

DEPARTMENT OF ENVIRONMENTAL SERVICES  
**CITY AND COUNTY OF HONOLULU**

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IN REPLY REFER TO:  
RE 99-084

September 13, 1999

OFFICE OF ENVIRONMENTAL  
QUALITY CONTROL

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

Dear Ms. Salmonson:

Subject: Finding of No Significant Impact (FONSI) for  
Keehi Corporation Yard, Kalihi-Kai, Honolulu, Hawaii

The Department of Environmental Services has reviewed the comments received during the 30-day public comment period which began on April 23, 1999. The agency has determined that this project will not have significant environmental effects and has issued a FONSI. Please publish this notice in the September 23, 1999, Environmental Notice.

We have enclosed a completed OEQC Publication Form and four copies of the final EA. Please call Mr. James Chun of the Refuse Division at 527-6238 if you have any questions.

Sincerely,

  
KENNETH E. SPRAGUE  
Director

Enclosure

OCT 8 1999

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'99 SEP 17 11:35 FINAL ENVIRONMENTAL ASSESSMENT

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OFFICE OF ENVIRONMENTAL QUALITY CONTROL **KEEHI CORPORATION YARD\***  
Kalihi-Kai, Honolulu, Hawaii

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**Proposing Agency:**

City and County of Honolulu  
Department of Environmental Services  
Refuse Division  
650 South King Street  
Honolulu, Hawaii 96813

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August 1999

FINAL ENVIRONMENTAL ASSESSMENT

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***KEEHI CORPORATION YARD***

Kalihi-Kai, Honolulu, Hawaii

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Prepared in Partial Fulfillment of the Requirements  
of Chapter 343, Hawaii Revised Statutes, and  
Chapter 200, Title 11, Administrative Rules,  
Department of Health, State of Hawaii

Proposing Agency:

City and County of Honolulu  
Department of Environmental Services  
Refuse Division  
650 South King Street  
Honolulu, Hawaii 96813

Prepared By

Gerald Park Urban Planner  
1400 Rycroft Street, Suite 876  
Honolulu, Hawaii 96814

August 1999

## PROJECT PROFILE

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**Project:** Keehi Corporation Yard

**Proposing Agency:** Department of Environmental Services  
Refuse Division  
City and County of Honolulu  
650 South King Street  
Honolulu, Hawaii 96813

**Approving Agency:** Department of Environmental Services  
City and County of Honolulu  
650 South King Street  
Honolulu, Hawaii 96813

**Tax Map Key:** Keehi Interchange at Middle Street  
**Land Area:** Approximately 5 acres  
**Land Owner:** State of Hawaii

**Existing Use:** Storage Area, Truck Parking  
**State Land Use Designation:** Urban  
**General Plan:** Primary Urban Center  
**Development Plan Area:** Primary Urban Center  
**Land Use Map:** No Designation  
**Public Facilities Map:** No Symbol (Pending City Council Approval)  
**Zoning:** R-5 Residential

**Special Management Area:** Outside Special Management Area

**Need for Assessment:** Use of County Funds  
Use of State Lands

**Contact Person:** James Chun, Project Manager  
Department of Environmental Services  
Refuse Division, 6<sup>th</sup> Floor  
City and County of Honolulu  
650 South King Street  
Honolulu, Hawaii 96813

Telephone: 527-6238

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## SECTION 1

## DESCRIPTION OF THE PROPOSED ACTION

The Refuse Division, Department of Environmental Services, City and County of Honolulu, proposes to relocate its administrative and refuse collection operations from the Honolulu Corporation Yard to a new corporation yard to be constructed in Kalihi-Kai, Honolulu, Hawaii. The Keehi Corporation Yard is proposed to be established on land under elevated sections of the H-1 Viaduct. The project site is bounded by the Keehi Transfer Station Access Road to the east and north, Kamehameha Highway to the west, and Middle Street to the south. The property is part of the Keehi Interchange at Middle Street encompassing an area of approximately 5 acres. A Location Map is shown in Exhibit 1-1.

### A. Background

The City and County of Honolulu's ("City") primary fleet maintenance and trade shop facilities are housed at the Honolulu Corporation Yard in the Kewalo Basin area of Honolulu. Constructed in the 1940s, the Corporation Yard occupies about 15.8 acres of State owned land. The City has received notice from the State of Hawaii to vacate the Kewalo Basin area to make way for State plans to redevelop the Kakaako waterfront area.

The City plans to relocate all operations conducted at the Honolulu Corporation Yard to other areas of Oahu. At this time, the City proposes relocating:

- The Department of Facility Maintenance Automotive Equipment Services and Road Maintenance to the proposed Halawa Corporation Yard in Aiea;
- The Department of Design and Construction Engineering-Survey and Material Testing Lab to the proposed Halawa Corporation Yard in Aiea;
- The Department of Transportation Services Street Light, Electric and Traffic Sign Maintenance Service and Warehousing, Traffic Signal Maintenance, and Meters and Parking operations to the proposed Manana Corporation Yard in Pearl City;
- The Board of Water Supply Primary Maintenance Facility to their corporation yard at Manana;
- The Department of Environmental Services Collection System Maintenance Division to the Sand Island Wastewater Treatment Plant; and
- The Department of Environmental Services Refuse Division to the proposed Keehi Corporation Yard.

Relocating the above operations to the proposed Keehi, Halawa, and Manana Corporation Yards will allow the City to vacate State owned lands, permit the State to proceed with plans to redevelop the Honolulu waterfront, and provide the City with modern facilities to improve operational efficiency and effectiveness.

### B. Technical Characteristics

The Refuse Division ("Division") proposes to construct the proposed Keehi Corporation Yard on approximately 5 acres of land under elevated sections of the H-1 Viaduct adjacent to Middle Street. This site was selected because 1) it provides a location within the Honolulu Collection District that is accessible to major thoroughfares, such as King Street, the H-1 Freeway, and Dillingham Boulevard; 2) it is adjacent to the City's Keehi Transfer Station, about 0.5 mile to the northwest, where refuse vehicles tip their daily loads; and 3) land under this section of the freeway is unimproved and has marginal utility for other development.

For the reasons presented above and to provide safe, efficient waste collection and disposal services pursuant to general plan policies, the proposed Keehi Corporation Yard will function as the operations base for the Honolulu Collection District ("District"). The Keehi Corporation Yard will accommodate Division administrative activities and fleet operations. All refuse vehicles serving the District will be parked at the yard. In support of the principal use, the Division plans to construct an office building, vehicle maintenance shop, employee lockers and showers, and employee parking.

Approximately 65 City vehicles will be garaged at the Keehi site as indicated below.

<u>Number</u>	<u>Vehicle Type</u>
17	20-cy end loaders
6	13-cy lane trucks
22	Automated collection trucks
3	Front end loaders
3	Bulky item trucks
2	Stake trucks
1	Flat bed truck
12	Pick-up trucks
1	Station Wagon

The preliminary site plan depicts collection vehicles parking along Keehi Transfer Station Access Road and Kamehameha Highway between pillars supporting the overhead highway ramps and in the middle of the site.

The Division proposes to construct three buildings on the site. A vehicle maintenance shop operated by the Automotive Equipment Services will be located in a single-story structure of approximately 5,000 square feet. This building will house a 4-bay vehicle repair shop and store room for tools and supplies. An office building of approximately 2,000 square feet will accommodate Refuse Division supervisors, administrative personnel, foremen, and a training room. Portions of the office building will be air conditioned. A shower and locker facility (approximately 2,500 square feet) for employees will be located adjacent to the office building. Building dimensions and heights for each of the proposed buildings have not been determined at this time. Building height will not exceed the allowable height of the zoning district and also will be restricted by the available space between ground elevation and the underside of the Viaduct. The buildings will cover about 5% of the total land area. A preliminary site plan is shown in Exhibit 1-2.

The type of building and building materials have not been determined. City corporation yard buildings are usually steel frame structures erected on concrete flooring with rolled metal panel roofing and exterior walls. Except for the concrete floor in the maintenance shop, the entire site will be paved with asphalt concrete.

A holding facility for spent petroleum products, vehicle fluids, batteries, and worn tires will be built near the repair shop. The design of the holding facility will adhere to City design standards for storing waste fluids and materials.

There are no available places for off-street parking in the area and all employee parking will be provided on site. Preliminary plans are to separate Division vehicle parking from employee parking.

Tentatively parking for an estimated 75 private vehicles will be provided along the Middle Street side of the site.

The corporation yard will be accessed directly from Keehi Transfer Station Access Road. One and possibly two driveways will be constructed, depending on whether a one- or two-way circulation plan improves traffic flow within the yard and on the access road. The driveways will be a minimum of 24 feet in width.

Water and sewer will be brought to the site from water and sewer systems located nearby or from the Keehi Transfer Station. Water and sewer systems will be designed by the consulting engineer and submitted to the respective agencies for review. Water use is estimated at 4,000 gallons per day and wastewater discharge at 3,200 gallons per day. A water line for fire protection will be installed along Keehi Transfer Station Access Road and an on-site hydrant may be required (Fire Department, 1999).

Drainage will be studied during the planning/design stage. Conceptually, the plan is to construct a culvert in an existing open earthen drainage ditch along the Middle Street side of the property. The culvert will be sized to accommodate flow from existing on-site drains, existing off-site runoff discharged into the ditch, and runoff from the corporation yard. The culvert will be covered and the area above it used for employee parking. If the ditch must remain in its existing condition, then the area to be leased from the State of Hawaii will have to be expanded and a ditch crossing constructed for vehicle access. Under either alternative, the plan is to grade the property so that runoff flows to the drainage ditch.

The State Department of Transportation (Comment Letter, 1999) has apprised the Department of Environmental Services that no structure, heavy vehicles or heavy equipment should be placed atop or near any highway structure footing. In addition, the Keehi Interchange may have to undergo seismic retrofit in the future and no permanent structure should be built near any highway structure which has not undergone retrofitting.

Collection trucks will not be fueled or washed at the Keehi Corporation Yard. The existing fueling facility at the Keehi Transfer Station will be expanded to accommodate additional pumps for the fueling of collection vehicles. Collection trucks currently are washed at the Keehi Transfer Station and this practice will be continued.

Wash water from the maintenance shop will be processed and released into the wastewater collection system. Wash water will be directed first into a sediment trap for removal of solids and then into an oil and water separator where petroleum based constituents will be removed and stored in holding tanks. The holding tanks will be inspected regularly and oil and sludge removed for proper disposal.

All trucks in the fleet are on a regular maintenance schedule. The schedule includes vehicle lubrication every month, oil changes every 6 months for automated and rear loaders, and tune ups as needed. Major repairs, such as engine overhaul and transmission work, are performed as needed.

Spent petroleum products, such as motor oil and vehicle fluids, will be collected and held in separate holding tanks (from the oil-water separator) for removal and disposal by a commercial disposal company.

Motor oil, grease, vehicle fluids, and solvents and other cleaning fluids used in maintenance and repair activities will be stored on the premises. The storage, use, and disposal of solvents and general

housekeeping activities will follow established City procedures to prevent the release of pollutants to the environment.

Landscaping will be added to fill in the existing landscape plantings around the perimeter to help conceal the parked trucks from public view and to enhance ground level landscaping for pedestrians and motorists. Trees will be selectively removed and those that will be retained should not interfere with vehicle operations. The Corporation Yard will be fenced and lighted at night for security purposes. Lighting is also necessary because operations begin, and sometimes end, in darkness.

### C. Operational Characteristics

The Honolulu Collection District encompasses a geographic area from Foster Village/Moanalua to Hawaii-Kai. The District is divided into 31 collection routes, 13 of which are serviced by 3-person collection crews, 16 by 1-person automated collection, and 2 by front loaders. Two bulky item trucks service the entire District. Refuse is collected twice a week in residential areas and daily in Chinatown. Most refuse is hauled to the Keehi Transfer Station for transfer to the H-POWER plant at Campbell Industrial Park. In 1998, refuse collected in the District totaled 124,208 tons (Refuse Division, 1998).

Approximately 127 personnel would be assigned to the Keehi Corporation Yard. Approximately 113 persons are assigned to manual and automated collection duties. About 10 workers—supervisors, clerical staff, mechanics, and utility workers—will remain on-site when collection crews are out collecting refuse. Working hours generally follow the schedule below:

Manual crews:	6:00 a.m. to 11:00 a.m.
Automated:	6:00 a.m. to 3:00 p.m.
Chinatown:	4:00 a.m. to 6:30 a.m.
Bulk Pickup:	6:00 a.m. to 1:00 p.m.
Office Staff:	6:00 a.m. to 2:30 p.m.
Mechanics:	7:00 a.m. to 11:00 p.m. (2 shifts)

The Keehi Corporation Yard will be open from 3:30 a.m. to 11:00 p.m., Mondays through Fridays and from 3:30 a.m. to 3:30 p.m. on Saturdays. The early opening hour will accommodate refuse crews working Chinatown. All collection crews will start and end their work day at the Keehi Corporation Yard. Collection crews currently leave the Honolulu Corporation Yard for their routes before 6:00 a.m. and this practice is expected to continue at the Keehi Corporation Yard.

Mechanics of the AES Division are on duty until 11:00 p.m., thus the late closing hour of the yard. Mechanics working the night shift will be servicing vehicles, but not as large a volume of trucks as are serviced during the day.

### D. Economic Characteristics

The cost of the project to include planning/design, construction, and construction management is estimated at between \$4.5 to \$6.8 million and will be funded by the City and County of Honolulu. Project design is projected to start in July 1999 and a construction contract advertised and awarded by early 2000. Construction would commence in early 2000 and should be completed in ten months. It would include grubbing and grading the site, utility installation, drainage improvements, paving the parking areas with asphalt concrete, erecting steel structures, and landscaping.

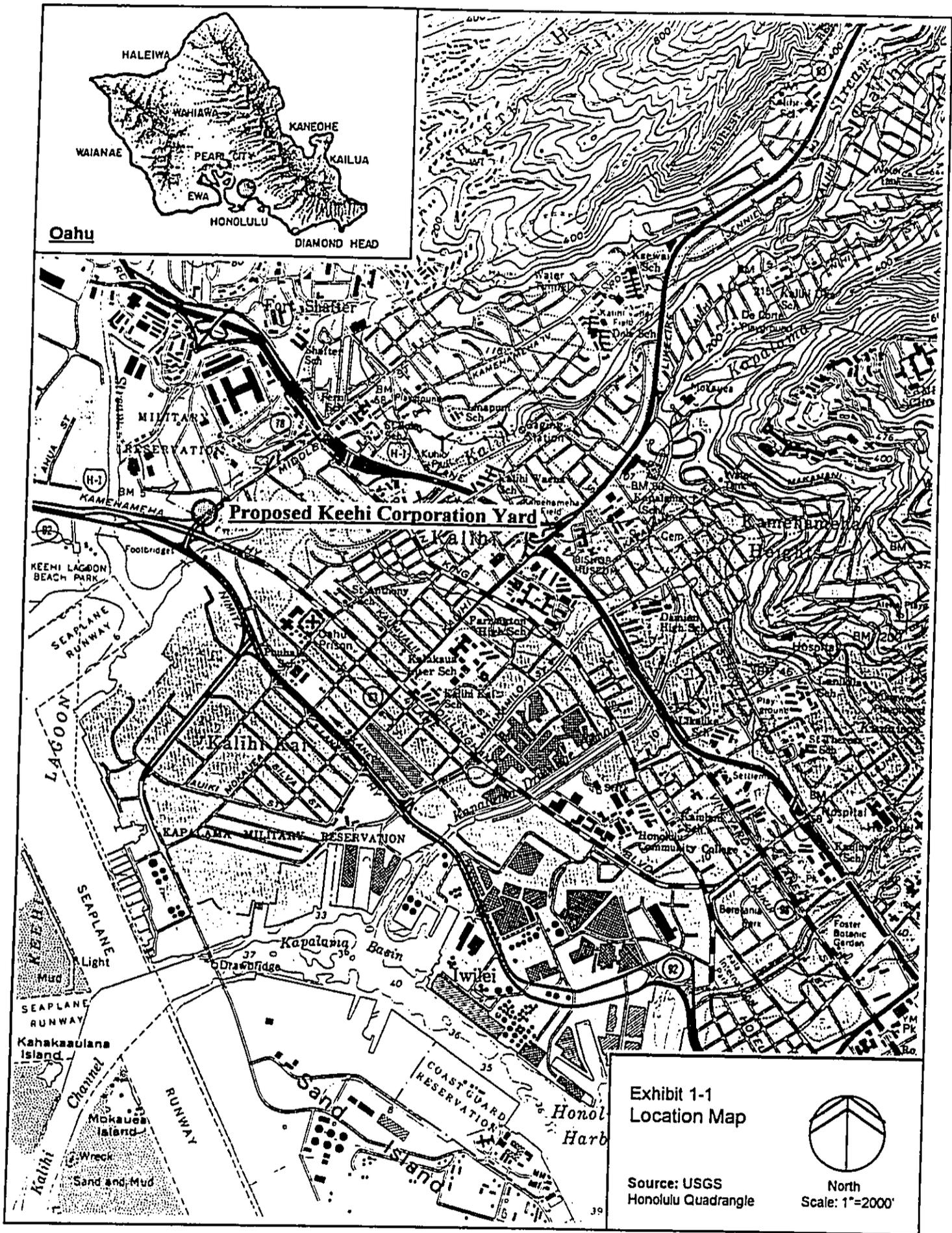
**E. Land Tenure**

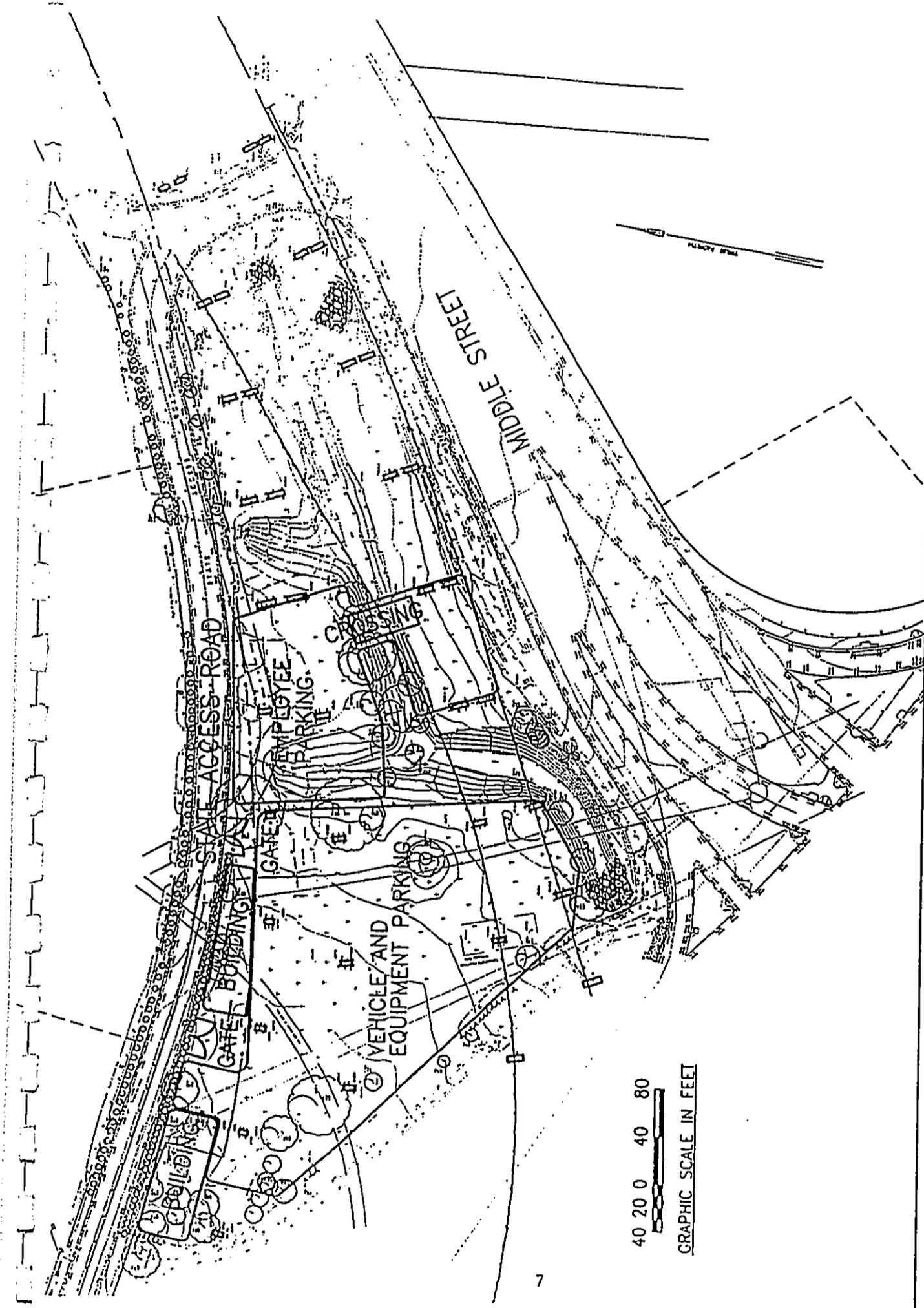
The property is owned by the State of Hawaii. The City is actively discussing the use of this site with the State of Hawaii. Land transfer arrangements are being negotiated. The boundaries of the site are currently being determined by the Refuse Division and the State Department of Transportation, Property Management Branch.

The site is currently leased to two tenants.

**F. Social Characteristics**

No residences will be displaced by the proposed action.





**KEEHI CORPORATION YARD**

Preliminary Site Plan

Exhibit 1-2

**A. Existing Conditions**

The existing tenants use the property for parking large construction vehicles and as a holding area for shipping containers. Construction vehicles parked on the premises include tractors, single-unit trucks, semi-trailers, full trailers, 2-trailer combinations, and empty trailers. Automobiles and light pick-up trucks also park during the day and are presumed to belong to company truck drivers.

Shipping containers (mostly 20 feet in length) are stored primarily on the western half of the site. The containers are either placed on the ground (some are stacked two high) or resting on trailers (See Photographs 1, 2, and 3).

The area between overhead highway ramps is roughly paved with various materials to facilitate access by trucks. This area is also open to the sky and not covered by overhead sections of the Viaduct. Debris, large automotive (or truck) parts, such as discarded axles and tires, trash containers, stone piles, bench seats, desks, chairs, and general litter are scattered throughout the site.

No structures or permanent improvements associated with the existing use were observed on the property. The site is fenced and screened by landscape plantings on all street facing sides.

The only permanent structures are concrete pillars supporting overhead inbound and outbound lanes of the H-1 Viaduct. Approximately 18-20 pillars are located on the premises.

**B. Topography**

The site is relatively flat, having been extensively altered for construction of the Keehi Interchange, and roughly graded to accommodate the present use. Ground elevation ranges from a high of 15 feet in the western corner to a low of 2 feet in the drainage ditch that parallels Middle Street.

**C. Soils**

Soil Conservation Survey Maps (1972) demarcate a single soil type ---Mixed Fill Land---between the lower reaches of Moanalua and Kalihi Streams. This soil consists of areas filled with material dredged from the ocean or hauled from nearby areas, garbage, and general material from other sources.

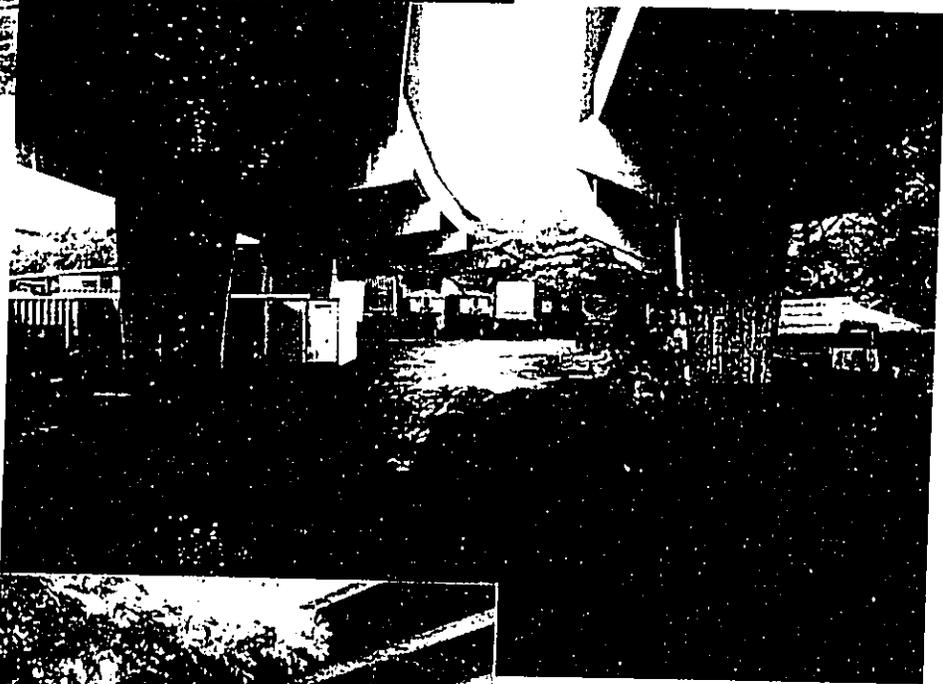
It cannot be determined if fill material was removed for construction of the Keehi Interchange and then filled with imported borrow. Most of the ground surface, however, is covered by assorted materials, including gravel, No. 3 rock, and asphalt concrete.

**D. Surface Water**

There are no streams, lakes, ponds, or wetlands on the premises. Moanalua Stream flows within an earthen channel about 0.25 mile to the west of the site. Under Nimitz Highway, the stream is confined to a concrete box channel and discharges into Keehi Lagoon makai of Nimitz Highway.



Photograph 1.  
North View of Site.



Photograph 2.  
South View of Site.



Photograph 3.  
West Corner  
of Site.

At one time, two fishponds--Kaihikapu and Weli--and an island--Mokumoa-- were the prominent features of what is now the Shafter Flats area . The ponds were subsequently filled, allowing for the development of current military and industrial activities. The project site appears to be in what used to be the lower section of Weli Fish Pond. The presence of these former natural features were not noted in environmental documents prepared for construction of the Keehi Interchange, which suggests that the features were already removed before planning of the highway began.

#### E. Flood Hazard and Drainage

The property is not located in an area prone to flooding. Flood hazard maps (Federal Emergency Management Agency) designate the property Zone X, which is defined as "areas determined to be outside [the] 500-year flood plain."

On-site runoff is directed into a large earthen drainage channel that parallels Middle Street along the south side and length of the site. The earthen channel is approximately 4-5 feet deep and 18-20 feet wide (See Photograph 4). The channel also receives off-site runoff from the upper Shafter Flats area and drain inlets along the Keehi Transfer Station Access Road and Middle Street. Runoff passes under Nimitz Highway through a box culvert (approximate dimensions 4' X 8') that discharges into Keehi Lagoon. The drainage channel is sized to accommodate runoff from a 50-year storm (Department of Transportation, 1971).

Drainpipes attached to pillars supporting overhead sections of the H-1 Freeway receive runoff from the roadway and discharge onto the project area.

#### F. Flora

Flora consists of landscaping along the street side edges of the property. Hibiscus and oleander form a continuous, screening hedge about 5-6 feet high along Nimitz Highway and Middle Street, respectively. The chain link fence along the Keehi Transfer Station Access Road supports a tangle of ipomea.

Interior areas have been graded and grubbed of vegetation. Opiuma, monkey pod, octopus, Formosan koa, African tulip, ironwood, and milo grow along the edges. Plant density--primarily koa haole and wayside weeds-- is the highest alongside and within the earthen drainage ditch.

#### G. Archaeology

There are no recorded archaeological features on the site (DOT, 1976).

#### H. Land Use

Land Use Controls for the property are:

State Land Use Designation:	Urban
General Plan	Primary Urban Center
Development Plan Land Use Map:	Residential
Development Plan Public Facilities Map:	No Symbol (Amendment Proposed, Site Determined, Within Six Years, 98/PUC-1007(IC))
Zoning:	R-5 Residential
Special Management Area:	Outside Special Management Area

#### **I. Acoustical**

The major source of noise originates from traffic on Middle Street, Kamehameha Highway, the H-1 Viaduct, the Keehi Transfer Station Access Road, and overhead aircraft from the nearby Honolulu International Airport. There are no noise sensitive uses, such as schools, residences, and hospitals in the vicinity.

#### **J. Infrastructure**

Water service is not directly available to the site. A Board of Water Supply 42" transmission main crosses (or passes) the southern portion of the property along Nimitz Highway. A 24" transmission main is located in Middle Street between Dillingham Boulevard and King Street.

There is no sewer service to the site. The nearest sewer manhole (for connection purposes) is located in Kamehameha Highway about 1,200 lineal feet to the southeast.

Underground electrical and communication lines are placed along Keehi Transfer Station Access Road.

#### **K. Roadways and Traffic Conditions**

The H-1 Freeway serves as the main thoroughfare for Ewa-Diamond Head traffic in Honolulu. Moanalua Freeway also serves Ewa-Diamond Head traffic and links with the H-1 Freeway at the Kahauiki Interchange (Middle Street). The Keehi Interchange connects the H-1 Freeway viaduct and Nimitz Highway with Kamehameha Highway and Middle Street. North King Street, Kamehameha Highway/Dillingham Boulevard and Nimitz Highway are primary arterials and provide alternative Ewa-Diamond Head routes to and from the downtown area.

King Street is a major urban arterial road running through Honolulu. North King Street begins at its intersection with Middle Street and has a posted speed limit of 25 miles per hour (mph) in the vicinity of the project. The Diamond Head and Ewa bound lanes of North King Street are bifurcated at Middle Street to serve as on- and off-ramps for the Moanalua/H-1 Freeways.

Middle Street is a two-way, four-lane collector road with a posted speed limit ranging from 30 to 35 mph. In the section between North King Street and Kamehameha Highway, on-street parking is prohibited.

Kamehameha Highway is a major arterial traversing from the study area through Central Oahu, the North Shore, and the Windward area to the Castle Junction. At the intersection with Puuhale Road, Kamehameha Highway terminates and becomes Dillingham Boulevard.

Keehi Transfer Station Access Road connects Middle Street with the Keehi Transfer Station. The two-lane, two-way road is paved and partially improved with curbs, gutters, and roadside landscaping (See Photograph 5). The intersection of Middle Street with the Keehi Transfer Station Access Road is an unsignalized stop controlled intersection. A left-turn lane is provided for vehicles turning left onto the Access Road from the mauka bound lanes of Middle Street.

State Department of Transportation 24-hour count data indicate that the peak traffic periods in the vicinity generally occur from 6:15 to 8:15 a.m. in the morning and 3:30 to 5:30 in the afternoon.

Manual traffic counts were taken at several intersections on two separate days during morning and afternoon peak periods. Traffic volumes at the study intersections are shown in Figures 2-1 and 2-2.

**L. Visual**

The site is located at one of the major road intersections in this section of Honolulu (See Photograph 6). Stacked containers and parked trucks and trailers can be observed through or above hedges planted around the exterior and trees growing inside the perimeter. On the Middle Street approach to the intersection (makai bound), a 6-foot high hedge borders the site and this section of the site is clearly visible to motorists and pedestrians.

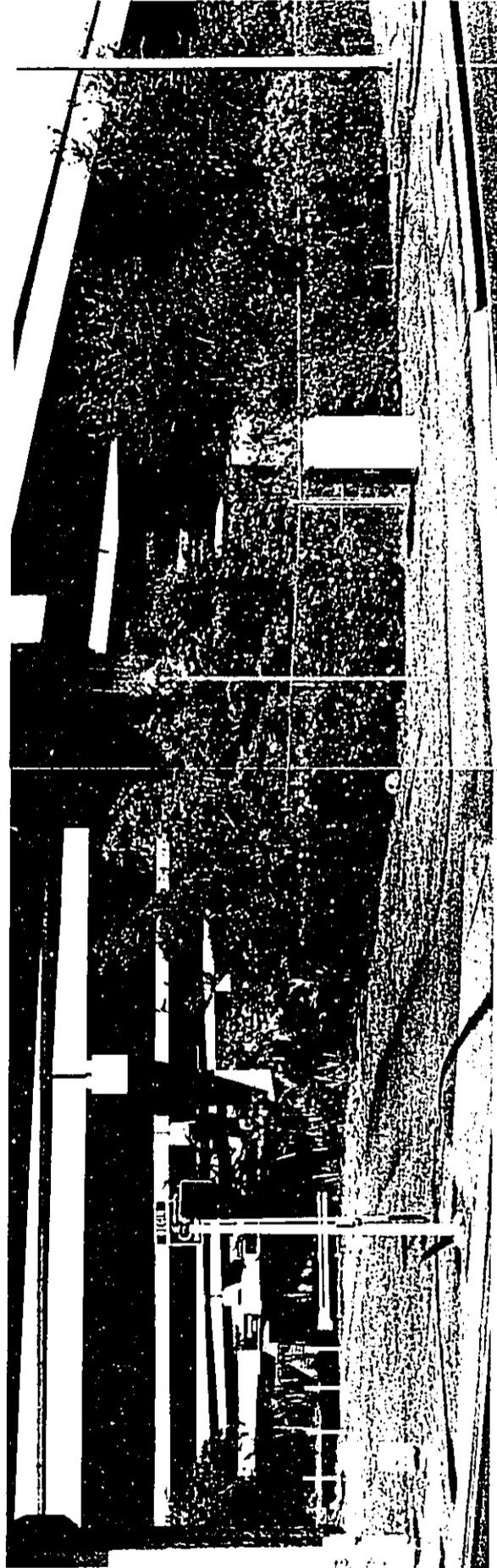
The site cannot be seen from inbound and outbound Viaduct ramps. Motorists can only see the tops of several tall trees growing between both Viaduct ramps.



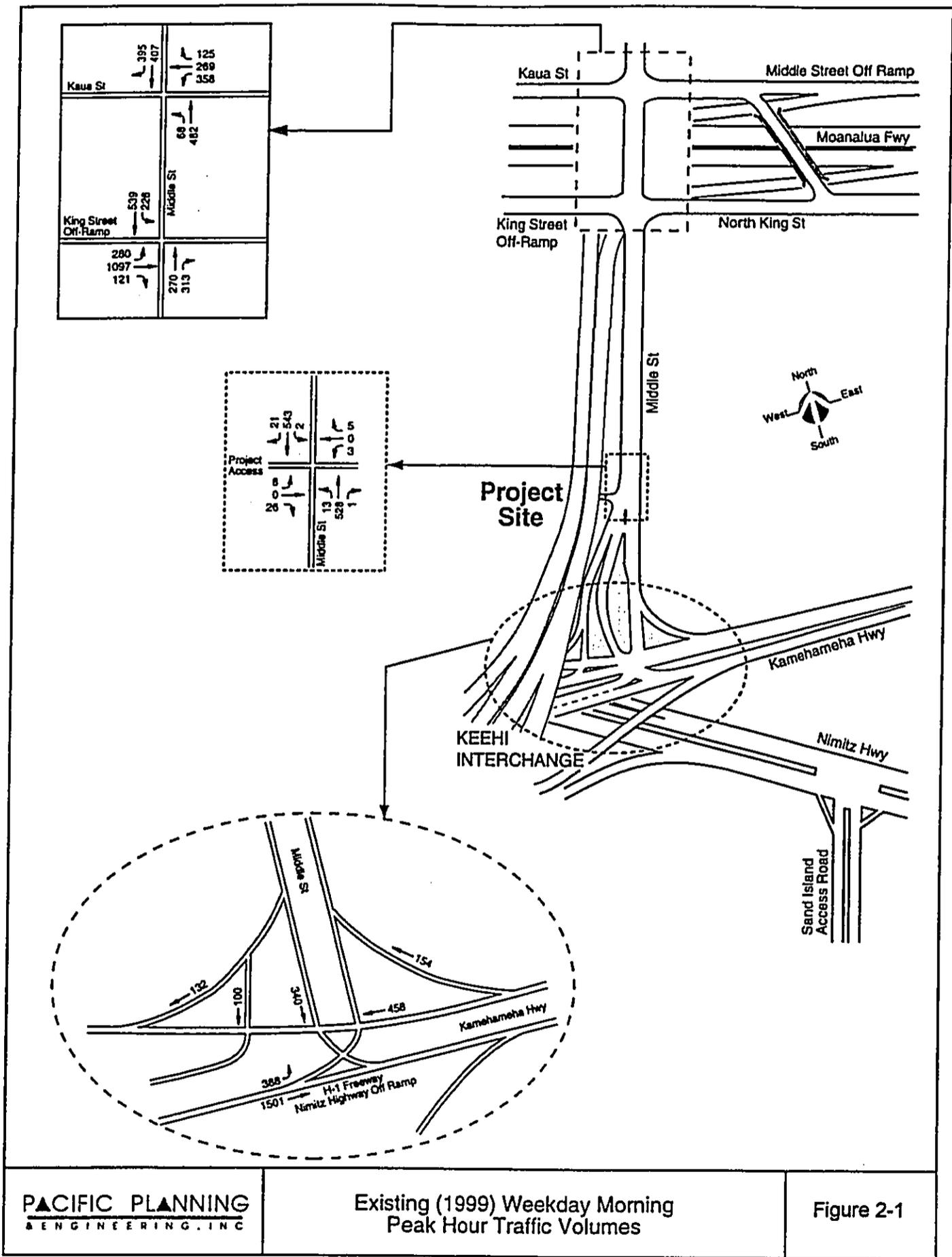
Photograph 4. Northeast View of Earthen Drainage Channel.



Photograph 5. North View of Keehi Transfer Station Access Road.



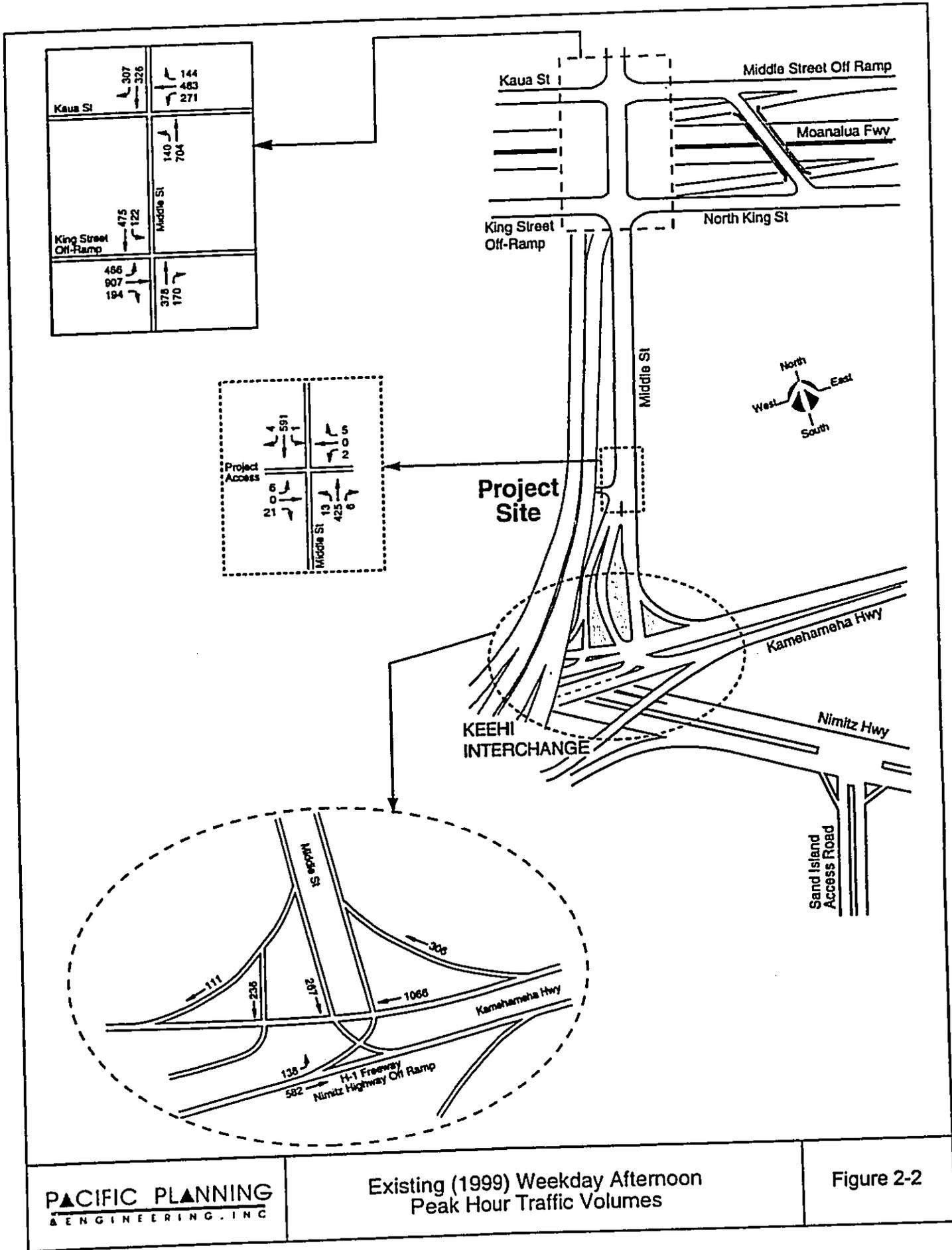
Photograph 6. View of Site from Middle Street/Dillingham Boulevard Intersection.



**PACIFIC PLANNING**  
 & ENGINEERING, INC

Existing (1999) Weekday Morning Peak Hour Traffic Volumes

Figure 2-1



PACIFIC PLANNING  
ENGINEERING, INC

Existing (1999) Weekday Afternoon Peak Hour Traffic Volumes

Figure 2-2

## SECTION 3

## SUMMARY OF POTENTIAL ENVIRONMENTAL IMPACTS AND MEASURES TO MITIGATE ADVERSE EFFECTS

---

### A. Assessment Process

The project was discussed with staff of the Refuse Division, Department of Environmental Services. State and County agencies were contacted for information relative to their areas of expertise. Time was spent in the field noting site conditions and conditions in the vicinity of the proposed project. The discussions and field investigations allowed us to identify existing conditions and features which could affect or be affected by the project. These conditions are:

- The land on which the project is proposed has been altered by road construction;
- The Shafter Flats area is prone to ground settlement problems;
- There are no rare or endangered flora or fauna on the premises;
- There are no archaeological features on the premises;
- There are no streams, lakes, and ponds on the site that would be affected by the proposed project;
- The site is not in a flood hazard area;
- There are no noise sensitive uses in the vicinity of the property; and
- Water, sewer, and drainage improvements are required.

### B. Short-Term Impacts

A Phase I Environmental Site Assessment will be performed prior to construction to determine the presence or absence of potential environmental contamination. There are no permanent buildings or painted surfaces on the premises, thus asbestos-containing materials and lead based paint should not be present. Owing to the present use, the property should be inspected for signs of oil spills or drips on the ground surface.

A soils survey will be conducted to ascertain if there are settlement problems and whether measures are necessary to stabilize the underlying strata.

The site will be rough graded to design elevation and the ground excavated for infrastructure and utility systems. Site work will raise fugitive dust, create noise, and contribute construction traffic to Middle Street, Kamehameha Highway, and adjoining roads.

Fugitive dust can and will be controlled by sprinkling water over exposed areas or by the application of other dust suppression measures stipulated in Chapter 60 (Air Pollution Control) Administrative Rules of the State Department of Health.

Construction noise will persist for the projected 10-month construction period. Allowable daytime noise level for residential zoning districts set by the State Department of Health is 55 dBA measured at the property line. Construction work will temporarily exceed this standard and, per Administrative Rules (Chapter 46) of the Department of Health, the Contractor will obtain a noise permit prior to construction. Construction will be limited to 7:00 a.m. to 3:30 p.m., Mondays through Fridays.

Because there are no noise sensitive uses in the vicinity of the project site and the area is not heavily populated, adverse noise impacts during construction are not anticipated.

On-site vegetation will be grubbed to site the improvements. All plants and trees on the premises are commonly found on Oahu and none are considered rare or endangered. The Contractor will be responsible for ensuring that grubbed material and construction waste and debris are disposed of in a manner and at a site approved by the State Department of Health.

Erosion control measures will be identified in an erosion control plan and Best Management Practices (BMPs) to be submitted with grading plans to the Department of Design and Construction, City and County of Honolulu, for review and approval. Earthwork quantities will be determined during the design phase of the project.

Should subsurface archaeological features be unearthed, work in the immediate area will cease and historic authorities consulted for proper disposition of the finds.

Construction notices will be posted to alert motorists of roadway construction. Flagmen will be posted to marshal vehicles around any excavations in adjoining roadways and during the unloading of material. One lane of the Keehi Transfer Station Access Road will be kept open at all times during roadwork. Excavations in the roadway will be restored to pre-construction conditions or better. Open trenches will be covered with steel plates at the end of each working day and safety devices posted during night hours.

### **C. Long-Term Impacts**

Corporation yard noise is an unavoidable impact but should not result in adverse effects. Noise will be generated when collection crews start work and when testing engines being repaired. Collection crews leave for their routes at 6 a.m., which means they will start and test their equipment before 6 a.m. Noise generated by 35 trucks (manual and automated) starting up and leaving the corporation yard at about the same time would be audible to passers-by. Vehicle noises, however, are impulsive sounds and of short duration. All vehicles are equipped with mufflers for noise attenuation.

Most engine testing will be scheduled during the day when the vicinity is "noisier" than at nights when it is "quieter." In both instances, there are no noise sensitive uses or resident population in the vicinity to be affected by noise from the corporation yard and background noise from traffic on adjacent roads. The absence of noise sensitive land uses is one reason for siting the corporation yard at this location.

Odor emanating from the hopper of collection trucks and petroleum based odors from the repair shop will be sensed at the Keehi site. This impact cannot be avoided, given that collection trucks collect domestic solid waste (which smells) and repair shops have a petroleum odor because engines are oily and greasy and petroleum products are used in engine repair work.

Refuse vehicles will not be washed at the site thus avoiding the discharge of pollutants into the environment and the accumulation of wash refuse. The Division's current procedure is to wash five trucks per day at the Keehi Transfer Station. After washing, refuse trucks will be driven to and parked at the Keehi Corporation Yard. Should complaints of odor in the area increase because of the new Corporation Yard, the Refuse Division will evaluate its wash procedures to mitigate the problem.

Trucks will fuel at the Keehi Transfer Station. No fuel will be stored on the premises, thus negating the potential for fuel spills or leaks from storage tanks.

Wastewater from the shower and bathroom facilities will be discharged into the municipal sewer, thus negating potential impacts on the underlying water table. Application for sewer connection will be submitted to the Department of Planning and Permitting for review and action.

Fire flow lines and fire hydrants will be installed along Keehi Transfer Station Access Road to provide fire protection for the general area.

Adherence to established Division procedures pertaining to the handling, storage, use, and disposal of hazardous materials and substances should preclude the release of petroleum based constituents into the environment. Oil, grease, automotive fluids, spent solvent, and collected sediment will be stored in approved holding tanks until removed by a waste contractor for proper disposal. Dead batteries, worn tires, and unusable engine and truck parts will be stored in a holding facility for removal and disposal. In the event there is an accidental release into the environment, personnel will follow established procedures for containing and handling the release.

Engine compartments and mechanical equipment on all collection vehicles will be steam cleaned. Solvents and degreasers also will be used to clean vehicle parts of built up engine oil and grease. Wash water from steam cleaning will be directed into traps (or sumps) for sediment removal. Water would flow into oil-water separators for removal of petroleum constituents.

The Department of Transportation (1999) commented that the storage of flammable and hazardous materials in the Interstate right-of-way is prohibited. The Department of Environmental Services will comply with the prohibition requirements of the Federal Highways Administration.

A Traffic Impact Assessment was prepared for the project by Pacific Planning and Engineering (1999). Sections of the assessment pertaining to traffic impacts are presented below. Future traffic with the project was forecasted by adding traffic generated by the proposed Keehi Corporation Yard to the forecasted traffic without the project. Forecasts for the year 2002 weekday morning and afternoon peak hours are shown in Figures 3-1 and 3-2.

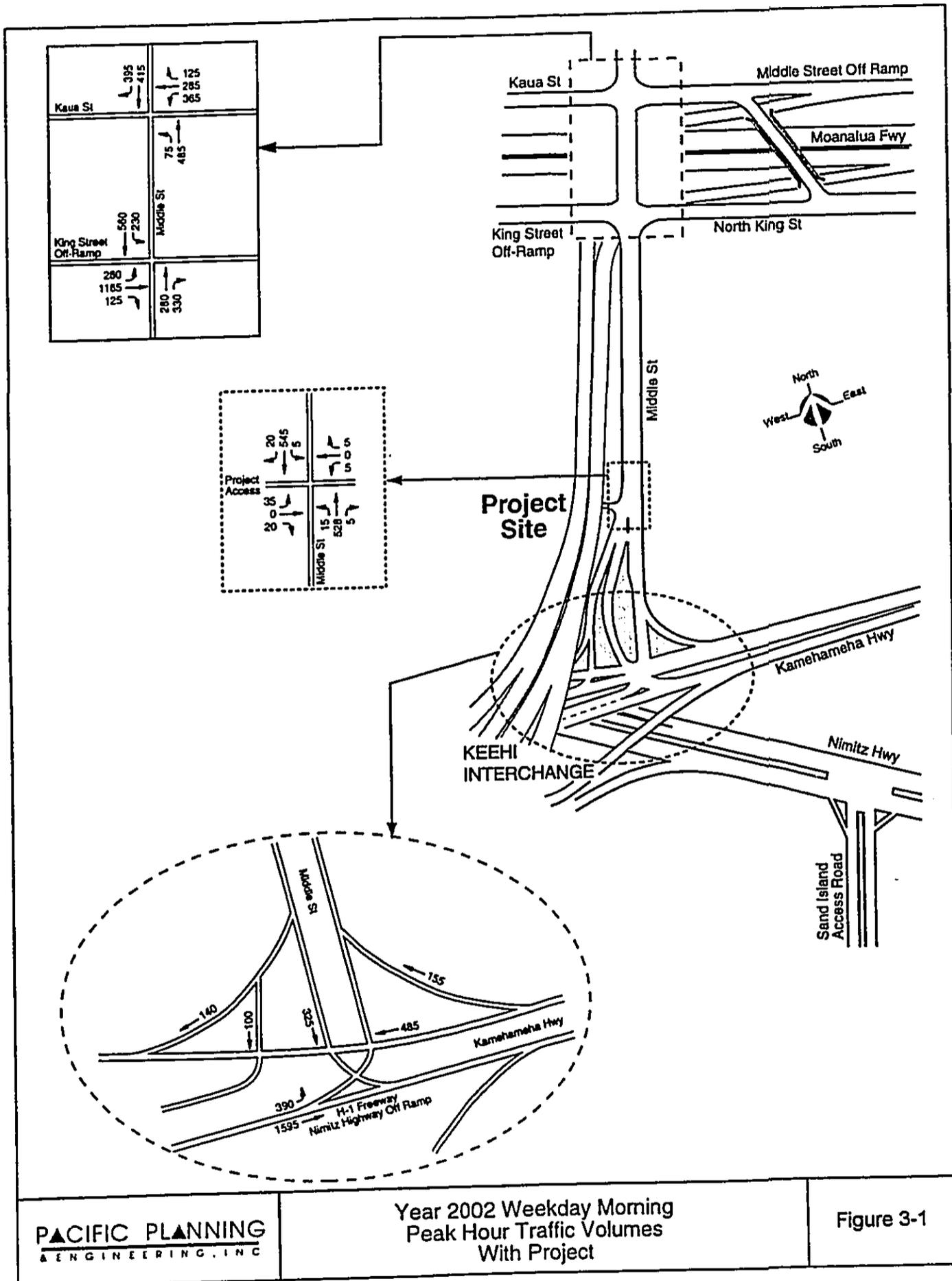
The majority of trips generated by the proposed project in the morning will occur before 6:00 a.m. (employees arriving, trucks leaving for their routes). This is well before the traffic flow peak on the adjacent roadways. Project trips generated during the morning study peak hour of 7:15 to 8:15 a.m. would consist of:

Automated refuse trucks arriving to unload after their first run.

- There are 16 automated refuse trucks. It is assumed that approximately half (say, 8) of those trucks arrive to unload during the study peak hour. After unloading, these trucks then depart for their second run.

Manual refuse trucks arriving upon completion of route.

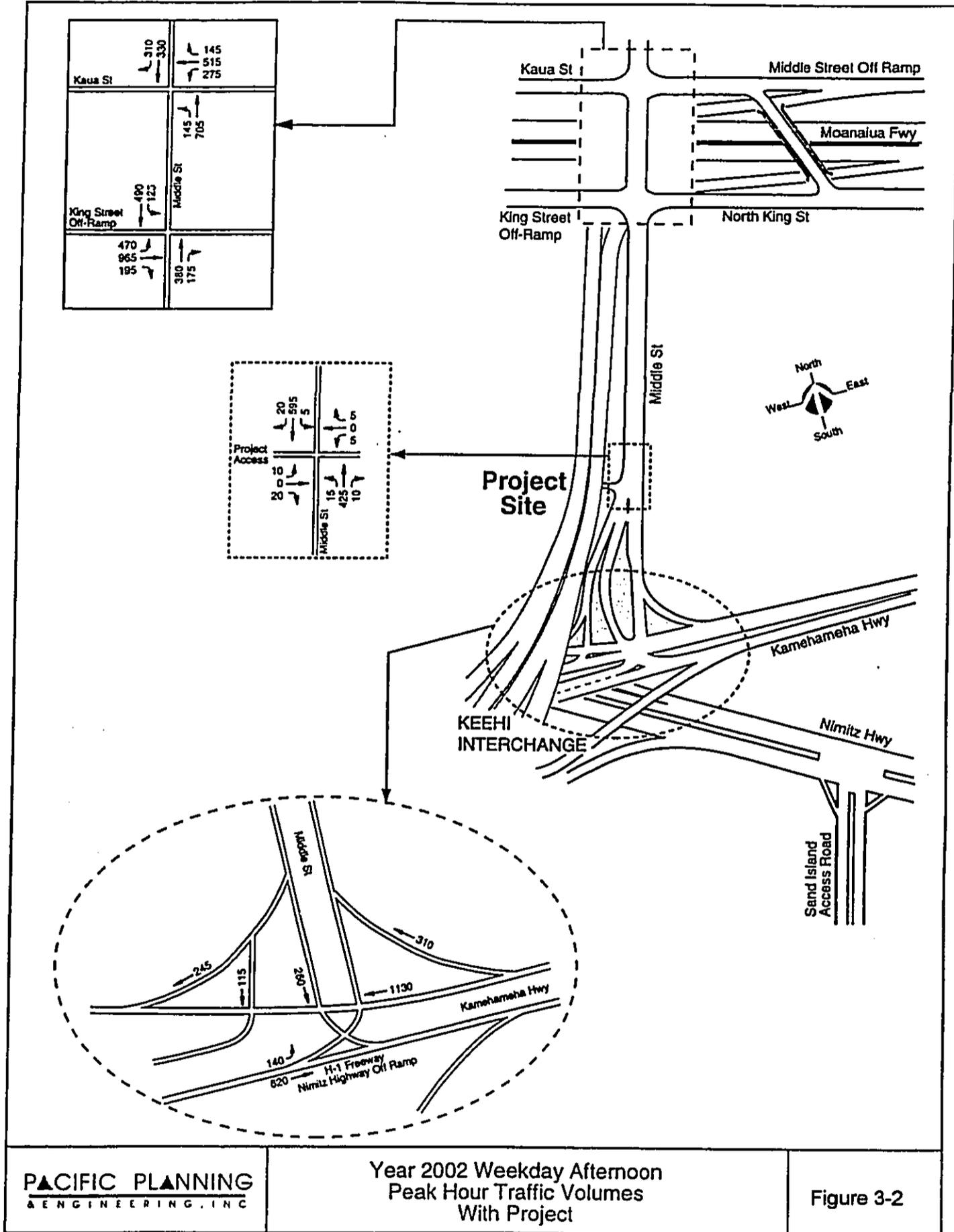
- There are 13 manual refuse trucks. On Mondays, Tuesdays and Wednesdays, approximately two (2) trucks arrive at the corporation yard during the morning peak



**PACIFIC PLANNING**  
ENGINEERING, INC

Year 2002 Weekday Morning Peak Hour Traffic Volumes With Project

Figure 3-1



PACIFIC PLANNING & ENGINEERING, INC

Year 2002 Weekday Afternoon Peak Hour Traffic Volumes With Project

Figure 3-2

period. On Thursdays, Fridays and Saturdays, 10 trucks would arrive during this time. For conservatism, 10 trucks were used for this analysis.

- Upon completion of their routes, these workers are finished for the day and leave the corporation yard. With three workers per truck, it is conservatively estimated that 30 workers (10 trucks x 3 workers per truck) now leave the Yard during this same peak period.

Similar to the morning, during the afternoon, the majority of trips would be generated before 3:00 p.m. (employees leaving), which is again before peak traffic occurs on the adjacent roadways. Project trips generated during the afternoon study peak hour of 3:30 to 4:30 p.m. would consist of:

Automated refuse trucks arriving upon completion of route.

- There are 16 automated refuse trucks. On Mondays, Tuesdays, Wednesdays and Fridays, approximately five (5) trucks arrive at the corporation yard during the afternoon peak period. On Thursdays and Saturdays, no trucks are anticipated to arrive during this time. For this analysis, five trucks were used.
- Upon completion of their route, these workers are finished for the day and leave the corporation yard. With one worker per truck, it is assumed that 5 workers (5 trucks x 1 worker per truck) leave the Yard during the same peak period.

Truck trips generated by the Keehi Corporation Yard were assigned to the adjacent roadways based on the planned route maps. These routes require that all trucks, except for one, leave and arrive in the direction of North King Street. The remaining route has the truck leaving towards North King Street, but returning via Kamehameha Highway. Employee trips were distributed and assigned based upon the general population distribution of Oahu.

An additional consequence of the project is that the refuse trucks will no longer have to travel to and from the Keehi Transfer Station to the Honolulu Corporation Yard upon completion of the routes. This results in a reduction of trips on the roadways. This reduction is reflected in the traffic forecasts and was generally based upon observations during the field surveys.

Analyses were conducted on the following intersections to determine the relative impact of the proposed Keehi Corporation Yard on the local roadway system and to determine whether improvements to mitigate the impact of the project are required. The study intersections are:

- Kamehameha Highway with Middle Street,
- North King Street(Moanalua Freeway eastbound off-ramp) with Middle Street,
- North King Street (H-1 Freeway westbound off-ramp)/Kaua Street with Middle Street, and
- Middle Street with the Access Road (Project entrance).

The intersection of Middle Street with the Access Road was analyzed using operational analysis for unsignalized intersections. The method of analysis measures traffic operations using the "level-of-service" (LOS) rating, which consists of six letter categories ranging from LOS "A" (best) to LOS "F" (worst). The LOS for unsignalized intersections is determined by total delay which is defined as the total elapsed time from when a vehicle stops at the end of a queue until the vehicle departs from the

stop line. This includes the time required for the vehicle to travel from the last-in-queue position. LOS for unsignalized intersections is classified into the six letter categories ranging from less than 5 seconds of average total delay per vehicle (LOS "A") to over 45 seconds of average total delay per vehicle (LOS "F").

The intersections of Kamehameha Highway with Middle Street, North King Street (Moanalua Freeway eastbound off-ramp) with Middle Street and North King Street (H-1 Freeway westbound off-ramp/Kaua Street) with Middle Street were analyzed using operational analysis for signalized intersections.

Operational analysis for signalized intersections is based on average stopped delay per vehicle to measure traffic operating conditions. The LOS for the traffic movements at a signalized intersection is also classified into the six letter categories ranging from less than 5 seconds of average delay per vehicle (LOS "A") to over 60 seconds of average delay per vehicle (LOS "F"). The Levels of Service for unsignalized and signalized intersections are not directly comparable because they are based upon different criteria.

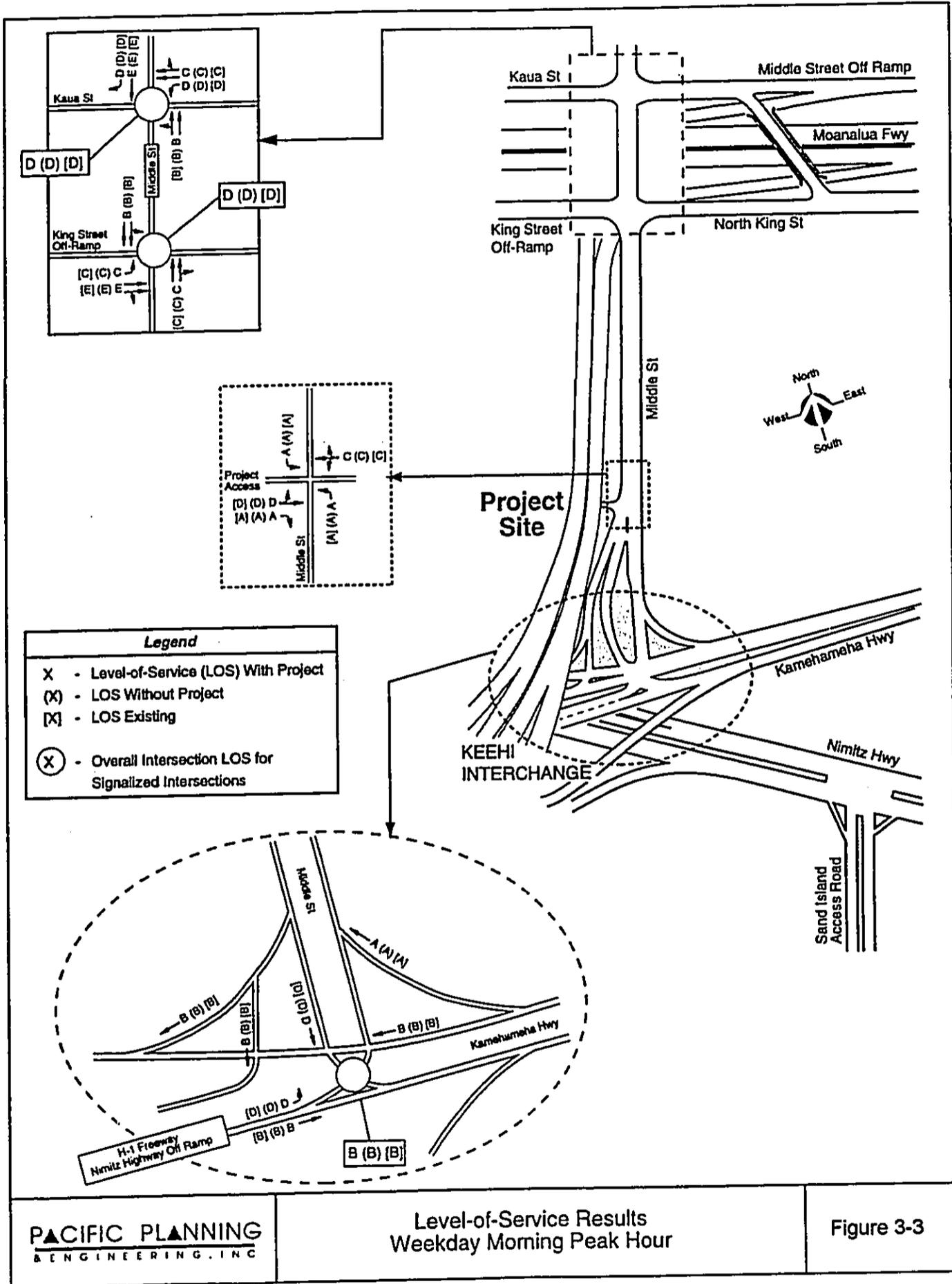
The results of the analysis, shown in Figures 3-3 and 3-4, indicate that the study intersections will operate at essentially the same LOS for the without-project condition as well as the with-project condition.

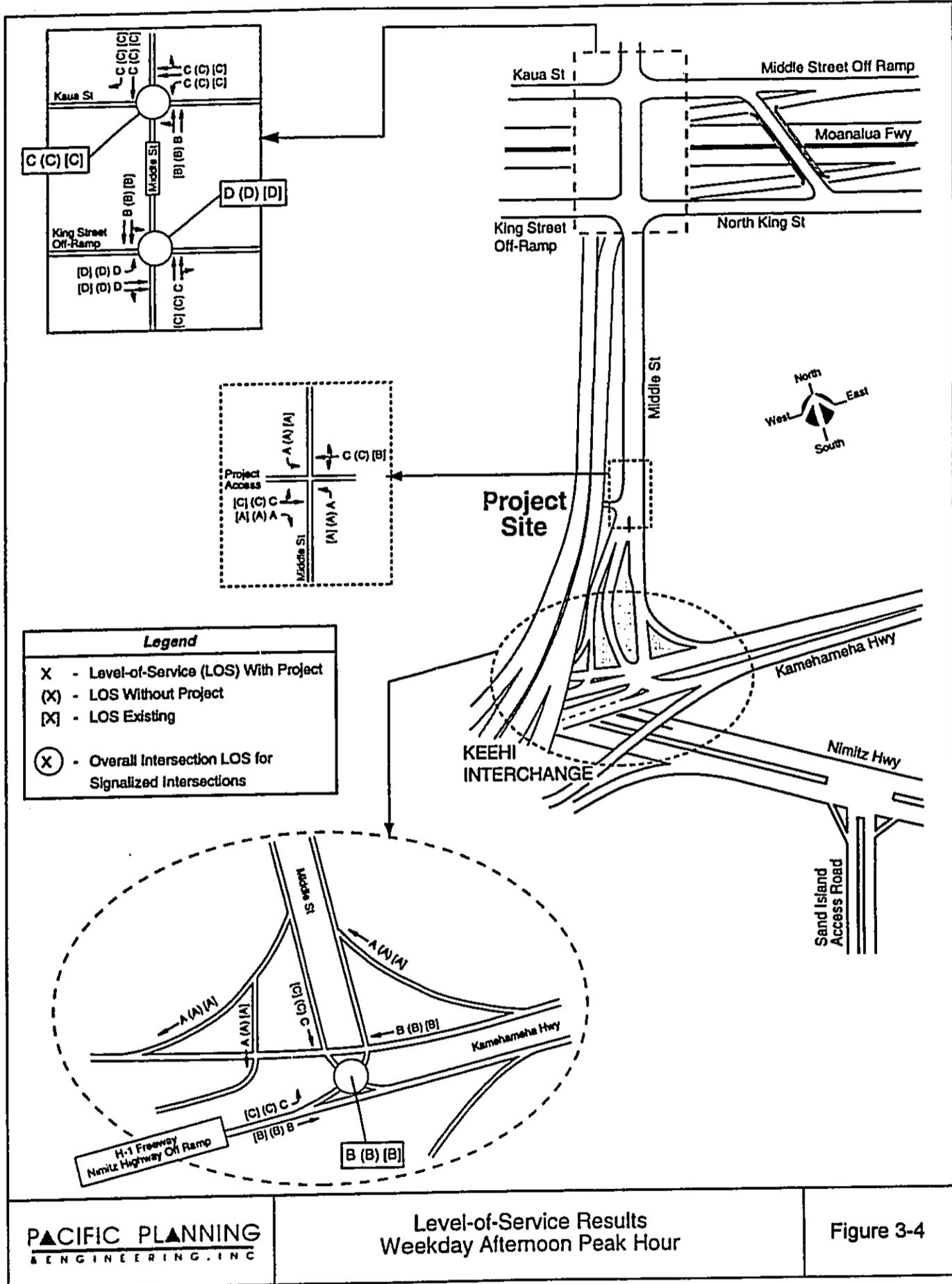
Collection trucks will be parked reverse style in a single row along the perimeter of the site. Manual and automated collection trucks are about 11½ feet tall, thus the upper one-third to one-half of the parked trucks will be visible above the perimeter landscaping from the adjoining grade level streets, much as the tops of storage containers are now visible. Landscaping around the perimeter of the site helps to conceal the existing activities and is expected to do the same for the parked trucks. If the line of parked trucks creates an adverse visual impact, the perimeter landscaping will be upgraded and dead or dying vegetation replaced per approval of the State Department of Transportation.

Construction funds to be expended on the project will purchase labor from local building trades and building materials from local suppliers. In turn, tax revenues will accrue to the State of Hawaii in the form of payroll and excise taxes. The State of Hawaii will receive lease rent from the City for land that has marginal utility for other development.

The City and County of Honolulu will realize economic benefits resulting from efficiencies of location. The proposed Keehi Corporation Yard is located within the Honolulu Collection District and near the Keehi Transfer Station. At this location, trip mileage between the corporation yard and collection routes, collection routes and the Keehi Transfer Station, and the Keehi Transfer Station and the corporation yard will be reduced substantially in comparison to a location at the Halawa Corporation Yard. A reduction in mileage should also reduce fuel costs and wear and tear on collection vehicles, thus extending their operational utility. Fuel and maintenance savings are estimated at \$170,000 per year for the Keehi site versus the Halawa site. The benefit of a central location that would reduce travel time with concomitant savings in fuel and maintenance costs supports City policy to provide safe and efficient waste collection and waste-disposal services.

Public uses and structures are a permitted use in the R-5 zoning district. Construction of a corporation yard at this location is being sought for reasons presented earlier in this Assessment. A location under the freeway supports a general plan policy to locate roads, highways, and other public facilities and





utilities in areas where they will least obstruct important views of the mountains and the sea. The importance of maintaining public views along streets and highways, mauka-makai view corridors, and views of natural features are key design principles of the development plan common provisions and this objective too can be realized by the proposed location. The perimeter of the site will be landscaped and this will support development plan principles of providing landscaping along major arterials and collector streets as a means to increase the general attractiveness of the community, easily identifying major roadway intersections through means such as distinctive landscaping, and establishing landscaping controls for ground level parking areas. The Refuse Division is acutely aware that the Middle Street/Dillingham Boulevard is a major intersection in this section of Honolulu. The site is passed by thousands of vehicles daily and one design objective will be to landscape the site to make a positive contribution to this industrial area and street oriented environment.

**A. No Action**

The No Action alternative would maintain the status quo of the site and preclude the occurrence of all environmental impacts, short- and long-term, beneficial and adverse, described in this Assessment.

**B. Alternative Sites**

Alternate sites for the proposed Keehi Coporation Yard were investigated during the site selection process for relocating the entire Honolulu Corporation Yard from Kewalo Basin. The site selection process evaluated seven alternate sites, which are listed below (Aotani & Hartwell, 1974). A site in Halawa Valley was eventually selected and space needs of the Refuse Division (and other City divisions) located at the Honolulu Corporation Yard were programmed into the planning and design of the Halawa Corporation Yard (now under construction).

Alternate Sites (Order of Selection)

Halawa Valley, Parcel 27 (Site of Halawa Corporation Yard)  
Halawa Valley, Parcel 2  
Sand Island  
Fort Shafter Makai  
Halawa Heights Road  
Plantation Drive  
Waipahu Incinerator

The Keehi site provides an alternate to relocating the Refuse Division to the Halawa Corporation Yard. The Keehi site was selected because 1) it provides a location within the Honolulu Collection District that is accessible to major thoroughfares such as King Street, the H-1 Freeway, and Kamehameha Highway; 2) it is adjacent to the Keehi Transfer Station where refuse collection vehicles tip their daily loads; and 3) land under this section of the freeway is unimproved and has marginal utility for other development.

SECTION 5

UNRESOLVED ISSUES

The State of Hawaii currently leases the site to two tenants. The names of the tenants and the terms of their respective leases are unknown at this time. If the tenants have to relocate because of City plans to build the proposed Keehi Corporation Yard on the site, the City may assist in relocating the tenants. It is anticipated that these issues will be discussed during lease negotiations between the City and County of Honolulu and the State of Hawaii.

Pending completion of a drainage study and consultation with the Department of Transportation, State of Hawaii, it cannot be determined at this time if the existing drainage ditch will remain an open, earth-lined channel or if existing and future on- and off-site runoff into the ditch can be accommodated in a drainage culvert and the ditch covered. Covering the ditch will provide more useable area for parking City trucks and employee vehicles.

The State Department of Transportation ("DOT") has several major concerns with the location of the proposed Keehi Corporation Yard and the effects it would have on the highway facility. Issues raised by the DOT concerning flammable material storage, ground settlement, drainage, seismic retrofitting of the freeway structures, and loss of landscape plantings (primarily trees) will be addressed during the design stage of the project.

**SECTION 6**

**PERMITS AND APPROVALS**

---

Permits and approvals required for the project are indicated below. Additional permits and approvals may be required pending final construction plans.

<u>PERMIT/APPROVAL</u>	<u>AUTHORITY</u>
State of Hawaii	
Variance From Pollution Controls	Department of Health
NPDES General Permits	Department of Health
Discharge of Hydrotesting Water	
Discharges Associated with Construction Activities	
City and County of Honolulu	
Grubbing, Grading, and Stockpiling Permit	Department of Planning and Permitting
Building Permit for Building, Electrical, Plumbing	Department of Planning and Permitting
Sidewalk/Driveway and Demolition Work	
Permit to Excavate Public Right-of-Way (Trenching)	Department of Planning and Permitting

**SECTION 7****AGENCIES AND ORGANIZATIONS CONSULTED IN THE  
PREPARATION OF THE ENVIRONMENTAL ASSESSMENT**

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Notice of the Draft Environmental Assessment for the Keehi Corporation Yard was published in the Office of Environmental Quality Control Environmental Notice of April 23, 1999 and May 8, 1999. Copies of the Draft Environmental Assessment were mailed to the agencies and organizations listed below. Publication in the Environmental Notice initiated a 30-day public comment period which ended on May 24, 1999. An asterisk \* identifies agencies and organizations that submitted written comments to the Draft Environmental Assessment. Comment letters and responses are founded in Appendix A of the Final Environmental Assessment.

**Federal**

- \*US Army Corps of Engineers
- US Department of the Interior
- Fish and Wildlife Service

**State**

- \*Department of Health
- \*Office of Environmental Quality Control
- Department of Land and Natural Resources
- \*State Historic Preservation Division
- Department of Transportation
- \*Highways Division

**City and County of Honolulu**

- \*Board of Water Supply
- \*Department of Design and Construction
- \*Department of Facility Maintenance
- \*Department of Planning and Permitting
- \*Department of Transportation Services
- \*Police Department
- \*Fire Department

**Other**

- \*Hawaiian Electric Company
- \*GTE Hawaiian Telephone Company
- Kalihi Business Association
- Kalihi-Palama Community Council
- Kalihi-Palama Neighborhood Board No. 15
- \*Aliamanu/Salt Lake/Foster Village Neighborhood Board No. 18
- Kalihi-Palama Public Library
- Salt Lake Public Library

**SECTION 8**

**DETERMINATION OF SIGNIFICANCE**

Chapter 200 (Environmental Impact Statement Rules) of Title 11, Administrative Rules of the State Department of Health, establishes criteria for determining whether an action may have significant effects on the environment (11-200-12). The relationship of the proposed project to these criteria is discussed below.

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

There are no natural or cultural resources on the premises to be affected by the proposed action.

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

The project does not curtail the beneficial uses of the environment.

- 3) Conflicts with the state's long-term environmental policies or goals and guidelines as expressed in chapter 344, Hawaii Revised Statutes, and any revisions thereof and amendments thereto, court decisions or executive orders;

The project will not conflict with long-term environmental policies, goals, and guidelines of the State of Hawaii.

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

The project will not substantially affect the economic or social welfare of the State. Short-term economic benefits will be derived in the form of construction wages and material purchases.

- 5) Substantially affects public health;

Public health will not be adversely affected by the proposed project.

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

Substantial secondary impacts are not anticipated.

- 7) Involves a substantial degradation of environmental quality;

Environmental quality of the site will not be degraded.

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

The proposed action does not involve a commitment for larger actions.

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

There are no rare, threatened or endangered flora or fauna on the premises.

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

Ambient air quality will be affected by fugitive dust and combustion emissions during construction but can be controlled by measures stipulated in this Assessment. Construction noise will be pronounced during site preparation work but should diminish once the buildings are erected. All construction activities will comply with air quality and noise pollution regulations of the State Department of Health.

Erosion control measures will be prescribed in grading plans and best management practices prepared for the project.

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

The proposed Keehi Corporation Yard is not located in a flood hazard area or tsunami inundation zone.

Soil borings and analysis should ascertain the potential for ground settlement problems.

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

The proposed Keehi Corporation Yard will not affect scenic vistas identified in County or State plans or studies.

13) Requires substantial energy consumption.

Energy consumption has not been determined.

Based on the above criteria, the proposed Keehi Corporation Yard project will not result in significant adverse environmental impacts and an Environmental Impact Statement should not be required.

## REFERENCES

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- Department of General Planning, City and County of Honolulu. 1992 (As amended). *General Plan Objectives and Policies*.
- Department of Transportation, State of Hawaii. 1971. *Environmental Impact Statement for Interstate H-1 Pearl Harbor Interchange to Middle Street, Oahu, Hawaii*. Pursuant to Section 10292)(c), P.L. 91-190 and Section 4(f), P.L. 89-670.
- Federal Emergency Management Agency. 1987. *Flood Insurance Rate Map*. Community Panel No. 150001 0031B.
- Pacific Planning and Engineering. 1999. *Traffic Impact Assessment Report for Keehi Corporation Yard*. Prepared for City and County of Honolulu Environmental Services Department.
- Planning Department, City and County of Honolulu. 1983. *Primary Urban Center Development Plan Land Use Map and Public Facilities Map*. Ordinance No. 83-9.
- Towill, R. M. Corporation and Environment Impact Study Corporation. 1976. *Environmental Impact Statement for the Shafter Flats Refuse Processing and Transfer Station*. Prepared for City and County of Honolulu, Department of Public Works..
- U.S. Department of Agriculture, Soil Conservation Service. 1972. *Soil Survey Report for Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii*. In Cooperation with the University of Hawaii Agricultural Experiment Station.
- U.S. Department of Transportation, Federal Highways Administration and State of Hawaii Department of Transportation, Highways Division. 1986. *Makai Boulevard Concept Middle Street to Pier 18, Project No. F-092-1(16), Honolulu, Island of Oahu, State of Hawaii*. Pursuant to 42 U.S.C. 4332(2)(c) and Chapter 343, Hawaii Revised Statutes.
- U.S. Department of Transportation, Federal Highways Administration and State of Hawaii Department of Transportation, Highways Division. 1996. *Draft Supplemental Environmental Impact Statement Nimitz Highway Improvements from Keehi Interchange to Pier 16 (Awa Street)*. Prepared Pursuant to 42 U.S.C. 4332(2)(c) and Chapter 343, Hawaii Revised Statutes. Prepared by Parsons Brinckerhoff Quade and Douglas, Inc.

**APPENDIX A**  
**COMMENTS AND RESPONSES**

DEPARTMENT OF ENVIRONMENTAL SERVICES  
**CITY AND COUNTY OF HONOLULU**  
 850 SOUTH KING STREET, HONOLULU, HAWAII 96813  
 Phone: (808) 527-0682 • Fax: (808) 527-4878

RECEIVED

APR 20 10 56

DEPT. OF ENVIRONMENTAL SERVICES



KENNETH E. SPRAGUE, P.E., P.L.D.  
 DIRECTOR  
 BARRY FUKUNAGA  
 COUNTY DIRECTOR  
 IN REPLY REFER TO:  
 RE 98-030

April 13, 1999

MEMORANDUM

TO: MR. ROSS SASAMURA, ACTING DIRECTOR  
 DEPARTMENT OF FACILITY MAINTENANCE

FROM: MR. KENNETH E. SPRAGUE, DIRECTOR  
 DEPARTMENT OF ENVIRONMENTAL SERVICES

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT,  
 KEEHI CORPORATION YARD, KALIHI-KAI, HONOLULU

We are forwarding for your review a copy of the Draft Environmental Assessment for the subject project. The proposed location of the Keehi Corporation Yard is in Kalihi-Kai, on land under the elevated sections of the H-1 Viaduct at Middle Street and Kamehameha Highway.

We would appreciate receiving your written comments on the proposed project by May 24, 1999, for inclusion in the Environmental Assessment.

If you have any questions, please call Mr. James Chun of the Department of Environmental Services at 527-6238 or Mr. Gerald Park of Gerald Park Urban Planner at 942-7484.

Attachment

April 15, 1999

We do not have any comments. If you have any questions, please call Laverne Higa at x-6246.

*R.A.A.*  
 ROSS S. SASAMURA  
 Acting Director and Chief Engineer

RECEIVED  
 DEPARTMENT OF FACILITY MAINTENANCE  
 APR 15 9 15 AM '99

FIRE DEPARTMENT  
**CITY AND COUNTY OF HONOLULU**  
 3278 KOA PALA STREET, SUITE 204  
 HONOLULU, HAWAII 96819-1808

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DEPT. OF ENVIRONMENTAL SERVICES



ATTILIO K. LEONARDI  
 FIRE CHIEF  
 JOHN CLARE  
 DEPUTY FIRE CHIEF

April 21, 1999

TO: KENNETH E. SPRAGUE, DIRECTOR  
 DEPARTMENT OF ENVIRONMENTAL SERVICES

FROM: ATTILIO K. LEONARDI, FIRE CHIEF

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT,  
 KEEHI CORPORATION YARD, KALIHI-KAI, HONOLULU  
 LAND UNDER THE H-1 VIADUCT AT  
 MIDDLE STREET AND KAMEHAMEHA HIGHWAY  
 HPD INTERNAL NO. OL 99-074

In response to your memorandum dated April 13, 1999, regarding the Draft Environmental Assessment for the subject project, additional fire hydrants will need to be provided on-site if the fire hydrants mentioned on page 17 of the document are located further than 150 feet from any structure constructed on the premises.

Should you have any questions, please call Battalion Chief Charles Wassman of our Fire Prevention Bureau at 831-7778.

*Attilio K. Leonard*  
 ATTILIO K. LEONARDI  
 Fire Chief

AKL/CW:bh

RECEIVED  
 APR 26 10 08 AM '99  
 DIVISION OF REFUSE COLLECTION & DISPOSAL



BENJAMIN L. CAYetano  
Governor



STATE OF HAWAII  
OFFICE OF ENVIRONMENTAL QUALITY CONTROL  
235 SOUTH BERETANIA STREET  
SUITE 702  
HONOLULU, HAWAII 96813  
TELEPHONE: (808) 584-1188  
FACSIMILE: (808) 584-1182

May 12, 1999

Kenneth Sprague, Director  
Department of Environmental Services  
650 South King Street  
Honolulu, Hawaii 96813

Attention: James Chun

Dear Mr. Sprague:

Subject: Draft Environmental Assessment (EA) for Keahi Corporation Yard, Kalihi Kai, Oahu

We have the following comments to offer:

1. Two-sided pages: In order to reduce bulk and conserve paper, we recommend printing on both sides of the pages in the final document.
2. Contacts: Consult with the State Historic Preservation Division of DLNR regarding the likelihood of encountering subsurface cultural remains on this parcel. In the final EA include copies of correspondence with this and all other agencies for both the early consultation phase of the draft EA and the comment period.
3. Bicycle path: A portion of the Pearl Harbor Bike Path is located adjacent to this parcel of land. Will use of the bicycle path be interrupted? If so, what mitigation measures are planned to reduce or eliminate these impacts?

If you have any questions, please call Nancy Heinrich at 588-4165.

Sincerely,

*Genevieve Salmonson*  
GENEVIEVE SALMONSON  
Director

c: Gerald Park

DEPARTMENT OF ENVIRONMENTAL SERVICES  
CITY AND COUNTY OF HONOLULU  
650 SOUTH KING STREET, HONOLULU, HAWAII 96813  
PHONE: (808) 527-4643 • FAX: (808) 527-9878



JEREMY HARRIS  
Mayor

GENEVIEVE SALMONSON  
Director

RECEIVED  
5-12-99

KENNETH E. SPRAGUE, P.E., Ph.D.  
DIRECTOR  
BARRY FUKUNAGA  
DEPUTY DIRECTOR  
IN REPLY REFER TO:  
RE 98-071

August 4, 1999

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

Dear Ms. Salmonson:

Subject: Keahi Corporation Yard  
Kalihi-Kai, Honolulu, Oahu

Thank you for reviewing the Draft Environmental Assessment prepared for the subject project. We offer the following responses to your comments in the order presented.

1. Printing. The Final EA will be duplex printed.
2. Contacts. The State Historic Preservation Division submitted the following comment: "A review of our records shows that there are no known historic sites at the project location. Because this area was extensively developed during construction of the H-1 Viaduct, it is highly unlikely that historic sites would be found. Therefore, we believe that this project will have 'no effect' on historic sites." All comments received during the public review period and our responses will be appended in the Final Environmental Assessment. Early consultation comments were received in person or by telephone.
3. Bicycle path. The project will not interrupt use of the Pearl Harbor Bike Path.

We thank the Office of Environmental Quality Control for participating in the environmental assessment review process. Your comments and our responses will be included in the Final Environmental Assessment.

Sincerely,

*Kenneth E. Sprague*  
KENNETH E. SPRAGUE  
Director



BOARD OF WATER SUPPLY  
CITY AND COUNTY OF HONOLULU  
830 SOUTH BERETANIA STREET  
HONOLULU, HAWAII 96843



May 18, 1999

JERRY HARRIS, Mayor  
EDDIE FLORES, JR., Chairman  
FORREST C. MURPHY, Vice Chairman  
KAZU HAYASHIDA  
JAN N.L.Y. AUM  
BARBARA KIM STANTON  
CHARLES A. SITO  
CLIFFORD S. JAMILE  
Manager and Chief Engineer

DEPARTMENT OF ENVIRONMENTAL SERVICES  
CITY AND COUNTY OF HONOLULU  
850 SOUTH KING STREET, HONOLULU, HAWAII 96813  
Phone: (808) 527-6863 • Fax: (808) 527-8875



JERRY HARRIS  
MAYOR

KENNETH E. SPRAGUE, P.E., Ph.D.  
DIRECTOR  
BARRY FUCHIMADA  
DEPUTY DIRECTOR  
BY REPLY REFER TO:  
RE 98-070

TO: MR. KENNETH E. SPRAGUE, DIRECTOR  
DEPARTMENT OF ENVIRONMENTAL SERVICES

FROM: *Clifford S. Jamile*  
CLIFFORD S. JAMILE  
SUBJECT: YOUR MEMORANDUM OF APRIL 13, 1999 ON THE  
DRAFT ENVIRONMENTAL ASSESSMENT FOR KEEHI  
CORPORATION YARD, KALIEHI-KAL, OAHU

RECEIVED  
MAY 24 9 34  
ENVIRONMENTAL SERVICES  
CITY AND COUNTY OF HONOLULU

August 4, 1999

MEMORANDUM

TO: CLIFFORD S. JAMILE, MANAGER AND CHIEF ENGINEER  
BOARD OF WATER SUPPLY

FROM: *Kenneth E. Sprague*  
KENNETH E. SPRAGUE, DIRECTOR  
DEPARTMENT OF ENVIRONMENTAL SERVICES

SUBJECT: KEEHI CORPORATION YARD  
KALIEHI-KAL, HONOLULU, OAHU

Thank you for the opportunity to review and comment on the Draft Environmental Assessment for the proposed Keehi Corporation Yard.

We have the following comments to offer:

1. There is no existing water service to the subject property. However, there is an existing three-inch water meter serving the Refuse Division's adjacent Keehi Transfer Station at TMK: 1-1-06: 13.
2. The existing water system cannot provide adequate fire protection in accordance with our Water System Standards. The applicant will be required to install a fire hydrant in the vicinity of the proposed corporation yard. The construction drawings should be submitted for our review and approval.
3. The availability of water will be confirmed when the building permit application is submitted for our review and approval. When water is made available, the applicant will be required to pay our Water System Facilities Charges for resource development, transmission and daily storage.
4. If a three-inch or larger water meter is required, the construction drawings showing the installation of the meter should be submitted for our review and approval.
5. Board of Water Supply approved reduced pressure principle backflow prevention assemblies will be required after all domestic water meters serving the proposed project.

If you have any questions, please contact Barry Usagawa at 527-5235.

Thank you for reviewing and commenting on the Draft Environmental Assessment for the subject project. We offer the following responses to your comments in the order presented.

1. Thank you for this information. BWS engineering staff will be consulted about alternatives for bringing water service to the site.
2. Construction drawings for the fire protection system will be submitted for BWS review and approval. The Fire Department has pointed out that a fire hydrant may have to be installed on-site if the fire hydrants are located farther than 150 feet from any structure on the premises.
3. No response required.
4. No response required.
5. No response required.

We thank the Board of Water Supply for participating in the environmental assessment review process. Your comments and our responses will be included in the Final Environmental Assessment.

DEPARTMENT OF TRANSPORTATION SERVICES  
**CITY AND COUNTY OF HONOLULU**

PACIFIC PARK PLAZA • 711 KAPUNAHU BOULEVARD, SUITE 1200 • HONOLULU, HAWAII 96813  
PHONE: (808) 523-4220 • FAX: (808) 523-4220

CREATED BY  
DATE



CHERYL D. SOON  
DIRECTOR  
JOSEPH M. MAGALDI, JR.  
SENIOR DIRECTOR

May 21, 1999

TPD4/99-01824

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ENVIRONMENTAL SERVICES  
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**MEMORANDUM**

**TO:** KENNETH E. SPRAGUE, DIRECTOR  
DEPARTMENT OF ENVIRONMENTAL SERVICES

**FROM:** CHERYL D. SOON, DIRECTOR

**SUBJECT:** KEEHI CORPORATION YARD

In response to your April 13, 1999 memorandum, the draft environmental assessment for the subject project was reviewed. The following comments are the result of this review:

1. One of the transportation improvements being proposed by the Primary Corridor Transportation Project is a Middle Street Bus Ramp. This ramp would provide bus access from Interstate Route H-1 to the proposed Middle Street Transit Center. As presently proposed, it may impact operations at the Keehi Corporation Yard site. Close coordination of the two projects will be required.
2. Most of the traffic impact appears to occur on State Department of Transportation (SDOT) jurisdiction roadways. As such, coordination with the SDOT is imperative.
3. The description of the size of the office building in the third paragraph on Page 2 should be corrected to read "2,000 square feet".
4. The sixth paragraph on Page 2 discusses the parking arrangements proposed for the subject project. Please clarify whether off-street parking, at a minimum, in accordance with the Land Use Ordinance will be provided.

Kenneth D. Sprague  
May 21, 1999  
Page 2

5. The second paragraph in Section K. Roadways and Traffic Conditions on Page 10 states that the posted speed limit on North King Street in the vicinity of the project is 35 miles per hour. This should be "25" miles per hour.

Should you have any questions regarding these comments, please contact Faith Miyamoto of the Transportation Planning Division at Local 6976.

CHERYL D. SOON

DEPARTMENT OF ENVIRONMENTAL SERVICES  
CITY AND COUNTY OF HONOLULU  
650 SOUTH KING STREET, HONOLULU, HAWAII 96813  
Phone: (808) 527-4663 • Fax: (808) 527-4678



DEPARTMENT OF THE ARMY  
U. S. ARMY ENGINEER DISTRICT, HONOLULU  
FT. SHAFTER, HAWAII 96859-5140

REPLY TO  
ATTENTION OF

May 12, 1999

JEREMY HARRIS  
MAYOR



KENNETH E. SPRAGUE, P.E., Ph.D.  
DIRECTOR

BARRY FUKUNAGA  
DEPUTY DIRECTOR

IN REPLY REFER TO:  
RE 99-009

Civil Works Technical Branch

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DEPT OF  
ENVIRONMENTAL  
SERVICES

Mr. Kenneth E. Sprague, Director  
Department of Environmental Services  
City and County of Honolulu  
650 South King Street  
Honolulu, Hawaii 96813

MEMORANDUM

TO: CHERYL D. SOON, DIRECTOR  
DEPARTMENT OF TRANSPORTATION SERVICES

FROM: *[Signature]*  
KENNETH E. SPRAGUE, DIRECTOR  
DEPARTMENT OF ENVIRONMENTAL SERVICES

SUBJECT: KEEHI CORPORATION YARD  
KALIH-KALI, HONOLULU, OAHU

August 4, 1999

Thank you for reviewing and commenting on the Draft Environmental Assessment for the subject project. We offer the following responses to your comments in the order presented.

1. The Department of Environmental Services will coordinate construction of the proposed Keehi Corporation Yard with construction of the Middle Street Bus Ramp.
2. The Department of Environmental Services will coordinate the movement of vehicles during construction and following completion of the project with the State Department of Transportation.
3. The text has been corrected to read "2,000 square feet."
4. Off-street parking for employees will be provided in accordance with the off-street parking requirements of the Land Use Ordinance.
5. The posted speed limit on North King Street has been revised to "25" miles per hour.

We thank the Department of Transportation Services for participating in the environmental assessment review process. Your comments and our responses will be included in the Final Environmental Assessment.

Dear Mr. Sprague:

Thank you for the opportunity to review and comment on the Draft Environmental Assessment (DEA) for the Keehi Corporation Yard, Kalihi-Kai, Honolulu, Oahu. The following comments are provided in accordance with Corps of Engineers authorities to provide flood hazard information and to issue Department of the Army (DA) permits.

- a. Based on the information provided, a DA permit will not be required for the project.
- b. The flood hazard information provided on page 9 of the DEA is correct.

Sincerely,

*[Signature]*  
for  
Paul Mizue, P.E.  
Acting Chief, Civil Works  
Technical Branch

DEPARTMENT OF DESIGN AND CONSTRUCTION  
**CITY AND COUNTY OF HONOLULU**

650 SOUTH KING STREET, 2ND FLOOR  
HONOLULU, HAWAII 96813  
PHONE: (808) 523-4584 • FAX: (808) 523-4587



JEREMY HARRIS  
MAYOR

RANDALL K. FUJIKI, AIA  
DIRECTOR  
ROLAND D. LIBBY, JR., AIA  
DEPUTY DIRECTOR

CL-202

May 24, 1999

MEMO TO: KENNETH E. SPRAGUE, DIRECTOR  
DEPARTMENT OF ENVIRONMENTAL SERVICES

FROM: RANDALL K. FUJIKI  
DIRECTOR

SUBJECT: KEEHL CORPORATION YARD

Thank you for the opportunity to comment on the draft Environmental Assessment. The following is a summary of our comments:

1. Page 1, the departments listed in the Background must be updated to be consistent with the new organizational names.
2. Page 3, third paragraph, the wash water will not go into the storm water collections system. Wash water will be processed and released into the wastewater collection system.
3. Page 4, Paragraph D, Economic Conditions, the project currently is estimated to cost between \$4.5 to \$6.8 million. Also, in the same paragraph, the date for the award of the construction contract and start of construction should read early 2000 instead of by December 2000 and February 2001.
4. Page 4, Paragraph E, the City is actively discussing use of this site with the State. Land transfer arrangements are being negotiated.

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ENVIRONMENTAL SERVICES

Kenneth E. Sprague, Director  
May 24, 1999  
Page 2

5. Page 21, last paragraph, provide comparison of cost with present location. Should there be any questions, please have your staff contact Clifford Lau at ext. 6373.

RKF:ln



DEPARTMENT OF ENVIRONMENTAL SERVICES  
CITY AND COUNTY OF HONOLULU

850 SOUTH KING STREET, HONOLULU, HAWAII 96813  
PHONE: (808) 537-8663 • FAX: (808) 537-8678



JEREMY HARRIS  
MAYOR

KENNETH E. SPRAGUE, P.E., Ph.D.  
DIRECTOR  
BARRY FURUKAWA  
DEPUTY DIRECTOR  
IN REPLY REFER TO:  
RE 98-007

JEREMY HARRIS  
MAYOR

DEPARTMENT OF PLANNING AND PERMITTING  
CITY AND COUNTY OF HONOLULU

150 SOUTH KING STREET • HONOLULU, HAWAII 96813  
TELEPHONE: (808) 525-4111 • FAX: (808) 527-8743



JAN NAOE SULLIVAN  
DIRECTOR  
LORETTA K.C. CHEE  
DEPUTY DIRECTOR

August 4, 1999

MEMORANDUM

TO: RANDALL K. FUJIKI, DIRECTOR  
DEPARTMENT OF DESIGN AND CONSTRUCTION

FROM: *[Signature]*  
KENNETH E. SPRAGUE, DIRECTOR  
DEPARTMENT OF ENVIRONMENTAL SERVICES

SUBJECT: KEEHI CORPORATION YARD  
KALIEHI-KAI, HONOLULU, OAHU

Thank you for reviewing and commenting on the Draft Environmental Assessment for the subject project. We offer the following responses to your comments in the order presented.

1. The departments and divisions have been updated to be consistent with the new organizational names.
2. The Draft EA will be revised to indicate that wash water will be processed and released into the wastewater collection system.
3. The Draft EA will be revised to indicate that the project is estimated to cost between \$4.5 to \$6.8 million. The date for awarding the construction contract and start of construction will be revised to early 2000.
4. The Draft EA will be revised to indicate that "land transfer arrangements are being negotiated."
5. Fuel and truck maintenance savings are estimated at \$170,000 per year for the Keehi site versus the Halawa site.

We thank the Department of Design and Construction for participating in the environmental assessment review process. Your comments and our responses will be included in the Final Environmental Assessment.

May 24, 1999

MEMORANDUM

TO: KENNETH E. SPRAGUE, DIRECTOR  
DEPARTMENT OF ENVIRONMENTAL SERVICES

ATTN: JAMES CHUN

FROM: JAN NAOE SULLIVAN, DIRECTOR  
DEPARTMENT OF PLANNING AND PERMITTING

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT (EA)  
KEEHI CORPORATION YARD, KALIEHI-KAI, OAHU  
TAX MAP KEY: KEEHI INTERCHANGE AT MIDDLE STREET

We have reviewed the Draft EA information for the above-referenced project and our comments are as follows:

- The final EA should include a conceptual site plan of the proposed facility as well as elevations of the typical structures. A separate landscaping plan should also be provided to illustrate how the facility will be screened from this heavily traveled corridor.
- Plans shown should also illustrate typical design provisions for the containment of spent petroleum products and other industrial fluids associated with the proposed activities.
- The final EA should include a discussion of all applicable City and County of Honolulu Development and General Plan objectives and policies.
- Bill 37 (1998), would place a publicly funded corporation yard symbol on the Primary Urban Center (PUC) Development Plan Public Facilities Map (DPPFM) for the proposed refuse corporation yard. Once the Bill is approved, the proposed project will be consistent with the PUC DPPFM.
- The final EA should include the traffic assessment report as an appendix.

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Mr. Kenneth E. Sprague  
May 27, 1999  
Page 2

According to the complaint, when cleaning out painting equipment with solvent, the initial blast is discharged onto a corrugated, galvanized wall. The facility was told to discontinue this practice and was advised to set up a containment system to capture the paint residue instead of letting it run off onto the ground. The applicant should address this issue if similar practices will be conducted at the Keehi Corporation Yard.

Also any hazardous wastes generated from the maintenance and repair shops, such as spent solvents or any used cleaning solutions which are characteristic of a hazardous waste, should be properly managed according to State hazardous waste rules.

- 2. If any of the liquid or solid wastes stored in the proposed "holding facility" are determined to be hazardous wastes, hazardous waste guidelines should be followed, depending upon generator status.

Should there be any questions on these comments, please call Ms. Beryl Ekimoto, Solid and Hazardous Waste Branch, Hazardous Waste Section, at 586-4226.

Underground Storage Tanks (USTs)

- 1. The proposed holding facility for spent petroleum products, vehicle fluids, batteries, and worn tires may store petroleum or hazardous substances, such as waste oil from vehicle engines, in underground storage tank (USTs). Any USTs installed at the Keehi Corporation Yard must meet federal and state UST requirements.
- 2. The draft EA states that the neighboring Keehi Transfer Facility's fueling capability may be expanded to accommodate the increased demand from the new Keehi Corporation Yard by installing additional fuel dispenser pumps. Any modifications to the existing UST systems at the Keehi Transfer Facility, including the installation of new fuel lines and dispensers, must be conducted in accordance with federal and state UST requirements. Owners of newly installed USTs must notify our Underground Storage Tank Section of the existence of such USTs within 30 days of installation. In addition, our Underground Storage Tank Section is developing new state administrative rules on USTs which, when finalized, will require permits for all new USTs. Finally, permits must be obtained from the applicable building and fire safety authorities before installation of any USTs.

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MAY 27 1999  
DEPARTMENT OF HEALTH  
HONOLULU, HAWAII 96801

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DIVISION OF REFUSE  
COLLECTION & DISPOSAL

Mr. Kenneth E. Sprague  
Director, Department of  
Environmental Services  
City and County of Honolulu  
650 South King Street  
Honolulu, Hawaii 96813

Dear Mr. Sprague:

Subject: Draft Environmental Assessment (DEA)  
Keehi Corporation Yard  
H-1 Viaduct at Middle Street and Kamehameha Highway  
Kalihi-Kai, Oahu

Thank you for allowing us to review and comment on the subject project. We have the following comments to offer:

Solid Waste

The solid waste to be stored at the proposed holding facility shall be routinely disposed, so as not to create a nuisance condition or a health or safety hazard. Spent vehicle fluids, batteries, worn tires, and other accumulated solid wastes, which are deemed non-hazardous shall be transported to a permitted solid waste management facility. Used oil shall also be transported by a permitted used oil transporter.

Should you have any questions on these comments, please call Ms. Lena Ichinotsubo at 586-4240.

Hazardous Waste

- 1. If the four-bay vehicle repair shop is to conduct autobody/paint work, our major concern is how the applicant intends to clean the painting equipment. A complaint was received by the Department of Health (DOH) in 1996 regarding a suspected discharge of toluene waste at the City and County's Honolulu corporation yard.

99-0675  
refer  
cc: [unclear]



Should you have any questions regarding these comments, please contact Eric Sadoyama of our Underground Storage Tank Section at (808) 586-4226.

Chemical Storage

Chemical storage and transfer activities have the potential to produce harmful impacts affecting the quality of our natural resources. The spillage of chemicals, especially hazardous chemicals and wastes, can do irreparable harm to soils and surface and ground water resources. These potential impacts raise several concerns:

- Groundwater contamination from leaking chemical containers;
- Soil and groundwater contamination from spills created by the transference of chemicals between containers;
- Soil and groundwater contamination from the runoff of washwater or other clean-up residue;
- Health effects to workers; and
- Contamination of surface waters and ecosystem damage due to runoff and spills.

Because of these potential impacts, it is important to design and build adequate storage facilities.

The following are suggestions for storage facility designs:

1. The site of the storage facility should meet all County and State land use requirements.
  - a. The facility should be down gradient from nearby wells and meet applicable County ordinances and State rules.
  - b. The facility should not be in critical flood zone areas in order to reduce the likelihood of surface and groundwater contamination.
  - c. The front entrance of the facility should be placed in the direction of prevailing winds to facilitate ventilation; and the facility should be located downwind from sensitive receptor areas such as, houses, play areas, feedlots, animal shelters, gardens, and ponds.

2. The storage facility should be properly designed, and meet all County and State building and safety requirements for chemical storage.

- a. The enclosure of the facility should be constructed of fire resistant material.
- b. The floor should be made of smooth finish concrete. Some suggestions are:
  - 1) A four-inch thick, smooth-finished concrete slab to resist chemical action and facilitate decontamination in event of an accident.
  - 2) Floor drains for washing and decontaminating the storage shed with a 1/4 inch per foot slope to the drains to prevent water from puddling.
- c. Adequate ventilation should be provided, which meet County and State building and safety requirements. A recommendation would be a forced air ventilation system with the following characteristics:
  - 1) Front entrance louvers placed near the ceiling of the facility.
  - 2) Two-speed electrically shielded centrifugal fan above the back entrance.
  - 3) Clearance of the area beneath the vent outlet to avoid exposure to potentially hazardous exhaust.
  - 4) Sufficient air changes: 6 per hour without the use of interior lighting; and 20 per hour with the use of interior lighting.
- d. Chemicals should be stored on a impervious or concrete surface that is bermed, or on a pallet if applicable. Another option, if appropriate, is having the chemicals stored in a contained area surrounded by dikes or curbs which are able to contain at least ten percent of the total volume stored in the area.
- e. All chemicals should be stored away from workers' rest and lunch areas, and depending upon manufacturers directions, away from sunlight and exposure to water.

Mr. Kenneth E. Sprague  
May 27, 1999  
Page 5

99-072/epo

- f. The facility should have appropriate warning signs, as specified by County and State requirements.
- g. The facility should be adequately secured after hours for the safety of property and public health.
3. If a washdown area is required, the area should be properly designed, and meet all County and State building and safety requirements for chemical storage.

Sincerely,

  
GARY GILL  
Deputy Director for  
Environmental Health

c: SHWB  
OSWH





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

JUN 14 1999

KAZU HAYASHIDA  
DIRECTOR

DEPUTY DIRECTOR  
BRYAN K. LUKALUKA  
GLENN H. OROBATTO

*Refuse 99-0765*

IN REPLY REFER TO:  
HWY-PS  
2,3963

Mr. Kenneth E. Sprague

Page 2

JUN 14 1999

HWY-PS 2,3963

Mr. Kenneth E. Sprague  
Director  
Department of Environmental Services  
City and County of Honolulu  
650 South King Street  
Honolulu, Hawaii 96813

Dear Mr. Sprague:

Subject: Draft Environmental Assessment, Keehi Corporation Yard, Kalihi-Kai, Honolulu

Thank you for the opportunity to review the subject document, which proposes relocating the Refuse Division's corporation yard from Kewalo Basin to a site under the Keehi Interchange at Middle Street.

We have the following comments:

1. The use of airspace within the Interstate Highway right-of-way must not impair the full use and safety of the highway (Title 23, Section 111, United States Code). The storage of hazardous and flammable materials in the Interstate right-of-way are prohibited.
2. The proposed site lies within a major highway interchange area between the downtown and the airport. Although we don't anticipate any negative impacts on our State highway system, you have not given us the Traffic Impact Assessment prepared for the project by Pacific, Planning and Engineering for our review and comments. We are concerned about safety and traffic congestion on the H-1, Nimitz Highway, Middle Street, Kamehameha Highway and Dillingham if there is a fire or explosion caused by the presence of flammable material, such as grease, oil, solvents, etc.
3. The Highways Division Oahu District Office needs the site for general maintenance use and has previously requested the site. The Federal Highway Administration policy allows use of airspace for non-highway purposes where such airspace is not required for the safe and proper operation and maintenance of the highway facility. The impact of the proposed use on the District Maintenance functions must be assessed and mitigation measures recommended.

4. The Keehi Interchange may have to undergo seismic retrofit in the future. No permanent structure should be built under or near any highway structure which has not undergone retrofitting.
5. The site is not suitable for the proposed buildings. Past proposed construction of a butler building on a floating slab was found not feasible because of negative features of the site, including ground instability, extensive presence of underground utilities and the need to avoid the freeway footings.
6. The impacts of removing the trees from the site should be addressed, particularly the effect on air temperature, air quality, drainage and aesthetics. The tree tops that are currently visible from the viaduct soften and enhance the concrete structure and provide visual relief for drivers.
7. The noxious and foul odors from 65 refuse collection trucks may impact the public using the State highway right-of-way for transportation. The economic impact of the proposed storage of malodorous trucks on the primary tourist route connecting the airport to Waikiki and downtown Honolulu should be assessed and mitigation measures proposed.
8. No structures or heavy vehicles or storage of heavy materials can be allowed on top of or near any structure footing. The load bearing capacity of the site should be assessed.
9. Any plans for use of the State highway right-of-way must be submitted for our review and approval. The plans must include protection of the columns from impact from any vehicles and equipment using the right-of-way.
10. Only storm runoff and waters as specified in the NPDES permit will be allowed to discharge in the State system. A drainage study is required for our review.

If you have any questions, you may contact Ronald Tsuzuki, Head Planning Engineer, Highways Division, at 587-1830 or Antonie Wurster, Planner, at 587-1842.

Very truly yours,

KAZU HAYASHIDA  
Director of Transportation

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DEPARTMENT OF ENVIRONMENTAL SERVICES  
**CITY AND COUNTY OF HONOLULU**

650 SOUTH KING STREET, HONOLULU, HAWAII 96813  
Phone: (808) 527-4443 • Fax: (808) 527-4875



JEREMY HARRIS  
MAYOR

KENNETH E. SPRAGUE, P.E., Ph.D.  
DIRECTOR  
DARYL FITZMAURICE  
DEPUTY DIRECTOR  
IN REPLY REFER TO:  
RE 85-008

August 4, 1989

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

Dear Mr. Hayashida:

Subject: Keehi Corporation Yard, HWY-PS-2.3983

Thank you for reviewing the Draft Environmental Assessment prepared for the subject project. We offer the following responses to your comments in the order presented.

1. We will comply with the Federal Highway Administration requirement on the storage of hazardous and flammable materials in the interstate right-of-way.
2. We plan to install a fire flow line along the Keehi Transfer Station Access Road where none now exists. The Honolulu Fire Department has appraised us that an onsite fire hydrant may be required, and if required, one will be provided. All building construction will comply with the City and County of Honolulu Uniform Fire Code. Building plans will be submitted to the Department of Transportation for review.
3. We will meet with your staff to discuss:
  - a) the space requirements of your Highways Division Oahu District Office;
  - b) future seismic retrofitting of freeway structures; and
  - c) the suitability of the site as related to our structure requirements.
4. We do not plan to remove all onsite trees. Trees will be selectively removed, and those that will be retained should not interfere with vehicle operations. Trees to be retained will be flagged in the field and identified on design drawings. Landscape plans will be submitted to the Department of Transportation for review.

Mr. Kazu Hayashida  
August 4, 1989  
Page 2

Most of the trees that motorists view between the in- and outbound lanes of the Keehi Interchange at Middle Street are growing in an around an earthen drainage ditch that crosses and helps to drain the property. We would seek to remove trees from the ditch if their continued growth would obstruct or impede runoff flow in the ditch.

5. Your comment suggests that all 65 trucks to be parked on the site are refuse collection trucks. Refuse collection trucks make up the greater part of the fleet, but all the collection trucks are not used daily. Currently, thirteen 3-man collection trucks and 16 automated trucks collect refuse in the Honolulu Collection District. Two bulky item trucks and two front loaders are also used. Pickup trucks are used by supervisors who are out in the field most of the day and also by mechanics who respond to trouble calls.

The type and number of backup vehicles that would generally remain in the yard include: 7 20-cy rearloaders, 3 13-cy lane trucks, 6 automated collection trucks, 1 frontloader, 1 bulky item truck, 1 stake truck, 1 flatbed truck, 6-7 pickup trucks, and 1 station wagon.

The composition of our fleet of trucks, particularly the number of 3-man collection trucks, will change as neighborhoods in the Honolulu Collection District are converted to automated pickup and more automated trucks are added to our fleet.

Collection trucks and their hoppers are emptied daily, thereby minimizing odors. All vehicles are washed weekly. Should complaints of odor in the area increase because of the new Corporation Yard, the Refuse Division will evaluate its procedures to further mitigate the problem.

6. A soils investigation will be conducted as part of the design process. The study will be forwarded to the Department of Transportation for review.
7. Design drawings will be submitted to the Department of Transportation for review.
8. A drainage study will be prepared and submitted to the Department of Transportation for review.

We thank the Department of Transportation for participating in the environmental assessment review process. Your comments and our responses will be included in the Final Environmental Assessment.

Sincerely,

KENNETH E. SPRAGUE  
Director