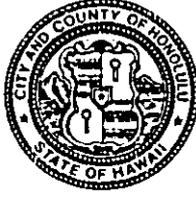


DEPARTMENT OF PLANNING AND PERMITTING  
**CITY AND COUNTY OF HONOLULU**

650 SOUTH KING STREET • HONOLULU, HAWAII 96813  
TELEPHONE: (808) 523-4414 • FAX: (808) 527-6743 • INTERNET: www.co.honolulu.hi.us

JEREMY HARRIS  
MAYOR



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RANDALL K. FUJIKI, AIA  
DIRECTOR  
LORETTA K.C. CHEE  
DEPUTY DIRECTOR

2000/SMA-63 (ST)

OFF. OF ENVIRONMENTAL  
QUALITY CONTROL

October 6, 2000

Ms. Genevieve Salmonson, Director  
Office of Environmental Quality Control  
State of Hawaii  
State Office Tower, Room 702  
235 South Beretania Street  
Honolulu, Hawaii 96813

Dear Ms. Salmonson:

CHAPTER 343, HRS  
Environmental Assessment (EA) Determination  
Finding of No Significant Impact

Recorded Owner: City and County of Honolulu  
Applicant : Department of Design and Construction,  
City and County of Honolulu  
Agent : Wilson Okamoto & Associates, Inc.  
Location : Kamehameha Highway, Hauula, Oahu  
Tax Map Keys : 5-4-9: pars. 7 and 8  
5-4-1: por. 10  
5-4-8: por. 19  
Request : Special Management Area (SMA) Use Permit  
Proposal : New 1,364-square foot multi-purpose  
building, additional parking and walkway  
at the existing Hauula Community Park  
Determination : A Finding of No Significant Impact is  
Issued

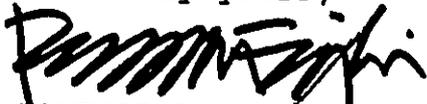
Attached and incorporated by reference is the Final EA prepared by the applicant for the project. Based on the significance criteria outlined in Title 11, Chapter 200, State Administrative Rules, we have determined that preparation of an Environmental Impact Statement is not required.

127

Ms. Genevieve Salmonson, Director  
Page 2  
October 6, 2000

We have enclosed a completed OEQC Bulletin Publication Form and four copies of the Final EA. If you have any questions, please contact Steve Tagawa of our staff at 523-4817.

Sincerely yours,



RANDALL K. FUJIKI, AIA  
Director of Planning  
and Permitting

RKF:am  
Attachments

DN58437

2000-10-23-OA-PEA-

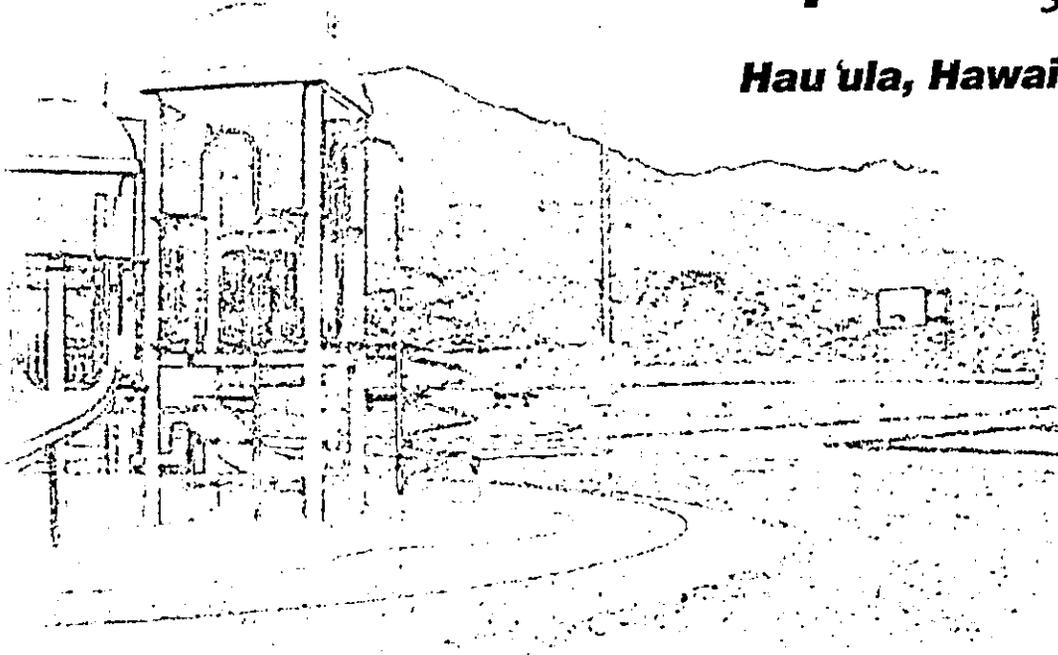
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FILE COPY

**FINAL ENVIRONMENTAL ASSESSMENT  
AND  
FINDING OF NO SIGNIFICANT IMPACT**

**(Hauula Community Park  
Multi-Purpose Building  
Expansion)**

**Hau'ula, Hawaii**



Prepared for:

**City and County of Honolulu  
Department of Design and Construction**

Prepared by:

**Wilson Okamoto & Associates, Inc.  
Engineers and Planners**

September 2000

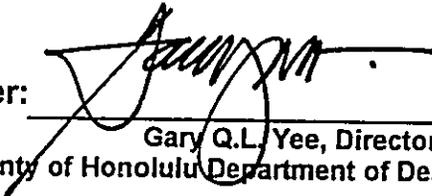


**Final Environmental Assessment  
Finding of No Significant Impact**

**Hau'ula Community Park  
Multi-Purpose Building Expansion**

**Hau'ula, O'ahu, Hawaii**

Responsible Officer:



\_\_\_\_\_

Gary Q.L. Yee, Director

City & County of Honolulu Department of Design and Construction

Date

9.15.00

**Prepared For:**

**City and County of Honolulu  
Department of Design and Construction  
650 S. King Street  
Honolulu, Hawaii 96813**

**Prepared By:**

**Wilson Okamoto & Associates, Inc.  
Engineers and Planners  
1907 South Beretania Street, Suite 400  
Honolulu, Hawaii 96826  
Job. No. 6382-02**

**September 2000**

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## **PREFACE**

This Final Environmental Assessment (EA) was prepared pursuant to Chapter 343, Hawaii Revised Statutes (HRS) and Title 11, Chapter 200, Administrative Rules, Department of Health, State of Hawaii. Proposed is an agency action by the City and County of Honolulu Department of Design and Construction involving the expenditure of City funds and the use of City and County of Honolulu and State of Hawaii lands. The project includes construction of a new multi-purpose building and additional parking stalls at Hau'ula Community Park in Hau'ula, Ko'olau Loa, O'ahu.

This EA has been processed as a Finding of No Significant Impact (FONSI) by the City and County of Honolulu Department of Planning and Permitting, determining that preparation of an environmental impact statement (EIS) is not required pursuant to Chapter 343, HRS. The Final EA reflects design refinements of the proposed project made since the Draft EA was published in July 2000. Most notably, the proposed building has been repositioned and its "footprint" has been reduced. As a result, the amount of area to be disturbed by construction activities has slightly decreased with a negligible reduction in impact. The proposed action requires a Special Management Area (SMA) permit from the City and County of Honolulu.

**PROJECT SUMMARY**

**Proposing Agency:** City and County of Honolulu  
Department of Design and Construction

**Approving Authority:** City and County of Honolulu  
Department of Planning and Permitting

**Location:** Hau'ula Community Park, Hau'ula, O'ahu, Hawai'i

**Tax Map Key(s):**  
Hau'ula  
Community Park: 5-4-01:01, 02, 06, 08, 09, 10, 11, 14 & 40  
5-4-8:18, 19 & 22  
5-4-9:07 & 08

**Project Site:** 5-4-9:07 (por.) & 08 (por.)  
5-4-01:10 (por.)  
5-4-8:19 (por.)

**Land Area:**  
Hau'ula  
Community Park: 11.631 acres

**Project Site:** 4,030 square feet

**Land Owner:** City and County of Honolulu, in fee or by Executive Order  
(except for four remnant parcels, owned by the State of  
Hawai'i unaffected by the proposed project)

**Existing Use:** Hau'ula Community Park

**State Land Use  
Classification:** Urban District

**Community Plan  
Designation:** Community Park

**County Zoning  
Designation:** P-2 General Preservation District

**Proposed Action:** The proposed project consists of a new, approximately  
1,364-square foot, single-story multi-purpose building,  
approximately 1,160 square feet of concrete walkway, and

11 additional parking stalls. The new building will adjoin the west side of the existing recreation building. The new building will provide office space and an activity area, called the Teen Center. The office space will serve the Park's Activity Coordinator and other Department of Parks and Recreation (DPR) staff at the Park. A breezeway between the existing and proposed building will extend as a covered walkway around the perimeter of the building.

The proposed project also includes upgrading the existing recreation building, including remodeling the bathrooms, kitchen, and storage area to achieve ADA compliance. The roof of the existing building will be raised to match the height of proposed building. The play equipment located between the existing building and playcourts will be repositioned to accommodate the new structure. The playcourts will be resurfaced and restriped to switch the location of the basketball and volleyball courts.

The proposed action will not generate an increase in the number of park users or in the amount of traffic to the Park. Instead, the new multi-purpose building will provide activity space to meet the needs of existing DPR programs, which currently operate with insufficient space. The proposed parking expansion is intended to alleviate existing parking demand.

The proposed action is consistent with the general policies regarding parks and recreation areas, as described in the Ko'olau Loa Sustainable Communities Plan Section 3.3.2.2 – Community Based Parks, to "Expand the Hau'ula Community Park...to include a multi-purpose recreation facility."

**Impacts:**

No significant impacts are anticipated from the construction or operation of the proposed expansion at Hau'ula Community Park. Construction work, mainly excavation and grading activities for the building's foundation, is anticipated to have short-term noise and air quality impacts in the surrounding area. All government rules and regulations will be followed during construction to minimize impacts. In the long-term, Use of the park is not anticipated to increase as a result of the proposed project, as the new multi-purpose building is intended to better accommodate existing DPR programs.

**Determination:** Finding of No Significant Impact (FONSI)

**Parties Consulted  
During Pre-Assessment:**

**Federal Agencies:** U.S. Fish and Wildlife Service

**State Agencies:** Department of Education  
Department of Land and Natural Resources, State Historic  
Preservation Division  
Department of Transportation, Highways Division

**County Agencies:** Department of Parks and Recreation  
Department of Planning and Permitting

**Parties Consulted  
During Draft EA Comment Period:**

**Federal Agencies:** U.S. Army Engineer District

**State Agencies:** Department of Business, Economic Development and  
Tourism, Office of Planning  
Department of Education  
Department of Health  
Department of Land and Natural Resources (DLNR)  
DLNR State Historic Preservation Division  
Department of Transportation, Highways Division  
Office of Hawaiian Affairs  
University of Hawai'i Environmental Center

**County Agencies:** Board of Water Supply  
Department of Parks and Recreation  
Department of Planning and Permitting

**Elected Officials:** Councilmember Steve Holmes

**Other  
Interested Parties:** Hau'ula Community Association  
Hau'ula Community Park Visioning Committee  
Hau'ula Cultural Preservation Committee

**Other Interested  
Parties (continued):** Hau'ula Elementary School PTSA (Lokahi Group)

Hau'ula Elementary School-Based Community  
Management Council  
Koolauloa Neighborhood Board No. 28  
Koolauloa Youth Athletic Club  
Koolauloa Youth Organization  
GTE Hawaiian Telephone Company  
Hawaiian Electric Company, Inc.

## 1. INTRODUCTION

The City and County of Honolulu Department of Design and Construction (DDC) proposes to expand the recreational facilities at Hau'ula Community Park in Hau'ula, Ko'olau Loa, O'ahu, with the construction of a new multi-purpose building and additional parking stalls. The new building will be situated immediately west of the existing recreation building on the makai end of the playfield. It will adjoin the existing recreation building. A breezeway between the buildings will extend as a covered walkway around the perimeter of the building. The roof of the existing building will be raised to connect with the roofline of the new building. A total of 11 additional parking stalls will be provided by extending the pavement of the existing parking area in the mauka direction.

The proposed project consists of a new, approximately 1,364-square foot, single-story multi-purpose building, approximately 1,160 square feet of covered concrete walkway, and 11 additional parking stalls. The new building will provide office space and an activity area, called the Teen Center. The office space will serve the Park's Activity Coordinator and other Department of Parks and Recreation (DPR) staff at the Park. Other improvements include renovating the existing recreation building to meet ADA standards, resurfacing and restriping the playcourts, and repositioning play equipment to accommodate the new building.

The existing building is comprised of 1,820 square feet of enclosed area and 912 square feet of lanai area (covered). On a weekly basis, more than 300 people use the facility including those affiliated with the Teen Club, Women and Infant Care (WIC) Program, Head Start Program, and Hau'ula Elementary School. The active ball field areas are used by football and baseball athletic programs which service more than 1,000 participants.

The proposed action will not generate an increase in the number of park users or in the amount of traffic to the Park. Instead, the new multi-purpose building will provide activity space to meet the needs of existing DPR programs, which currently operate with insufficient space. The proposed parking expansion is intended to alleviate existing parking demand.

The proposed action is consistent with the general policies regarding parks and recreation areas, as described in the Ko'olau Loa *Sustainable Communities Plan* Section 3.3.2.2 – Community Based Parks, to “Expand the Hau'ula Community Park...to include a multi-purpose recreation facility.”

The portion of Hau'ula Community Park in which the proposed project is situated is within the City and County of Honolulu's Special Management Area (SMA) and, therefore, will require an SMA Permit.

## 2. SETTING AND PROJECT DESCRIPTION

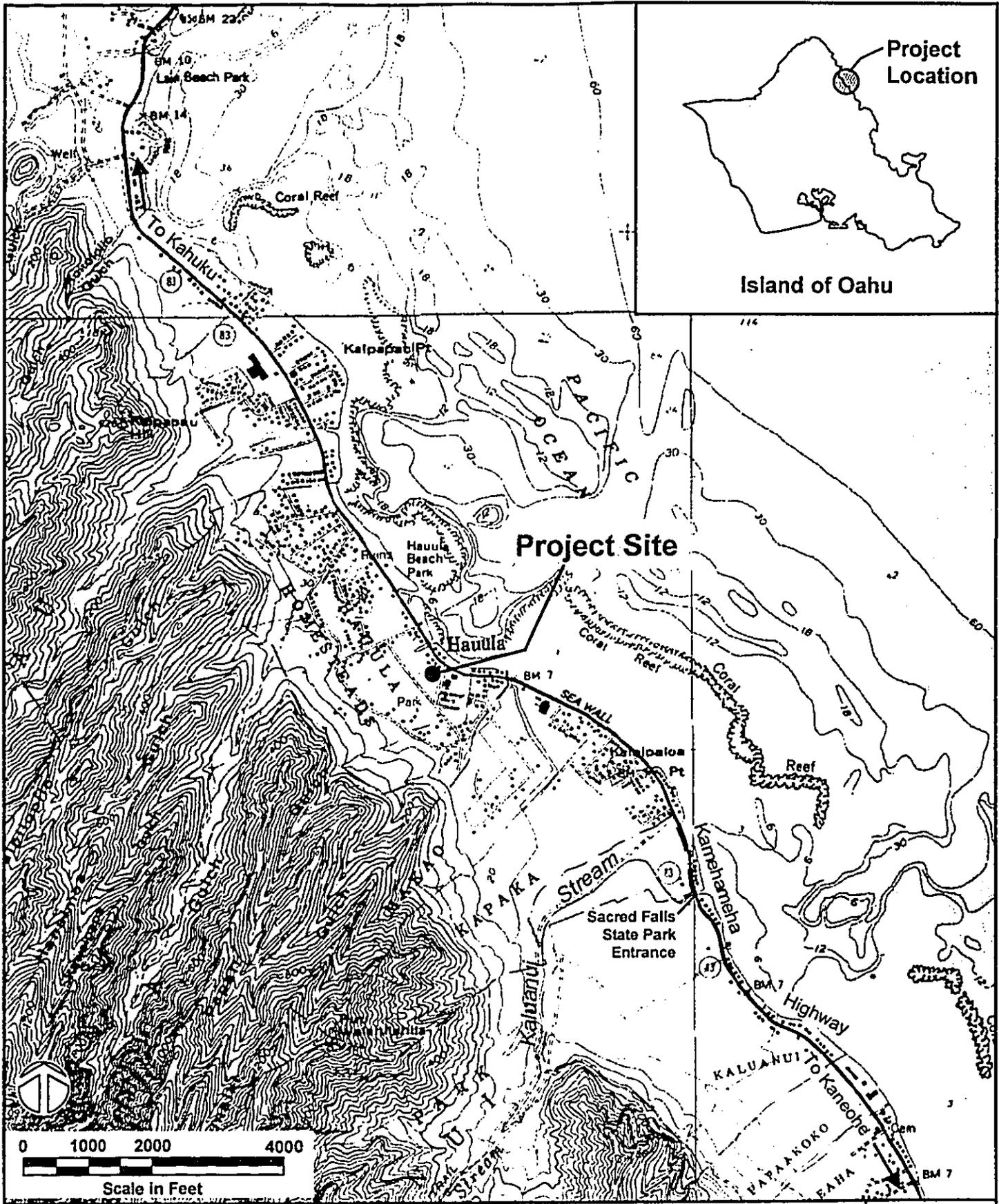
### 2.1 Project Background And Need

The proposed new multi-purpose building is intended for use by teenagers participating in the Park's Teen Club, advised by the City and County of Honolulu DPR Activity Coordinator. The Park's existing recreation building is used for programs involving children in grades kindergarten through 6th, as well as community groups. The proposed project will provide a space for Teen Club participants to hold enrichment activities on a regular basis, including academic, extracurricular, and physical activity programs. The Teen Center will also be used by youth involved with the Park's "at-risk" program, a volunteer-coordinated program encouraging self-improvement through cultural activities, community mentoring, and parental involvement. The proposed project will provide the facilities necessary to create a comfortable, more spacious, and more effective environment for existing DPR programs. This is consistent with the Ko'olau Loa *Sustainable* Communities Plan, Section 3.1.3.5, which recommends the expansion of community-based parks where there is a lack of sufficient facilities and where recreational needs of residents are not being adequately met.

### 2.2 Project Location

The proposed project site is situated within the existing Hau'ula Community Park, in Hau'ula, Ko'olau Loa, O'ahu. The Park is located on the mauka side of Kamehameha Highway, approximately 3 miles south of Lā'ie Point and 4 miles north of Kahana Bay. Uses adjoining the Park include Hau'ula Elementary School to the southeast, Hau'ula Fire Station on the northwest and various single-family residences to the north and south. Hau'ula Beach Park is located 0.3 mile to the north, and the entrance to Sacred Falls State Park, now closed to public access, is located approximately 1 mile south along Kamehameha Highway, at the mouth of Kaluanui Stream (see Figure 2-1).

The Park consists of approximately 10.4 acres and is identified by Tax Map Keys (TMK) 5-04-01:01, 02, 06, 08, 09, 10, 14, 39, 40, and 50; 5-4-08:18, 19, & 22; and 5-04-09:07 and 08. The Park land is owned by both the City and County of Honolulu and the State of Hawaii. The project site, however, is located on TMK parcels 5-4-9:07 and 08, which are owned by the City and County of Honolulu (see Figure 2-2). Hau'ula Community Park is administered and maintained by the City and County of Honolulu. Primary access to the Park is from Kamehameha Highway, and alternate access may be gained from Hau'ula Homestead Road.

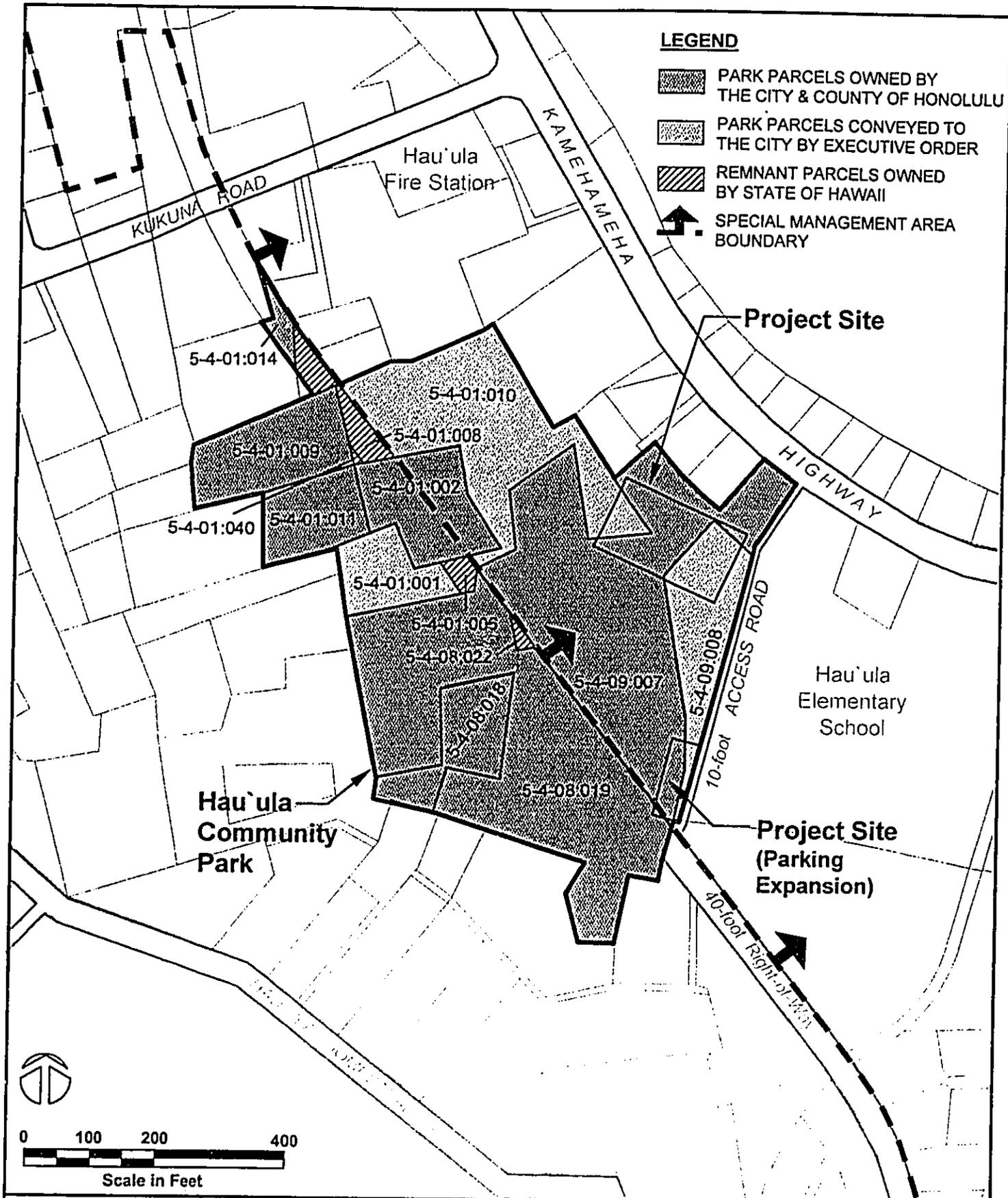


  
**WILSON OKAMOTO  
& ASSOCIATES, INC.**  
 ENGINEERS - PLANNERS

Hau'ula Community Park - Multi-Purpose Building Expansion

**LOCATION MAP**

**FIGURE**  
2-1



  
**WILSON OKAMOTO & ASSOCIATES, INC.**  
 ENGINEERS • PLANNERS

Hau'ula Community Park - Expansion of Multi-Purpose Building

**LAND OWNERSHIP, TAX MAP KEY, SPECIAL MANAGEMENT AREA MAP**

**FIGURE 2-2**

### **2.3 Project Description**

The new multi-purpose building will be rectangular in shape, adjoining the eastern side of the existing recreation building. The new building will provide office space and an activity area called the Teen Center (see Figures 2-3, 2-4 and 2-5). The Teen Center will include a lounge/game room, as well as an area for group exercises. The office space will serve the Park's Activity Coordinator and other DPR staff.

The proposed project also includes upgrading the existing recreation building, including remodeling the bathrooms, kitchen, and storage area to achieve ADA compliance. The roof of the existing building will be raised to match the height of proposed building. The play equipment located between the existing building and playcourts will be repositioned to accommodate the new structure. The playcourts will be resurfaced and restriped to switch the location of the basketball and volleyball courts.

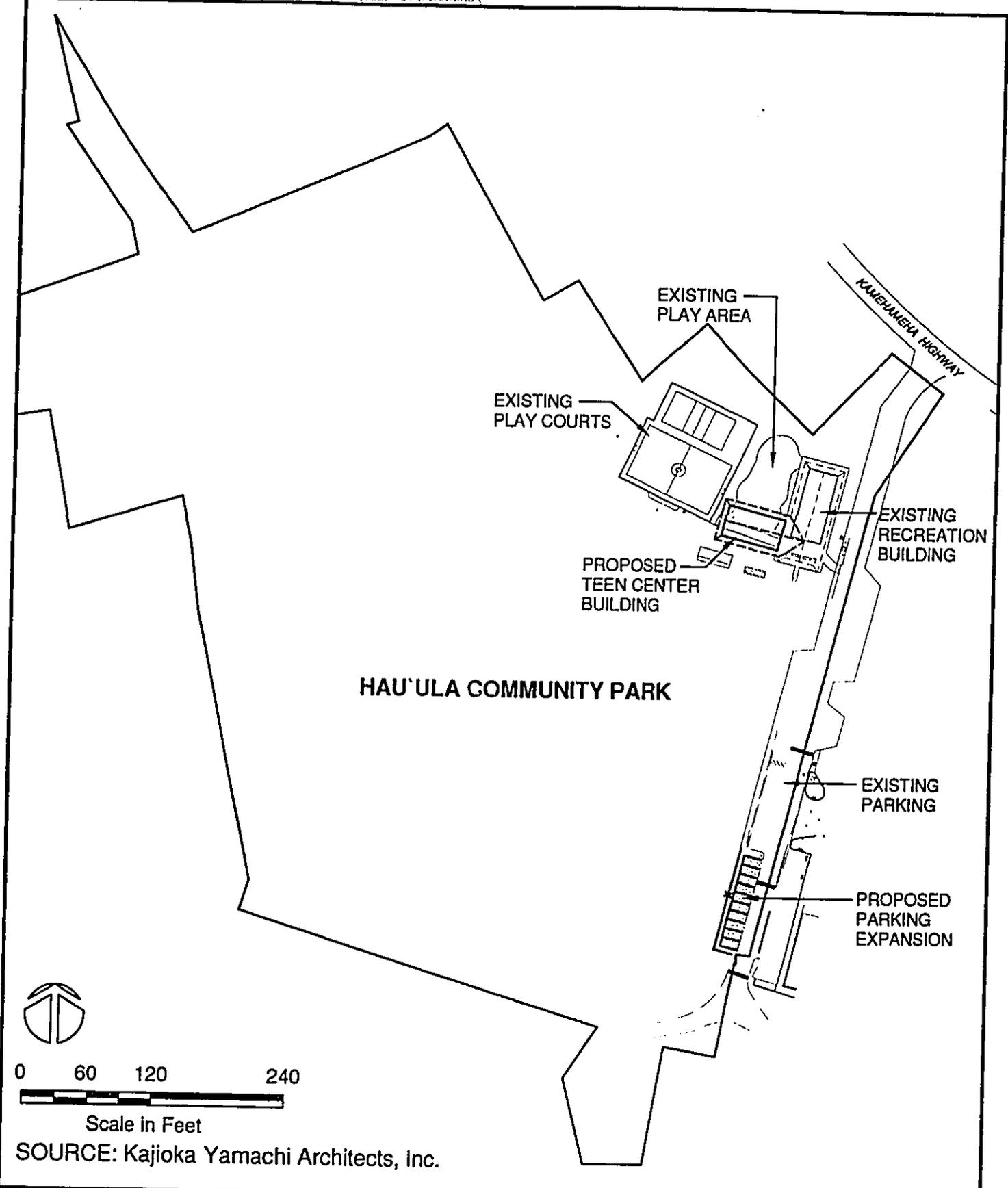
The proposed action will not generate an increase in the number of park users or in the amount of traffic to the Park. The new multi-purpose building will provide activity space to meet the needs of existing DPR programs, which currently operate with insufficient space. The proposed parking expansion is intended to alleviate existing parking demand.

#### **2.3.1 Project Schedule and Cost**

Contingent on the bidding process, construction is anticipated to commence in March 2001 with completion estimated by December 2001. The construction cost is estimated at approximately \$620,000.

### **2.4 Existing and Surrounding Uses**

Existing Uses: Facilities at Hau'ula Community Park include a recreation building, a play area with playground equipment, a basketball court, a volleyball court, a lighted baseball/football field with bleachers, and parking provided along the eastern Park boundary, adjoining that of Hau'ula Elementary School. The proposed multi-purpose building site presently includes the concrete walkway connecting the existing recreation building to the playcourts. It also includes part of the existing children's play area and a small portion of the open lawn (see Photos 1 and 2). The proposed parking expansion is to be located in a grassed area at the mauka end of the existing parking lot (see Photo 3).



SOURCE: Kajioka Yamachi Architects, Inc.

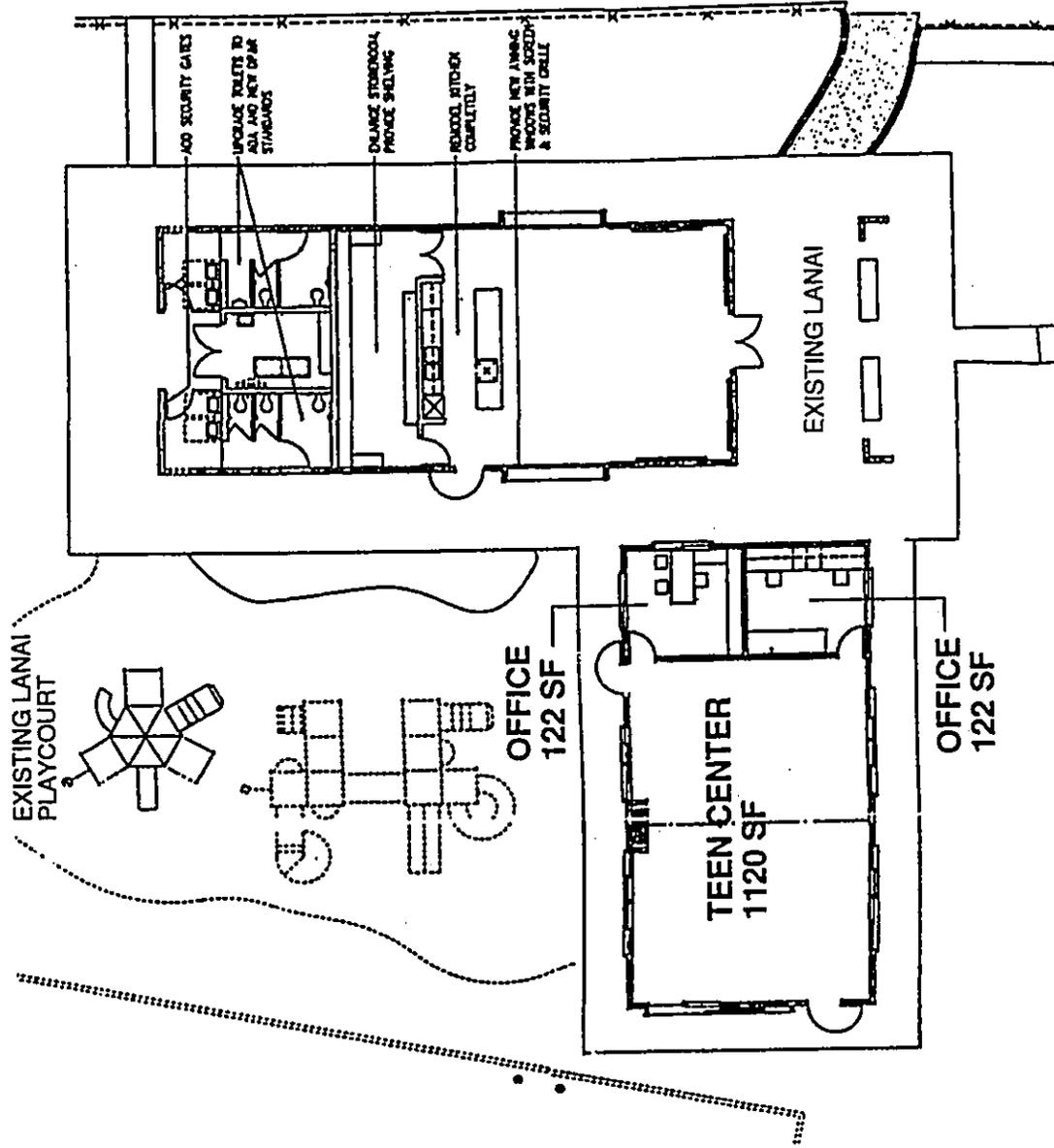


HAU'ULA COMMUNITY PARK -  
MULTI-PURPOSE BUILDING EXPANSION

PROPOSED SITE PLAN

FIGURE  
2-3

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Not to Scale

SOURCE: Kajioka Yamachi Architects, Inc.



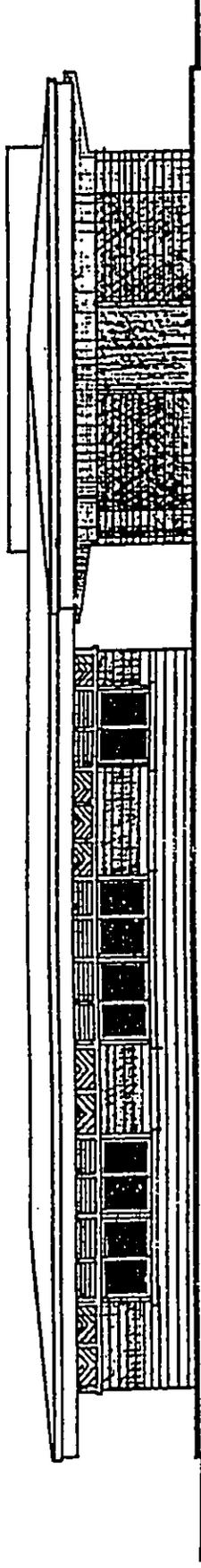
HAU'ULA COMMUNITY PARK - MULTI-PURPOSE BUILDING EXPANSION

PROPOSED FLOOR PLAN

FIGURE

2-4

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SOURCE: Kajjoka Yamachi Architects, Inc.

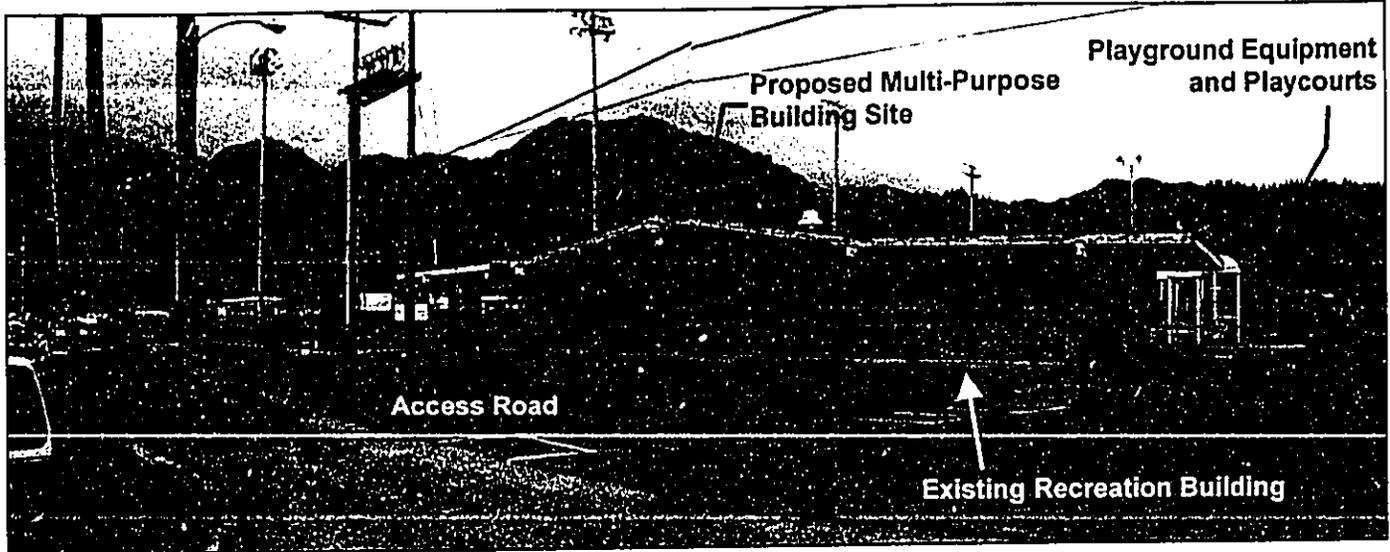


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& ASSOCIATES, INC.  
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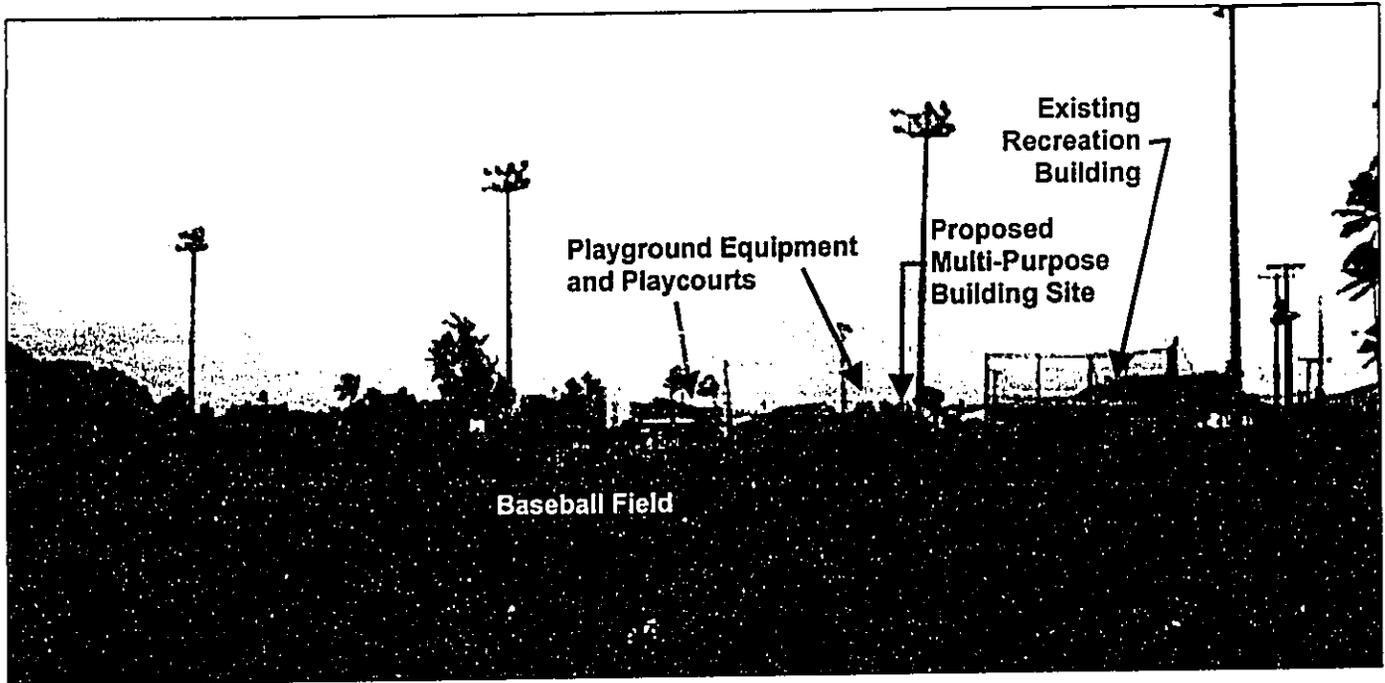
HAU'ULA COMMUNITY PARK - MULTI-PURPOSE BUILDING EXPANSION

SOUTH ELEVATION

FIGURE  
2-5



**Photo 1:** The existing recreation building at Hauula Community Park, looking west from the entrance to the Park on Kamehameha Highway. Hauula Elementary School is located to the left of the access road. The site for the new multi-purpose building is behind the existing recreation building, mauka of the playcourts.



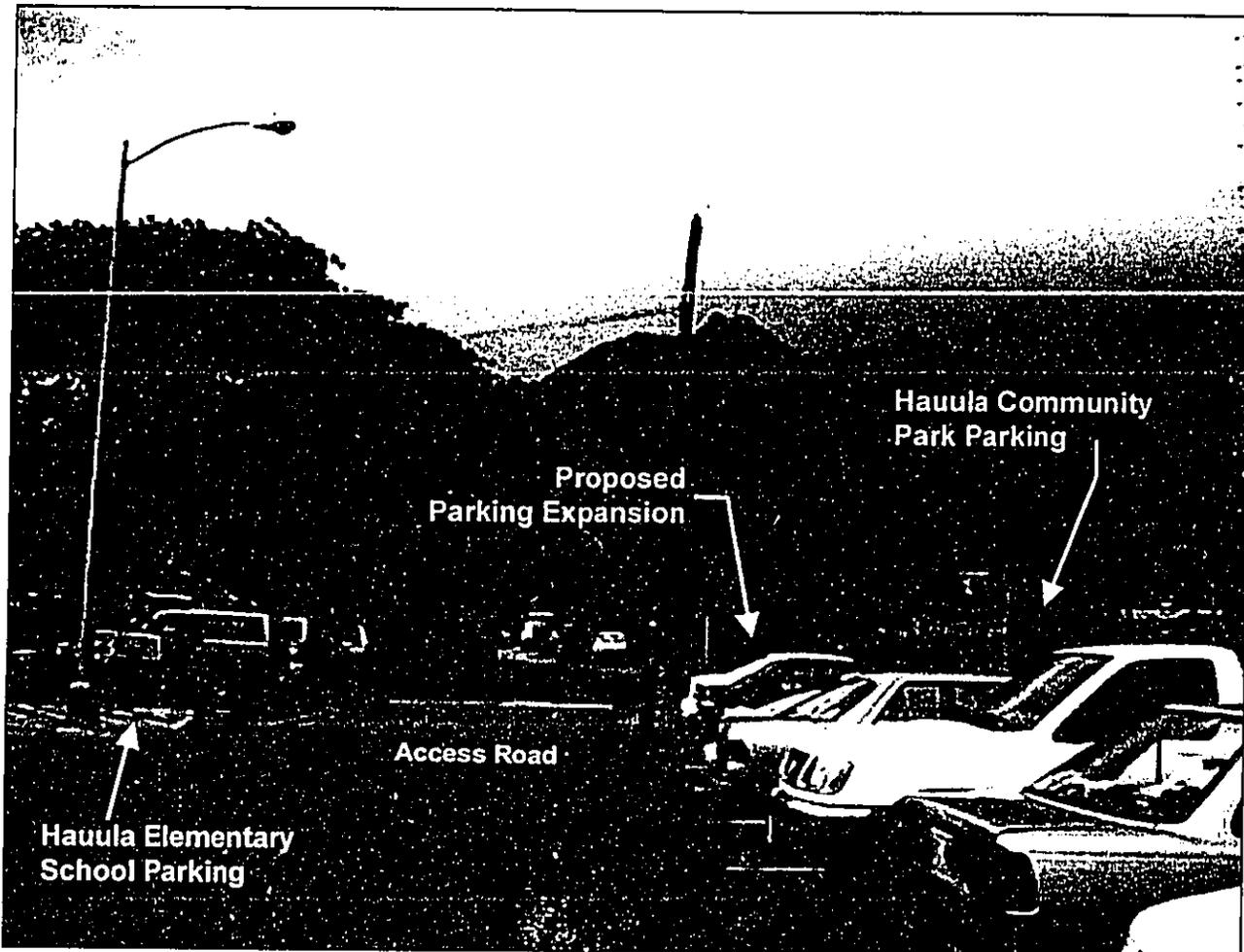
**Photo 2:** The baseball field, playground equipment and playcourts, looking east from the mauka section of the Park. The existing recreation building is visible behind the backstop, and the access road and existing parking area are to the right. The site for the new multi-purpose building includes the concrete walkway connecting the existing building to the playcourts, a portion of the children's play area, and part of the grassy lawn behind the baseball dugout.

  
**WILSON OKAMOTO  
& ASSOCIATES, INC.**  
 ENGINEERS • PLANNERS

Hau'ula Community Park – Multi-Purpose Building Expansion

**PROPOSED MULTI-PURPOSE BUILDING SITE**

**PHOTOS  
1 & 2**



**Photo 3:** View of the mauka end of the existing parking lot. Parking on the right side of the access road is for the Park, while parking on the left side is for Hauula Elementary School. The proposed parking expansion would add 11 more stalls along the right side of the road.

  
**WILSON OKAMOTO  
 & ASSOCIATES, INC.**  
 ENGINEERS - PLANNERS

Hau'ula Community Park – Multi-Purpose Building Expansion

**PROPOSED PARKING EXPANSION**

PHOTO 3

**Surrounding Uses:** Hau'ula Elementary School is located adjacent to the southeast boundary of the Park, with the school parking area adjoining that of the Park. Other uses within the immediate vicinity of the project site include the Hau'ula Fire Station and a few single family residences located to the northwest, and the Hau'ula Homestead area located along the western and southwestern boundaries of the Park. 'Aukai Beach Park is immediately makai of the project site, on the opposite side of Kamehameha Highway. Hau'ula Beach Park is located 0.3 mile along the coast to the north.

The Hau'ula Civic Center is located on Kukuna Road, approximately 800 feet from the project site. Five commercial uses are located nearby on Kamehameha Highway. Ching Tong Leong Store and Hale Kuai Cooperative are two retail establishments approximately 400 feet from the project site, just west of the entrance to Hau'ula Elementary School and Hau'ula Community Park. Ulu's Sundries is located adjacent to the Fire Station, approximately 200 feet from the project site. Rainbow Bar BQ restaurant and a 7-Eleven Hawaii convenience store are located further north along Kamehameha Highway.

Uses within the surrounding area include residences, the Polynesian Cultural Center, McDonald's Restaurant, Brigham Young University's Hawaii Campus, the Church of Jesus Christ of Latter-Day Saints Hawaii Temple, and the Lā'ie Village Shopping Center, which are situated in Lā'ie, approximately 2.5 miles north along Kamehameha Highway. Residential areas, small shops and boutiques, and vacation rental cottages and condos, such as Pat's At Punalu'u, may be found about 1.5 miles south along Kamehameha Highway in Punalu'u.

The Kaipapa'u Forest Reserve includes the area down slope from the crest of the Ko'olau Range to the mauka boundary of the Hau'ula Homesteads. Sacred Falls State Park, now closed to public access, is located approximately 1 mile south along Kamehameha Highway, at the mouth of Kaluanui Stream. Other parks in the area include Punalu'u Beach Park, approximately 2 miles south, Kākela Beach Park, about 1.5 miles north, and Lā'ie Beach Park (Pounders Beach), located about 2 miles north along Kamehameha Highway.

### **3. DESCRIPTION OF THE EXISTING ENVIRONMENT, PROJECT IMPACTS AND MITIGATION MEASURES**

#### **3.1 Climate**

Like the rest of the Hawai'ian Islands, O'ahu has two identifiable seasons. During the summer, between May and October, the weather is warmer and drier with the northeast trade winds most persistent. In the winter months, between November and April, the weather is cooler and wetter and the trade winds are more frequently interrupted by other winds including southeasterly and southwesterly storms.

The climate is characterized as mild sub-tropical, with relatively uniform temperatures throughout the year resulting in a mean annual temperature of 75 degrees Fahrenheit (°F). The average temperature dips to 68°F during the coolest month and rises to 82°F during the warmest month.

Average annual rainfall is approximately 51 inches in the vicinity of the project site. Monthly average rainfall varies from 3 to 6 inches. Rainfall during the summer months averages approximately three inches per month, while the winter months contribute the majority of rainfall, averaging 5 to 6 inches a month.

#### **Environmental Impacts and Mitigation Measures**

No impacts on climatic conditions are anticipated as a result of the construction and operation of the proposed project.

#### **3.2 Geology and Topography**

Geology: The physiography of Windward O'ahu is dominated by the Ko'olau Range, the eroded remnants of a volcanic dome which forms the eastern part of O'ahu. The Ko'olau Range is elongate along a northwest-southeast axis, extending for 37 miles. In places, there are high sea cliffs along the shore. Precipitous fluted cliffs, or pali, extend for 20 miles from Waimānalo in the southeast, transitioning to gentler slopes toward Lā'ie.

The Ko'olau Range consists of thin tholeiitic basaltic flows with minor ash deposits and numerous dikes. The rocks of the Ko'olau volcano have been divided into two groups: the Kailua volcanic series and the Ko'olau volcanic series. The rocks of the Kailua volcanic series, located at the foot of the Nu'uuanu Pali, are principally the eroded remains of the Ko'olau caldera complex of ponded lavas, vent breccias, and

dikes. The rocks of the Ko'olau volcanic series are those lavas and dikes lying outside the caldera. This series comprises the bulk of the Ko'olau Range, with an exposed thickness of 3,000 feet.

Along the base of the Ko'olau Range, the land is characterized by both older and younger alluvium. The older alluvium forms an apron at the base of projecting Ko'olau basaltic ridges and spurs. Its composition is predominantly silt and clay, with lesser amounts of sand and gravel and a few beds of poorly sorted gravel and cobbles. The younger alluvium, extending up into stream valleys, consists primarily of gravel, sand and silt. Colluvial deposits, formed at the base of cliffs by erosion, smooth the transition to stream deposited alluvium on the coastal plains. Much of the coastal plain in the Windward area is underlain by calcareous sedimentary material. Along the coastline, limestone is superposed by dune and beach deposits, which are very permeable. Layers of reef limestone alternate with beds of clay, tuff, and alluvium reaching depths of 1,200 feet.

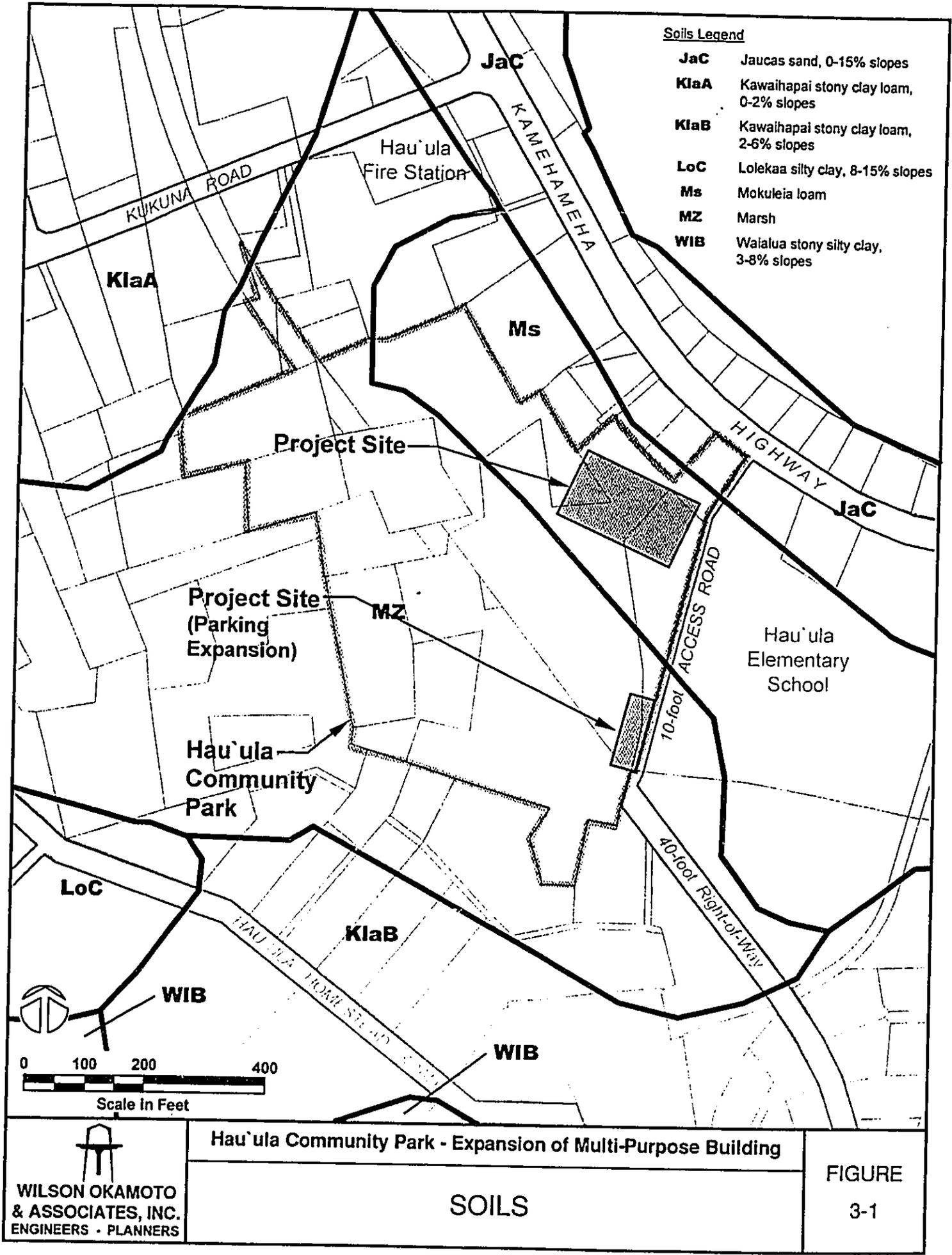
Topography: The topography of the area near the project site is relatively flat, as the fringing coastal plain remains only a few feet above sea level. Elevations between the coast and Hau'ula Homestead Road, located about 0.2 mile mauka of the project site range from 0 to 20 feet above sea level. The approximate elevation of the project site is 6 feet. In the mauka, or southwest, direction of the project site, numerous gulches drain the slopes of the Ko'olau Range. In this area, the summit elevations rise to approximately 2,400 feet.

### **Environmental Impacts and Mitigation Measures**

No significant impacts to the geology and topography of the project site are anticipated. Construction at the project site will require grading and excavation activities for the building's foundation work. The excavated areas will either be built over, paved over, or backfilled and landscaped to existing contours. For flood protection, the proposed multi-purpose building will have a finish floor elevation of 8 feet, approximately 2 feet above the existing grade.

### **3.3 Soils**

The U.S. Department of Agriculture Natural Resources Conservation Service classifies the soil in the project site as Mokuleia loam (Ms) (see Figure 3-1). Mokuleia loam occurs in small areas on coastal plains, and is nearly level. The soil profile includes a surface layer of loam approximately eight inches thick in most places, underlain by a dark-brown and light-gray layer, 34 to 48 inches thick, consisting of single-grain sand and loamy sand. The surface layer of loam is moderately permeable, although water moves rapidly through the sand subsoil. Runoff is very slow, and the erosion hazard is no more than slight.



The soil capability class rating for Mokuleia loam is II if the land is irrigated, and VI if not irrigated.

The soil in the mauka section of Hau'ula Community Park is classified as Marsh (MZ). Marsh consists of wet, periodically flooded areas covered dominantly with grasses and bulrushes or other herbaceous plants. It occurs as small, low-lying areas along the coastal plains. Water stands on the surface, but marsh vegetation thrives. The water is fresh or brackish, depending on the proximity to the ocean.

Jaucas sand, 0 to 15 percent slopes (JaC) occurs in a narrow strip along Kamehameha Highway, extending from the shoreline to the area beneath the entrance to the parking lot, the residential lots, and the Hau'ula Fire Station along the makai boundary of the Park. In a representative profile, the soil is single grain, pale brown to very pale brown, sandy, and more than 60 inches deep. In many places the surface layer is dark brown as a result of accumulation of organic matter and alluvium. Permeability is rapid, and runoff is very slow to slow. Water erosion hazard is slight, but wind erosion is a severe hazard where vegetation has been removed.

Other soils found in the vicinity of the Park include Kawaihapai stony clay loam, 2 to 6 percent slopes (KlaB), located to the southwest, and Waialua stony silty clay, 3 to 8 percent slopes (WIB), located to the south. Lolekaa silty clay, 8 to 15 percent slopes (LoC) may be found to the west and Kawaihapai stony clay loam, 0 to 2 percent slopes (KlaA) is located to the northeast of the project site.

A preliminary geotechnical report conducted by Geolabs-Hawaii (May 2000) indicates that the project site is underlain by a surface fill layer approximately 4 to 5 feet thick, consisting of stiff, silty clay with some soft pockets. This fill layer superposes swamp deposits consisting of very soft organic clay, which extends to depths of about 5.5 to 8 feet below the ground surface. Lagoonal deposits, consisting of loose to very loose gravel and sands with varying amounts of silt, underlie the swamp deposits. These lagoonal deposits extended to the maximum depths explored: approximately 16.5 to 27.5 feet below the existing ground surface.

The *Detailed Land Classification – Island of Oahu* prepared by the University of Hawai'i Land Study Bureau (LSB), evaluates the quality or productive capacity of certain lands on the Island for selected crops and overall suitability in agricultural use. A five-class productivity rating system was established with "A" representing the highest productivity and "E" the lowest. According to the study, the project site is identified as lying within an urban area and, therefore, not rated.

The Agricultural Lands of Importance in the State of Hawaii (ALISH) map, prepared by the State Department of Agriculture, classifies agricultural lands into three categories: 1) Prime Agricultural Land, 2) Unique Agricultural Land, and 3) Other Important Agricultural Land. None of the land within the project site, or in the vicinity

of the project site, has been identified by the State ALISH system under any of the above mentioned categories.

#### **Environmental Impacts and Mitigation Measures**

No significant impacts on the soil within the project site are anticipated as a result of the construction and operation of the proposed building. The soils are unsuitable for agriculture. Excavation and grading activities associated with construction of the proposed project will comply with City and County of Honolulu grading ordinances and include appropriate erosion control measures. For flood protection, the proposed multi-purpose building will have a finish floor elevation of 8 feet, requiring approximately 50 cubic yards of imported fill material.

#### **3.4 Surface Water**

There are no streams or surface water features on the project site. The project site lies within the Waipuhi watershed. The *Hawaii Stream Assessment* does not identify any perennial streams "appropriate for protection" within the Waipuhi watershed. The nearest perennial stream is identified as Ma'akua Stream, which drains the Ma'akua watershed, emptying into the ocean at the south end of Hau'ula Beach Park approximately 0.3 mile north of the project site. Approximately 1 mile south of the project site, Kaluanui Stream enters the ocean, draining the Kaluanui watershed.

The U.S.G.S. Hau'ula Quadrangle depicts several drainage ditches and perennial streams in the area between Ma'akua Stream and Kaluanui Stream. Moving north from Kaluanui Stream, an unnamed drainage ditch is shown running through the Hau'ula Beach Homesteads. A more extensive drainage ditch system, located 0.4 mile up the coast, is shown to empty into the ocean just east of the first intersection of Kamehameha Highway and Hau'ula Homestead Road. Slightly further north streams draining Papali Gulch and Punaiki Gulch merge, flowing along the eastern boundary of Hau'ula Elementary School to the ocean. North of the project site, between the Hau'ula Fire Station and Kukuna Road, a ditch is shown to extend about 200 feet inland. Flow in this ditch is most likely intermittent, due to storm runoff and ground water seepage, as it drains the area of Hau trees and California grass west of Hau'ula Community Park. The mouth of this drainage was observed to be blocked by a large sand dune.

#### **Environmental Impacts and Mitigation Measures**

No significant impacts to surface water bodies are anticipated during the construction and operation of the proposed building. Construction activities are not likely to introduce or release into streams or drainage ditches any substance that could adversely affect streams or bodies of water in the vicinity of the project site.

Construction of the proposed multi-purpose building will disturb approximately 2,600 square feet of ground surface, and the proposed parking expansion will affect approximately 2,000 square feet. Excavation and grading activities associated with construction of the proposed project will comply with City and County of Honolulu grading ordinances and include appropriate erosion control measures.

After construction is completed, the additional 4,030 square feet of impermeable surface created by the proposed project is not anticipated to affect drainage patterns or the infiltration rate of rainwater since the project site is small in relation to the open space available throughout the Park.

### 3.5 Ground Water

The project site is situated above the ground-water body identified as Koolauloa Basal Water. The Koolauloa Aquifer System, which includes the Koolauloa Basal Water body and part of the Koolau High Level Dike Water body has a thick basal lens, which is recharged by leaks from high level dike impounded water along the Ko'olau Range. The basal lens is protected at the coast by a deep wedge of sedimentary caprock. It has a sustainable yield of 42.0 mgd of potable water, although a more conservative estimate of 35.0 mgd has been used for planning purposes in the past to ensure the maintenance of a higher equilibrium in the aquifer system.

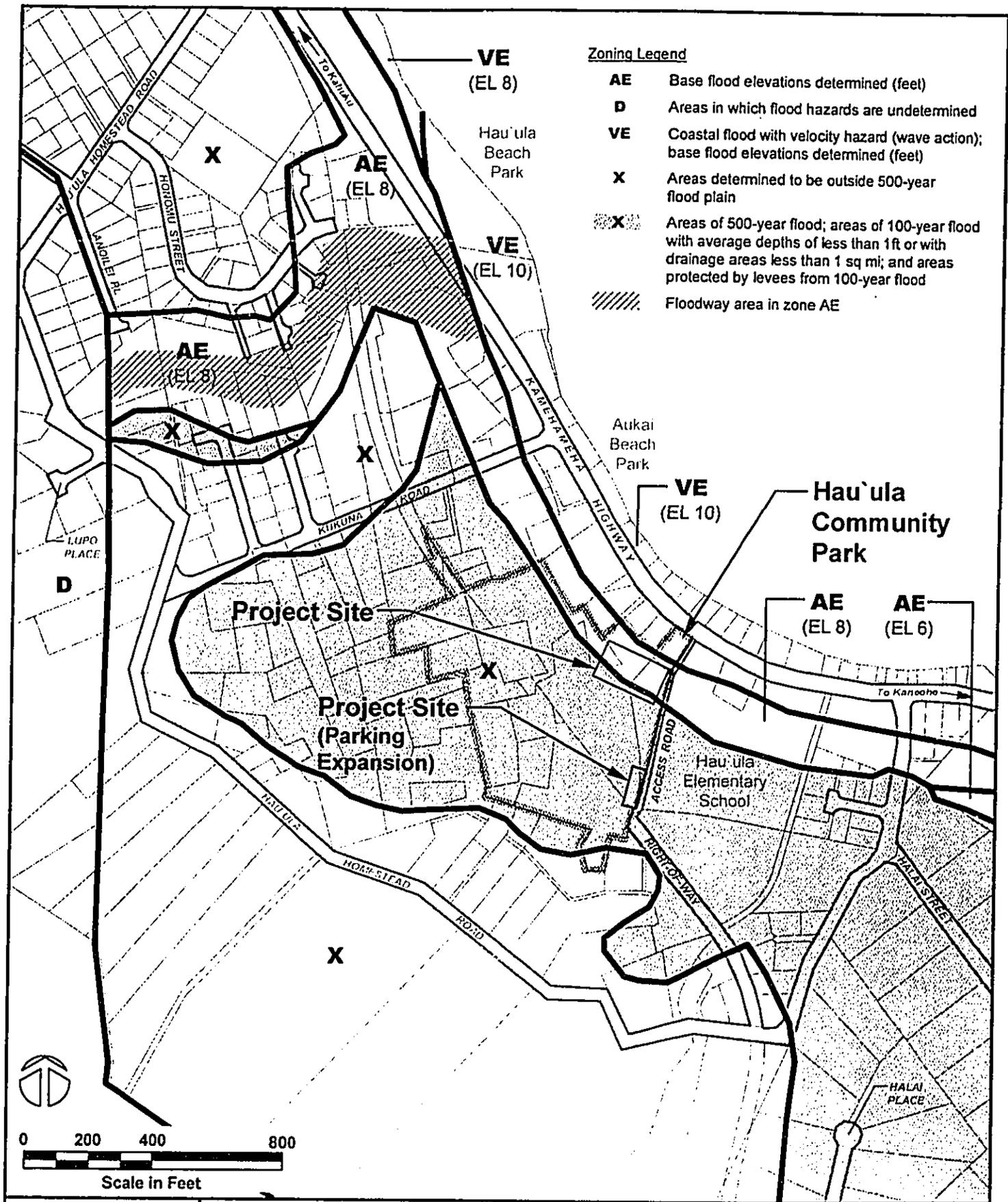
A preliminary geotechnical report by Geolabs-Hawaii (May 2000) indicates that the Ground-water table beneath the project site is relatively near to the ground surface. Drilled borings encountered ground water at depths ranging from approximately 3.7 to 4 feet below the existing ground surface at the time of field exploration.

#### Environmental Impacts and Mitigation Measures

No significant impacts to ground water underlying the project site are anticipated during the construction and operation of the proposed building and parking expansion. Construction of the proposed facility is unlikely to introduce or release into the soil any substance that could adversely affect ground water. As for the long-term operation of the facility, an aerobic treatment unit with two seepage pits will service the proposed building. This wastewater system, located to the south west of the proposed building, will be in conformance with all State DOH requirements, as specified by Chapter 62, Hawaii Administrative Rules.

### 3.6 Flood Hazard

The Flood Insurance Rate Map (FIRM), panel No. 150001 0015C (1990), of the U.S. Federal Emergency Management Agency (FEMA) identifies the project site as lying within areas determined to be Zone X (see Figure 3-2).



  
**WILSON OKAMOTO & ASSOCIATES, INC.**  
 ENGINEERS - PLANNERS

Hau'ula Community Park - Expansion of Multi-Purpose Building

**FLOOD ZONES**

**FIGURE**  
 3-2

Zone X includes areas subject to 500-year floods. Lands within Zone X are also subject to 100-year floods with average depths of less than one foot, or may include lands with drainage areas of less than one square mile, or areas protected by levees from 100-year floods.

### Impacts and Mitigation Measures

It is unlikely that construction and operation of the proposed building will result in flooding of the project site or the surrounding area. However, due to its low elevation and proximity to the shore, the project site is subject to coastal hazards such as storm waves and tsunami inundation. The proposed project is situated in Zone X, directly adjacent to the boundary of Zone AE, indicating that the project site is within the flood fringe. The finish floor of the new multi-purpose building will be constructed at an elevation of eight feet, which is the base flood elevation in the area immediately makai of the proposed site.

### 3.7 Flora and Fauna Resources

Flora: Landscaped vegetation within the fenced boundary of Hau'ula Community Park consists of grass maintained for the playfield. A Tropical Almond (Indian Almond), or false Kamani tree (*Terminalia catappa*), is situated near the entrance to the parking lot, just makai of the existing recreation building. Hau trees (*Hibiscus tiliaceus*) and California grass (*Brachiaria mutica*) grow thickly to the north and northwest, beyond the Park's playfields.

Fauna: Faunal species likely to be found in the vicinity are common and introduced. Mammals include domestic dogs (*Canis f. familiaris*), cats (*Felis catus*), Indian mongoose (*Herpestes a. auropunctatus*), and rats (*Rattus sp.*). Reptiles include toads and various species of gecko. Avifauna include doves, sparrows, and mynas. A neighboring home, located northwest of the Park near the playcourts, was observed to keep a small number of fowl, including chickens and geese.

### Environmental Impacts and Mitigation Measures

There are no known threatened or endangered species of flora or fauna inhabiting the project site. The proposed building will be located within the existing maintained area of Hau'ula Community Park, and thus, no loss of faunal habitat or impacts on floral species will occur as a result of construction activities or operation of the facility. The U.S. Fish and Wildlife Service indicated that they have no comments or objections to the proposed project (Staff Communication May 22, 2000)

### 3.8 Air Quality

Within the area of the proposed project, air quality is typical of rural communities. Sparse development and the exposure to trade winds promote good air quality. The only identifiable source of emissions is traffic travelling along Kamehameha Highway, and these emissions do not significantly affect ambient air quality in the area.

#### Environmental Impacts and Mitigation Measures

The proposed project will have short-term, construction-related impacts on air quality, including the generation of dust and emissions from construction vehicles, equipment, and commuting construction workers. The contractor will be responsible for complying with State Department of Health (DOH) Administrative Rules, Title 11, Chapter 60, "Air Pollution Control."

During the construction phase, two potential types of air pollution emissions will likely occur: 1) Fugitive dust from soil excavation and the movement of construction vehicles; and, 2) Carbon monoxide and nitrogen oxide emissions from on-site construction equipment and from worker's vehicles and equipment travelling to and from the project site. Compliance with State regulations will require adequate measures to control fugitive dust by methods such as frequent watering of loose or exposed soil and dust generating equipment during construction. As may be deemed appropriate, paving and/or reestablishment of vegetated areas early in the construction schedule will also help control dust. Exhaust emissions from construction vehicles are anticipated to have negligible impacts on air quality in the project vicinity as emissions would be relatively small and readily dissipated.

Upon completion of construction, there will be no long-term air quality impacts in the immediate vicinity of the project site, as the proposed action will not generate an increase in the number of park users or in the amount of traffic to the Park. The new multi-purpose building will provide activity space to meet the needs of existing DPR programs, which currently operate with insufficient space.

### 3.9 Noise

Typical of rural communities, ambient noise levels in the vicinity of the project site are predominantly attributable to natural conditions and vehicles travelling along Kamehameha Highway.

### **Environmental Impacts and Mitigation Measures**

Noise from construction activities will likely be unavoidable during the entire construction period. Unavoidable construction noise impacts will be mitigated to some degree by the contractor's compliance with provisions of the State DOH Administrative Rules, Title 11, Chapter 46, "Community Noise Control" noise regulations. These rules require a noise permit if the noise level from construction activity is expected to exceed the allowable levels stated in the Chapter 46 rules. It shall be the contractor's responsibility to minimize noise by properly maintaining noise mufflers and other noise-attenuating equipment, and to maintain noise levels within regulatory limits. Also, the guidelines for the hours of heavy equipment operation and noise curfew times, as set forth by the DOH noise control regulations, will be adhered to.

In the long-term, no noise impacts from the operation of the proposed facility are anticipated. Ambient noise levels in the immediate vicinity of the project site are not expected to increase, as the proposed action will not increase use of the Park or the amount of traffic to the Park. The new multi-purpose building will provide activity space to meet the needs of existing DPR programs, which currently operate with insufficient space.

### **3.10 Scenic Resources**

The dominant scenic feature in the vicinity of the project site is the panoramic ocean view. Mauka views include the distant slopes of the Ko'olau Mountains with ridges extending toward the sea. According to the City's Coastal View Study (1987), the project site lies within the Lā'ie/Ka'a'awa Viewshed. Kamehameha Highway, the coastal road through the region, provides "intermittent coastal views" in the Hau'ula area. The view study does not identify any significant stationary viewpoints along the Hau'ula coastline. The project site is momentarily visible from Kamehameha Highway, as residences and a sundry store are adjacent to the roadway.

#### **Impacts and Mitigation Measures**

The project site is set back approximately 300 feet from Kamehameha Highway. At this distance, existing park facilities, vegetation and structures mauka and adjacent to the highway would screen most motorists' views of the proposed project. The proposed multi-purpose building will be a single story structure consistent with the design of the existing recreation building. Appropriate landscaping and screening will be employed to compliment the rural character of the Park and the surrounding area, as required by the Ko'olau Loa *Sustainable* Communities Plan.

**3.11 Archaeological Resources**

There are no documented archaeological or historic sites on the project site or in the Hau'ula area. There are four documented archaeological sites within the vicinity of the project site, according to the *Hawaii Register of Historic Places*, as listed in Table 3-1. The nearest site is the Upper Kaipapa'u Stream, which runs through the Kaipapa'u Forest Reserve, and reaches the ocean approximately one mile from the project site, north of Hau'ula Beach Park. The remaining sites are situated more than one mile away in Kahana, Punalu'u, and Lā'ie.

Location	Registered Site Number	Site Description
Kahana	80-06-302	Pu'u Makane Heiau (pre-1778): Possible small heiau, badly deteriorated
Punalu'u	80-06-293	Hanawao Heiau (period unknown ): Remains of a large heiau, now used as a large cemetery; deteriorated condition
Kaipapa'u	80-05-1056	Upper Kaipapa u Stream (period unknown): Area contained one platform; others reported but not surveyed due to thick vegetation
Lā'ie	80-02-281	Nioi Heiau Complex (pre-1778): Heiau with unusual features; deteriorated condition; some research potential

Source: State Department of Land and Natural Resources. *Hawaii Register of Historic Places*. 1974.

**Environmental Impacts and Mitigation Measures**

According to the DLNR State Historic Preservation Division (SHPD), there are no known historic sites at the project site, which underwent an archaeological reconnaissance survey in 1980 prior to the development of the existing park. However, a discontinuous buried cultural deposit, including evidence of habitation and burials, was found in the Kamehameha Highway corridor during the construction of a waterline project in the project vicinity. In addition, during the installation of subsurface electrical lines at Hau'ula Elementary School, located immediately to the south of the project site, possible continuation of this subsurface deposit and an additional human burial were documented. An archaeological monitoring plan will be submitted to the SHPD for review and approval prior to any ground disturbance within the project site. Further, should any archaeological, cultural, or historic sites be uncovered during construction activities, all work in the project vicinity will cease and the SHPD will be notified immediately..

### **3.12 Socio-Economic Considerations**

#### **3.12.1 Population**

The 1990 Census reported the population of Honolulu at 836,231. The Ko'olau Loa Subdivision of Honolulu County, comprised of Hau'ula, Ka'a'awa, Kahuku, Kawela Bay, Lā'ie, Punalu'u, and Pūpūkea Census Designated Places (CDPs), was reported to have a population of 18,540 people. Of these seven CDPs, Hau'ula was the third most populated with 3,381 people. The populations of the Lā'ie and Pūpūkea CDPs were reported at 5,577 and 4,140, respectively (U.S. Bureau of the Census 1992).

#### **Environmental Impacts and Mitigation Measures**

No adverse impacts on the population of Hau'ula are anticipated as a result of the construction and operation of the proposed project.

The proposed project will benefit students participating in the Park's Teen Club, advised by the DPR Activities Coordinator. The new multi-purpose building will provide a space for Teen Club participants to hold enrichment activities on a regular basis, including academic, extracurricular and physical activity programs. It will also be used by youth involved with the Park's "at-risk" program, a volunteer-coordinated program encouraging self-improvement through cultural activities, community mentoring, and parental involvement.

#### **3.12.2 Economy**

The 1990 Census reported that, of the 2,265 people in Hau'ula age 16 or older, 1,421 people comprised the civilian labor force. The unemployment rate was 5.9 percent, and 14 percent of the population was living below poverty level. The median family income was \$37,283, and 12 percent of all families were living below poverty level (U.S. Bureau of the Census 1992).

#### **Environmental Impacts and Mitigation Measures**

No significant impacts on the economy of the Hau'ula area are anticipated as a result of the construction and operation of the proposed project.

### **3.13 Public Facilities and Services**

#### **3.13.1 Police, Fire, Ambulance and Medical Services**

Police: The Kahuku Police Substation is located on Kamehameha Highway, approximately 5.3 miles northwest of the project site, adjacent to the Kahuku Fire

Station and immediately east of Kahuku Intermediate and High Schools. The Substation also receives support from the Kailua and Kāne'ōhe Police Stations, located 19 and 16 miles away, respectively. The Substation is manned by 27 staff and officers assigned to 3 watches within a 24-hour period. Its service area extends approximately 20 miles along the Windward coast from Ka'a'awa to Waiale'e Stream (Department of Planning and Permitting 1999).

Fire: Fire protection service for the project area is provided by the Hau'ula Station No. 15 located approximately 250 feet to the northwest of the project site, near the intersection of Kukuna Road and Kamehameha Highway. The station's response area extends 6.8 miles along the Windward coast, from Kahana Bay to the Polynesian Cultural Center in Lā'ie. Five firefighters man 24-hour shifts every other day, for a total of 3 shifts. The station is equipped with a five-person engine company, a one-person tanker truck, and a surfboard for water rescues (Department of Planning and Permitting 1999).

Ambulance: The nearest Emergency Medical Service (EMS) ambulance is based at the Kahuku Fire Station, approximately 5.3 miles northwest of the project site.

Medical: The project site is within the service area of the Kahuku Hospital, located approximately 5.7 miles to the northwest. The Hospital is a non-profit, civic and public safety facility that provides emergency services and a physician base for primary medical services to the Ko'olau Loa community. The 25-bed Kahuku Hospital is outfitted with modern equipment and facilities and is staffed by 15 physicians and 60 employees. The Hospital provides numerous care services, including a 24-hour emergency room, medical/surgical care, obstetrical/gynecological care, and long-term care. Although most surgical procedures can be accommodated at Kahuku Hospital by surgeons who commute from other facilities, specialty cases are transferred to Honolulu hospitals.

Other medical facilities in the region include the Kaiser Permanente Kahuku Clinic, the Hale'iwa Family Health Center, and the North Shore Health Center in Kahuku. Castle Medical Center in Kailua and Wahiawā General Hospital also provide a full spectrum of acute and long-term care services.

### **Environmental Impacts and Mitigation Measures**

No significant impacts to fire services are anticipated as a result of the proposed project. Construction of the proposed multi-purpose building would negligibly increase the need for fire protection at Hau'ula Community Park. The project will be designed and built in compliance with the applicable City and County of Honolulu fire code requirements.

No increase in frequency of police and EMS service to the park is expected, as the proposed action will not generate an increase in the number of park users or in the amount of traffic to the Park. The new multi-purpose building is intended to serve existing DPR programs and program participants.

### **3.14 Infrastructure and Utilities**

#### **3.14.1 Solid Waste**

Currently, solid waste from Hau'ula Community Park is collected by the DPR and taken to the County's Kapa'a Transfer Station, located at the former Kapa'a Landfill. Waste material is then taken to the Honolulu Program of Waste Energy Recovery (H-POWER) Plant, located in Campbell Industrial Park, where it is incinerated to produce steam-generated electrical energy.

##### **Environmental Impacts and Mitigation Measures**

During the construction phase, short-term construction-related increases in solid waste are anticipated. The contractor will be responsible for the disposal of construction waste.

No significant impacts to the municipal solid waste collection and disposal system are anticipated in relation to operating the proposed multi-purpose building. Refuse generated by the proposed project will continue to be collected by the DPR and transported to the County's Kapa'a Transfer Station for disposal. The solid waste to be generated during operation of the proposed building is not anticipated to increase, as the proposed multi-purpose building is intended to serve existing DPR programs and program participants.

#### **3.14.2 Roadway System**

The primary vehicular access to Hau'ula Community Park is from Kamehameha Highway via a 10-foot wide access road, which serves both the Park and the adjacent Hau'ula Elementary School. Alternate access may be gained from a 40-foot right-of-way, which connect Hau'ula Homestead Road to the mauka end of the 10-foot access road.

##### **Environmental Impacts and Mitigation Measures**

Short-term, construction-related traffic impacts to area businesses, residents, and visitors may occur as a result of the proposed project. Motorists, pedestrians, and bicyclists traveling in and around the immediate

construction area may experience minor inconveniences and delays in travel time.

If necessary, to mitigate potential traffic congestion and delays along Kamehameha Highway, the movement of construction vehicles may be restricted during the morning and afternoon peak traffic hours. It is anticipated that all construction-related vehicles will park within the Park and, thus, will not affect street parking in the vicinity.

Advanced notification of construction activity will be sent to all residents and businesses in the project area, as well as to the Hau'ula Elementary School. Any road detours, if deemed necessary, will be coordinated with area residents, businesses and the school, the Honolulu Fire Department, and the Honolulu Police Department.

No significant long-term impacts are anticipated as a result of the operation of the proposed project, as the proposed action will not generate an increase in the number of park users or in the amount of traffic to the Park. The proposed parking expansion is intended to alleviate the existing congestion in the parking lot.

### **3.14.3 Water System**

Potable water is supplied by the City and County of Honolulu Board of Water Supply (BWS) from its Hau'ula 180 Water System. The Hau'ula Well and the Punalu'u Well No. 1, located about 0.8 miles northwest and about 1.6 miles southeast of the project site, respectively, are the primary sources of water for Hau'ula Town. Water is transported through one main service line, which extends along Kamehameha Highway. Other wells in the vicinity of Hau'ula and Punalu'u are sources for a transmission line that serves the Kāne'ohe area.

In the vicinity of the project site, the main supply line on Kamehameha Highway is a 12-inch line. Two 3-inch lines run parallel to the main supply line between the southeastern most intersection of Hau'ula Homestead Road and Kamehameha Highway and the intersection of Kukuna Road and Kamehameha Highway (Information Delivery Service 1999).

#### **Environmental Impacts and Mitigation Measures**

The proposed project's average daily water demand is calculated to be 8,800 gallons per day (gpd). The project's maximum daily and peak hour flow demands are calculated at 13,200 gallons and 4,500 gallons, respectively. Proposed water system improvements include a new 2-inch water line within the Park, connecting to an existing 2-inch water line near the existing recreation building.

Construction and operation of the proposed building will have no impact on the City and County of Honolulu Board of Water Supply's wells in Hau'ula and Punalu'u. Operation of the proposed facility will not result in a significant increase in water consumption demand, as the proposed action will not generate an increase in the number of park users. The new multi-purpose building is intended to serve existing DPR programs and program participants.

#### **3.14.4 Wastewater System**

There are no municipal sewer lines serving the Hau'ula area. Existing users in the vicinity employ cesspools for wastewater disposal. The State DOH no longer approves the use of cesspools for sewage disposal, and currently requires the installation of septic tanks and leaching fields or individual wastewater treatment systems.

The restrooms in the existing recreation building at Hau'ula Community Park are served by an individual wastewater system (IWS) which uses a cavitette for treatment and a cesspool located immediately makai of the existing building for disposal.

The Kahuku Wastewater Treatment Plant is located approximately 5.8 miles northwest of the project site on Kamehameha Highway, near the Kahuku Hospital. The facility has an average daily flow rate of 0.13 million gallons per day (mgd) and a treatment capacity of 0.20 mgd average flow. The facility utilizes injection wells as the primary method of waste disposal and incorporates the existing collection system for the entire Kahuku Area, extending from Makahoa Point in the South to the Ki'i Wildlife Refuge in the north and from the Kahuku Golf Course in the east to the residential areas just mauka of Kahuku Hospital. There are no planned sewer line extensions south towards the Hau'ula area.

#### **Environmental Impacts and Mitigation Measures**

The proposed project does not include new restrooms or other appurtenances requiring modification of the existing on-site wastewater system. As such, there will be no impact to the wastewater system.

### 3.14.5 Drainage System

Drainage in the vicinity of the project site follows a basic mauka to makai flow pattern. Water is channeled through gulches that flow from the Ko'olau range to the ocean. Water is also channeled to the sea through manmade drainage ditches throughout the vicinity (see Section 3.4.1). Other factors that affect drainage patterns include local topography and natural and manmade barriers. All of the streams and drainage ditches in the vicinity of the project site empty into coastal waters.

#### Environmental Impacts and Mitigation Measures

No significant impacts on the existing drainage patterns within Hau'ula Community Park are anticipated as a result of the construction and operation of the proposed building. During construction, close coordination will be maintained with the City Department of Facility Maintenance to ensure that functions of the existing area drainage patterns are not impacted or impeded.

Construction of the proposed multi-purpose building will disturb approximately 2,600 square feet of ground surface, and the proposed parking expansion will affect approximately 2,000 square feet. During construction, storm runoff may carry increased amounts of sediment as a result of erosion along newly excavated surfaces. This will be mitigated by compliance with the City's grading ordinance, including appropriate erosion control measures.

After construction is completed, the additional 4,030 square feet of impermeable surface created by the proposed project are not anticipated to affect the natural drainage patterns within the Park.

### 3.14.6 Electrical and Communication Systems

Electrical: Electrical service in the Hau'ula area is provided by Hawaiian Electric Company, Inc. (HECO) through a network of aerial power lines. A substation with a 12.5 kilovolt amperes (kVA) capacity is located at the corner of Hanaimoa Street and Pu'uowa'a Street, approximately 0.5 mile from the project site. The electrical system for the existing facilities at the Park includes two electrical meters.

Communication: Telephone service in the Hau'ula area is provided by Verizon Hawaii, Inc. through a network of overhead service lines. Phone service for Hau'ula is afforded through Verizon's Lā'ie substation, located approximately 3 miles northwest of the project site.

### **Environmental Impacts and Mitigation Measures**

No significant impacts are anticipated on the electrical or communication system as a result of the construction and operation of the proposed building. Existing electrical and telephone lines will be extended to service the new multi-purpose building. Close coordination with HECO and Verizon during the construction phase will ensure that aerial lines and utility poles will not be adversely impacted and electrical and phone services will not be interrupted to adjacent areas. Operation of the proposed facility will result in a slight increase in energy consumption demand, however this increase is negligible and will not require any upgrade of the electrical system.

Verizon confirmed that the project can be accommodated via existing overhead service lines and that the project does not present any conflict regarding telephone services (Correspondence dated August 15, 2000).

#### **4. ALTERNATIVES TO THE PROPOSED ACTION**

##### **4.1 No Action Alternative**

Under the No Action alternative, the project site would remain part of an open lawn separating the existing playcourts and the baseball/football field. The recreational facilities at Hau'ula Community Park would continue to be inadequate for park users, as the space provided by the existing recreation building is currently insufficient.

The No Action alternative would not be consistent with the general policies regarding parks and recreation areas, as described in the Ko'olau Loa *Sustainable Communities Plan* Section 3.3.2.2 – Community Based Parks, to “Expand the Hau'ula Community Park...to include a multi-purpose recreation facility.” This alternative would prevent the realization of all long-term benefits to the DPR activities program at Hau'ula Community Park, as well as benefits to other park users and community members.

The No Action alternative would also preclude all other short- and long-term beneficial and relatively insignificant adverse physical, environmental and socio-economic impacts described in this EA.

##### **4.2 Alternative I**

Alternative I consists of a single-story multi-purpose building situated immediately mauka of the existing basketball court. The detached structure would provide space for the Teen Center and DPR Staff, as well as additional restrooms, storage space, and an open lanai.

This alternative was not pursued due to DPR's concern that housing the Teen Center in a detached structure may over extend the responsibilities of the staff in managing the facilities.

## **5. SPECIAL MANAGEMENT AREA**

Pursuant to the Hawaii Coastal Zone Management Act (Chapter 205A, Hawaii Revised Statutes) all counties have enacted ordinances establishing Special Management Areas (SMA). Any development within the SMA, including development proposed by the State, requires a SMA Permit. On Oahu, the SMA permit is administered by the City Department of Planning and Permitting (DPP) and acted upon by the City Council pursuant to Ordinance No. 84-4.

The project site is located with the boundaries of the City's SMA (see Figure 5-1) and, therefore, will require approval of a SMA permit. The proposed project is in consonance with the following applicable objectives, policies and guidelines for the issuance of the SMA permit:

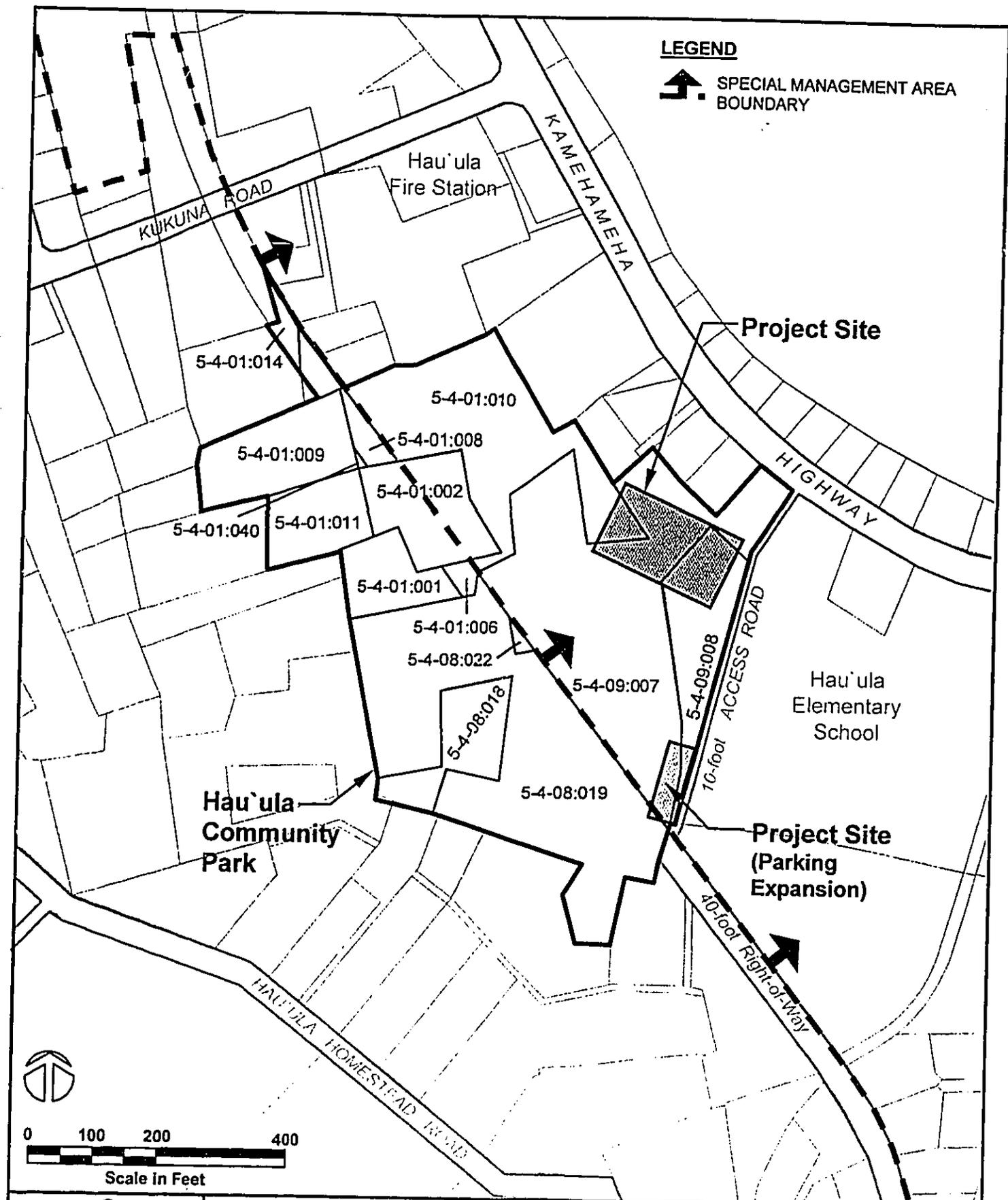
### **Recreational Resources**

*Objective: Provide coastal recreational opportunities accessible to the public.*

*Policy B: Provide adequate, accessible, and diverse recreational opportunities in the coastal zone management area by:*

*(iv) Providing an adequate supply of shoreline parks and other recreational facilities suitable for public recreation.*

**Comment:** The proposed project represents a continuation of an existing recreational use and will not have an adverse effect upon coastal or inland recreation resources. The proposed multi-purpose building is intended for use by youths participating in the Park's Teen Club, advised by the City and County of Honolulu DPR Activity Coordinator. The proposed project will provide a space for Teen Club participants to hold enrichment activities on a regular basis, including academic, extracurricular, and physical activity programs. The proposed project will provide the facilities necessary to create a comfortable, more spacious, and more effective environment for existing DPR programs. This is consistent with the Ko'olau Loa Sustainable Communities Plan, Section 3.1.3.5, which recommends the expansion of community-based parks where there is a lack of sufficient facilities and where recreational needs of residents are not being adequately met.



  
**WILSON OKAMOTO  
 & ASSOCIATES, INC.**  
 ENGINEERS • PLANNERS

Hau'ula Community Park - Expansion of Multi-Purpose Building

**SPECIAL MANAGEMENT AREA MAP**

**FIGURE**  
 5-1

### **Historic Resources**

*Objective: Protect, preserve, and, where desirable, restore those natural and manmade historic and prehistoric resources in the coastal zone management area that are significant in Hawaiian and American history and culture.*

*Policy A: Identify and analyze archaeological resources;*

*Policy B: Maximize information retention through preservation of remains and artifacts or salvage operations; and*

*Policy C: Support state goals for protection, restoration, interpretation and display of historic resources.*

**Comment:** According to the DLNR State Historic Preservation Division (SHPD), there are no known historic sites at the project site, which underwent an archaeological reconnaissance survey in 1980 prior to the development of the existing park. However, a discontinuous buried cultural deposit, including evidence of habitation and burials, was found in the Kamehameha Highway corridor during the construction of a waterline project in the project vicinity. In addition, during the installation of subsurface electrical lines at Hau'ula Elementary School, located immediately to the south of the project site, possible continuation of this subsurface deposit and an additional human burial were documented. An archaeological monitoring plan will be submitted to the SHPD for review and approval prior to any ground disturbance within the project site. Further, should any archaeological, cultural, or historic sites be uncovered during construction activities, all work in the project vicinity will cease and the SHPD will be notified immediately.

### **Scenic and Open Space Resources**

*Objective: Protect, preserve, and where desirable, restore or improve the quality of coastal scenic and open space resources.*

*Policy B: Ensure that new developments are compatible with their visual environment by designing and locating such developments to minimize the alteration of natural landforms and existing public views to and along the shoreline.*

**Comment:** The dominant scenic feature in the vicinity of the project site is the panoramic ocean view. Mauka views include the distant slopes of the Ko'olau Mountains with ridges extending toward the sea.

According to the City's Coastal View Study (1987), the project site lies within the Lā'ie/Ka'a'awa Viewshed. Kamehameha Highway, the coastal road through the region, provides "intermittent coastal views" in the Hau'ula area. The view study does not identify any significant stationary viewpoints along the Hau'ula coastline. The project site is momentarily visible from Kamehameha Highway.

The project site is set back approximately 300 feet from Kamehameha Highway. At this distance, existing park facilities, vegetation and structures mauka and adjacent to the highway would screen most motorists' views of the proposed project. The proposed multi-purpose building will be a single story structure consistent with the design of the existing recreation building. Appropriate landscaping and screening will be employed to compliment the rural character of the Park and the surrounding area, as required by the Ko'olau Loa Sustainable Communities Plan.

### **Coastal Ecosystems**

*Objective: Protect valuable coastal ecosystems from disruption and minimize adverse impacts on all coastal ecosystems.*

*Policy B: Preserve valuable coastal ecosystems, including reefs, of significant biological or economic importance.*

*Comment: The proposed project lies several hundred feet from the coastline, and is not anticipated to adversely impact coastal ecosystems. Excavation and grading activities associated with construction of the proposed project will comply with City and County of Honolulu grading ordinances and include appropriate erosion control measures. After construction is completed, the additional 7,200 square feet of impermeable surface created by the proposed project are not anticipated to affect the natural drainage patterns within the Park. A shallow swale on the mauka side of the proposed multi-purpose building will be constructed to facilitate drainage toward an existing ditch north of the Park.*

### **Economic Uses**

*Objective: Provide public or private facilities and improvements important to the State's economy in suitable locations.*

*Policy B: Ensure that coastal dependent development such as harbors and ports, and coastal related development, such as visitor*

*facilities, and energy-generating facilities are located, designed and constructed to minimize adverse social, visual and environmental impacts in the coastal zone management area.*

Comment: As it is located within an existing City Park, the proposed project will not affect opportunities for siting any coastal-dependent development, coastal related development, or energy-generating facilities.

**Coastal Hazards**

*Objective: Reduce hazard to life and property from tsunami, storm waves, stream flooding, erosion, subsidence, and pollution.*

*Policy C: Ensure that developments comply with requirements of the Federal Flood Insurance Program.*

Comment: The construction and operation of the proposed building will not cause flooding of the project site or the surrounding area. However, due to its low elevation and proximity to the shore, the project site is subject to coastal hazards such as storm waves and tsunami inundation. The proposed project is situated in Zone X, directly adjacent to the boundary of Zone AE, indicating that the project site is within the flood fringe. The finish floor of the new multi-purpose building will be constructed at an elevation of eight feet, which is the base flood elevation in the area immediately makai of the proposed site.

**Managing Development**

*Objective: Improve the development review process, communication, and public participation in the management of coastal resources and hazards.*

*Policy B: Facilitate timely processing of applications for development permits and resolve overlapping of conflicting permit requirements.*

Comment: In compliance with the Special Management Area Rules and Regulations of the City and County of Honolulu, required documentation will be filed with the City's Department of Planning and Permitting in conjunction with the SMA permit application which will be subject to a public hearing and decision by the Honolulu City Council.

**Public Participation**

*Objective: Stimulate public awareness, education, and participation in coastal management.*

*Policy B: Disseminate information on coastal management issues by means of educational materials, published reports, staff contact, and public workshops for persons and organizations concerned with coastal-related issues, developments, and government activities.*

*Comment: The public will be afforded an opportunity to review and comment on the EA pursuant to the requirements of Chapter 343 Hawaii Revised Statutes and Section 11-200 of Title 11 Department of Health Administrative Rules. In addition, the public participation objective will be addressed during the processing of the SMA Permit which will include public notification, as well as a public hearing.*

**Beach Protection**

*Objective: Protect beaches for public use and recreation.*

*Comment: The project is not anticipated to adversely impact any beaches or shoreline resources. The proposed improvements are not located adjacent to the shoreline or along any public beaches or beach parks.*

**Marine Resources**

*Objective: Implement the State's Ocean resources management plan.*

*Policy A: Exercise an overall conservation ethic, and practice stewardship in the protection, use, and development of marine and coastal resources.*

*Comment: The project is not anticipated to adversely impact marine and coastal resources. Excavation and grading activities associated with construction of the proposed project will comply with City and County of Honolulu grading ordinances and include appropriate erosion control measures.*

## **6. REQUIRED PERMITS AND APPROVALS**

The following is a list of permits and approvals, which may be required prior to construction of the proposed project:

### City and County of Honolulu

- Department of Planning and Permitting
  - Special Management Area (SMA) Permit
  - Building Permit
  - Grading Permit

## 7. DETERMINATION OF FONSI

The proposed project involves the expansion of the recreational facilities at Hau'ula Community Park in Hau'ula, Ko'olau Loa, O'ahu, with the construction of a new multi-purpose building and additional parking stalls. Potential impacts of the proposed project have been evaluated in accordance with the significance criteria of Section 11-200-12 of the Department of Health's Administrative Rules. Discussion of the project's conformance to the criteria is presented as follows:

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

The proposed project is not anticipated to involve any construction activity that may lead to a loss or destruction of any natural or cultural resource. There is little potential for encountering such resources, as the site has already been graded and landscaped for the existing park facilities.

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

The proposed project will not curtail the beneficial uses of the environment. Use of the project site for the proposed project would be consistent with its current use as a park.

- (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 project is not in conflict with the long-term environmental policies, goals, and guidelines of the State of Hawaii. As presented earlier in Section 3, the project's potential adverse impacts are associated only with the short-term construction-related activities, and such impacts can be mitigated through adherence to standard construction mitigation practices.

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

The proposed project will have no adverse effects on the economy of Hau'ula. As for the social welfare of the community, long-term social benefits will manifest through the availability of meeting and recreational space for the Park's Teen Club and "at-risk" program participants to pursue academic and enrichment activities on a regular basis. These program presently do not have sufficient space, as they share the existing recreation building with programs for children and other community groups. The proposed project will provide the facilities necessary to create a comfortable, more spacious, and more effective environment for DPR programs.

(5) *Substantially affects public health;*

Because of the already limited community park facilities in the Koolauloa area, the proposed project will properly serve the people of Hau'ula by enhancing the recreation facilities for use by current and future members of the community.

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

No adverse secondary impacts are anticipated as a result of the construction activities or long-term operation of the proposed project. The new multi-purpose building is in concert with the general policies regarding community parks, as stated in Section 4.1.

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

Construction activities associated with the proposed project are anticipated to result in negligible short-term impacts to noise, air-quality, and traffic in the immediate vicinity. With the incorporation of the recommended mitigation measures during the construction period, the project will not result in degradation of environmental quality.

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

No cumulative effects are anticipated, inasmuch as the proposed project involves a redevelopment of a site, which is consistent with its current use as a community park.

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

There are no known, threatened, or endangered species of flora or fauna or associated habitats on the project site that could be adversely affected by the construction and operation of the proposed project.

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

Operation of construction equipment would temporarily elevate ambient noise levels and concentrations of dust and exhaust emissions in the vicinity of the project site. Operation of the proposed project will have no significant impact on air or water quality or ambient noise levels in the vicinity.

- (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, fresh water, or coastal waters;*

The project is located within Zone X, areas designated to be subject to 500-year floods, and 100-year floods with average depths of less than 1 foot. The proposed project is situated adjacent to the boundary of Zone AE, and therefore is within the flood fringe. The finish floor of the new multi-purpose building will be constructed at an elevation of eight feet, which is the base flood elevation in Zone AE, the area immediately makai of the proposed site.

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

The proposed project will alter the visual setting by adding a new structure at the makai end of the Park. The new structure, however, will comply with all applicable development standards of the existing zoning and will not affect scenic views.

- (13) Requires substantial energy consumption.*

Construction and operation of the project will not require substantial increases in energy consumption.

## **8. CONSULTATION**

### **8.1 Pre-Assessment Consultation**

The following agencies and organizations were consulted during the preparation of the Draft EA. Of the six parties that formally replied during the pre-assessment period, some had no comments while others provided comments, as indicated by the ✓ and ✓✓, respectively. All written comments are reproduced herein.

#### **Federal Agencies**

- ✓ U.S. Fish and Wildlife Service (John Schmerfeld, Personal Communication)

#### **State Agencies**

- ✓ Department of Education
- ✓✓ Department of Land and Natural Resources, Historic Preservation Division
- ✓✓ Department of Transportation, Highways Division

#### **County Agencies**

- ✓✓ Department of Planning and Permitting
- ✓✓ Department of Parks and Recreation

DEPARTMENT OF PLANNING AND PERMITTING  
**CITY AND COUNTY OF HONOLULU**  
 650 SOUTH KING STREET • HONOLULU, HAWAII 96813  
 TELEPHONE: (808) 523-4414 • FAX: (808) 527-8733 • INTERNET: WWW.CITYANDCOUNTY.HI.GOV

**RECEIVED**  
 MAY 26 2000



RAMDALL K. FUJIKI, AIA  
 DIRECTOR  
 LORETTA K. CHIEE  
 SENIOR DIRECTOR  
 2000/CLOG-2965 (DT)

May 25, 2000

Mr. Earl Matsukawa  
 Wilson Okamoto & Associates, Inc.  
 1907 S. Beretania Street, Suite 400  
 Honolulu, Hawaii 96826

Dear Mr. Matsukawa:

Preliminary Review  
 Hauula Community Park, Multi-Purpose Building Expansion  
Tax Map Keys: 5-4-1; 10; 5-4-8; 19; 5-4-9; 7 and 8

Thank you for the opportunity to review the above-described project. We have the following comments:

1. The project area is within the Special Management Area (SMA) and will require a SMA permit.
2. The Draft Environmental Assessment should include a Site Plan showing the proposals, designating the separate tax map key parcels.

Although we have no other comments at this time, we would like to review the Draft Environmental Assessment (EA) when it becomes available. Please send four copies of the EA to this department for any future review. In 1998, City departments were reorganized and three additional project review branches, Civil Engineering, Traffic Review and Wastewater, are now part of our department.

If you have any questions regarding this letter, please call Ms. Dana Teramoto of our staff at 523-4648.

Very truly yours,

*Randall K. Fujiki*  
 RANDALL K. FUJIKI, AIA  
 Director of Planning and Permitting

RKF:dt

cc: Dept. of Design and Construction  
 (Wesley Obata)

DEPARTMENT OF PLANNING AND PERMITTING  
**CITY AND COUNTY OF HONOLULU**  
 650 SOUTH KING STREET • HONOLULU, HAWAII 96813  
 TELEPHONE: (808) 523-4414 • FAX: (808) 527-8733 • INTERNET: WWW.CITYANDCOUNTY.HI.GOV

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 MAY 31 2000



RAMDALL K. FUJIKI, AIA  
 DIRECTOR  
 LORETTA K. CHIEE  
 SENIOR DIRECTOR  
 2000/CLOG-2997 (ST)

2000/CLOG-2997 (ST)

May 30, 2000

Earl Matsukawa, AICP  
 Project Manager  
 Wilson Okamoto & Associates, Inc.  
 1907 S. Beretania, Suite 400  
 Honolulu, Hawaii 96826

Dear Mr. Matsukawa:

Pre-Assessment Consultation  
 Draft Environmental Assessment (DEA)  
 Hauula Community Park Expansion - Hauula  
Tax Map Keys 5-4-1; 10; 5-4-8; 19; 5-4-9; 7 and 8

We have reviewed the information for the above-referenced project received on May 17, 2000, and confirm that a major Special Management Area (SMA) Use Permit is required.

We suggest that a thorough discussion of the proposed project's conformance with the land use policies, principles and guidelines of the Ko'olau Ioa Sustainable Communities Plan be included. On an editorial note, the introduction section of the Project Summary (p.1), incorrectly cites the EIS rules, Title 11, Chapter 200, Hawaii Administrative Rules (HAR), as Chapter 20.

We will provide additional comments when the DEA becomes available. If you have any questions, please contact Steve Tagawa of our staff at 523-4817.

Sincerely yours,

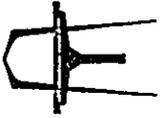
*Chelen Mark*  
 For RANDALL K. FUJIKI, AIA  
 Director of Planning  
 and Permitting

RKF:lg  
 Permit: 4074

**WILSON**  
**OKAMOTO**  
**& ASSOCIATES, INC.**

Letter to Mr. Randall K. Fujiki  
6382-02  
July 21, 2000  
Page 2

**WILSON**  
**OKAMOTO**  
**& ASSOCIATES, INC.**



ENGINEERS  
PLANNERS  
335 BERKELEY ST  
SUITE 400  
HONOLULU HI 96806  
PHONE 808-946-2277  
FAX 808-946-2253

6382-02  
July 21, 2000

Mr. Randall Fujiki, Director  
Department of Planning and Permitting  
City and County of Honolulu  
650 S. King Street  
Honolulu, Hawaii 96813

Dear Mr. Fujiki:

Subject: Hau'ula Community Park - Multi-Purpose Building Expansion  
Pre-Environmental Assessment Consultation  
Tax Map Keys: 5-4-09:07 & 08 (por.), 5-4-01:10 (por.), 5-4-08:19 (por.)  
Hau'ula, Hawaii

Thank you for your letters of May 25, 2000 and May 30, 2000 (Ref. Log No. 2000/CLOG-2965(DT) and 2000/CLOG2997(ST)), regarding the subject Pre-Environmental Assessment Consultation.

An application for a Special Management Area (SMA) Permit and applicable supplementary materials for the proposed project will be submitted to the Department of Planning and Permitting.

Your comment regarding the relationship between the proposed project and affected tax map key parcels is acknowledged, and a figure showing the proposed multi-purpose building site and proposed parking expansion will be included in the forthcoming Draft Environmental Assessment.

Your concerns regarding the proposed project's consistency with the Ko'olau Loa Sustainable Communities Plan are acknowledged and will be addressed in the forthcoming Draft Environmental Assessment (EA). Section 3 of the Ko'olau Loa Sustainable Communities Plan, entitled Land Use Policies, Principles and Guidelines, includes guidelines for Open Space Preservation (Section 3.1) and Parks and Recreation Areas (Section 3.2).

Guidelines related to the proposed project are:

- Expand or provide new community-based parks in areas where there is a lack of sufficient facilities and where recreational needs of residents are not being adequately met (Section 3.1.3.5).
- Design and site structural improvements and landscaping in the community-based parks so as to create or add to the aesthetic value of these open space elements (Section 3.1.3.5).

Planning principles related to the proposed project include:

- *Appropriate Siting and Screening.* Carefully site active playfields and supporting facilities for intensive use, and use generous landscaping and screening to reduce the potential impacts on surrounding areas (Section 3.3.3).
- *Environmental Compatibility.* Construct park facilities in a manner that avoids adverse impacts on natural resources or processes in the coastal zone or any other environmentally sensitive area. In the design of recreation areas, incorporate natural features of the site and use landscape materials that are indigenous to the area where feasible to retain a sense of place (Section 3.3.3).

Most relevant to the proposed project is a general policy for community-based parks included in Section 3.3.2.2 of the *Sustainable Communities Plan*:

- Expand the Hau'ula Community Park by acquiring adjacent parcels, when feasible, to include a multi-purpose recreation facility.

This policy is addressed in Section 4 of the forthcoming Draft EA. The aforementioned planning principles are addressed in the impacts and mitigation measures described throughout Section 3, and the project's impact on scenic resources is specifically addressed in Section 3.10. The guideline calling for expansion of facilities, where recreational needs of residents are not being adequately met, is discussed in Section 2.1.

**WILSON**  
**OKAMOTO**  
**ASSOCIATES, INC.**

Letter to Mr. Randall K. Fujiki  
6382-02  
June 1, 2000  
Page 3

We appreciate your interest and participation in the consultation phase of the environmental review process. Your letter will be included in the forthcoming Draft Environmental Assessment.

Sincerely,



Earl Matsukawa, AICP  
Project Manager

cc: Mr. Richard Osato, Kajioka Yamachi Architects, Inc.  
Mr. Wesley Obata, City & County of Honolulu Department of Design & Construction

DEPARTMENT OF PARKS AND RECREATION  
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET, 10TH FLOOR • HONOLULU, HAWAII 96813  
PHONE: (808) 533-4131 • FAX: 533-4054



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JUN 01 2000

WILLIAM D. BALFOUR, JR.  
DIRECTOR

MICHAEL T. ALMI  
DEPUTY DIRECTOR

May 30, 2000

Wilson Okamoto & Associates, Inc.  
1907 South Beretania Street, Suite 400  
Honolulu, Hawaii 96826

Attention: Earl Matsukawa, AICP, Project Manager  
Gentlemen:

Subject: Environmental Assessment (EA) Pre-Assessment Consultation  
Hauula Community Park-Expansion of Multi-Purpose Building  
Hauula, Oahu, Hawaii  
TMK: Portions of 5-4-1:10, 5-4-8:19, 5-4-09:7 and 8

Thank you for the opportunity to comment on the proposed expansion of the Multi-Purpose Building at Hauula Community Park. The Department of Parks and Recreation supports the expansion of the Multi-Purpose Building and is prepared to support the expanded teen activities, accordingly.

We look forward to reviewing the final Environmental Assessment. Should you have any questions, please contact Mr. John Reid, Planner, at 547-7396

Sincerely,

*W.D. Balfour, Jr.*  
WILLIAM D. BALFOUR, JR.  
DIRECTOR

WDB:cu  
100-376229

cc: Mr. Wesley Obata, Department of Design and Construction  
Mr. Don Griffin, Department of Design and Construction

6382-02  
July 21, 2000

Mr. William D. Balfour, Jr., Director  
Department of Parks and Recreation  
City and County of Honolulu  
650 S. King Street, 10<sup>th</sup> Floor  
Honolulu, Hawaii 96813

Dear Mr. Balfour:

Subject: Hau'ula Community Park - Multi-Purpose Building Expansion  
Pre-Environmental Assessment Consultation  
Tax Map Keys: 5-4-09:07 & 08 (por.), 5-4-01:10 (por.), 5-4-08:19 (por.)  
Hau'ula, Hawaii

Thank you for your letter of May 30, 2000, regarding the subject Pre-Environmental Assessment Consultation.

We appreciate your interest and participation in the consultation phase of the environmental review process. Your support of the proposed project is acknowledged and your comment letter will be included in the forthcoming Draft Environmental Assessment.

Sincerely,

Earl Matsukawa, AICP  
Project Manager

cc: Mr. Richard Osato, Kajjoka Yamachi Architects, Inc.  
Mr. Wesley Obata, City & County of Honolulu Department of Design & Construction

BENJAMIN J. CALETANO  
JOINT P.O. BOX



STATE OF HAWAII  
DEPARTMENT OF EDUCATION  
P.O. BOX 2200  
HONOLULU, HAWAII 96824

PAUL G. LEMAHIEU, Ph.D.  
SUPERINTENDENT

OFFICE OF THE SUPERINTENDENT

May 30, 2000

Mr. Earl Matsukawa, AICP  
Wilson Okamoto & Associates, Inc.  
1907 South Beretania Street, Suite 400  
Honolulu, Hawaii 96826

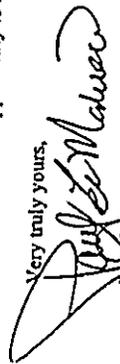
Dear Mr. Matsukawa:

Subject: Hau'ula Community Park  
Multi-Purpose Building Expansion  
Pre Assessment Consultation

The Department of Education has no comment on the proposed project at this time.

Thank you for the opportunity to respond.

Very truly yours,

  
Paul G. LeMahieu, Ph.D.  
Superintendent of Education

PLEM:by

cc: Paula Yoshioka, DAS  
Wesley Obata, C&C

6382-02  
July 21, 2000

WILSON  
OKAMOTO  
& ASSOCIATES, INC.



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SUITE 400  
HONOLULU, HI 96826  
PH: (808) 946-2277  
FAX: (808) 946-2253

Dr. Paul G. LeMahieu, Ph.D.  
Superintendent of Education  
Department of Education  
State of Hawaii  
P.O. Box 2360  
Honolulu, Hawaii 96804

Dear Dr. LeMahieu:

Subject: Hau'ula Community Park -- Multi-Purpose Building Expansion  
Pre-Environmental Assessment Consultation  
Tax Map Keys: 5-4-09:07 & 08 (por.), 5-4-01:10 (por.), 5-4-08:19 (por.)  
Hau'ula, Hawaii

Thank you for your letter of no comment dated May 30, 2000, regarding the subject  
Pre-Environmental Assessment Consultation.

We appreciate your interest and participation in the consultation phase of the  
environmental review process. Your letter will be included in the forthcoming Draft  
Environmental Assessment.

Sincerely,



Earl Matsukawa, AICP  
Project Manager

cc: Mr. Richard Osato, Kajiooka Yamachi Architects, Inc.  
Mr. Wesley Obata, City & County of Honolulu Department of Design &  
Construction

WILSON OKAMOTO & ASSOC., INC.

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JUN 14 2000



STATE OF HAWAII

DEPARTMENT OF LAND AND NATURAL RESOURCES

HISTORIC PRESERVATION DIVISION  
211 Wilson Building, Room 555  
Honolulu, Hawaii 96826

THOMAS E. JOHNS, CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES

DOVITILE  
JANET L. CARROLL

AQUATIC RESOURCES  
BOATING AND OCEAN RECREATION  
CONSERVATION AND RESOURCES  
MANAGEMENT  
CONVEYANCE  
FORESTRY AND WILDLIFE  
HISTORIC PRESERVATION  
LAND  
STATE PARKS  
WATER RESOURCE MANAGEMENT

LOG NO: 25576 ✓  
DOC NO: 0006EJ02

June 7, 2000

Earl Matsukawa, AICP  
Project Manager  
Wilson Okamoto & Associates, Inc.  
1907 South Beretania Street, Suite 400  
Honolulu, Hawaii 96826

Dear Mr. Matsukawa:

**SUBJECT:** Chapter 6E-8 Historic Preservation Review- Pre-Assessment Consultation for City & County of Honolulu, Hau'ula Community Park -- Expansion of Multi-Purpose Building  
Hau'ula, Ko'olaupua, O'ahu  
TRK: 5-4-9-001:010, 5-4-8:019; 5-4-009:7 & 8

Thank you for the opportunity to provide comment for the Environmental Assessment on the Hau'ula Community Park Expansion of Multi-Purpose Building. The project proposes to construct a new multi-purpose building and additional parking stalls immediately *mauka* of the existing basketball court; these improvements will be connected to the existing recreation building with a new sidewalk. Ground disturbance other than construction of the new facility includes water and drainage systems, electrical and communications systems, and a wastewater treatment unit and seepage pit.

A review of our records shows that there are no known historic sites at the project location, which underwent archaeological reconnaissance survey in 1980 before development of the Community Park. However, a discontinuous buried cultural deposit including evidence for habitation and burials was found in the Kamehameha Highway corridor during the City & County's water line project in this vicinity (State Site No. 50-80-06-4794). A possible continuation of this subsurface deposit and an additional human burial were also documented at Hau'ula Elementary School during installation of subsurface electrical lines.

Although surface historic sites are not found on these parcels, it is possible that the ground disturbance for the proposed facility will have an adverse effect on such subsurface cultural deposits. Therefore we believe that on-site archaeological monitoring may be most appropriate to mitigate these adverse effects.

Earl Matsukawa  
Page 2

An acceptable archaeological monitoring plan should be prepared and submitted to this office for review and acceptance prior to beginning any ground disturbance. An acceptable archaeological monitoring plan has the following components:

An archaeological monitoring plan must contain the following eight specifications: (1) The kinds of remains that are anticipated and where in the construction area the remains are likely to be found; (2) How the remains and deposits will be documented; (3) How the expected types of remains will be treated; (4) The archaeologist conducting the monitoring has the authority to halt construction in the immediate area of a find in order to carry out the plan; (5) A coordination meeting between the archaeologist and construction crew is scheduled, so that the construction team is aware of the plan; (6) What laboratory work will be done on remains that are collected; (7) A schedule for report preparation; and (8) Details concerning the archiving of any collections that are made.

If an acceptable archaeological monitoring plan is prepared, and if the plan is implemented, then we believe that the proposed undertaking will have "no adverse effect" on significant historic sites.

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

Aloha,  
  
Don Hibbard, Administrator  
State Historic Preservation Division

EJ:dmm

**WILSON**  
**OKAMOTO**  
& ASSOCIATES, INC.

Letter to Mr. Don Hibbard, Ph.D.  
6382-02  
July 21, 2000  
Page 2

6382-02  
July 21, 2000

**WILSON**  
**OKAMOTO**  
& ASSOCIATES, INC.



ENGINEERS  
PLANNERS  
227 S. BERTANIERA ST  
SUITE 400  
HONOLULU, HI 96826  
PH: 808/346-2277  
FAX: 808/346-2253

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

Dear Dr. Hibbard:

Subject: Hau'ula Community Park – Multi-Purpose Building Expansion  
Pre-Environmental Assessment Consultation  
Tax Map Keys: 5-4-09:07 & 08 (por.), 5-4-01:10 (por.), 5-4-08:19(por.)  
Hau'ula, Hawaii

Thank you for your letter of June 7, 2000 (Ref. Log No. 25576, Doc No. 0006EJ02), regarding the subject Pre-Environmental Assessment Consultation.

Your comment regarding the possible presence of subsurface cultural deposits beneath the project site is acknowledged, as well as your recommendation for on-site archaeological monitoring during excavation and ground disturbance. An appropriate archaeological monitoring plan will be prepared and submitted to your office for review and acceptance prior to the commencement of any excavation activities. The monitoring plan will be prepared in accordance with the eight specifications described in your letter so as to ensure that the proposed project will have "no adverse effect" on significant historic sites and cultural deposits.

We appreciate your interest and participation in the consultation phase of the environmental review process. Your letter will be included in the forthcoming Draft Environmental Assessment.

Sincerely,



Earl Matsukawa, AICP  
Project Manager

cc: Mr. Richard Osato, Kajioka Yamachi Architects, Inc.  
Mr. Wesley Obata, City & County of Honolulu Department of Design & Construction

BENJAMIN J. CATTEANO  
GOVERNOR



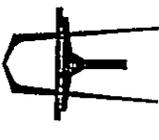
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
869 PUNCHBOWL STREET  
HONOLULU, HAWAII 96813-5097

JUN 20 2000

KAZU HAYASHIDA  
DIRECTOR  
BRUCE OKAMOTO  
SERAN K. ANTONIO  
GLENN L. OKAMOTO

IN REPLY REFER TO:  
HWY-PS  
2.8890

WILSON  
OKAMOTO  
& ASSOCIATES, INC



ENGINEERS  
PLANNERS  
1907 S BERETANIA ST  
SUITE 400  
HONOLULU, HI 96826  
PH: (808) 946-2277  
FAX: (808) 946-2253

Mr. Earl Matsukawa  
Project Manager  
Wilson Okamoto & Associates, Inc.  
1907 South Beretania Street, Suite 400  
Honolulu, Hawaii 96826

Dear Mr. Matsukawa:

Subject: Environmental Assessment, Pre-Assessment Consultation  
Hau'ula Community Park - Expansion of Multi-purpose Building  
Hau'ula, Oahu, Hawaii, TMK: 5-4-1: 10, 5-4-8: 19, 5-4-09: 7 and 8

Thank you for your transmittal of May 15, 1999, soliciting our comments regarding the above project.

We have the following comment:

Construction plans must be submitted to us for all work done within the Kamehameha Highway rights-of-way.

Very truly yours,  
  
KAZU HAYASHIDA  
Director of Transportation

6382-02  
July 21, 2000

Mr. Kazu Hayashida, Director  
Department of Transportation  
State of Hawaii  
869 Punchbowl Street  
Honolulu, Hawaii 96813

Dear Mr. Hayashida:

Subject: Hau'ula Community Park - Multi-Purpose Building Expansion  
Pre-Environmental Assessment Consultation  
Tax Map Keys: 5-4-09:07 & 08 (por.), 5-4-01:10 (por.), 5-4-08:19 (por.)  
Hau'ula, Hawaii

Thank you for your letter of June 20, 2000 (Ref. Log No. HWY-PS 2.8890) regarding the subject Pre-Environmental Assessment Consultation. Your comment regarding the necessary submittal of construction plans for work within the Kamehameha Highway rights-of-way is acknowledged. The construction of the proposed multi-purpose building and parking expansion will not include any improvements to Kamehameha Highway.

We appreciate your interest and participation in the consultation phase of the environmental review process. Your letter will be included in the forthcoming Draft Environmental Assessment.

Sincerely,  
  
Earl Matsukawa, AICP  
Project Manager

cc: Mr. Richard Osato, Kajiooka Yamachi Architects, Inc.  
Mr. Wesley Obata, City & County of Honolulu Department of Design & Construction



## 8.2 Draft EA Consultation

The following agencies, organizations and elected officials were consulted during the public review period of the Draft EA. Of the eight parties that formally replied during the Draft EA comment period, some had no comments while others provided comments, as indicated by the ✓ and ✓✓, respectively. All written comments are reproduced herein.

### Federal Agencies

- ✓ U.S. Army Engineer District

### State Agencies

- Department of Business, Economic Development and Tourism, Office of Planning
- ✓ Department of Education
- Department of Health
- ✓✓ Department of Land and Natural Resources (DLNR)
- ✓✓ DLNR, State Historic Preservation Division
- ✓ Department of Transportation
- Office of Hawaiian Affairs
- University of Hawai'i Environmental Center

### County Agencies

- Board of Water Supply
- ✓✓ Department of Parks and Recreation
- ✓✓ Department of Planning and Permitting

### Elected Officials

- Councilmember Steve Holmes

### Other Interested Parties

- Hau'ula Community Association
- Hau'ula Community Park Visioning Committee
- Hau'ula Cultural Preservation Committee
- Hau'ula Elementary School-Based Community Management Council
- Hau'ula Elementary School PTSA (Lokahi Group)
- Koolauloa Neighborhood Board No. 28
- Koolauloa Youth Athletic Club
- Koolauloa Youth Organization
- ✓✓ Verizon Hawaii, Inc. (formerly GTE Hawaiian Telephone Company)
- Hawaiian Electric Company, Inc.



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

READY TO  
ATTENTION OF

August 21, 2000

Regulatory Branch

Mr. Randall K. Fujiki, AIA  
Department of Planning and Permitting  
City and County of Honolulu  
650 South King Street  
Honolulu, Hawaii 96813

Dear Mr. Fujiki:

This letter responds to your request for review and comments on the draft Environmental Assessment (DEA) for the Hauula Community Park Multi-Purpose Building Expansion, dated August 2, 2000. Based on the information provided in the DEA I have determined that a Department of the Army permit will not be required for this project.

If you have any questions concerning this determination, please contact William Lennan of my staff at 438-6986, and reference File No. 20000284.

Sincerely,

George P. Young, P.E.  
Chief, Regulatory Branch

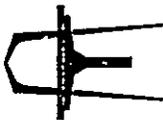
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'00 AUG 23 PM 3 39  
CITY & COUNTY OF HONOLULU

6382-02

September 19, 2000

WILSON  
OKAMOTO  
& ASSOCIATES, INC.



ENGINEERS  
PLANNERS  
1907'S BERETANIA ST.  
SUITE 400  
HONOLULU, HI 96816  
PH (808)946-2377  
FAX (808)946-2350

Mr. George P. Young, P.E., Chief  
Regulatory Branch  
Department of the Army  
U.S. Army Engineer District, Honolulu  
Ft. Shafter, Hawaii 96858-5440

Dear Mr. Young:

Subject: Hau'ula Community Park - Multi-Purpose Building Expansion  
Draft Environmental Assessment (EA)  
Tax Map Keys: 5-4-09:07 & 08 (por.), 5-4-01:10 (por.), 5-4-08:19 (por.)  
Hau'ula, Hawaii

Thank you for your letter dated August 21, 2000 (File Ref. 20000284) indicating that a Department of Army permit will not be required for the proposed project. Your participation in the public comment phase of the Draft EA is appreciated.

Sincerely,

Earl Matsukawa, AICP, Project Manager

cc: Mr. Steve Tagawa, City & County of Honolulu Department of Planning and Permitting

Mr. Wesley Obata, City & County of Honolulu, Department of Design and Construction

Mr. Richard Osato, Kajiooka Yamachi Architects, Inc.

ENRIQUE CAVITTARO  
Governor



STATE OF HAWAII  
DEPARTMENT OF EDUCATION  
P.O. BOX 2080  
HONOLULU, HAWAII 96804

PAUL C. LAMARELLI, Ph.D.  
Superintendent

SEP 20 2000 9 03

CITY OF HONOLULU

OFFICE OF THE SUPERINTENDENT

August 24, 2000

Mr. Randall K. Fujiki, AIA, Director  
Department of Planning and Permitting  
City and County of Honolulu  
650 South King Street  
Honolulu, Hawaii 96813

Dear Mr. Fujiki:

Subject: Haunala Community Park  
Multi-Purpose Building Expansion  
Draft Environmental Assessment

The Department of Education has no comment on the proposed project.

Thank you for the opportunity to respond.

Very truly yours,  
  
Paul G. LeMahieu, Ph.D.  
Superintendent of Education

PLeM:hy

cc: P. Yoshioka, DAS  
L. Albert, WDO

6382-02  
September 19, 2000

WILSON  
OKAMOTO  
& ASSOCIATES, INC.



ENGINEERS  
PLANNERS  
1907 S. BERETAZIA ST.  
SUITE 400  
HONOLULU, HI 96826  
PH: 808/946-2277  
FAX: 808/946-2253

Dr. Paul G. LeMahieu, Ph.D.  
Superintendent of Education  
Department of Education  
State of Hawaii  
P.O. Box 2360  
Honolulu, Hawaii 96804

Dear Dr. LeMahieu:

Subject: Haunala Community Park - Multi-Purpose Building Expansion  
Draft Environmental Assessment (EA)  
Tax Map Keys: 5-4-09:07 & 08 (por.), 5-4-01:10 (por.), 5-4-08:19 (por.)  
Haunala, Hawaii

Thank you for your letter dated August 24, 2000 indicating that you have no comments on the subject Draft EA. Your participation during the public comment period of the project is appreciated.

Sincerely,

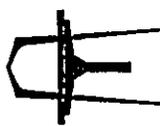
Earl Matsukawa, AICP, Project Manager

cc: Mr. Steve Tagawa, City & County of Honolulu Department of Planning and Permitting  
Mr. Wesley Obata, City & County of Honolulu, Department of Design and Construction  
Mr. Richard Osato, Kajioka Yamachi Architects, Inc.



6382-02  
September 19, 2000

**WILSON  
OKAMOTO  
& ASSOCIATES, INC.**



**ENGINEERS  
PLANNERS**  
1907 S. BERETANIA ST  
SUITE 400  
HONOLULU, HAWAII 96826  
PH (808) 946-2277  
FAX (808) 946-7253

Mr. Timothy E. Johns, Chairperson  
Department of Land and Natural Resources  
State of Hawaii  
P.O. Box 621  
Honolulu, Hawaii 96809

Attention: Ms. Lauren Tanaka, Land Division, Planning Branch

Dear Mr. Johns:

Subject: Hau'ula Community Park – Multi-Purpose Building Expansion  
Draft Environmental Assessment  
Tax Map Keys: 5-4-09:07 & 08 (por.), 5-4-01:10 (por.), 5-4-08:19 (por.)  
Hau'ula, Hawaii

Thank you for your letter dated September 5, 2000 (File No.: 00-202), commenting on the subject Draft EA. The following is offered in response to your comments:

Engineering Branch

We appreciate your confirmation of the flood designation for the project site. As required, the project will comply with rules and regulations of the National Flood Insurance Program and all applicable County Ordinances.

Oahu District Land Office

TMK 5-4-02:10 cited in your letter is not included as part of the project site. Nevertheless, as noted in Figure 2-2 of the Draft EA, however, it is our understanding that TMK 5-4-01:10 was conveyed to the City by Executive Order.

Your participation during the public comment phase of the project is appreciated.

Sincerely,  


Earl Matsukawa, AICP, Project Manager

cc: Mr. Steve Tagawa, City & County of Honolulu Department of Planning and Permitting  
Mr. Wesley Obata, City & County of Honolulu, Department of Design and Construction  
Mr. Richard Osato, Kajitaka Yamachi Architects, Inc.

BENJAMIN J. CAVELAND  
GOVERNOR OF HAWAII



TRACY E. JOHNS, CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
DOORING  
JANET E. LAWRENCE

STATE OF HAWAII

DEPARTMENT OF LAND AND NATURAL RESOURCES

HISTORIC PRESERVATION DIVISION  
EVALUATION BUILDING, ROOM 555  
421 KEMAHUA DRIVE  
HONOLULU, HAWAII 96813

ADULTIC RESOURCES  
BOATING AND OCEAN RECREATION  
CONSERVATION AND RESTORATION  
ENFORCEMENT  
FOUNDRY AND WAREHOUSE  
HISTORIC PRESERVATION  
LAND  
STATE PARKS  
WATER RESOURCE MANAGEMENT

August 25, 2000

**RECEIVED**  
AUG 29 2000

WILSON OKAMOTO & ASSOC., INC.

Randall K. Fujiki, Director  
Department of Planning and Permitting  
City & County of Honolulu  
650 South King Street  
Honolulu, Hawaii 96813

LOG NO: 26070 ✓  
DOC NO: 0008EJ13

Dear Mr. Fujiki:

SUBJECT: Chapter 6E-8 Historic Preservation Review - Draft Environmental Assessment City & County of Honolulu, Hau'ula Community Park Multi-Purpose Building Expansion  
Hau'ula, Ko'olaupua, O'ahu  
TMK: 5-4-009:7 & 8

Thank you for the opportunity to provide comment on the DEA for the Hau'ula Community Park Multi-Purpose Building Expansion project. The project proposes the construction of a new multi-purpose building and additional parking stalls immediately mauka of the existing basketball court; these improvements will be connected to the existing recreation building with a new sidewalk. Ground disturbance other than construction of the new facility includes water and drainage systems, electrical and communications systems, and a wastewater treatment unit and seepage pit.

We commented during the pre-EA consultation phase that we believe that ground disturbance activities may have an "adverse effect" on subsurface cultural deposits that may be in the area and recommended that archaeological monitoring would be needed to mitigate these adverse effects. Our complete comments are included in Section 8.1 of the DEA.

Section 3.11 Archaeological Resources Environmental Impacts and Mitigation Measures of the DEA incorrectly includes the following in the second sentence of the paragraph "It is unlikely that the construction of the proposed multi purpose building will have an impact on archaeological, cultural, or historic sites" and should be removed from this section. The remaining portion of the section summarizes our earlier comments correctly.

Randall K. Fujiki, Director  
Page Two

To date, SHPD has not reviewed for acceptance the archaeological monitoring plan. We look forward to reviewing the plan and if it is acceptable, and successfully implemented, then we believe that the proposed undertaking will have "no adverse effect" on significant historic sites.

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

Aloha,  
  
Don Hibbard, Administrator  
State Historic Preservation Division  
E:ijk

c: Earl Matsukawa, AICP, Project Manager, Wilson Okamoto & Associates, Inc., 1907 South Beretania Street, Suite 400, Honolulu, Hawaii 96826  
Dean Uchida, Administrator, Land Division File No 00-202

6382-02  
September 19, 2000

**WILSON**  
**OKAMOTO**  
ASSOCIATES, INC.



**ENGINEERS**  
**PLANNERS**  
2715 BERETANIA ST  
SUITE 400  
HONOLULU HI 96826  
PH: (808) 946-2777  
FAX: (808) 946-2753

Mr. Don Hibbard, Ph.D., Administrator  
Historic Preservation Division  
Department of Land and Natural Resources  
State of Hawaii  
Kakuhewa Building, Room 555  
601 Kamohila Boulevard  
Kapolei, Hawaii 96707

Dear Dr. Hibbard:

Subject: Hau'ula Community Park - Multi-Purpose Building Expansion  
Draft Environmental Assessment  
Tax Map Keys: 5-4-09:07 & 08 (por.), 5-4-01:10 (por.), 5-4-08:19(por.)  
Hau'ula, Hawaii

Thank you for your letter dated August 25, 2000 (Log No: 26070, Doc No: 0008EJ13), commenting on the subject Draft EA. The second sentence in Section 3.11 *Archaeological Resources Environmental Impacts and Mitigation Measures* will be deleted in the Final EA. As stated in both the Draft and Final EA, an appropriate archaeological monitoring plan will be prepared and submitted to your office for review and acceptance prior to the commencement of any excavation activities.

Your participation during the public comment phase of the project is appreciated.

Sincerely,

Earl Matsukawa, AICP, Project Manager

cc: Mr. Steve Tagawa, City & County of Honolulu Department of Planning and Permitting  
Mr. Wesley Obata, City & County of Honolulu, Department of Design and Construction  
Mr. Richard Osato, Kajioka Yamachi Architects, Inc.

EMILYAN J. CAVETANO  
GOVERNOR



05 SEP 7 09 11 27  
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
869 PUNCHBOWL STREET  
HONOLULU, HAWAII 96813-5877  
CITY OF HONOLULU  
SEP - 6 2000



KAZU HAYASHIDA  
DIRECTOR  
DEPUTY DIRECTOR  
BRUCE K. UEMURA  
GLENN H. OKAMOTO

IN REPLY REFER TO:  
HWY-PS  
2.9947

Mr. Randall K. Fujiki, Director  
Department of Planning and Permitting  
City and County of Honolulu  
650 South King Street  
Honolulu, Hawaii 96813

Dear Mr. Fujiki:

Subject: Draft Environmental Assessment (DEA), Construction of a New 5,200 Square Foot  
Multi-Purpose Building at the Existing Haoula Community Park, TMK: 5-4-2, 8, 9

Thank you for your transmittal of August 2, 2000, requesting our comments regarding the DEA  
for the subject project.

Your response to our letter (HWY-PS 2.8890, dated June 20, 2000), as reproduced and included  
in the DEA, is satisfactory.

Very truly yours,

KAZU HAYASHIDA  
Director of Transportation

6382-02  
September 19, 2000

WILSON  
OKAMOTO  
& ASSOCIATES, INC.



ENGINEERS  
PLANNERS  
1807 S. BERETANIA ST.  
SUITE 400  
HONOLULU, HI 96826  
PH: (808) 946-2727  
FAX: (808) 946-2753

Mr. Kazu Hayashida, Director  
Department of Transportation  
State of Hawaii  
869 Punchbowl Street  
Honolulu, Hawaii 96813

Dear Mr. Hayashida:

Subject: Hau'ula Community Park - Multi-Purpose Building Expansion  
Draft Environmental Assessment  
Tax Map Keys: 5-4-09:07 & 08 (por.), 5-4-01:10 (por.), 5-4-08:19 (por.)  
Hau'ula, Hawaii

Thank you for your letter dated September 6, 2000 (Ref. HWY-PS 2.9947), noting that  
your comments from the pre-assessment consultation phase have been satisfied.

Your participation during the public comment phase of the Draft EA is appreciated.

Sincerely,

Earl Matsukawa, AICP, Project Manager

cc: Mr. Steve Tagawa, City & County of Honolulu Department of Planning and  
Permitting  
Mr. Wesley Obata, City & County of Honolulu, Department of Design and  
Construction  
Mr. Richard Osato, Kajioaka Yamachi Architects, Inc.

DEPARTMENT OF PARKS AND RECREATION  
CITY AND COUNTY OF HONOLULU

450 SOUTH KING STREET, 10TH FLOOR • HONOLULU, HAWAII 96813  
PHONE: (808) 523-4182 • FAX: 523-4054



JEREMY HARRIS  
MAYOR

WILLIAM D. BALFOUR, JR.  
DIRECTOR

MICHAEL T. AMER  
DEPUTY DIRECTOR

**RECEIVED**  
SEP 11 2000

September 7, 2000

WILSON OKAMOTO & ASSOC., INC

TO: RANDALL K. FUJIKI, DIRECTOR  
DEPARTMENT OF PLANNING AND PERMITTING

ATTENTION: STEVE TAGAWA

FROM: WILLIAM D. BALFOUR, JR., DIRECTOR

SUBJECT: HAUULA COMMUNITY PARK - MULTI-PURPOSE BUILDING  
EXPANSION DRAFT ENVIRONMENTAL ASSESSMENT  
TKMS: 5-4-9-07 & .08 (por.), 5-4-1:10 (por.),  
and 5-4-8:19 (por.), KOOLAULOA, OAHU, HAWAII

Thank you for the opportunity to review and comment on the Draft Environmental Assessment relating to the Hauula Community Park Multi-purpose Building Expansion.

The Department of Parks and Recreation supports this development providing activity space to meet the community's needs for programs and alleviate existing parking demands.

Should you have any questions, please contact Mr. John Reid, Planner, at 547-7396.

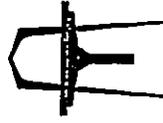
*W.D. Balfour, Jr.*  
WILLIAM D. BALFOUR, JR.  
Director

WDB:cu  
(50-2112JR)

cc: Ms. Genevieve Salmonson, Office of Environmental Quality Control  
/ Mr. Earl Matsukawa, Wilson Okamoto & Associates, Inc.  
Mr. Don Griffin, Department of Design and Construction

6382-02  
September 19, 2000

WILSON  
OKAMOTO  
& ASSOCIATES, INC



ENGINEERS  
PLANNERS  
1907 S. BERETANIA ST.  
SUITE 400  
HONOLULU, HI 96826  
PH: 808/946-2277  
FAX: 808/946-2253

Mr. William D. Balfour, Jr., Director  
Department of Parks and Recreation  
City and County of Honolulu  
650 S. King Street, 10<sup>th</sup> Floor  
Honolulu, Hawaii 96813

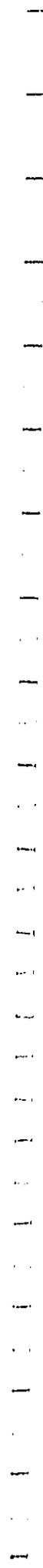
Dear Mr. Balfour:

Subject: Hau'ula Community Park - Multi-Purpose Building Expansion  
Draft Environmental Assessment  
Tax Map Keys: 5-4-09:07 & 08 (por.), 5-4-01:10 (por.), 5-4-08:19 (por.)  
Hau'ula, Hawaii

Thank you for your letter dated September 7, 2000 (Ref. 00-2112JR) supporting the proposed project. Your participation during public comment phase of the Draft EA is appreciated.

Sincerely,  
*Earl Matsukawa*  
Earl Matsukawa, AICP, Project Manager

cc: Mr. Steve Tagawa, City & County of Honolulu Department of Planning and Permitting  
Mr. Wesley Obata, City & County of Honolulu, Department of Design and Construction  
Mr. Richard Osato, Kajioka Yamachi Architects, Inc.



DEPARTMENT OF PLANNING AND PERMITTING  
CITY AND COUNTY OF HONOLULU

450 SOUTH KING STREET - HONOLULU, HAWAII 96813  
TELEPHONE: (808) 525-4414 FAX: (808) 525-6743 INTERNET: www.ci.honolulu.hi.us

RECEIVED  
SEP 08 2000



WILSON OKAMOTO & ASSOC., INC.

RANDALL K. FUJIKI, AIA  
DIRECTOR  
LORETTA K. C. CHEE  
SENIOR DIRECTOR

2000/CLOG-4169 (ST)  
2000/SMA-63  
2000/ED-9

September 7, 2000

Mr. Earl K. Matsukawa, AICP  
Wilson Okamoto & Associates, Inc.  
1907 South Beretania Street, Suite 400  
Honolulu, Hawaii 96826

Attn.: Laura Mau

Dear Mr. Matsukawa:

Draft Environmental Assessment (DEA):  
Hauula Community Park Multi-Purpose Building  
Hauula, Oahu  
Tax Map Keys 5-4-1: por. 10; 5-4-8: por. 19;  
5-4-9: pors. 7 & 8

We have reviewed the DEA for the above-referenced project received on July 21, 2000, and find the following revisions/additions are required:

SECTION 1 INTRODUCTION

The Final EA should be expanded to more thoroughly describe the existing facilities at this park (e.g., square-footage of existing buildings), and provide general information on the numbers of people who utilize these facilities. This expanded description will better explain the need for the proposed facility.

SECTION 2.3 Project Description

This section should clarify why the proposed expansion of the existing facilities will not increase the use of this park or generate additional vehicular traffic in the area.

Earl Matsukawa, AICP  
Page 2  
September 7, 2000

SECTION 3.2 Geology and Topography

This section should be expanded to provide estimates on the amount of grading and fill that will be required for the construction of the proposed improvements. Information should also be provided on the types of machinery which will be used to construct the proposed improvements and where this equipment will be stored during the construction phase. The Final EA should also discuss how large an area of the park will be restricted from use during construction and what measures will be taken to minimize such construction impacts.

SECTION 3.4 Surface Water

This section should be revised to clarify how drainage at the project site is accommodated and whether any drainage improvements are proposed.

SECTION 3.5 Ground Water

This section should be expanded to elaborate on the accommodation of wastewater at this new facility. An exhibit should be added to disclose the location of proposed system and leach fields/seepage pits.

Should you have any questions, please contact Steve Tagawa of our Land Use Approvals Branch at 523-4817.

Sincerely yours,

RANDALL K. FUJIKI, AIA  
Director of Planning  
and Permitting

RKF:st  
Attachments

cc: Office of Environmental Quality Control  
William Balfour, DPR

POST: 3/11/01

**WILSON**  
**OKAMOTO**  
**& ASSOCIATES, INC.**

6382-02  
Letter to Mr. Randall Fujiki  
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September 19, 2000

6382-02  
September 19, 2000

**WILSON**  
**OKAMOTO**  
**& ASSOCIATES, INC.**



**ENGINEERS**  
**PLANNERS**  
275 BERKELEY AVE  
SUITE 400  
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PH: (808) 946-7277  
FAX: (808) 946-2253

Mr. Randall Fujiki, Director  
Department of Planning and Permitting  
City and County of Honolulu  
650 S. King Street  
Honolulu, Hawaii 96813

Dear Mr. Fujiki:

Subject: Hau'ula Community Park - Multi-Purpose Building Expansion  
Draft Environmental Assessment  
Tax Map Keys: 5-4-09:07 & 08 (por.), 5-4-01:10 (por.), 5-4-08:19 (por.)  
Hau'ula, Hawaii

Thank you for your letter dated September 7, 2000 (Ref. Log No. 2000/CLOG-4169 [ST]), 2000/SMA-63, 2000/ED-9), regarding the subject Draft Environmental Assessment (EA). The following is offered in response to your comments:

**Section 1 INTRODUCTION**

The Final EA will include the following description of the existing building as well as an estimate of the number of people currently using the facility: The existing building is comprised of 1,820 square feet of enclosed area and 912 square feet of lanai area (covered). On a weekly basis, more than 300 people use the facility including those affiliated with the Teen Club, Women and Infant Care (WIC) Program, Head Start Program, and Hau'ula Elementary School. The active ball field areas are used by football and baseball athletic programs which service more than 100 participants.

**Section 2.3 Project Description**

The proposed action is not anticipated to increase the number of park users or the amount of traffic to the Park. As noted in Section 2.3 of the Draft EA, the new building will provide activity space to meet the needs of existing programs which currently operate with insufficient space. Priority over the use of the building will be given to the Teen Club, although other groups such as the WIC and Head Start Programs, and Hau'ula Elementary School will also be eligible to use the facility during periods when it is not in use by the Teen Club. The Teen Club membership generally ranges from about 50 participants during the fall and spring semesters, to about 100 participants during the summer. The Teen Club membership is not anticipated to increase a result of the proposed project.

**Section 3.2 Geology and Topography**

The estimated amount of grading and fill will be determined as project design progresses.

As a construction contractor has not been selected, it is speculative at this juncture, to identify the types of construction machinery that will be required for the project. In general, however, construction equipment for the project may include backhoes, concrete trucks, equipment to haul the building materials, and employee vehicles. In addition, it is uncertain whether the equipment or building materials will be stored on site, or how large an area may be affected. In the event that stockpiling is required, however, every attempt will be made to avoid the active play areas including the ball fields and play courts to minimize the impact to park users.

**Section 3.4 Surface Water**

There is no existing on-site drainage system. Surface flows are currently accommodated via ground percolation or sheet flows toward Kamehameha Highway. No drainage improvements are proposed as part of the project.

**Section 3.5 Ground Water**

The proposed building has been revised to omit restrooms or other appurtenances that would have required connections and upgrades to the existing wastewater system. As such, no modification to the existing system is proposed.

Thank you for your participation during the public comment phase of the Draft EA.

Sincerely,

Earl Matsukawa, AICP, Project Manager

cc: Mr. Steve Tagawa, City & County of Honolulu Department of Planning and Permitting  
Mr. Wesley Obata, City & County of Honolulu, Department of Design and Construction  
Mr. Richard Osato, Kajioaka Yamauchi Architects, Inc.

DRP

Steve Tagawa, Land Use Planning Division  
Page 2  
August 9, 2000

August 9, 2000

MEMORANDUM

TO: STEVE TAGAWA, LAND USE PLANNING DIVISION  
VIA: LOWELL CHUN, COMMUNITY ACTION PLANS BRANCH CHIEF  
KATHY SOKUGAWA, CHIEF, INTERIM DIVISION  
FROM: PAM DAVIS, COMMUNITY ACTION PLANS BRANCH  
SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT (EA) FOR HAULULA  
COMMUNITY PARK EXPANSION PROJECT  
TAX MAP KEY 5-4-1-10-5-4-9-7 AND 8 AND 5-4-8-19

We have reviewed the above-referenced EA document, and offer the following comments:

City General Plan

The proposal, which includes a new 5,200-square foot multi-purpose building, a walkway to connect the new building to the existing recreation building, and 11 additional off-street parking spaces, conforms to Objective B, Policy 4 (Natural Environment) which is to "provide opportunities for recreational and educational use and physical contact with Oahu's natural environment". The new building will be used primarily as a teen center, and will include a lounge and game room, restrooms, and an area for group exercises. It also complies with Objective A, Policy 8 (Physical Development and Urban Design), which is to "locate community facilities on sites that will be convenient to the people they are intended to serve". The Haulula Community Park is well established in the area. The additional on-site parking spaces will make it more convenient for park users, since parking is currently insufficient.

The proposal conforms to Objective D, Policy 1 (Culture and Recreation), to "develop and maintain community-based parks to meet the needs of the different communities on Oahu". The EA document indicates that the new multi-purpose building is intended to better accommodate existing Department of Parks and Recreation programs, which currently operate with insufficient space.

Koolauloa Sustainable Communities Plan (SCP)

The 10-acre Haulula Community Park is one of only two community-based parks in Koolauloa. One of the important principles outlined in the SCP is to "support and encourage improvements at existing educational and recreational facilities". In fact, Section 3.3.2.2 states that "Haulula Community Park should be expanded to include a multi-purpose recreation facility". Section

2.4. states that the "existing parks and recreation areas should be maintained and enhanced to utilize the region's abundance of natural and scenic resources for the enjoyment of residents and visitors". The proposed improvements support these policies and guidelines.

Section 3.1.3.5. provides guidelines pertaining to community-based parks in Koolauloa, including:

- Expand or provide new community-based parks in areas where there is a lack of sufficient facilities and where recreational needs of residents are not being adequately met; and
- Design, locate, and configure structural improvements and landscaping in community-based parks so as to create or add to the aesthetic value of these open space elements.

The proposed multi-purpose building is sited adjacent to the existing basketball court and near the existing recreation building. Its 5,200-square foot footprint will not inordinately decrease open space, and its siting will not interfere with use of the active playfields. The exterior building design serves to maintain the rural character of the area, and new landscaping will provide an additional visual amenity.

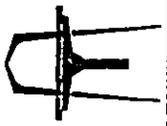
In summary, the proposal is in compliance with the policies and guidelines of both the General Plan and the Koolauloa Sustainable Communities Plan.

If you have any questions, please contact Pam Davis at extension 4807.

scavaa.pnd

6382-02  
September 19, 2000

**WILSON**  
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2075 BERETANIA ST  
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Mr. Lowell Chun, Chief  
Community Action Plans Branch  
Department of Planning and Permitting  
City and County of Honolulu  
650 South King Street  
Honolulu, Hawaii 96813

Dear Mr. Chun:

Subject: Hau'ula Community Park - Multi-Purpose Building Expansion  
Draft Environmental Assessment  
Tax Map Keys: 5-4-09:07 & 08 (por.), 5-4-01:10 (por.), 5-4-08:19 (por.)  
Hau'ula, Hawaii

Thank you for your letter dated August 9, 2000 indicating that the project is in compliance with the policies and guidelines of the General Plan and the Koolauloa Sustainable Communities Plan. Your participation during public comment phase of the Draft EA is appreciated.

Sincerely,



Earl Matsukawa, AICP, Project Manager

cc: Mr. Steve Tagawa, City & County of Honolulu Department of Planning and Permitting  
Mr. Wesley Obata, City & County of Honolulu, Department of Design and Construction  
Mr. Richard Osato, Kajioke Yamachi Architects, Inc.

**GTE Hawaiian Tel**

*Beyond the call*

GTE Hawaiian Telephone Company Incorporated  
P.O. Box 2200 - Honolulu, HI 96841 - 808 540-4511

August 15, 2000

Department of Planning and Permitting  
City and County of Honolulu  
650 South King Street  
Honolulu, Hawaii 96813

Attention: Mr. Steve Tagawa

Subject: Hau'ula Community Park - Multi-Purpose Building Expansion  
Draft Environmental Assessment; Kō olauloa, Oahu, Hawaii

Dear Steve:

Thank you for the opportunity to comment on the above subject Draft Environmental Assessment. As noted in Section 3.14.6, Verizon Hawaii Inc. currently provides telephone service to this project site via overhead service lines. Phone service to the new Multi-Purpose building can be extended from this existing line. We do not foresee any conflicts with the new project at this time.

Should you have any questions, please call Garret Hayashi at 840-1438.

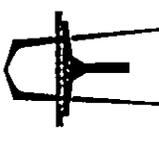
Sincerely,

Wayne L. Cabral  
Wayne L. Cabral  
Section Manager  
Access Design & Construction

cc: Ms. Genevieve Salmonson, Director  
Office of Environmental Quality Control  
State of Hawaii  
235 South Beretania Street, Room 702  
Honolulu, Hawaii 96813

Wilson Okamoto & Associates, Inc. ✓  
1907 South Beretania Street, Suite 400  
Honolulu, Hawaii 96826  
Attention: Earl Matsukawa

**WILSON  
OKAMOTO  
& ASSOCIATES, INC.**



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6382-02  
September 19, 2000

Mr. Wayne Cabral, Section Manager  
Access Design and Construction  
Verizon Hawaii Inc.  
P.O. Box 2200  
Honolulu, Hawaii 96841

Dear Mr. Cabral:

Subject: Hau'ula Community Park - Multi-Purpose Building Expansion  
Draft Environmental Assessment  
Tax Map Keys: 5-4-09;07 & 08 (por.), 5-4-01:10 (por.), 5-4-08:19(por.)  
Hau'ula, Hawaii

Thank you for your letter dated August 15, 2000 indicating that phone service to the proposed project could be accommodated via existing overhead service lines, and that the project does not present any conflict regarding telephone services. Your participation during public comment phase of the Draft EA is appreciated.

Sincerely,

Earl Matsukawa

Earl Matsukawa, AICP, Project Manager

cc: Mr. Steve Tagawa, City & County of Honolulu Department of Planning and Permitting  
Mr. Wesley Obata, City & County of Honolulu, Department of Design and Construction  
Mr. Richard Osato, Kajioka Yamachi Architects, Inc.

## 9. REFERENCES

Cabral, Wayne. GTE Hawaiian Tel, Windward District Engineering Manager. Personal Communication, May 25, 2000.

City and County of Honolulu Department of Land Utilization. *Coastal View Study*. 1987.

City and County of Honolulu Department of Planning and Permitting. *Ko'olau Loa Sustainable Communities Plan*. May 1999. Adopted by Ordinance 99-72, Bill 67 (1999), CDI. Approved December 16, 1999. Effective February 14, 2000.

Geolabs, Inc. Facsimile transmittal of preliminary findings and geotechnical engineering recommendations for Hauula Community Park Multi-Purpose Building. Prepared for Kajioka Yamachi Architects. May 18 2000.

George A.L. Yuen & Associates, Inc. *State Water Resources Protection Plan, Volumes I and II*. Prepared for the State of Hawaii Department of Land and Natural Resources, Commission on Water Resource Management. Review Draft, March 1992.

Giambelluca et al. Water Resources Research Center, University of Hawaii at Manoa. *Rainfall Atlas of Hawaii*. Report R76. Prepared for the State of Hawaii Department of Land and Natural Resources Division of Water and Land Development. June 1986.

Gushi, Scott. City and County of Honolulu Department of Planning and Permitting, Wastewater Branch. Personal Communication, May 22, 2000.

Hawaii Cooperative Park Service Unit, Western Region Natural Resources and Research Division, National Park Service. *Hawaii Stream Assessment, A Preliminary Appraisal of Hawaii's Stream Resources, Report R84*. Prepared for the State of Hawaii Commission on Water Resource Management. December 1990.

Hawaiian Electric Company, Inc. Customer Engineering Department and Substation Department. Personal Communication, May 22, 2000.

Information Delivery Service, MSE Corporation. *City and County Honolulu Digital Maps*. 1998.

Juvik, Sonia P. and Juvik, James O. *Atlas of Hawaii, Third Edition*. Prepared for University of Hawaii at Hilo, Department of Geography. 1998.

Kepler, Angela Kay. *Hawaiian Heritage Plants*. 1984.

Macdonald, Gordon A., et al. *Volcanoes in the Sea, The Geology of Hawaii, Second Edition*. 1986.

Merlin, Mark David. *Hawaiian Coastal Plants and Scenic Shorelines*. 1986.

Santiago, Annette. City and County of Honolulu Department of Parks and Recreation, Hau'ula Community Park Activity Coordinator. Personal Communication, May 8, 2000.

Schmerfeld, John, U.S. Fish and Wildlife Service. Personal Communication, May 22, 2000.

Shiraishi, David. City and County of Honolulu Department of Environmental Services, Refuse Division. Personal Communication, May 19, 2000.

State of Hawaii Department of Agriculture. *Agricultural Lands of Importance to the State of Hawaii*. 1979.

State of Hawaii, Department of Land and Natural Resources. *The Hawaii Register Historic Places, Volume II, Hawaii Interim Preservation Plan*. March 1974.

Stearns, Harold T. *Geology of the State of Hawaii, Second Edition*. 1985.

Stemmermann, Lani (ed.). *A Guide to Pacific Wetland Plants*. 1981.

University of Hawaii Land Study Bureau. *Detailed Land Classification – Island of Oahu*. December 1972.

U.S. Bureau of the Census. *1990 Census of Population and Housing, Summary Social, Economic, and Housing Characteristics, Hawaii*. April 1992.

U.S. Department of Agriculture, Soil Conservation Service, in cooperation with the University of Hawaii Agricultural Station. *Soil Survey of Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii*. August 1972.

U.S. Federal Emergency Management Agency. *Flood Insurance Rate Map, Panel No. 150001 0015C*. September 28, 1990

Wilson Okamoto & Associates, Inc. *Oahu Water Management Plan, Technical Reference Document*. Prepared for the City and County of Honolulu Department of General Planning. March 1990.