUILDING
COURT
NEW CARETAKERS
RESIDENCE



COLUMNAR TREES

BUSHES/HEDGES

TREES

PALMS

Figure 4

Conceptual Master Plan

Hawai'i Baptist Academy

May 2002

Source: GROUP 70 INTERNATIONAL

3.0 LAND USE CONFORMANCE

The State of Hawai'i and City and County of Honolulu land use plans, policies, and ordinances relevant to the proposed Hawai'i Baptist Academy improvements are described below.

3.1 STATE OF HAWAI'I

3.1.1 State Land Use Law (Chapter 205, Hawai'i Revised Statutes)

The State Land Use Law (Chapter 205, Hawai'i Revised Statutes (HRS)), establishes the State Land Use Commission (LUC) and gives this body the authority to designate all lands in the State into one of four districts: Urban, Rural, Agriculture, or Conservation.

The State-owned parcel (TMK 2-2-22: 19) and the parcel containing the Stan Sagert Campus (TMK 2-2-22: 3) are both within two State Land Use Districts, Urban and Conservation. The dividing line is Nu'uanu Stream. Portions of the parcels located 'Ewa of the stream are in the Urban District, while portions of the parcels located Diamond Head of the stream are in the Conservation District (Figure 5).

Within the State-owned parcel no buildings or other improvements will be developed on the Diamond Head side of the stream in the Conservation District. The proposed improvements on the 'Ewa side of the stream are consistent with uses allowed within the Urban District.

3.2 CITY AND COUNTY OF HONOLULU

Relevant land use plans and ordinances of the City and County of Honolulu that pertain to the proposed improvements include the General Plan, the Primary Urban Center Development Plan, the Primary Urban Center Development Plan Land Use Map, the Primary Urban Center Development Plan Public Facilities Map, and the Land Use Ordinance (Chapter 21, Revised Ordinances of Honolulu).

3.2.1 General Plan

As required by the City Charter, the General Plan for the City and County of Honolulu serves two purposes. The first is a statement of the long-range social, economic, environmental and design objectives for the general welfare and prosperity of the people of O'ahu. Second, the General Plan is a statement of broad policies that facilitate the attainment of the objectives of the plan.

The proposed improvements at on the State-owned parcel are in accordance with the following General Plan policies:

> *Policy VII. Physical Development and Urban Design*
> *Objective A, Policy 5: Provide for more compact development and intensive use of urban lands where compatible with the physical and social character of existing communities.*
>
> *Objective D, Policy 5: Require new developments in stable, established communities and rural areas to be compatible with existing communities and areas.*

Policy IX. Health and Education
Objective B: To provide a wide range of educational opportunities for the people of O'ahu.

Objective B, Policy 1: Support education programs that encourage the development of employable skills.

Objective B, Policy 5: Facilitate the appropriate location of learning institutions from the preschool through the university levels.

Discussion: The proposed improvements to Hawai'i Baptist Academy conform to many objectives of the General Plan. In particular, the improvements to the school, within a highly urbanized area, provide for compact development and intensive use of urban lands. The improvements are compatible with the physical and social character of the existing Nu'uanu neighborhood, as the school has been operating at its present location since 1975. Furthermore, the school is appropriately located within the primary urban center, and thus is conveniently located for a great number students. Improving the school also serves to increase and enhance the range of educational opportunities on O'ahu. Also, as a K through 12 school, Hawai'i Baptist Academy provides education that is basic to the development of employable skills.

3.2.2 Development Plan—Current and Proposed

The City and County of Honolulu Development Plans (DPs) and Sustainable Community Plans represent eight geographic regions that include all areas of O'ahu. Hawai'i Baptist Academy is located in the area designated as the Primary Urban Center (PUC). The corresponding development plan for this area is the *Primary Urban Center Development Plan.*

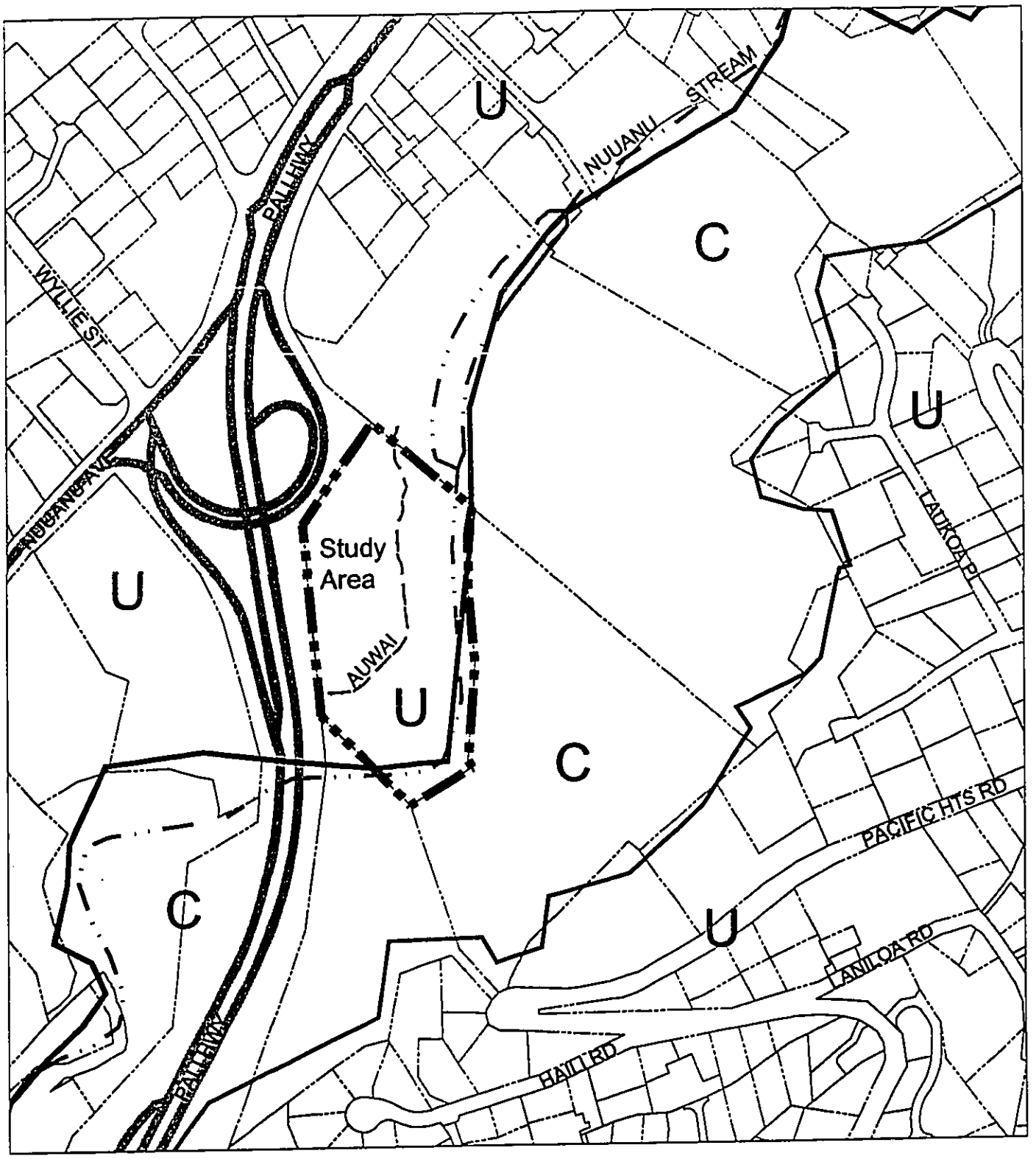
Before 1992, the City Charter required DPs to be "relatively detailed plans" for implementing and accomplishing the development objectives and policies of the General Plan. In 1992, a Charter amendment changed this to require the DPs to consist of "conceptual schemes."

In response to the 1992 Charter amendments, the City and County Department of Planning (now the Department of Planning and Permitting) launched a thorough review of all eight DPs to bring them into conformance with the Charter-mandated conceptual orientation. Currently, the *Primary Urban Center Development Plan* is under revision to bring it into conformance. However, until the proposed plan is adopted by the City Council, the current, more detailed, plan is still in effect. Both the current and proposed plans are discussed below.

3.2.2.1 Current Development Plan

The current *Primary Urban Center Development Plan* includes two parts—text and maps. The text portion also contains two portions: 1) common provisions that are common to all unrevised pre-1992 O'ahu development plan areas, and 2) special provisions that are specific to the Primary Urban Center and include descriptions, urban design principles, controls and development priorities.

Those sections of the DP Common Provisions and Special Provisions that are applicable to the proposed improvements are listed and discussed below.



Legend

C	Conservation
U	Urban
▬ ▪ ▬	Study Area
———	TMK Boundary

Source: City & County of Honolulu GIS Database

FIGURE 5
State Land Use District Boundary Map
Hawai'i Baptist Academy

NORTH

LINEAL SCALE (FEET)
0 150 300 450

PBR HAWAII
May 2002

Common Provisions

Sec. 24-1.4 *General urban design principles and controls.*

Discussion: The proposed improvements to Hawai'i Baptist Academy will be in conformance with the DP common provisions specifying general urban design principles and controls. In particular, the improvements will be compatible with the physical and social character of the existing neighborhood. In addition, the improvements will be in compliance with all height controls and substantial open space will be maintained, as only a relatively small portion of the site will contain buildings.

Special Provisions

SECTION 24-2.2. *URBAN DESIGN PRINCIPLES AND CONTROLS FOR THE PRIMARY URBAN CENTER*

24-2.2(a) *Specific Urban Design Considerations*
(1) Open Space
(2) Public Views
(3) Height Controls
(b) *Principles and Controls for Special Areas*
(5) Makiki Punchbowl

Discussion: The proposed improvements to Hawai'i Baptist Academy are in accord with the Primary Urban Center Special Provisions for urban design principles and controls. In conformance with the design principles for open space, the steep slopes and the stream area of the site remain in open space. In addition, the natural appearance and public views of nearby Punchbowl Crater will not be impacted as all improvements will be in compliance with the Special Provisions height controls.

Development Plan Maps

The current *Primary Urban Center Development Plan* also includes two map elements: 1) the Land Use Map, which defines the area and distributes the various land uses in a manner that implements the General Plan objectives and policies; and 2) the Public Facilities Map, which identifies planned public and private facilities and infrastructure.

Discussion: The Primary Urban Center Development Plan Land Use Map (Figure 6) contains the letters "PF" across both the current site of the Hawai'i Baptist Academy and the site of the proposed improvements. The legend for the map has a category for "Public Facility", however the legend does not define "PF" as "Public Facility." Section 24-18 of the Development Plan Common Provisions states: "Both publicly funded and privately funded facilities are shown on the map." Therefore, it may be inferred that the "PF" letters on the map refer to either "Public" or "Private" facilities or that they refer to privately funded public facilities. In either case it may be concluded that the location of Hawai'i Baptist Academy and the proposed improvements are consistent with the Primary Urban Center Development Plan Land Use Map.

The Primary Urban Center Development Plan Public Facilities Map does not identify any planned public and private facilities or infrastructure that would be in conflict with the proposed improvements at Hawai'i Baptist Academy.

3.2.2.2 Proposed Development Plan

In July of 1999, in compliance with the City Charter mandate for more conceptual development plans, the Department of Planning and permitting released a draft revision of the *Primary Urban Center Development Plan.* Community members had several concerns with the draft revision, and as such, as of August 2002, the Department of Planning and Permitting is preparing a new draft. Because of the amount of concern within the community, as well as the nature of the community's concerns, the new draft is expected to be substantially different from the previously released draft.

Discussion: Since the revised draft of the *Primary Urban Center Development Plan* is not available for review at the time of this writing, it is not possible to discuss the proposed Hawai'i Baptist Academy improvements in relation to the new draft plan.

3.2.3 Land Use Ordinance

The Land Use Ordinance (LUO) (Chapter 21, Revised Ordinances of Honolulu) is the City and County of Honolulu's zoning ordinance. Besides zoning regulations, the LUO contains ordinances regulating the use of land and regulations intended to ensure that adequate controls and review mechanisms are in place for proposed land uses.

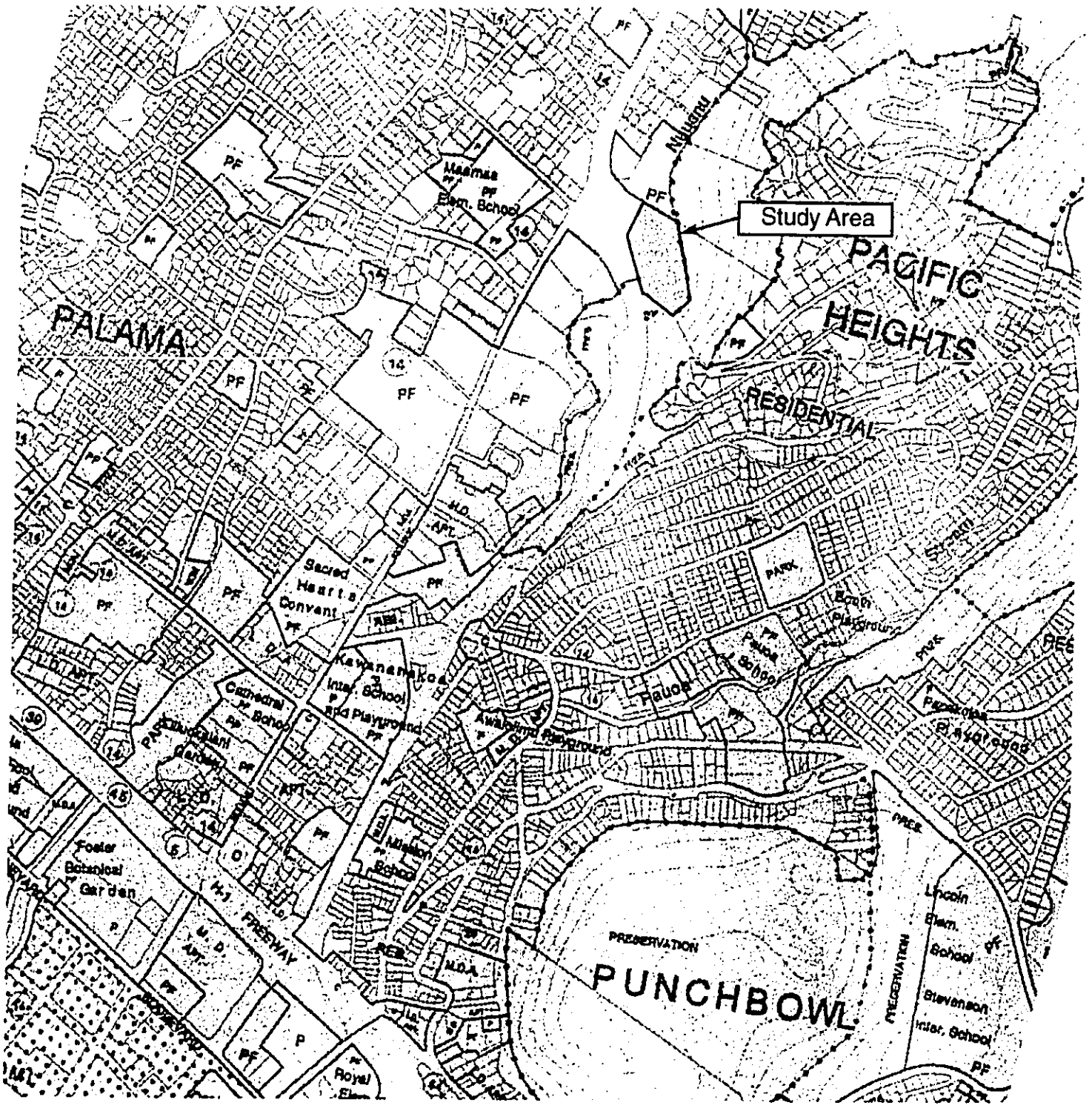
Both the parcel containing the main portion of the Hawai'i Baptist Academy Stan Sagert Campus (TMK 2-2-22: 3) and the parcel subject to this environmental assessment (TMK 2-2-22: 19) are split are zoned R-10 Residential and P-1 Restricted Preservation (Figure 7). The portions of the parcels zoned P-1 are across Nu'uanu Stream on the Diamond Head side and contain steep slopes.

According to the LUO, the purpose of the Preservation zone is to preserve and manage major open space and recreation lands and lands of scenic and other natural resource value. It is intended that all lands within the State-designated Conservation District be zoned P-1. The Hawai'i Baptist Academy lands across Nu'uanu Stream zoned P-1 are in the State Conservation District.

The purpose of the Residential zone is to allow for a range of residential densities, however, non-dwelling uses that support and complement residential neighborhood activities are also permitted. Elementary, intermediate, and high schools are permitted in the R-10 zone with a Conditional Use Permit, Minor. A public hearing may be required for a Conditional Use Permit, Minor for a school in the R-10 zone, depending on the desires of the adjoining property owners and the decision of the Director of the Department of Planning and Permitting.

The maximum height of structures in the R-10 zone is between 25 and 30 feet, depending on the building envelop. A 30-foot front yard and 15 feet side yards are required for schools in the R-10 district. Additional setbacks are required depending on the height of the building.

Discussion: With a Conditional Use Permit, Minor, a school is permitted in the R-10 zone. The proposed improvements to Hawai'i Baptist Academy will comply with all height, setback, and other



LEGEND

- Study Area
- PF — Public Facility

Source: Primary Urban Center Development Plan Land Use Map

FIGURE 6

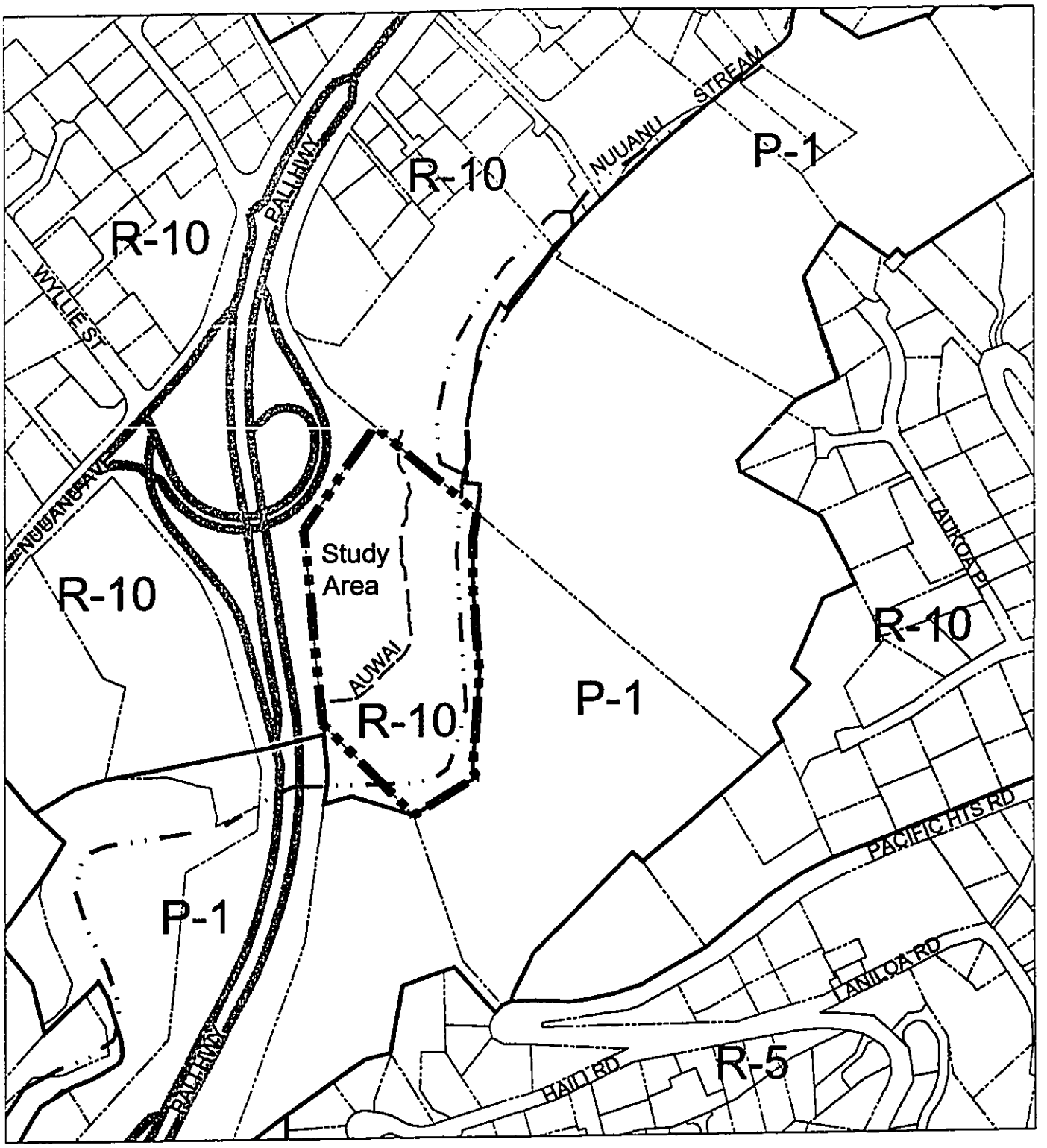
Development Plan Land Use Map

Hawai'i Baptist Academy

0 500 1000 FEET

May 2002

PBR HAWAII



Legend

- P-1 Restricted Preservation
- R-5 Residential 5,000 s.f. Minimum Lot Size
- R-10 Residential 10,000 s.f. Minimum Lot Size
- Study Area
- TMK Boundary

Source: City & County of Honolulu GIS Database

FIGURE 7
Zoning Map
Hawai'i Baptist Academy

NORTH

LINEAL SCALE (FEET)
0 150 300 450

PBR HAWAII
May 2002

requirements of the Land Use Ordinance. No buildings or other improvements will be developed on the State-owned parcel across Nu'uanu Stream in the P-1 zone.

3.3 APPROVALS AND PERMITS

Table 2 provides an approximate list of approvals and permits required for the implementation of the proposed improvements, but is subject to Department of Planning and Permitting review.

Table 2
Required Permits and Approvals

Permit/Approval	Responsible Agency
ADA Accessibility	Disability and Communication Access Board
Building Permit for Building, Electrical, Plumbing, Sidewalk/Driveway and Demolition work	Department of Planning and Permitting
Conditional Use Permit, Minor	Department of Planning and Permitting
Grubbing, Grading, and Stockpiling Permit	Department of Planning and Permitting
National Pollution Discharge Elimination System Permit (NPDES)	Department of Health
Places of Assembly	Honolulu Fire Department
Sewer Connection Permits	Department of Planning and Permitting
Water	Board of Water Supply

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4.0 DESCRIPTION OF THE AFFECTED ENVIRONMENT, POTENTIAL IMPACTS OF THE PROPOSED ACTION, AND MITIGATIVE MEASURES

The environment surrounding the Hawai'i Baptist Academy includes the physical or natural environment and the human or social environment. This section describes the existing conditions, potential impacts to the environment and mitigative measures.

4.1 PHYSICAL CHARACTERISTICS

4.1.1 Climate

Temperatures in the area are generally very moderate with average daily minimum and maximum temperatures ranging from about 65 to 87 degrees Fahrenheit. Average annual rainfall at the elevation where the school is located is about 23 inches with summer months being the driest. Trades winds are generally from the northeast. Strong winds do occur at times in connection with storm systems moving through the area.

Potential Impacts and Mitigative Measures

The proposed improvements are not expected to have an effect on climatic conditions and no mitigative measures are necessary. Project landscaping will help mitigate any localized temperature increases from the proposed improvements.

4.1.2 Topography

The elevation of the subject property ranges from approximately 240 feet mean sea level (MSL) to approximately 200 feet MSL. The primary slopes occur in the area of Nu'uanu Stream and in the south portion of the property. The majority of the 2.5 acres of usable area are graded for use as a parking lot and tennis courts.

Potential Impacts and Mitigative Measures

No significant impacts to the site topography are anticipated. The usable portion of the site already have been modified by improvements related to the parking lot and tennis courts. The proposed improvements will not require significant grading of the site, that would alter the topography of the area.

4.1.3 Geology

The Hawai'i Baptist Academy Stan Sagert Campus is within Nu'uanu Valley, a valley of the Ko'olau Mountain Range. The mountain range is believed to have formed during the late Tertiary/early Pleistocene time (between 1 and 12 million years ago). After cessation of the main volcanic activity, erosion reduced the height of the volcanic dome by as much as 1,000 feet. Stream activity cut deep valleys into the mountain range. During high stands of sea level, the valleys were

infilled with sediment (alluviated) grading to the high sea level stands (Stearns and Chamberlain, 1967).

Nu'uanu Valley was formed by a large stream that formerly flowed from the upper slopes of the Ko'olau Volcano. Caldera collapse destroyed the top of the volcanic shield and erosion has removed most of its windward flank and scoured out the caldera, removing the upper section of the valley.

Potential Impacts and Mitigative Measures

No significant impacts to the site geology are anticipated. The proposed improvements are relatively insignificant compared to the overall geologic character of the site and region. As such, significant impacts resulting from the proposed improvements are not expected. Appropriate engineering, design, and construction measures will be undertaken to minimize potential erosion due to the grading of soils during construction.

4.1.4 Soils

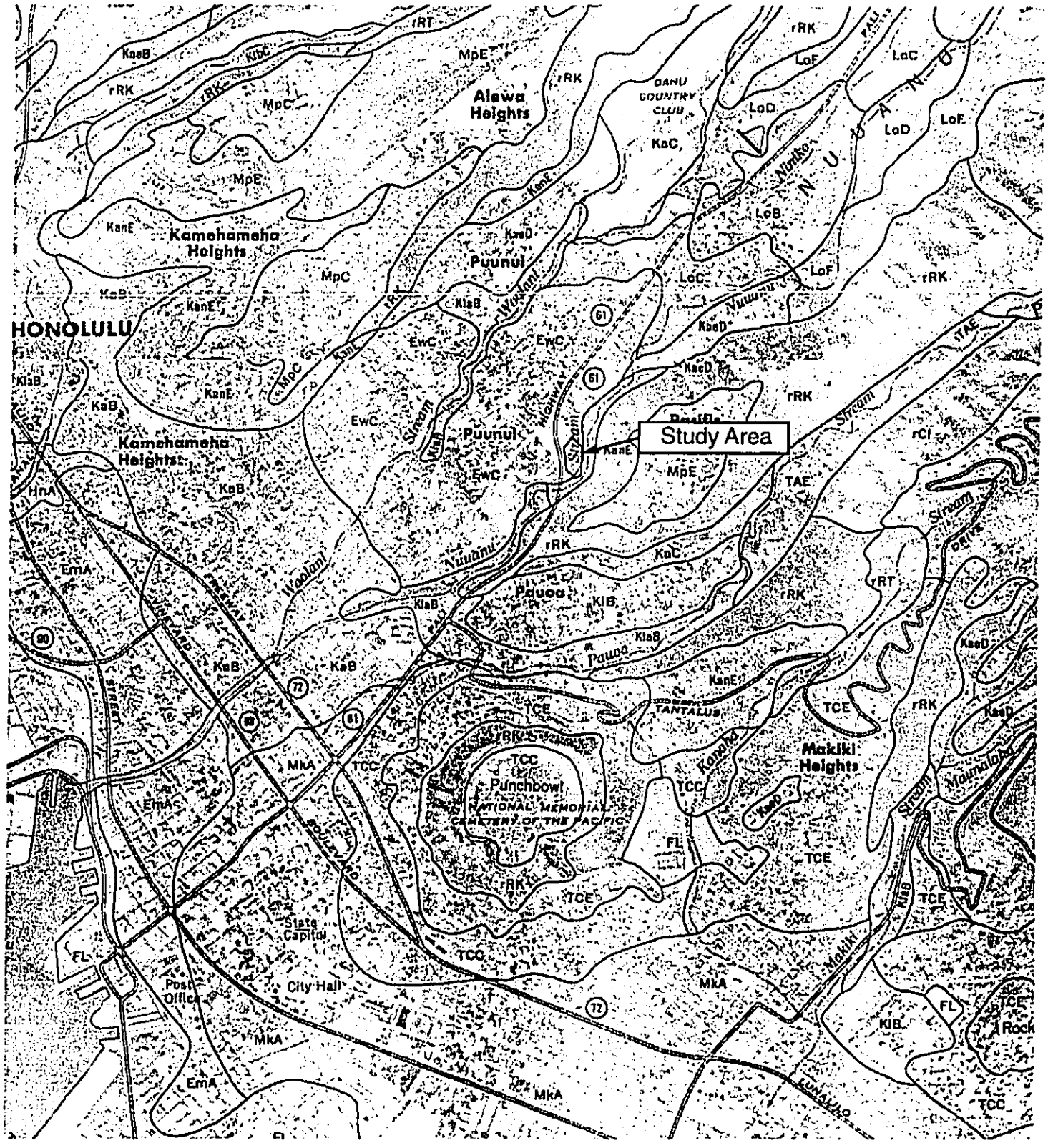
There have been three soil suitability studies prepared for Hawai'i whose principal focus have been to describe the physical attributes of land and the relative productivity of different land types for agricultural production. These are: 1) the U.S. Department of Agriculture Soil Conservation Service (SCS) Soil Survey; 2) Land Study Bureau Detailed Land Classification; and 3) the Agricultural Lands of Importance to the State of Hawai'i (ALISH).

Soil Conservation Survey. According to the *United States Department of Agriculture Soil Conservation Service, Soil Survey of Islands of Kaua'i, O'ahu, Maui, Moloka'i and Lāna'i, State of Hawai'i,* 1972, the soils on the Hawai'i Baptist Academy site are classified as 'Ewa Stony Silty Clay ((EwC) (Figure 8).

The 'Ewa series soils consist of well-drained soils in basins and on alluvial fans on O'ahu. These soils developed in alluvium derived from basic igneous rock. They are nearly level to moderately sloping. Elevations range from sea level to 150 feet. The annual rainfall is between 10 to 30 inches. 'Ewa Stony Silty Clay ((EwC) contains surface stones and has a runoff that is slow to moderate. The soil in generally used for pasture.

Detailed Land Classification. The University of Hawai'i's Land Study Bureau *Detailed Land Classification* applies a five-class productivity rating to soils using the letters A, B, C, D and E—with A representing the class of highest productivity and E the lowest. For the subject property the land on the 'Ewa side of Nu'uanu Stream is not classified under the *Detailed Land Classification.* The land on the diamond head side of the stream is classified as "E," the lowest productively rating.

Agricultural Lands of Importance to the State of Hawai'i. The State Department of Agriculture's *Agricultural Lands of Importance to the State of Hawai'i (ALISH)* system of defining soil agricultural suitability has not classified the lands of the subject property according to its rating system.



LEGEND

- Study Area
- EwC — 'Ewa Stony Silty Clay 6 to 12 Percent Slopes
- KanE — Kaena Very Stony Clay 10 to 35 Percent Slopes
- rRK — Rock Land

Source: U.S. Soil Conservation Service

FIGURE 8

Soil Conservation Service Survey

Hawai'i Baptist Academy

0 1000 2000

FEET

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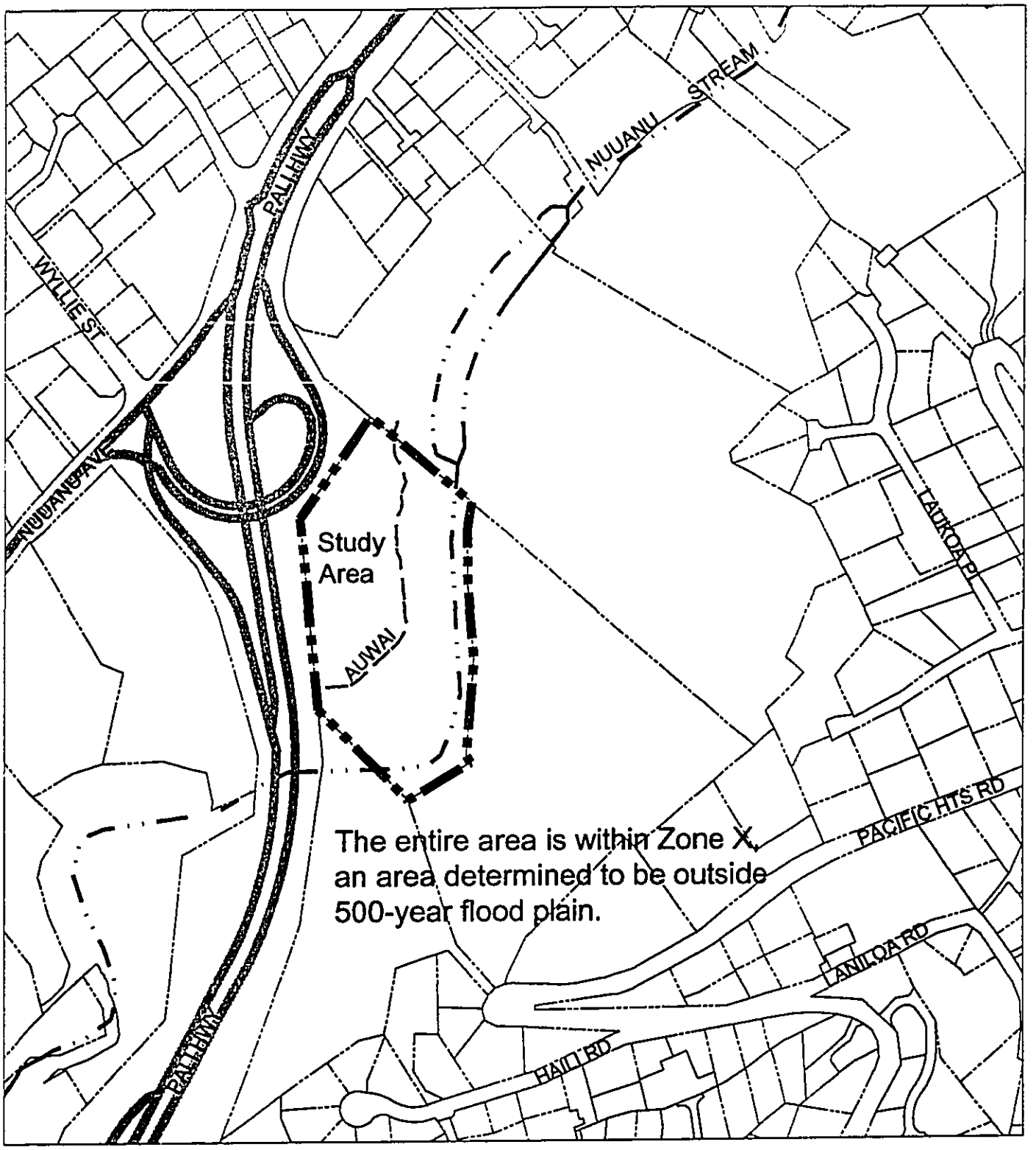

Legend

- Study Area
- TMK Boundary

Source: City & County of Honolulu GIS Database

FIGURE 9
Flood Insurance Rate Map
Hawai'i Baptist Academy

NORTH

LINEAL SCALE (FEET)
0 150 300 450

PBR HAWAII
May 2002

Potential Impacts and Mitigative Measures

Factors of the site limiting its agricultural potential are its: 1) established uses as a school; 2) designation within the State Urban district; and 3) surrounding City residential zoning. Rainfall in the project area is sufficient for soil-based agricultural crops, however, other areas within the State exist where soil conditions are better suited for commercial agriculture.

All grading operations will be conducted in compliance with dust and erosion control and other requirements of the City and County of Honolulu regarding grading, soil erosion, and sediment control (Chapter 14, Articles 13, 14, 15, ROH) and the provisions of Chapter 11-60.1, Hawai'i Administrative Rules, Section 11-60.1-33 on fugitive dust. Best management practices (BMPs) to mitigate pollutants will be included in the construction plans.

4.1.5 Drainage

The Flood Insurance Rate Map (Figure 9) indicates the subject parcel and the parcel containing the main campus are both located within Zone X. Zone X indicates areas determined to be outside of the 500-year flood plain.

Hawai'i Baptist Academy currently uses swales, on-site ditches, drain inlets and underground drain lines to intercept on-site generated runoff. The runoff accumulated within the school site school discharges into Nu'uanu Stream through the use of outlet structures located at various points along the Stream.

Potential Impacts and Mitigative Measures

The amount of impervious area added by the improvements is small in relation to the larger basin. As a result, changes to the runoff coefficient are expected to be negligible. Therefore, it is concluded that the proposed improvements will not significantly increase the peak discharge to the existing drainage system.

Construction work on the site will temporarily expose bare soil and will slightly increase the erosion potential. Upon completion, the presence of impermeable surfaces (buildings, walkways, and parking areas, etc) and landscaping will reduce the overall rate of erosion. Project specifications will incorporate erosion control requirements to mitigate any negative impacts during construction.

Detailed site specific measures for erosion and sediment control will be specified in the grading plans. Silt laden runoff from the site is anticipated during construction, however, the use of silt fences around the perimeter of the construction area and appropriately sized silt retention facilities (basins, swales, etc.) will maintain the quality of storm runoff to Nu'uanu Stream. The Department of Health's Clean Water Branch will be contacted when preparing the plans for best management practices for water quality pollution control.

4.1.6 Flora and Fauna

The site of the Hawai'i Baptist Academy and the surrounding area has been extensively altered by urbanization. No threatened or endangered plant or animal species are known to exist on the subject property. The developed portion of the property is landscaped with introduced plants that include

Opiuma, African Tulip, Shower, Monkeypod, Autograph, Banyan, Coconut and Areca Palm trees. Birds and animals common to urban areas, such as rats, mice, and domesticated and feral cats and dogs, were sighted or are presumed to exist on the site.

Potential Impacts and Mitigation Measures

While final landscaping plans have not been completed, the proposed improvements will include increased landscaping. Significant trees will be preserved or relocated when feasible. Hence, the proposed improvements should have a positive impact on the botanical resources of the campus.

The proposed improvements are not expected to have a significant negative impact on birds or introduced wildlife in the area. Birds and the introduced wildlife will most likely benefit from landscape improvements.

4.1.7 Natural Hazards

The Hawaiian islands are associated with volcanic eruption and earthquakes. Volcanic hazards in the area of the Hawai'i Baptist Academy are considered minimal due to the extinct status of the volcano comprising the Ko'olau Mountains. Seismic hazards in the area are no greater than other locations on O'ahu.

Devastating hurricanes have impacted Hawai'i twice in the past two decades: Hurricane 'Iwa in 1982 and Hurricane 'Iniki in 1992. While it is difficult to predict these natural occurrences, it is reasonable to assume that future events could be likely given the recent record. Hawai'i Baptist Academy, as the rest of O'ahu or the state, is no more or less vulnerable to the destructive winds and torrential rains associated with hurricanes.

Potential Impacts and Mitigation Measures

The proposed improvements will not exacerbate any hazard conditions. The potential impact of destructive winds and torrential rainfall of hurricanes will be mitigated by compliance with the Uniform Building Code adopted by the City and County of Honolulu. Likewise, all structures will be constructed for protection from earthquakes in accordance with the County's Uniform Building Code.

4.1.8 Wetlands and Stream Resources

Nu'uanu Stream is classified as a wetland on both the United States Geological (USGS) map and the United States Department of the Interior Fish and Wildlife Service Wetland Map for Honolulu. As previously mentioned, Nu'uanu Stream flows through the subject property near the eastern border.

Potential Impacts and Mitigative Measures

No improvements will be built within the Nu'uanu Stream. All proposed improvements will be designed to avoid the stream and the surrounding streambanks. During the construction period, measures will be taken to prevent silt from entering the stream as described earlier in sections 4.1.4 (Soils) and 4.1.5 (Drainage).

4.2 HUMAN ENVIRONMENT

4.2.1 Archaeological and Historic Resources

The subject parcel, along with the surrounding area, has been extensively modified from its natural state. Before urbanization, the many areas of Nu'uanu Valley were used for agricultural activities (e.g., taro cultivation). As recently as 1983, a large portion of the subject property was held in reserve by the State Department of Transportation (DOT) for potential highway needs. In January 1983, DOT declared most of the subject property as surplus and possible for disposal. A review of DLNR records in 1983 indicated that, historically, the State-owned property is directly related to the parcel owned by Hawai'i Baptist Academy. The Academy's administration building, Lanihuli, was originally the Waldron residence. There are a number of features on the undeveloped portion of the State parcel that relate to its use as part of the Waldron residence (ca. 1911-1933). These features include a royal palm-lined driveway, a concrete-lined *'auwai* (irrigation ditch) on the west side of Nuuanu Stream, and numerous landscaping features on the east side of the stream (another concrete 'auwai, rock and concrete steps and walkways, and stacked rock terraces).

According to correspondence dated 1983, a Department of Land and Natural Resources Division of State Parks archaeologist explored the property and did not find anything of historical or archaeological significance on the school side (west side) of the stream (where the proposed improvements are limited to). No sites on the subject property are listed on the National or Hawai'i Registers of Historic Places.

One feature of interest is the concrete-lined *'auwai* (irrigation ditch). The 'auwai runs along the sloped bank between Nu'uanu Stream and the developed areas of the campus. This ditch (more akin to a flume) is in a pipe immediately upstream of the project area under the Bessie Fleming classroom building on the Hawai'i Baptist Academy property and is a concrete-lined ditch downslope of the proposed improvements on the State-owned parcel.

The history of the 'auwai is not known, including when it was lined with concrete (or if it existed before it was lined with concrete). However, when Hawaii Baptist Academy built the Bessie Fleming classroom building it assumed responsibility of the maintenance of the portion of the 'auwai on that property.

Approximately two years ago, a neighboring property mauka of Hawaii Baptist Academy temporarily cut off irrigation water into the 'auwai, so recently it has been dry except for storm conditions. Therefore, the 'auwai does not irrigate anything beyond where the water flow has been cut off and its flow is not perennial.

At an inlet at the makai end of the property the 'auwai goes underground. It then goes under Pali Highway, through the nearby Community Church grounds, under Nu'uanu Avenue, across several residential properties, and terminates at a park. It is not known where the 'auwai connects with Nu'uanu Stream, however it would be logical to assume it connects with the stream at a point further mauka than the Hawaii Baptist Academy Campus.

No development is proposed over the 'auwai.

Potential Impacts and Mitigative Measures

The proposed improvements will be located on the flatter areas of the site, and on the west side of, and away from, Nu'uanu Stream (where most of any remaining archaeological features, such as petroglyphs) would be located. The royal palm-lined driveway, and the concrete-lined 'auwai on the west side of Nuuanu Stream will not be affected by the proposed campus facilities.

In their comment letter on the draft environmental assessment the State Historic Preservation Division confirmed that the area proposed for expansion of Hawaii Baptist Academy was investigated in 1983 by a State Parks archaeologist and that no significant historical or archaeological sites were found. State Historic Preservation Division further stated:

> Because the historic features of the existing Academy will not be affected by the project and because our records show that there are no known historic sites within the unimproved area, we believe that this project will have "no effect" on significant historic sites.

All construction plans will include the following language as normally recommended by the State Historic Preservation Division:

> Should historic remains such as artifacts, burials, concentrations of shell or charcoal be encountered during the construction activities, work shall cease immediately in the immediate vicinity of the find and the find shall be protected from further damage. The contractor shall immediately contact the State Historic Preservation Division at 692-8015 which will assess the significance of the find and recommend an appropriate mitigation measure, if necessary.

As requested by the Office of Hawaiian Affairs in their letter commenting on the draft environmental assessment, the Oahu Island Burial Council will also be contacted if historic or cultural resources are encountered during construction activities.

4.2.2 Cultural Resources

Nu'uanu Valley is rich with history and legend. One of the bloodiest and most well-known battles in Hawaiian history took place in Nu'uanu Valley in 1795 when Kamehameha I defeated Chief Kalanikūpule of O'ahu. After this battle Kamehameha had only to capture Kaua'i to unite all of the islands into one kingdom. Before coming to O'ahu, Kamehameha had captured Maui and Moloka'i. After Kamehameha's arrival on O'ahu, the Oahuans had set up a last stand within Nu'uanu, but were pushed further and further back into the valley by Kamehameha's army until they reached the Nu'uanu Pali. Faced with death, Oahuans broke ranks, some standing and fighting, some fleeing, and still others falling hundreds of feet to their death. It is said that in 1897, during the construction of the first Pali road, about 800 skulls and other bones were unearthed at the edge of the cliff.

It is also known that large portions of Nu'uanu Valley were formerly planted in taro. In upper Nu'uanu there are many small valleys which open into the main valley on either side of the stream. According to the book, *Sites of O'ahu* (Sterling and Summers 1978), traces of ancient terraces have been discovered in several valleys on steep slopes above stream beds, below the falls, and on small

flat areas along the sides of streams. Probably these small valleys were used for planting taro in ancient times. In addition, from Waolani to Kapālama there were continuous terraces on the level and gently sloping land between the Nu'uanu and Waolani streams, past Wyllie and Judd Streets, and throughout the section on the north side of the valley, down what is now Liliha Street.

There are also several reports of heiaus in the valley. The book, *Sites of O'ahu*, contains several accounts: "According to Pahu there was a heiau in the vicinity of 2290 Liliha Street. Kapena, another informant, remembers having heard that there was a heiau at 2712 Nu'uanu Street." Kaheiki Heiau is a famous heiau mentioned in several legends. One legend, recounted by Robert A. Nui, and recorded in *Sites of O'ahu* is as follows:

> Legends locate this temple in the vicinity of Waolani. It was built for Kahani-ake-akua, whose caretakers were Kahano and Newa. Kahano was kupua or demi-god. He lay down on the ocean floor, stretched out his arms, resting one on Kakiki and the other on O'ahu. Thus was formed a bridge for the menehunes to travel back and forth while building the temple of Kaheiki. Of my own belief, the heiau of Kaheiki was located in a secluded spot on the Nu'uanu stream side of Pacific Heights, immediately in the back of 'Iolani School and about 600 yards from the often sung "Alekoki". The stone alter at present imbedded in the floor of the Nu'uanu Stream projects in the shape of a triangle about four feet or more from the water level in summer but becomes completely submerged in the rainy months. This location is well known to me, because I remember what resulted from the many futile attempts by strangers, who scoffered at the admonitions of the kama'āinas that the stone was "kūpaianaha" meaning "strange." There is a method of fishing which perhaps may be forgotten by a lot of us -- the method of diverting the flow of the water by putting up mud dams, commonly referred to in Hawaiian as "paniwai", in order to trap the elusive shrimp and 'o'opu or goby. The next step is to bail out all water within the dam, allowing only an inch or two to remain and then stirring the mud from the river bed. As soon as this is done, the shrimp and baby goby will rise to the surface for oxygen thereby exposing themselves to wary fishermen. Distinctly I recall the following occasion: the stage I just mentioned had been reached, when the dam collapsed and water poured in from all directions, it was especially strange as just before this not one iota of rain cloud was showing, yet when the fishermen were preparing to gather their catch, the heavens suddenly grew overcast and freshets tore down the stream. The strangers, you see, had ignored the warnings of the residents and the wrath of the gods had been invoked on them. Said one of the residents to the newcomer "Luhi makehewa" — "useless labor."

Another legend of Nu'uanu recounted in *Sites of O'ahu* is of the guardian dogs of Kapena Falls, which is located nearby Hawai'i Baptist Academy:

> Once upon a time a couple of strangers came to O'ahu and settled above Kapena Falls in Nu'uanu Valley. The couple said they came from another island, but the folks who lived in Nu'uanu began to suspect that they came from Kahiki, the place name Hawaiians gave any foreign land.

The couple had five pet dogs. The largest of the five was called Poki. Each of the other dogs had names which have been forgotten.

These dogs were much attached to the couple. They never left the environs of the couple's home, and they never allowed strangers to set foot within the grounds until either the man or the woman welcomed the visitors.

In time all friends of the couple became friends of the dogs, and that was when people began to notice that these dogs were not ordinary dogs--they seemed to be kupuas in a dog form, super-natural beings.

The path to the Pali went by their home. Ordinarily the dogs did not stir when a stranger went by on the path minding his business. If the stranger tried to enter the home, the dogs set up a great howl, but they did not attack the stranger.

Then there came a day when friends of the couple went by, journeying to the Pali. The dogs rushed out, set up a terrific howl and laid themselves across the Nu'uanu path in front of the couple.

One friend, turned and returned to Waikīkī, but the other friend patted the dogs and insisted upon going to the Pali. There he was set upon by robbers and killed.

The friend who had returned to Waikīkī rejoiced that he had heeded the warning given by the kupua dogs.

In time, the King of O'ahu heard about the dogs and sent a company of men to the Pali to clean out the robber band which infested the place.

After that, the people of O'ahu realized that the dogs at Kapena Falls were really kupua dogs. When they journey by Kapena Falls, they got into the habit of leaving flowers, leis, ferns and food for the dogs.

It was their way of saying "thank you."

There are two famous pools nearby Hawai'i Baptist Academy, Kapena Pool, north of the site, and Alapena Pool, to the south. Nearby residents tell of childhood memories of swimming in these pools. The pools are well known, especially by people in the neighborhood, and they are still used for recreational activities. According the Department of Health there is no law against swimming in Nu'uanu Stream and the pools, however the Department of Health warns that the stream is a "hot spot" for leptospirosis, which can cause flu-like symptoms if it enters a person's body from cuts or from drinking.

Many carved images of people and animals can be found in 13 different sites in the vicinity of Alapena Pool, right below Kapena Falls. The easiest to see of the three sites is the "man and dog" petroglyphs along the trail west of Nu'uanu Stream at Nu'uanu Memorial Park. The petroglyphs which are on a rock wall, are now enclosed by a protective grating. The other two sites are on the

west bank south of Alapena Pool and have a total of about forty carvings. They are mostly petroglyphs of humans and animals. In one interpretation, the images of a dog refer to the legendary guardian dog of Kapena Falls.

In more recent times, when the 13-acre estate that is now the Hawai'i Baptist Academy campus was sold in 1972, the *Honolulu Star-Bulletin* reported: "For more than 50 years the mansion at 2429 Pali Highway was the scene of glittering gatherings of Hawai'i's political and social leaders." The *Honolulu Star-Bulletin* further reports: "The home, noted for its well-manicured grounds and profuse gardens, was built by Mr. and Mrs. John W. Waldron after their marriage in 1910." After John Waldron's death, Mrs. Waldron sold the home to her uncle, Justice Alexander George Morrison Robertson. Robertson, one-time Territorial Supreme Court justice, lived at the estate until his death in 1948. Robertson left the estate to his wife, Mrs. Ululani Robertson. After her death in reverted to the Robertson estate. Thirty-six Robertson heirs shared the net proceeds when Hawai'i Baptist Academy purchased the property.

Potential Impacts and Mitigative Measures

While Nu'uanu Valley has a rich cultural history, the proposed Hawai'i Baptist Academy improvements on the State-owned property are not expected to interfere with any cultural resources or practices. The proposed improvements will be located on the flatter areas of the site, and away from Nu'uanu Stream, the 'auwai, and the former gardens (where any undiscovered archaeological features, such as petroglyphs likely would be located).

4.2.3 Traffic and Circulation

The primary access to the subject property and the intermediate and high school campus of Hawai'i Baptist Academy is from "Ramp P" (see Figure 4). Ramp P is a northbound partially one-way street providing access to Pali Highway from Wyllie Street and Nu'uanu Avenue. To access the campus, motorists must enter Ramp P from either Wyllie Street or Nu'uanu Avenue and then travel on the ramp over Pali Highway in a counter clockwise direction from east to north. Access to the campus is via a right turn off of the ramp. Upon exiting the campus, motorists must turn right and head north on the ramp a short distance until it intersects with Pali Highway. From Pali Highway motorists wishing to return to Honolulu must continue driving north until a U-turn is permitted on Pali Highway.

Pedestrians may also access the campus from Ramp P, which includes sidewalks.

Traffic to the campus primarily results from students being dropped off in the morning and being picked up in the afternoon. To avoid traffic queuing on Ramp P, Hawai'i Baptist Academy officials route drop-off/pick-up traffic through the campus in a loop pattern. Hawai'i Baptist Academy officials report that there is greater traffic in the morning than in the afternoon because in the afternoon students may leave at varying times due to after-school studying or athletic activities.

Academy officials also report that many students are dropped off or picked up on the opposite (ewa) side of Pali Highway, near the intersection of Wyllie Street and Nu'uanu Avenue. Students then walk to the campus over Pali Highway on Ramp P. This allows drivers dropping off students to avoid entering Ramp P and thus being forced to exit onto Pali Highway traveling north and then make a U-turn back to Honolulu.

Some students also take the City bus to and from school. There are nearby bus stops on the diamond head side of Pali Highway near the Philippine Consulate, on the 'ewa side of Pali Highway near Niolopa Place, and at the intersection of Nu'uanu Avenue and Wyllie Street. Students arriving by bus on the 'ewa side of Pali Highway cross over the Highway by walking on Ramp P. Academy officials report a greater amount of students use the bus to leave school than arrive at school, indicating that some students are dropped off in the morning but take the bus after school.

Potential Impacts and Mitigative Measures

Based on projected number of new students and employees attending and working at the campus after the proposed improvements are completed, a substantial amount new traffic is not anticipated.

Academy officials project 20 additional students may attend the school after the improvements are completed and up to 15 additional employees many work on the campus. This represents approximately a five percent increase in the number of people coming to the campus. It is expected that some of the additional students and employees will also take the bus. Since the developable area of the campus is limited, parking for students is limited to 22 students in the senior class. No additional parking for students will be provided.

The proposed improvements are not being built to facilitate a substantial increase in enrollment, but rather are being implemented to maintain the school's accreditation, improve its academic standing, and reduce class size. Therefore, the student pick-up and drop off circulation patterns already established are not expected to change substantially and traffic to the campus is not expected to significantly increase.

In their comments on the draft environmental assessment the State of Hawaii Department of Transportation stated: "The proposed expansion is not anticipated to have a significant impact to Pali Highway, our State Facility." The Department of Transportation further stated ". . . plans for any construction work within the State Highway's right-of-way must be submitted for our review and approval."

Construction vehicles and equipment may have a temporary impact on local traffic. Mitigative measures include:

1) Mobilizing and demobilizing construction vehicles and equipment during non-peak traffic hours;

2) The use of temporary traffic control devices, such as signs, cones, and barricades installed in accordance with the City's traffic standards; and

3) If necessary, the use of an off-duty police officer to direct traffic.

4.2.4 Air Quality

In general, air quality in Hawai'i is excellent due to the predominant northeast trade winds. Some localized conditions, such as heavy traffic at intersections, can negatively impact air quality. Air quality in the vicinity of the Hawai'i Baptist Academy is most likely affected by emissions from motor vehicle traffic on nearby roadways.

Presently, the State of Hawai'i is considered by the U.S. Environmental Protection Agency to be in attainment for all criteria pollutants. To ensure that existing air quality continues, both Federal and State standards have been established to identify ambient air quality conditions and potential changes as they may occur in the future.

Potential Impacts and Mitigative Measures

Long-term air quality impacts are not expected due to the proposed improvements at Hawai'i Baptist Academy. Because air quality in Nu'uanu Valley is primary impacted from vehicle emissions, and because the proposed improvements are not expected to substantially increase traffic in the area, it may be concluded that the proposed improvements will not substantially alter air quality in the vicinity.

Short-term air quality impacts due to the proposed improvements may result from construction activities. During construction, air quality in the area may be impacted by exhaust generated from construction equipment and fugitive dust. All construction activities will implement best management practices to reduce any negative air quality impacts and comply with the provisions of Hawai'i Administrative Rules, Chapter 11-60.1, "Air Pollution Control," Section 11-60.1-33, Fugitive Dust. A combination of measures such as watering exposed soils, minimizing the amount of disturbed area, and rapid establishment plant materials will be implemented as appropriate. Exhaust emissions from construction equipment are not likely to exceed established air quality standards.

4.2.5 Noise

The predominate source of noise in the vicinity of Hawai'i Baptist Academy is traffic from Pali Highway. Occasional aircraft flying over the site may also contribute to noise levels. Within the Hawai'i Baptist Academy campus and the subject property the sound of flowing water from Nu'uanu Stream may be heard. Noise on-site may also be generated from human interaction, sporting activities, parking lot activities, and lawn mowing and other landscape maintenance.

Potential Impacts and Mitigative Measures

Long-term noise impacts due to the proposed improvements are not expected to be significant. As previously discussed, the proposed improvements are not expected to significantly increase enrollment, the number of employees at the campus, or traffic to the campus. Since a substantial increase in these noise sources is not anticipated, noise levels are not expected to significantly increase over existing levels.

Short term noise impacts will be generated during construction. Proper mitigating measures (such as limiting construction to daylight hours) will be employed to minimize the noise impacts. All project activities will comply with the State Department of Health's Administrative Rules, Chapter 11-46, "Community Noise Control and will be monitored to ensure compliance.

4.2.6 Visual Resources

The site is mostly hidden from view from the Pali Highway and Ramp Q because of landscaping along the Highway and Ramp P.

Potential Impacts and Mitigative Measures

Any potential impact on the appearance of the project site would be from the new classroom building. It is not known whether the building will be two stories high (the maximum height of the building), but at two stories, the maximum height of the building will be approximately 30 feet high. At one story, the building will probably be 20 feet high (but there are no assurances that the required square footage can be accommodated in a one story building). It is possible that the building may be a combination of one and two stories. In addition, present plans anticipate a building with a more "kama'āina" character than the modern Bessie Fleming Building. The proposed middle school building will have a sloped roof, which adds to the building height, but provides more character.

4.2.7 Social Impacts

Hawai'i Baptist Academy has been operating its intermediate and high school at its present location in Nu'uanu Valley since 1975. Before that grades 7 to 12 were combined with the elementary grades at the school's original campus in Makiki, which was established in 1949. Throughout this time Hawai'i Baptist Academy has striven to be a good neighbor at its respective locations.

Because it is a private school, Hawai'i Baptist Academy students reside in all areas of O'ahu and thus the school's social impacts radiate out throughout the entire community and beyond.

Since its inception, Hawai'i Baptist Academy has been committed to excellence in teaching and the integration of faith and learning. The school offers a comprehensive curriculum in a safe, disciplined environment. Positive social impacts resulting from Hawai'i Baptist Academy's presence in Honolulu include the development of citizens with:

- Knowledge and skills necessary for success in college;
- The desire for life-long learning;
- Social knowledge and skills for relating to others;
- Individual and civic responsibility; and
- Creativity and aesthetic appreciation.

In addition, because Hawai'i Baptist Academy is a private school, its students do not burden the State's public school system.

Potential Impacts and Mitigative Measures

The proposed improvements will help to strengthen Hawai'i Baptist Academy's ability to provide quality education opportunities in Hawai'i. The long-term result will be a more educated citizenry instilled with the abilities to positively contribute to the State's social and economic well being.

As an established element of the Nu'uanu community, Hawai'i Baptist Academy has demonstrated its ability to fit in with the existing residential nature of the area. In addition, because of the access to the Academy campus via Ramp P, Hawai'i Baptist Academy students and staff do not travel through residential streets in the neighborhood and thus the social impacts related to people traveling through the residential neighborhood are lessened. Furthermore, as a private school, Hawai'i Baptist Academy requires their students to adhere to a strict code of conduct, including elements of good citizenship and respect for other people and their property.

4.2.8 Economic Impacts

Hawai'i Baptist Academy is a non-profit organization. As a private school, parents or guardians of enrolled students pay tuition to support operating expenses. About ten percent of students receive financial aid. Charitable contributions from parents, alumni, and mainland and local friends, churches, employees, and foundations supplement the school's operating expenses.

Currently there are 69 employees at the Hawai'i Baptist Academy intermediate and high school campus, including faculty and other staff.

The preliminary estimate for the proposed improvements is $5.2 million.

Potential Impacts and Mitigative Measures

The proposed improvements will generate short-term construction employment and associated other jobs in the economy generated by sales to construction companies or the expenditure of wages by workers.

Hawai'i Baptist Academy estimates the new facilities will provide long-term employment for up to a total of 15 additional faculty and staff members. While total student enrolment is not expected to increase significantly, the school would like to decrease class sizes and therefore expects to hire additional teachers when they have additional classroom facilities.

In the larger context, the proposed improvements will allow Hawai'i Baptist Academy to provide increased quality education opportunities. A long-term indirect consequence of this is a more educated citizenry instilled with the abilities to positively contribute to the State's social and economic well being.

In addition, parents or guardians of Hawai'i Baptist students pay the same taxes paid by parents or guardians of public school students, however because Hawai'i Baptist Academy is a private school, its students do not burden the State's public school system.

4.2.9 Infrastructure

Infrastructure improvements necessary for the proposed campus facilities will be provided by connecting to existing easements.

4.2.9.1 Water System

The City and County of Honolulu Board of Water Supply owns and maintains the water system that services Hawai'i Baptist Academy.

Potential Impacts and Mitigative Measures

In their comment letter on the draft environmental assessment the Board of Water Supply stated: "The existing water system is presently adequate to accommodate the proposed school improvements."

The proposed campus facilities will accommodate 20 more students and up to 15 more faculty and staff. Based on a per student/faculty/staff demand of 60 gallons per day, the additional campus population will generate approximately 2,100 gallons per day. All water system improvements will be designed in accordance with the Water System Standards and Approved Materials List and Standard Details for Water System Construction of the Board of Water Supply. It is assumed that the existing off-site water source, storage and transmission system is presently adequate to accommodate the additional demand. However, the availability of water will be determined when the Building Permit applications are submitted to the Board of Water Supply for review and approval.

When water is made available, Hawaii Baptist Academy will be required to pay the Board of Water Supply Water System Facilities Charges for resource development, transmission, and daily storage. Further, the proposed improvements are subject to Board of Water Supply Cross-Connection Control and Backflow Prevention requirements before the issuance of the Building Permit Applications.

For fire protection purposes, any multi-storied Middle School, Maintenance and Caretaker's Residence buildings will be equipped with sprinkler systems. Fire hydrants will be installed within 150 feet anywhere along the first floor of buildings without sprinklers and within 150 feet of the face of buildings with sprinklers. On-site fire protection requirements will be coordinated with the Fire Prevention Bureau of the Fire Department.

4.2.9.2 Wastewater Facilities

The existing wastewater system in the area is owned and maintained by the City and County of Honolulu. There is an 18-inch sewer line (within the 10-foot wide Nu'uanu Valley Sewage System Easement) that runs stream-side of the developed portion of the State property, around the existing parking lot and tennis courts.

Potential Impacts and Mitigative Measures

Wastewater generated from the proposed improvements will be transmitted to the City and County of Honolulu sewer system.

The proposed campus facilities will accommodate 20 more students and up to 15 more faculty and staff. Based on a per student/faculty/staff demand of 25 gallons per day, the additional campus population will generate approximately 875 gallons of wastewater per day. The proposed wastewater system improvements will be designed and constructed in accordance with Department of Environmental Services Design Standards and will require their review and final approval. It is assumed that the existing off-site wastewater collection, treatment and disposal system is presently adequate to accommodate the additional demand.

All wastewater plans will conform the applicable provisions of the State Department of Health's Administrative Rules, Chapter 11-62, "Wastewater Systems."

4.2.9.3 Drainage Facilities

The Hawai'i Baptist Academy currently uses overland sheet flow, swales, on-site ditches, drain inlets and underground drain lines to intercept on-site generated runoff. This includes drainage into

the a concrete ditch (more commonly referred to as the "'auwai"), which is located mostly between the Nu'uanu Valley Sewage System Easement and Nu'uanu Stream. The area of the proposed improvements generally slopes toward Nu'uanu Stream. It appears runoff from the area of the proposed improvements currently flows toward Nu'uanu Stream but is mostly intercepted by the 'auwai. This is evidenced by debris found in portions of the 'auwai that are not maintained. Runoff from the area streamside (or downslope) of the 'auwai flows towards Nu'uanu Stream.

Potential Impacts and Mitigative Measures

The proposed improvements are not expected to significantly alter the current overall drainage patterns of the site (i.e., towards Nu'uanu Stream). Storm water from increased impervious surfaces will be directed to depressed landscaped (grassed, etc.) areas to pond and infiltrate into the ground. Excess storm water runoff that may overflow the depressed grassed areas will be directed toward Nu'uanu Stream via grassed lined swales, or hard surface swales where runoff velocity maybe erodible. Any increase in storm runoff quantity due to an increase in impervious areas created because of the project will be retained on-site in above-ground basins and/or belowground storage facilities. Project engineering and design will pay special attention to post-construction best management practices.

4.2.9.4 Electrical and Communication Utilities

Primary electrical, telephone, and cable television (CATV) service for Hawai'i Baptist Academy originates from Hawaiian Electric Company's (HECO), Verizon Hawaii, Inc. and Oceanic Cablevision's overhead facilities.

Potential Impacts and Mitigative Measures

Present electrical, telephone and cable capacities are adequate to support the proposed improvements.

4.2.9.5 Solid Waste Disposal

On O'ahu, residential and commercial wastes are hauled to landfills, the incinerator, or transfer stations. A waste-to-energy conbuster, H-POWER (Honolulu Program of Waste Energy Recovery) located at the Campbell Industrial Park incinerates about 1,800 tons of conbustable waste per day. The electricity generated is bought by Hawaiian Electric Company. Currently, the H-POWER facility receives all residential and commercial packer truck wastes on the island.

The Waimānalo Gulch Landfill, which opened in 1989, is the City's primary solid waste disposal facility and is located mauka of Farrington Highway near Kahe Point. The site accepts residential, commercial and nonhazardous industrial solid wastes, demolition debris and ash and residue from the H-POWER waste-to-energy facility. Wastewater treatment sludge, septic tank wastes and cesspool pumpings are accepted, provided such disposal is in accordance with the landfill's operating guidelines. The site also handles special wastes such as spent lime, contaminated foods and asbestos.

Potential Impacts and Mitigative Measures

The proposed improvements will comply with the State Department of Health and the City and County of Honolulu Department of Facility Maintenance requirements to ensure that all aspects of the project conform to the program goals and objectives of the Integrated Solid Waste Management Act, Chapter 342G, Hawai'i Revised Statues, and the County's approved integrated solid waste management plans in accordance with a schedule and time frame satisfactory to the Department of Health.

Vegetation removed from the property during the construction will be chipped and then hauled to a green waste disposal site for composting. Green waste will be disposed of in compliance with all state and county laws and ordinances.

Solid waste generated during the operation of the project will be collected by a private collection service and disposed of by the City and County of Honolulu, Department of Environmental Services, Refuse Division.

4.2.10 Public Services

4.2.10.1 Fire Protection

Fire protection is provided by the Nu'uanu Fire Station located at 115 Wyllie Street, near the intersection with Nu'uanu Avenue, less than one half mile from Hawai'i Baptist Academy.

Potential Impacts and Mitigative Measures

There may be an occasional and unavoidable demand for fire protection services associated with the proposed improvements. The applicant will advise the Fire Department of project implementation and phasing to permit adequate planning and advance notice of project completion. Existing levels of fire protection services and facilities are considered adequate to service the proposed project.

4.2.10.2 Police Protection

Police protection is provided by the Honolulu Main Police Station located at 801 South Beretania Street.

Potential Impacts and Mitigative Measures

There may be an occasional and unavoidable demand for police protection services associated with the project, however, it is anticipated that the existing police service will not be adversely affected by the proposed improvements.

4.2.10.3 Health Care Services

Various health care services in Honolulu provide primary patient care to adults, women, and children. The nearest hospital with 24-hour emergency services is the Kuakini Medical Center, located at 347 North Kuakini Street, approximately five minutes from the Hawai'i Baptist Academy

Stan Sagert Campus by ambulance service. Queen's Medical Center is also located nearby at 1301 Punchbowl Avenue.

Potential Impacts and Mitigative Measures

There will be an unavoidable and occasional need for emergency health care services. However, the proposed project is not expected to have a long-term adverse impact on emergency medical services.

4.2.10.4 Public Transit

Fixed route bus service is provided through the City Department of Transportation Services, which currently contracts with O'ahu Transit Services (OTS) for operation of TheBus. The OTS also operates the Handi-Van system, which is a demand responsive paratransit service for semi-ambulatory and non-ambulatory persons with disabilities.

The Hawai'i Baptist Academy Stan Sagert Campus is serviced by bus routes #4, #55, #56 and # 57. There are nearby bus stops on the Diamond Head side of Pali Highway near the Philippine Consulate, on the Ewa side of Pali Highway near Niolopa Place, and at the intersection of Nu'uanu Avenue and Wyllie Street.

Potential Impacts and Mitigative Measures

Although the proposed improvements may slightly increase the number of students traveling to the Hawai'i Baptist Academy Stan Sagert Campus by bus, this potential increase in bus ridership is not expected to be significant.

4.2.10.5 Proximity of Commercial and Other Services

The Hawai'i Baptist Academy is located approximately one mile from Downtown Honolulu. Various commercial establishments are also located throughout Nu'uanu Valley.

Potential Impacts and Mitigative Measures

The proposed improvements to the Hawai'i Baptist Academy Stan Sagert Campus are not anticipated to create addition demand for commercial and other services.

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5.0 ALTERNATIVES TO THE PROPOSED ACTION

According to Title 11, Department of Health, Chapter 200, Environmental Impact Statement Rules, Section 11-200-10(6) an environmental assessment must discuss alternatives considered. As such, the following alternatives have been evaluated.

5.1 NO ACTION ALTERNATIVE

The no action alternative will not accomplish the project's goal to maintain the school's accreditation or the project's objectives to improve academic standing of the school and reduce class size.

5.2 ALTERNATIVE SITE

As an alternative to the proposed improvements on land adjacent to the Hawai'i Baptist Academy Stan Sagert Campus, additional facilities could be build at the site of the Hawai'i Baptist Academy's elementary campus, located at 21 Bates Street, about a half mile away. The elementary school campus is approximately seven acres. Currently classes for grades Kindergarten to sixth are held at the elementary campus.

This alternative may not be practical because it would expand the grade levels at the elementary school. Standard educational divisions traditionally separate grade levels into middle or intermediate schools at the sixth or seventh grade levels. This is done to avoid conflicts between young students and students entering puberty.

5.3 THE PREFERRED SITE

The property adjacent to the Hawai'i Baptist Academy intermediate-high school campus is the preferred site for the proposed improvements because:

- It will implement the project's goal to maintain the school's accreditation and the project's objectives to improve academic standing of the school and reduce class size
- The land is adjoining the existing campus and therefore it is a logical extension of the campus
- The site is already in use by the Hawai'i Baptist Academy for recreational and parking uses
- Other uses of the site, such as residential or commercial uses are not practical

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6.0 DETERMINATION, FINDINGS, AND REASONS FOR SUPPORTING THE ANTICIPATED DETERMINATION

To determine whether the proposed improvements on the State-owned property adjacent to the Hawai'i Baptist Academy Stan Sagert Campus may have a significant impact on the environment, all expected consequences, both primary and secondary, and the cumulative as well as short- and long-term effects of the have been evaluated. Based on the studies performed and research evaluated, the Accepting Authority (Department of Land and Natural Resources) has issued a Finding of No Significant Impact (FONSI).

6.1 SIGNIFICANCE CRITERIA

According to Title 11, Department of Health, Chapter 200, Environmental Impact Statement Rules, Section 11-200-12, an applicant or agency must determine whether an action may have a significant impact on the environment, including all phases of the project, its expected consequences both primary and secondary, its cumulative impact with other projects and its short and long-term effects. In making the determination, the Rules establish "Significance Criteria" to be used as a basis for identifying whether significant environmental impacts will occur. The significance criteria are listed below along with a discussion of the project impacts.

(1) Involves an irrevocable commitment to loss or destruction of any natural or cultural resources;

The property subject to this environmental assessment has been modified for parking and recreational uses for the adjacent main portion of the Hawai'i Baptist Academy Stan Sagert Campus. In addition, the surrounding neighborhood has been extensively modified for residential uses, the Pali Highway, and other urban uses. Before urbanization, the area may have been used for agricultural activities (e.g. taro cultivation) due to its proximity to Nu'uanu Stream. Later, the Waldron Residence was built on the adjoining parcel and, for a time, the State Department of Transportation held the subject parcel in reserve for potential highway needs. The proposed improvements are limited to the west side of Nuuanu Stream. The royal palm-lined driveway, and the concrete-lined 'auwai on the west side of Nuuanu Stream will not be affected by the proposed campus facilities.

According to correspondence dated to 1983, a Department of Land and Natural Resources Division of State Parks archaeologist explored the property and did not find anything of historical or archaeological significance on the school side (west side) of the stream (where the proposed improvements are limited to). No sites on the subject property are listed on the National or Hawai'i Registers of Historic Places and therefore proposed improvements are not expected to have a effect on any known historic property.

Should any archaeologically significant artifacts, bones, or other indicators of previous on-site activity be uncovered during the construction phases of the proposed improvements, their treatment will be conducted in compliance with the requirements of the Department of Land and Natural Resources, State Historic Preservation Division.

One feature of interest is the concrete-lined *'auwai* (irrigation ditch). The 'auwai runs along the sloped bank between Nu'uanu Stream and the developed areas of the campus. This ditch (more akin to a flume) is in a pipe immediately upstream of the project area under the Hawai'i Baptist Academy property and is a concrete-lined ditch downslope of the proposed improvements on the State-owned parcel. The ditch eventually enters an inlet at the makai (downslope) end of the property. Approximately, two years ago a neighboring property mauka of Hawai'i Baptist Academy cut off irrigation water into the 'auwai, so the ditch has been dry except during storm conditions. No development is proposed over the 'auwai.

The proposed improvements will be designed in such a way as to minimize potential hazards from runoff into Nu'uanu Stream. Current drainage patterns (storm runoff into the dry 'auwai, with eventual discharge into the inlet) will be maintained. As such, there will be no irrevocable commitment to loss or destruction of any natural resources.

(2) Curtails the range of beneficial uses of the environment;

It is unlikely that the property would be developed for other uses because it is: 1) in a highly urbanized area; 2) already being used for school parking and tennis courts; 2) located adjacent to main portion of the Hawai'i Baptist Academy Stan Sagert Campus.

Construction of the proposed improvements, will foreclose other uses, however, the proposed uses are not unreasonable and will provide the beneficial social impact of educated children. Thus the proposed uses represent a reasonable use that could be concluded to be the best use of the property. Therefore, the beneficial uses of the environment are not unreasonably curtailed.

(3) Conflicts 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 improvements are consistent with the Environmental Policies established in Chapter 344, HRS and the National Environmental Policy Act.

(4) Substantially affects the economic or social welfare of the community or state;

The proposed improvements will positively affect the social welfare of Honolulu and Hawai'i by helping to strengthen Hawai'i Baptist Academy's ability to provide quality education opportunities to children of the state. The long-term result will be a more educated citizenry instilled with the abilities to positively contribute to the State's social and economic well being.

In addition, parents or guardians of Hawai'i Baptist students pay the same taxes paid by parents or guardians of public school students, however because Hawai'i Baptist Academy is a private school, the students educated there do not burden the State's public school system.

Further, the proposed improvements will generate short-term construction employment and associated other jobs in the economy and will provide long-term employment for up to a total of 15 additional faculty and staff members.

(5) Substantially affects public health;

Impacts to public health may be temporarily affected by air, noise, and water quality impacts during construction, however, these will be of a short-term duration, and insignificant, especially when weighed against the positive social and economic benefits associated with the proposed improvements.

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

The proposed improvements will not have secondary impacts associated with population growth. Hawai'i Baptist Academy students are residents of Hawai'i and the school does not have boarding facilities, so it is impractical for out-of-state students to attend the school.

Because the proposed improvements not are being built in expectation of increased enrollment, infrastructure demands on roads and water and sewer drainage systems are expected to be minimal and can be accommodated by the existing systems.

(7) Involves a substantial degradation of environmental quality;

The proposed improvements do not involve substantial degradation of environmental quality on-site or in the surrounding neighborhood. Situated within an established urban area, the site is already in use for parking and tennis courts. As such, the "natural environment" that may have been associated with the site has already been modified.

The proposed improvements will be designed to comply with all federal, state, and county laws regarding drainage, erosion control, and non-point source pollution. There are no anticipated impacts that would degrade environmental quality.

Appropriate best management practices will provide safeguards for protection of water quality during the short-term construction period.

(8) Is individually limited but cumulatively has considerable effect on the environment, or involves a commitment for larger actions;

The proposed improvements will not have a cumulative negative effect on the environment. Because the site is within an already urbanized area, expansion potential beyond the site is limited.

The proposed improvements are consistent with the urban uses designated for the State Land Use Urban District, and are also consistent with the City and County of Honolulu General Plan, the Primary Urban Center Development Plan and City zoning.

The proposed improvements are being built to allow accomplish the project's goal to maintain the school's accreditation and the project's objectives to improve academic standing of the school and reduce class size, and therefore not envisioned involve a commitment for larger actions.

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

No threatened or endangered plant or animal species are known to exist on the subject property. The flora primarily consists of introduced species. Birds and animals common to urban areas, such as rats, mice, and domesticated and feral cats and dogs, were sighted or are presumed to exist on the site.

(10) Detrimentally affects air or water quality or ambient noise levels;

Long-term air quality impacts are not expected due to the proposed improvements. Because air quality in Nu'uanu Valley is primary impacted from vehicle emissions, and because the proposed improvements are not expected to substantially increase traffic in the area, it may be concluded that the proposed improvements will not substantially alter air quality in the vicinity.

Short-term air quality impacts due to the proposed improvements may result from construction activities. During construction, air quality in the area may be impacted by exhaust generated from construction equipment and fugitive dust. All construction activity will maintain compliance with State of Hawai'i air pollution control regulations and follow best management practices to reduce any negative air quality impacts

The proposed improvements will be designed to comply with all federal, state, and county laws regarding drainage, erosion control, and non-point source pollution. Therefore, the affect on water quality is expected to be negligible. During construction phases, any possible impact to water quality will be minimized and mitigated by the implementation of appropriate erosion control requirements.

Long-term noise impacts due to the proposed improvements are not expected to be significant. The proposed improvements are not expected to significantly increase enrollment, the number and employees at the campus, or traffic to the campus. Since a substantial increase in these noise sources is not anticipated, noise levels are not expected to significantly increase over existing levels.

Short term noise impacts will be generated during construction. Proper mitigating measures (such as limiting construction to daylight hours) will be employed to minimize the noise impacts. All work will be monitored to comply with State of Hawai'i Department of Health noise limits.

(11) Affects or is likely to suffer damage by being located in an environmentally sensitive area, such as a flood plain, tsunami zone, beach, erosion-prone area, geologically hazardous land, estuary, freshwater, or coastal waters.

The property is not is located in the flood plain. It is also not in a tsunami zone, near a beach, in an erosion-prone area, on geologically hazardous land, or near an estuary or coastal waters. Nu'uanu Stream flows through one edge of the site, but the proposed improvements will be designed in such a way as to minimize potential hazards from runoff into Nu'uanu Stream. Current drainage patterns (storm runoff into the dry 'auwai, with eventual discharge into the inlet) will be maintained.

To protect the stream, final plans will include detailed site specific measures for erosion and sediment control. It is expected that the amount of impervious area added by the improvements will

be small in relation to the larger basin. As a result, changes to the runoff coefficient are expected to be negligible.

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

The proposed improvements will not affect scenic vistas and view planes identified in county or state plans or studies. The subject property is not within the Punchbowl Special District as specified in the Land Use Ordinance, and is not identified in the City and County of Honolulu "Coastal view Study." In addition, panoramic view planes identified in the Primary Urban Center Development Plan Special and Common Provisions will not be affected.

In general, while a classroom building is proposed to be built, this building will not significantly affect scenic vistas and view planes. Surrounding landscaping will serve to reduce the building's visual bulk. Furthermore, in relation to the height of the valley ridge lines, the building's height is substantially less. As such, although the building may affect views from certain nearby vantage points, it will not significantly obscure scenic vistas and view plains.

(13) Requires substantial energy consumption.

Construction of the proposed improvements will not require substantial energy consumption relative to other similar projects. Design of the proposed improvements, including the classroom building, will incorporate energy saving design measures. Once completed, the new building is expected to consume energy similar to other developments.

6.2 DETERMINATION

On the basis of the above criteria and the discussion of impacts and mitigative measures contained in this document, and the comments received in the review of the draft environmental assessment, the Accepting Authority (Department of Land and Natural Resources) of this environmental assessment has determined that the proposed improvements on the State-owned property adjacent to the Hawai'i Baptist Academy Stan Sagert Campus will not have a significant effect on the environment. Pursuant to Chapter 343, Hawaii Revised Statues, the Accepting Authority has issued a Finding of No Significant Impact (FONSI).

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8.0 COMMENTS ON THE DRAFT ENVIRONMENTAL ASSESSMENT & RESPONSES

The draft environmental assessment was sent to the following agencies, organizations, and individuals. Where indicated the agency, organization, or individual submitted comments.

	AGENCY	DEA Mail Date	Date of Comments
	STATE		
1	Department of Business Economic Development and Tourism	6/7/02	
2	Department of Education	6/7/02	6/27/02
3	Department of Hawaiian Home Lands	6/7/02	
4	Department of Health	6/7/02	7/11/02
5	Department of Land and Natural Resources—Aquatic Resources	6/7/02	
6	Department of Land and Natural Resources—Conservation District Planning	6/7/02	
7	Department of Land and Natural Resources—Forestry & Wildlife	6/7/02	
8	Department of Land and Natural Resources—Historic Preservation Division	6/7/02	6/25/02
9	Department of Land and Natural Resources—State Parks	6/7/02	
10	Department of Land and Natural Resources—Water Resource Management	6/7/02	6/25/02
11	Department of Transportation	6/7/02	7/30/02
12	Liliha Public Library	6/7/02	
13	Office of Environmental Quality Control	6/7/02	7/22/02
14	Office of Hawaiian Affairs	6/7/02	7/14/02
	CITY AND COUNTY OF HONOLULU		
15	Board of Water Supply	6/7/02	6/24/02
16	Department of Planning and Permitting	6/7/02	
17	Nu'uanu/Punchbowl Neighborhood Board	6/7/02	
	FEDERAL		
18	Army Corps of Engineers	6/7/02	

The following pages contain comment letters received and responses.

BENJAMIN J. CAYETANO
GOVERNOR

STATE OF HAWAI'I
DEPARTMENT OF EDUCATION
P.O. BOX 2360
HONOLULU, HAWAII 96804

PATRICIA HAMAMOTO
SUPERINTENDENT

OFFICE OF THE SUPERINTENDENT

June 27, 2002

MEMO TO: Mr. Al Jodar, Land Agent
Land Division
Department of Land and Natural Resources

F R O M: Patricia Hamamoto, Superintendent
Department of Education

SUBJECT: Hawaii Baptist Academy
Draft Environmental Assessment

The Department of Education (DOE) has reviewed the Draft Environmental Assessment for additional education facilities for the Hawaii Baptist Academy. The proposed facilities would be adjacent to the existing Hawaii Baptist Academy Stan Sagert Campus and located on a 4.97-acre state owned parcel of land. The DOE has no comment on the proposed project.

Thank you for the opportunity to respond.

PH:HM:hy

cc: A. Suga, OBS

AN AFFIRMATIVE ACTION AND EQUAL OPPORTUNITY EMPLOYER

PBR HAWAII

LAND PLANNING
LANDSCAPE ARCHITECTURE
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August 27, 2002

Ms. Patricia Hamamoto
Superintendent
State of Hawaii
Department of Education
P.O. Box 2360
Honolulu, Hawaii 96804

SUBJECT: HAWAII BAPTIST ACADEMY DRAFT ENVIRONMENTAL ASSESSMENT, TMK 2-2-22: 19

Dear Ms. Hamamoto:

Thank you for your memorandum regarding the Hawaii Baptist Academy Draft Environmental Assessment (EA) dated June 27, 2002, and addressed to Al Jodar of the Department of Land and Natural Resources. As the planning consultant for the applicant, Hawaii Pacific Baptist Convention, we are responding to your memorandum and note that you have no comments.

We appreciate your participation in the review of the draft EA.

Sincerely,

PBR HAWAII

Tom Schnell, AICP.
Associate

cc: Richard Bento/Hawaii Baptist Academy
Naomi Kuwaye/Imanaka Kudo & Fujimoto
Diedre S. Mamiya/Department of Land and Natural Resources, Land Division
Al Jodar/Department of Land and Natural Resources, Land Division

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BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII

STATE OF HAWAII
DEPARTMENT OF HEALTH
P.O. BOX 3378
HONOLULU, HAWAII 96801

BRUCE B. ANDERSON, PH.D., M.P.H.
DIRECTOR OF HEALTH

In reply, please refer to:
File
02-153/epo

July 11, 2002

Mr. Al Jodar, Land Agent
Land Division
Department of Land and Natural Resources
P.O. Box 621
Honolulu, Hawaii 96809

Dear Mr. Jodar:

Subject: Draft Environmental Assessment (DEA)
Hawaii Baptist Academy Improvements
Nuuanu, Oahu
Tax Map Key: 2-2-022:19

Thank you for the opportunity to review and comment on the subject proposal. The DEA was routed to the various branches of the Environmental Health Administration. We have the following comments.

Clean Water Branch (CWB)

1. The applicant should contact the Army Corps of Engineers to identify whether a federal permit (including a Department of Army permit) is required for this project. A Section 401 Water Quality Certification is required for "Any applicant for Federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, which may result in any discharge into the navigable waters...", pursuant to Section 401(a)(1) of the Federal Water Pollution Act (commonly known as the "Clean Water Act");

2. A National Pollutant Discharge Elimination System (NPDES) general permit coverage is required for the following discharges to waters of the State:

   a. Discharge of storm water runoff associated with industrial activities, as define in Title 40, Code of Federal Regulations, Sections 122.26(b)(14)(i) through 122.26(b)(14)(ix) and 122.26(b)(14)(xi);

   b. Discharge of storm water runoff associated with construction activities that involve the disturbance of five (5) acres or greater, including clearing, grading, and excavation;

   c. Discharge of treated effluent from leaking underground storage tank remedial activities;

   d. Discharge of once through cooling water less than one million gallons per day;

   e. Discharge of hydro-testing water;

   f. Discharge of construction dewatering effluent;

   g. Discharge of treated effluent from petroleum bulk stations and terminals; and

   h. Discharge of treated effluent from well drilling activities.

   Any person requesting to be covered by a NPDES general permit for any of the above activities should file a Notice of Intent with the Department of Health, Clean Water Branch (CWB) at least thirty (30) days prior to commencement of any discharges to State waters;

3. If construction activities involve the disturbance of one acre or greater, including clearing, grading, and excavation, and will take place or extend after March 10, 2003, an NPDES general permit coverage is required for discharges of storm water runoff into State waters; and

4. The applicant may be required to apply for an individual NPDES permit if there is any type of activity in which wastewater is discharged from the project into State waters.

If you have any questions, please contact the Clean Water Branch at (808) 586-4309.

Wastewater Branch (WWB)

Wastewater generated from this project must be transmitted to the city sewer system.

All wastewater plans must conform to applicable provisions of the Department of Health's Administrative Rules, Chapter 11-62, "Wastewater Systems". We reserve the right to review the detailed wastewater plans for conformance to applicable rules.

If you have any questions, please contact the Wastewater Branch at (808) 586-4294.

Clean Air Branch (CAB)

Due to the nature and location of the project, there is a significant potential for fugitive dust emissions during the removal, transport and installation activities for this project. Developer must ensure that mitigative measures concerning short-term air quality proposed in the DEA are adequate for compliance with the Hawaii Administrative Rules, section 11-60.1-33, on Fugitive Dust.

If you have any questions, please contact Mr. David Wong, Clean Air Branch at (808) 586-4200.

Noise, Radiation and Indoor Air Quality (NRIAQ) Branch

All project activities shall comply with the Administrative Rules of the Department of Health, Chapter 11-46, on "Community Noise Control".

If you have any questions, please contact the NRIAQ at (808) 586-4701.

Environmental Planning Office (EPO)

This project is located in the watershed of Nuuanu Stream, which drains into the Honolulu Harbor and Shores Area. Both Nuuanu Stream and the Honolulu Harbor and Shores Area receiving waters are currently listed under section 303(d) of the Clean Water Act as being impaired by nutrients. The stream is also listed for trash, the harbor/shore for pathogens, metals, turbidity, and suspended solids. The impaired status of these waters requires that the Department of Health establish Total Maximum Daily Loads (TMDLs) suggesting how much the existing pollutant loads should be reduced in order to attain water quality standards in the stream and coastal waters.

Although these TMDLs are yet to be established and implemented, a first step in achieving TMDL objectives would be to prevent any project-related increases in pollutant loads. There are several components of the DEA related to this task:

- Page 28 of the DEA states, "The proposed improvements will not likely alter the current overall drainage patterns of the site (i.e., towards Nu'uanu Stream)." We suggest that the proposed conversion from parking lot and recreational areas to buildings, along with the relocation of the parking lot "toward the stream" (DEA page 7) may significantly alter drainage patterns in the facilities described on page 28 of the DEA (e.g., pre-project overland sheet flow from a parking lot v. post-project concentration and discharge of runoff collected by gutters from the roofs of buildings). Even if the spatial runoff pattern of storm water runoff is unaltered, both the quantity and quality of this runoff (and thus the magnitude of pollutant loads) may change. Although page 17 of the DEA suggests "... that the proposed improvements will not significantly increase the peak discharge to the existing drainage system," we suggest that the proposed conversion from parking lot and recreational areas to buildings may increase onsite impervious area and alter spatial runoff patterns in ways that increase peak discharge;

- Page 17 of the DEA states, "Silt laden runoff from the site is anticipated during construction, however the use of silt fences around the perimeter of the construction area will prevent the silt laden runoff from leaving the site and entering the stream." Because page 28 of the DEA suggests that runoff from the area of the proposed improvements is mostly intercepted by the 'auwai and that portions of the 'auwai are not maintained, it appears that silt fence deployment around the perimeter of the construction area may not be enough to protect the stream. We suggest that the Hawai'i Baptist Academy consult with the DOH Clean Water Branch (Engineering Section and Polluted Runoff Control Section) about site-specific silt fence deployment and other best management practices for water quality pollution control;

- Page 17 of the DEA states, "Upon completion, the presence of impermeable surfaces (buildings, walkways, and parking areas, etc.) and landscaping will reduce the overall rate of erosion." This is only true if remaining erodible areas are stabilized and if runoff from impermeable surfaces us kept away from these areas;

- Page 34 of the DEA states, "The proposed improvements will be designed in such a way as to minimize potential hazards from runoff into Nu'uanu stream." We suggest that facility design is only the first step in polluted runoff control and that attention to post-construction best management practices, facility maintenance procedures, and on-site water use behavior are the key to any future improvement in Nu'uanu stream water quality; and

- Page 17 of the DEA states, "All grading operations will be conducted in compliance with dust and erosion control and other requirements of the City and County of Honolulu regarding grading, soil erosion, and sediment control ..." We suggest that conformance with City & County of Honolulu Grading Permit conditions does not guarantee conformance with State water quality standards and TMDLs. We therefore encourage Hawaii Baptist Academy to participate in the TMDL process and suggest that they consult with the Department of Health Clean Water Branch (Engineering Section) to discuss how water pollution control permitting may be linked with TMDL implementation.

As a final note, we wonder if any of the property subject to this environmental assessment was historically used for wetland taro irrigation? It is curious that the detailed history of this parcel in the DEA begins with the post-1910 construction of the Waldron residence and neglects any documentation of earlier ownership, control, or use of the property.

If you have any questions about these comments or the Total Maximum Daily Load program, please contact David Penn at (808) 586-4337.

Sincerely,

GARY GILL
Deputy Director
Environmental Health Administration

c: CWB
WWB
CAB
NRIAQ
EPO

PBR HAWAII

August 27, 2002

Mr. Gary Gill
Deputy Director
Environmental Health Administration
State of Hawaii
Department of Health
P. O. Box 3378
Honolulu, Hawai'i 96801

SUBJECT: HAWAII BAPTIST ACADEMY DRAFT ENVIRONMENTAL ASSESSMENT, TMK 2-2-22: 19

Dear Mr. Gill:

Thank you for your letter regarding the Hawaii Baptist Academy Draft Environmental Assessment (EA) dated July 11, 2002, and addressed to Al Jodar of the Department of Land and Natural Resources (02-153/epo). As the planning consultant for the applicant, Hawaii Pacific Baptist Convention, we are responding to your comments.

Clean Water Branch (CWB)

1) Per your comment, the applicant has been advised to contact the Army Corps of Engineers to identify whether a federal permit (including a Department of Army permit) is required.

2-4) The applicant will file an application and secure the appropriate NPDES permits before commencing construction.

Wastewater Branch (WWB)

Wastewater generated from the project will be transmitted to the City and County of Honolulu sewer system.

All wastewater plans will conform the applicable provisions of the State Department of Health's Administrative Rules, Chapter 11-62, "Wastewater Systems." We acknowledge that you reserve the right to review the detailed wastewater plans for conformance to the applicable rules.

Clean Air Branch (CAB)

As stated in section 4.2.4, "Air Quality" of the draft EA we acknowledge the potential for fugitive dust emissions from construction activities. The applicant will require all construction activities to comply with the provisions of Hawai'i Administrative Rules, Chapter 11-60.1, "Air Pollution Control," Section 11-60.1-33, Fugitive Dust.

Noise, Radiation and Indoor Air Quality (NRIAQ) Branch

All project activities will comply with the State Department of Health's Administrative Rules, Chapter 11-46, "Community Noise Control."

Environmental Planning Office (EPO)

Regarding your concerns about altered runoff patterns and increased peak discharges, storm water from impervious surfaces will be directed to depressed landscaped (grassed, etc.) areas to pond and infiltrate into the ground. Excess storm water runoff that may overflow the depressed grassed areas will be directed toward Nu'uanu Stream via grassed lined swales, or hard surface swales where runoff velocity maybe erodible. Any increase in storm runoff quantity due to an increase in impervious areas created because of the project will be retained on-site in above-ground basins and/or belowground storage facilities. Project engineering and design will pay special attention to post-construction best management practices.

Regarding your concerns about silt-laden runoff during construction, in addition to the silt fence deployment discussed in the draft EA, the applicant will construct the appropriately sized silt retention facilities (basins, swales, etc.) to maintain the quality of storm runoff to Nu'uanu Stream during construction. The applicant's consultant will consult with the Department of Health's Clean Water Branch when preparing the plans for best management practices for water quality pollution control.

Regarding your concerns about grading and Total Maximum Daily Loads (TMDLs), in addition to complying with the City and County of Honolulu's grading permit conditions, the grading operation will conform to the State water quality standards and TMDLs standards in effect at the time of grading.

Finally, regarding your question about uses of the property prior to the construction of the Waldron residence, no documentation of earlier ownership, control, or use of the specific property was found, despite searches of Department of Land and Natural Resources records (which owns the property subject to this EA), and inquiries to the State Historic Preservation Division. As stated in the draft EA (see section 4.2.1, "Archaeological and Historic Resources"), and confirmed by the State Historic Preservation Division, in 1983 a State Parks archaeologist investigated the property and no significant historical or archaeological site were found. In addition, this year—at our request—State Historic Preservation Division personnel visited the site and did not have concerns about the location of the proposed improvements.

We appreciate your participation in the review of the draft EA. Where appropriate, your comments will be incorporated into the final EA.

Sincerely,

PBR HAWAII

Tom Schnell, AICP
Associate

cc: Richard Bento/Hawaii Baptist Academy
Naomi Kuwaye/Imanaka Kudo & Fujimoto
Diedre S. Mamiya/Department of Land and Natural Resources, Land Division
Al Jodar/Department of Land and Natural Resources, Land Division

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BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII

STATE OF HAWAII

DEPARTMENT OF LAND AND NATURAL RESOURCES

HISTORIC PRESERVATION DIVISION
KAKUHIHEWA BUILDING, ROOM 555
601 KAMOKILA BOULEVARD
KAPOLEI, HAWAII 96707

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CONVEYANCES
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
LAND
STATE PARKS

June 25, 2002

MEMORANDUM

LOG NO: 30143 ✓
DOC NO: 0206EJ26

To: Al Jodar, Land Agent
Land Division

From: Don Hibbard, Administrator
Historic Preservation

SUBJECT: Chapter 6E-8 Historic Preservation Review – Draft Environmental Assessment for the Hawai`i Baptist Academy
Nu`uanu, Kona, O`ahu
TMK: (1) 2-2-022:019

The Hawai`i Baptist Academy proposes to improve its facilities by constructing a new middle school building, a new maintenance building, a new caretaker's residence and new parking lot on state land adjacent to the existing campus. Although some of the improvements will take place within the existing improved portions of the campus, portions of the improvements will take place on previously unimproved state land. Our review is based on historic maps, aerial photographs, records, and reports maintained at the State Historic Preservation Division; in addition, Elaine Jourdane and Sara Collins of our staff conducted a brief field inspection of the proposed improvement area with representatives of Hawai`i Baptist Academy in May 2002.

The DEA correctly summarizes that there are no historic sites listed on the National or Hawai`i Register of Historic Places on this parcel and that the Academy's administration building was once the historic Waldron residence and a number of features that relate to its use as a historic home, (royal palm lined driveway, a concrete-lined `auwai and landscaping features) are existing on the school property. The current project does not propose any improvements to these features. The area of unimproved land proposed for expansion and new facilities was investigated in 1983 by a State Parks archaeologist. No significant historical or archaeological sites were found.

Because the historic features of the existing Academy will not be affected by the project and because our records shows that there are no known historic sites within the unimproved project area, we believe that this project will have "no effect" on significant historic sites. The DEA also includes the provision that SHPD will be notified should historic remains be encountered during construction activities.

Should you have any questions, please feel free to call Sara Collins at 692-8026 or Elaine Jourdane at 692-8027.

EJ:jk

c: Vincent Shigekuni, PBR Hawaii 1001 Bishop Street, Honolulu, HI 96813

PBR HAWAII
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Waimea Office

August 27, 2002

Mr. Don Hibbard
Administrator
Historic Preservation Division
State of Hawaii
Department of Land and Natural Resources
Kakuhihewa Building, Room 555
601 Kamokila Boulevard
Kapolei, Hawai'i 96707

SUBJECT: HAWAII BAPTIST ACADEMY DRAFT ENVIRONMENTAL ASSESSMENT, TMK 2-7-22: 19

Dear Mr. Hibbard:

Thank you for your memorandum regarding the Hawaii Baptist Academy Draft Environmental Assessment (EA) dated June 25, 2002, and addressed to Al Jodar of the Department of Land and Natural Resources (LOG NO: 30143; DOC NO: 0206EJ26). As the planning consultant for the applicant, Hawaii Pacific Baptist Convention, we are responding to your comments.

Thank you for confirming that the area proposed for expansion of Hawaii Baptist Academy was investigated in 1983 by a State Parks archaeologist and that no significant historical or archaeological sites were found.

We acknowledge that you believe the project will have no effect on significant historic sites.

Your comments will be included in the final EA.

We appreciate your participation in the review of the draft EA.

Sincerely,

PBR HAWAII

Tom Schnell, AICP
Associate

cc: Richard Bento/Hawaii Baptist Academy
Naomi Kuwaye/Imanaka Kudo & Fujimoto
Diedre S. Mamiya/Department of Land and Natural Resources, Land Division
Al Jodar/Department of Land and Natural Resources, Land Division

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BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT
P.O. BOX 621
HONOLULU, HAWAII 96809

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HERBERT M. RICHARDS, JR.

LINNEL T. NISHIOKA
DEPUTY DIRECTOR

June 25, 2002

TO: Ms. Dede Mamiya, Administrator
Land Division

Ref:Hawaii Baptist Academy dr

FROM: Linnel T. Nishioka, Deputy Director
Commission on Water Resource Management (CWRM)

SUBJECT: Draft Environmental Assessment, Hawaii Baptist Academy
Nuuanu Valley, Honolulu, Oahu

FILE NO.: 01od-322

Thank you for the opportunity to review the subject document. Our comments related to water resources are marked below.

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

[X] We recommend coordination with the county government to incorporate this project into the county's Water Use and Development Plan.

[ ] We recommend coordination with the Land Division of the State Department of Land and Natural Resources to incorporate this project into the State Water Projects Plan.

[ ] We are concerned about the potential for ground or surface water degradation/contamination and recommend that approvals for this project be conditioned upon a review by the State Department of Health and the developer's acceptance of any resulting requirements related to water quality.

[ ] A Well Construction Permit and/or a Pump Installation Permit from the Commission would be required before ground water is developed as a source of supply for the project.

[ ] The proposed water supply source for the project is located in a designated water management area, and a Water Use Permit from the Commission would be required prior to use of this source.

[ ] Groundwater withdrawals from this project may affect streamflows, which may require an instream flow standard amendment.

[ ] We are concerned about the potential for degradation of instream uses from development on highly erodible slopes adjacent to streams within or near the project. We recommend that approvals for this project be conditioned upon a review by the corresponding county's Building Department and the developer's acceptance of any resulting requirements related to erosion control.

[ ] If the proposed project includes construction of a stream diversion, the project may require a stream diversion works permit and amend the instream flow standard for the affected stream(s).

[X] If the proposed project alters the bed and banks of a stream channel, the project may require a stream channel alteration permit.

[ ] OTHER:

If there are any questions, please contact Lenore Nakama at 587-0218.

PBR HAWAII

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August 27, 2002

Ms. Linnel T Nishioka
Deputy Director
Commission on Water Resource Management
State of Hawaii
Department of Land and Natural Resources
P. O. Box 621
Honolulu, Hawai'i 96809

SUBJECT: HAWAII BAPTIST ACADEMY DRAFT ENVIRONMENTAL ASSESSMENT, TMK 2-2-22: 19

Dear Ms. Nishioka:

Thank you for your memorandum regarding the Hawaii Baptist Academy Draft Environmental Assessment (EA) dated June 25, 2002, and addressed to Dede Mamiya of the Department of Land and Natural Resources (Ref:Hawaii Baptist Academy.dr). As the planning consultant for the applicant, Hawaii Pacific Baptist Convention, we are responding to your comments.

Per your comments the applicant has been advised to coordinate with the City and County of Honolulu to incorporate the project into the County's Water Use and Development Plan. The Board of Water supply has been provided with a copy of the draft EA.

The proposed improvements to Hawaii Baptist Academy are not expected to alter the bed or stream channel of Nu'uanu Stream.

We appreciate your participation in the review of the Draft Environmental Assessment.

Sincerely,

PBR HAWAII

Tom Schnell, AICP
Associate

cc: Richard Bento/Hawaii Baptist Academy
Naomi Kuwaye/Imanaka Kudo & Fujimoto
Diedre S. Mamiya/Department of Land and Natural Resources, Land Division
Al Jodar/Department of Land and Natural Resources, Land Division

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8- 8-02; 8:38AM;

BENJAMIN J. CAYETANO
GOVERNOR

GHPOA

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RECEIVED
2002 JUL 31 P 3:47
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
869 PUNCHBOWL STREET
HONOLULU, HAWAII 96813-5097

JUL 30 2002

BRIAN K. MINAAI
DIRECTOR

DEPUTY DIRECTORS
JEAN L. OSHITA
JADINE Y. URASAKI

IN REPLY REFER TO:
HWY-PS
2.7268

TO: GILBERT S. COLOMA-AGARAN
CHAIR
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

FROM: BRIAN K. MINAAI
DIRECTOR OF TRANSPORTATION

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT, HAWAII BAPTIST ACADEMY FACILITY EXPANSION, NUUANU VALLEY, HONOLULU
TMK: 2-2-22: 19

The proposed expansion is not anticipated to have a significant impact to Pali Highway, our State facility. However, the applicant should be advised that plans for any construction work within the State Highway's right-of-way must be submitted for our review and approval.

If there are any questions regarding these comments, please contact Ronald Tsuzuki, Head Planning Engineer, Highways Division, at 587-1830 or via e-mail at ronald_tsuzuki@exec.state.hi.us. Please refer to review file number: 02-160.

Post-it® Fax Note 7671	Date	# of pages ▶ 1
To Tom Schnell	From Al Jodar	
Co./Dept.	Co.	
Phone #	Phone # 587-0429	
Fax # 523-1402	Fax # 587-0455	

PBR HAWAII

LAND PLANNING
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August 27, 2002

Mr. Brian K. Minaai
Director of Transportation
State of Hawaii
Department of Transportation
869 Punchbowl Street
Honolulu, Hawaii 96813-5097

SUBJECT: HAWAII BAPTIST ACADEMY DRAFT ENVIRONMENTAL ASSESSMENT, TMK 2-2-22: 19

Dear Mr. Minaai:

Thank you for your memorandum regarding the Hawaii Baptist Academy Draft Environmental Assessment (EA) dated July 30, 2002, and addressed to Gilbert S. Coloma-Agaran, Chair of the Department of Land and Natural Resources (HWY-PS 2.7268). As the planning consultant for the applicant, Hawaii Pacific Baptist Convention, we are responding to your comments.

We acknowledge that you find the proposed expansion of Hawaii Baptist Academy is not anticipated to have a significant impact to Pali Highway.

Per your comments, the applicant has been advised that any plans for construction work within the State Highway's right-of-way will be submitted to the Department of Transportation for review and approval.

Your comments will be incorporated into the final EA.

We appreciate your participation in the review of the draft EA.

Sincerely,

PBR HAWAII

Tom Schnell, AICP
Associate

cc: Richard Bento/Hawaii Baptist Academy
Naomi Kuwaye/Imanaka Kudo & Fujimoto
Diedre S. Mamiya/Department of Land and Natural Resources, Land Division
Al Jodar/Department of Land and Natural Resources, Land Division

O:\Job20\2071.01\EA\Comment letter responses\DOT.wpd

BENJAMIN J. CAYETANO
GOVERNOR

GENEVIEVE SALMONSON
DIRECTOR

STATE OF HAWAII
OFFICE OF ENVIRONMENT QUALITY CONTROL
235 SOUTH BERETANIA STREET
SUITE 702
HONOLULU, HAWAII 96813
TELEPHONE (808) 586-4185
FACSIMILE (808) 586-4186

July 22, 2002

Mr. Richard Bento
Hawai'i Baptist Convetion
21 Bates Street
Honolulu, Hawai'i 96817

Mr. Tom Schnell
PBR Hawai'i
1001 Bishop Street, Suite 650
Honolulu, Hawai'i 96813

Mr. Al Jodar, Land Division
Department of Land and Natural Resources, State of Hawai'i
P.O. Box 621
Honolulu, Hawai'i 96809

Dear Messrs. Bento, Schnell and Jodar:

Thank you for your submittal of the draft environmental assessment (DEA) for the proposed improvements to the Hawai'i Baptist Academy campus on property leased from the State of Hawai'i, Tax Map Key 2-2-22, parcel 19, in the judicial district of Honolulu. We have reviewed the document and submit the following comments for your consideration and response.

1. CONSULTATION WITH THE DEPARTMENT OF TRANSPORTATION ON TRAFFIC ISSUES: The Department of Transportation, Highways Division has concerns about traffic issues. Please consult with Mr. Ron Tsuzuki of the Highways Division.
2. MAXIMUM CAPACITY OF THE CAMPUS: The environmental assessment assumes that at the present time there will not be an increase in enrollment. Please discuss what the maximum capacity of the campus would be should enrollment increase in the future.
3. CONCRETE 'AUWAI: The draft environmental assessment describes concrete "irrigation" ditches. Please clarify what is being irrigated by these ditches and whether water flow through these ditches is perennial. Also, please clarify the terminal of the concrete auwai on the property, especially with respect to the "inlet at the makai end of the property" on page 19. When did the 'auwai become concretized? Does the makai end inlet discharge into the Nu'uanu Stream? Where does the 'auwai connect with the Nu'uanu Stream?
4. KAPENA FALLS AND ALAPENA POOL: For purposes of cultural impact assessment please clarify if the falls and plunge pool and Alapena Pool are currently being used for recreational activities. Does the Department of Health permit swimming in the waters of Nu'uanu Stream?
5. GUIDELINES FOR SUSTAINABLE BUILDING DESIGN IN HAWAI'I: Please find enclosed a copy of the Guidelines for Sustainable Building Design prepared by the Environmental Council.
6. USE OF RECYCLED GLASS. Please consider the use of glass-asphalt aggregate ("glasphalt") in the design of impervious surfaces.
7. INDIGENOUS AND POLYNESIAN INTRODUCED PLANTS FOR USE IN PUBLIC LANDSCAPING: Please consider the use of native, indigenous and polynesian introduced plants in your landscaping.

Thank you for the opportunity to comment. If there are any questions, please call Leslie Segundo, Environmental Health Specialist, at (808) 586-4185.

Sincerely,

GENEVIEVE SALMONSON
Director

Enclosures

Guidelines for Sustainable Building Design in Hawai`i

A planner's checklist

(Adopted by the Environmental Council on October 13, 1999)

Introduction

Hawai`i law calls for efforts to conserve natural resources, promote efficient use of water and energy and encourage recycling of waste products. Planning a project from the very beginning to include sustainable design concepts can be a critical step toward meeting these goals.

The purpose of the state's environmental review law (HRS Ch. 343) is to encourage a full, accurate and complete analysis of proposed actions, promote public participation and support enlightened decision making by public officials. The Office of Environmental Quality Control offers the following guidelines for preparers of environmental reviews under the authority of HRS 343 to assist agencies and applicants in meeting these goals.

These guidelines do not constitute rules or law. They have been refined by staff and peer review to provide a checklist of items that will help the design team create projects that will have a minimal impact on Hawai`i's environment and make wise use of our natural resources. In a word, projects that are *sustainable*.

A sustainable building is built to minimize energy use, expense, waste, and impact on the environment. It seeks to improve the region's sustainability by meeting the needs of Hawai`i's residents and visitors today without compromising the needs of future generations. Compared to conventional projects, a resource-efficient building project will:

I. Use less energy for operation and maintenance
II. Contain less *embodied* energy (e.g. locally produced building products often contain less *embodied* energy than imported products because they require less energy-consuming transportation.)
III. Protect the environment by preserving/conserving water and other natural resources and by minimizing impact on the site and ecosystems
IV. Minimize health risks to those who construct, maintain, and occupy the building
V. Minimize construction waste
VI. Recycle and reuse generated construction wastes

VII. Use resource-efficient building materials (e.g. materials with recycled content and low embodied energy, and materials that are recyclable, renewable, environmentally benign, non-toxic, low VOC (Volatile Organic Compound) emitting, durable, and that give high life cycle value for the cost.)
VIII. Provide the highest quality product practical at competitive (affordable) first and life cycle costs.

In order to avoid excessive overlapping of items, the checklist is designed to be read in totality, not just as individual sections. This checklist tries to address a range of project types, large scale as well as small scale. Please use items that are appropriate to the type and scale of the project.

Although this list will help promote careful and sensitive planning, mere compliance with this checklist does not confirm sustainability. Compliance with and knowledge of current building codes by users of this checklist is also required.

TABLE OF CONTENTS

I. Pre Design

___1. Hold programming team meeting with client representative, Project Manager, planning consultant, architectural consultant, civil engineer, mechanical, electrical, plumbing (MEP) engineer, structural engineer, landscape architect, interior designer, sustainability consultant and other consultants as required by the project. Identify project and sustainability goals. Client representatives and consultants need to work together to ensure that project and environmental goals are met.
___2. Develop sustainable guideline goals to insert into outline specifications as part of the Schematic Design documents. Select goals from the following sections that are appropriate for the project.
___3. Use Cost-Benefit Method for economic analysis of the sustainability measures chosen. (Cost-Benefit Method is a method of evaluating project choices and investments by comparing the present and life cycle value of expected benefits to the present and life cycle value of expected costs.)
___4. Include "Commissioning" in the project budget and schedule. (Building "Commissioning" is the process of ensuring that systems are designed, installed, functionally tested, and capable of being operated and maintained in accordance with specifications that meet the owner's needs, and recognize the owner's financial and operational capacity. It improves the performance of the building systems, resulting in energy efficiency and conservation, improved air quality and lower operation costs. *Refer to Section IX.*)

II. Site Selection & Site Design

A. Site Selection

___1. Analyze and assess site characteristics such as vegetation, topography, geology, climate, natural access, solar orientation patterns, water and drainage, and existing utility and transportation infrastructure to determine the appropriate use of the site.
___2. Whenever possible, select a site in a neighborhood where the project can have a positive social, economic and/or environmental impact.
___3. Select a site with short connections to existing municipal infrastructure (sewer lines, water, waste water treatment plant, roads, gas, electricity, telephone, data communication lines and services). Select a site close to mass transportation, bicycle routes and pedestrian access.

B. Site Preparation and Design

___1. Prepare a thorough existing conditions topographic site plan depicting topography, natural and built features, vegetation, location of site utilities and include solar information,

rainfall data and direction of prevailing winds. Preserve existing resources and natural features to enhance the design and add aesthetic, economic and practical value. Design to minimize the environmental impact of the development on vegetation and topography.

___2. Site building(s) to take advantage of natural features and maximize their beneficial effects. Provide for solar access, daylighting and natural cooling. Design ways to integrate the building(s) with the site that maximizes and preserves positive site characteristics, enhances human comfort, safety and health, and achieves operational efficiencies.

___3. Locate building(s) to encourage bicycle and pedestrian access and pedestrian oriented uses. Provide bicycle and pedestrian paths, bicycle racks, etc. Racks should be visible and accessible to promote and encourage bicycle commuting.

___4. Retain existing topsoil and maintain soil health by clearing only the areas reserved for the construction of streets, driveways, parking areas, and building foundations. Replant exposed soil areas as soon as possible. Reuse excavated soils for fill and cut vegetation for mulch.

___5. Grade slopes to a ratio of less than 2 : 1 (run to rise). Balance cut and fill to eliminate hauling. Check grading frequently to prevent accidental over excavation.

___6. Minimize the disruption of site drainage patterns. Provide erosion and dust controls, positive site drainage, and siltation basins as required to protect the site during and after construction, especially, in the event of a major storm.

___7. Minimize the area required for the building footprint. Consolidate utility and infrastructure in common corridors to minimize site degradation, and cost, improve efficiency, and reduce impermeable surfaces.

___8. For termite protection, use non toxic alternatives to pesticides and herbicides, such as Borate treated lumber, Basaltic Termite Barrier, stainless steel termite barrier mesh, and termite resistant materials.

III. Building Design

___1. Consider adaptive re-use of existing structures instead of demolishing and/or constructing a new building. Consult the State Historic Preservation Officer for possible existing historic sites that may meet the project needs.

___2. Plan for high flexibility while designing building shell and interior spaces to accommodate changing needs of the occupants, and thereby extend the life span of the building.

___3. Design for re-use and/or disassembly. (For recyclable and reusable building products, see Section VII).

___4. Design space for recycling and waste diversion opportunities during occupancy.

___5. Provide facilities for bicycle and pedestrian commuters (showers, lockers, bike racks, etc.) in commercial areas and other suitable locations.

___6. Plan for a comfortable and healthy work environment. Include inviting outdoor spaces, wherever possible. *(Refer to Section VIII.)*

___7. Provide an Integrated Pest Management approach. The use of products such as Termi-mesh, Basaltic Termite Barrier and the Sentricon "bait" system can provide long term protection from termite damage and reduce environmental pollution.

___8. Design a building that is energy efficient and resource efficient. *(See Sections IV, V, VII.)* Determine building operation by-products such as heat gain and build up, waste/gray-water and energy consumption, and plan to minimize them or find alternate uses for them.

___9. For natural cooling, use
   a. Reflective or light colored roofing, radiant barrier and/or insulation, roof vents
   b. Light colored paving (concrete) and building surfaces
   c. Tree Planting to shade buildings and paved areas
   d. Building orientation and design that captures trade winds and/or provides for convective cooling of interior spaces when there is no wind.

IV. Energy Use

___1. Obtain a copy of the State of Hawai'i Model Energy Code (available through the Hawai'i State Energy Division, at Tel. 587-3811). Exceed its requirements. (Contact local utility companies for information on tax credits and utility-sponsored programs offering rebates and incentives to businesses for installing qualifying energy efficient technologies.)

___2. Use site sensitive orientation to :
   a. Minimize cooling loads through site shading and carefully planned east-west orientation.
   b. Incorporate natural ventilation by channeling trade winds.
   c. Maximize daylighting.

___3. Design south, east and west shading devices to minimize solar heat gain.

___4. Use spectrally selective tints or spectrally selective low-e glazing with a Solar Heat Gain Coefficient (SHGC) of 0.4 or less.

___5. Minimize effects of thermal bridging in walls, roofs and window systems.

___6. Maximize efficiencies for lighting, Heating, Ventilation, Air Conditioning (HVAC) systems and other equipment. Use insulation and/or radiant barriers, natural ventilation, ceiling fans and shading to avoid the use of air conditioning whenever appropriate.

___7. Eliminate hot water in restrooms when possible.

___8. Provide tenant sub-metering to encourage utility use accountability.

___9. Use renewable energy. Use solar water heaters and consider the use of photovoltaics and Building Integrated Photovoltaics (BIPV).

__10. Use available energy resources such as waste heat recovery, when feasible.

A. Lighting

___1. Design for at least 15% lower interior lighting power allowance than the Energy Code.
___2. Select lamps and ballasts with the highest efficiency, compatible with the desired level of illumination and color rendering specifications. Examples that combine improved color rendering with efficient energy use include compact flourescents and T8 flourescents that use tri-phosphor gases.
___3. Select lighting fixtures which maximize system efficacy and which have heat removal capabilities
___4. Reduce light absorption on surfaces by selecting colors and finishes that provide high reflectance values without glare.
___5. Use task lighting with low ambient light levels.
___6. Maximize daylighting through the use of vertical fenestration, light shelves, skylights, clerestories, building form and orientation as well as through translucent or transparent interior partitions. Coordinate daylighting with electrical lighting for maximum electrical efficiency.
___7. Incorporate daylighting controls and/or motion activated light controls in low or intermittent use areas.
___8. Avoid light spillage in exterior lighting by using directional fixtures.
___9. Minimize light overlap in exterior lighting schemes.
__10. Use lumen maintenance procedures and controls.

B. Mechanical Systems

__1. Design to comply with the Energy Code and to exceed its efficiency requirements.
___2. Use "Smart Building" monitor/control systems when appropriate.
___3. Utilize thermal storage for reduction of peak energy usage.
___4. Use Variable air volume systems to save fan power.
___5. Use variable speed drives on pumping systems and fans for cooling towers and air handlers.
___6. Use air-cooled refrigeration equipment or use cooling towers designed to reduce drift.
___7. Specify premium efficiency motors.
___8. Reduce the need for mechanical ventilation by reducing sources of indoor air pollution. Use high efficiency air filters and ultraviolet lamps in air handling units. Provide for regular maintenance of filtration systems. Use ASHRAE standards as minimum.
___9. Locate fresh air intakes away from polluted or overheated areas. Locate on roof where possible. Separate air intake from air exhausts by at least 40 ft.
__10. Use separate HVAC systems to serve areas that operate on widely differing schedules and/or design conditions.
__11. Use shut off or set back controls on HVAC system when areas are not occupied.
__12. Use condenser heat, waste heat or solar energy. (Contact local utility companies for information on the utility-sponsored Commercial and Industrial Energy Efficiency Programs which offer incentives to businesses for installing qualifying energy efficient technologies.)
__13. Evaluate plug-in loads for energy efficiency and power saving features.
__14. Improve comfort and save energy by reducing the relative humidity by waste reheat, heat pipes or solar heat.
__15. Minimize heat gain from equipment and appliances by using:
  a. Environmental Protection Agency (EPA) Energy Star rated appliances.
  b. Hoods and exhaust fans to remove heat from concentrated sources.
  c. High performance water heating that exceeds the Energy Code requirements.
__16. Specify HVAC system "commissioning" period to reduce occupant exposure to Indoor Air Quality (IAQ) contaminants and to maximize system efficiency.

V. Water Use

A. Building Water

___1. Install water conserving, low flow fixtures as required by the Uniform Plumbing Code.
___2. If practical, eliminate hot water in restrooms.
___3. Use self closing faucets (infrared sensors or spring loaded faucets) for lavatories and sinks.

B. Landscaping and Irrigation

(See Section VI.)

VI. Landscape and Irrigation

___1. Incorporate water efficient landscaping (xeriscaping) using the following principles:
  a. Planning, Efficient irrigation: Create watering zones for different conditions. Separate vegetation types by watering requirements. Install moisture sensors to prevent operation of the irrigation system in the rain or if the soil has adequate moisture. Use appropriate sprinkler heads.
  b. Soil analysis/improvement: Use (locally made) soil amendments and compost for plant nourishment, improved water absorption and holding capacity.
  c. Appropriate plant selection: Use drought tolerant and/or slow growing hardy grasses, native and indigenous plants, shrubs, ground covers, trees, appropriate for local conditions, to minimize the need for irrigation.
  d. Practical turf areas: Turf only in areas where it provides functional benefits.

e. Mulches: Use mulches to minimize evaporation, reduce weed growth and retard erosion.

Contact the local Board of Water Supply for additional information on xeriscaping such as efficient irrigation, soil improvements, mulching, lists of low water-demand plants, tours of xeriscaped facilities, and xeriscape classes.

___2. Protect existing beneficial site features and save trees to prevent erosion. Establish and carefully mark tree protection areas well before construction.
___3. Limit staging areas and prevent unnecessary grading of the site to protect existing, especially native, vegetation.
___4. Use top soil from the graded areas, stockpiled on the site and protected with a silt fence to reduce the need for imported top soil.
___5. Irrigate with non-potable water or reclaimed water when feasible. Collect rainwater from the roof for irrigation.
___6. Sub-meter the irrigation system to reduce water consumption and consequently water and sewer fees. Contact the local county agency to obtain irrigation sub-metering requirements and procedures. Locate irrigation controls within sight of the irrigated areas to verify that the system is operating properly.
___7. Use pervious paving instead of concrete or asphalt paving. Use natural and man-made berms, hills and swales to control water runoff.
___8. Avoid the use of solvents that contain or leach out pollutants that can contaminate the water resources and runoff. Contact the State of Hawai'i Clean Water Branch at 586-4309 to determine whether a NPDES (National Pollutant Discharge Elimination System) permit is required.
___9. Use Integrated Pest Management (IPM) techniques. IPM involves a carefully managed use of biological and chemical pest control tactics. It emphasizes minimizing the use of pesticides and maximizing the use of natural process
__10. Use trees and bushes that are felled at the building site (i.e. mulch, fence posts). Leave grass trimmings on the lawn to reduce green waste and enhance the natural health of lawns.
__11. Use recycled content, decay and weather resistant landscape materials such as plastic lumber for planters, benches and decks.

VII. Building Materials & Solid Waste Management

A. Material Selection and Design

___1. Use durable products.
___2. Specify and use natural products or products with low embodied energy and/or high recycled content. Products with recycled content include steel, concrete with glass, drywall, carpet, etc. Use ground recycled concrete, graded glass cullet or asphalt as base or fill material.
___3. Specify low toxic or non-toxic materials whenever possible, such as low VOC (Volatile Organic Compounds) paints, sealers and adhesives and low or formaldehyde-free materials. Do not use products with CFCs (Chloro-fluoro-carbons).
___4. Use locally produced products such as plastic lumber, insulation, hydro-mulch, glass tiles, compost.
___5. Use advanced framing systems that reduce waste, two stud corners, engineered structural products and prefabricated panel systems.
___6. Use materials which require limited or no application of finishing or surface preparation. (i.e. finished concrete floor surface, glass block and glazing materials, concrete block masonry, etc.).
___7. Use re-milled salvaged lumber where appropriate and as available. Avoid the use of old growth timber.
___8. Use sustainably harvested timber.
___9. Commit to a material selection program that emphasizes efficient and environmentally sensitive use of building materials, and that uses locally available building materials. (A list of Earth friendly products and materials is available through the Green House Hawai'i Project. Call Clean Hawai'i Center, Tel. 587-3802 for the list.)

B. Solid Waste Management, Recycling and Diversion Plan

___1. Prepare a job-site recycling plan and post it at the job-site office.
___2. Conduct pre-construction waste minimization and recycling training for employees and sub-contractors.
___3. Use a central area for all cutting.
___4. Establish a dedicated waste separation/diversion area. Include Waste/Compost/Recycling collection areas and systems for use during construction process and during the operational life cycle of the building.
___5. Separate and divert all unused or waste cardboard, ferrous scrap, construction materials and fixtures for recycling and/or forwarding to a salvage exchange facility. Information on "Minimizing C&D (construction and demolition) waste in Hawai'i" is available through Department of Health, Office of Solid Waste Management, Tel. 586-4240.
___6. Use all green waste, untreated wood and clean drywall on site as soil amendments or divert to offsite recycling facilities.
___7. Use concrete and asphalt rubble on-site or forward the material for offsite recycling.
___8. Carefully manage and control waste solvents, paints, sealants, and their used containers. Separate these materials from C&D (construction and demolition) waste and store and dispose them of them carefully.
___9. Donate unused paint, solvents, sealants to non-profit organizations or list on HIMEX (Hawai'i Materials Exchange). HIMEX is a free service operated by Maui Recycling

Group, that offers an alternative to landfill disposal of usable materials, and facilitates no-cost trades. See web site, www.himex.org.

__10. Use suppliers that re-use or recycle packaging material whenever possible.

VIII. Indoor Air Quality

___1. Design an HVAC system with adequate supply of outdoor air, good ventilation rates, even air distribution, sufficient exhaust ventilation and appropriate air cleaners.

___2. Develop and specify Indoor Air Quality (IAQ) requirements during design and contract document phases of the project. Monitor compliance in order to minimize or contain IAQ contaminant sources during construction, renovation and remodeling.

___3. Notify occupants of any type of construction, renovation and remodeling and the effects on IAQ.

___4. Inspect existing buildings to determine if asbestos and lead paint are present and arrange for removal or abatement as needed.

___5. Supply workers with, and ensure the use of VOC (Volatile Organic Compounds)-safe masks where required.

___6. Ensure that HVAC systems are installed, operated and maintained in a manner consistent with their design. Use UV lamps in Air Handling Units to eliminate mold and mildew growth. An improperly functioning HVAC system can harbor biological contaminants such as viruses, bacteria, molds, fungi and pollen, and can cause Sick Building Syndrome (SBS).

___7. Install separate exhaust fans in rooms where air polluting office equipment is used, and exhaust directly to the exterior of the building, at sufficient distance from the air intake vents.

___8. Place bird guards over air intakes to prevent pollution of shafts and HVAC ducts.

___9. Control indoor air pollution by selecting products and finishes that are low or non-toxic and low VOC emitting. Common sources of indoor chemical contaminants are adhesives, carpeting, upholstery, manufactured wood products, copy machines, pesticides and cleaning agents.

__10. Schedule finish application work to minimize absorption of VOCs into surrounding materials e.g. allow sufficient time for paint and clear finishes to dry before installing carpet and upholstered furniture. Increase ventilation rates during periods of increased pollution.

__11. Allow a flush-out period after construction, renovation, remodeling or pesticide application to minimize occupant exposure to chemicals and contaminants.

IX. Commissioning & Construction Project Closeout

___1. Appoint a Commissioning Authority to develop and implement a commissioning plan and a preventative maintenance plan. Project Manager's responsibilities must include coordination of commissioning activities during project closeout.

___2. Commissioning team should successfully demonstrate all systems and perform operator training before final acceptance.

___3. Provide flush-out period to remove air borne contaminants from the building and systems.

___4. Provide as-built drawings and documentation for all systems. Provide data on equipment maintenance and their control strategies as well as maintenance and cleaning instructions for finish materials.

X. Occupancy and Operation

A. General Objectives

___1. Develop a User's Manual for building occupants that emphasizes the need for Owner/Management commitment to efficient sustainable operations.

___2. Management's responsibilities must include ensuring that sustainability policies are carried out.

B. Energy

___1. Purchase EPA rated, Energy Star, energy-efficient office equipment, appliances, computers, and copiers. (Energy Star is a program sponsored by U.S. Dep. Of Energy. Use of these products will contribute to reduced energy costs for buildings and reduce air pollution.)

___2. Institute an employee education program about the efficient use of building systems and appliances, occupants impact on and responsibility for water use, energy use, waste generation, waste recycling programs, etc.

___3. Re-commission systems and update performance documentation periodically per recommendations of the Commissioning Authority, or whenever modifications are made to the systems.

C. Water

___1. Start the watering cycle in the early morning in order to minimize evaporation.

___2. Manage the chemical treatment of cooling tower water to reduce water consumption.

D. Air

___1. Provide incentives which encourage building occupants to use alternatives to and to reduce the use of single occupancy vehicles.

___2. Provide a location map of services within walking distance of the place of employment (child care, restaurants, gyms, shopping).
___3. Periodically monitor or check for indoor pollutants in building.
___4. Provide an IAQ plan for tenants, staff and management that establishes policies and documentation procedures for controlling and reporting indoor air pollution. This helps tenants and staff understand their responsibility to protect the air quality of the facility.

E. Materials and Products

___1. Purchase business products with recycled content such as paper, toners, etc.
___2. Purchase Furniture made with sustainably harvested wood, or with recycled and recycled content materials, which will not off gas VOC's.
___3. Remodeling and painting should comply with or improve on original sustainable design intent.
___4. Use low VOC, non-toxic, phosphate and chlorine free, biodegradable cleaning products.

F. Solid Waste

___1. Collect recyclable business waste such as paper, cardboard boxes, and soda cans.
___2. Avoid single use items such as paper or Styrofoam cups and plates, and plastic utensils.

XI. Resources

Financing: Energy Efficiency in Buildings. U.S. Department of Energy, DOE/EE-0152, May, 1998 (Call Tel.1-800-DOE-EREC or visit local office)

Building Commissioning: The Key to Quality Assurance. U.S. Department of Energy, DOE/EE-0153, May, 1998 (Call Tel.1-800-DOE-EREC or visit local office)

Guide to Resource-Efficient Building in Hawaii. University of Hawai'i at Manoa, School of Architecture and Energy, Resources and Technology Division, Department of Business, Economic Development and Tourism, October 1998. (Call Tel. 587-3804 for publication)

Hawaii Model Energy Code. Energy, Resources and Technology Division, Department of Business, Economic Development and Tourism, November 1997 (Call Tel. 587-3810 for publication)

Photovoltaics in the Built Environment: A Design Guide for Architects and Engineers. NREL Publications, DOE/GO #10097-436, September 1997 (Call Tel.1-800-DOE-EREC or visit local office)

Building Integrated Photovoltaics: A Case Study. NREL Publications #TP-472-7574, March 1995 (Call Tel.1-800-DOE-EREC or visit local office)

Solar Electric Applications: An overview of Today's Applications. NREL Publications, DOE/GO #10097-357, Revised February, 1997 (Call Tel.1-800-DOE-EREC or visit local office)

Green Lights: An Enlightened Approach to Energy Efficiency and Pollution Prevention. U.S. Environmental Protection Agency, Pacific Island Contact Office (Call Tel. *541-2710 for publication.*)

Healthy Lawn, Healthy Environment. U.S. Environmental Protection Agency, Pacific Island Contact Office. (Call Tel. 541-2710 for this and related publications)

How to Plant a Native Hawaiian Garden. Office of Environmental Quality Control (OEQC), Department of Health, State of Hawai'i (Call Tel. 586-4185 for publication)

Buy Recycled in Hawai'i. Clean Hawai'i Center, Energy, Resources and Technology Division, Department of Business, Economic Development and Tourism, November 1997. (Call Tel. 587-3802 for publication)

Hawai'i Recycling Industry Guide and other recycling and reuse related fact sheets. Clean Hawai'i Center, Energy, Resources and Technology Division, Department of Business, Economic Development and Tourism, July 1999. (Call Tel. 587-3802 for publication)

Minimizing Construction and Demolition Waste. Office of Solid Waste Management, Department of Health and Clean Hawai'i Center, Energy, Resources and Technology Division, Department of Business, Economic Development and Tourism, February 1998. (Call Tel. 586-4240 for publication)

Contractor's Waste Management Guide and Construction and demolition Waste Management Facilities Directory. Clean Hawai'i Center, Energy, Resources and Technology Division, Department of Business, Economic Development and Tourism, 1999. (Call Tel. 587-3802 for publication)

Waste Management and Action: Construction Industry. Department of Health, Solid and Hazardous Waste Branch (Call Tel. 586-7496 for publication)

Business Guide For reducing Solid Waste. U.S. Environmental Protection Agency, Pacific Island Contact Office, Tel. 541-2710 (Call for publication.)

The Inside Story: A Guide to Indoor Air Quality, U.S. Environmental Protection Agency, Pacific Island Contact Office, Tel. 541-2710 (Call for this and related publications.) Additional information is available from the American Lung Association, Hawai'i, Tel. 537-5966

Selecting Healthier Flooring Materials, American Lung Association and Clean Hawai'i Center, February 1999. (Call Tel. 537-5966 x307)

Office Paper Recycling: An Implementation Manual, U.S. Environmental Protection Agency, Pacific Island Contact Office, Tel. 541-2710 (Call for publication.)

Acknowledgments

OEQC and the Environmental Council would like to thank Allison Beale, Gary Gill, Nick H. Huddleston, Gail Suzuki-Jones, Purnima McCutcheon, Virginia B. MacDonald, Steve Meder, Ramona Mullahey, Thomas P. Papandrew, Victor Olgay, Howard Tanaka, and Howard Wiig for their assistance with this project.

PBR HAWAII

LAND PLANNING
LANDSCAPE ARCHITECTURE
ENVIRONMENTAL STUDIES

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Fax: (808) 523-1402
E-Mail: [illegible]

Hilo Office
[illegible]

Wailuku Office
[illegible]

August 27, 2002

Ms. Genevieve Salmonson
Director
State of Hawaii
Office of Environmental Quality Control
235 South Beretania Street, Suite 702
Honolulu, Hawai'i 96813

SUBJECT: HAWAII BAPTIST ACADEMY DRAFT ENVIRONMENTAL ASSESSMENT, TMK 2-2-22: 19

Dear Ms. Salmonson:

Thank you for your letter regarding the Hawaii Baptist Academy Draft Environmental Assessment (EA) dated July 22, 2002. As the planning consultant for the applicant, Hawaii Pacific Baptist Convention, we are responding to your comments.

1) *Consultation with the Department of Transportation on Traffic Issues*: The Department of Transportation has reviewed the draft EA. In their comment letter (see attached) it is stated: "The proposed expansion is not anticipated to have a significant impact to Pali Highway, our State facility."

2) *Maximum Capacity of the Campus*: As discussed in section 2.1.5, "Community Meeting," of the draft EA, for both campuses (the elementary school is at a separate location) Hawaii Baptist Academy has a total enrollment capacity of 1,200 students. Current enrollment is 1,035 students. As discussed in section 2.1.3, "Enrollment," current enrollment at the Stan Sagert Campus (the middle and high school campus) is 630 students.

   Since the Stan Sagert Campus has a larger portion of the total Academy enrollment, it is reasonable to conclude that a larger portion of the available capacity could be allocated to the Stan Sagert Campus. However, the goal of the proposed improvements is to reduce class size, so it is unlikely additional students would be admitted up to the campus capacity. This will be clarified in the final EA.

3) *Concrete 'Auwai*: In several sections the draft EA refers to an 'auwai on the property. The history of the 'auwai is not known, including when it was lined with concrete (or if it existed before it was lined with concrete). However, when Hawaii Baptist Academy built the Bessie Fleming classroom building on the adjoining property it assumed responsibility of the maintenance of the portion of the 'auwai on that property.

   As stated in section 4.2.1, "Archaeological and Historic Resources," approximately two years ago, a neighboring property mauka of Hawaii Baptist Academy temporarily cut off irrigation water into the 'auwai, so recently it has been dry except for storm conditions. Therefore, the 'auwai does not irrigate anything beyond where the water flow has been cut off and its flow is not perennial.

At the inlet at the makai end of the property the 'auwai goes underground. It then goes under Pali Highway, through the nearby Community Church grounds, under Nu'uanu Avenue, across several residential properties, and terminates at a park. It is not known where the 'auwai connects with Nu'uanu Stream, however it would be logical to assume it connects with the stream at a point further mauka than the Hawaii Baptist Academy Campus.

4) *Kapena Falls and Alapena Pool:* As these areas are well known, especially by people in the neighborhood, they are currently being used for recreational activities. According the Department of Health there is no law against swimming in Nu'uanu Stream, however the Department of Health warns that the stream is a "hot spot" for leptospirosis, which can cause flu-like symptoms if it enters a person's body from cuts or from drinking.

5) *Guidelines for Sustainable Building Design in Hawaii:* Thank you for providing a copy of the "Guidelines for Sustainable Building Design." Please note that the draft EA contains a section referencing these guidelines (See section 2.4, "Sustainable Building Design').

6) *Use of Recycled Glass:* The used of glass-asphalt ("glasphalt") will be considered in the design of impervious surfaces.

7) *Indigenous and Polynesian Introduced Plants for Use in Public Landscaping:* Indigenous and Polynesian introduced plants will be considered for use in landscaping.

We appreciate your participation in the review of the draft EA. Where appropriate, your comments will be incorporated into the final EA.

Sincerely,

PBR HAWAII

Tom Schnell, AICP
Associate

cc: Richard Bento/Hawaii Baptist Academy
Naomi Kuwaye/Imanaka Kudo & Fujimoto
Diedre S. Mamiya/Department of Land and Natural Resources, Land Division
Al Jodar/Department of Land and Natural Resources, Land Division

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BENJAMIN J. CAYETANO
GOVERNOR

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LAND DIVISION
02 JUL 31 A 8:10

RECEIVED
2002 JUL 31 P 3:47
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
869 PUNCHBOWL STREET
HONOLULU, HAWAII 96813-5097

JUL 30 2002

BRIAN K. MINAAI
DIRECTOR

DEPUTY DIRECTORS
JEAN L. OSHITA
JADINE Y. URASAKI

IN REPLY REFER TO:
HWY-PS
2.7268

TO: GILBERT S. COLOMA-AGARAN
CHAIR
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

FROM: BRIAN K. MINAAI
DIRECTOR OF TRANSPORTATION

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT, HAWAII BAPTIST ACADEMY FACILITY EXPANSION, NUUANU VALLEY, HONOLULU
TMK: 2-2-22: 19

The proposed expansion is not anticipated to have a significant impact to Pali Highway, our State facility. However, the applicant should be advised that plans for any construction work within the State Highway's right-of-way must be submitted for our review and approval.

If there are any questions regarding these comments, please contact Ronald Tsuzuki, Head Planning Engineer, Highways Division, at 587-1830 or via e-mail at ronald_tsuzuki@exec.state.hi.us. Please refer to review file number: 02-160.

Post-it® Fax Note 7671	Date	# of pages ▶ 1
To Tom Schnell	From Al Jodar	
Co./Dept.	Co.	
Phone #	Phone # 587-0429	
Fax # 523-1402	Fax # 587-0455	

PHONE (808) 594-1888

FAX (808) 594-1865

STATE OF HAWAI'I
OFFICE OF HAWAIIAN AFFAIRS
711 KAPI'OLANI BOULEVARD, SUITE 500
HONOLULU, HAWAI'I 96813

HRD#02-637

June 14, 2002

Mr. Al Jodar
Land Agent
Land Division
Department of Land and Natural Resources
P.O. Box 521
Honolulu, HI 96809

SUBJECT: DEA – HAWAII BAPTIST ACADEMY- TMK: 2-2-22:19

Dear Mr. Jodar:

Thank you for the opportunity to review the above referenced Draft Environmental Assessment for construction of a classroom and administrative building for the Hawai'i Baptist Academy.

The Office of Hawaiian Affairs has the following comment: Please amend the language under *4.2.1 Archaeological and Historic Resources* to reflect that both the State Historic Preservation Division and the Oahu Island Burial Council will be contacted if historic or cultural items are discovered.

If you have any questions, please contact Jerry B. Norris at 594-1847 or email him at jerryn@oha.org.

Sincerely,

Jalna S. Keala
Acting Director, Hawaiian Rights Division

cc: OHA Board of Trustees
Clyde W. Namu'o, OHA Administrator

PBR HAWAII
LAND PLANNING
LANDSCAPE ARCHITECTURE
ENVIRONMENTAL STUDIES

August 27, 2002

Ms. Jalna S. Keala
Acting Director
Hawaiian Rights Division
State of Hawaii
Office of Hawaiian Affairs
711 Kapi'olani Boulevard, Suite 500
Honolulu, Hawai'i 96813

SUBJECT: HAWAII BAPTIST ACADEMY DRAFT ENVIRONMENTAL ASSESSMENT, TMK 2-2-22: 19

Dear Ms. Keala:

Thank you for your letter regarding the Hawaii Baptist Academy Draft Environmental Assessment (EA) dated June 14, 2002, and addressed to Al Jodar of the Department of Land and Natural Resources (HRD#02-637). As the planning consultant for the applicant, Hawaii Pacific Baptist Convention, we are responding to your concerns.

Section 4.2.1, "Archaeological and Historic Resources," of the final EA will be revised to indicate that both the State Historic Preservation Division and the Oahu Burial Council will be contacted if historic or cultural items are encountered during construction activities.

We appreciate your participation in the review of the draft EA.

Sincerely,

PBR HAWAII

Tom Schnell, AICP
Associate

cc: Richard Bento/Hawaii Baptist Academy
Naomi Kuwaye/Imanaka Kudo & Fujimoto
Diedre S. Mamiya/Department of Land and Natural Resources, Land Division
Al Jodar/Department of Land and Natural Resources, Land Division

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BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HI 96843

June 24, 2002

Mr. Al Jodar, Land Agent
Land Division
Department of Land and Natural Resources
State of Hawaii
P. O. Box 621
Honolulu, Hawaii 96809

Dear Mr. Jodar:

Subject: Your Letter of June 7, 2002 on the Draft Environmental Assessment for Hawaii Baptist Academy, TMK: 2-2-22: 19

Thank you for the opportunity to comment on the proposed improvements at Hawaii Baptist Academy.

The existing water system is presently adequate to accommodate the proposed school improvements.

The availability of water will be confirmed when the building permit is submitted for our review and approval. When water is made available, the applicant will be required to pay our Water System Facilities Charges for resource development, transmission and daily storage.

The proposed project is subject to Board of Water Supply Cross-Connection Control and Backflow Prevention requirements prior to the issuance of the Building Permit Applications.

Very truly yours,

for CLIFFORD S. JAMILE
Manager and Chief Engineer

Save Water . . . our greatest need – use it wisely

August 27, 2002

Mr. Clifford S. Jamile
Manager and Chief Engineer
Board of Water Supply
City and County of Honolulu
630 South Beretania Street
Honolulu, Hawaii 96843

SUBJECT: HAWAII BAPTIST ACADEMY DRAFT ENVIRONMENTAL ASSESSMENT, TMK 2-2-22: 19

Dear Mr. Jamile:

Thank you for your letter regarding the Hawaii Baptist Academy Draft Environmental Assessment (EA) dated June 24, 2002, and addressed to Al Jodar of the Department of Land and Natural Resources. As the planning consultant for the applicant, Hawaii Pacific Baptist Convention, we are responding to your comments.

Thank you for confirming the existing water system is presently adequate to accommodate the proposed school improvements.

We acknowledge: 1) the availability of water will be confirmed when the building permit is submitted for your review and approval; 2) when water is made available, the applicant will be required to pay the Board of Water Supply's Water System Facilities Charges; 3) the proposed improvements are subject to Board of Water Supply Cross-Connection Control and Backflow Prevention requirements before the issuance of the Building Permit Applications.

Your comments will be incorporated into the final EA.

We appreciate your participation in the review of the draft EA.

Sincerely,

PBR HAWAII

Tom Schnell, AICP
Associate

cc: Richard Bentc/Hawaii Baptist Academy
Naomi Kuwaye/Imanaka Kudo & Fujimoto
Diedre S. Mamiya/Department of Land and Natural Resources, Land Division
Al Jodar/Department of Land and Natural Resources, Land Division

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