ENVIRONMENTAL ASSESSMENT

HAU'ULA FIRE STATION RELOCATION

Portion Kaipapa'u, District of Ko'olau Loa, City and County of Honolulu, Hawai'i

Prepared For

Department of Design and Construction
City and County of Honolulu
650 South King Street
Honolulu, Hawai'i 96813

October 2009

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Prepared In Fulfillment of the Requirements of the National Environmental Policy Act, Chapter 343, Hawai'i Revised Statutes, and Hawai'i Administrative Rules Title 11-200

Prepared For

Department of Design and Construction
City and County of Honolulu
650 South King Street
Honolulu, Hawai'i 96813

Prepared By

Gerald Park Urban Planner
95-595 Kanamee Street #324
Mililani, Hawai'i 96789

and

AM Partners, LLC
1100 Alakea Street, Suite 800
Honolulu, Hawai'i 96813

October 2009

Environmental Assessment
For HUD-Funded Proposals

Project Identification:	II-62-09-FED
Preparer:	Gerald Park Urban Planner
Responsible Entity:	Department of Design and Construction City and County of Honolulu 650 South King Street Honolulu, Hawai'i 96813
Month/Year:	
Responsible Entity:	Department of Design and Construction
Certifying Officer:	Craig I. Nishimura, Director Department of Design and Construction City and County of Honolulu 650 South King Street Honolulu, Hawai'i 96813
Project Name:	Hau'ula Fire Station Replacement
Project Location:	Tax Map Key 5-4-018: 064, 065
Street Address:	54-282 and 54-290 Kamehameha Highway Hau'ula, O'ahu, Hawai'i
Estimated Total Project Cost:	$1.0 Million (Land Acquisition) $0.6 Million (Design) $8.0 Million (Construction)
Recipient Address:	Department of Design and Construction City and County of Honolulu 650 South King Street, 11th Floor Honolulu, Hawai'i 96813
Project Representative:	Clifford Y.L. Lau, Chief Facilities Division Department of Design and Construction 650 S. King Street, 11th Floor Honolulu, Hawai'i 96813
Telephone Number:	(808) 768-8478

Conditions for Approval:

Finding:

X Finding of No Significant Impact

_ Finding of Significant Impact

Preparer Signature:

_____ Date October 28, 2009

Gerald Park, Principal, Gerald Park Urban Planner

Approving Official Signature:

_____ Date OCT 28 2009

MP

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Introduction

The Department of Design and Construction, City and County of Honolulu, proposes to acquire land on which to construct a new fire station in the town of Hau'ula, District of Ko'olau Loa, O'ahu, Hawai'i. The new Hau'ula Fire Station will be located on a site on the mauka-northern corner of the intersection of Kamehameha Highway and Kawaipuna Street.

The land to be acquired encompasses two adjoining lots identified by tax map as 5-4-018: 064 with a street address of 54-290 Kamehameha Highway and 5-4-018: 065 with a street address of 54-282 Kamehameha Highway. The two lots are rectangular shaped, similar in land area (20,297 and 20,300 square feet, respectively), and have a combined area of 40,597 square feet (0.932 acres).

The lots are bounded by a fast food restaurant and vacant lot to the north, Kamehameha Highway to the east, Kawaipuna Street to the south, and the New Beginning Learning Center and a two-story office building on the west. A Location Map, Vicinity Map, and Tax Map are shown on Figures 1, 2, and 3.

Statement of Purpose and Need for the Proposal

The Honolulu Fire Department ("HFD") continually strives to meet the changing needs of the communities they serve by modernizing their facilities, upgrading fire fighting equipment, and training fire fighters in new and innovative fire fighting techniques and technologies. HFD has determined that the existing Hau'ula Fire Station does not meet the needs of the department and community and must be replaced. The station is inadequately sized to accommodate the living, working, and equipment storage needs for a modern engine company and tanker apparatus. Several decades of exposure to the harsh ocean climate have deteriorated the structure and components of the station making repair or rehabilitation infeasible and impractical.

Furthermore, the current site is located in a Coastal High Hazard Zone, Stream Floodway, and tsunami evacuation zone. A properly located facility should be sited beyond known flood and tsunami hazard area thereby providing for continued and uninterrupted emergency response services to the community should any of these events occur.

The new station will be designed to comply with the latest adopted editions of the International Building Code, Land Use Ordinance ("LUO"), Americans with Disabilities Act Accessibility Guidelines ("ADAAG"), Uniform Fire Code, National Fire Protection Association, and the Occupational Safety and Health Administration ("OSHA") standards and regulations. The building will be designed in accordance with sustainable principles to meet Leadership in Energy and Energy Design ("LEED") Silver Certification requirements and to have an architectural character appropriate for the Hau'ula community.

Description of the Proposal

Technical Characteristics

The proposed Hau'ula Fire Station will be a "T-shaped" structure with an integrated three story training tower at the rear of the station. The 12,000 to 14,000 square foot structure will be constructed on a reinforced concrete slab on grade with solid grouted 8" CMU exterior walls (12" CMU walls for the apparatus bay and training tower) and topped by a composition

shingle or standing seam metal roof. Three apparatus bays are proposed: one each for the existing fire apparatus and tanker and the third for a future vehicle. The third bay will also provide HFD with the flexibility to accommodate a relief pumper, HazMat storage trailer, and/or various types of support equipment.

The structure will be sited parallel to Kawaipuna Street with property line setbacks equal to or exceeding LUO yard requirements. The preliminary siting of the structure provides a large open yard fronting Kamehameha Highway for the station's septic tank and filtration field and for accommodating on-site runoff.

The station will have varying heights but will not exceed the 40-foot height limit for the zoning district (B-1 Neighborhood Commercial). The height of the apparatus bays measures approximately 36 feet from finished grade to top of the roof ridge, the height of the training tower will be approximately 38 feet from finished grade to the top of the parapet walls, and the dormitory will be about 25 feet above finished grade.

The apparatus will egress the station onto Kawaipuna Street and proceed to Kamehameha Highway. A standard traffic control signal equipped with an Opticon ^{TM} traffic control system will be installed at the intersection of Kamehameha Highway and Kawaipuna Street. The system will assist in safely bringing traffic to a stop in cases where the fire apparatus is responding from the station; otherwise the signal will function as a standard traffic control device. Flashing amber lights may be installed in front of the station on Kawaipuna Street and at the Kamehameha Highway intersection to alert motorists that the apparatus is responding to an alarm.

Returning vehicles will ingress the station from Kamehameha Highway using a driveway on the north side of the lot.

Ten uncovered, off-street parking stalls are proposed. Seven stalls will be located in the northwest corner for personnel assigned to the station. Three parking stalls at the front southeast corner are set aside for visitors. One visitor stall will be ADA compliant.

Water is available from municipal lines in either Kamehameha Highway or Kawaipuna Street. Demand for domestic use and irrigation is estimated at 750 gallons per day

Wastewater flow is estimated at 600 gallons per day. At this time, a septic tank and filtration field is proposed for wastewater collection and effluent disposal. The actual method of wastewater disposal will be determined during the design stage of the project in consultation with the State Department of Health.

Permanent drainage structures such as underground piping are not planned. The site will be graded to direct surface runoff to the front of the station and into landscaped areas for collection and percolation into the ground.

Power and communication lines will be brought to the station via underground conduits from overhead lines along Kamehameha Highway or Kawaipuna Street.

The front, side, and rear of the station will be landscaped with native Hawaiian salt tolerant drought resistant grass, groundcover, hedges, and trees to aid in water conservation. Landscaped areas will be equipped with a permanent underground irrigation system.

The apparatus room will function as a vehicle wash area. Floor drains will collect and discharge wash water into an underground oil-water separator placed in a concrete vault. Petroleum based constituents will be collected and stored in an oil storage tank and water will be discharged into the septic system. The oil tank will be inspected regularly and oil and sludge removed for proper disposal.

A steel, double-walled, anti-ballistic above ground storage tank (AST) with a 1,000 gallon capacity for diesel fuel will be placed next to the driveway from Kamehameha Highway. Because the AST contains flammable and combustible fluids, it is subject to regulation by local building codes and the Honolulu Fire Department. There are no regulations requiring leak detection for AST.

Emergency power to the station will be supplied by a 50-kilowatt or larger back-up generator equipped with noise attenuating features. Fuel for the generator will be provided by an independent above ground LPG or diesel storage tank not tasked with fueling or providing fuel to any other piece of equipment. The generator will be housed in a separate room nside the station.

LPG gas will be used for cooking. A pair of portable LPG cylinders will be located on the site in the vicinity of the kitchen. The existing LPG cylinder service will be relocated from the existing Hau'ula Fire Station as not to affect the standing Master Agreement the City and County of Honolulu has with the LPG supplier. The relocation of the service will occur when the HFD relocates their operations from the existing station to the new station.

Interior working and living spaces will be climate controlled to attenuate traffic noise, dust, and other irritants that would negatively affect the occupants, furnishings, and operations of the station. Air conditioning and other mechanical equipment will be enclosed for noise attenuation and screened or concealed from public view.

Firefighter training and team maintenance and physical fitness exercises will be conducted on the driveway at the back of the station's apparatus bays and in the three story training tower. A regulation sized volleyball court and half basketball court will be striped in the rear driveway.

A public service entrance from Kawaipuna Street will allow the public to access the station. The entrance will be clearly identifiable and ADA accessible. Off-street parking will be provided.

A 6-foot high fence will enclose the *mauka* areas of the station. Entry will be controlled by manual and electronic security gates.

The rear of the station will be illuminated by pole mounted security light fixtures. The poles will not exceed 40 feet in height. The light fixtures will be shielded to prevent direct illumination into nearby commercial and residential areas.

Economic Characteristics

The city will purchase the two lots which are privately owned by separate owners.

The Department of Design and Construction proposes to use a combination of Community Development Block Grant ("CDBG") funds and City capital improvement project funds to

acquire the land and construct the station. Land acquisition costs are estimated at $1.0 million for both lots. The probable design and construction cost is estimated at $8.6 million and is subject to change during the design phase. The design and construction of the new station will be subject to funding in FY 2011 and/or subsequent fiscal years.

Operating expenses are projected at $206,000.00 annually, exclusive of salaries.

The new Hau'ula Fire Station is expected to be occupied and operational by November 2014. Disposition of the existing fire station at that time has not been determined.

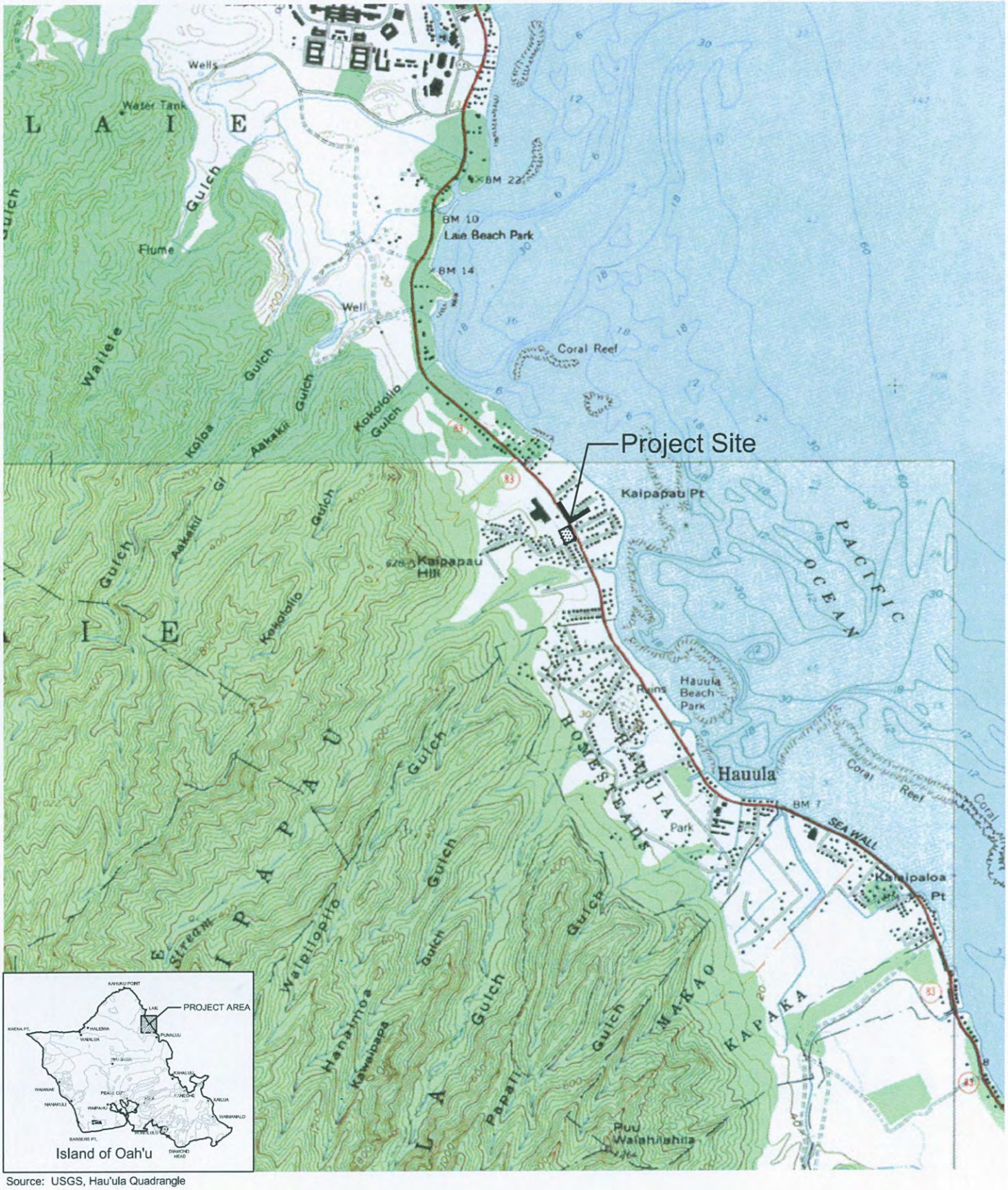
The two lots may be consolidated or treated as one zoning through Joint Development. A Conditional Use Permit will be required for Joint Development.

Social Characteristics

The lots are vacant and undeveloped thus there will be no residential or business displacement resulting from the proposed action.

The entire complement of 18 firefighters posted to the existing Hauula Fire Station will relocate to the new station. HFD suppression forces work on a three platoon system. Each platoon will work alternating 24 hour shifts. Each platoon will consist of six personnel---one captain, two Firefighter III, and three Firefighter I.

The station will provide a gender neutral living and working environment with non-gender specific spaces but with appropriate privacy for all personnel. This setup will allow HFD flexibility in assigning personnel to the station regardless of their gender.



Source: USGS, Hau'ula Quadrangle

Gerald Park
Urban Planner
September 2009

LINEAL SCALE (FEET)
1000 500 0 500 1000 2000

NORTH

Figure 1
Location Map
Hau'ula Fire Station Relocation

Kaipapa'u, Ko'olauloa, O'ahu

Department of Design and Construction, City & County of Honolulu

Source: Aerial, Google Earth

Gerald Park
Urban Planner
September 2009

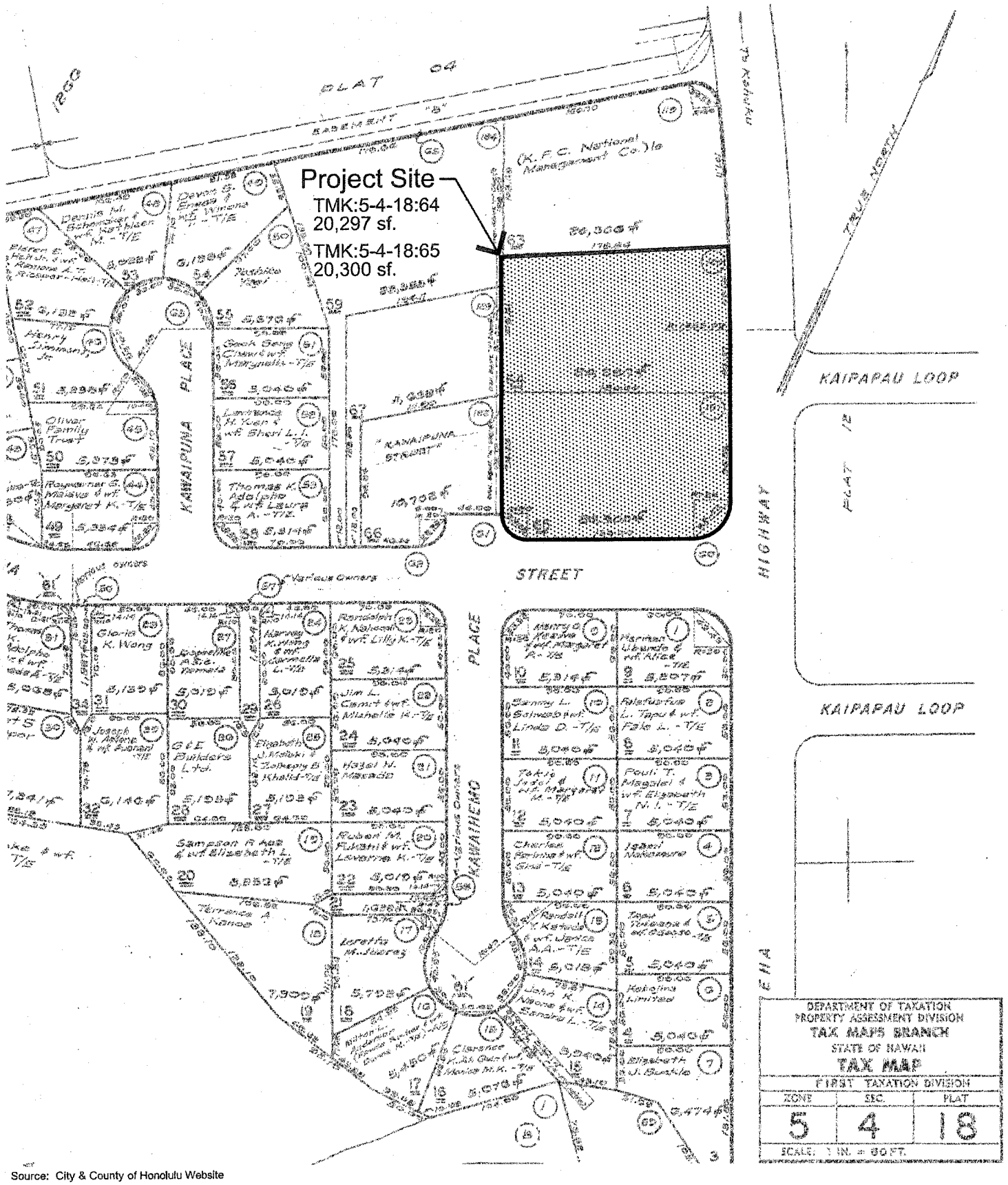
LINEAL SCALE (FEET)
250 125 0 125 250 500

NORTH

Kaipapa'u, Ko'olauloa, O'ahu

Figure 2
Vicinity Map
Hau'ula Fire Station Relocation

Department of Design and Construction, City & County of Honolulu



Source: City & County of Honolulu Website

LINEAL SCALE (FEET)
1000 500 0 500 1000 2000
NORTH

Gerald Park
Urban Planner
September 2009

Figure 3
Tax Map
Hau'ula Fire Station Relocation

Kaipapa'u, Ko'olauloa, O'ahu

Department of Design and Construction, City & County of Honolulu

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
PROPOSED PRELIMINARY SITE PLAN
AT
HAULA COMMERCIAL LOTS
The Honolulu Fire Department
Haula Fire Station Site
TMK: 5-4-018:064 & 065
At: 54-282 Kamehameha Highway
Haula, Koolauloa, Oahu, Hawaii
Kahuku
Mauka
Makai
Kaaawa
Proposed
Haula
Fire Station
5-4-018:064
5-4-018:065
Kamehameha Hwy
Kaipapau Loop
Kawaipuna Street
Preliminary Site Plan
Graphic Scale

Existing Conditions and Trends

The existing Hauula Fire Station at 54-64 Kamehameha Highway was constructed in 1964 and has served the Hau'ula community for the past 45 years. The 4,123 square foot station is the home of Engine 15. Eighteen HFD personnel are assigned to the station. A platoon consisting of a captain, two engineers, and three firefighters are on watch each day. Three platoons work a rotation shift. Their primary fire fighting equipment includes a fire apparatus and a 2,500 gallon tanker.

The first response area for Engine 15 is north on Kamehameha Highway to but excluding the Polynesian Cultural Center and south on Kamehameha Highway to the last dwelling in Punalu'u before Kahana Bay.

Engine 15 responds to an average of 30 alarms per month to include fires, emergency medical incidents, hazardous materials incidents, and land and sea rescues. Responses to alarms occur at various times of the day.

The existing fire station is located in a flood hazard zone and is susceptible to flooding from overland flow (Flood Zone AE) and coastal high hazard waves (Flood Zone VE). Station personnel who have been there the longest do not recall the station flooding *per se.* However, heavy rains coupled with a high tide have created conditions where rising water came close to but did not enter the station. The high water level has the unintended effect of causing the station's cesspool to back up into the station flooding the apparatus floor. Flood like conditions occur one to three times annually.

The site is owned by the State of Hawaii and was transferred by Executive Order 1396 in 1950 to the City and County of Honolulu for use as a fire station.

The site of the proposed Hauula Fire Station is privately owned land that is vacant and undeveloped. Building permit records show that in the early 2000's the lots were used as an open air country market called Hauula Country Market. Small temporary structures and sheds subsequently were erected thereon as part of the Country Market. As recently as 2007 and 2008, the owners sought to construct a restaurant and to operate a shrimp truck on the premises. The latter uses never materialized.

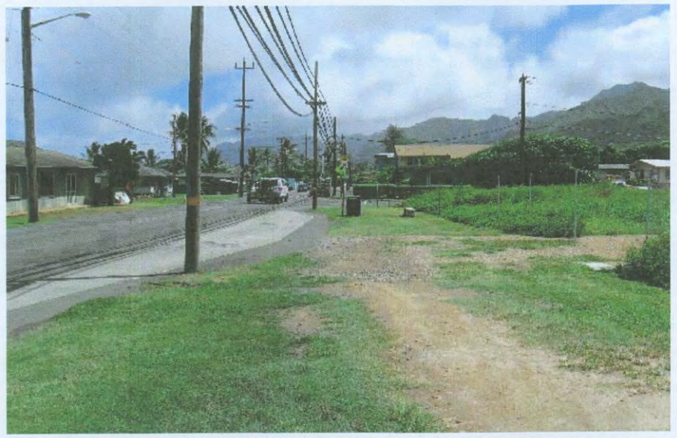
Possible remnant structures of the "Hau'ula Country Market are located on lot 64. The first is a square-shaped (8' X 8') wood framed shed. The shed is locked but shelving and boxes were observed through a window. A hose bib on the outside indicates that water is (or was) available to the shed. The shed is portable and can be moved. The second is tubular framing for a large tent (40' X 28'). The framing is assembled and intact but there is no canopy covering.

The two properties are part of a Neighborhood Business zoning district that includes the Hau'ula Kai Center to the north, two adjoining lots on the west, and a low-rise commercial building across Kamehameha Highway. The commercial area is surrounded by residential uses to the east, south, and west. An agricultural zoning district adjoins the Hau'ula Kai Center on its north side.

The following description of existing conditions applies to the two lots to be acquired. Several existing site conditions are shown in the Site Photographs.

Photograph 1. Mauka View of Site from Kamehameha Highway.

Photograph 2. View Towards Kamehameha Highway from Kawaipuna Street.



Photograph 3. Kamehameha Highway Lot Frontage with Bus Stop.

Photograph 4. Site Looking North.

Photograph 5. Site Looking South.

Aerial: USGS National Map Viewer
Photographs: Gerald Park

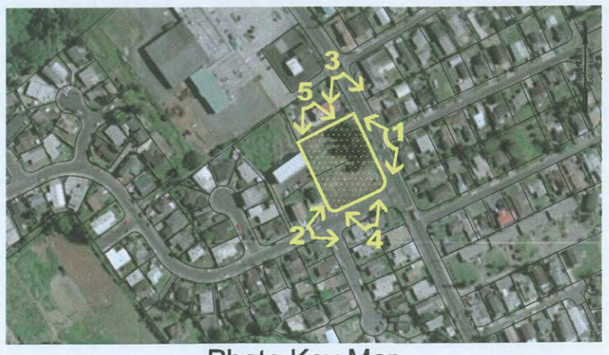


Photo Key Map

GRAPHIC SCALE IN FEET

200 100 0 200 400

Gerald Park
Urban Planner
September 2009

Environmental Characteristics

Climatic conditions in Hau'ula can be characterized as abundant sunshine, persistent northeast tradewinds, relatively constant temperatures, moderate humidity, and infrequent severe storms. Average wind velocity in the area averages 10 to 15 miles per hour. Monthly mean temperatures are in the range of 76^0 F in August and 70^0 F in December. Temperatures of 80^0F are not uncommon throughout the year. Annual rainfall along the coast averages 60 inches.The dryer months of the year are from June through September and the wetter months from October to April (Towill, 2007).

The lots are relatively flat with no adverse **topographical** features and pronounced depressions. Ground elevation falls from northwest to southeast from a high of about 20 feet above mean sea level to 18 feet at Kamehameha Highway. Ground slope averages 2% measured from west to east across the properties.

The US Soil Conservation Service (1972) maps two soil types---Kawaihapai clay loam (KIB) and Lolekaa silty clay (LoB))---as occurring on both lots and on land surrounding the lots. For both soils, permeability is moderate, runoff is slow, and the erosion hazard is slight. Both soils have slight limitations for septic tank filter fields.

There are no **streams, rivers, ponds, wetlands**, or surface water features on the property. Kaipapa'u Stream (a perennial stream in its upper reaches that may be intermittent in its lower reach) flows from the mountains to the ocean about 500 feet to the south. According to the Hawaii Stream Assessment, Kaipapa'u is rated as having outstanding aquatic resources and recreational opportunities for swimming and hunting (Commission on Water Resources Management, 1990).

According to **groundwater** maps prepared by Mink and Lau (1990), coastal lands at Hau'ula overlie the Koolauloa aquifer of the Windward aquifer sector (See Table 1).

Table 1. Aquifer Classification System

Aquifer Code	**306001116**	**30601121**
Island Code	3 - Oahu	3 - Oahu
Aquifer Sector	06 - Windward	06 - Windward
Aquifer system	01 - Koolauloa	01- Koolauloa
Aquifer Type, hydrogeology	1 - Basal	1 - Basal
Aquifer Condition	1 - Unconfined	2 - Confined
Aquifer Type, geology	6 - Sedimentary	1 - Flank
Status Code	**12211**	**12213**
Developmental Stage	1 - Currently Used	1 – Currently Used
Utility	2 – Ecologically Important	2 – Ecologically Important
Salinity (in mg/L Cl^-)	2 – Low (250-1000))	2 - Low (250-1,000)
Uniqueness	1 - Irreplaceable	1 - Irreplaceable
Vulnerability to Contamination	1 - High	3 - Low

Source: Mink and Lau, 1990.

The Koolauloa aquifer is characterized by an unconfined sedimentary aquifer above a confined flank aquifer. The sedimentary aquifer is comprised of water with low salinity, is currently being used (but not for drinking water), and is highly vulnerable to contamination.

The flank-confined aquifer also is not used for drinking water, is low in salinity, and has a low vulnerability to contamination.

In the absence of soil borings, the depth to groundwater cannot be determined.

The **Flood Insurance Rate Map** (Federal Emergency Management Agency, 2005) for the area (See Figure 5) places the property in Flood Zone "X" which is defined as "Areas determined to be outside the 0.2% annual chance floodplain." Located about 700 feet inland and separated from the shoreline by a residential subdivision, the lots are well outside the tsunami inundation zone (See Figure 6).

The lots are sparsely vegetated by **plant** species but weedy plants approximately 3 to 4 feet in height cover most of lot 65. California grass, Guinea grass, koa haole, sleeping grass, ipomea, and wedelia are the predominant species. None are considered rare, threatened or endangered or proposed for that status. All are common weeds and grasses found throughout the Hawaiian Islands.

No **wildlife** was observed at the time of the field inspection. More than likely mongoose and rodents frequent the area because of the dense vegetative cover and feral cats and dogs may browse the premises.

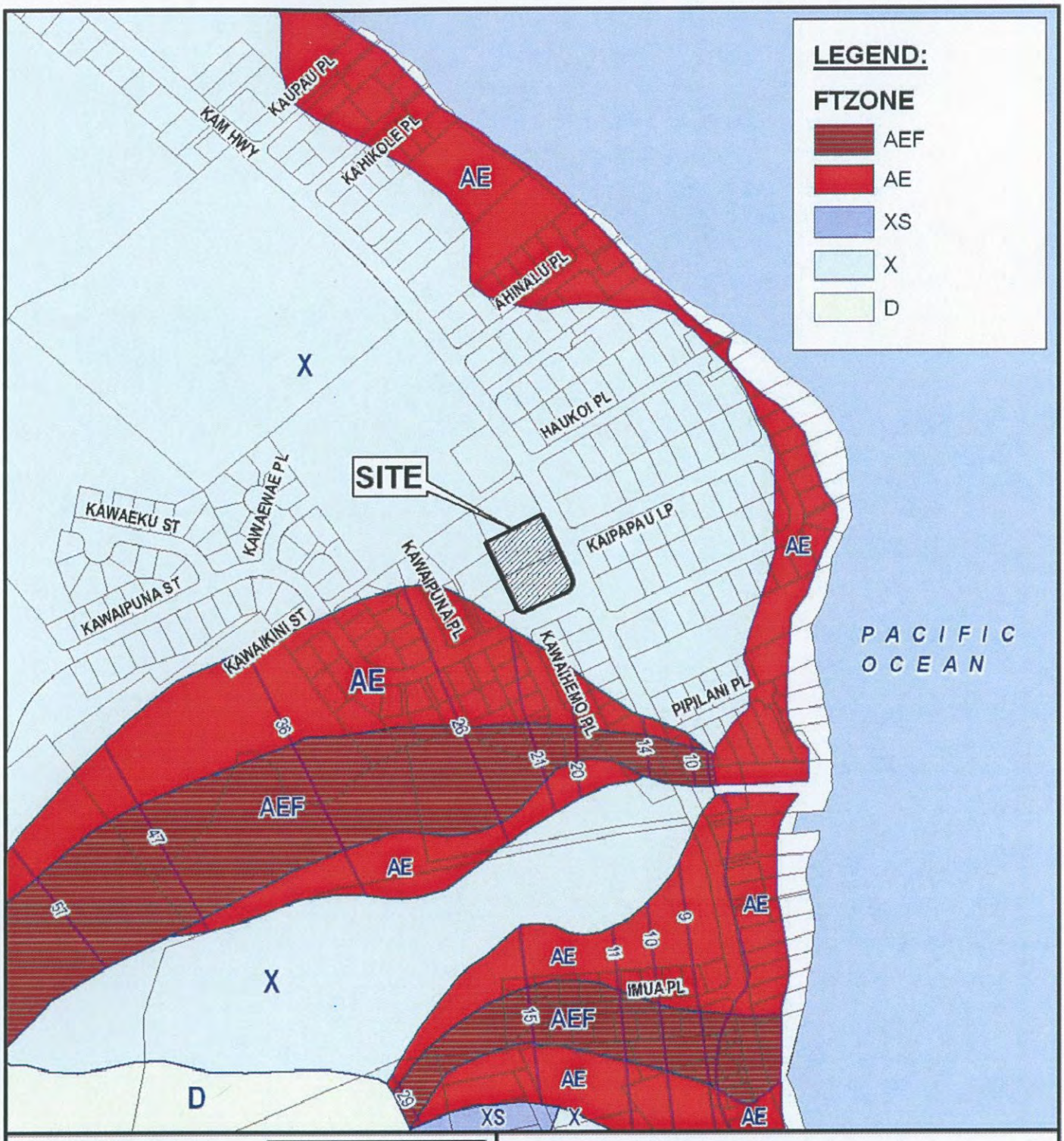
Cattle egret was the only **avifauna** observed. Egrets are common throughout the State of Hawaii and not listed as rare, threatened, or endangered.

An archaeological field inspection (Cultural Surveys Hawaii, 2009) did not observe the presence of **surface archaeological features** on the two lots. It was noted that heavy land disturbance associated with commercial agricultural uses of the project lands prior to modern development within the project area would have destroyed any surface historic properties that may have existing thereon. The property has been heavily disturbed by mechanical grading and tree removal. The eastern portion of the property is adjacent to Kamehameha Highway and may contain remnant fill material associated with the building of the highway.

Background research, however, identified two human burials and a cultural layer in close proximity to the project area in similar sediments (soils) found within the project area. Thus while there are no surface features present, there is a potential for subsurface historic properties, if the form of cultural layers and burials, to be present. The archaeological field inspection report is found in Appendix A.

A Phase I Environmental Site Assessment ("ESA") was conducted to identify *recognized environmental conditions* associated with the property (Bureau Veritas, 2009). The ESA reported that none of the following *recognized environmental conditions* were observed on the premises:

- Hazardous substances and petroleum products
- Underground storage tanks ("UST")
- Above ground storage tanks ("AST")
- In-ground hydraulic equipment
- Solid waste disposal sites
- PCB containing equipment such as electrical transformers



VICINITY MAP

0 200 400 800

Scale in Feet

Figure 5

FLOOD ZONE MAP

Hau'ula Fire Station Relocation

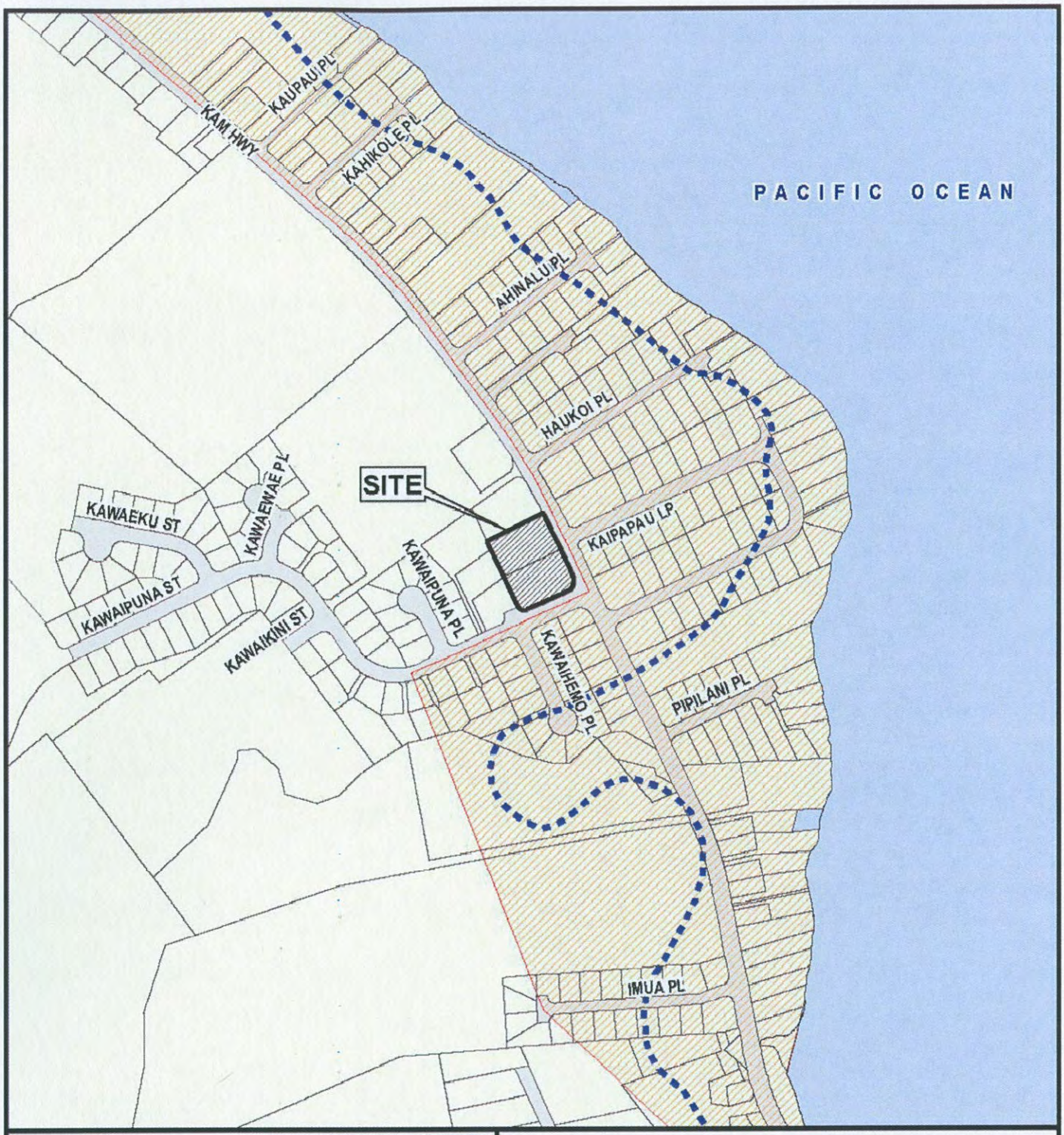
TAX MAP KEY(S): 5-4-018:064 & 065

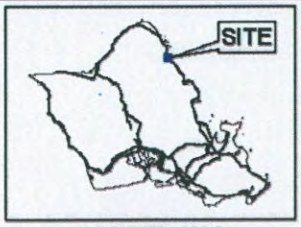
Data Source: FEMA FIRM Panels 0135 & 045

Note: Data represented on this map is not intended to replace site survey.

Prepared by: Department of Planning & Permitting
City and County of Honolulu

Date Prepared: Sept. 2009





VICINITY MAP

0 200 400 800

Scale in Feet

Figure 6

INUNDATION ZONE MAP

Hau'ula Fire Station Relocation

TAX MAP KEY(S): 5-4-018:064 & 065

Legend:

- Tsunami Inundation Line
- Tsunami Evacuation Zone

Prepared by: Department of Planning & Permitting
City and County of Honolulu

Date Prepared: Sept. 2009

The small shed was locked and the interior was not inspected for asbestos containing materials and lead based paint. Both constituents are not a concern at the subject property because the shed is portable and can be removed.

The ESA pointed out that the property was previously used for agricultural purposes. Past use of agricultural chemicals such as herbicides and pesticides may have the potential to affect the subject property. However, there is no evidence of storage, mixing, or excessive use of agricultural chemicals on the subject property. The Phase I Environmental Site Assessment is found in Appendix B.

The Coastal View Study (Chu and Jones, 1987) does not identify specific significant **coastal views** from Kamehameha Highway (Section A Hauula, Laie Kaaawa Viewshed) as it winds through Hau'ula. Rather, the authors contend that continuous and intermittent coastal views along the entire length of the coastal highway provide significant views. *Makai* of the proposed fire station site, a developed residential area is several lots deep and precludes seeing the ocean from the highway.

The valleys and lower cliffs of the Koolau Mountain Range are identified as important coastal landform and Hauula Beach Park is recognized as providing significant stationary views for pedestrians in both north and south directions.

Land Use Controls

The property is classified Urban by the State Land Use Commission, general planned Rural, designated Rural Residential on the Ko'olau Loa *Sustainable* Communities Plan, and zoned B-1 Neighborhood Business (See Figure 7).

"The General Plan for the City and County of Honolulu is a comprehensive statement of objectives and policies which sets forth the long-range aspirations of Oahu's residents and the strategies of actions to achieve them. It is the focal point of a comprehensive planning process that addresses physical, social, economic and environmental concerns affecting the City and County of Honolulu (General Plan)."

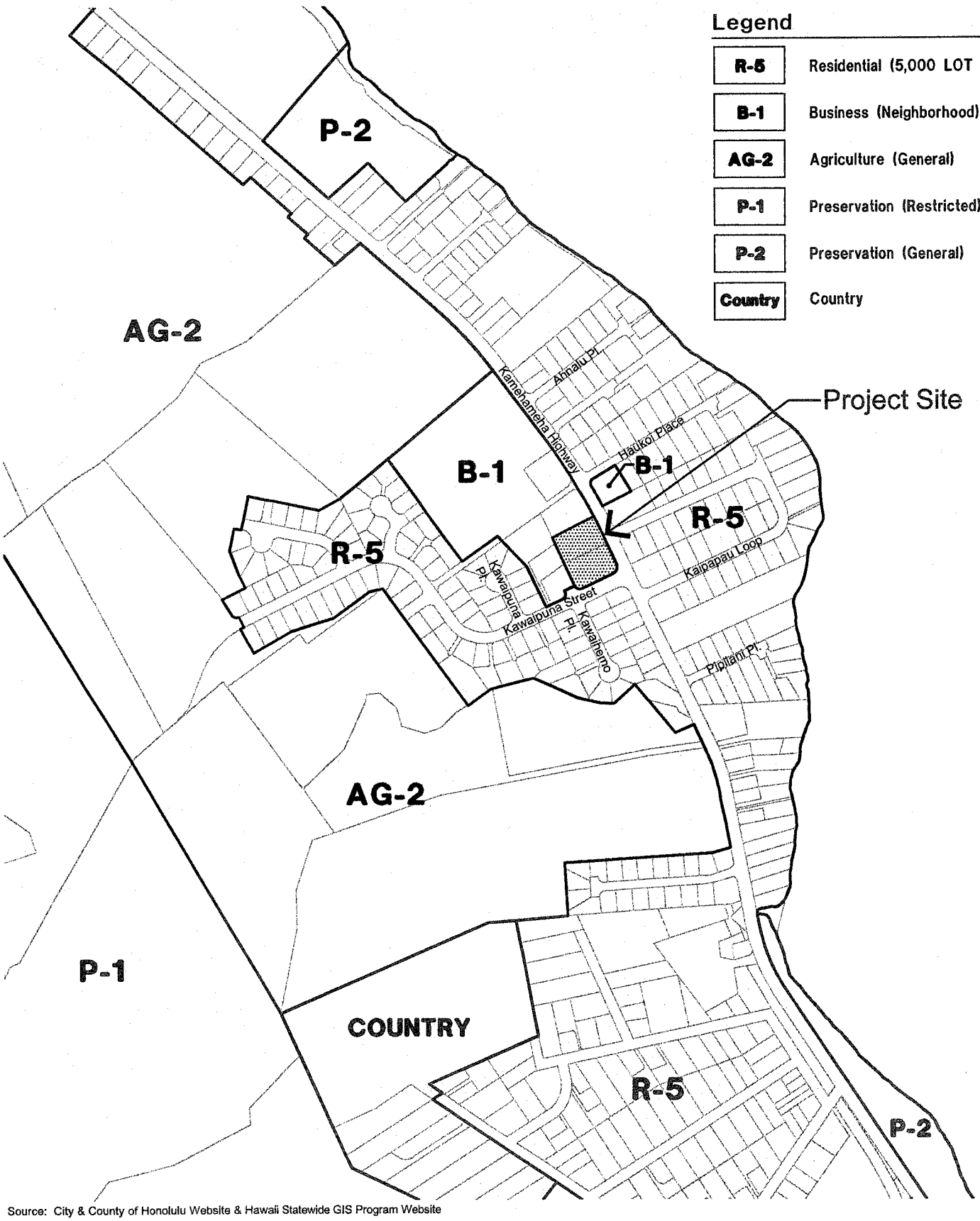
The general plan sets forth objectives and policies in eleven functional areas that can be achieved within a 20-year time span. General plan functional area objectives and policies associated with the Honolulu Fire Department mission and appropriate for the proposed Hau'ula Fire Station are recited below.

Public Safety

Objective B: To protect the people of Oahu and their property against natural disasters and other emergencies, traffic and fire hazards, and unsafe condition.

Policy 7. Provide adequate fire protection and effective fire prevention programs.
Policy 8. Provide adequate search and rescue and disaster response services.
Policy 9. Design safe and secure public buildings.

The Ko'olau Loa *Sustainable* Communities Plan (1999) described existing and proposed public safety facilities for the area thusly:



Source: City & County of Honolulu Website & Hawaii Statewide GIS Program Website

Gerald Park
Urban Planner
September 2009

LINEAL SCALE (FEET)
250 125 0 125 250 500

NORTH

Kalpapa'u, Ko'olauloa, O'ahu

Figure 7
Zoning Map
Hau'ula Fire Station Relocation

Department of Design and Construction, City & County of Honolulu

"The Honolulu Fire Department (HFD) operate fire stations in Ka'a'awa, Hau'ula and Kahuku. The ... Hau'ula Station #15 is equipped with a five-person engine company and a one-person tanker truck. The ...HFD has previously proposed a new fire station in Kawela as a long-range project, if and when additional growth in the area justifies construction of a new facility. HFD has no other plans for new stations in Ko'olau Loa nor do they anticipate increasing personnel at either of the existing stations.

Planning Principles and Guidelines:

Maintain Police and Fire/Ambulance Stations. There is no anticipated need for new locations for either police or fire stations. Accommodate any necessary improvements through renovation or minor expansion of existing facilities for fire/ambulance and police protection. There is a need for a new ambulance facility in Ka'a'awa.

Adequate Police and Fire/Ambulance Protection. Provide adequate staffing and facilities for fire/ambulance and police protection as required to support new developments."

The Department of Planning and Permitting, City and County of Honolulu is in the process of updating the Ko'olau Loa *Sustainable* Communities Plan ("SCP"). As part of the update planning process HFD recommended that the SCP update include language stating that HFD is planning the relocation of the Hau'ula Fire Station out of the flood area and a new site will be selected for the station. It is anticipated that this language will be included in the SCP update.

Hau'ula Fire Station is not identified on the current SCP Land Use and Public Facility Maps. However, a symbol for a future fire station is shown on the Public Infrastructure Map for Ko'olauloa (2000). This "symbolization" on the Public Infrastructure Map depicts the general location of the new facility and means the cost of the facility exceeds $3.0 million.

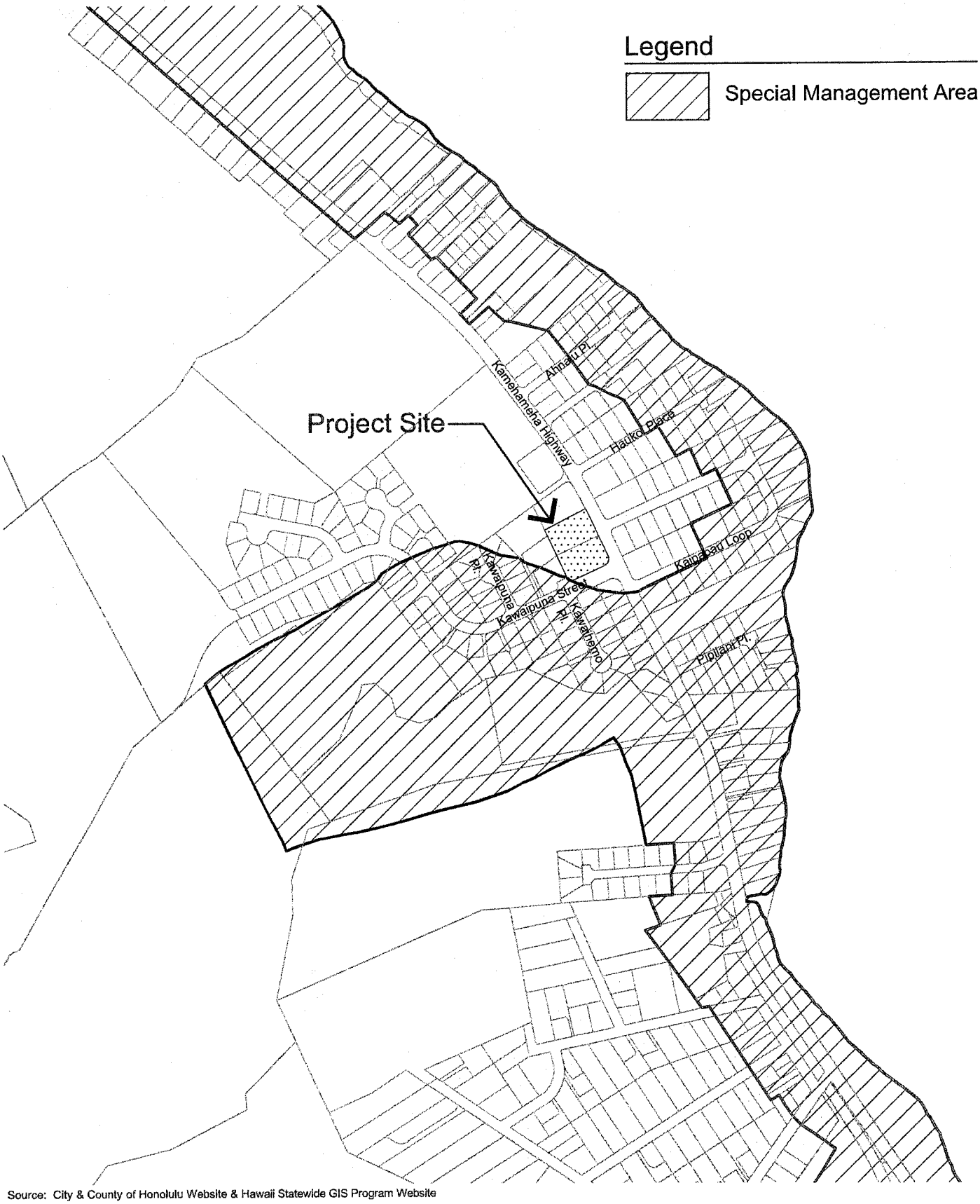
Public uses and structures such as a fire station are a permitted use in the B-1 Neighborhood Commercial zoning district.

The lots are outside of the County delineated Special Management (See Figure 8) and a Special Management Area permit will not be required to construct the fire station.

Public Facilities and Services

Kamehameha Highway, (State Highway 83) is the only roadway linking Hauula with other communities in Ko'olau Loa to the south and north and the North Shore. In the vicinity of the proposed fire station, the two-way, two-lane highway has no curbs, gutters, and sidewalks on either side of the right-of-way. The travel lanes are flanked by grass shoulders of varying width on both sides. Speed limit signs were not observed but a speed limit of 35 mph is presumed because that is the posted speed limit to the north and south.

The lots have a combined frontage of 230 feet on Kamehameha Highway. A bus stop on the road shoulder fronts lot 65.



Source: City & County of Honolulu Website & Hawaii Statewide GIS Program Website

Gerald Park
Urban Planner
September 2009

LINEAL SCALE (FEET)
250 125 0 125 250 500

NORTH

Kaipapa'u, Ko'olauloa, O'ahu

Figure 8
Special Management Area Map
Hau'ula Fire Station Relocation

Department of Design and Construction, City & County of Honolulu

Kawaipuna Street is the primary access road to Kamehameha Highway from residences *mauka* of the project site and the adjoining Hauula Kai Center. In the vicinity of the proposed fire station, the two-way, two-lane street lies within a 50-foot right-of-way fully improved with curbs, gutters, and sidewalks. On street parking is allowed on both sides of the street.

Kawaipuna Street intersects Kamehameha Highway in a T-intersection. The north bound approach of Kamehameha Highway has one lane that serves through traffic and left turn movements onto Kawaipuna Street. The southbound approach has one traffic lane that serves through traffic and right turn movements onto Kawaipuna Street. The eastbound approach of Kawaipuna Street has one stop-controlled lane that serves left and right turn movements.

Water service is drawn from a Board of Water Supply 8" main under Kamehameha Highway. Lot 64 is serviced by a 1¼" lateral and ¾" water meter; Lot 65 is serviced by a 1" lateral and 5/8" water meter.

There are no municipal **wastewater collection and treatment** facilities in Hau'ula. Cesspools and septic systems are the prevalent means of wastewater disposal. The lots are located above (or outside) the Department of Health Underground Injection Control line and in a critical wastewater disposal area as determined by the Oahu Wastewater Advisory Committee [Note: All of Oahu is considered a critical wastewater disposal area].

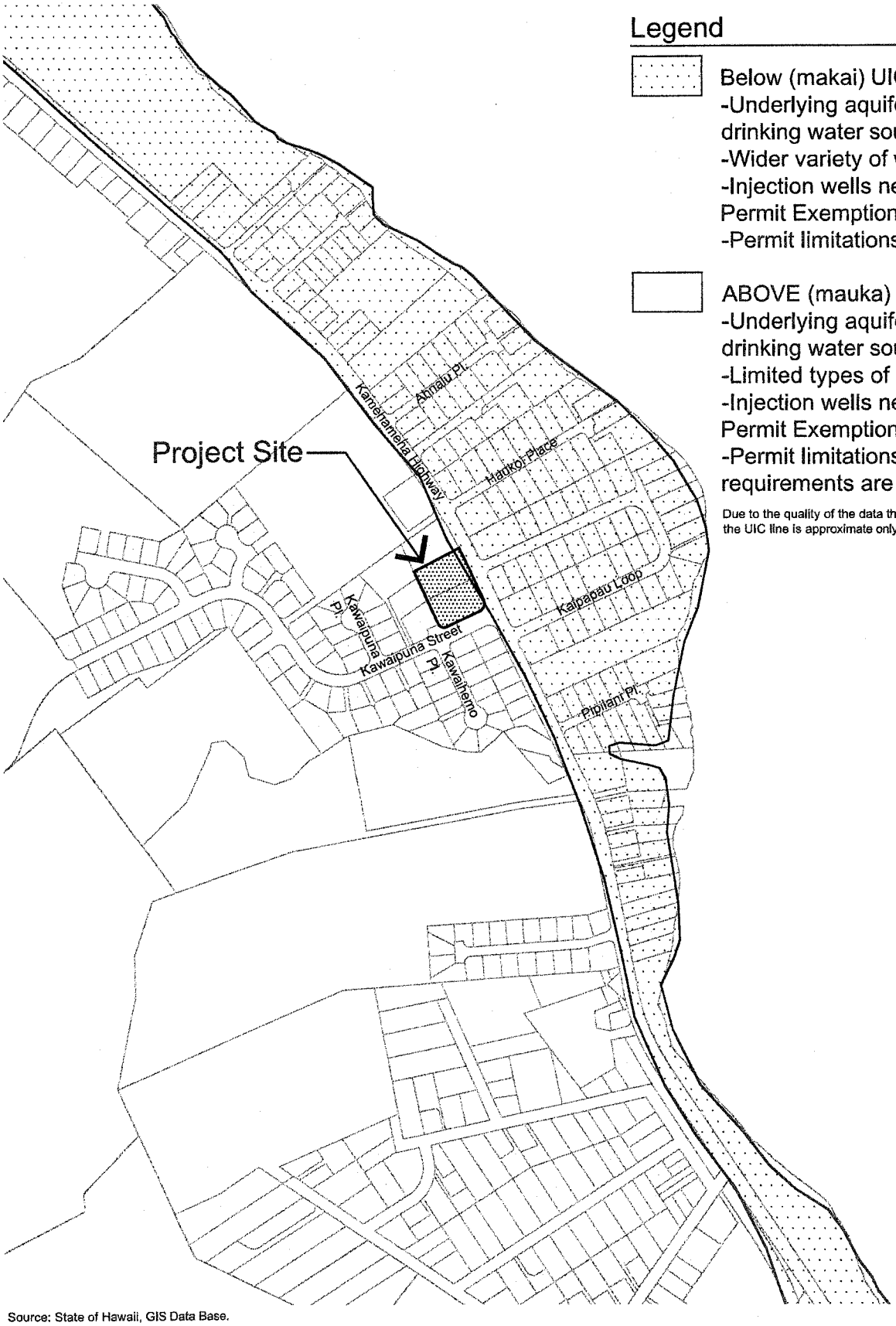
Injection wells are a method of injecting water or other fluids into a groundwater aquifer. Chapter 23, Hawaii Administrative Rules regulates the location, construction, and operation of injection wells so that fluids do not migrate and pollute groundwater sources. For the subject lots, its location above the UIC line indicates that the underlying groundwater is a drinking water source and limited types of injection wells are permitted (See Figure 9).

The BWS operates and maintains a **production well** (Hau'ula Well) on a lot in the Hau'ula Homestead Subdivision near Hanaimoa and Puuowaa Streets. The well is located about 2,200 LF to the south of the proposed fire station at approximately elevation 40 feet above mean sea level. Department of Health regulations prohibit the siting of individual wastewater treatment systems within 1,000 feet of a drinking well (Chapter 62, Hawaii Administrative Rules). The proposed fire station is not located within 1,000 feet of this potable water source.

Police service originates from the Kahuku Substation located in the town of Kahuku about 5.0 miles to the north. The Honolulu Fire Department operates fire stations at Kahuku (Engine 13) which is located adjacent to the police substation and Engine 21 located approximately 7 miles to the south in Ka'a'awa.

Power and communication systems are available from overhead cabling along Kamehameha Highway fronting the two lots.

Hauula Elementary School, a public school, is located approximately one mile to the south adjacent to the existing fire station.



Legend

Below (makai) UIC LINE
-Underlying aquifer not cosidered drinking water source
-Wider variety of wells allowed
-Injection wells need UIC Permit or Permit Exemption
-Permit limitations are imposed

ABOVE (mauka) UIC LINE
-Underlying aquifer considered a drinking water source
-Limited types of injection wells allowed
-Injection wells need UIC permit or Permit Exemption
-Permit limitations are imposed and requirements are more stringent

Due to the quality of the data the location of the UIC line is approximate only.

Source: State of Hawaii, GIS Data Base.

Gerald Park
Urban Planner
September 2009

LINEAL SCALE (FEET)
250 125 0 125 250 500

NORTH

Figure 9
Underground Injection Control Map
Hau'ula Fire Station Relocation

Kaipapa'u, Ko'olauloa, O'ahu

Department of Design and Construction, City & County of Honolulu

The Bright Beginning Learning Center on Kawaipuna Street abuts lot 65 on its west side. The Learning Center provides childcare services for children aged 3 to 5 years old and has a current enrollment of approximately 66 children. Childcare services are offered from 8:00 AM to 2:00 PM, Mondays to Friday. Opened in the year 2000, the center operates from a three-story building that overlooks lot 65 and a detached two-story building further to the west.

Nearby municipal **recreation** facilities include Hauula Beach Park approximately 0.5 miles to the south and Kokololio Beach Park about 0.3 miles to the north.

Statutory Checklist

(24 CFR §58.5 and 58.6)

Wetlands Protection [EO 11990]

The National Wetlands Map does not identify the presence of wetlands on the property.

Documentation: http://wetlands.fws.gov/

Coastal Zone Management [Sections 307 (c), (d)]

The Hawaii Coastal Zone Management Program no longer reviews any HUD assistance programs including Community Development Block Grants and housing programs such as the Public Housing Capital Fund. Applicants for HUD assistance are no longer required to obtain CZM federal consistency approval for HUD assisted activities.

Documentation: Correspondence to United States Department of Housing and Urban Development, Hawaii Field Office from Administrator, Office of Planning, Department of Business, Economic Development & Tourism, June 24, 2004. (See Appendix C)

Historic Preservation [36 CFR 800]

There are no archaeological features or historic sites on the ground surface.

Documentation: Cultural Surveys Hawaii, October 2009.

Floodplain Management [24 CFR 55, EO 11988]

The Flood Insurance Rate Map (Federal Emergency Management Agency, 2004) for the area (See Figure 6) places the property in Flood Zone "X" which is defined as "Areas determined to be outside the 0.2% Annual Chance Floodplain."

Documentation: Flood Insurance Rate Map, Panels 0135 and 045.

Sole Source Aquifers [40 CFR 149]

The project is not located in an EPA designated Sole Source Aquifer area. The Oahu Sole Source Aquifer includes all of the Wahiawa District, all of the Ewa District, and that portion of the Honolulu District west (Ewa) of Manoa Stream.

Documentation: http://www.epa.gov/OGWDW/swp/ssa/reg9.html

Endangered Species Act [50 CFR 402]

On-site vegetation consists primarily of weeds and grass. There are no trees growing on the lots. None of the observed plants are listed or proposed for listing as rare, threatened, or endangered species.

Documentation: Gerald Park Urban Planner, Field Investigation, September 2009.

Wild and Scenic Rivers Act [Sections 7 (b), (c)]

There are no wild and scenic rivers in the State of Hawaii.

Documentation: http//www.nps.gov/rivers/wildriverslist.html

Clean Air Act [Sections 176 (c) and (d) and 40 CFR 6, 51, 93]

The Clean Air Act required the U.S. Environmental Protection Agency to establish National Ambient Air Quality Standards ("NAAQS") for pollutants considered harmful to public health and the environment. The EPA Office of Air Quality Planning and Standards has set National Standards for six principal (or criteria) pollutants: carbon monoxide, lead, nitrogen dioxide, particulate matter, ozone, and sulfur oxides. Areas of the country are identified as a "non-attainment area" where a particular pollutant regularly exceeds the NAAQS.

The State of Hawaii and the project site are located within an "attainment" area for the six criteria pollutants.

Documentation: http://www.epa.gov/air/data/oaqps/greenbk/

Farmland Protection Policy Act [7 CFR 658]

The property is not designated Prime or Unique farmland used for agricultural production or associated activities.

Documentation: Agricultural Lands of Importance to the State of Hawaii, 1977.

Environmental Justice [EO 12898]

Relocating the existing Hau'ula Fire Station to another site in the same community will not burden this rural community with environmental inequities or expose residents to adverse environmental impacts. Potential environmental impacts resulting from construction activities and long-term operation of the fire station are disclosed in other sections of this environmental assessment. These impacts can be mitigated by public health regulations, existing environmental regulations, and community outreach by the user agency (Honolulu Fire Department).

Relocating the fire station to a site outside a flood hazard zone and tsunami evacuation zone is a priority of the Honolulu Fire Department. A properly located facility assures the safety of personnel assigned to the station and provides for continued and uninterrupted emergency response services to the community should any of these events occur. There will be no decline in response area coverage and the new station will be able to accommodate and deploy up to date fire fighting equipment and resources into the community it serves.

This environmental assessment will be available to local community groups and placed in the nearest public library for review. Residents can review an on-line version through the State Office of Environmental Quality Control. People can comment on the environmental assessment and their comment and associated response will become part of the environmental record.

Documentation: Project Plans, Honolulu Fire Department, 2009.

Noise Abatement and Control [24 CFR 51 B]

The fire station is not located within 15 miles of Honolulu International Airport or Kalaeloa Airport, the two major airports on the island of Oahu.

The station is within line of sight of Kamehameha Highway the major roadway in the District of Ko'olau Loa. The roadway is at about the same elevation as the project site and there are no existing solid barriers, structures, or natural features that would attenuate traffic noise between the road and the fire station. During the field inspection, it was noted that the major contributors to existing ambient background noise levels were traffic along Kamehameha Highway, periodic tour and school buses, and on occasion loud motorcycles.

Traffic noise levels are expected to be the loudest during daylight and early evening hours when station personnel are awake and at the lowest levels during late night and early morning hours when personnel are asleep.

To help reduce noise from traffic on Kamehameha Highway, the station will be set back from the road right-of-way and constructed of concrete masonry units. The interior working and living environment will be climate controlled to further attenuate traffic noise, dust, and other irritants from the nearby road that would negatively affect the occupants, furnishings, equipment, and operations of the station.

Documentation: Project Plans, Honolulu Fire Department, September 2009.

Toxic Chemicals and Radioactive Materials [24 CFR 58.5(i)(2)]

Evidence of polychlorinated biphenyls (PCBs) was not observed on or near the property during a site inspection. Historical photographs show that the property was used for agricultural purposes in the past. There is no evidence of agricultural chemicals such form of herbicides and pesticides were stored, mixed, or used excessively on the property.

Documentation: Bureau Veritas, Phase I Environmental Site Assessment, October 2009.

Explosive and Flammable Operations [24 CFR 51 C]

Underground and Aboveground Storage tanks, non-hazardous solid waste sites, and petroleum products in drums were not observed on the property. A gasoline station is located about 400 feet southeast of the property.

Documentation: Bureau Veritas, Phase I Environmental Site Assessment, October 2009.

Airport Clear Zones and Accident Potential Zones [24 CFR 51 D]

The site of the proposed fire station and the community of Hau'ula are not located under or near the flight path of Oahu's two major airports. Honolulu International Airport is located approximately 19.5 miles due south on the southern coast of Oahu and separated from Hau'ula by the Koolau Mountain. Kalaeloa Airport, also located on the south coast of the

island, is approximately 23.5 miles southwest and separated from Hau'ula by the Waianae and Koolau Mountains.

Documentation: State Department of Transportation, Airports Division, Honolulu International Airport, Airport Layout Plan, September 2000
State Department of Transportation, Airports Division, Kalaeloa Airport Master Plan, Airport Layout Drawing November 1996.

Environmental Assessment Checklist

Impact Codes
1 No impact anticipated
2 Potentially beneficial
3 Potentially adverse
4 Requires mitigation
5 Requires project modification

LAND DEVELOPMENT

Conformance with Comprehensive Plans and Zoning — Code: 1

The lots on which the Hau'ula Fire Station are proposed is classified Urban by the State Land Use Commission (See Figure 7), general planned Rural, and designated Rural Residential on the Ko'olau Loa *Sustainable* Communities Plan. The lots are zoned B-1 Neighborhood Commercial.

The existing Ko'olau Loa *Sustainable* Communities Plan (1999) text states that "there is no anticipated need for new locations for either police or fire stations. Accommodate any necessary improvements through renovation or minor expansion of existing facilities for fire/ambulance and police protection." The Plan was adopted ten years ago and is currently undergoing revisions. As part of the revision process, the Honolulu Fire Department recommended that the plan text be revised to state that HFD is planning the relocation of the Hau'ula Fire Station out of the flood area and a new site will be selected for the station. It is anticipated that this language will be included in the *Sustainable* Communities Plan update thus conforming both the Plan and the action to relocate the fire station out of the flood area.

As a public use and structure, a fire station is a permissible use in the Neighborhood Commercial zoning district. The proposed improvements will comply with the lot coverage, yard requirements, and building height regulations of the B-1 zoning district and the off-street parking requirements of the Land Use Ordinance.

Source: City and County of Honolulu, Land Use Ordinance, Ordinance No. 86-96.
Department of Planning and Permitting, Zoning Map No. 21, 2001.

Compatibility and Urban Impact — Code: 1

The Hau'ula Fire Station should be compatible with the business and residential uses located around the station. The station will be designed with an appropriate architectural character for the community. It will be consistent with the existing two- and three-story buildings on adjacent lots. The station will be setback from Kamehameha Highway to create an ample front yard for open space and drainage control purposes. The site will be landscaped to buffer adjoining uses, add vertical elements to soften the building form, and add color to a barren urban environment.

Source: Project Plans, October 2009.

Slope Code: 1

The site is relatively flat (2% slope) with no adverse topographical features. Major earthwork is not required to prepare the site for the proposed improvements.

Source: USGS Map, Hauula Quadrangle.

Erosion Code: 1

Site work will expose soil thus creating opportunities for erosion (fugitive dust and suspended sediment in runoff). Grubbing, grading, and stockpiling excavated or imported material will be performed in accordance with the Grading Ordinance of Honolulu, 1990, as amended and an approved Grading Plan. Furthermore, work will be performed in accordance with the Soil Erosion Standards and Guidelines (1975) and Rules Relating to Storm Drainage Standards (1999) to reduce pollution associated with storm water runoff.

Best Management Practices (BMPS) for erosion and drainage control during construction will be incorporated into grading plans. The project limits are less than one (1) acre thus a National Pollutant Discharge Elimination System ("NPDES") General Permit Authorizing Discharges of Storm Water Associated with Construction Activity will not be required from the State Department of Health.

Roof and surface runoff will be directed to landscaped areas around the station and to the front yard for detention and/or percolation into the ground.

Source: Project Plans, October 2009.

Soil Suitability Code: 1

Site soils are suitable for building as evidenced by the presence of two- and three-story structures on adjacent lots which have the same soils types as the two lots. .

Geo-technical studies will be performed during the design stage. The same studies will help to determine the engineering parameters for designing and operating the septic tank filter field.

Source: Soil Conservation Service, 1972.

Hazards and Nuisances, including Site Safety Code: 1

Natural hazards are not associated with the property.

There are no underground or aboveground storage tanks on the premises.

Source: Gerald Park Urban Planner, Field Investigation, September 2009.
Bureau Veritas, Environmental Site Assessment, October 2009.

Energy Consumption Code: 1

Energy usage will increase due to the inclusion of air conditioning, computers, vehicle charging systems, and other equipment not installed in the existing station. Design

features to help offset increases in energy consumption will include insulated walls, natural lighting, energy efficient light fixtures, energy efficient appliances, low-E glass, and an efficient air conditioning system. Energy conservation technologies such as solar water heating and photovoltaic electric generating systems may also be included in the design of the station.

The station is intended to be designed in accordance with "LEED" Silver Certification requirements which should reduce the overall impact of the station on the environment and reduce long-term operating costs.

Source: Project Plans, October 2009.

Noise-Contribution to Community Noise Level Code: 1

The fire station site is adjacent to residential areas on the south and east, a neighborhood shopping center on the north, and business uses on the west (including a children's learning center). Exposure to noise will vary by construction phase, the duration of each phase, and the type of equipment used during the different phases. Maximum sound levels in the range of 82-96 dB measured at 50 feet from the source would be generated by heavy machinery during the site work phase. After site work is completed, reductions in sound levels, frequency, and duration can be expected as the structure is built out.

Community Noise Control regulations establish maximum permissible sound levels for construction activities occurring within "acoustical" zoning districts. Based on the business zoning of the area, the project is considered to be located in the Class B zoning district for noise control purposes. The maximum permissible daytime sound level in the district is 60 dBA between 7:00 AM to 10:00 PM and 50 dBA between 10:00 PM and 7:00 AM (Chapter 46, Community Noise Control, 1996).

In general, any noise source that emits noise levels in excess of the maximum permissible sound levels cannot be operated without first obtaining a noise permit from the State Department of Health. Although the permit does not attenuate noise *per se* it regulates the times during which excessive noise is allowed.

The construction contractor will be responsible for obtaining and complying with conditions attached to the permit. Work will typically be scheduled between the hours of 7:00 AM to 3:30 PM Mondays through Fridays (except on holidays). The contractor will also ensure that construction equipment with motors is properly equipped with mufflers in good operating condition. All construction activities will comply with Chapter 46 Noise Control for Oahu, Administrative Rules, Department of Health, State of Hawaii.

The station, like other fire stations located on Oahu, is not anticipated to be a significant generator of noise. In general, on-duty fire fighters adhere to a standard schedule of activities for maintaining the facility, grounds, equipment, their firefighting skills, and physical fitness. These activities are conducted during normal daylight hours. Noise levels generated by these activities are not significantly different from noise levels in the surrounding neighborhood.

When an alarm is sounded by the dispatch over the station's public address system and the company responds to an emergency, noise levels may be audible in surrounding areas. The driver of the fire apparatus is required to sound the siren when responding to

an emergency. Noise may be audible again when the company returns to the station and performs restoration work on the apparatus and equipment in preparation for the next emergency call.

The back up generator, air conditioning, and other mechanical equipment will be equipped with noise attenuation devices and placed in enclosed spaces for noise attenuation and for screening from public view to minimize visual impacts.

Source: Project Plans, October 2009.

Air Quality Code: 1
Effects on Ambient Air Quality on Project and Contribution to Community Pollution Levels

Construction will temporarily affect air quality and the acoustical environment. Grubbing will be the first construction activity followed by limited grading, trenching, and other site work activities that can generate fugitive dust. Windy conditions coupled with exposed soil can create dust problems. The general contractor will employ dust control measures to prevent the work site and construction equipment and activities from becoming significant dust generators. Control measures will comply with Chapter 60.1, Air Pollution Control, Title 11, State Department of Health (and revisions thereto).

Most construction equipment and vehicles are diesel powered and emit exhaust emissions typically high in nitrogen dioxide and low in carbon monoxide. The Federal and State nitrogen dioxide standard ---100mg/m^3 per annum---which is an annual standard, is not likely to be exceeded during construction. Carbon dioxide emissions should be less than that generated by automobile traffic on adjoining streets. Aldehyde odors from diesel equipment may be detected but should be dispersed by the prevailing winds.

Source: Gerald Park Urban Planner, September 2009.

Environmental Design Code: 1
Visual Quality--Coherence, Diversity, Compatible Use, and Scale

Fire stations are necessary neighborhood components for the sake of public safety. The new fire station will be similar in appearance and form to those located throughout the City and County of Honolulu, and particularly those in rural or low-density neighborhoods. The predominant visual element of the structure will be its training tower nearing 40 feet in height. This iconic feature will also serve to identify the building to the public as an essential emergency facility. The building will constructed of durable, quality materials typically used for public facilities.

Public views of the natural landscape of the Ko'olau Mountains and foothills from Kamehameha Highway will not be significantly affected. The size and scale of the building will be in keeping with the character of the neighborhood and ample setbacks and yards will provide landscaping that will greatly improve the present appearance of the vacant and weed-covered lots. The new fire station will positively contribute to the appearance and on-going vitality of Hau'ula.

Source: Project Plans, October 2009.

SOCIOECONOMIC

Demographic/Character Changes Code: 1

The proposed project will not alter neighborhood or community demographics and the character of the neighborhood. The project will not introduce a permanent resident population to the area.

Source: Project Plans, October 2009.

Displacement Code: N/A

The site is vacant and not occupied.

Employment and Income Patterns Code: N/A

COMMUNITY FACILITIES AND SERVICES

Educational Facilities Code: 1

Effects on Hau'ula Elementary School, the only public school in the community, are not anticipated. The school is too distant to be directly affected by construction related impacts and station operations in the long-term.

Measures for mitigating construction related impacts such as fugitive dust, noise, erosion and runoff, and construction traffic will be deployed to minimize these impacts on the adjoining Bright Beginnings Learning Center. The site work contractor will meet with school administrators and staff to apprise them of construction activities at the station. In the long-term, fire station operations should not adversely affect classroom instruction and activities. The exception is when the station's public address system signals an alarm and the apparatus sounds its siren when leaving the station. Noise associated with an emergency response could temporarily disrupt classroom activities but this impact cannot be avoided.

Fire Department personnel will consult with school administrators on how to instruct children and their parents how to react in the event when the apparatus is responding to an emergency during school hours and during peak traffic periods before and after school. Personnel will also communicate with neighboring residents about personal and motoring safety when the apparatus is responding to an alarm.

Source: Gerald Park Urban Planner, Field Investigation, September 2009.
Honolulu Fire Department, October 2009.

Commercial Facilities Code: 1

The station will be physically closer to shopping and eating establishments in the community. Firefighters already probably frequent these establishments thus there should be no change in business activities as a result of the proposed relocation.

Source: Gerald Park Urban Planner, Field Investigation, September 2009.

Health Care Code: N/A

Social Services Code: N/A

Solid Waste Code: 1

Solid waste quantities have not been determined. Refuse will be collected by City refuse personnel or contracted out to a private hauler.

Source: Honolulu Fire Department, October 2009.

Wastewater Code: 1

The method of wastewater collection and disposal will be determined during the design stage of the project. Since the area is not served by a municipal sewer system, it is anticipated wastewater disposal will entail an individual wastewater system. The system would consist of an on-site septic tank and filtration field. Solids would be collected in the septic tank and effluent would be discharged to a filtration field. The wastewater system will be designed, operated, and maintained pursuant to Department of Health regulations (Chapter 62, Hawaii Administrative Rules).

Wastewater flow is projected at 600 gallons per day which is unchanged from wastewater flows generated at the existing station. Since there is no increase in manpower, there should be no change in daily flow.

Source: Project Plans, October 2009.

Storm Water Code: 1

On-site runoff will be conveyed to landscaped areas around the station and the yard fronting Kamehameha Highway for detention on site for pollutant removal and water percolation into the ground.

Source: Project Plans, October 2009.

Water Supply Code: 1

Average daily water demand is estimated at 750 gallons per day for domestic consumption and irrigation. Water is available from the existing water system in Kamehameha Highway or Kawaipuna Street. The project should not place additional demands on the area's water system since staffing levels will remain unchanged

Source: Project Plans, October 2009.

Public Safety: Police Code: N/A

Fire Code: 2

The relocation of the fire station is part of the Honolulu Fire Department's continuing mission to modernize, update, and address many of the design deficiencies of fire stations throughout the City and County of Honolulu. A new fire station will provide for proper living

and working conditions of all firefighters assigned to the station. With a properly programmed, designed, and sized station, the HFD will be able to deploy the most current firefighting resources, equipment, skilled personnel, and materials available for the next 40 or more years.

No change in staffing requirements is anticipated because of the relocation and size of the new station. The station will be staffed continuously 24 hours a day, 7 days a week. Each on duty platoon will be supervised by a captain and staffed with 5 fire fighters. Three platoons comprise the engine company for a total complement of 18 personnel.

Engine 15 responds to an average of 30 emergency calls per month. Emergency call volume is not anticipated to change provided the area population and density remains unchanged.

The proposed action will not adversely affect fire protection services within the first response area. Until the new station is constructed, Engine 15 will continue to operate from the existing Hau'ula Fire Station.

Source: Honolulu Fire Department, October 2009.

Emergency Medical — Code: N/A

Open Space and Recreation

Open Space — Code: N/A

Recreation — Code: N/A

Cultural Facilities — Code: 1

Cultural facilities are not known to be associated with the site.

Source: Gerald Park Urban Planner, Field Investigation, September 2009.

Transportation — Code: 2

Construction vehicles hauling materials and transporting workers will contribute traffic on Kamehameha Highway and Kawaipuna Street over the construction period. Material deliveries will be scheduled during non-peak hours to minimize impacts on local traffic and streets. As much as possible, construction materials will be unloaded on site so as not to interfere with traffic circulation on adjoining streets. If unloading from the road is required, personnel will be posted for traffic control during material loading and off-loading.

Utility connections will be made in the road right-of-way and required minor modifications to traffic patterns. Traffic management measures to be implemented during this phase of work may include closing one lane of traffic, posting flagmen or "Special Duty" police officers for traffic control, and placing warning signs well distant from work sites to alert motorists of road work ahead. All open trenches will be bridged with steel plates during non-working hours. If required, a traffic management plan will be prepared and submitted to the State Department of Transportation, Highways Division for review and approval prior to construction.

HFD proposes to install a traffic signal at the intersection of Kamehameha Highway and Kawaipuna Street thus introducing the first traffic signal into this rural community. The traffic signal is anticipated to change traffic patterns in the area and the driving habits for all motorists passing through the intersection. Anticipated impacts on traffic operations are summarized below:

- The fire apparatus and other vehicles will be able to safely negotiate left and right turn movements onto Kamehameha Highway from Kawaipuna Street.
- Traffic volume on Kamehameha Highway is expected, in general, to remain similar to existing conditions despite the change in traffic operations at the intersection.
- Traffic queues and a "platoon" effect caused by a signalized intersection may affect left turn movements from Kaipapau Loop, Hauko Place, and Pipilani Place, streets on the makai side of Kamehameha Highway. Traffic queues may result in some delay in left turn movements and the "platoon" effect may create breaks in traffic flow thereby reducing the queuing time to make a left turn.
- Traffic on Kapapau Loop to the south of Kawaipuna Street will experience difficulty directly entering and exiting the street because of its proximity to the intersection.

Source: Project Plans, October 2009.
Honolulu Fire Department, October 2009.

NATURAL FEATURES

Water Resources Code: 1

The project is not located in an EPA designated Sole Source Aquifer area. The southern Oahu Basal Aquifer includes all of the Wahiawa District, all of the Ewa District, and that portion of the Honolulu District west (Ewa) of Manoa Stream.

"This project has been reviewed and found to be consistent with the Memorandum of Understanding between HUD and EPA (effective 4.30/90) pursuant to Section 1424(e) of the Safe Water Drinking Act of 1974."

Source: Memorandum of Understanding between the U.S. Department of Housing and Urban Development and the Environmental Protection Agency, Region IX. (See Appendix C)

Surface Water Code: 1

There are no streams, ponds, wetlands, or other surface water bodies on the premises. Kaipapa'u Stream, a perennial stream, is located about 500 feet to the south of the site.

Source: Gerald Park Urban Planner, Field Investigation, September 2009.

Unique Natural Features and Agricultural Lands Code: 1

The project is not proposed on land or in an area with unique natural features.
The fire station is proposed on urban zoned land; valuable agricultural land .will not be affected.

Source: Gerald Park Urban Planner, Field Investigation, September 2009.
Agricultural Lands of Importance to the State of Hawaii Map, 1977.

Vegetation and Wildlife Code: 1

On-site plant materials are common weeds and grasses found on the Island of Oahu and the State of Hawaii. None of the observed plants are listed or proposed for rare, threatened, or endangered status.

Source: Gerald Park Urban Planner, Field Investigation, September 2009.

Other Factors

Flood Disaster Protection Act (Flood Insurance) Code: 1

The Flood Insurance Rate Map for the area places the property in Flood Zone "X" which is defined as "Areas determined to be outside the 0.2% annual chance floodplain."

Source: Federal Emergency Management Agency, 2005.

Coastal Barrier Resources Act/Coastal Barrier Improvement Act Code: N/A

This act is not applicable to the State of Hawaii, as no formally identified "coastal barriers" are known to exist in the State of Hawaii.

Source: http://laws.fws.gov/lawdigest/coastbar.html

Airport Runway Clear Zone or Clear Zone Disclosure Code: 1

The proposed Hau'ula Fire Station is not situated within the runway clear zone of Honolulu International Airport or Kalaeloa Airport.

Source: State Department of Transportation, Airports Division, Honolulu International Airport, Airport Layout Plan, September 2000
State Department of Transportation, Airports Division, Kalaeloa Airport Master Plan, Airport Layout Drawing, November 1996.

Archaeological Features Code: 1/4

The entire project area has been completely disturbed by prior development activities (grading and leveling) and no surface historic properties were observed within the project area. However, background research identified two human burials and a cultural layer in close proximity to the project area in similar sediments (soils) found within the project area. Thus while there are no surface features present, there is a potential for subsurface historic properties, if the form of cultural layers and burials, to be present.

In consideration of the above, the consulting archaeologists recommended consultation with the State Historic Preservation Division to determine an appropriate scope of work to complete the project's historic preservation review process.

Should site work uncover subsurface features, work in the immediate area will cease and the proper historic authorities notified for disposition of the finds. As a matter of protocol, both the State Historic Preservation Division and Honolulu Police Department will be notified for inspection and disposition of the finds.

SUMMARY OF FINDINGS AND CONCLUSIONS

There are no significant environmental resources associated with the two lots. The lots are flat and not located in an area of natural hazards. There are no surface archaeological features, surface waters such as streams or wetlands, rare, threatened, and endangered flora and fauna, hazardous materials or hazardous material sites within 1 mile, and both lots are not within identified flood hazard and coastal high hazard zones.

The Department of Design and Construction will consult with the State Historic Preservation Division to determine an appropriate scope of work to complete the historic review process.

The proposed use is a permitted use in the underlying zoning district. Placement of the station on the site will comply with the development standards for the zoning district to include setbacks and building height requirements.

Water is available and adequate to accommodate the proposed use. There is no drainage system serving the property thus on-site runoff will be accommodated on the premises. An on-site individual wastewater system will collect and treat domestic wastewater. Since staffing levels will remain unchanged from the existing station, there will be no significant increase in water consumption and wastewater discharge. Energy consumption will increase due to the inclusion of air conditioning, computers, vehicle charging systems, and other equipment not installed in the existing station. Design measures to be incorporated into the building design will aid in reducing energy use. Furthermore, the station will be designed in accordance with LEED principles for sustainability.

A fire station *per se* re is not a significant noise generating facility. The sound of the apparatus and its siren will be heard between the station and the scene of the emergency whenever there is an emergency call. This already occurs in the community and will continue as long as Engine 15 responds to alarms.

ALTERNATIVES TO THE PROPOSED ACTION

Alternatives and Project Modification Considered

No Action Alternative

A No Action alternative would maintain the status quo of the site. The lots would remain vacant until improved for uses allowed in the B-1 zoning district. A No Action alternative would preclude the occurrence of all impacts, short and long term, beneficial and adverse described in this Assessment.

A No Action alternative also means that the existing Hau'ula Fire Station will continue to operate from its present location in a deteriorating facility that could compromise the HFD mission to provide continued and uninterrupted emergency response services to the community. As disclosed earlier, the Honolulu Fire Department wants to relocate the

Hau'ula Fire Station outside of a flood hazard area. A location beyond known flood and tsunami hazard areas will provide for continued and uninterrupted emergency response services to the community should any of these events occur.

Alternative Location

There is no alternative location available on which to relocate the Hau'ula Fire Station at this time.

In 2002, the Honolulu Fire Department proposed relocating the Hau'ula Fire Station to a lot on Hauula Homestead Road about 0.2 miles *mauka* of Kamehameha Highway. In general, the location was not favored because access would have been through a residential subdivision, Hauula Homestead Road is too narrow to accommodate residential traffic and the fire apparatus at the same time, safety concerns for residents living along the road and children playing in the road, and proximity of the station's proposed wastewater disposal system to a Board of Water Supply potable water well.

Mitigation Measures Recommended: None

Additional Studies Performed

Phase I Environmental Site Assessment, Bureau Veritas, September 2009.
Archaeological Field Inspection and Literature Review, Cultural Surveys Hawaii, September 2009.

List of Sources, Agencies, and Persons Consulted

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Honolulu Fire Department

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Endangered Species	http://endangered.fws.gov/wildlife.html
Sole Source Aquifers	http://www.epa.gov/OGWDW/swp/ssa/reg9.html
Wetlands	http://wetlands.fws.gov/
Wilderness	http://wilderness.nps.gov/
Wild and Scenic Rivers	http//www.nps.gov/rivers/wildriverslist.html

Agreements

Correspondence to US. Department of Housing and Urban Development, Hawaii Field Office from Administrator, Office of Planning, Department of Business, Economic Development & Tourism, June 24, 2004.

Memorandum of Understanding between the U.S. Department of Housing and Urban Development and the Environmental Protection Agency, Region IX.

Maps

Flood Insurance Rate Map, Community Panels 15003C0370F, September 2004.

Agricultural Lands of Importance to the State of Hawaii, 1977.

Zoning Map No. 21, Kahana to Laie Point, Department of Planning and Permitting, City and County of Honolulu, 2001.

APPENDIX A

Archaeological Literature Review and Field Inspection Report
Hau'ula Fire Station Project

Archaeological Literature Review and Field Inspection Report for the Hau'ula Fire Station Project

Kaipapa'u Ahupua'a, Ko'olauloa District, O'ahu

TMK: [1] 5-4-018:064 & 065

Prepared for

Gerald Park Urban Planner

Prepared by

Nifae Hunkin, B.A.

Douglas Borthwick, B.A.

and

Hallett H. Hammatt, Ph.D.

Cultural Surveys Hawai'i, Inc.

Kailua, Hawai'i

(Job Code: HAUULA 1)

October 2009

O'ahu Office
P.O. Box 1114
Kailua, Hawai'i 96734
Ph.: (808) 262-9972
Fax: (808) 262-4950

www.culturalsurveys.com

Maui Office
1993 Main St.
Wailuku, Hawai'i 96793
Ph: (808) 242-9882
Fax: (808) 244-1994

Management Summary

Reference	Archaeological Literature Review and Field Inspection Report for the Hau'ula Fire Station Project, Kaipapa'u Ahupua'a, Ko'olauloa District, O'ahu, TMK: [1] 5-4-018:064 & 065
Date	October 2009
Project Number (s)	Cultural Surveys Hawai'i Inc. (CSH) Job Code: HAUULA 1
Investigation Permit Number	The fieldwork component of the archaeological literature review and field inspection study was carried out under archaeological permit number 09-20, issued by the Hawai'i State Historic Preservation Division/Department of Land and Natural Resources (SHPD/DLNR), per Hawai'i Administrative Rules (HAR) Chapter 13-282.
Project Location	The project area is located at the northwest corner of the intersection of Kamehameha Highway and Kawaipuna Street, Hau'ula, Hawaii.
Land Jurisdiction	Private/City and County of Honolulu
Agencies	State Historic Preservation Division (SHPD), Department of Land and Natural Resources (DLNR)
Project Description	The proposed project involves the proposed construction of fire station facilities on two adjoining lots (TMK: [1] 5-4-018:064 & 065), which are both currently zoned as commercial. Minimally, land disturbing activities would include grubbing and grading, excavations for subsurface utilities, and associated infrastructure improvements.
Project Acreage	0.93-acres
Area of Potential Effect (APE) and Survey Acreage	For the purposes of this archaeological literature review and field inspection study, the Area of Potential Effect (APE) is considered to be the entire 0.93-acre project area.
Historic Preservation Regulatory Context and Document Purpose	The proposed project is subject to Hawai'i State environmental and historic preservation review legislation [Hawai'i Revised Statutes (HRS) Chapter 343 and HRS 6E-8/Hawai'i Administrative Rules (HAR) Chapter 13-275, respectively]. While this investigation does not fulfill the requirements of an archaeological inventory survey investigation (per HAR Chapter 13-276), it serves as a document to facilitate the proposed project's planning and supports historic preservation review compliance by assessing if there are any major archaeological concerns within the study area and to develop data on the general nature, density and distribution of archaeological resources.
Fieldwork Effort	The field inspection of the project area was accomplished on October 8, 2009, by two CSH archaeologists, Douglas Borthwick, B.A., and Nifae Hunkin, B.A., under the general supervision of Hallett H. Hammatt, Ph.D. (principal investigator). The fieldwork required 1 person-day to complete.

Results Summary	The entire project area was observed to have been completely disturbed by prior development activities (i.e. grading and leveling). No surface historic properties were observed within the project area. However, background research has identified two human burials and a subsurface cultural layer (SIHP -4795 & -4796) in close proximity to the project area (Masterson et al. 1997) (see Figure 8 & Figure 9). The burials and cultural layer were observed during the instillation of a water main along Kamehameha Highway and were situated within sediments similar to those found within the current project area. Thus while no historic properties were observed during the pedestrian inspection of the project area, based on background research, there is a potential for subsurface historic properties, in the form of subsurface cultural layers and burials, to be present.
Recommendations	Based on the results of the literature review and field inspection the presence of as yet undocumented historic properties, including buried cultural layers and burials, cannot be ruled out. Accordingly, CSH recommends consultation with SHPD to determine an appropriate scope of work to complete the project's historic preservation review process.

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Section 1 Introduction

1.1 Project Background

At the request of Gerald Park Urban Planner, Cultural Surveys Hawai'i, Inc. (CSH) prepared this archaeological literature review and field inspection study for the proposed Hau'ula Fire Station Project, Kaipapa'u Ahupua'a, Ko'olauloa District, O'ahu, TMK: [1] 5-4-018:064 & 065. The project area is located in the *makai* (coastal) portion of Kawaipuna neighborhood, where Kawaipuna Street intersects with Kamehameha Highway. This area is depicted on the U.S. Geological Survey 7.5-Minute Series Topographic Map, Hau'ula Quadrangle (1998) (Figure 1, Figure 2 and Figure 3).

For the purposes of this Archaeological Literature Review and Field Inspection (LRFI), the area of potential effect (APE) is considered to be the entire approximately 0.93-acre study area. The proposed project involves the proposed construction of fire station facilities on two adjoining lots (TMK: [1] 5-4-018:064 & 065), which are both currently zoned as commercial. Minimally, land disturbing activities would include grubbing and grading, excavations for subsurface utilities, and associated infrastructure improvements.

The proposed project is subject to Hawai'i State environmental and historic preservation review legislation [Hawai'i Revised Statutes (HRS) Chapter 343 and HRS 6E-8/Hawai'i Administrative Rules (HAR) Chapter 13-275, respectively]. While this investigation does not fulfill the requirements of an archaeological inventory survey investigation (per HAR Chapter 13-276), it serves as a document to facilitate the proposed project's planning and supports historic preservation review compliance by assessing if there are any major archaeological concerns within the study area and to develop data on the general nature, density and distribution of archaeological resources.

1.2 Scope of Work

This study was not intended to meet the requirements of an archaeological inventory-level survey per the rules and regulations of the State Historic Preservation Division/Department of Land and Natural Resources (SHPD/DLNR). However, the level of work is sufficient to address archaeological site types and locations, and allow for future work recommendations. The literature review and field inspection includes a report detailing research methods and findings. The goal was to identify, if possible, any cultural resources documented in historical and archival records.

Scope of Work

1. Historical research to include study of archival sources, historic maps, Land Commission Awards and previous archaeological reports to construct a history of land use and to determine if archaeological sites have been recorded on or near this property.

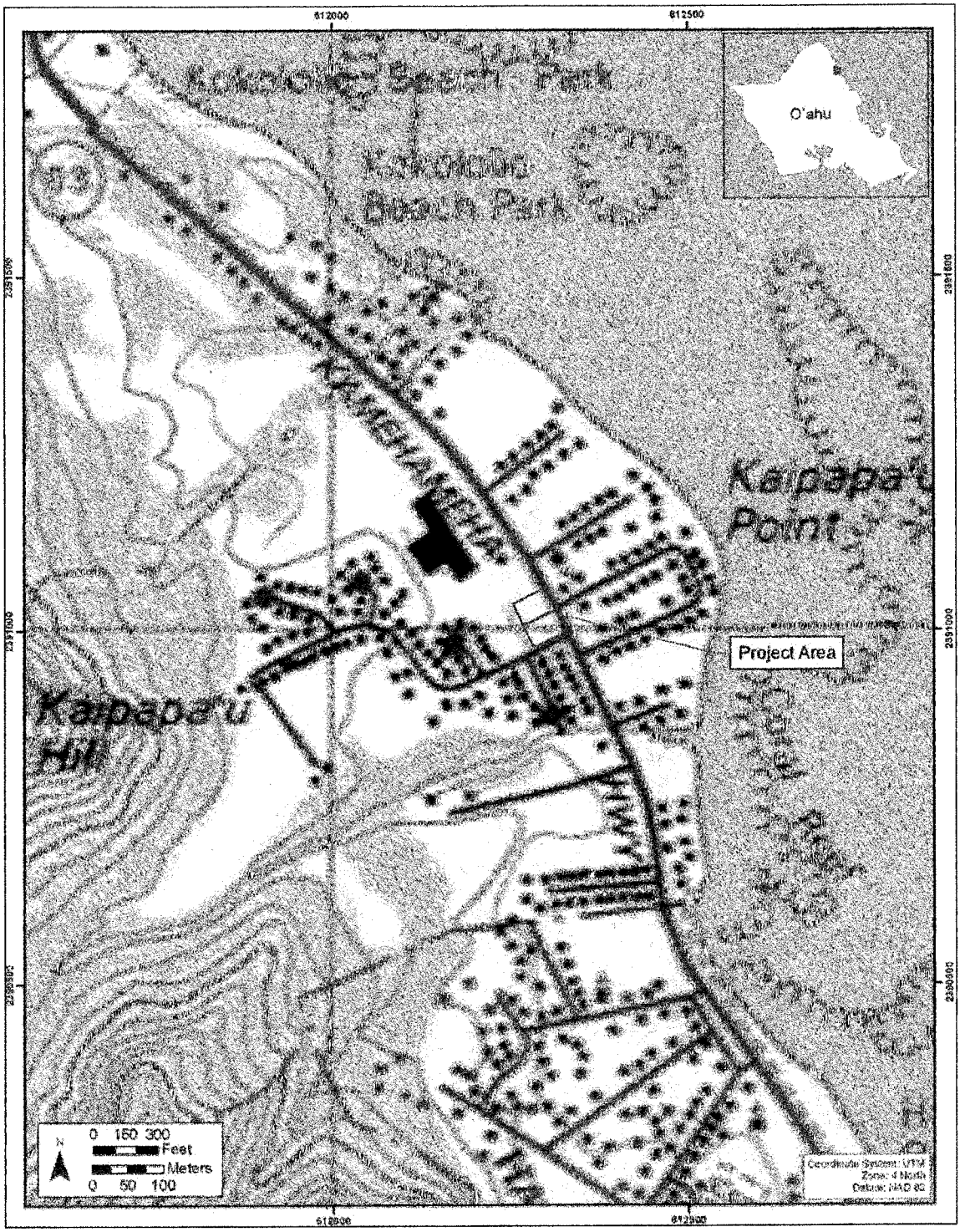

Figure 1. Portion of USGS 7.5 Minute Series Topographic Map, Hau'ula Quadrangle (1998), showing the location of the project area

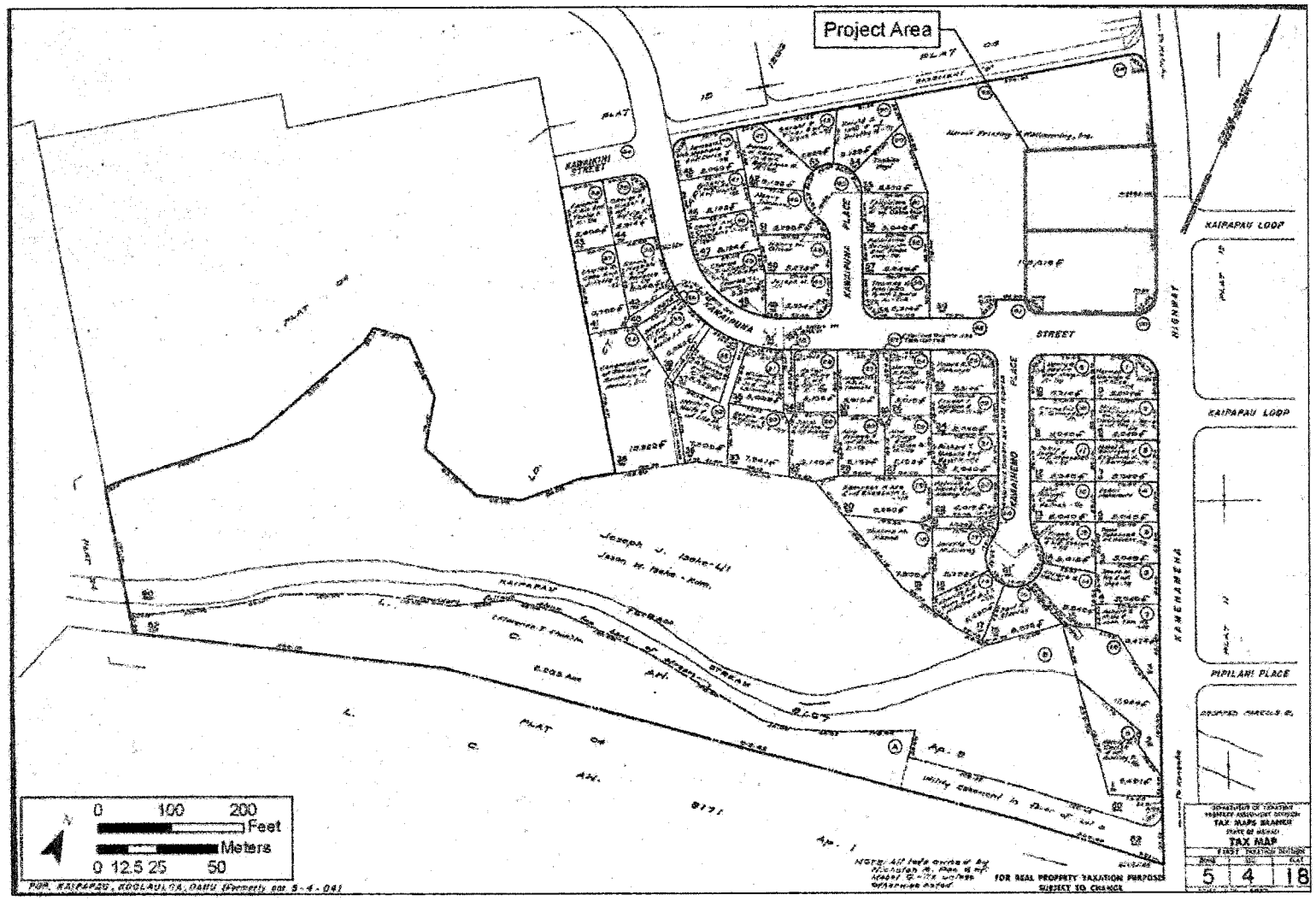

Figure 2. TMK [1] 5-4-09 showing location of project area

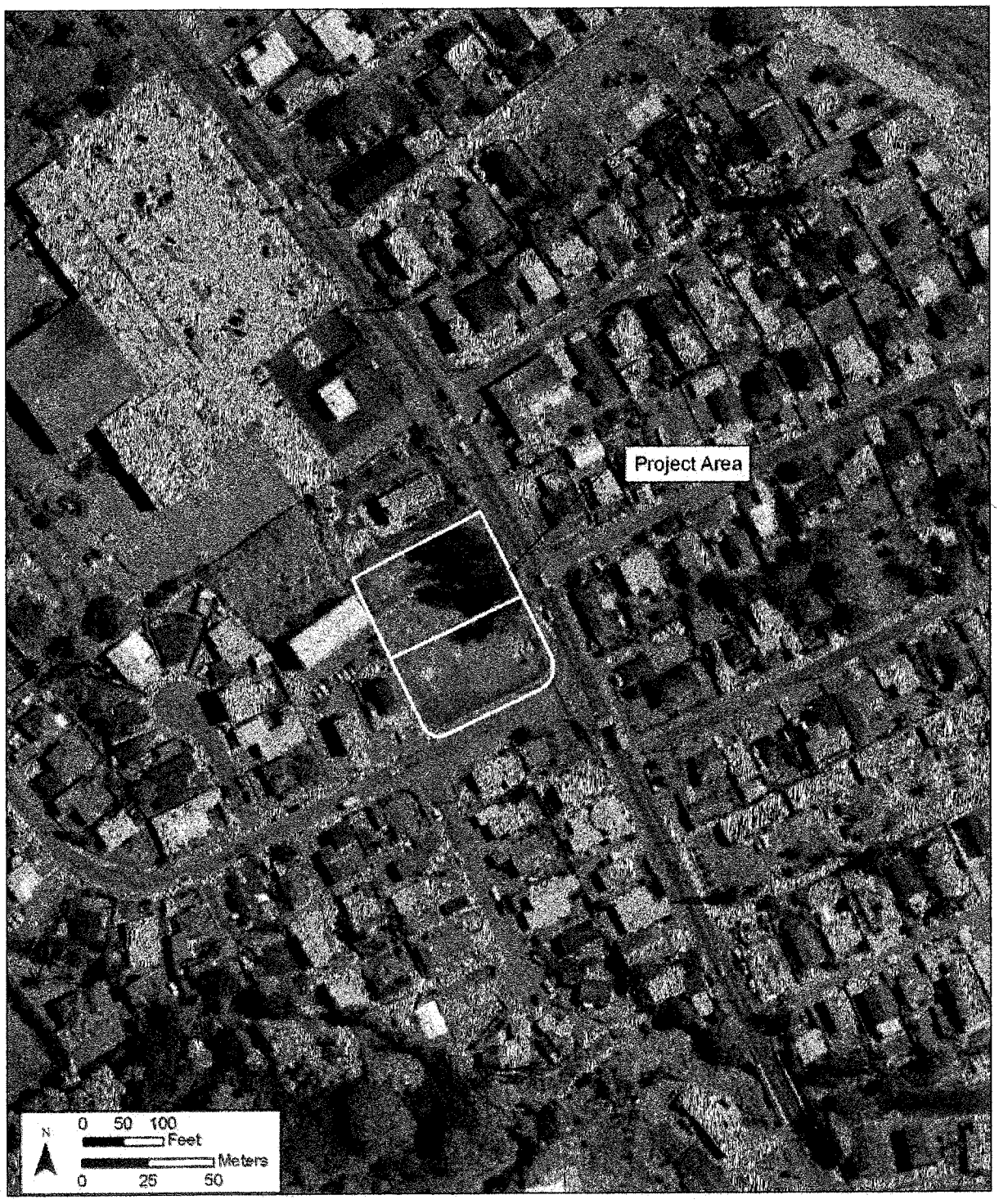

Figure 3. Aerial photograph showing the project area (source: USGS Orthoimagery 2005)

2. Limited field inspection of the project area to identify any surface archaeological features and to investigate and assess the potential for impact to such sites. This assessment will identify any sensitive areas that may require further investigation or mitigation before the project proceeds.
3. Preparation of a report to include the results of the historical research and the limited fieldwork with an assessment of archaeological potential based on that research, with recommendations for further archaeological work, if appropriate. It will also provide mitigation recommendations if there are archaeologically sensitive areas that need to be taken into consideration.

1.3 Environmental Setting

1.3.1 Natural Environment

The project area is flat and averages approximately six feet above mean sea level (AMSL). The natural shoreline is approximately 60-meters to the northeast.

Rainfall averages 59-inches per year (Giambelluca et al. 1986), with temperature ranging from 60 to 85 degrees Fahrenheit (Armstrong 1973:58).Vegetation within the project area was limited to an un-maintained grass lawn and a large false kamani tree.

Along its coastline, Kaipapa'u Ahupua'a is characterized by backshore dune deposits, and further inland by a series of ridges and gulches. Many gulches have intermittent streams. The project area is located makai (east, downslope) of Waipilopilo Gulch, and lies approximately 138 meters north of Kaipapa'u Stream, which flows into Kilia Channel.

The USDA Soil Survey (Foote et al. 1972) classifies the project area's sediments as Lolekaa silty clay (LoB) for the northern quarter of the project area, and Kawaihapai clay loam (KlB) for the southern three quarters of the project area (Figure 4).

Lolekaa silty clay (LoB) is described as:

> "...on terraces and fans. Included in mapping were small areas of Kaneohe soils on uplands and Hanalei soils in narrow drainageways...In a representative profile the surface layer is dark-brown silty clay about 10 inches thick. The subsoil is 46 to more than 70 inches thick ...The substratum is strongly weathered gravel...Permeability is moderately rapid. Runoff is slow, and the erosion hazard is slight. The available water capacity is about 1.3 inches per foot of soil. Soft, weathered gravel is common in the subsoil but does not affect use and management of the soil for farming. In places roots penetrate to a depth of 5 feet or more...This soil is used for pasture, homesites, truck crops, bananas, and papayas." (Foote et al. 1972:83-84)

Kawaihapai clay loam (KlB) is described as:

> "Permeability is moderate. Runoff is slow, and erosion hazard is no more than slight. The available water capacity is about 1.8 inches per foot in the surface layer and about 1.6 inches per foot in the subsoil. In places roots penetrate to a

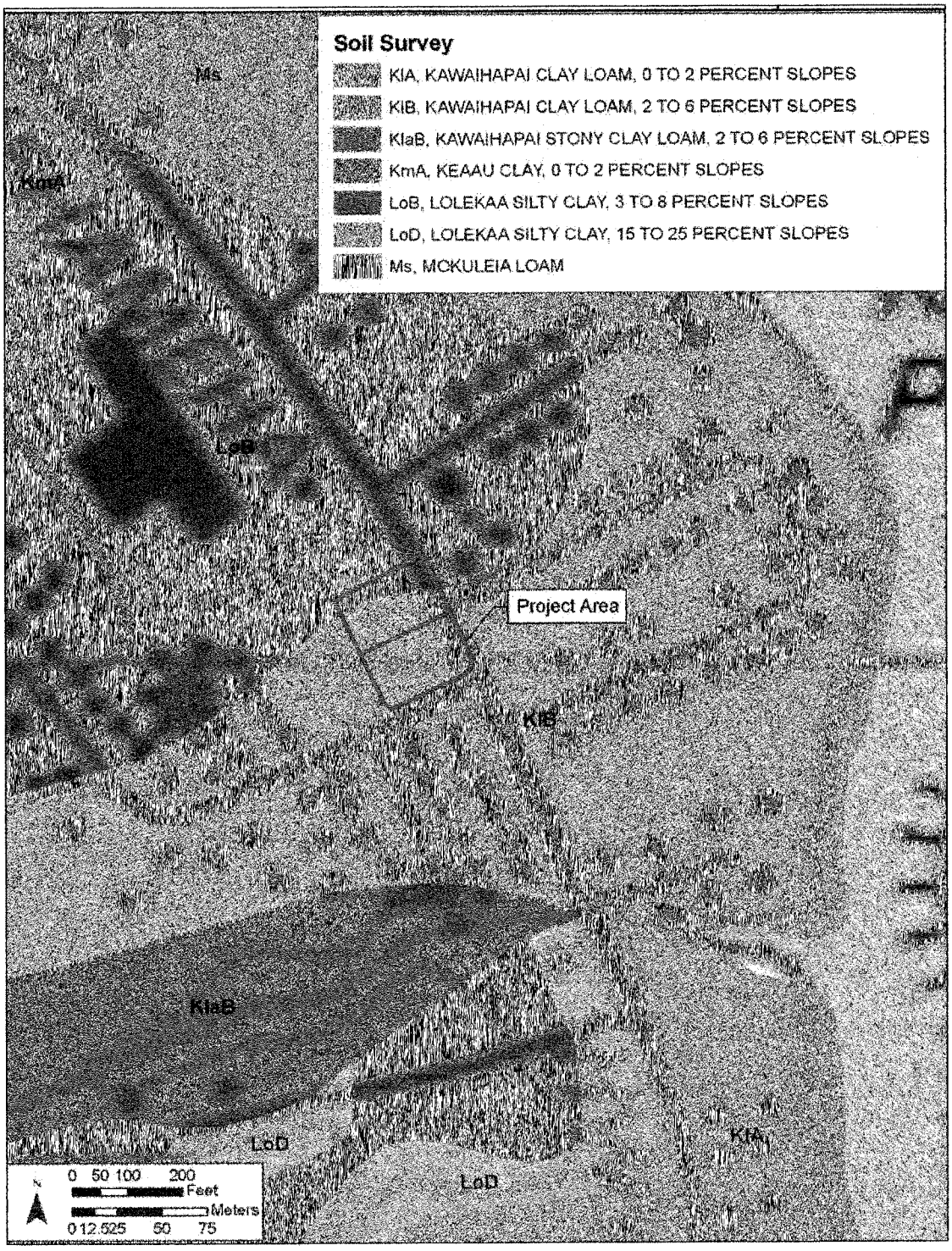

Figure 4. Overlay of Soil Survey of the State of Hawai'i (Foote et al. 1972), indicating sediment types within and surrounding the project area. Source: Soils Survey Geographic Database (SSUGRO) 2001, U.S. Department of Agriculture

depth of 5 feet or more. In some places the soil is subject to flooding…This soil is used for sugarcane, truck crops, pasture, and orchids." (Foote et al. 1972: 64)

1.3.2 Built Environment

The project area is located in a residentially developed area of Kaipapa'u, adjacent to the southbound lane of Kamehameha Highway, surrounded on all sides by modern development, including streets and utility infrastructure (see Figure 3). The project area is bounded by a chain link fence on all sides with two driveway openings on its east side. There is also a bus stop belonging to Bus Route 55, heading south, towards Kāne'ohe, adjacent to the southeastern border of the project area.

Section 2 Methods

2.1 Field Methods

The fieldwork component of the archaeological literature review and field inspection was conducted on October 8, 2009 by two CSH archaeologists, Douglas Borthwick, B.A. and Nifae Hunkin, B.A., under the general supervision of Hallatt H. Hammatt, Ph.D. (principal investigator).

2.2 Document Review

Background research included: a review of previous archaeological studies on file at SHPD; review of documents at Hamilton Library of the University of Hawai'i, the Hawai'i State Archives, the Mission Houses Museum Library, the Hawai'i Public Library, and the Archives of the Bishop Museum; study of historic photographs at the Hawai'i State Archives and the Archives of the Bishop Museum; and study of historic maps at the Survey Office of the Department of Land and Natural Resources. Historic maps and photographs from the CSH library were also consulted. In addition, Māhele records were examined from the Waihona 'Aina database (<www.waihona.com>).

This research provided the environmental, cultural, historic, and archaeological background for the study area. The sources studied were used to formulate a predictive model regarding the expected types and locations of historic properties in the study area.

Section 3 Background Research

3.1 Traditional and Historical Background

Kaipapa'u Ahupua'a is located in the Ko'olauloa District, bound on its north side by Lā'ie Malo'o Ahupua'a, on its east side by the Pacific Ocean at Kaipapa'u Point, on its south side by Hau'ula Ahupua'a, and on its west side by Kawailoa Ahupua'a. Kaipapa'u literally translates to "shallow sea" (Pukui, Elbert and Mookini 1974: 70) or "ocean of shoals" (Bordner 1992).

3.1.1 Mythological and Traditional Accounts

There are few written accounts associated with the *ahupua'a* of Kaipapa'u in the district of Ko'olauloa. These accounts describe the development and naming of landmarks, the origin and presence of marine resources, and the presence of Kamapua`a, the demi-god, in Windward O`ahu. One legend was cited in Sterling and Summers' (1978) *Sites of O'ahu*, as recorded by Westervelt is as follows:

> *There is a valley near Hauula called Kaipapau. Here lived an old kahuna who always worshipped the two great gods Kane and Kanaloa. These gods had their home in the place where the old man continually worshipped them. Once the gods came to their sister's home and received from her dried fish for food. This they carried to the sea and threw into the waters, where it became alive again and swam along the coast while the gods journeyed inland. By and by they came to the little river on which the old man had his home. The gods went inland along the bank of the river and the fish turned also, forcing their way over the sand bank which marked the mouth of the little stream. Then they went up the river to a pool before the place where the gods had stopped. Ever since, when high water has made the river accessible, these fish, named ulua, have come to the place where the gods were worshipped by the kahuna and where they rested and drank awa with him* (page 160).

There are also accounts of two priests associated with Kaipapa'u refered to in Sterling and Summers' (1978) *Sites of O'ahu*, in which Abraham Fornander is quoted describing a priest named Kapukaihaoa who lived in Kaipapa'u: "He could discern mysteries and secrets and forthcoming events" (160). Elmore and Kennedy (2001) cite a second priest associated with Kaipapa'u named Makuakaumana, as quoted from Handy (1971):

> *...it is from here [Hauula] that according to legend, the kahuna Makuakaumana was taken back to Kahiki by a whale when his chief, Paao, had no room for him in his conoe. There is still a spring in the uplands of Kaipapau, the adjacent district, named for the famous seer who dwelt in the vicinity, Puna-a-Makuakaumana.*

Handy (1971) discusses native accounts of past taro cultivation practices while comparing what was once there to what was there during his account in *Hawaiian Planter*: "The level land

opening out below the valley, now in cane was presumably all in terraces. Hauula natives say that there are old taro flats along [Kaipapa'u] stream up in the valley, which is very narrow and steep."

Lo'i cultivation in Kaipapa'u Ahupua'a was also discussed in Handy and Handy's (1972) *Native Planters in Old Hawaii*:

> *Progressing northward along the Ko'olau coast we find conditions comparatively less and less suitable for wet-taro culture than in our Type Area which includes the great valleys of Kahana and Punalu'u. In Kaipapa'u (shallow sea) the ahupua'a adjacent to Hau'ula, the upper stream valley is steep and narrow, yet natives of the district say that making the most of small opportunity, a few lo'i used to be worked there. The level land to seaward may once have supported a moderate amount of terracing, but as this was all under cane when the area was studied in 1953, the extent could not be determined.*

Traditional fishing practices and other marine resource production was an important form of traditional subsistence lifestyles that took place in this coastal region of Kaipapa'u Ahupua'a, which was once called Kakaihala; and fronting Kakaihala, Papapiapia, Papaakea, and Kao were the popular fishing grounds (Clark 1977). There was also a legendary reference describing a natural phenomenon regarding the traveling and spawning patterns of the anaeleho fish. There was a saying: "Ka ia hali a ka makani" or "the fish fetched by the wind" (Bordner 1992:5). Pukui relates to this saying when she wrote: "The anaeleho, a fish that travels from Honouliuli, where it breeds, to Kaipapa'u on the windward side of Oahu. It then turns about and returns to its original home. It is driven closer to shore when the wind is strong" (Pukui 1983: 145)

3.1.2 Mid- to late-1800s

In 1845, the Board of Commissioners to Quiet Land Titles, also called the Land Commission, was established "for the investigation and final ascertainment or rejection of all claims of private individuals, whether natives or foreigners, to any landed property" (Chinen 1958:8). This led to the *Māhele*, the division of lands between the king of Hawaii, the *ali'i* (chiefs), and the common people, which introduced the concept of private property into the Hawaiian society. In 1848, Kamehameha III divided the land into four divisions: certain lands to be reserved for himself and the royal house were known as Crown Lands; lands set aside to generate revenue for the government were known as Government Lands; lands claimed by *ali'i* and their *konohiki* (supervisors) were called Konohiki Lands; and habitation and agricultural plots claimed by the common people were called *kuleana* (Chinen 1958:8-15).

Only two Land Commission Awards (LCAs), LCA 8167 and LCA 8171, were recorded for the *ahupua'a* of Kaipapa'u. The *kuleana* were located just *mauka* (inland, west) of Kamehameha Highway, adjacent to Kaipapa'u Stream, along its southern bank (see Figure 2), approximately 185 meters south of the current project area.

LCA 8167, composed of two parcels (8.75-acres), was awarded to Hikiau. According to the Native Register (496v.5) for this claim states "Keaweiki has the *mo'o*, I only have a *kula*. It is

bounded on the north by Kanihooi's *mo'o*, on the east, Hoopalahe's *mo'o*. I have a claim for cultivation in the upland, and the forest, and a fishing claim, and a house lot claim." Foreign Testimony (10v8) notes that "potatoes, melons, etc." were being cultivated on Hikiau's land.

LCA 8171, consisting of one parcel (22-acres), was awarded to Hoopalahee:

> ...The *mo'o* is Kihapai, in this *mo'o* I have 4 *lo'i*, bounded on north by a house claim, on the east by Kawainui's *mo'o*. I have a *kula* claim in this *mo'o* adjoining on the east of Hikiau's *mo'o kula*. I cultivate in the *kula* of Kanihooi, and in the *kula* of Kawahine, and in the *kula* of Maiahe.
>
> I have a claim of cultivation in the upland and in the forest. I farm in the *Ahupua'a* of Hauula. The *mo'o* is Kalaipahoa, I have 2 *lo'i* in it and a small *kula* also adjoining on the north of the *lo'i*s in the *mo'o*...I also have a house claim. (Native Register 49v.5)

Foreign testimony also attests to how this LCA was once used, and indicates that the kalo land is fenced in, and that "stones are prepared for building a wall" around a house lot (Elmore and Kennedy 2001:7).

According to these accounts of past land use, it is clear that during the mid-1800s, this land was used for cultivation of various introduced, as well as traditional crops, and that the fishing and farming that took place on these parcels sustained a small population of inhabitants.

3.1.3 1900s

Major developments in Ko`olauloa during the twentieth century include the growth of railroads in conjunction with the sugar industry (Figure 5), the construction of Kamehameha Highway, the construction of several hiking trails and a ranger cabin in the Ko`olau mountains, and the expansion of Mormon enterprises.

3.1.3.1 Railroad Companies

The three railroad companies in operation in Ko`olauloa during the early 1900s were the Kahuku Plantation Company, the Ko`olau Railway Company, and the Waiāhole Water Company. The operations of these companies improved the logistics of the sugar industry and provided a cultural and social connection for the various peoples inhabiting windward Oahu.

The creation of the Koolau Railway Company in 1905 by the Hawaiian Development Company, Ltd. (a conglomeration of businesses), under the impetus of James B. Castle, resulted

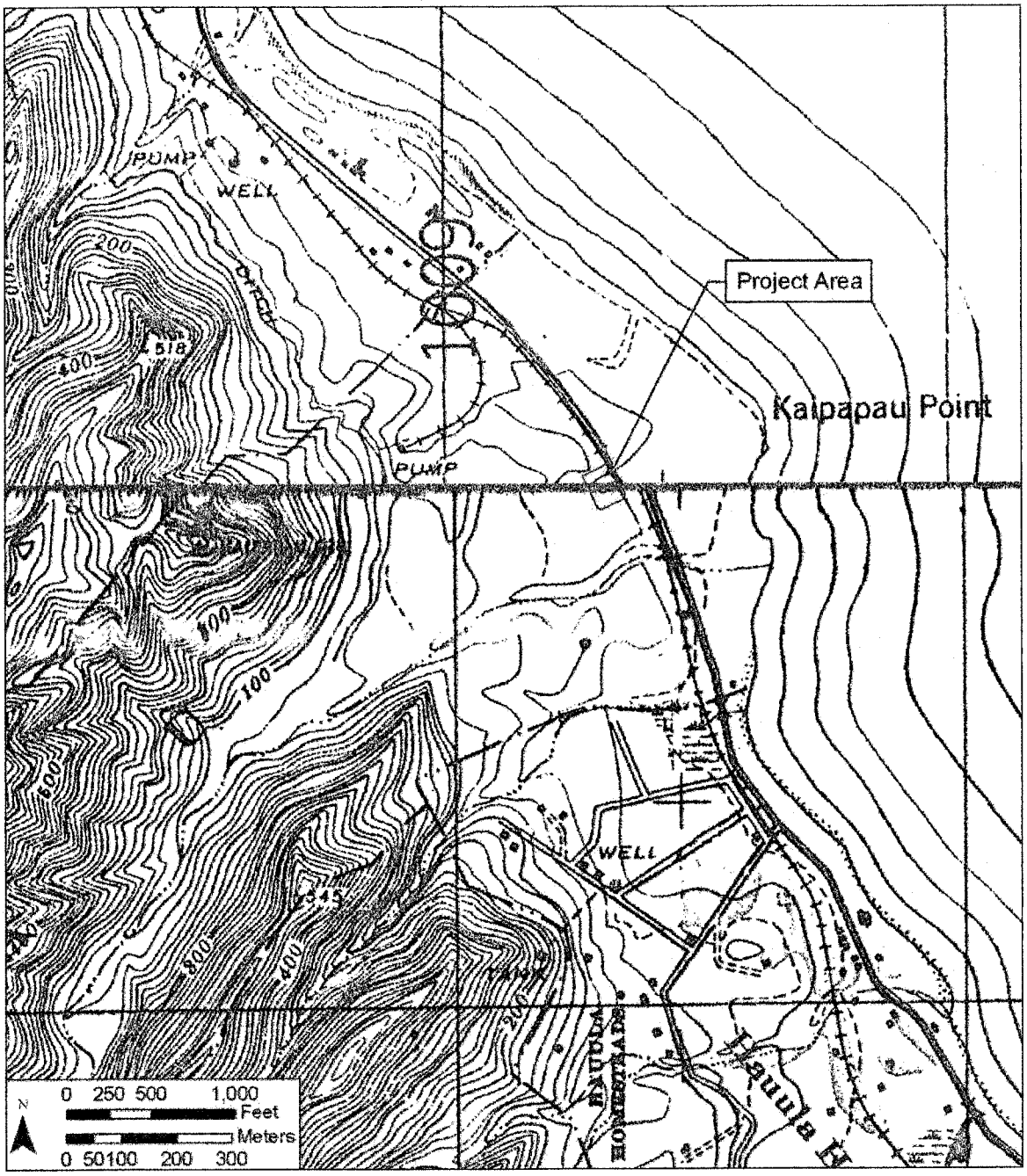

Figure 5. 1943 War Department topographic map, Hau'ula Quadrangle, showing the location of the project area in relation to the abandoned railroad

not only in the improvement of agricultural transport but the unification of the windward community (Conde and Best 1973). The railway functioned in cooperation with the Ko`olau Agricultural Company, both of which were owned by the Zion Securities Corporation. This railway was envisioned as the connecting link between Kahuku (the Oahu Railway), Kāneohe, and Honolulu. However, its construction culminated with the initial section from Kahuku to Kahana, running past Hau`ula along the Kamehameha Highway alignment, which was completed by the end of 1907 (Figure 6). In 1931, the Koolau Railway Company was purchased by the Kahuku Plantation Company which operated portions of the line until its dissolution in 1955 (Conde and Best 1973:298,300).

Although the Koolau Railway Company's line did not reach its ultimate destination of Honolulu, its presence on the windward side proved to be, if only for a limited time, a beneficial stimulus to the agricultural and ethnic community. As noted in a January 1908 issue of the Pacific Commercial Advertiser:

> *From here [Kahuku] two trains run daily, connecting with the noon train from Honolulu and one reaching Kahuku in the late afternoon. Passengers and freight are carried as far as Kahana and the traffic so far developed has been such as to encourage the promoters. The trip over the line is interesting and the fare is five cents a mile. Running rights over the line between Kahuku Mill and Lā`ie Plantation are given the Kahuku Plantation for the transportation of the Lā`ie cane crop...This, during the grinding season, makes the end of the line a busy one. The crop at Lā`ie this season is a good one too and the Mormon Settlement is a prosperous and busy one [Conde and Best 1973:308].*

Conde and Best (1973) also make reference to locomotive named "Kaipapau" that operated for the Kahuku Plantation sugar company (297).

The use of the railway by passengers is further related in an article in Thrum's 1911 Hawaiian Annual (128-133) which describes a leisurely train ride from Hale`iwa to Kahana, including a brief stop in Hau`ula, "a station of growing importance." Passengers on this excursion represented several nationalities including Chinese, "haole" (caucasian), and Hawaiian (who were the most numerous). In their study of rural Chinese of O`ahu, Char and Char (1988:114) indicate that the completion of the Kahana to Kahuku route, through improved transportation and produce exchange, strengthened ties between these district communities. The tracks ran *makai* of the present project area; in front of Hau`ula Congregational Church, and then inland to the south. The tracks are no longer extant. The location of the Hau`ula station could not be found, however it is likely that the train stopped at "Helu-moa", fronting the congregational church, before the tracks turned inland.

3.1.3.2 Kamehameha Highway

The construction of Kamehameha Highway in 1932 by the Department of Public Works, City and County of Honolulu reflected a major shift in transportation and resulted in the restructuring of the local community. By providing easier access to all parts of the island, the highway increased mobility and fostered urbanization. In the early to mid-1900s, the agricultural

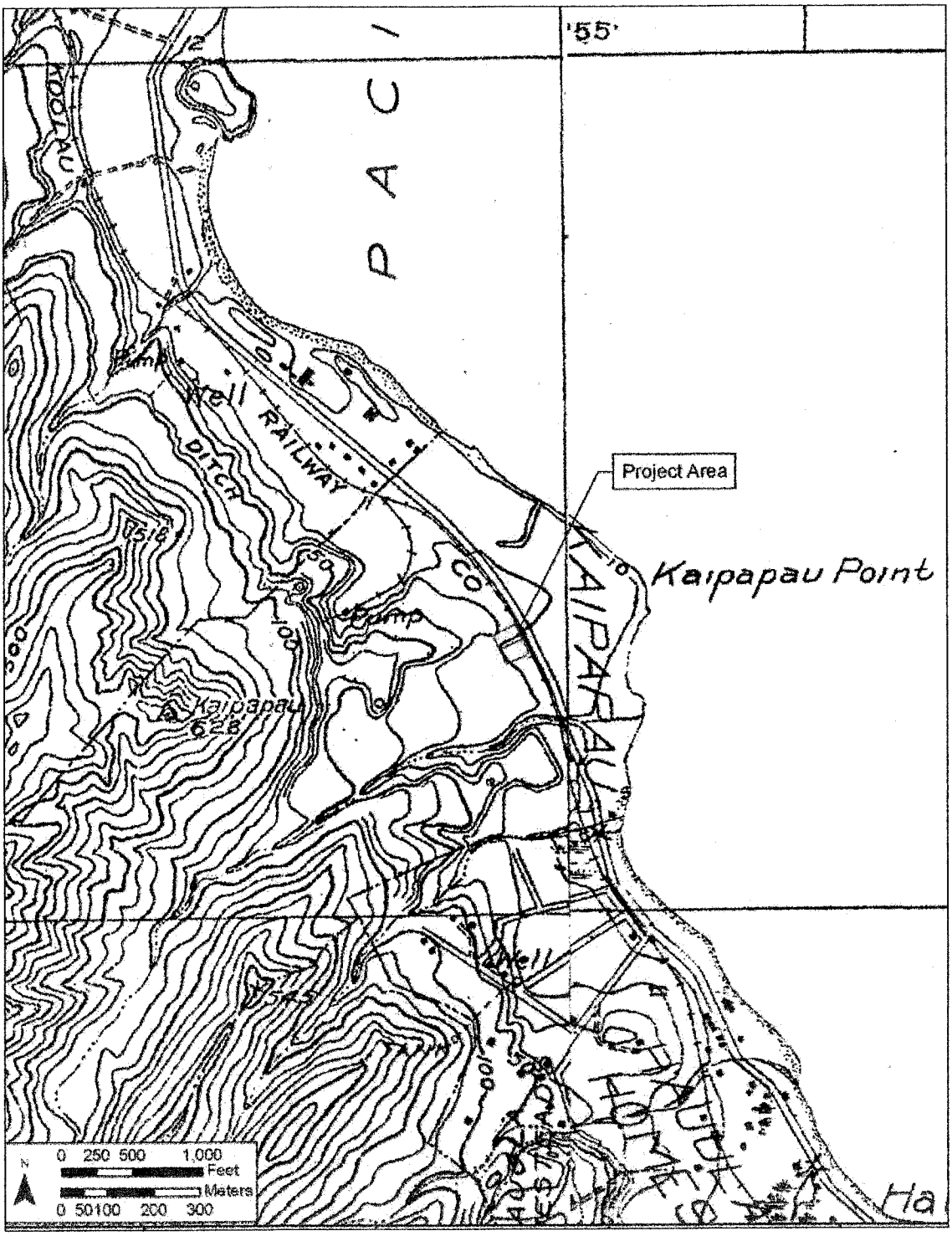

Figure 6. U. S. Geological Survey 1928/1929 Kaipapau Quad map, showing railroad in relation to Kamehameha Highway alignment

industry's switch from railway to truck transport rendered train hauling obsolete and the introduction of automobiles to Hawai`i marked an increase in individualized mobility, all of which furthered the development of an upgraded roadway.

3.1.3.3 Trails and Kaipapa'u Cabin

Several trails are present within Hau'ula Ahupua'a. Some of these trails, as well as the Kaipapau Cabin, were constructed in the early 1900s. In the 1930s, the Civilian Conservation Corps developed the majority of the Ko`olau Ridge Trail Complex which consists of a twenty mile summit trail with numerous links to the surrounding valleys and ridges, including the Lā`ie trail (State of Hawaii, DLNR 1991:IV21). Other major trails present within these *ahupua'a* include the Hau'ula Loop trail, the Ma'akua Gulch trail, and the Ma'akua Ridge Trail. Each of these three trails begins off of Ma'akua Homestead Road (*mauka* of the project area) and heads *mauka* into the ridges and valleys of the Ko'olau range.

Kaipapa'u cabin was built as a shelter for rangers and pig hunters whose eradication efforts were encouraged by the government to protect native vegetation growth and, as a result, water resources from destructive pig activity (Judd 1933:1). The cabin was completed on December 23, 1932 by Territorial Forrester C.S. Judd with the transportational help of the U.S. Army (Judd 1933:5). The 10.0-foot by 10.0-foot structure was constructed at the head of Kaipapau Gulch, midway between two cabins which were already present in the Ko'olau summit area, one being located "at the head of Malaekahana" and the other seven miles away "along the Marsh trail near the head of the Poamoho and opposite Punalu'u Valley (Judd 1933:2).

3.2 Previous Archaeological Research

To build a comprehensive archaeological context for the current project area, references have been made to not only previous archaeological studies within Kaipapa'u Ahupua'a but also to areas in adjoining portions of the two neighboring *ahupua'a*, Lā'iemalo'o, Hau'ula,a and even in Mākao Ahupua'a (Figure 8).

Previous archaeological research shows a continuous occupation in the immediate vicinity of the project area since pre-contact times. In 1930, J. Gilbert McAllister conducted an island-wide archaeological survey of O'ahu, recording prominent sites, mainly *heiau* and other large structures near the coast. In the *ahupua'a* of Mākao, he recorded traces of old taro terraces (44, site 288): "on the low level land below the sites [enclosures inland from Hau'ula town on the land known as Mākao, at the mouth of Kapoho Valley] are traces of old taro patches that are being plowed for cane" (McAllister 1933:159).

McAllister (1933) recorded Kaunihokahi Heiau in Hau'ula, site -286; the lower terraces of the *heiau* had been modified into cattle pens for a dairy located at the site. A second *heiau*, site -287, called Maunawila was recorded in Hau'ula near the courthouse (Figure 7). Within Mākao, McAllister recorded a series of enclosures that may be the remains of Kapoho Heiau. Also mentioned is Luaali'i Heiau in Mākao, but this site had been destroyed before McAllister's survey. More recent archaeological surveys completed at select parcels within Hau'ula Ahupua'a include Connolly (1980), Barrera (1981), Riford (1984), Walker and Rosendhal (1988), Bordner (1992), Wolforth (1997), Masterson et al. (1997), Masterson et al. (1998), and Elmore and Kennedy (1999).

Robert Connolly III conducted a reconnaissance survey for the Hau`ula playground, *mauka* of the Beach Park previously thought to be an area of taro *lo`i* (Connolly III, 1980). However, no surface sites observed or recorded. The present project area is located approximately 1.5-kilometers northwest of this previous project.

Chiniago, Inc. completed a survey and subsurface testing at a property immediately *makai* of the Hau`ula Kai Shopping Center (Barrera, 1981). Although no surface sites were present, a coral concentration, historic and indigenous artifacts were recovered during testing which revealed an extensive cultural deposit. Eroding from the storm berm along the *makai* perimeter of the property a human burial was present. The subsurface feature and a human burial were assigned State site 50-80-05-1430 (Figure 8).

During December, 1983 and January, 1984, Chiniago, Inc. conducted a reconnaissance survey of a large area inland of the current project area. Because of lack of access to parts of the properties, this report (Barrera 1984) recommends further surveying and study was needed for the area prior to further development.

Bishop Museum completed a reconnaissance survey of the 7-11 property in Hau`ula, situated immediately *mauka* of Hau`ula Beach Park (Riford, 1984). Riford reported an absence of surface sites due to previous grading of the property by bulldozer. The current project area is located approximately half a mile southeast of this previous study(Figure 8).

Directly east of the current project area, at the apex of Kaipapa'u Point, in association with a relief drain project, an archaeological investigation was conducted including three test units.

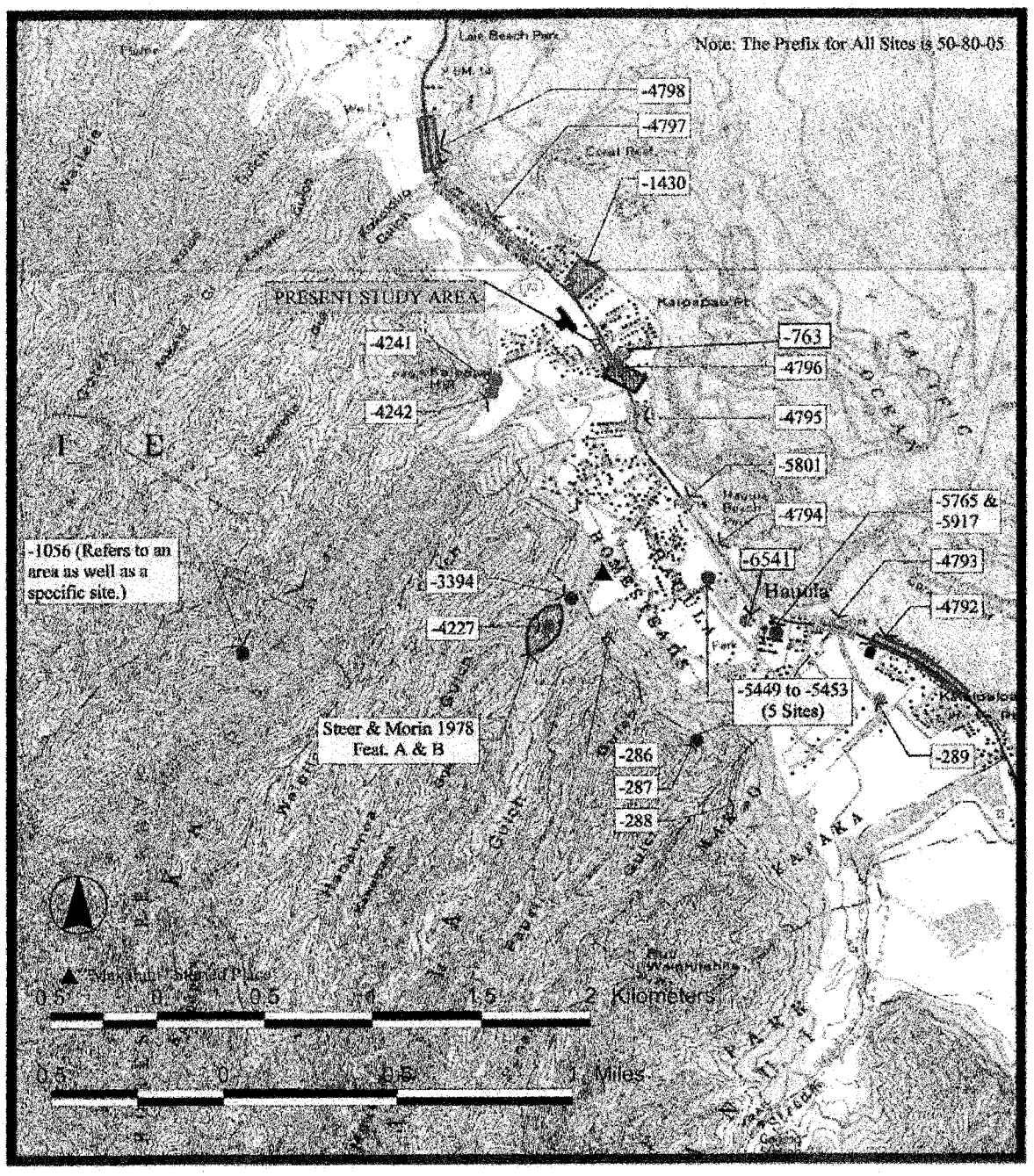

Figure 7. Map showing locations of previously identified sites in relation to location of the project area

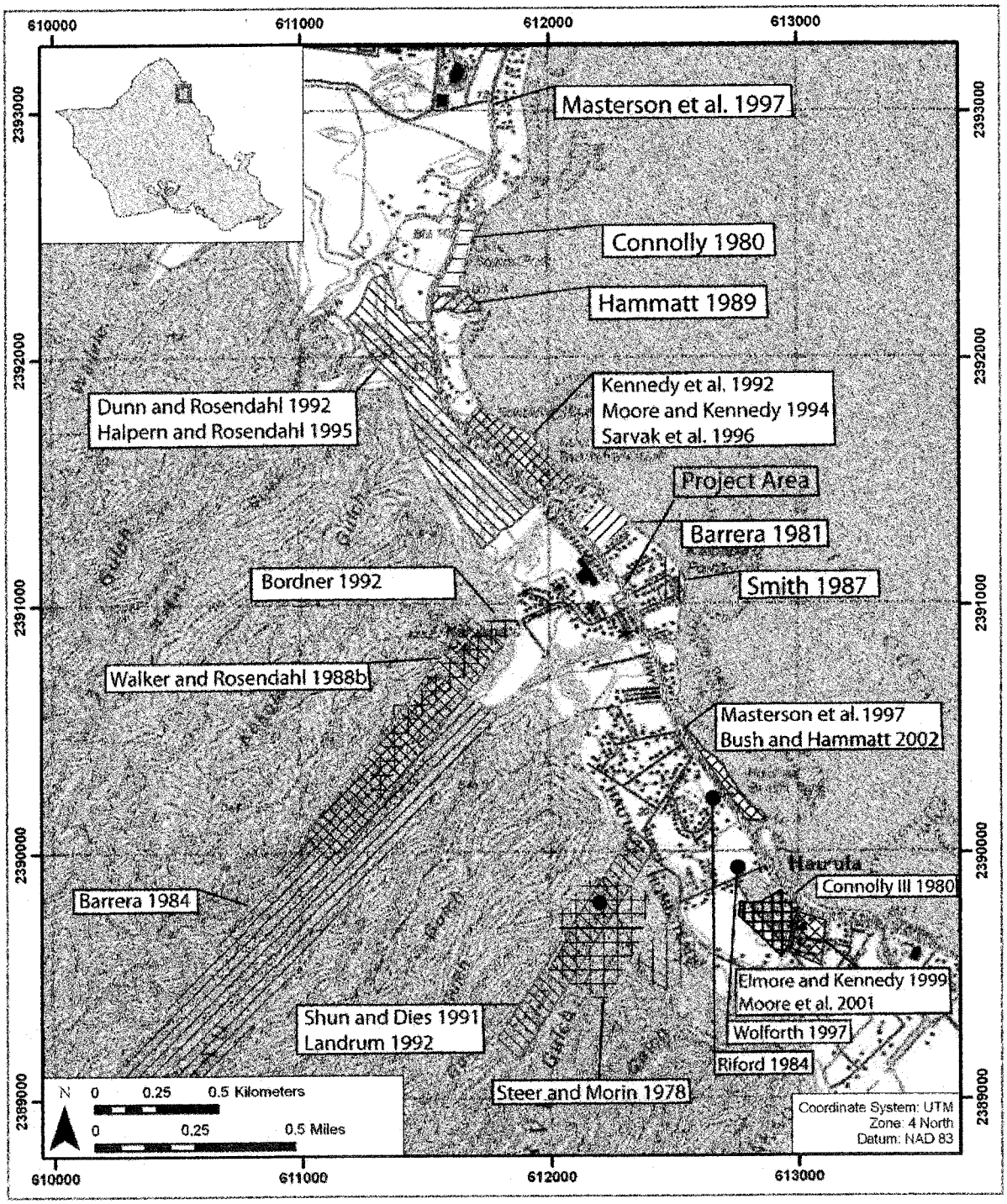

Figure 8. Portion of USGS 7.5 Minute Series Topographic Map, Hau'ula Quadrangle (1998), showing the location of the project area in relation to previous archaeological studies in the vicinity

These test unit were excavated into fill recently deposited fill soils. No sites were identified in the course of this investigation (Smith 1987).

In 1988 Nancy McMahon completed an archaeological field check west of the project area (McMahon 1988). The investigation identified Kaunihokahi Heiau, which had been previously recorded by McAllister in 1933.

PHRI conducted a reconnaissance survey for the Hau`ula Well Site, located considerably *mauka* of the present project area in Kaipapau Valley (Walker and Rosendahl, 1988). One site was recorded with two features. Site 50-80-06-4242, feature 1, is an L-shaped wall, feature 2 is a ditch (an *auwai*) (see Figure 7). Two subsequent surveys were completed on the same property with the addition of the access road corridor.

Subsurface testing (augering) within an open field area mauka of a sandstone bluff. Five (5) auger holes and three (3) shovel test pits were placed in the level, mauka area of the property and no cultural layers or archaeological features were observed. The most significant feature on the property was a cave. This cave measured 2 to 3 feet in diameters and 50-feet long. Only a few grams of fragmented remains of two (2) individual burials were discovered, and a test pit measuring 50-centimeters square revealed scattered cultural material amounting to three volcanic glass flakes and a single fish bone at a base depth of 30-centimeters. Cultural activity is indicated, but no occupation layer is present. The overhang of the cave was probably used for temporary shelter (Hammatt 1989).

Bordner (1992) recorded Site #50-80-06-1056 (previously recorded during the Statewide Inventory of Historic Places), which was not located due to heavy vegetation although it was thought to possibly be within the upper portion of the project area. In 1994 Engineering Design Inc. relocated the Rosendahl site, ascertained that Site 1056 is actually situated *mauka* of the proposed well facility, and recorded yet another site, Site 50-80-06-4241, an historic well and reservoir site located near the presently proposed well site. Site 50-80-06-4242 feature 1 was considered an historic boundary/cattle wall. Feature 2 was considered in the 1994 report to be remnants of bulldozer push (see Figure 7).

The work of Dunn and Rosendahl (1992) suggests that evidence supports the idea that a prehistoric agricultural complex was developed. Substantial Hawaiian activity in the immediate vicinity in pre-contact times was indicated.

Archaeological Consultants of the Pacific, Inc. conducted archaeological inventory surveys and data recovery program at Kokololio (Kekaha) Beach Park (Kennedy 1990; Kennedy 1992; Kennedy 1993; Kennedy and Berlin 1991; Kennedy, Denham, and Moore 1992; Kennedy, Moore, and Reintsema 1992), south of the current project area along the shoreline area *makai* of Kamehameha Highway. Three previously-unrecorded sites, including burials and fire pits, were identified. Results from the data recovery program indicated that the sites were occupied as early as the thirteenth century. Moore and Kennedy (1994) reported seven human burials during archaeological monitoring at Kokololio Beach Park. The burials were designated State Sites 50-80-02-4830 through -4836 (Moore and Kennedy 2000). Sarvak et al. (1996) reported the inadvertent discovery of a human burial, sling stones, and an *'ulu maika* (game stone) during archaeological monitoring at Kokololio Beach Park. The site was designated State Site 50-80-02-5369.

In 1997 a portion of the approximately 3.2-mile long Board of Water Supply new 16-inch water main was excavated south of the project area on the *makai* shoulder of Kamehameha Highway. A total of 19 human burials and numerous buried cultural deposits were recorded and grouped into nine site areas designated SIHP #50-80-06-4792 through -4798 (Masterson, et al., 1997). All excavations for the waterline were monitored by CSH following the inadvertent discovery of human remains in Mākao within the first week of excavation.

Archaeological monitoring of the waterline construction activities documented two historic properties (50-80-06-4795 and -4796) in close proximity to the current project area (Figure 9) (Masterson et al. 1997). State Site 50-80-06-4795 was a buried cultural deposit with an associated human burial situated under Kamehameha Highway on both sides of Waipilopilo Stream on the boundary between Hau'ula and Kaipapa'u Ahupua'a. The deposit extends over 300 linear meters north/south along the *makai* side of Kamehameha Highway. Due to the nature of the project's excavation (trenching only 2-meters wide) the mauka-makai extent of the cultural deposit is unknown. Although the site is situated in an area designated as the Kawaihapai Soil Series (Foote et al. 1972: 63-64), the cultural deposit and burial were discovered within a pocket of beach sand (Masterson et al. 1997). State Site -4796 is a human burial uncovered during excavations on the makai side of Kamehameha Highway just north of Kaipapa'u Stream in Kaipapa'u Ahupua'a. The burial was situated at a depth of 80 cmbs in a narrow layer of silty loam that was situated between two layers of compact clay loam. Although a burial was found in this unlikely sediment, as was State Site 50-80-06-4795 described above (sand being the usual indicator for potential burials observed in a coastal beach region), no cultural material was found to have been associated with this site (Figure 9) (Masterson et al. 1997)

During excavation activities associated with Hau'ula Beach Park improvements, human remains were encountered (Site 50-80-06-5801). The remains appear to have been posited in a pit after being disturbed and were then re-buried. The original location of the burial could not be determined (Bush and Hammatt 2002).

A Cultural Surveys Hawaii, Inc. archaeologist was contacted and made a site inspection at a worksite in Hau'ula, approximately 1.5-kilometers south of the current project area (Site -6541). During structural improvements at the Hau'ula Community Park basketball court human remains were encountered, then based on consultation with the SHPD/DLNR, the disturbed remains were reinterred at the origin with the remaining in situ remains (Perzinski and Hammatt 2004).

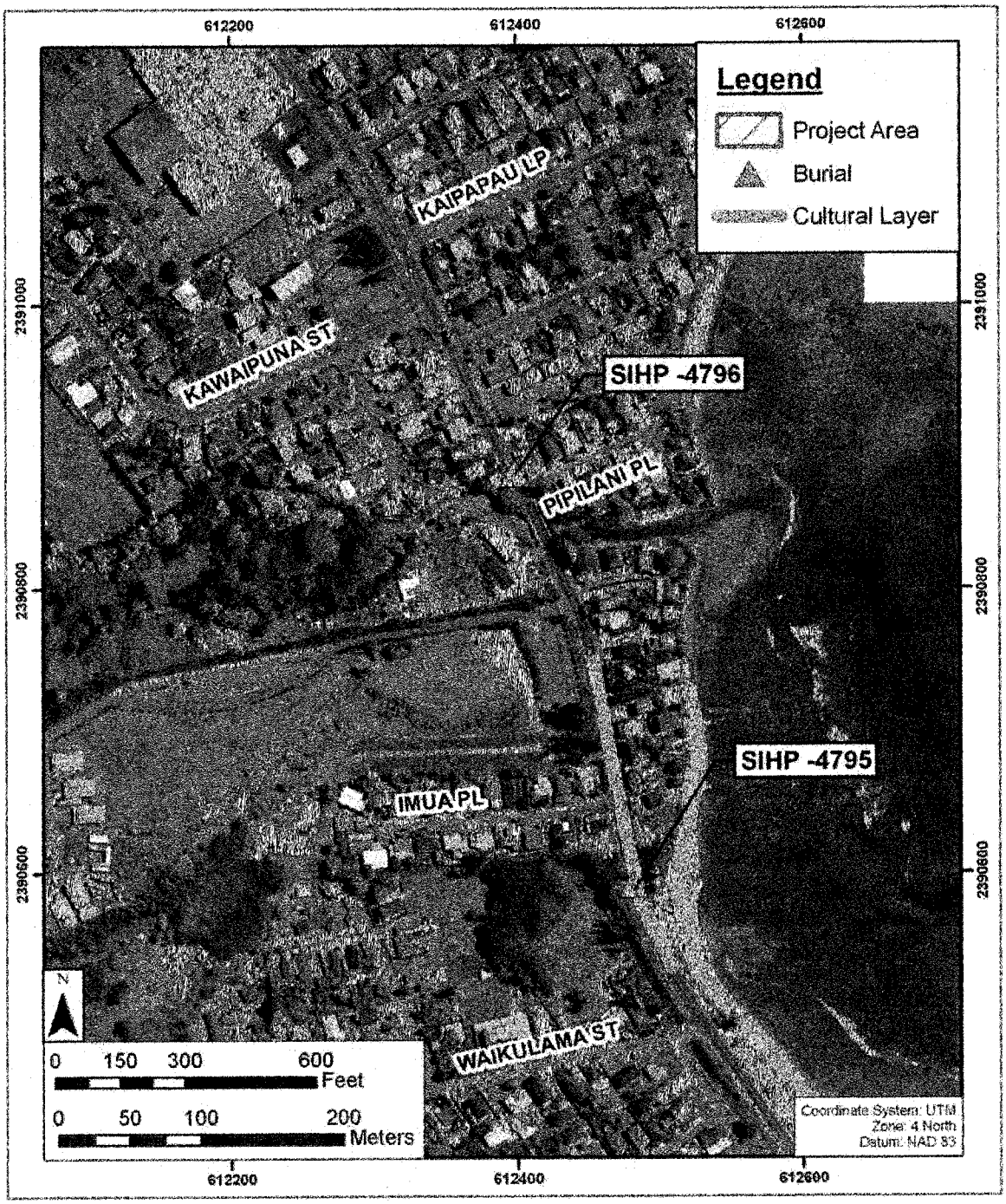

Figure 9. Aerial image showing locations of two human burials nearest current project area

Table 1. Previous Archaeological Studies in the Vicinity of the Project Area

Reference	Location of Study	Type of Study	Results of Study
McAllister 1933	Island-wide	Archaeological Reconnaissance	Identified 4 sites in vicinity: -286 Kaunihokahi Heiau, -287 Maunawila Heiau, -288 Inclosures & -289 Luaali`i Heiau
Connolly 1980	Lā'ie Beach Park	Subsurface Reconnaissance Survey	Ten test pits and auguring; emphasizes transitory short-term occupation
Connolly III 1980	Hau`ula Playground just W. of school	Archaeological Reconnaissance	No surface remains
Barrera 1981	Makai of Kam. Hwy. N. Kaipapau	Archaeological Reconnaissance	Extensive subsurface site, no site # given
Barrera 1984	Kaipapau Valley	Archaeological Reconnaissance	Viewed project area from ridge to south
Riford 1984	The 7-11 property in Hau`ula, situated mauka of Hau`ula Beach Park	Archaeological Reconnaissance	No significant finds
Smith 1987	Kaipapau Loop, Kaipapau Point	Archaeological Testing	No significant finds
McMahon 1988	Back of central Hau`ula Town	Field check	Identified Kaunihokahi Heiau
Walker & Rosendahl 1988a	Back of central Hau`ula Town	Archaeological Test Excavation	Report historic glass and branch coral in double enclosure Site -3394
Walker & Rosendahl 1988b	Kaipapau Exploratory Well, Kaipapau Valley	Archaeological Reconnaissance	Identified a wall and a ditch associated with Site -1056
Hammatt 1989	Point South of Lā'ie	Reconnaissance Survey	Cave with burial & cultural material - Site -4705
Kennedy 1990	TMK: 5-5-01:2	Inventory Survey	One midden deposit (site -4308) and 1 burial (site -4309)

Kennedy and Berlin 1991	Kokololio (Kakela) Beach Park	Data Recovery and Subsurface Testing	n/a
Shun and Dies 1991	Mouth of Ma`akua Gulch	Archaeological Monitoring	Monitoring was to avoid impact to Site -3394. They identified Site-4227 further mauka
Bordner 1992	N. side Kaipapau Stream	Archaeological Inventory Survey	Historic boundary walls and clearings noted. No sites designated.
Dunn and Rosendahl 1992	TMK 1-5-5-005:, 1-5-5-006:, 1-5-5-007	Interim Report	Background, summary of findings
Kennedy 1992	TMK 5-5-001:054	Data Recovery	3 additional fire pits
Kennedy, Denham & Moore 1992a	Kokololio Beach Park	Inventory Survey and Subsurface Testing	Identifies 3 human burials - sites 4476, -4477, -4478 and 12 fire pits, sites -4479, -4480, -4481, -4482
Kennedy, Moore & Reintsema 1992b	Kokololio Beach Park	Data Recovery Report	Reports 4 burials, Sites -3744, -4476, -4477 & -4478 and 2 subsurface sites -4479 & -4480
Landrum 1992	Mouth of Ma`akua Gulch	Archaeological Site Evaluation	Evaluates and recommends preservation measures for Sites -3394 and -4227
Kennedy 1993	TMK 5-5-001:002	Monitoring Report	Reports no significant finds
Moore & Kennedy 1994	Kokololio Beach Park	Monitoring Report	7 burials recorded: Sites -4830 through -4836
Halpern and Rosendahl 1995	TMK 1-5-5-005: 1-5-5-006	Archaeological Inventory Survey	Addendum for Lā'ie Master Plan project
Sarvak et al. 1996	Kokololio Beach Park	Monitoring Report	Reports a burial, sling stones, *'ulu maika* at Site –5369

Wolforth 1997	Kukuna Road Central Hau`ula Town	Description of Sites	Briefly describes five sites: -5449 (historic cemetery), -5450 (habitation site), -5451 (historic habitation), -5452 (taro pond field) and -5453 (wall).
Masterson et al. 1997	Kamehameha Highway from Kapaka to Laie	Monitoring Report	Sixty-three features, including 19 human burials
Masterson et al. 1998	Hau`ula Beach Park	Archaeological Inventory Survey	Minimal findings
Elmore & Kennedy 1999	Hau`ula Elementary School	Burial Recovery	Burial (1) Site -5765 and probable cultural layer
Moore et al. 2001	Hau`ula Elementary School	Archaeological Monitoring Report	Burial (1) Site -5917
Bush & Hammatt 2002	Hau`ula Beach Park Improvements	Archaeological Monitoring Report	Burial (1) Site -5801
Perzinski & Hammatt 2004	Hau'ula Community Park	Memorandum on Inadvertant Discovery	Burial (1) Site- 6541

Section 4 Results of Fieldwork

4.1 Survey Findings

Fieldwork consisted of a complete pedestrian inspection of the 0.93-acre project area. The study area is located at the intersection of Kamehameha Highway and Kawaipuna Street (Figure 10). The project area was observed to have been heavily disturbed by mechanical grading and tree removal. The western portion of the project area consists of a level area that has been heavily mechanically graded, and was overgrown with vegetation during the current field inspection (Figure 11). The eastern portion of the project area has been artificially leveled as it is adjacent to Kamehameha Highway, and may contain remnant fill material associated with building the highway (Figure 12).

Due to the heavily disturbed nature of the project lands, the pedestrian inspection focused on the less disturbed portions of the project area, particularly along the fence line bordering the neighboring properties to the north and west.

The proposed development area within the central portion of the project area includes an existing modern storage shed with an air vent on its roof (Figure 13). The entire proposed subdivision area is situated on graded lands that have been artificially leveled with a mix of local and imported fill material.

Section 5 Summary & Recommendations

5.1 Summary

The entire project area was observed to have been completely disturbed by prior development activities (i.e. grading and leveling). No surface historic properties were observed within the project area. However, background research has identified two human burials and a subsurface cultural layer (SIHP -4795 & -4796) in close proximity to the project area (Masterson et al. 1997) (see Figure 8 & Figure 9). The burials and cultural layer were observed during the instillation of a water main along Kamehameha Highway and were situated within sediments similar to those found within the current project area. Thus while no historic properties were observed during the pedestrian inspection of the project area, based on background research, there is a potential for subsurface historic properties, in the form of subsurface cultural layers and burials, to be present.

5.2 Recommendations

Based on the results of the literature review and field inspection the presence of as yet undocumented historic properties, including buried cultural layers and burials, cannot be ruled out. Accordingly, CSH recommends consultation with SHPD to determine an appropriate scope of work to complete the project's historic preservation review process.

Figure 10. Northwest view of project area at the intersection of Kamehameha Highway and Kawaipuna Street

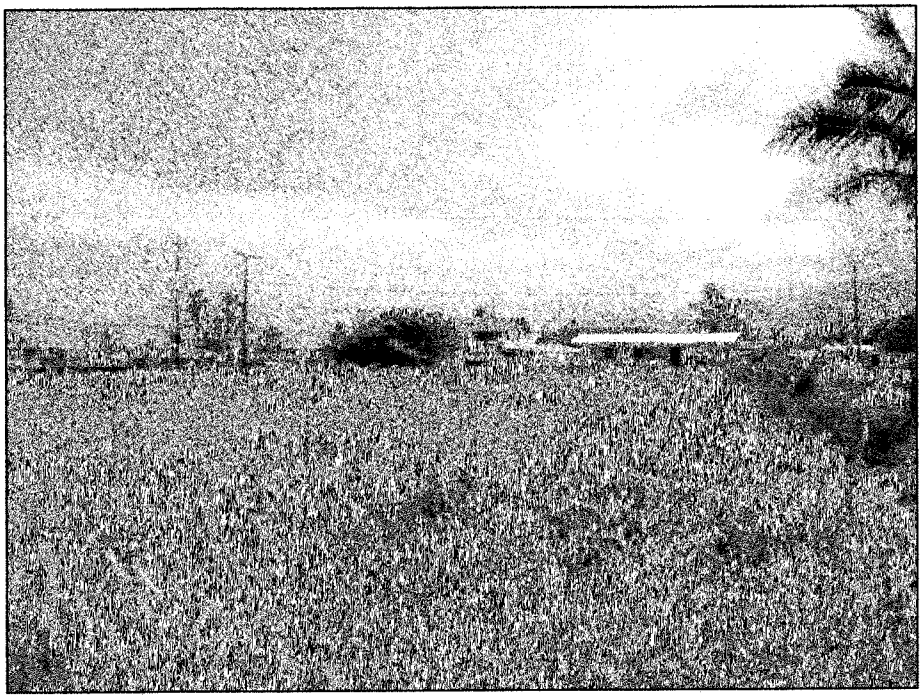

Figure 11. South view of west side of project area

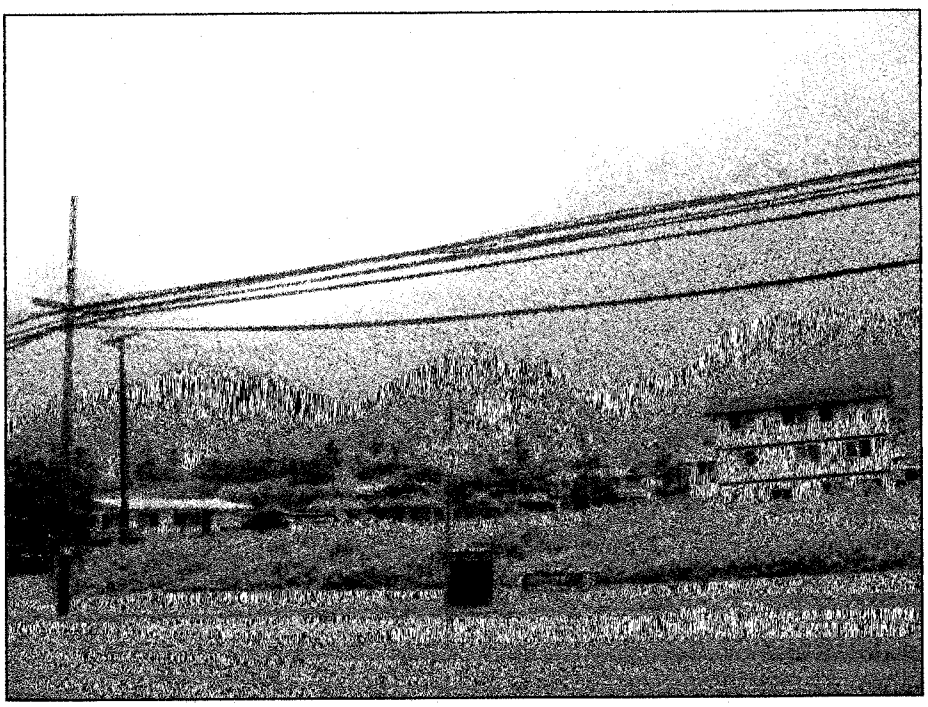

Figure 12. West view of project area from across Kamehameha Highway

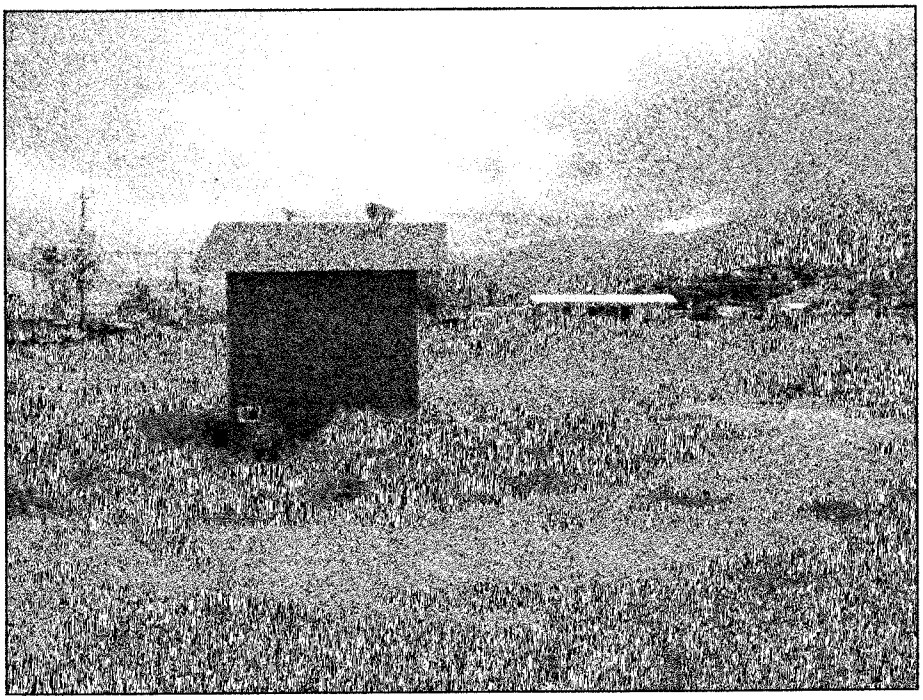

Figure 13. South view of central portion of project area, this shed is the only standing structure on the property

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APPENDIX B

Phase I Environmental Site Assessment
Proposed Hauula Fire Station Site

Phase I Environmental Site Assessment

Proposed Hauula Fire Station Site
Kamehameha Highway
(TMK Numbers: [1] 5-4-018: Parcels 64 and 65)
Hauula, Oahu, Hawaii

October 27, 2009
Project No. 17009-009146.00

Prepared for:

GERALD PARK URBAN PLANNER
95-595 Kanamee Street, Suite 324
Mililani, Hawaii 96789

For the benefit of business and people

Prepared by:

BUREAU VERITAS NORTH AMERICA, INC.
970 N. Kalaheo Avenue, Suite C-316
Kailua, Hawaii 96734
808.531.6708
www.us.bureauveritas.com

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ATTORNEY-CLIENT PRIVILEGED AND CONFIDENTIAL WORK PRODUCT

Executive Summary

Gerald Park Urban Planner retained Bureau Veritas North America, Inc. (Bureau Veritas) to conduct a Phase I Environmental Site Assessment (ESA) of the proposed Hauula Fire Station site, located at Kamehameha Highway (Tax Map Key [TMK] Numbers: [1] 5-4-018: Parcels 064 and 065), Hauula, Oahu, Hawaii 96818 (the "subject property"). The objective of the assessment was to provide an independent, professional opinion regarding *recognized environmental conditions (RECs)*, as defined by the American Society for Testing and Materials (ASTM), associated with the subject property. This assessment was requested in association with an acquisition of the subject property.

This assessment was performed under the conditions of, and in accordance with Bureau Veritas' Proposal Number 1703.09.276, dated September 22, 2009, using ASTM E1527-05, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* as a guideline. Any exceptions to, additions to, or deletions from the ASTM guidelines are described in the report. Details of the work performed, sources of information, and findings are presented in the report. Limitations of the assessment are described in Sections 1.1 and 1.2.

The subject property is comprised of 40,600 square feet land area designated as TMK Numbers: (1) 5-4-018: Parcels 064 and 065 which are owned by Chai Huay Yoshimura and Choon Huay James, respectively. At the time of Bureau Veritas' March 10, 2009 site visit, the subject property was undeveloped except for a small wooden storage shed. Several plastic containers were located on the subject property and were used to hold up tent posts. The remaining portion of the subject property was covered with dense, low-lying vegetation.

The historical research conducted for this assessment has established the use of the subject property since 1939. A 1939 aerial photograph showed the subject property as agricultural land. Subsequent aerial photographs and topographic maps depicted the property similarly until 2004, when an aerial photograph depicted the subject property with low-lying vegetation.

According to records at the City and County of Honolulu Real Property Tax Assessment Office, both parcels that comprise the subject property originated from TMK Number: (1) 5-4-004: Parcel 007. The earliest available records indicated that Parcel 007 was owned by the Kiapapau Land Co., in 1951, and consisted of 10.920 acres. The parcel was deeded to Lati-pac Hawaii, Inc. in 1960, and two years later became part of the Dillingham Corporation. In 1964, the parcel was deeded to Nicholas Pao and 105,618 square feet were dropped into TMK Number: (1) 5-4-018: Parcel 059. In 1968, Parcel 059 was deeded to Kahuku Shopping Center, Ltd., and then deeded to Hawaii Printing and Wallcovering, Inc. in 1971. In 1983, the parcel was deeded to John Inagaki and the current subject parcels (Parcels 064 and 065) were created in 1989. Both subject parcels were deeded to Lesely Murakami in 1991, and were entrusted to Jon and Jake Muarakami in 2004. In 2005, Parcel 064 was deeded to Wayne and Chai Huay Yoshimura, and Parcel 065 was deeded to Mark and Choon Huay James.

This assessment has revealed no evidence of *RECs*, as defined by ASTM, in connection with the property.

The following environmental condition, which is not considered to be a *REC*, as defined by ASTM, was revealed during this assessment:

- Aerial photographs from 1939 through 1969 indicated that the subject property was formerly used for agricultural purposes. Past use of agricultural chemicals such as pesticides and herbicides may have the potential to impact the subject property. However, there is no evidence of storage,

mixing, or excessive use of agricultural chemicals on the subject property. Moreover, according to Hawaii Revised Statutes (HRS) Chapter 128D Environmental Response Law, the presence of agricultural chemicals does not constitute a release of a hazardous substance. Section 128D-1 of the HRS, excludes "any release resulting from the legal application of a pesticide product registered under the Federal Insecticide, Fungicide, and Rodenticide Act."

This finding is not considered a *REC* because there is no evidence of significant pesticide and/or herbicide releases on the subject property. In addition, according to HRS Chapter 128D, the presence of agricultural chemicals does not constitute a release. Because the planned development is construction of a fire station, no additional investigation is recommended. However, if the subject property is ever redeveloped for residential use, testing for agricultural chemicals is required by the State of Hawaii.

1.0 INTRODUCTION

Gerald Park Urban Planner retained Bureau Veritas North America, Inc. (Bureau Veritas) to conduct a Phase I Environmental Site Assessment (ESA) of the proposed Hauula Fire Station site, located at Kamehameha Highway (Tax Map Key [TMK] Numbers: [1] 5-4-018: Parcels 64 through 65), Hauula, Oahu, Hawaii 96818 (the "subject property"). The objective of the assessment was to provide an independent, professional opinion regarding *recognized environmental conditions (RECs),* as defined by the American Society for Testing and Materials (ASTM), associated with the subject property. This assessment was requested in association with an acquisition of the subject property.

1.1 METHODOLOGY AND EXCEPTIONS

Good commercial and customary practice for conducting ESA has the goal of providing an independent, professional opinion regarding *RECs*, as defined by ASTM, associated with the subject property. The term *recognized environmental conditions* is defined as the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property. The term includes hazardous substances or petroleum products even under conditions in compliance with laws. The term is not intended to include *de minimis* conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be *de minimis* are not *RECs*.

This assessment was performed under the conditions of, and in accordance with Bureau Veritas' Proposal Number 1703.09.276, dated September 22, 2009, using ASTM E1527-05, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* as a guideline. Any exceptions to, additions to, or deletions from the ASTM guidelines are described in the report. Details of the work performed, sources of information, and findings are presented in the report. Limitations of the assessment are described in Sections 1.1 and 1.2.

The assessment included the following components:

- A site walkthrough inspection of the property for visual evidence of potential environmental concerns including existing or potential soil and groundwater contamination, as evidenced by soil or pavement staining or discoloration, stressed vegetation; indications of waste dumping or burial, pits, ponds, or lagoons; containers of hazardous substances or petroleum products; electrical and hydraulic equipment that may contain polychlorinated biphenyls (PCBs), such as electrical transformers and hydraulic hoists; and underground and aboveground storage tanks (USTs/ASTs).

- An investigation of historical use of the subject property through reasonably ascertainable historical information (e.g., aerial photographs, fire insurance maps, city directories,) for evidence of prior land use that could have led to *RECs*.

- A review of information available on general geology and topography of the subject property, local groundwater conditions, sources of water, power, and sewer, and proximity to ecologically sensitive receptors, such as streams, that might be impacted by *RECs* and environmental issues.

- A review of environmental records available from the property owner or site contact including regulatory agency reports, permits, registrations, and consultants' reports for evidence of *RECs* and activity and use limitations (AULs).

- A site property line visual assessment of adjacent properties for evidence of potential offsite environmental conditions that may affect the subject property.

- A review of a commercial database summary of federal, state and tribal regulatory agency records pertinent to the subject property and offsite facilities located within ASTM-specified search distances from the subject property.

- Review of reasonably ascertainable Federal, State and Local environmental agency case files for the subject property. This will also include interviewing agency project managers (if available) regarding the status of the subject property (e.g. leaking underground storage tank [LUST] incident closure, etc.).

- Interviews with the subject property owner, key site personnel, and others, regarding current and previous uses of the property, particularly activities involving hazardous substances and petroleum products.

- Evaluation of information gathered during the assessment to reach conclusions concerning *RECs*, and development of this report.

This assessment also included the following non-ASTM items:

- Asbestos-Containing Materials (ACM)

- Lead-Based Paint (LBP)

- Radon

- Wetlands

This assessment did not include sampling or analysis of suspect ACM, LBP, soil, groundwater or other materials.

Ms. Meredith Gibe, Environmental Scientist with Bureau Veritas' Honolulu Regional Office, conducted the site walkthrough portion of the assessment on October 16, 2009, unaccompanied. Ms. Gibe completed this assessment under the supervision of Mr. Tim Swartz, Senior Project Manager with Bureau Veritas and Environmental Professional as defined in §312.10 of 40 CFR 312.

See table of contents for a list of appendices. Resumes for environmental professionals involved in this assessment are included in the appendices. Photographs taken at the time of the assessment are included behind the *Photographs* Tab.

1.2 LIMITING CONDITIONS OF ASSESSMENT

Information for the assessment was obtained from sources listed in the appendices. This information, to the extent it was relied on to form Bureau Veritas' opinion, is assumed to be correct and complete. Bureau Veritas is not responsible for the quality or content of information from these sources. At the time of the site visit, Bureau Veritas was able to gain access to all areas of the subject property, except for the shed located on the northeastern portion of the subject property. However, lack of access to this portion of the subject property did not prevent an evaluation of the subject property with respect to recognized environmental conditions.

Information for the assessment was obtained from sources listed in the appendices. This information, to the extent it was relied on to form Bureau Veritas' opinion, is assumed to be correct and complete. Bureau Veritas is not responsible for the quality or content of information from these sources.

1.2.1 Unavailable Documentation

At the time of this assessment, all requested documents regarding the subject property were made available for review, except for the following:

- The City and County of Honolulu Fire Prevention Bureau was contacted on October 20, 2009, to obtain information regarding any fires, complaints, permits, or violations involving hazardous material use, USTs, or ASTs on record for the subject and/or adjoining properties.

  Bureau Veritas has not received a response from the City and County of Honolulu Fire Prevention Bureau as of the date of this report. If later findings change the conclusions and recommendations in this report, Bureau Veritas will forward an addendum letter to Gerald Park Urban Planner.

- Bureau Veritas ordered recorded land title records and lien records that are filed under federal, state, tribal, or local law.

  Bureau Veritas has not received the title reports from First Hawaiian Title as of the date of this report. Based on the other data reviewed for this assessment, Bureau Veritas does not believe that the lack of the land title records has impacted the findings of this report. If later findings change the conclusions and recommendations in this report, Bureau Veritas will forward an addendum letter to Gerald Park Urban Planner.

1.2.2 Data Gaps

Historical subject property use information was obtained for the time period, 1939 to 2008. Several gaps in use information exceeding five years were encountered during this assessment. Based on general knowledge of the area and known past uses of the subject property, Bureau Veritas does not consider these data gaps to be significant.

1.3 RELIANCE

The information and opinions rendered in this report are exclusively for use by Gerald Park Urban Planner and the Honolulu Fire Department. Bureau Veritas will not distribute or publish this report without consent except as required by law or court order. The information and opinions expressed in this report are given in response to a limited assignment and should be considered and implemented only in light of that assignment. The services provided by Bureau Veritas in completing this project were consistent with normal standards of the profession. No other warranty, expressed or implied, is made.

2.0 USER PROVIDED INFORMATION

ASTM E 1527 defines "user" as the party seeking to use Practice E 1527 to complete an ESA of the subject property, and in this case, the user is the Honolulu Fire Department. ASTM E 1527 specifies that certain tasks associated with identifying potential *RECs* at the subject property should be performed by the user and provided to the environmental professional. This section documents the information obtained from the user.

The City and County of Honolulu Department of Design and Construction (DDC) provided Bureau Veritas an ASTM Practice E 1527-05 User/Client Questionnaire regarding environmental issues at the subject property on behalf of the Honolulu Fire Department.

2.1 RECORDED LAND TITLE RECORDS

The DDC indicated that he was not aware of any environmental cleanup liens or activity and use limitations (AULs) filed or recorded against the subject property.

2.2 SPECIALIZED KNOWLEDGE

The DDC indicated that he has no knowledge or experience that is material to *RECs* in connection with the subject property.

2.3 COMMONLY KNOWN OR REASONABLY ASCERTAINABLE INFORMATION

The DDC was asked if he was aware of any of the following:

Any pending, threatened, or past litigation relevant to hazardous substances or petroleum products in, on, or from the property.	Yes	_____	No	X
Any pending, threatened, or past administrative proceedings relevant to hazardous substances or petroleum products in, on, or from the property.	Yes	_____	No	X
Any notices from any governmental entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products.	Yes	_____	No	X

2.4 VALUATION REDUCTION FOR ENVIRONMENTAL ISSUES

According to the DDC, the purchase price of the subject property reflects its fair market value.

2.5 OWNER, PROPERTY MANAGER, AND OCCUPANT INFORMATION

The DDC indicated that he has no specific information that is material to *RECs* in connection with the subject property.

2.6 REASON FOR PERFORMING PHASE I

The DDC indicated that this assessment was requested in association with an acquisition of a portion of the subject property.

3.0 SUBJECT PROPERTY DESCRIPTION

3.1 LOCATION AND LEGAL DESCRIPTION

The subject property consists of a rectangular-shaped land lot that is 40,600 square feet in area. The subject property is located to the north of the intersection of Kamehameha Highway and Kawipuna Street, in Hauula, Oahu, Hawaii (Figures 1 and 2, *Figures* Tab). Currently, the subject property has no designated address.

The subject property is further described as the parcels of land designated as TMK Numbers: (1) 5-4-018: Parcels 64 and 65. According to the City and County of Honolulu Planning and Zoning Department, the subject property is currently zoned "B-1, Neighborhood Business District." The State Land Use designation is "Urban District."

Bureau Veritas ordered recorded land title records and lien records from First Hawaiian Title Corporation. As of the date of this report, Bureau Veritas has not received the title records. Based on the other data reviewed for this assessment, Bureau Veritas does not believe that the lack of access to these records has impacted the findings of this report. If later findings change the conclusions and recommendations in this report, Bureau Veritas will forward an addendum letter to Gerald Park Urban Planner.

3.2 CURRENT USE OF SUBJECT PROPERTY

The subject property is comprised of 40,600 square feet land area designated as TMK Numbers: (1) 5-4-018: Parcels 064 and 065 which are owned by Chai Huay Yoshimura and Choon Huay James, respectively. At the time of Bureau Veritas' March 10, 2009 site visit, the subject property was undeveloped except for a small wooden storage shed. Several plastic containers were located on the subject property and were used to hold up tent posts. The remaining portion of the subject property was covered with dense, low-lying vegetation.

Based on observations made during Bureau Veritas' site visit, the following information was ascertained:

- Storm water runoff from the subject property flows to the east via sheet flow towards Kamehameha Highway and the Pacific Ocean.
- Electrical utilities are not currently provided to the subject property.
- Water and sewer services are not currently provided to the subject property.
- The planned use of the subject property is development as the Hauula Fire Station.

3.3 CURRENT USES OF ADJOINING/NEARBY PROPERTIES

The area surrounding the subject property consists of commercial properties. Adjoining properties were observed (from the subject property or from public access areas) for signs of recognized environmental conditions and their potential to pose an environmental concern to the subject property (Figure 2, Figures

Tab). The uses and features of adjoining properties are described below (the direction is based on the center of the subject property).

Northeast: Shrimp Express restaurant, beyond which is the Tamura's Market shopping center

East: Kamehameha Highway, beyond which are residential homes and the Pacific Ocean

South: Kawipuna Street, beyond which are residential homes

Northwest: Residential homes

West: Residential homes

Current visible uses of adjoining properties do not appear to present an environmental concern to the subject property.

3.4 PHYSICAL SETTING

The subject property lies within the Kahuku Plain physiographic region, in the northeastern portion of the Island of Oahu. The general topographic gradient of the region slopes down moderately in a northeasterly direction towards the Pacific Ocean.

Based on the U.S. Geological Survey (USGS), Pearl Harbor, Hawaii, 7.5-minute topographic quadrangle map, elevations across the subject property range from approximately 20 feet above mean sea level (amsl) (USGS 1999) to approximately 15 feet amsl. The approximate latitude and longitude of the subject property are 21° 37' 07.57" North and 157° 54' 54.19" West, respectively.

Soil

According to the Soil Survey of the Islands of Kauai, Oahu, Maui, Molokai, and Lanai (Foote, D.E. et al., 1972), the type of soil underlying the site is classified as belonging to the Kawaihapai series. These soils consist of well-drained soils that formed in alluvium derived from basic igneous rock in humid uplands. Kawaihapai soils are in drainageways and on alluvial fans on the coastal plains and have slopes of 0 to 15 percent.

Specifically, the subject property soil consists of Kawaihapai clay loam with two to six percent slopes (mapping unit *KlB*). These soils are poorly drained and occupy smooth slopes. Depth to coral varies from 20 to 50 inches. In a representative profile the surface layer is a dark brown stratified sandy loam. The substratum is stony and gravelly. The soil neutral, runoff is slow, and the erosion hazard is slight.

Groundwater

Bureau Veritas reviewed the *Aquifer Identification and Classification for Oahu: Groundwater Protection Strategy for Hawaii, Report No. 179*, published by the Water Resources Research Center at the University of Hawaii, for information on groundwater conditions below the subject property. The report describes the regional groundwater beneath the subject property as part of the Koolauloa aquifer system within the Windward aquifer sector.

The upper Koolauloa aquifer is described as an unconfined, basal aquifer of the sedimentary type, occurring in nonvolcanic lithology. This aquifer is listed as a potential water source that is of ecological importance. This aquifer has low salinity (250 to 1,000 milligrams of chloride per liter of water). It is identified as irreplaceable, with a high vulnerability to contamination.

The lower Koolauloa aquifer is described as a confined, basal aquifer of the flank type, occurring in horizontally extensive lavas. This aquifer is listed as a currently used, irreplaceable water supply of low salinity, with a low vulnerability to contamination.

The subject property is located above the State of Hawaii Department of Health (DOH) defined Underground Injection Control (UIC) line. Areas above the UIC line denote potential underground drinking water sources. Areas below the UIC line generally denote groundwater that is unsuitable for drinking water purposes. Consequently, the groundwater below the subject property may be considered a potential drinking water source.

The depth to first groundwater beneath the subject parcel is estimated to range from approximately 10 to 15 feet below ground surface (bgs). The regional groundwater flow direction is generally inferred to follow surface topography and flow to the east towards the Pacific Ocean. However, topography is not always a reliable basis for predicting groundwater flow direction, since the local gradient and flow direction under the subject parcel may be influenced naturally by zones of higher or lower permeability, tidal changes, or by nearby pumping or recharge, and may deviate from the regional trend.

4.0 HISTORICAL REVIEW

4.1 SUMMARY OF HISTORICAL REVIEW

The historical research conducted for this assessment has established the use of the subject property since 1939. A 1939 aerial photograph showed the subject property as agricultural land. Subsequent aerial photographs and topographic maps depicted the property similarly until 2004, when an aerial photograph depicted the subject property with low-lying vegetation.

According to records at the City and County of Honolulu Real Property Tax Assessment Office, both parcels that comprise the subject property originated from TMK Number: (1) 5-4-004: Parcel 007. The earliest available records indicated that Parcel 007 was owned by the Kiapapau Land Co., in 1951, and consisted of 10.920 acres. The parcel was deeded to Lati-pac Hawaii, Inc. in 1960, and two years later became part of the Dillingham Corporation. In 1964, the parcel was deeded to Nicholas Pao and 105,618 square feet were dropped into TMK Number: (1) 5-4-018: Parcel 059. In 1968, Parcel 059 was deeded to Kahuku Shopping Center, Ltd., and then deeded to Hawaii Printing and Wallcovering, Inc. in 1971. In 1983, the parcel was deeded to John Inagaki and the current subject parcels (Parcels 064 and 065) were created in 1989. Both subject parcels were deeded to Lesely Murakami in 1991, and were entrusted to Jon and Jake Muarakami in 2004. In 2005, Parcel 064 was deeded to Wayne and Chai Huay Yoshimura, and Parcel 065 was deeded to Mark and Choon Huay James.

Based on Bureau Veritas' review of Department of Planning and Permit (DPP) records, three permits still undergoing review were listed for Parcel 064 and included permits for a shrimp truck and fencing. Nine permits with the status of "permit application closed" or "plans review in progress" were reviewed for Parcel 065 including: installation of permanent electric service for extension cords for a flea market, new gazebo, new trellis, temporary tent for sales, and a security fence. The permits were issued to the Hauula Country Market, Mark James, Lesley Murakami, and Mark James.

4.2 AERIAL PHOTOGRAPHS

Aerial photographs, which include the subject and adjoining properties, were reviewed at the Hawaii State Archives, Kekauluohi Building, located on the Iolani Palace grounds in Honolulu, Hawaii. Photographs from the years 1939, 1954, 1965, 1969, and 2004 were available for review and are summarized below.

Date: 1939 Aerial Photograph No. M 48.219

- The subject property and surrounding areas appeared as agricultural land. Unpaved roads were observed throughout the area. Kamehameha Highway was observed in its current configuration.

Date: 1954 Aerial Photograph No. DACE 5-34

- The subject and properties adjacent to the north, south, and west appeared similar to the 1939 aerial photograph. The area to the west of the subject property appeared as a residential area and contained multiple structures.

Date: 1965 Aerial Photograph No. EKM 3CC-76

- No significant changes from the 1954 aerial photograph were observed.

Date: 1969 Aerial Photograph No. R.M. Towill 5187-1

- No significant changes were observed from the 1965 aerial photograph, except that a residential area appeared adjacent to the south of the subject property, and Kawaipuna Street was observed in its current configuration.

Date: 2004 Aerial Photograph Source Google Earth©

- The subject property appeared with low-lying vegetation and that did not appear as agricultural crops. A large rectangular building (currently Shrimp Express) was observed adjacent to the north of the subject property, beyond which was a shopping center (currently Tamura's Market). The area to the south of the subject property appeared more developed than the 1969 aerial photograph and appeared as a residential area.

No readily apparent evidence of recognized environmental conditions at the subject or adjoining properties was noted on the aerial photographs reviewed, except that the subject property appeared with agricultural crops in aerial photographs from 1939 to 1969. However, there is no evidence of storage, mixing, or excessive use of agricultural chemicals on the subject property. Therefore, this finding is not considered a recognized environmental condition.

4.3 USGS TOPOGRAPHIC MAPS

Historic topographic maps for the subject property and vicinity were reviewed at Hawaii State Archives, Kekauluohi Building, located on the Iolani Palace grounds in Honolulu, Hawaii, and from Bureau Veritas' private collection. Maps dated 1966, 1983, and 1992 were available for review and depicted the following:

USGS Quadrangle: Hauula, Hawaii **Scale: 1:24,000**

1966: The subject property was depicted as undeveloped land. The area to the south and east appeared developed as a residential area. Kamehameha Highway and Kawaipuna Street appeared in their current configurations. A large rectangular structure in the location of the current Tamura's grocery store shopping center was shown to the north.

1983: The subject property and surrounding area appeared similar to the 1968 topographic map, except that the structure located in the current location of Tamura's grocery store appeared larger. More houses were depicted to the south of the subject property.

1992: The subject property and surrounding areas were shown similar to the 1983 topographic map.

No readily apparent evidence of *RECs* at the subject or adjoining properties was noted on the topographic maps reviewed.

4.4 FIRE INSURANCE MAPS

Fire insurance maps typically depict either the locations of manufacturing and industrial facilities within the city limits or potential fire hazards existing within individual building structures. In many cases areas of environmental concern, such as locations of USTs, can be found by reviewing fire insurance maps.

Bureau Veritas attempted to review the Sanborn Fire Insurance Maps at Hamilton Library, located at the University of Hawaii, Manoa Campus. However, the Sanborn map collection did not include map coverage of the subject property.

4.5 PRIOR OWNERSHIP

As part of this assessment, Bureau Veritas ordered reasonably ascertainable recorded land title records and lien records that are filed under federal, state, tribal, or local law on behalf of Gerald Park Urban Planner.

Bureau Veritas has not received the title reports from First Hawaiian Title as of the date of this report. Based on the other data reviewed for this assessment, Bureau Veritas does not believe that the lack of the land title records has impacted the findings of this report. If later findings change the conclusions and recommendations in this report, Bureau Veritas will forward an addendum letter to Gerald Park Urban Planner.

According to available records at the City and County of Honolulu Real Property Tax Assessment Office, the subject parcels are designated as TMK Numbers: (1) 5-4-018: Parcels 64 through 65. Historical ownership records are listed in the following table:

Tax Map Key	Date	Property Transaction
TMK No.: (1) 5-4-018: Parcel 064	1989	Earliest available records indicated that the subject parcel consisted of 20,297 square feet created from TMK No.: (1) 5-4-018: Parcel 059 (see records below) and owned by John Inagaki.
	1991	The subject parcel was deeded to Lesley Murakami.
	2004	The subject parcel was entrusted to Jon and Jake Murakami.
	2005	The subject parcel was deeded to Wayne and Chai Huay Yoshimura.
TMK No.: (1) 5-4-018: Parcel 065	1989	Earliest available records indicated that the subject parcel consisted of 20,297 square feet created from TMK No.: (1) 5-4-018: Parcel 059 (see records below) and owned by John Inagaki.

Tax Map Key	Date	Property Transaction
TMK No.: (1) 5-4-018: Parcel 065 (continued)	1991	The subject parcel was deeded to Lesley Murakami.
	2004	The subject parcel was entrusted to Jon and Jake Murakami.
	2005	The subject parcel was deeded to Mark and Choon Huay James.
TMK No.: (1) 5-4-018: Parcel 059	1964	Earliest available records indicated that the parcel was owned by Nicholas Pao and consisted of 105,618 square feet that originated from TMK No.: (1) 5-4-004: Parcel 007 (see records below).
	1968	The parcel was deeded to Kahuku Shopping Center, Ltd.
	1971	The parcel was deeded to Hawaii Printing and Wallcovering, Inc.
	1983	The parcel was deeded to John Inagaki
TMK No.: (1) 5-4-004: Parcel 007	1951	Earliest available records indicated that the parcel was owned by the Kaipapau Land Co., Ltd and consisted of 10.920 acres.
	1960	The parcel was deeded to Latipac-Hawaii, Inc.
	1962	Latipac-Hawaii, Inc. became part of the Dillingham Corporation.
	1964	Parcel was deeded to Nicholas Pao.

No readily apparent evidence of potential *RECs* at the subject property was noted in the ownership records reviewed, except that the subject property was part of a larger parcel that was owned by companies affiliated with agriculture (Kaipapau Land Co. and Dillingham Corporation). This past ownership indicates the potential use of agricultural chemicals such as pesticides and herbicides that may have impacted the subject property. However, based on other historical records and a general knowledge of the area, there is no evidence of storage, mixing, or excessive use of agricultural chemicals on the subject property. Therefore, this finding is not considered a recognized environmental condition.

4.6 AGENCY CONTACTS

4.6.1 Building, Planning, and/or Zoning Departments

According to the City and County of Honolulu Planning and Zoning Department, the subject property is currently zoned "B-1 Neighborhood Business District." The State Land Use designation is "Urban District."

Based on Bureau Veritas' review of Department of Planning and Permit (DPP) records, three permits still undergoing review were listed for Parcel 064 and included permits for a shrimp truck and fencing. Nine permits with the status of "permit application closed" or "plans review in progress" were reviewed for Parcel 065 including: installation of permanent electric service for extension cords for a flea market, new gazebo, new trellis, temporary tent for sales, and a security fence. The permits were issued to the Hauula Country Market, Mark James, Lesley Murakami, and Mark James.

No evidence of potential *RECs* was noted in the DPP permits records.

4.6.2 Fire Department

The City and County of Honolulu Fire Prevention Bureau was contacted on October 20, 2009, to obtain information regarding any fires, complaints, permits, or violations involving hazardous material use, USTs, or ASTs on record for the subject and/or adjoining properties.

Bureau Veritas has not received a response from the City and County of Honolulu Fire Prevention Bureau as of the date of this report. If later findings change the conclusions and recommendations in this report, Bureau Veritas will forward an addendum letter to Gerald Park Urban Planner.

4.6.3 Department of Health/Solid and Hazardous Waste Branch

Bureau Veritas performed a database review of the DOH, Solid and Hazardous Waste Branch (SHWB) records regarding USTs and LUSTs at the subject property.

The subject property was not listed in either the UST or the LUST databases.

4.6.4 Department of Health/Hazard Evaluation and Emergency Response Branch

Bureau Veritas performed a database review of the DOH, Hazard Evaluation and Emergency Response (HEER) records regarding environmental concerns or violations at the subject property.

The subject property was not listed in the HEER database, which was last updated on April 4, 2008.

4.7 PREVIOUS ENVIRONMENTAL REPORTS OR OTHER DOCUMENTS

No previous environmental reports or documents were provided or reviewed by Bureau Veritas.

5.0 INTERVIEWS

5.1 INTERVIEW WITH OWNERS

Bureau Veritas attempted to locate the owners of the subject property to conduct an interview, but was unable to reach them by telephone.

5.2 INTERVIEW WITH SITE MANAGER

The subject property is currently unoccupied; therefore, no site managers were contacted for this assessment.

5.3 INTERVIEWS WITH OCCUPANTS

The subject property is currently unoccupied; therefore, no occupant interviews were conducted for this assessment.

5.4 INTERVIEWS WITH OTHERS

Bureau Veritas conducted an in-person interview with Mr. Jack Hobbs, Regional Manager with Reynolds Recycling, during the October 16, 2009 site visit. Mr. Hobbs was cutting the vegetation on the northern portion of the subject property in order to establish a recycling center in that location. Mr. Hobbs stated that the shed on the subject property was used to sell plate lunches. A tent was also located on the subject property and was used to sell t-shirts alongside Kamehameha Highway. Mr. Hobbs stated that, to the best of his knowledge, the subject property has never been developed. Mr. Hobbs was not aware of any hazardous material releases, USTs, or other subsurface structures of environmental concern at the subject property.

Mr. Hobbs was asked if he was aware of any of the following:

Any pending, threatened, or past litigation relevant to hazardous substances or petroleum products in, on, or from the property.	Yes _____	No **X**
Any pending, threatened, or past administrative proceedings relevant to hazardous substances or petroleum products in, on, or from the property.	Yes _____	No **X**
Any notices from any governmental entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products.	Yes _____	No **X**

6.0 STANDARD ENVIRONMENTAL RECORD SOURCES, FEDERAL, STATE, AND LOCAL

Available government database information, prepared by Environmental Data Resources (EDR) and dated October 15, 2009, was reviewed to evaluate both the subject property and any listed sites within ASTM-recommended search distances. Federal, state, tribal, and local databases reviewed are included in the appendices.

The subject property was not identified in the EDR report.

A total of four locations were identified within the specified search distances from the subject property, and were noted in the following manner: one State Hazardous Waste Site (SHWS); one LUST site; one UST site; and one Resource and Recovery Act (RCRA)-Non Generator (NonGen) site. The search distances range from 0.25 to 1 mile and are based on the environmental risk to the subject property. Nearby sites with the potential to impact the subject property were evaluated in more detail and are listed as follows:

Offsite listings			
Facility	**Database**	**Approximate Distance and Orientation from Subject Property**	**Environmental Concern**
Tesoro Gas Express #54 54-304 Kamehameha Hwy	LUST, UST	295 feet southeast	No; LUSTs were listed as "Site Cleanup Completed (NFA)," and the all of the USTs were listed as "Permanently Out of Use."
Payless Drug 54-316 Kamehameha Hwy	FINDS, RCRA-NonGen	439 feet north-northwest	No; no reported violations or releases

A total of five unmappable sites were also listed in the EDR report. Unmappable sites are sites that cannot be plotted with confidence, but can be located by zip code or city name. In general, a site cannot be geocoded due to inaccurate or missing information in the environmental database record provided by its applicable agency. Cross referencing addresses and site names, as well as a visual reconnaissance of surrounding properties, has been completed for the unmappable facility sites in the database report.

The subject and adjacent properties were not identified on the unmappable sites listing in the environmental database report. No unmappable sites were identified with the potential to impact the subject property because, based upon Bureau Veritas' review, they are too distant and/or topographically downgradient or crossgradient relative to the subject property to reasonably affect it.

All database reviewed in the EDR report were, in Bureau Veritas' opinion, determined to be sufficiently complete and sufficiently current to serve as the basis for Bureau Veritas' opinions.

7.0 SITE RECONNAISSANCE

7.1 METHODOLOGY AND LIMITATIONS

At the time of the site visit, Bureau Veritas was able to gain access to all areas of the subject property except for the locked storage shed located on the subject property.

Lack of access to these areas did not prevent an evaluation of the subject property with respect to environmental conditions. Photographs taken at the time of the ESA are included behind the *Photographs* Tab.

7.2 GENERAL OBSERVATIONS

At the time of Bureau Veritas' October 16, 2009 site visit, the subject property was undeveloped, except for a small wooden shed located on the northeastern portion of the subject property. The shed was locked and inaccessible for Bureau Veritas to enter, but a window showed the shed contained shelving and boxes. According to Mr. Hobbs, the shed was previously used to sell food on the subject property.

The central portion of the subject property appeared with multiple plastic containers placed in a rectangular formation and were formerly used to hold up tent posts. Gravel fill was observed on the surface, in the location of the former tent. According to Mr. Hobbs, a tent was formerly placed in this location and was used to sell t-shirts along the roadside.

The southeastern portion of the subject property was observed with a polyvinyl chloride pipe (PVC) approximately 4 feet in height. Two wires extended from the pipe and appeared to be associated with electricity. According to permits reviewed by Bureau Veritas, this portion of the subject property included a permit for permanent electricity for extension cords.

The remaining portions of the subject property were covered with dense, low-lying vegetation. During the time of Bureau Veritas' visit, several employees with Reynolds Recycling were clearing the northern portion of the subject property. According to Mr. Hobbs of Reynolds Recycling, some unauthorized dumping was discovered during their clearing, but they did not find any hazardous materials.

7.3 HAZARDOUS SUBSTANCES AND PETROLEUM PRODUCTS

The subject property was assessed for signs of storage, use, or disposal of hazardous materials. The assessment consisted of noting evidence (e.g., drums, unusual vegetation patterns, staining) indicating that hazardous materials are currently or were previously located on the subject property.

Bureau Veritas did not observe any potentially hazardous substances or petroleum products on the subject property.

7.4 STORAGE TANKS

7.4.1 Underground Storage Tanks

The subject property was inspected for evidence of USTs (e.g., vent piping, dispensing equipment, pavement variations).

No evidence of USTs was observed during Bureau Veritas' October 16, 2009 site walkthrough, and there are no USTs or LUSTs recorded for the subject property in the DOH, SHWB records reviewed (see Section 4.6.3).

7.4.2 Aboveground Storage Tanks

The subject property was inspected for evidence of ASTs (e.g. concrete foundations or saddles, pedestals or steel support structures). Bureau Veritas also inspected the subject property adjacent to the north of the subject property and the current location of the Shrimp Express restaurant for liquid propane tanks.

No evidence of ASTs was observed on the subject property. No liquid propane tanks were observed Bureau Veritas did not observe any liquid propane gas tanks on the subject property or on the property occupied by the restaurant.

7.4.3 In-Ground Hydraulic Equipment

The subject property was inspected for evidence of in-ground hydraulic equipment (e.g. hydraulic elevators or lifts that have hydraulic fluid-containing reservoirs or jacks below ground surface). Although not regulated as USTs, hydraulic equipment of this type can be of concern due to the potential for oil leaks from the hydraulic cylinders. Hydraulic fluid in equipment installed in 1978 or before may contain PCBs.

No evidence of in-ground hydraulic equipment was observed on the subject property.

7.5 WASTES

Currently, non-hazardous solid waste is not generated onsite.

7.6 POLYCHLORINATED BIPHENYLS (PCBS)

The subject property was inspected for the presence of liquid-cooled electrical units (transformers, light ballasts, and capacitors), and major sources of hydraulic fluid (elevators and lifts). Such units are notable because they may be potential PCB sources.

Bureau Veritas did not observe any potential PCB sources on or near the subject property during the site assessment.

7.7 WASTEWATER AND STORM WATER DISCHARGE

The subject property does not currently utilize water or sewer services. Storm water runoff from the subject property infiltrates the unpaved ground and flows to the east via sheet flow towards Kamehameha Highway and to the Pacific Ocean.

7.7.1 Discharge Sources

Evidence of industrial, process or other discharge sources (i.e. other than domestic waste water from sinks and toilets) was not observed on the subject property.

7.7.2 Oil/Water Separators, Clarifiers, Sumps, and Trenches

The subject property was inspected for evidence of oil/water separators, clarifiers, sumps and trenches (e.g. hatches, manholes, patches on the floor slabs). Although not regulated as USTs, these features can be of concern due to the potential for leaks into the subsurface.

No evidence of oil/water separators, clarifiers, sumps and trenches was observed during Bureau Veritas' October 16, 2009 site visit.

7.7.3 Septic Systems

The subject property was inspected for evidence of current or former septic systems (e.g. clean out manhole, records, and interviews).

Evidence of septic systems was not observed during the course of Bureau Veritas' October 16, 2009 site walkthrough.

7.8 WELLS

No evidence of wells was observed during Bureau Veritas' October 16, 2009 site visit.

According to the State of Hawaii Department of Land and Natural Resources (DLNR), Division of Water Resource Management *Ground Water Index and Summary* database (2006), no wells were identified located on or near the subject property.

7.9 DRY CLEANING OPERATIONS

There are currently no dry cleaners on the subject property, and research did not reveal that dry cleaning operations have been conducted on the subject property in the past.

8.0 NON-ASTM ISSUES

8.1 ASBESTOS-CONTAINING MATERIALS

During the assessment, the subject property was inspected for the presence of suspect ACM. The inspection consisted of noting observable materials (*i.e.*, materials that are readily accessible and visible without dismantling elements of the structure, such as carpet, wallboard, or ceiling panels) that may contain asbestos.

No structures were observed on the subject property, except for the small shed, which is portable. Therefore, ACM is not expected to be an issue at the subject property.

8.2 RADON

Radon is a naturally occurring radioactive gas formed by the decay of uranium in bedrock and soil. The potential adverse health effects associated with radon gas depend on various factors, such as the concentration of the gas and duration of exposure. The concentration of radon gas in a building depends on subsurface soil conditions, the integrity of the building's foundation, and the building's ventilation system.

Due to the relatively young geological age (less than five million years) of the southernmost islands of the Hawaiian archipelago, radon gas does not occur at elevated levels. Therefore, no further investigation of radon is recommended for the subject property.

8.3 LEAD-BASED PAINT

Lead-based paint (LBP) was commonly used for corrosion protection in the 1960s, and in prime, intermediate, and finish coats well into the 1970s. Regulations specifically addressing LBP include Housing and Urban Development (HUD) (1995) guidelines and the Consumer Product Safety Act (1977). These regulations define LBP as containing 0.5 percent lead by weight (5,000 ppm), and 0.06 percent lead by weight (600 ppm), respectively, for housing and consumer products. There is no industrial definition. There are specific testing methods for sampling and analyzing lead in paint.

No structures were observed on the subject property, except for the small shed, which is portable. Therefore, LBP is not a concern to the subject property.

8.4 WETLANDS

The subject property was inspected for the presence of sensitive ecological areas by noting environmental indicators (e.g., wetlands vegetation, floodplains) located on or immediately adjoining the subject property.

No sensitive ecological areas were observed on the subject property. According to the USGS 7.5-Minute Topographic Map for Hauula, Hawaii (1999), and the United States Fish and Wildlife Service (USFWS) National Wetland Map, there are no wetlands located on or near the subject property.

The Federal Emergency Management Agency Flood Insurance Rate Map (FEMA/FIRM) was reviewed to determine if the subject property is located in a flood hazard area. According to the map, the subject property is located within Zone X, which denotes areas outside the 500-year floodplain (FEMA Panel #15003C-0335F, revised September 30, 2004).

9.0 FINDINGS, OPINIONS, CONCLUSIONS, AND RECOMMENDATIONS

Bureau Veritas has performed a DRAFT Phase I ESA in conformance with the scope and limitations of ASTM E 1527-05 of the Proposed Hauula Fire Station Site, Located at Kamehameha Highway (TMK Numbers: [1] 5-4-018: Parcels 64 through 65), Hauula, Oahu, Hawaii 96818, the subject property. Any exceptions to, or deletions from, this practice are described in Section 1.2 of this report.

This assessment has revealed no evidence of *RECs*, as defined by ASTM, in connection with the property.

The following environmental conditions, which are not considered to be *RECs*, as defined by ASTM, were revealed during this assessment:

- Aerial photographs from 1939 through 1969 indicated that the subject property was formerly used for agricultural purposes. Past use of agricultural chemicals such as pesticides and herbicides may have the potential to impact the subject property. However, there is no evidence of storage, mixing, or excessive use of agricultural chemicals on the subject property. Moreover, according to Hawaii Revised Statutes (HRS) Chapter 128D Environmental Response Law, the presence of agricultural chemicals does not constitute a release of a hazardous substance. Section 128D-1 of the HRS, excludes "any release resulting from the legal application of a pesticide product registered under the Federal Insecticide, Fungicide, and Rodenticide Act."

  This finding is not considered a recognized environmental condition because there is no evidence of significant pesticide and/or herbicide releases on the subject property. In addition, according to HRS Chapter 128D, the presence of agricultural chemicals does not constitute a release. Because the planned development is construction of a fire station, no additional investigation is recommended. However, if the subject property is ever redeveloped for residential use, testing for agricultural chemicals is required by the State of Hawaii.

Certification of both Environmental Professionals signing below:

I declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined in §312.10 of 40 CFR 312. I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. I have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

This report prepared by:

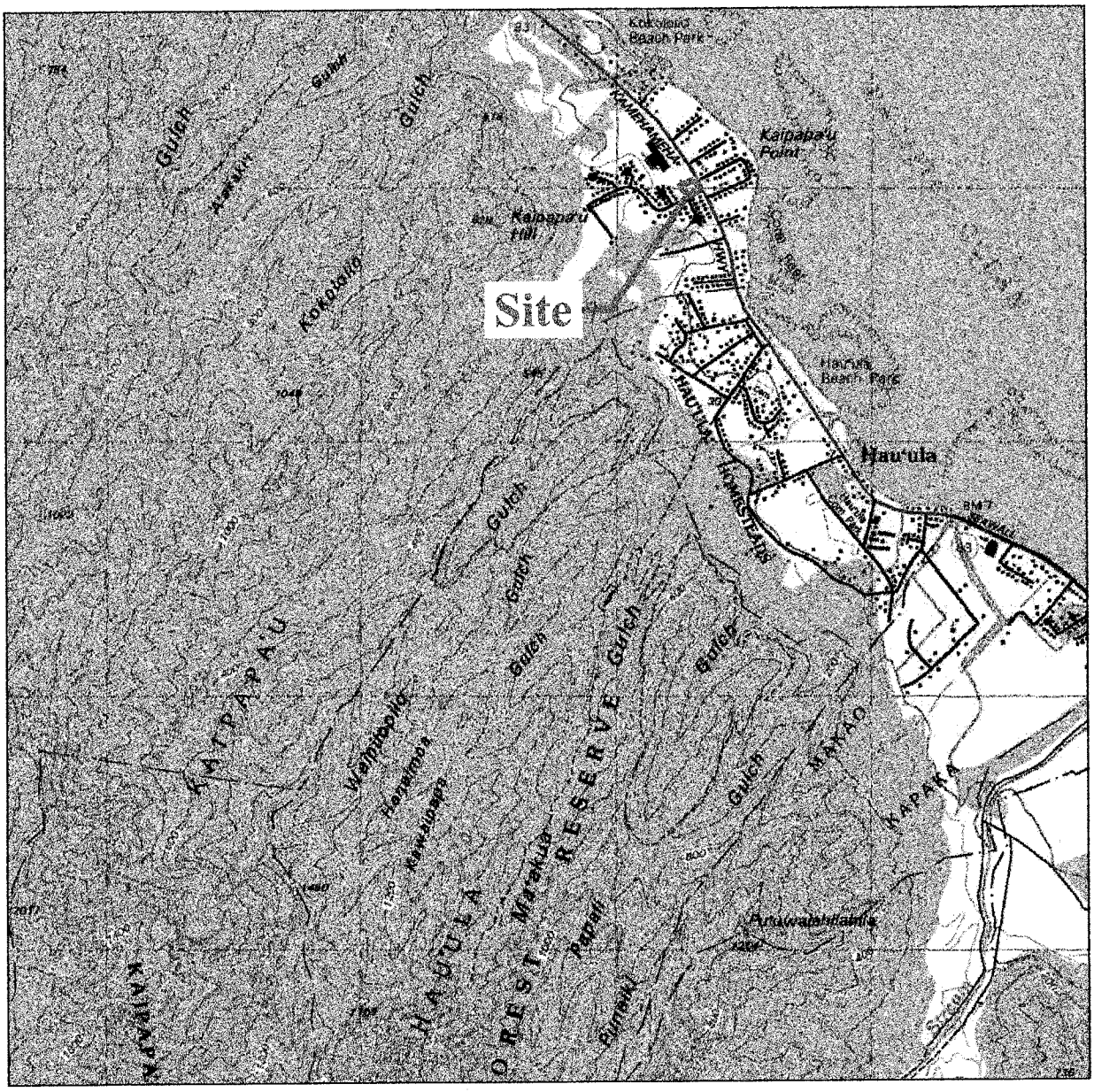
Tim Swartz
Senior Project Manager
Health, Safety, and Environmental Services

This report reviewed by:

Daniel P. Ford, R.G.
Vice President
Health, Safety, and Environmental Services

October 27, 2009
Project No. 17009-009146.00

FIGURES



SCALE 1: 24000

1 0 1 MILE

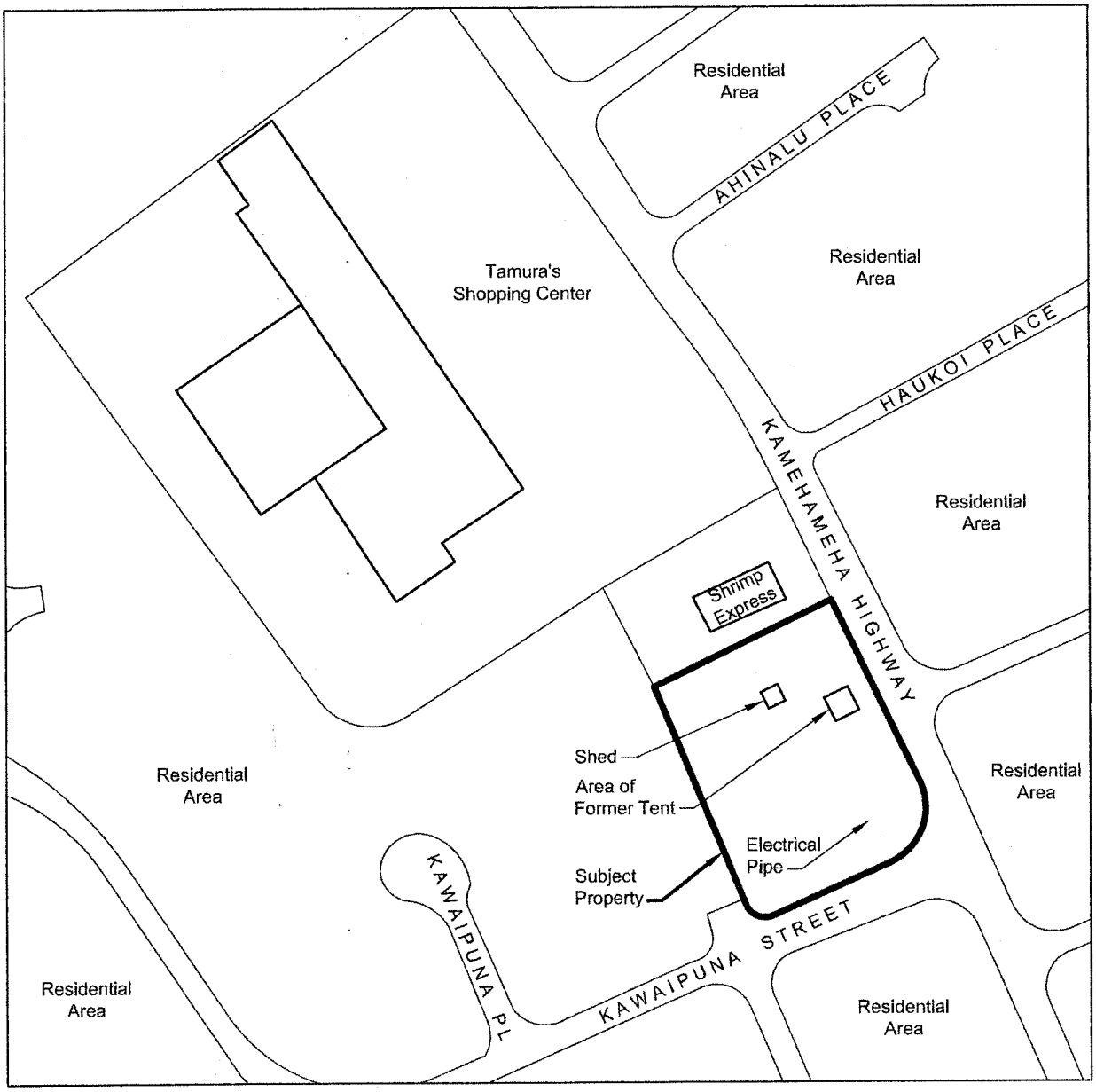
1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 .5 0 1 KILOMETER

N

Portion of 7.5-minute Series (Topographic) Maps
United States Department of Interior
United States Geological Survey
Hauula Quadrangle, City & County of Honolulu, Hawaii
1998

BUREAU VERITAS	Project No.: 17009-009146.00	Title: Site Location Map	FIGURE 1
	Date: 10/23/09	Location: Proposed Hauula Fire Station Site (TMK: [1] 5-4-018: Parcels 064 & 065) Hauula, Oahu, Hawaii	
	Revised By: DG		
	Checked By: MG	Client: Gerald Park Urban Planner	

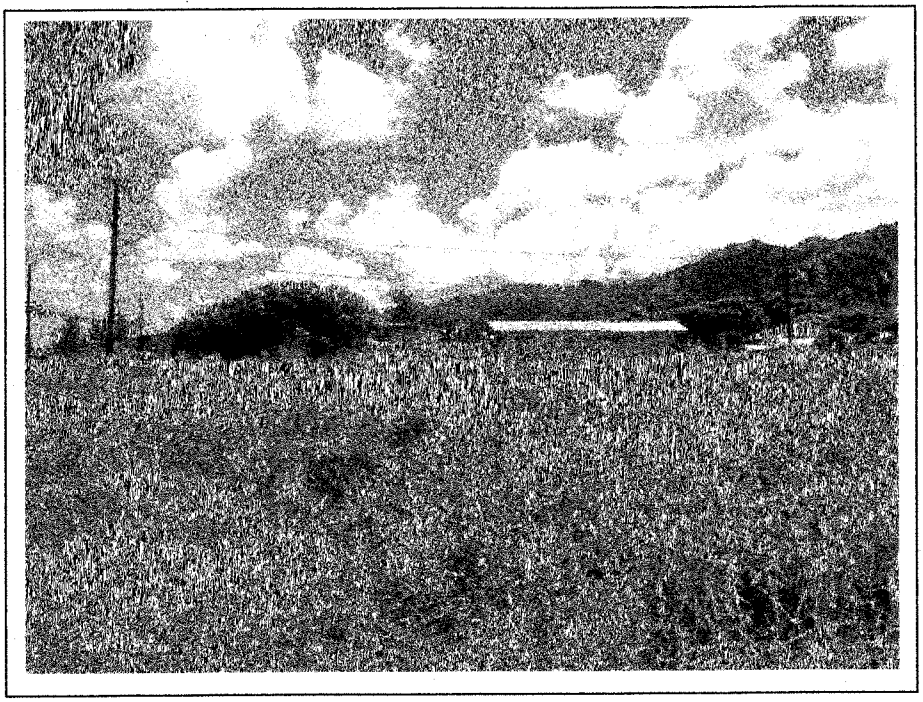


N

0 37.5' 75' 150' 300'

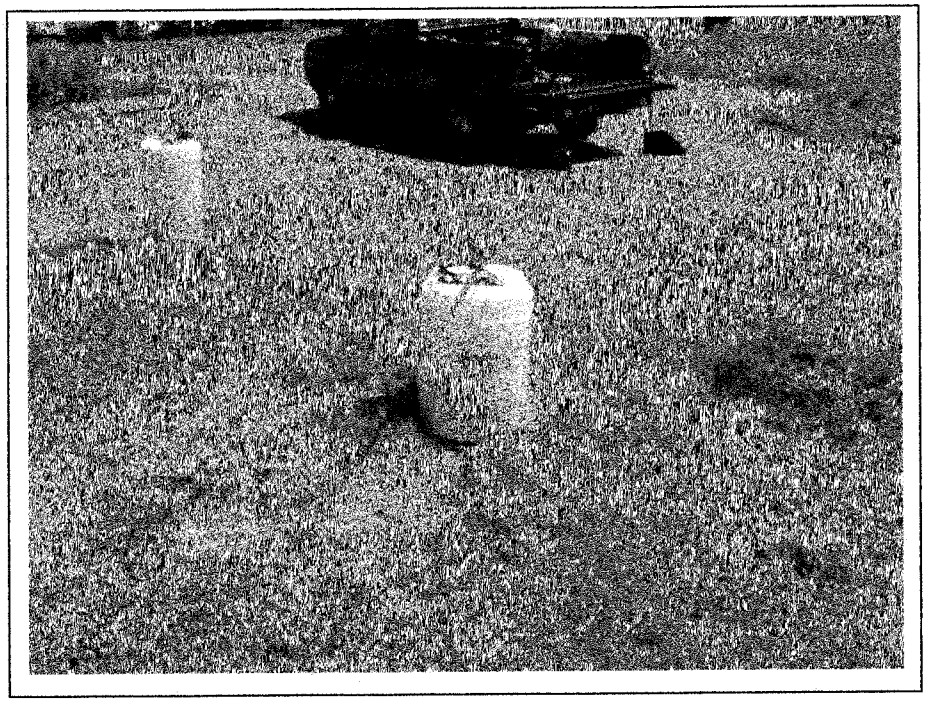
BUREAU VERITAS	Project No.: 17009-009146.00	Title: Site Vicinity Map	FIGURE 2
	Date: 10/23/09	Location: Proposed Hauula Fire Station Site (TMK: [1] 5-4-018: Parcels 064 & 065) Hauula, Oahu, Hawaii	
	Revised By: DG		
	Checked By: MG	Client: Gerald Park Urban Planner	

PHOTOGRAPHS

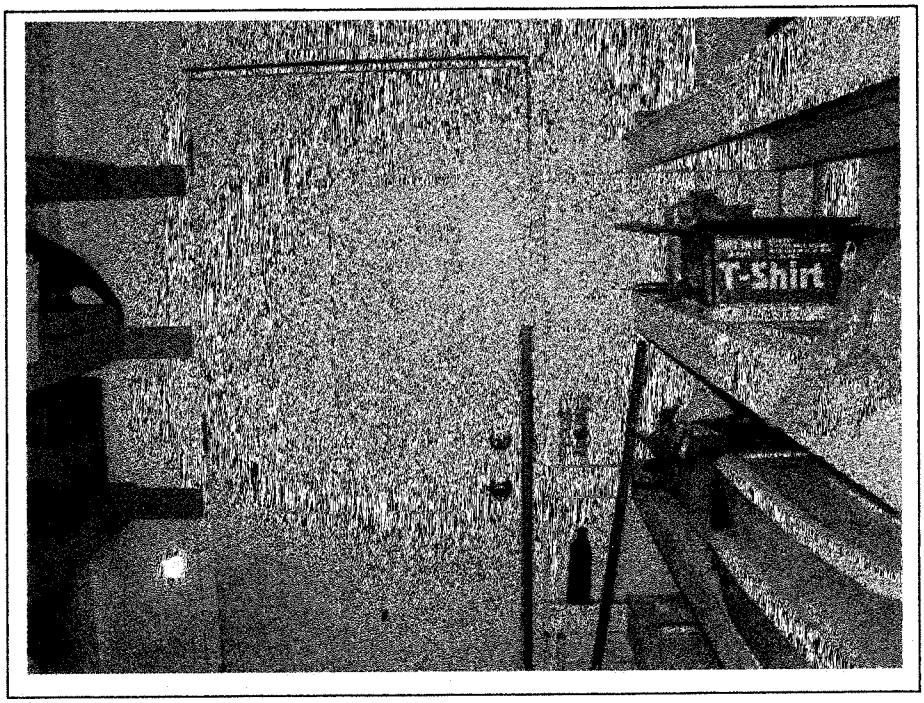


Project No. 17009-009146.00	**Description**	Overview of southern portion of the subject property, looking southwest	**Photo 1**
	Site Name	Proposed Hauula Fire Station, Hauula, Oahu, Hawaii	**Photo Date** October 16, 2009
	Client	Gerald Park Urban Planner	

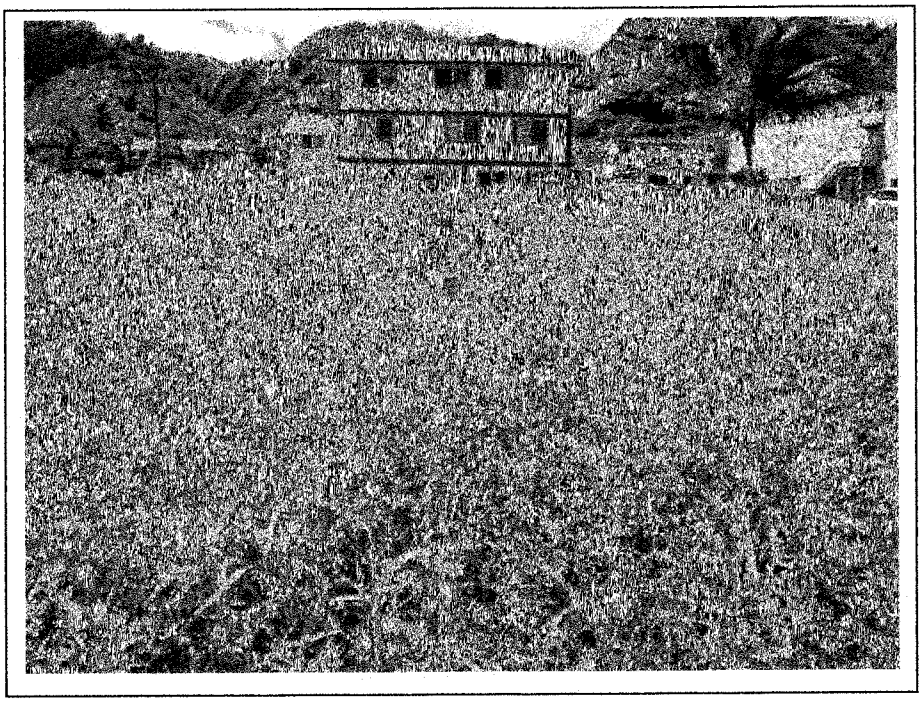
Project No. 17009-009146.00	**Description**	Overview of northern portion of the subject property, looking northwest	**Photo 2**
	Site Name	Proposed Hauula Fire Station, Hauula, Oahu, Hawaii	**Photo Date** October 16, 2009
	Client	Gerald Park Urban Planner	



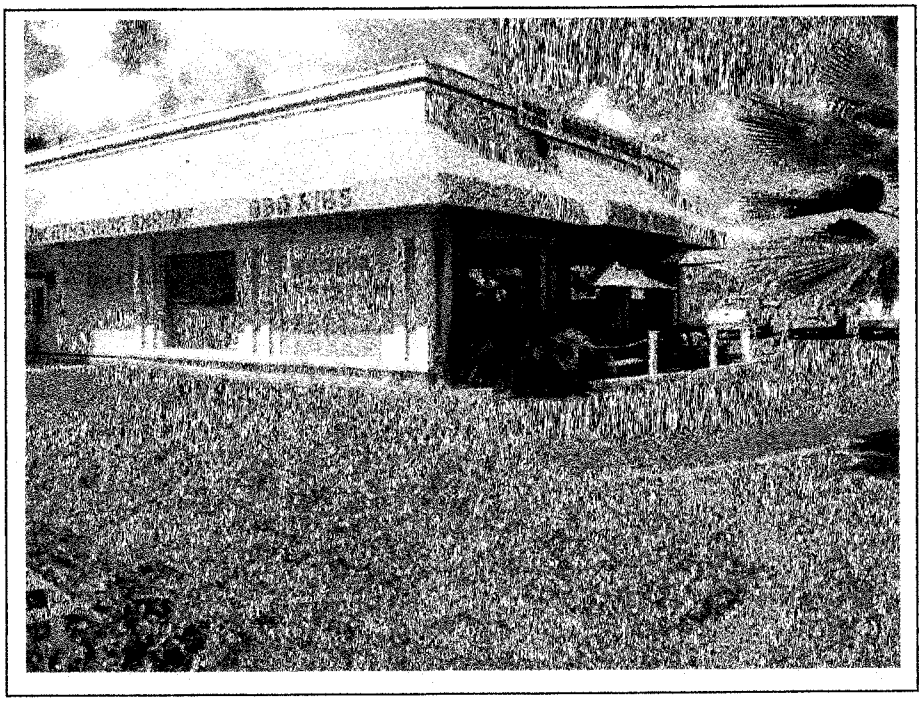
Project No. 17009-009146.00			
	Description	View of containers used to stabilize a former tent, looking southeast	**Photo 3**
	Site Name	Proposed Hauula Fire Station, Hauula, Oahu, Hawaii	**Photo Date** October 16, 2009
	Client	Gerald Park Urban Planner	



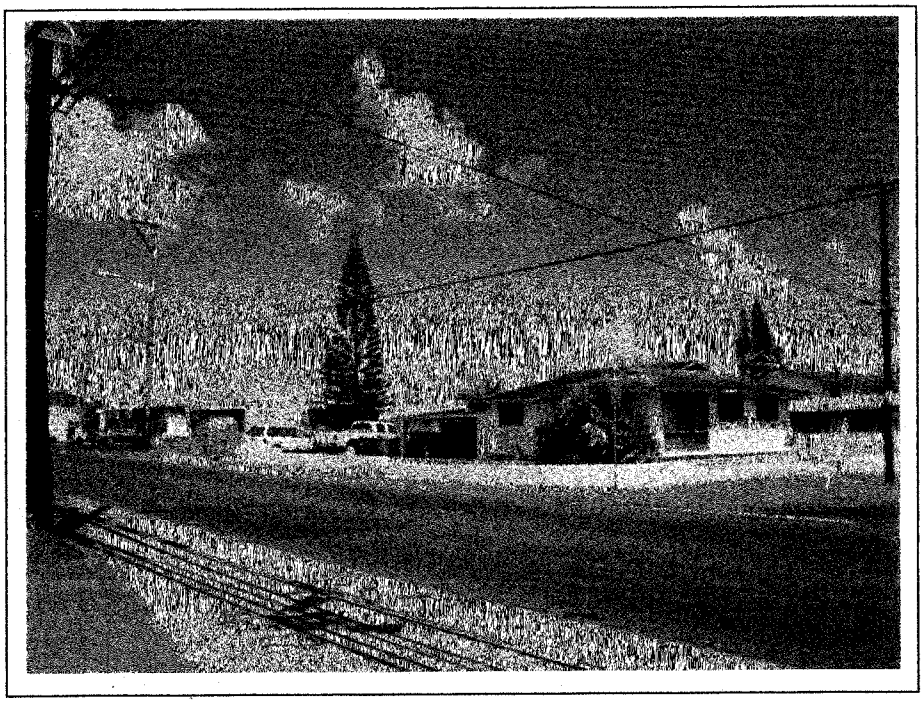
Project No. 17009-009146.00			
	Description	View of interior of shed located on the subject property (photo taken through window)	**Photo 4**
	Site Name	Proposed Hauula Fire Station, Hauula, Oahu, Hawaii	**Photo Date** October 16, 2009
	Client	Gerald Park Urban Planner	



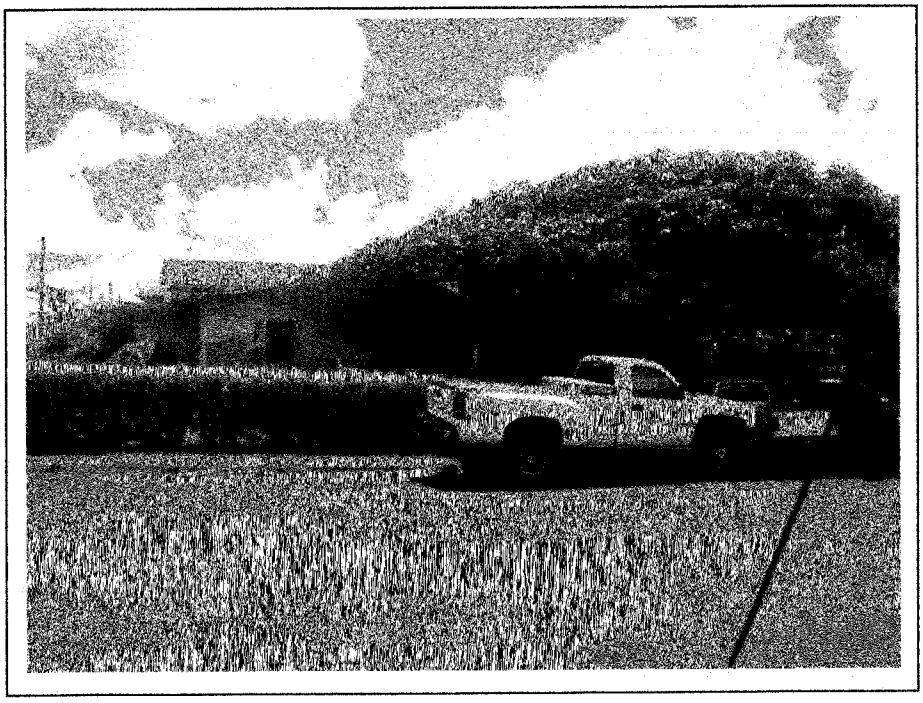
Project No. 17009-009146.00	Description	View of electrical pipe located on the southern portion of the subject property, looking southwest	Photo 5
	Site Name	Proposed Hauula Fire Station, Hauula, Oahu, Hawaii	Photo Date October 16, 2009
	Client	Gerald Park Urban Planner	



Project No. 17009-009146.00	Description	View of Shrimp Express restaurant located adjacent to the north of the subject property, looking northwest	Photo 6
	Site Name	Proposed Hauula Fire Station, Hauula, Oahu, Hawaii	Photo Date October 16, 2009
	Client	Gerald Park Urban Planner	



Project No. 17009-009146.00	Description	View of Kamehameha Highway and residential properties located adjacent to the east of the subject property, looking northeast	Photo 7
	Site Name	Proposed Hauula Fire Station, Hauula, Oahu, Hawaii	Photo Date October 16, 2009
	Client	Gerald Park Urban Planner	



Project No. 17009-009146.00	Description	View of residential homes located adjacent to the south of the subject property, looking southwest	Photo 8
	Site Name	Proposed Hauula Fire Station, Hauula, Oahu, Hawaii	Photo Date October 16, 2009
	Client	Gerald Park Urban Planner	

APPENDIX A

RESUMES OF ENVIRONMENTAL PROFESSIONALS

Daniel P. Ford, RG

Vice President

MBA., With Distinction, 1999
Hawaii Pacific University, Honolulu, Hawaii

BA, Geology, 1985
University of California, Berkeley, California

Registered Professional Geologist (R.G.), State of Kentucky, No. 0864, 1993

Mr. Daniel P. Ford has over 24 years of environmental consulting experience. He has assisted clients on regulatory strategy and has interfaced with U.S. Environmental Protection Agency (EPA) and state agencies on hundreds of projects. He is experienced in preliminary environmental site assessments (ESAs), subsurface investigations for soil and groundwater contamination, water quality studies, National Pollutant Discharge Elimination System (NPDES) sampling programs, Spill Prevention Control and Countermeasure (SPCC) Plans, hydrogeologic studies, site characterizations, risk assessments, hazardous waste management, remedial investigation and feasibility studies, and remediation management. Mr. Ford has managed complex projects for private landowners, financial institutions, governmental agencies, and industrial clients.

Mr. Ford is also responsible for Bureau Veritas' operations in Honolulu, Hawaii and the Pacific Region. He supervises technical and administrative staff, prepares budgets and proposals, manages projects, conducts technical reviews of project submittals, and provides regulatory liaison assistance to clients. Mr. Ford's project experience extends throughout the Hawaiian Islands and the Pacific Basin, Australia, the Philippines, Korea, Japan, Guam, Saipan, the U.S. Mainland, and Central America.

Tim J. Swartz

Senior Project Manager, Environmental Services

Associate of Science Degree (AS) in Occupational and Environmental Safety Management
Honolulu Community College, Honolulu, Hawaii

Studies in Psychology and Biology
University of Kansas, Lawrence, Kansas

AHERA Building Inspector and Management Planner

AHERA Contractor/Supervisor

NIOSH 582 Phase Contrast Microscopy/Asbestos Identification/AAR Participant

SCITEC Radiation Safety Training

OSHA 40-Hour Hazardous Waste, Health, and Safety Accreditation/Annual Update

Lead-Based Paint Inspector

Lead-Based Paint Abatement Worker Awareness Training Course

Tim Swartz has over 18 years of experience in the environmental and industrial hygiene fields. His background includes Phase I environmental site assessments and soil and groundwater sampling, management of asbestos and lead paint assessment surveys, air monitoring and project oversight for asbestos and lead paint abatement projects, and various air quality surveys. Mr. Swartz has extensive project management experience and is familiar with standards and requirements of the American Society for Testing and Materials (ASTM) for Phase I environmental site assessments (ESAs), and Asbestos Hazard Emergency Response Act (AHERA). He is also familiar with Environmental Protection Agency (EPA) regulations for asbestos surveys and air monitoring projects; EPA and Department of Housing and Urban Development (HUD) guidelines for lead-based paint surveys and abatement; and Occupational Safety and Health Administration (OSHA) regulations for projects involving worker health and safety.

APPENDIX B

LIST OF SOURCES/REFERENCES

LIST OF SOURCES/REFERENCES

SOURCES

Agency and division/source:	Gerald Park Urban Planner
Name/title of representative:	Mr. Gerald Park
Agency Telephone Number:	(808) 596-7484

Agency and division/source:	Reynolds Recycling
Name/title of representative:	Mr. Jack Hobbs / Regional Manager
Agency Telephone Number:	(808) 487-2802

REFERENCES

Physical Setting

- *Aquifer Identification and Classification for Oahu: Groundwater Protection Strategy for Hawaii. Technical Report No. 179*, dated February 1990, prepared by Mink, J.F. and L.S. Lau
- *Federal Emergency Management Agency (FEMA), Flood Insurance Rate Map (FIRM) Map No.* Panel #15003C-0335F, revised September 30, 2004, prepared by FEMA
- *Ground Water Well Index* database, dated January 9, 2006, prepared by the State of Hawaii, Department of Land and Natural Resources, Commission on Water Resource Management
- *Soil Survey of Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii,* dated August 1972, prepared by Foote, Donald E. et al. US Department of Agriculture, Soil Conservation Service, in cooperation with the University of Hawaii Agricultural Experiment Station

State and County Agencies

- *The EDR Radius Map Report*, dated October 15, 2009, prepared by Environmental Data Resources, Inc.
- *Hazard Evaluation & Emergency Response (HEER) Office Database*, dated April 4, 2008, prepared by the State of Hawaii, Department of Health, HEER Office
- Ownership records and Tax Map Key maps, prepared by the City and County of Honolulu Real Property Tax Assessment Office
- *Underground Storage Tank (UST) Database* and *Leaking Underground Storage Tank (LUST) Database*, dated 2006, prepared by State of Hawaii, Department of Health, Solid and Hazardous Waste Branch

LIST OF SOURCES/REFERENCES
(Continued)

Aerial Photographs

Source: Hawaii State Archives, Kekauluohi Building, located on the Iolani Palace grounds in Honolulu, Hawaii.

Date:	1939	Aerial Photograph No.	M 48.219
Date:	1954	Aerial Photograph No.	DACE 5-35
Date:	1965	Aerial Photograph No.	EKM 3-CC-76
Date:	1969	Aerial Photograph No.	R.M. Towill 5187-1
Date:	2004	Aerial Photograph Source	Google Earth©

Topographic Maps

Source: Hawaii State Archives, Kekauluohi Building, located on the Iolani Palace grounds in Honolulu, Hawaii and Bureau Veritas' private collection.

USGS Quadrangle: Hauula, Hawaii **Scale: 1:24,000**

Year(s): 1966, 1983, 1992

APPENDIX C

REGULATORY DATABASE REPORT

NOTE:

THE APPENDIX C REGULATORY DATA BASE REPORT HAS NOT BEEN REPRODUCED FOR THIS ENVIRONMENTAL ASSESSMENT. PERSONS DESIRING A COPY OF THE REGULATORY DATABASE CAN CONTACT GERALD PARK AT 625-9626 TO REQUEST AN ELECTRONIC FILE WITH THE INFORMATION.

APPENDIX C

CORRESPONDENCE AND AGREEMENTS

1. Correspondence to US. Department of Housing and Urban Development, Hawaii Field Office from Administrator, Office of Planning, Department of Business, Economic Development & Tourism, June 24, 2004.

2. Memorandum of Understanding between the U.S. Department of Housing and Urban Development and the Environmental Protection Agency, Region IX.

LINDA LINGLE
GOVERNOR
THEODORE E. LIU
DIRECTOR
STEVE BRETSCHNEIDER
DEPUTY DIRECTOR
MARY LOU KOBAYASHI
ADMINISTRATOR
OFFICE OF PLANNING

DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM

OFFICE OF PLANNING
235 South Beretania Street, 6th Floor, Honolulu, Hawaii 96813
Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96804

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

Ref. No. P-10520

June 24, 2004

Mr. Gordan Y. Furutani, Field Office Director
U.S. Department of Housing and Urban Development
Hawaii State Field Office
500 Ala Moana Boulevard, Suite 3A
Honolulu, Hawaii 96813

Dear Mr. Furutani:

Subject: Hawaii Coastal Zone Management (CZM) Program Federal Consistency Requirements for U.S. Department of Housing and Urban Development (HUD) Grant Programs

We have recently revised the Hawaii CZM Program list of federal assistance programs that require CZM federal consistency review by our office. We no longer review any HUD assistance programs, including Community Development Block Grants, and housing programs such as the Public Housing Capital Fund. Applicants for HUD assistance are no longer required to obtain CZM federal consistency approval for HUD assisted activities. Other CZM regulations such as the Special Management Area and Shoreline Setback provisions which are administered by the Counties, are still valid and may apply to HUD assisted projects. Each County Planning Department should be consulted for the applicability of Special Management Area and Shoreline Setback Area requirements. We suggest that the environmental checklist that applicants for HUD assistance must complete be modified to reflect the change in CZM requirements.

Thank you for your cooperation in ensuring compliance with Hawaii's CZM Program. If you have any questions, please contact John Nakagawa at 587-2878 or Debra Tom at 587-2840, of our CZM Program.

Sincerely,

Mary Lou Kobayashi

Mary Lou Kobayashi
Administrator

CITY AND COUNTY OF HONOLULU

HONOLULU, HAWAII 96813

FRANK F. FASI
MAYOR

PAUL T. LEONG
CHIEF BUDGET OFFICER

GEMINIANO O. ARRE, JR.
DEPUTY CHIEF BUDGET OFFICER

August 15, 1991

MEMORANDUM

TO: PARTICIPATING AGENCIES

FROM: PAUL T. LEONG, CHIEF BUDGET OFFICER

SUBJECT: MEMORANDUM OF UNDERSTANDING (MOU) BETWEEN THE U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT (HUD) AND THE ENVIRONMENTAL PROTECTION (EPA), REGION IX, SAN FRANCISCO, CALIFORNIA (EFFECTIVE 4/30/90) SAFE DRINKING WATER ACT OF 1974 (PUBLIC LAW 93-523)

Section 1424 (e) of the Safe Water Drinking Act of 1974 (Act) requires EPA consultation for all federally assisted programs and activities to be located in a EPA designated Sole Source Aquifer area. To facilitate and expedite such compliance, EPA and HUD have entered into the subject MOU (Attachment) which identifies the conditions (page 2) under which an activity must be referred to EPA for comment as part of the project's environmental review process.

Your attention is directed to the MOU's Review Procedure (page 4) which provides a 30 calendar day EPA comment and review period.

For all project activities which do not require EPA review as set forth in the MOU, the project's environmental review records (ERR) must contain the following statement to document compliance with the said Act:

> "This project has been reviewed and found to be consistent with the Memorandum of Understanding between HUD and EPA (effective 4/30/90) pursuant to Section 1424 (e) of the Safe Water Drinking Act of 1974."

HUD has determined that a grantee's failure to appropriately consult with EPA as set forth in the MOU will constitute a finding of non-compliance with the said Act.

Compliance with the MOU is effective immediately.

Should you have any question regarding this matter, please contact Jean Tanji (X5676) or Stephanie Laws (X5062).

PTL:jkk

Attachment

Distribution: Board of Water Supply, Building, Parks and Recreation, Public Works and, Housing and Community

Memorandum of Understanding
Between
The Department of Housing and Urban Development
Region IX, San Francisco, CA, and
The Environmental Protection Agency, Region IX, San Francisco, CA

I. INTRODUCTION and PURPOSE

This Memorandum of Understanding (MOU) is a record of agreement between the Region IX Offices of the U.S. Environmental Protection Agency (EPA) and the Department of Housing and Urban Development (HUD) concerning EPA review of projects receiving Federal financial assistance and that may affect Region IX sole source aquifers designated pursuant to Section 1424(e) of the Safe Drinking Water Act (PL 93-523). This MOU outlines the steps that will be followed by HUD in determining which projects should be subject to review, and the procedures that will be followed by both agencies in meeting the requirements of Section 1424(e).

Pursuant to Section 1424(e), EPA has designated six (6) aquifers in Region IX (others may be added from time to time) which are the sole or principal source of drinking water for all municipal and private water systems in that watershed, and that if contaminated, would create a significant hazard to public health.

Therefore, per this MOU, no HUD (or HUD grant recipient) commitment for Federal financial assistance and/or Federal insurance may be entered into for any project which EPA predetermines may contaminate the aquifer through its streamflow source and recharge zones so as to create a significant hazard to public health.

The purpose of this MOU is to ensure that each project proposed within an EPA designated sole source aquifer area (see attached maps) that is to receive HUD mortgage insurance or other financial assistance, is designed and constructed in a manner that will not cause contamination of any EPA designated sole source aquifer nor cause a public health hazard in connection with such designated sole source aquifers. In order to achieve this purpose, HUD or HUD Community Development Block Grant recipients (See Section III) will notify EPA of all applications for projects listed in II-A below at the earliest possible date. If an Environmental Impact Statement (EIS) pursuant to the National Environmental Policy Act (NEPA) is prepared for any project in the sole source aquifer area, HUD and EPA will coordinate so that the Draft EIS for the project contains EPA's 1424(e) comments.

II. PROJECT IDENTIFICATION

A. The following projects will be referred to EPA for review/comments under Section 1424(e):

Projects that are located within an EPA designated sole source aquifer area for which HUD mortgage insurance or other assistance is requested, and which involve:

1. Agricultural activities including but not limited to land related operations employed in the production, raising, processing and marketing of crops or livestock.

2. Construction of (or addition to) residential, commercial or industrial projects, or public facilities, or land developments, whose sanitation facilities will consist of individual disposal systems (cesspools, septic tanks with leach fields or seepage pits), or community sewerage systems (owned either privately or by a homeowners association), or a proposed (i.e. not yet in place) publicly owned piped sanitary sewer system, the discharge from which will terminate within the watershed of the aquifer.

3. The preparation of an EIS.

4. Existing or proposed industrial projects which manufacture, store, transport, or dispose of toxic chemicals or radioactive materials.

5. Acquisition of a site intended to be used for a sanitary landfill and its operation, or closure of a sanitary landfill.

6. Construction or abandonment of a water well.

7. Facilities which dispose of their waste water in either dry wells, retention ponds, or by other methods not employing a treatment plant.

B. The EPA and HUD mutually agree that activities listed below would not affect water quality in Region IX sole source aquifers, and need not be referred to EPA for evaluation prior to HUD approval:

1. Construction of (or addition to) residential, commercial or industrial projects, or public facilities, or land developments, which will be served by an existing and publicly owned and operated sewerage system and treatment plant which is not subject to a locally or EPA imposed moratorium, except for any development covered in A above.

2. Acquisition, disposition, rehabilitation, reconstruction or modernization of existing projects, buildings, and public facilities.

3. Financial assistance (loans or grants) including refinancing, or provision of mortgage insurance on existing projects, properties, buildings or developments.

4. Public services, preparation of environmental studies or project plans, planning activities, technical assistance and training, payment/repayment or reimbursement of loans or interest.

5. Emergency activities for mitigating an imminent threat to health and safety.

III. COMMUNITY DEVELOPMENT BLOCK GRANT APPLICATIONS

HUD regulations, at 24 CFR Part 58, implement the requirements of section 104(g) of the Housing and Community Development Act of 1974, as amended, and apply to activities and projects funded with HUD assistance, under all Community Development Block Grant (CDBG) and other grant programs. This includes entitlement grants, non-entitlement (i.e. small cities) grants administered by HUD or by States, and grants to Indian tribes.

Pursuant to section 104(g), a grant recipient's assumption of the responsibility for environmental review and decision making, includes such responsibilities under the other provisions of law and authorities specified at 58.5.

Before committing any CDBG or other grant funds (other than for activities exempt under 58.34), the recipient must certify that it has complied with the requirements and obligations which would apply to HUD under the other laws and authorities, including Section 1424(e) of the Safe drinking Water Act of 1974, as amended.

The following procedures shall apply to CDBG applications in addition to those specified in Section IV below:

A. HUD will inform all CDBG recipients, and States which administer the Small Cities Block Grant program, that a 1424(e) review will be required for all projects listed in II-A above.

B. If the recipient submits a Request for Release of Funds (RROF) and certification for a project listed in II-A above, and which EPA has determined will contaminate the sole source aquifer so as to create a hazard to public health and has so advised the recipient in writing, the EPA shall submit an objection to the RROF to HUD (or to the State in the case of a state administered Small Cities Block Grant program) within 15 days from the time EPA receives the Notice of Intent to RROF. In such cases, HUD (or the State) will not release the funds until the matter has been resolved between EPA and the recipient, and HUD (or the State) has been so advised in writing.

C. The environmental requirements for multi-year projects must encompass the entire multi-year scope of activities and be included in the RROF and certification.

IV. REVIEW PROCEDURE

A. Upon receipt of applications by HUD, or prior to submitting a RROF and certification to HUD (or to the State) by a recipient, for projects meeting the criteria in II-A above, the HUD office will send copies of the application, or the recipient will send a brief description of the proposed project (see 2 below), to EPA for its review.

1. EPA shall notify the HUD Office (or the recipient) in writing within 10 calendar days to request additional information it may need to conduct its review.

2. Information needed by EPA normally includes the following and may be submitted concurrently with Item IV-A above:

   (a) Location map identifying project location relative to the sole source aquifer area, and topographic map.

   (b) Description and objective of project activity, including project design, materials to be used, assessment of potential impacts on ground water quality and quantity, and alteration of natural topography and vegetation.

   (c) Names/addresses/telephone numbers of any City, County, State or Federal agencies that are involved.

3. EPA shall have 30 calendar days to review and submit its comments to the HUD Office, or to the recipient. The 30 day period will begin when EPA has received the additional data it may have requested.

4. EPA may request and HUD (or the recipient) may grant additional time for review and comment in exceptional cases. Requests and approvals shall be in writing.

5. HUD (or the recipient) may approve the project if no EPA approval has been received within the normal 30 days or longer agreed-to period.

6. EPA review recommendations shall be sent directly to the HUD Office, or to the recipient, as applicable.

7. When the project reviewed was submitted to EPA by a HUD Field Office, a copy of EPA comments shall also be submitted to:
   HUD Regional Environmental Officer
   San Francisco, CA 94102

B. Each Draft EIS prepared by HUD or by a recipient, for projects within a sole source aquifer area, shall reflect EPA comments.

C. Materials submitted to EPA by HUD or recipients under this Memorandum of Understanding will be addressed to the attention of the Office of Ground Water (W-1-G), EPA Region IX, San Francisco, CA 94105.

D. Local Area Certification (HUD Handbook 4135.1 Rev 2) - If all or part of the geographical boundaries of a certifiable or conditionally certifiable community are within a sole source aquifer area, and residential land developments will meet criteria II.A. 2 above, the HUD office may consult with EPA as part of the certification review process.

E. HUD and EPA will each assign liaison personnel to serve as contact points and to be responsible for maintaining communications as to procedures and activities of their respective agency in Federal Region IX. The liaison personnel are:

HUD: Regional Environmental Officer
San Francisco, CA 94102

EPA: Director, Office of Groundwater,
San Francisco, CA 94105

The liaison personnel, accompanied by appropriate staff, will hold meetings as needed to discuss matters of concern related to Region IX aquifers and this Memorandum of Understanding.

F. The Memorandum of Understanding is subject to revision upon agreement of both parties.

U.S. Department of Housing and Urban Development

Regional Administrator-Regional Housing Commissioner

Date: 1/8/90

U.S. Environmental Protection Agency

Regional Administrator

Date: 4-30-90

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
215 Fremont Street
San Francisco, Ca. 94105

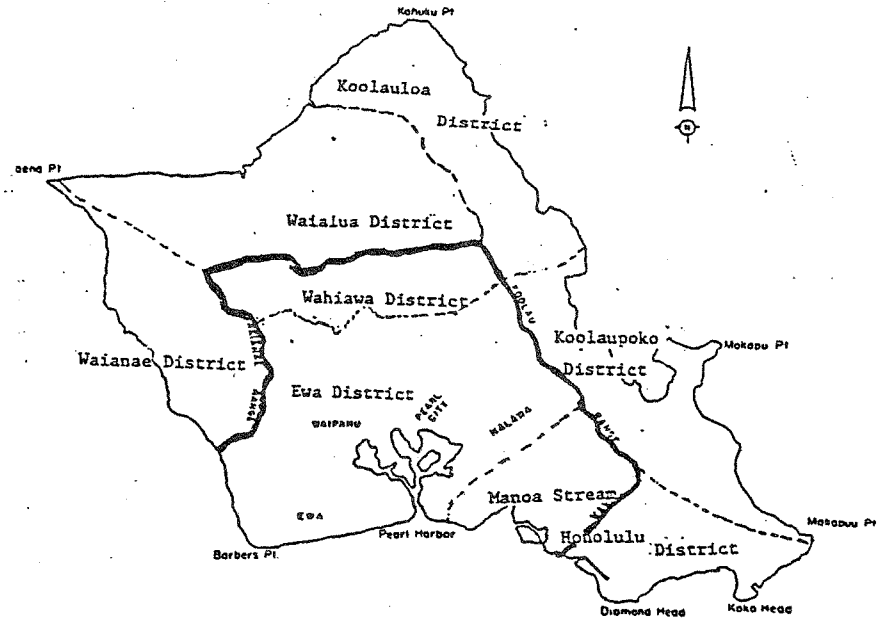
8/14/91
New EPA address
75 Hawthorne Street,
San Francisco, CA
94105

AQUIFER: Southern Oahu Basal Aquifer

DATE DESIGNATED: 11/30/87

DESIGNATED AREA: In the State of Hawaii, Island of Oahu, entirely contained within Honolulu County. Including portions of the City of Honolulu.

Specifically, all of the Wahiawa district, all of the Ewa district, and that portion of the Honolulu district west (Ewa) of Manoa stream.



DESIGNATED SOLE SOURCE AQUIFER
Oahu, HI