DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 11TH FLOOR
HONOLULU, HAWAII 96813
Phone: (808) 768-8480 • Fax: (808) 768-4567
Web site: www.honolulu.gov

JUL 23 2012

PETER B. CARLISLE
MAYOR

LORI M.K. KAHIKINA, P.E.
DIRECTOR

CHRIS TAKASHIGE, P.E.
DEPUTY DIRECTOR

FILE COPY

473922

July 5, 2012

RECEIVED
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OFC. OF ENVIRONMENTAL
QUALITY CONTROL

Mr. Gary Hooser, Director
Office of Environmental Quality Control
State of Hawaii
235 South Beretania Street, Suite 702
Honolulu, Hawai'i 96813

Dear Mr. Hooser:

Subject: Draft Environmental Assessment (DEA) for
Pearl City Corporation Yard
Division of Road Maintenance Facility Redevelopment
Tax Map Key (1) 9-7-023: Portion of 009 & 010
'Ewa District, Island of O'ahu, Hawai'i

The Department of Design and Construction has reviewed the DEA for the subject project and anticipates a Finding of No Significant Impact. Please publish a notice of the availability of the DEA in the next available OEQC Environmental Notice.

We have enclosed a completed OEQC Publication Form and one (1) copy of the document in pdf format on a CD and one (1) hard copy of the DEA.

Please contact Mr. Clyde Tomihara at 768-8468 if you have any questions.

Very truly yours,

Lori M.K. Kahikina, P.E.
Director

LMKK:li

Enclosures

Agency Action EA
Chapter 343, HRS
Publication Form

Project Name: **Draft Environmental Assessment, Pearl City Corporation Yard, Division of Road Maintenance Facility Redevelopment**

Island: **O‘ahu**

District: **‘Ewa**

TMK: **(1) 9-7-023: Portion of 09 & 10**

Permits: **Plan Review, Sediment and Erosion Control Plan, Construction Plan Review, Conditional Use Permit, Grading and Building Permit, National Pollutant Discharge Elimination System**

Proposing/Determination: Finding of No Significant Impact

Agency: **City and County of Honolulu, Department of Design and Construction**
Responsible Official: Lori M.K. Kahikina, P.E., Director
Contact: Clyde Tomihara, tel. 768-8468

Consultant: **R.M. Towill Corporation**
Contact: Chester Koga, AICP, email: chesterk@rmtowill.com
2024 N. King Street, Suite 200
Honolulu, Hawai‘i 96819
Telephone: 808-842-1133

Project Summary: See attachment

Summary (Provide proposed action and purpose/need in less than 200 words. Please keep the summary brief and on this one page)**:**

The Department of Design and Construction is planning the redevelopment of the Department of Roads and Maintenance (DRM) baseyard to improve the operational efficiency of the facility and meet the growing service demands of the ʻEwa district. The proposed project would occupy 4.7 acres that consists of two parcels of land owned by the State of Hawaiʻi and the City and County of Honolulu, the Tax Map Key (TMK) parcels are (1) 9-7-023: 009 and 010. The proposed project would take place over three phases for the sake of funding flexibility and to sustain operations during construction.

- Phase one: Demolish and replace existing office building, aggregate storage bins, paved area for interim private owned vehicles (POV) parking (25 cars), construct new perimeter chain link fencing, and gates for the DRM yard, upgrade security system to monitor the corporation yard's three gates, and include a new emergency generator.
- Phase two: Construct new warehouse and paint storage shed, expanding interim POV parking area, pave new area for permanent POV parking lot and loading zone areas, construct a new underground stormwater retention basin and related site drainage improvements, construct a new exit only road up to third street (optional).
- Phase three: Demolish and replace carport (for large vehicles and equipment), construct a new dewatering/drying basin, pavement for the balance of DRM yard, and constructing a new wash area and recycling system (optional).

Project costs are estimated at $11.2 million (including all optional items). Phase 1 construction start time is schedule for fall 2013.

Status: (30-day comment period or FONSI)

Draft Environmental Assessment

Pearl City Corporation Yard, Division of Road Maintenance, Facility Redevelopment

Department of Design and Construction

District of ʻEwa, Island of Oʻahu, Hawaiʻi

Tax Map Key: (1) 9-7-23: portion of 9 & 10

July 2012

Department of Design and Construction
City and County of Honolulu
650 S. King Street, 11th Floor
Honolulu, HI 96813

Draft Environmental Assessment

Pearl City Corporation Yard
Division of Road Maintenance
Facility Redevelopment

Department of Design and Construction

District of ʻEwa, Island of Oʻahu, Hawaiʻi

Tax Map Key: (1) 9-7-23: portion of 9 & 10

July 2012

Prepared For:
Department of Design and Construction
City and County of Honolulu
650 S. King Street, 11th Floor
Honolulu, HI 96813

R. M. TOWILL CORPORATION
SINCE 1930

Prepared by:

R.M. Towill Corporation
2024 North King Street, Suite 200
Honolulu, Hawaiʻi 96819
22016-0P

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

ACRONYMS

AES	Division of Automotive Equipment Service, Department of Facility Maintenance
BMPs	Best Management Practices
CATV	Cable Television
CCH	City and County of Honolulu
CCTV	Closed Circuit Television
CDA	Civil Defense Agency
CWA	Clean Water Act of 1972, as amended
DDC	Department of Design and Construction
DOT	Department of Transportation
DPP	Department of Planning and Permitting
DRM	Division of Road Maintenance, Department of Facilities Management
DLNR	Department of Land and Natural Resources
DOH	Department of Health
FONSI	Finding of No Significant Impact
gpd	Gallons per day
HAR	Hawai‘i Administrative Rules
HECO	Hawaiian Electric Company
HRS	Hawai‘i Revised Statutes
LBS	Pounds
LEED	Leadership in Energy and Environmental Design
MSL	Mean Sea Level
NRCS	Natural Resources Conservation Service
NPDES	National Pollutant Discharge Elimination System
PN	Persons
PCCY	Pearl City Corporation Yard
POV	Privately Owned Vehicle
PUC	Primary Urban Center
REFUSE	Division of Refuse, Department of Environmental Services
SHPD	State Historic Preservation Division
SMA	Special Management Area
TMK	Tax Map Key
UH	University of Hawai‘i
VOG	Volcanic Haze

PROJECT SUMMARY

Project:	Pearl City Corporation Yard (PCCY), Division of Road Maintenance Facility Redevelopment
Proposing Agency:	Department of Design and Construction (DDC) City and County of Honolulu 650 S. King Street, 11th Floor Honolulu, HI 96813
Owner:	City and County of Honolulu (CCH) and State of Hawai‘i
Accepting Authority:	Department of Design and Construction Ms. Lori M. K. Kahikina, P.E., Director City and County of Honolulu Contact: Clyde Tomihara Tel. 768-8468
Agent:	R. M. Towill Corporation (RMTC) 2024 North King Street, Suite 200 Honolulu, Hawai‘i 96819 Tel. 808-842-1133, email: chesterk@rmtowill.com
Location:	District of Pearl City, Island of O‘ahu, Hawai‘i
Tax Map Key:	(1) 9-7-23: portion of 009 & 010
Proposed Action:	Redevelopment of the Division of Road Maintenance (DRM) facilities is proposed to improve the operational efficiency and to meet the growing service demands. The proposed project would consist of: 1) integrating parcel 10 (vacant portion of the base yard), 2) replacing and improving the DRM’s operational facilities (three phases), 3) acquiring Leadership in Energy and Environmental Design (LEED) level of Silver for all building greater than 5,000 sf. LEED is intended to reduce and mitigate potential impacts of the proposed development by utilizing sustainable construction technologies and approaches, in terms of site development, water use efficiency, wastewater disposal options, energy demand, air quality, noise control and resource considerations. Three phases are proposed for the project. <u>Phase one:</u> Demolish and replace the existing office and aggregate storage bins, paved area for interim private owned vehicles(POV) parking (25 cars), construct new perimeter chain link fencing, and gates for the DRM yard, upgrade security system to monitor the corporation yard’s three gates, and include a new emergency generator. <u>Phase two:</u> Construct new warehouse and paint storage shed, expanding interim POV parking area, pave new area for permanent POV parking lot and loading zone areas, construct a new underground stormwater retention basin and related site drainage improvements, construct a new exit only road up to third street (optional).

	Phase three: Demolish and replace carport (for large vehicles and equipment), construct a new dewatering/drying basin, pavement for the balance of DRM yard, and constructing a new wash area and recycling system (optional). Project costs are estimated at $11.2 million (including all optional items).
Land Area Affected:	Approximately 4.7 acres for the base yard plus the ingress and egress points from Second, Third Street, and Fourth Streets.
Present Use:	Public building (base yard) is currently occupied by the DRM, Department of Facility Maintenance / Division of Automotive Equipment Service (AES), and the Department of Environmental Services / Division of Refuse (REFUSE).
State Land Use District:	Urban Land Use District.
Zoning:	Residential District (R-5).
Special Management Area (SMA):	The site is not in SMA.
Permits Required:	Department of Health • National Pollutant Discharge Elimination System Permit Department of Planning and Permitting • Conditional Use Permit • Grading and Building Permit
Anticipated Determination:	Finding of No Significant Impact (FONSI)

SECTION 1
INTRODUCTION

1.1 PROJECT OVERVIEW

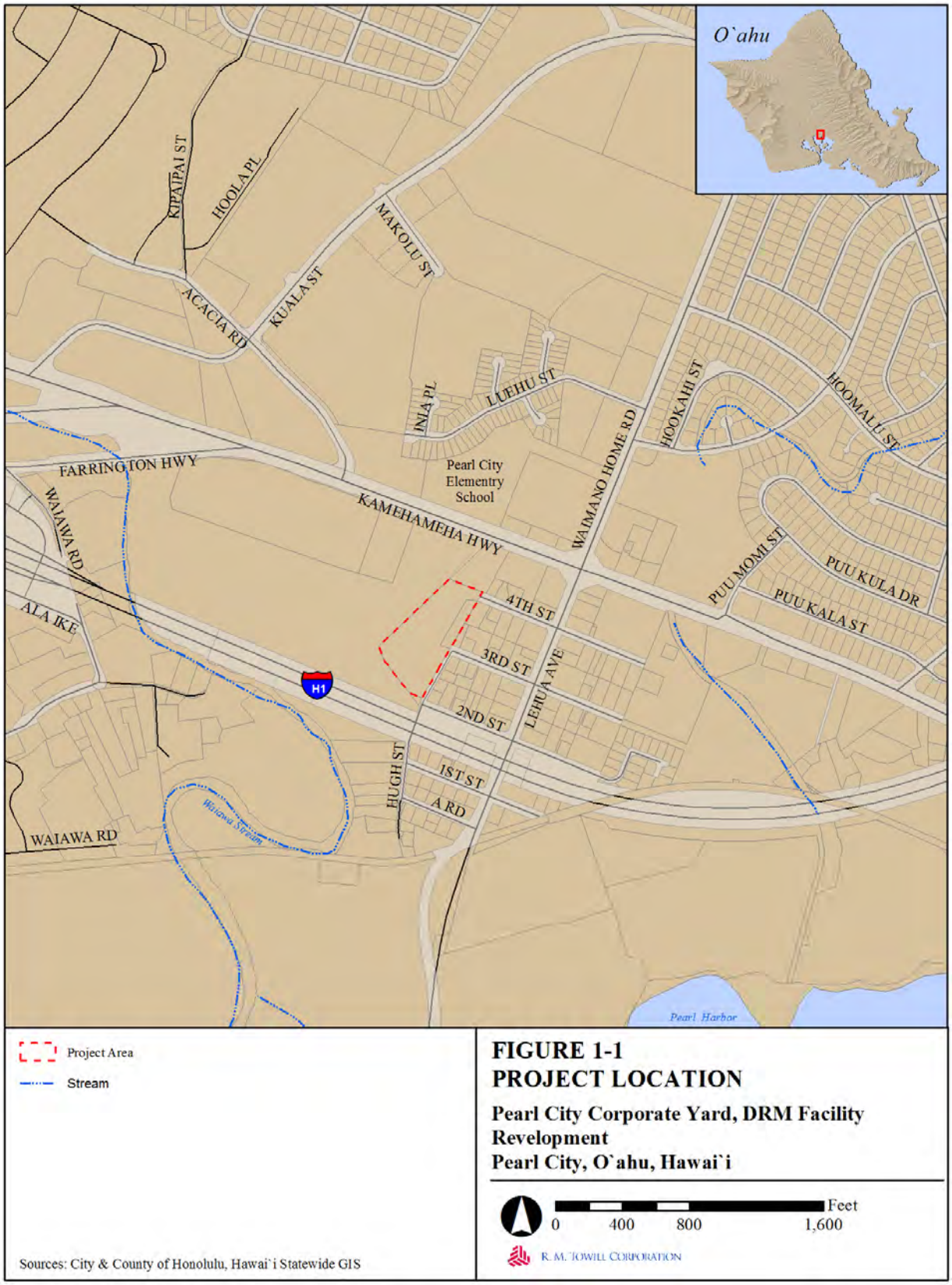
The project area is located in the *Mānana ahupua‘a* area in Pearl City on the island of O‘ahu (see **Figure 1-1).** The proposed project consists of redeveloping the DRM portion of the PCCY. Redevelopment involves replacing and improving the DRM's operational facilities. The purpose of the project is to meet the DRM's growing service demands for the ‘Ewa District by replacing the aging facilities.

Currently the project site consists of two parcels of land owned by the State of Hawai‘i and the City and County of Honolulu (referred to as the City and County); the Tax Map Key (TMK) parcels are (1) 9-7-023: 009 and 010 (see **Figure 1-2)**. Redevelopment would include integrating parcel 10, a vacant land portion of the base yard.

The PCCY has been in operation since 1968. Today, the 4.7-acre base yard has become spatially taxed beyond capacity by the decades of use and expansion by the three municipal agencies that occupy it:

- Division of Road Maintenance (DRM), a division of the Department of Facility Maintenance
- Division of Automotive Equipment Services (AES), a division of the Department of Facility Maintenance
- Division of Refuse, a division of the Department of Environmental Services (REFUSE)

On O‘ahu the PCCY is one of ten base yards that provide road maintenance service on the island (see **Figure 1-3)**. The proposed project is necessary to meet the growing service demands for the ‘Ewa district, which includes the area between ‘Aiea and Makakilo areas, as well as back-up coverage for the Wai‘anae and Waialua districts.


O`ahu
KIPAIPAI ST
HOOLA PL
MAKOLU ST
ACACIA RD
KUALA ST
INIA PL
LUEHU ST
HOOKAHI ST
HOOMALU ST
FARRINGTON HWY
Pearl City Elementry School
WAIMANO HOME RD
KAMEHAMEHA HWY
WAIAWA RD
PUU MOMI ST
PUU KULA DR
PUU KALA ST
ALA IKE
4TH ST
3RD ST
LEHUA AVE
H1
2ND ST
HUGH ST
1ST ST
A RD
WAIAWA RD
Waiawa Stream
Pearl Harbor
Project Area
Stream
Sources: City & County of Honolulu, Hawai`i Statewide GIS
FIGURE 1-1
PROJECT LOCATION
Pearl City Corporate Yard, DRM Facility Revelopment
Pearl City, O`ahu, Hawai`i
0
400
800
1,600
Feet
R. M. TOWILL CORPORATION

9 7 23

CORRECTED
JAN 10 1979
SEP 1 1950
DEC 21 1950
MAY 3 1951
JAN 28 1957
APR 4 1968
APR 27 1968
MAY 7 1968
FEB 28 1979
NOV 3 1981
NOV 3 1981
AUG 24 1984

PROJECT AREA

28.733 Ac.

FIGURE 1-2. PARCEL MAP

FIRST		DIVISION
ZONE	SEC.	PLAT
9	7	23

CONTAINING PARCELS

SCALE: 1 in. = 100 ft.

PRINTED

Dwg. No: 1788
By: C.S.C. of U.K.H. Dec. 1933
Source: Tax Maps Bureau

Revised To:

Por. of WAIAWA & MANANA, EWA, OAHU.

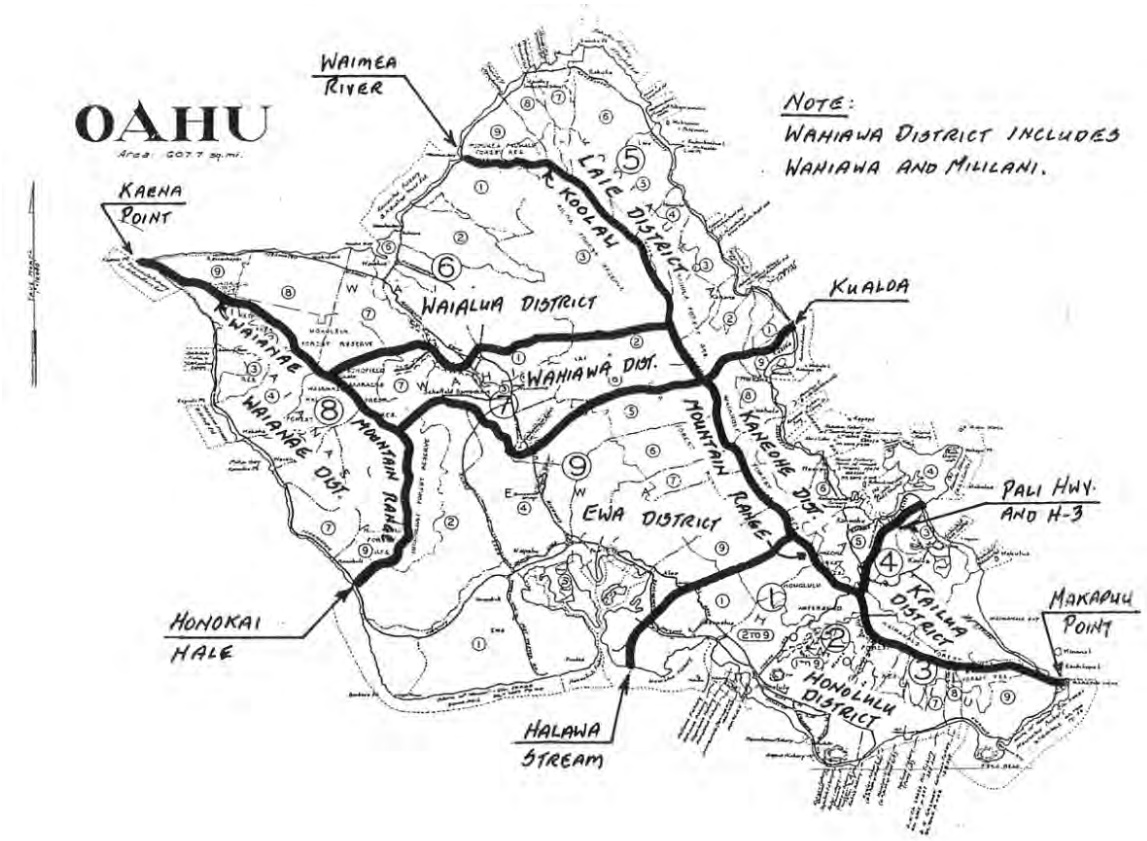


FIGURE 1-3. DRM DISTRICT

The DRM is primarily responsible for the maintenance of all streets and municipal parking lots under the jurisdiction of the City and County of Honolulu. Street maintenance includes but is not limited to:

- Maintenance of asphalt & concrete pavement, re-striping of pavement markings, replacement of raised pavement markers,
- Maintenance of City-owned streams, channels, ditches and other flood control and storm drainage systems
- Maintenance of bus stops and their litter containers
- Provision of dead animal pick up
- Provision of emergency work caused by both natural and terrorist/ homeland security disasters
- Assistance to other City agencies and departments in special situations and emergencies

1.2 PROJECT PURPOSE AND NEED

Over the past century, O‘ahu has seen its population increase more than 15 times since 1900 (from about 58,500 in 1900 to 953,207 in 2010). In the last three decades, ‘Ewa, Central O‘ahu

and Primary Urban Center (PUC) have seen a majority of the Island's growth; 'Ewa has seen significant growth since 1990. One of the fundamental objectives of the General Plan is to direct growth to appropriate areas of O'ahu. To guide implementation of the "directed growth" policy, the General Plan provides a set of population percentages (I Population, Objective C, Policy 4) to describe the desired distribution of the island's population amongst the eight planning areas for the year 2025. These percentages are intended to serve as "markers" to measure how well the directed growth policy is being achieved.

The area population growth trends from 2000 to the year 2035, both in terms of population numbers and in terms of each area's share of the total O'ahu population is displayed in **Figure 1-4.** Superimposed on the graph are the General Plan markers, which have been placed at the year 2025. The graph shows clearly that all the planning areas are trending in the direction envisioned by the General Plan. The graph also shows that the 'Ewa population is trending towards increasing faster the projected population distribution (CCH, 2011). To keep up with the anticipated population growth and to improve the operational efficiency, redevelopment of the DRM base yard is proposed.

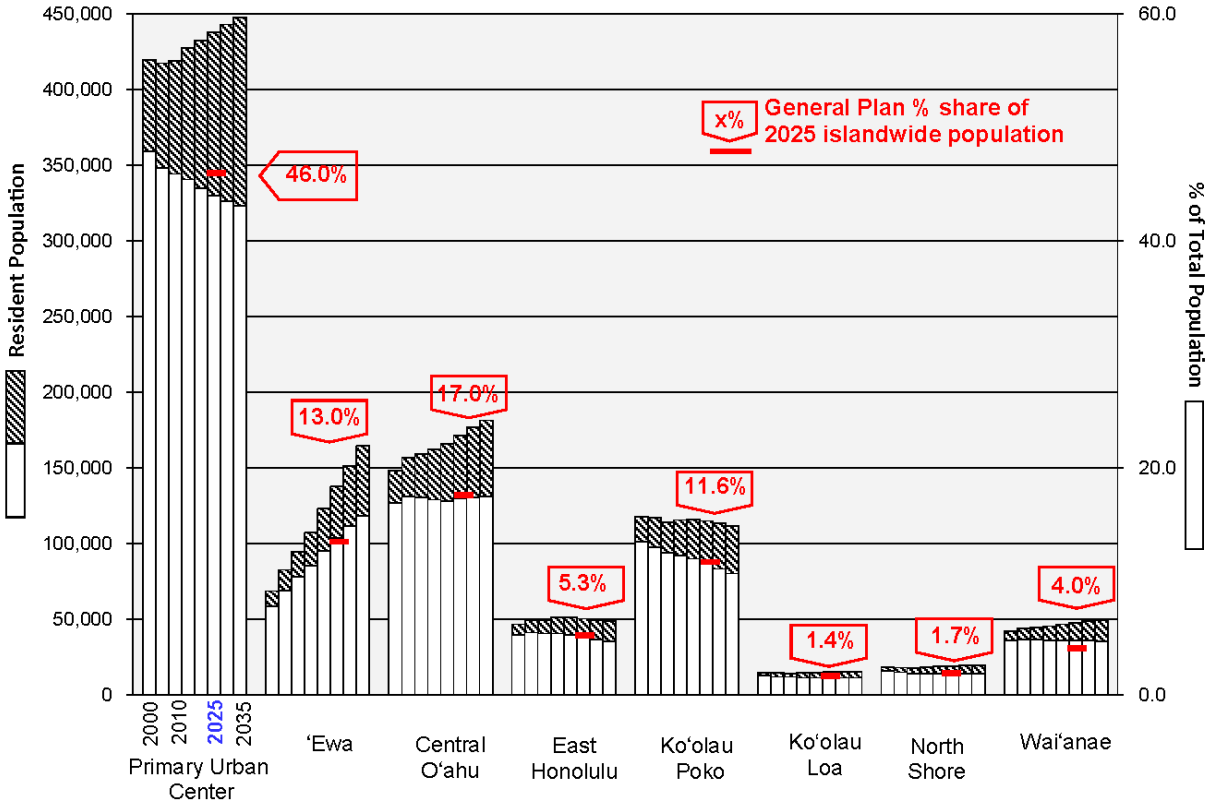


FIGURE 1-4. POPULATION GROWTH AND GENERAL PLAN POPULATION DISTRIBUTION POLICY

In 1968, the first recorded structures on the site include several small buildings and sheds, used primarily for AES operations, and a caretaker's house. At that time the yard consisted of parcel 9 (4.3 ac) only. Between 1981 and 1989, the majority of the existing yard facilities were constructed over 4 phases:

- 1981- Phase 1 REFUSE Division carport with office and toilets
- 1984- Phase 2 DRM office and locker/shower building, carport, secured storage building, aggregate storage bins, and REFUSE Division 2nd carport
- 1987- Phase 3 AES carport, fuel station, service maintenance shop (tire/lube), and DRM 2nd parking carport
- 1989- Phase 4 AES Repair Shop

In 2005, the City and County purchased the parcel 10 (0.43 ac). Current tax maps indicate that the parcels remain unconsolidated. Although the added parcel lies adjacent to DRM's yard area, it remains undeveloped since its acquisition and is currently vacant. Incorporating parcel 10 would allow the DRM to utilize the land and operate more efficiently. The DRM facilities at PCCY are one of the City and County's older facilities which are not only challenged by obsolete operational and staffing accommodations, but also by constrained by site conditions and yard security issues.

1.3 BASIS FOR THE ENVIRONMENTAL ASSESSMENT

In accordance with Chapter 343, Section 5, Hawai‘i Revised Statutes (HRS), this project involves the following action that requires the preparation of an environmental assessment (EA):

(1) Propose the use of state or county lands or the use of state or county funds.

Pursuant to the requirements of Chapter 343 HRS, and Chapter 11-200, Hawai‘i Administrative Rules (HAR), the proposing agency, the DDC, has determined that the proposed project is not expected to have significant environmental effects. Based on analysis and review of environmental conditions, project effects, and proposed mitigation measures, it is anticipated that a Finding of No Significant Impact (FONSI) will be issued for this project.

1.4 PROPOSING AGENCY AND ACCEPTING AUTHORITY

In accordance with Chapter 343, Section 5, HRS, the proposing agency, and accepting authority for this EA is the DDC.

SECTION 2
PROJECT DESCRIPTION AND ALTERNATIVES CONSIDERED

2.1 BACKGROUND INFORMATION

2.1.1 PROJECT LOCATION

The PCCY is approximately 10 miles west of Honolulu, located at 952 Third Street. The base yard is *makai* (towards the sea) of Kamehameha Highway, between H-1 Viaduct and Cutter Dodge, and flanked by the University of Hawai‘i’s (UH) Urban Garden Center on its west and residential neighbors on its east).

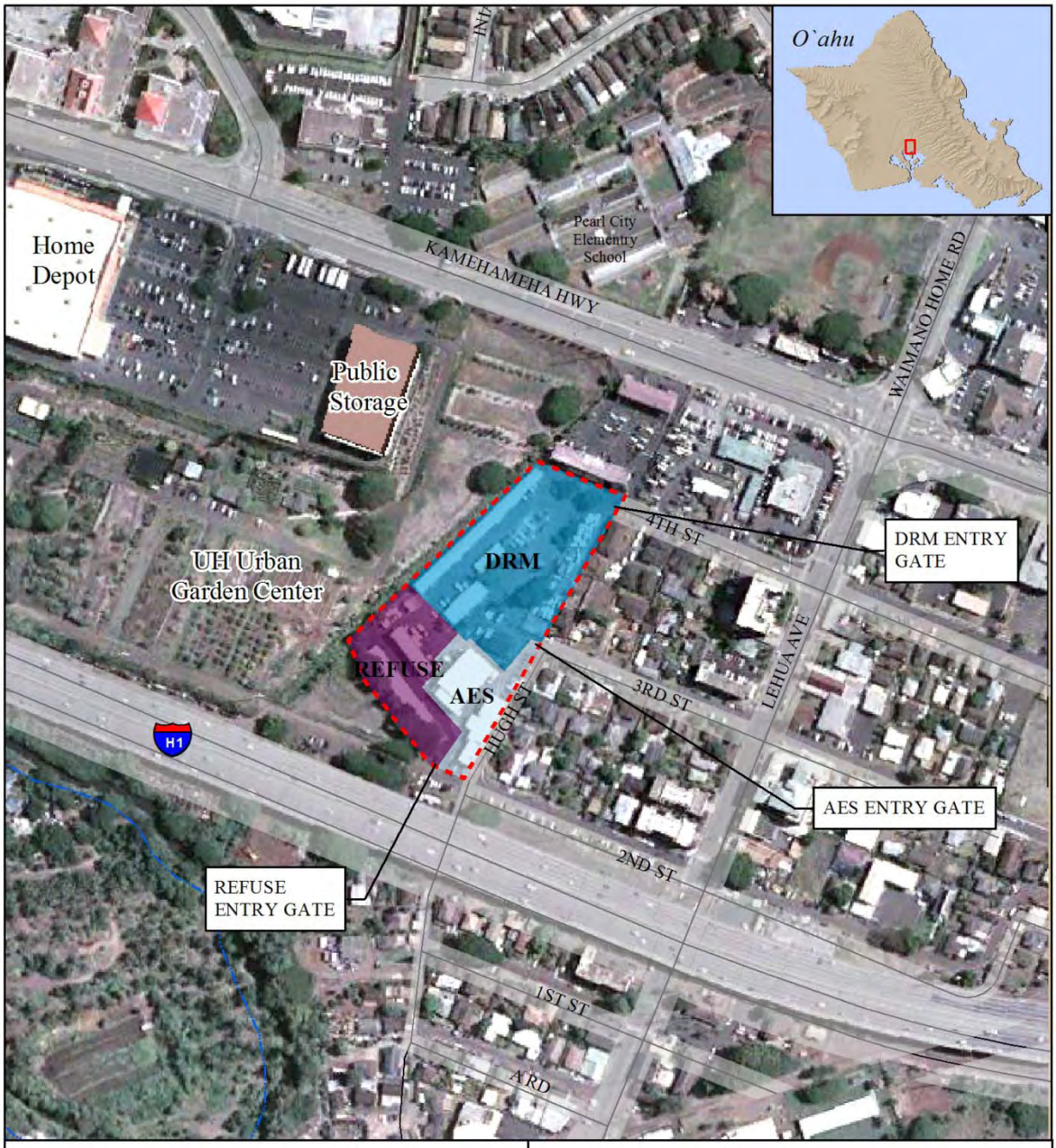
2.1.2 OWNER INFORMATION

The PCCY project site is located on land owned by the State of Hawai‘i and the City and County. The base yard is managed by the City and County.

2.2 PROJECT DESCRIPTION

The DRM is separated into three operational divisions as depicted in **Figure 2-1**. Each division has its own gated entry- DRM from Fourth Street, AES from Third Street and REFUSE from Second Street. The AES and REFUSE are integrated on the south end of the site and are separated from the DRM by a chain-link fence and sliding gate. The nature of services provided by these divisions requires circulation, storage, and maintenance of heavy vehicles and heavy equipment within the base yard. **Figure 2-2** shows the existing site plan. **Appendix A** includes a more detailed set of drawings for Phases 1 through 3 of the Master Plan. Currently the DRM personnel count is at 24 persons (PN) and is projected to grow to 45 PN per consultation with the District Supervisor.

The first step of the project would be to integrate parcel 10 (as discussed in Section 1.3), then phasing the DRM base yard improvements as City and County funding is available. The integration of parcel 10 would allow the DRM to utilize the land and operate more efficiently (see **Figure 1-2**). The DRM facilities would occupy approximately two-thirds of the 4.7-acre corporation yard when the proposed improvements are fully implemented.


O`ahu
Home Depot
KAMEHAMEHA HWY
Pearl City Elementry School
WAIMANO HOME RD
Public Storage
UH Urban Garden Center
DRM
REFUSE
AES
4TH ST
DRM ENTRY GATE
3RD ST
LEHUA AVE
HUGH ST
AES ENTRY GATE
2ND ST
REFUSE ENTRY GATE
1ST ST
ARD
H1
Project Area
AES Area
DRM Area
REFUSE Area
Sources: City & County of Honolulu, Hawai`i Statewide GIS
FIGURE 2-1
AERIAL VIEW OF PROJECT AREA
Pearl City Corporate Yard, DRM Facility Revelopment
Pearl City, O`ahu, Hawai`i
0 125 250 500 750 Feet
R. M. Towill Corporation

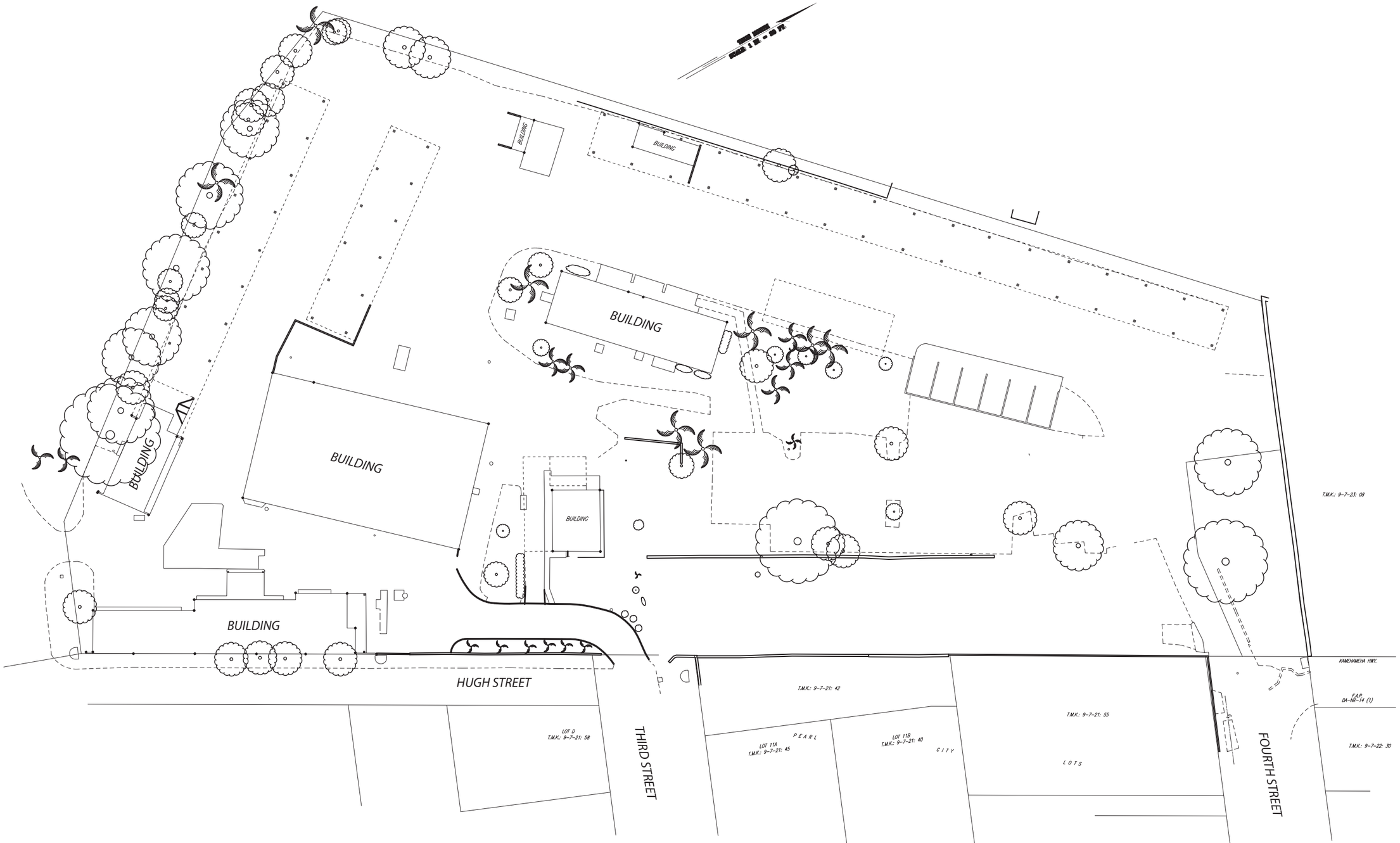


FIGURE 2-2. EXISTING SITE PLAN

CONTROLPOINT SURVEYING, INC.
1100 SUGER ESTATES DRIVE, SUITE 1000
HONOLULU, HAWAII 96814

TOPOGRAPHIC SURVEY MAP
C&C – PEARL CITY CORPORATION YARD
–
TAVARA & KAMANA, ETA., OAHU, HAWAII

REV.	PLOTTED:
FINAL	MARCH 11, 2009

SCALE : 1 IN. = 20 FT.
TAX MAP KEY : 9 - 7 - 23: 10
DATE : JANUARY 9, 2009
DRAFTSMAN : EM
DRAWING : 07220.DWG
JOB. NO. : 07220
FIELD BOOK: 2244, 2000
FLD. WORK BY : FLD. CREW,

Funding for Phase 1 has been approved by the City and County but funding for Phase 2 and 3 are subject to approval. Descriptions of the proposed improvements are described below in Tables 2-1 through 2-3. , **Figures 2-3 and 2-4** illustrate the DRM site phasing and proposed site plan. **Figures 2-5 and 2-6** illustrate the office, warehouse, carport structures' floor plans, and structural elevations. **Figure 2-7** shows the aggregate storage bins and cross section.

For funding feasibility and flexibility to sustain operations during construction the proposed DRM redevelopment would take place over three phases. The proposed construction would consist of replacement of nearly all of DRM's facilities with the exception of the:

- caretaker's residence and its driveway
- main electrical transformer
- majority of its underground utility lines and
- two 2000 gallon propane Liquefied Petroleum Gas (LPG) tanks that services the AES fueling station

Table 2-1 DRM REDEVELOPMENT – PHASE 1

PHASE 1	
Demolish and Replace Office and Staff Building	
Demolish and Replace Aggregate Storage Bins	
Demolish Small Carport	
Construct New Paved Area for Interim POV Parking of Approximately 25 Cars	
Construct New Perimeter Chain-Link Fencing and Gates for the DRM Yard	
Construct New Security Video Security System to Monitor the Corporation Yard's Three Gate Entries	
Construct Pad for New Emergency Generator	
Cost Estimate:	**$3,900,000**

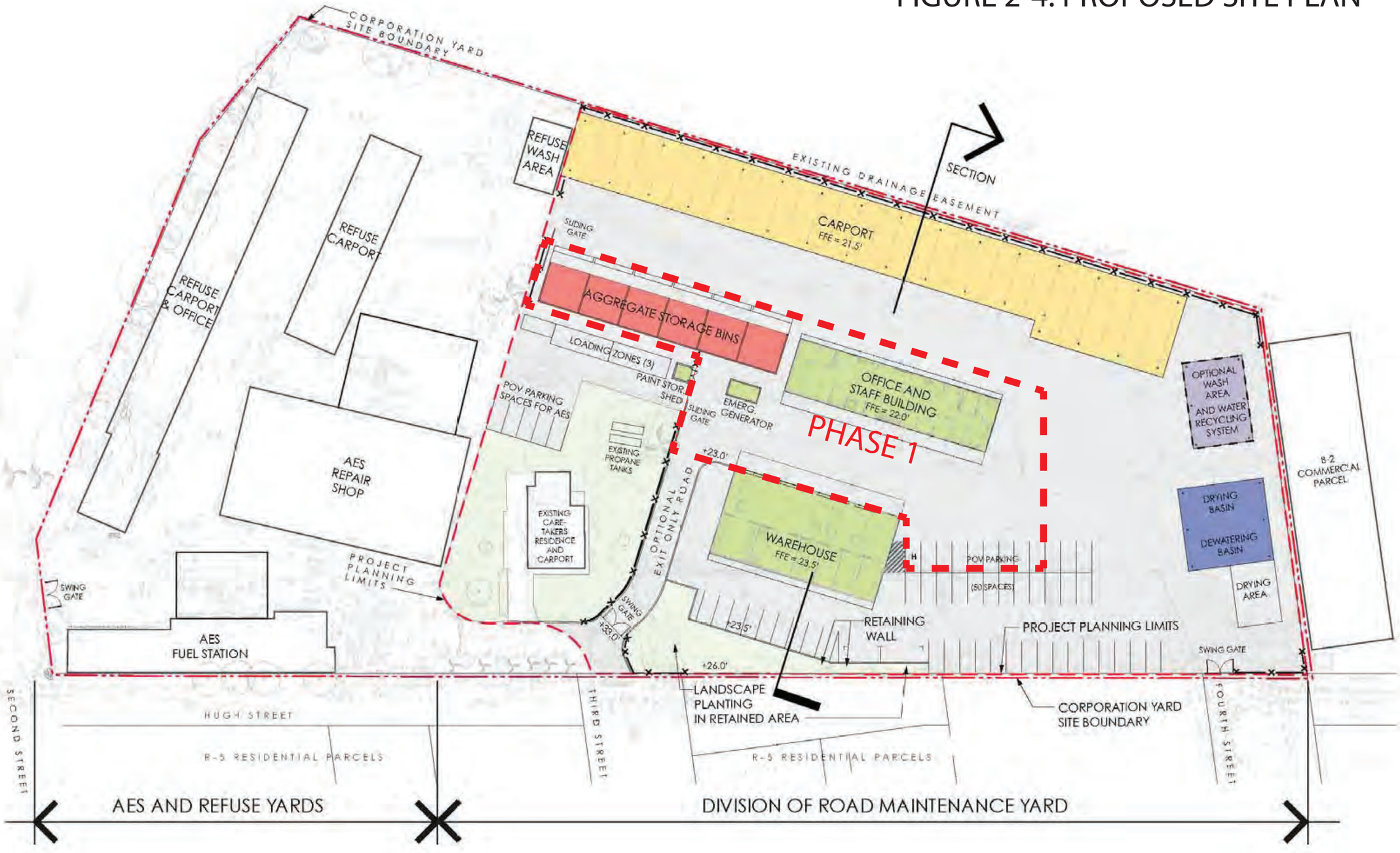
Table 2-2 DRM REDEVELOPMENT – PHASE 2

PHASE 2	
Construct New Warehouse	
Construct New Paint Storage Shed	
Expand Phase 1 POV Paved Area for Permanent POV Parking and Loading Zone Areas	
Construct New Underground Stormwater Retention Basin and Related Site Drainage Improvements	
***Option Item**: Construct New Exit-Only Road up to Third Street.*	**$300,000**
Cost Estimate: Base (w/out option)	**$2,700,000**

Table 2-3 DRM REDEVELOPMENT – PHASE 3

PHASE 3	
Demolish and Replace Carport (for large vehicles and equipment)	
Construct New Dewatering/ Drying Basin	
Construct New and Reconstruction of Pavement for Balance of DRM Yard Site	
***Option Item**: Construct New Wash Area and Water Recycling System*	**$900,000**
Cost Estimate: Base (w/out option)	**$3,400,000**

FIGURE 2-4. PROPOSED SITE PLAN

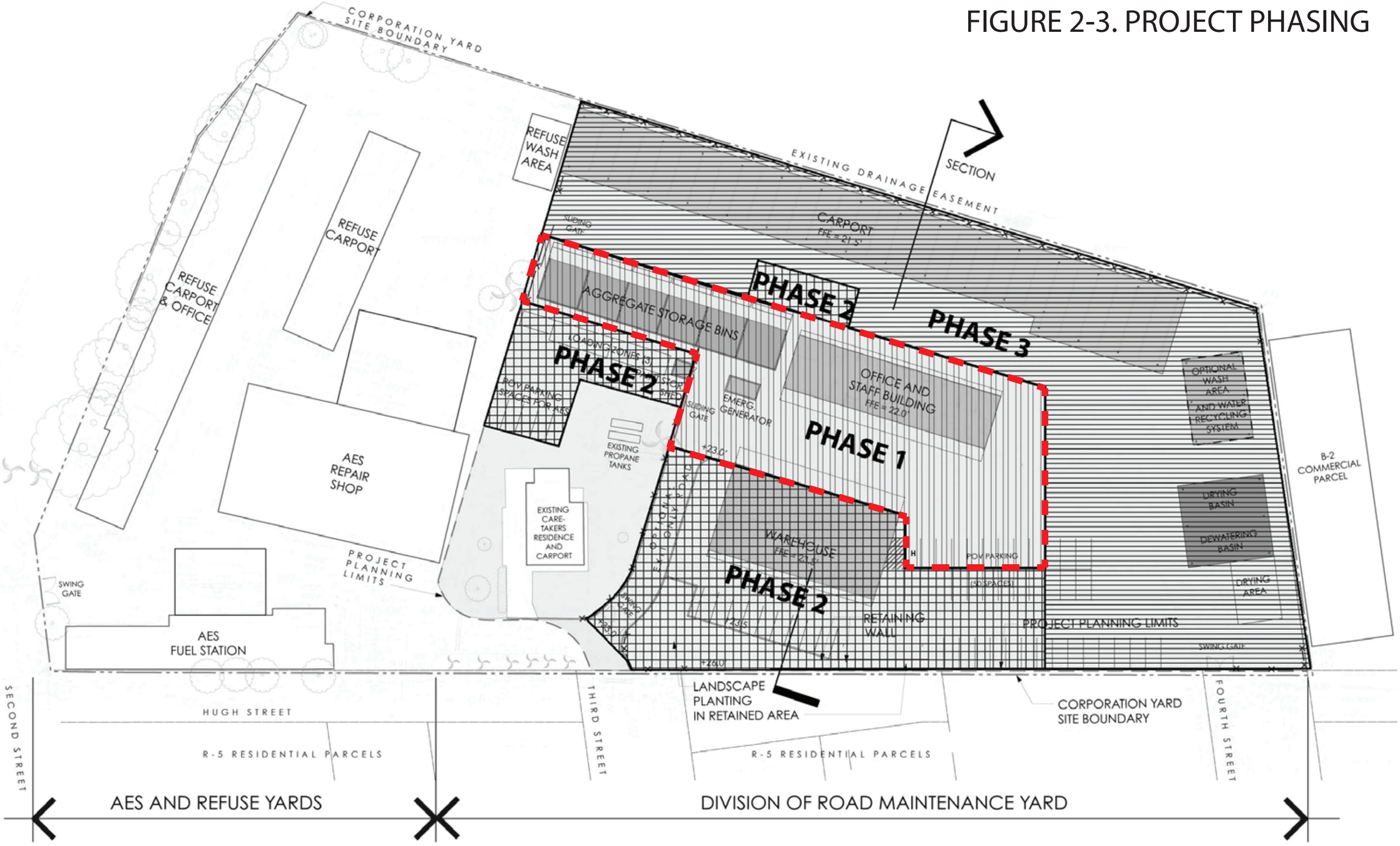


MASTER PLAN FOR THE DIVISION OF ROAD MAINTENANCE

DEPARTMENT OF FACILITY MAINTENANCE AT THE PEARL CITY CORPORATION YARD

CITY AND COUNTY OF HONOLULU

FIGURE 2-3. PROJECT PHASING



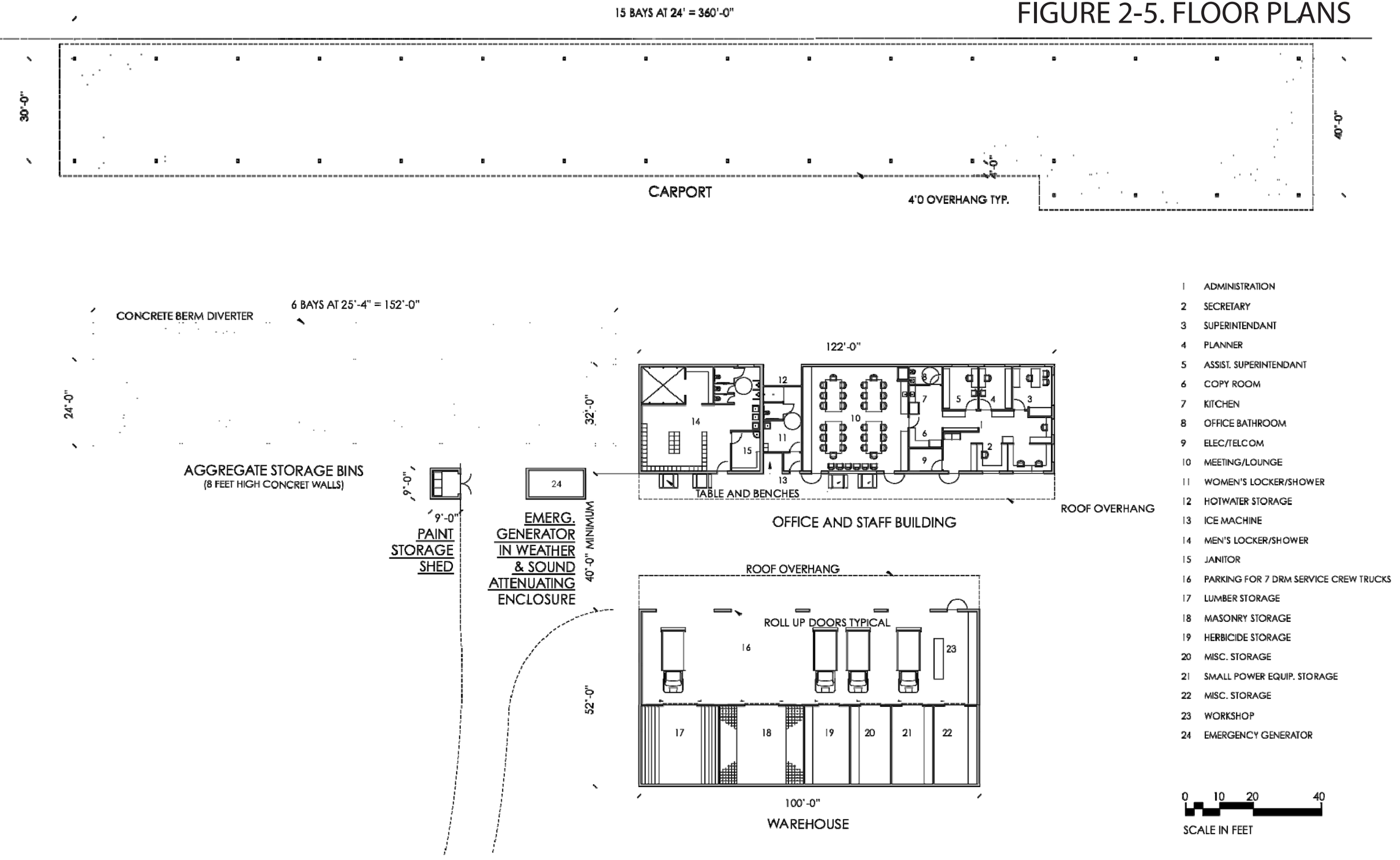
EXECUTION STRATEGY - 3 CONSTRUCTION PHASES THAT ALLOW DRM TO SUSTAIN YARD OPERATION DURING AND BETWEEN PHASES

MASTER PLAN FOR THE DIVISION OF ROAD MAINTENANCE

DEPARTMENT OF FACILITY MAINTENANCE AT THE PEARL CITY CORPORATION YARD

CITY AND COUNTY OF HONOLULU

FIGURE 2-5. FLOOR PLANS



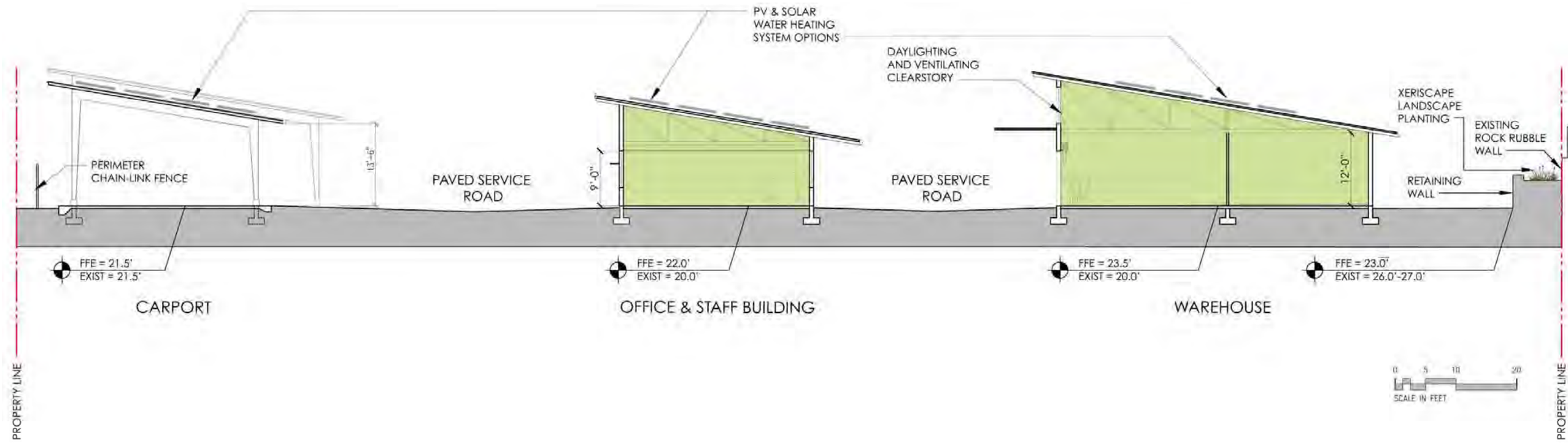
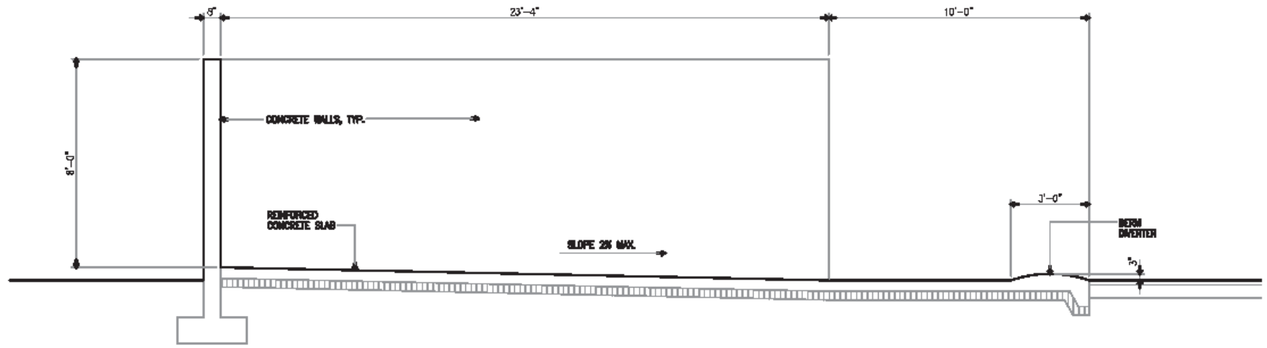


FIGURE 2-6. STRUCTURAL ELEVATIONS



A / A–0 **SECTION**
SCALE: 3/8" = 1'-0"

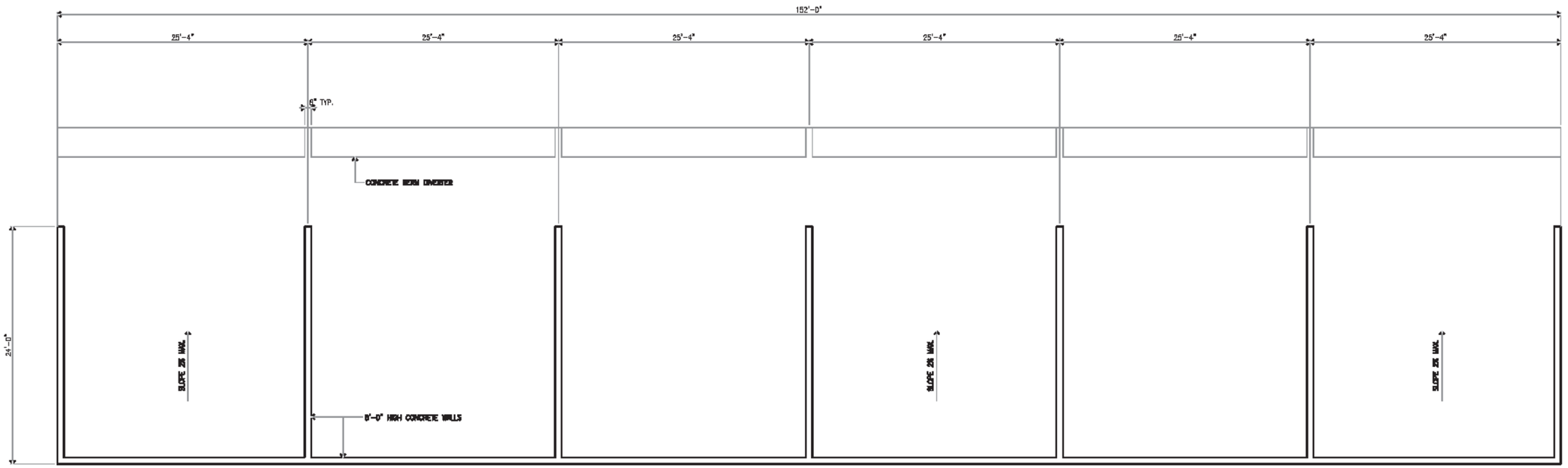


FIGURE 2-7. AGGREGATE STORAGE BINS AND CROSS-SECTION

4 2 0 4 8 12
Scale: 3/16"=1'-0"

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY & COUNTY OF HONOLULU

PEARL CITY CORPORATION YARD RENOVATIONS

952 THIRD STREET, PEARL CITY, OAHU, HAWAII

TMK: 9-7-23: 09

DESIGN BY: C.L.
DRAWN BY: S.O.
CHECKED BY: C.L.
DATE: JANUARY 2012
PROJECT NO.: 0
DRAWING NO.: A-3
SHEET NO. 0 OF 0
FILE DRAW FOLDER

2.3 PROJECT SCHEDULE AND COST

2.3.1 SCHEDULE

Completion of Permitting and Entitlements (Phase 1)	June 2013
Bid and Award (Phase 1)	September 2013
Start of Construction (Phase 1)	Fall 2013
Phase 2	TBD
Phase 3	TBD

2.3.2 COST

According to the City and County, Six-Year Capital Improvements Program and Budget for Fiscal Year 2012 – 2017 the proposed project is listed and funding for Phase 1 has been authorized, but subsequent funding for Phase 2 and 3 has not been obtained. Two optional items for consideration are; 1) new exit only road up Third Street ($300,000); and 2) new wash area and water recycling system ($900,000), phase two and three (respectively). Total budgeted costs are estimated at $11.2 million dollars.

2.4 ALTERNATIVES CONSIDERED

2.4.1 NO ACTION

Chapter 343, HRS requires that a "no-action" alternative be considered to serve as a baseline against which potential actions can be measured. The no-action alternative would involve no effort to redevelop the DRM base yard at PCCY. Under this option, environmental impacts resulting from work activities would be averted and project costs would be spared. However, with the "no-action" alternative, the redevelopment of the PCCY would not be undertaken. Neither the public nor City and County employees would benefit from the redevelopment and increased efficiency of the DRM.

2.4.2 ALTERNATIVE LOCATIONS OR STRATEGIES

Parcel 10 is not only owned by the City and County, but also well suited to the proposed use. Inclusion of parcel 10 and redevelopment of the DRM base yard would allow the property to be fully utilized. There do not appear to be any environmental or other disadvantages associated with the proposed site. No alternative sites have been advanced in this Environmental Assessment.

2.4.3 DELAYED ACTION

The delayed action alternative would postpone construction of the proposed base yard to an unspecified future date. Under this alternative, environmental impacts resulting from work activities would be delayed, but are anticipated to be generally the same as with the proposed project. Project costs would also be postponed to a later date. It is reasonable to assume that future costs for labor and materials would be greater than present day costs due to inflation. However, it is noted that delays in performing preventive maintenance could result in premature roadway deterioration, overtime pay, and additional significant indirect costs in the long term.

Although some upfront costs may be averted under this alternative, it would likely cost more to redevelop the base yard at a later date. Neglected roads steadily become more difficult to use, resulting in increased vehicle operating costs (more frequent repairs, more fuel use). This imposes a heavy burden on the economy: as passenger and freight services are diminished, there is potential for consequential loss of economic and social development opportunities. For these reasons, this alternative was rejected.

2.4.4 PROPOSED ACTION

The proposed inclusion of parcel 10 and redevelopment of the DRM base yard offers the provisions to efficiently store, maintenance, and operate the heavy vehicles and equipment within the base yard. The proposed project consists of three Phases as described in Tables 2-1 through 2-3. As directed growth in the ‘Ewa district and PUC is encouraged and populations increase adequate road maintenance and repair becomes increasingly significance. The proposed action would keep road maintenance in the ‘Ewa district in satisfactory operating condition for a longer period of time; therefore is the selected alternative.

SECTION 3
DESCRIPTION OF AFFECTED ENVIRONMENT, POTENTIAL IMPACTS AND PROPOSED MITIGATION

3.1 PHYSICAL ENVIRONMENT

3.1.1 CLIMATE

Air temperature in Hawai‘i has a muted annual cycle because of small season to season changes in solar radiation and the ocean’s moderating influence. Pearl City temperature typically can range from highs in the upper 80’s to lows near 62 degrees Fahrenheit (Honolulu Obsvy 702.2 weather station, 5.61 miles from Pearl City). The project area is located in an urbanized environment; its microclimate varies somewhat from the overall climate of the region. The core of the project area, with its abundance of brick, concrete, and asphalt surfaces tend to absorb the solar energy, heat up, and re-radiate that heat to the ambient air resulting in slight temperature differences.

Winds are primarily northeasterly trade winds. Occasionally, during the winter months, storms are accompanied by winds from the south. In general, the trades are more persistent in summer than in the winter and stronger in the afternoon than the night. This is attributed to a combination of a large island, intense daytime sunshine and steady winds. During the day, breezes blow from the sea and up valley bottoms. At night, breezes blow from the land, down the mountain slopes. Rainfall in the general project area averages about 20 inches annually (Juvik and Juvik, 1998).

Impacts and Mitigation Measures

The proposed project would have no impact on the existing climate of the region; therefore, no mitigation measures are required or recommended.

3.1.2 TOPOGRAPHY, GEOLOGY, AND SOILS

The project area is on relatively level terrain. The elevation in the base yard varies from a high of 40 feet above mean sea level (msl) on the northeast side of the property to a low of 15 feet msl on the southwest side of the base yard in the REFUSE area. The DRM project site elevations range from 40 feet to 20 feet (see **Figure 3-1**).

The island of O‘ahu consists of two main shield volcanoes, each with numerous parasitic vents. Erosion has deeply dissected these great shield volcanoes, leaving long narrow ridges. Wai‘anae Range, on the west, is 1,280 m high and 35 km long; the Ko‘olau Range on the east is 992 m high and 59 km long. An erosional unconformity between the lavas of the two volcanoes is exposed along Kaukonahua Gulch at the eastern base of the Wai‘anae Range, where lavas from Wai‘anae Volcano dip 100 to 150 northeastward and are overlain by lavas from the Ko‘olau Volcano dipping 50 northwestward (Macdonald and Abbott, 1970).

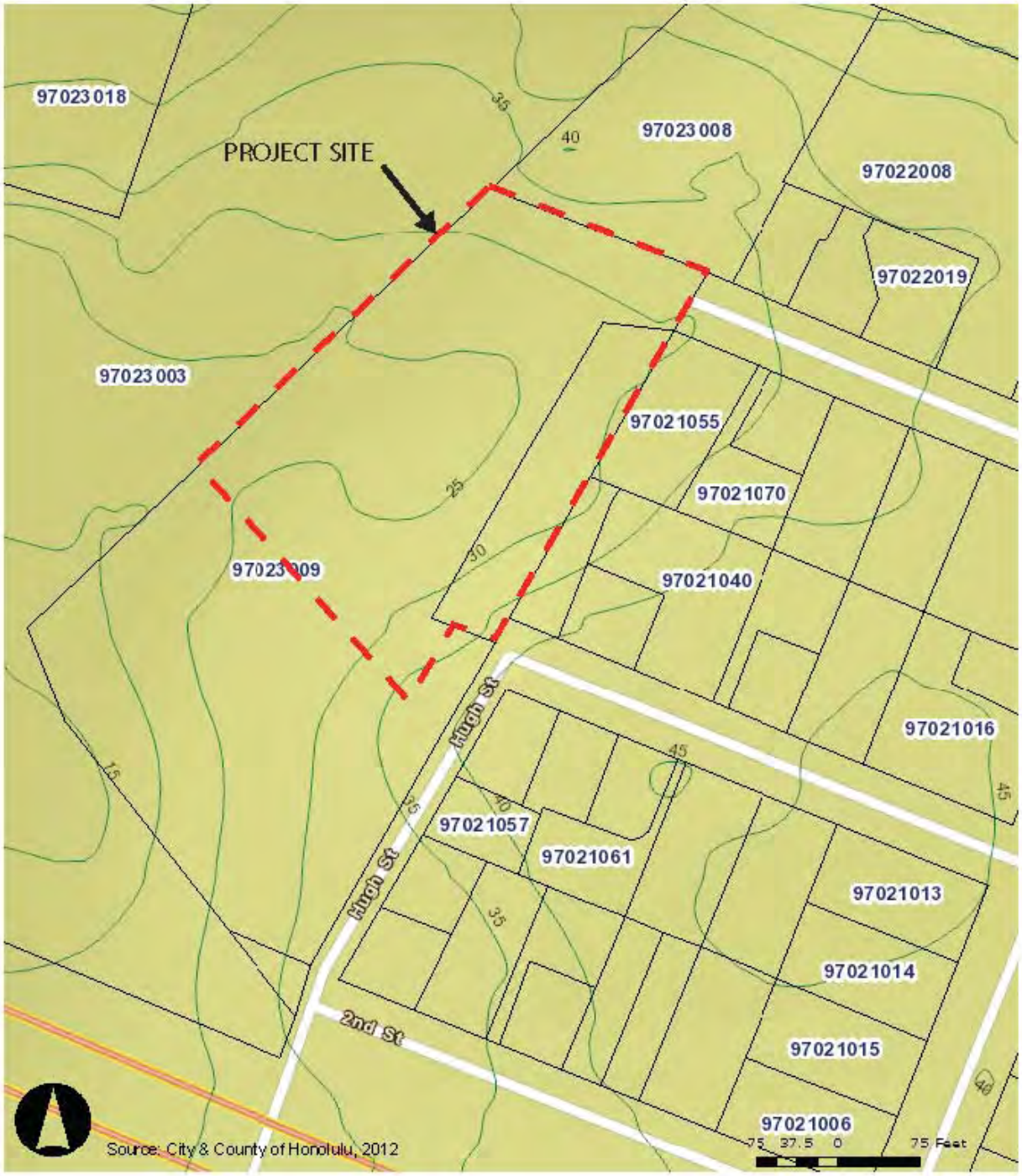


FIGURE 3-1. TOPOGRAPHY

According to the Natural Resources Conservation Service (NRCS) the following underlying soils are depicted in **Figure 3-2**. The soil on the project site is designated as Kawaihapai clay loam, (KIA), zero to two percent slope. The Kawaihapai series consists of well-drained soils that formed in alluvium derived from basic igneous rock in humid uplands. Kawaihapai soils are in drainage ways and on alluvial fans on the coastal plains and have slopes of 0 to 15 percent. These soils are well drained with slow to medium runoff, depending on slope and moderate permeability.

Other soil types in the project vicinity are Honouliuli clay, (HxA), zero to two percent, Kawaihapai clay loam, (KIC), six to fifteen percent slope, Moloka‘i silty loam, (MuB), three to seven percent slope, Pearl Harbor clay, (Ph), Water > 40 acres (W).

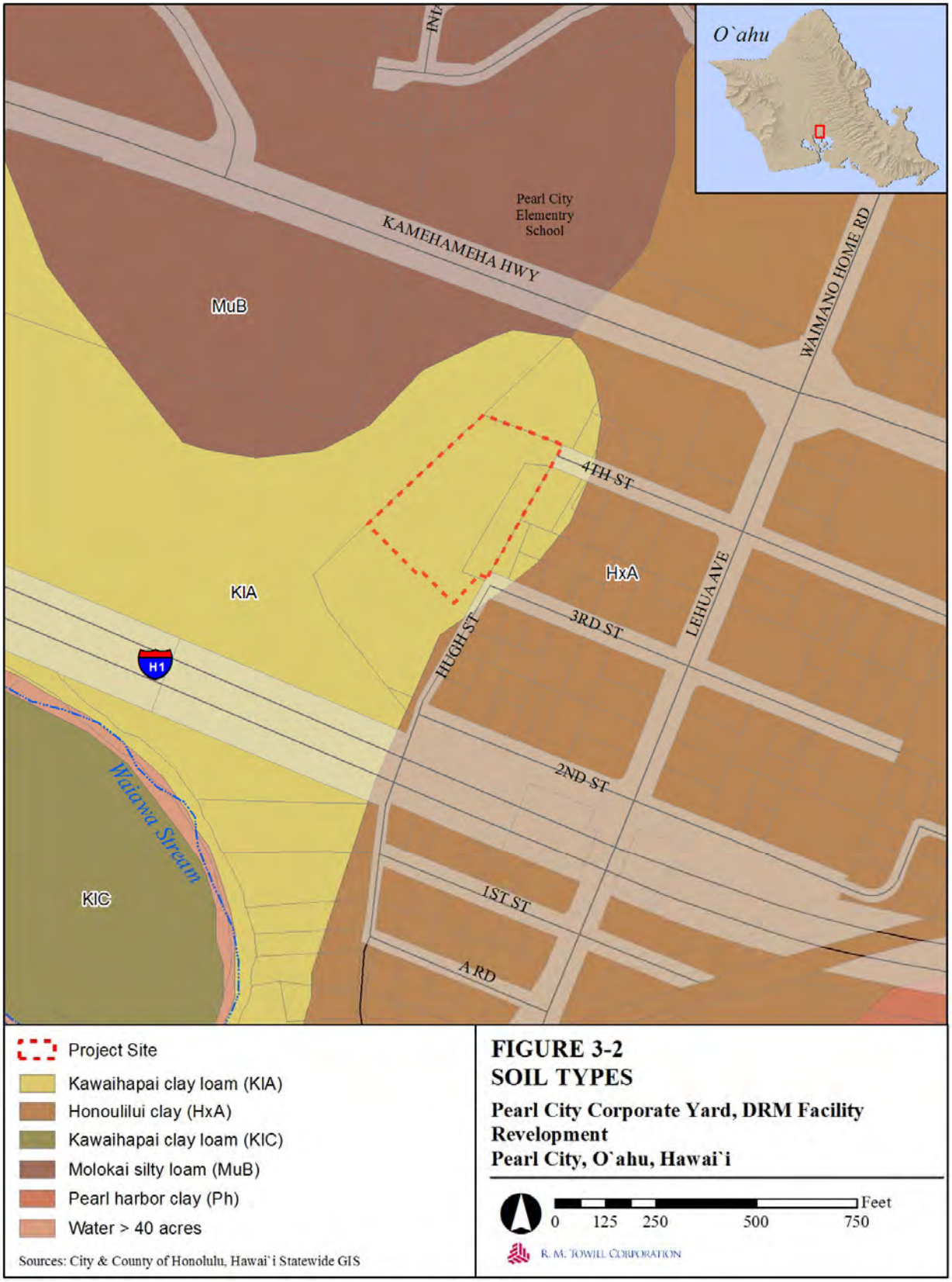
Impacts and Mitigation Measures

The proposed project would require excavation for the underground stormwater retention basin and related site drainage improvements (Phase 2). Other construction related improvements would be partially below grade and trenching would be required to connect with existing sewer and water lines (Phase 1). No other substantial excavation is expected on the property, and therefore, the site’s existing topography would remain the same. The soil conditions at the PCCY do not present any unusual or abnormal problems to the design and construction of the proposed action. No additional mitigation measures are required or recommended.

3.1.3 SURFACE WATERS AND HYDROLOGY

According to the National Wetlands Inventory, there are no wetlands on the subject project site (USFWS, 2012). The adjacent parcel to the west (UH Urban Garden Center) contains two wetlands (see **Figure 3-3**). A wetland is an area of land where soil is saturated with moisture either permanently or seasonally. The United States Geological Survey has one mapped stream (blue-line) located to the south of the project site.

The project site generally slopes from the southeast to northwest with the stormwater runoff originating from properties located east of the site and through the mostly paved base yard. Runoff from the site flows into a drainage easement (adjacent to the property) via sheet flow or 30 inch storm drain line. The drainage easement is within the adjacent property owned by the UH Urban Garden Center and is in favor of the State Department of Transportation (DOT), which is an unlined drainage ditch that is 20 feet wide and averages 8 feet in depth. The existing 30” storm drain line is owned and operated by the City and County, which crosses the DRM area and discharges into DOT drainage easement. It was determined that the 30 inch storm drain collects runoff from surrounding properties and approximately 40 percent of the base yard (CCH PCCY MP, 2011). The DRM base yard drain inlets and a network of drainpipes are discussed in more detail in Section 3.3.2 Drainage System.


O`ahu
Pearl City Elementry School
KAMEHAMEHA HWY
WAIMANO HOME RD
MuB
4TH ST
HxA
KIA
LEHUA AVE
3RD ST
HUGH ST
H1
2ND ST
Waiawa Stream
KIC
1ST ST
A RD
Project Site
Kawaihapai clay loam (KIA)
Honoulilui clay (HxA)
Kawaihapai clay loam (KIC)
Molokai silty loam (MuB)
Pearl harbor clay (Ph)
Water > 40 acres
Sources: City & County of Honolulu, Hawai`i Statewide GIS
FIGURE 3-2
SOIL TYPES
Pearl City Corporate Yard, DRM Facility Revelopment
Pearl City, O`ahu, Hawai`i
Feet
0 125 250 500 750
R. M. TOWILL CORPORATION


O`ahu
Pearl City
Elementry
School
KAMEHAMEHA HWY
WAIMANO HOME RD
PEM1KFh
4TH ST
PEM1KFh
H1
HUGH ST
3RD ST
LEHUA AVE
Waiawa Stream
2ND ST
1ST ST
A RD
PEM1KFh
Project Site
Wetlands
PEM1KFh - palustrine, emergent, persistent, semipermanently and artificially flooded, diked/impounded
Sources: City & County of Honolulu, Hawai`i Statewide GIS
FIGURE 3-3
WETLANDS
Pearl City Corporate Yard, DRM Facility Revelopment
Pearl City, O`ahu, Hawai`i
Feet
0 125 250 500 750
R. M. TOWILL CORPORATION

Impacts and Mitigation Measures

Best Management Practices (BMPs) would be installed and maintained during all phases of construction activities to ensure that sediment and other contaminants are not discharged in stormwater runoff water from the site.

The proposed project would require National Pollutant Discharge Elimination System (NPDES) permitting, which is discussed in Section 3.3.2 Drainage System.

The contractor would be required to halt work and take action as necessary to protect the work site and stored materials from storm damage and erosion. No additional mitigation measures are required or recommended.

3.1.4 AIR QUALITY

Generally, air quality in the State of Hawai‘i is one of the best in the nation and criteria pollutant levels remain well below state and federal ambient air quality standards. Hawai‘i lies within the Northern Hemisphere Hadley Cell, which is responsible for persistent northeast trade winds. Consequently, air quality is relatively good with the exception of occasional Kona or leeward storms that produce a low-pressure system that brings southerly winds and precipitation. During those unfavorable conditions (when trade winds are not present), a volcanic haze (vog) blankets the Hawaiian island chain. The volcanic emissions from the Kīlauea (active) volcano on the Island of Hawai‘i produces sulfur dioxide, which converts into particulate sulfate causing vog. The major industrial source for air pollution is oil-fired power plants, which emit SO_2, nitrogen oxides, and particulate matter. Motor vehicles emit CO, nitrogen oxides and hydrocarbons, and smaller amounts of other pollutants. Except for periodic vog and possibly occasional localized impacts from traffic congestion, local industrial sources, and dust from farms and ranches during very windy periods, the present air quality of the project area is believed to be relatively good.

Vehicular traffic is the primary source of air pollutants affecting the project area from Kamehameha Highway, H-1 freeway, and Waimano Home Road.

During Phase 3, the provision of an on-site dewatering and drying basin is proposed. The on-site dewatering and drying basin would increase productivity and efficiency. Since the DRM vactors (vacuum trucks) presently haul their storm drain, beach, and stream cleaning debris to the Sand Island Dewatering Facility, the convenience of having the on-site dewatering would eliminate driving time and transportation costs to the Sand Island Dewatering Facility.

Storage of saturated debris removed has been thought to produce a musty odor because it consists mostly of soil and weathered basalt and clay. However, according to the operator of the City’s Ahuimanu dewatering facility (October 13, 2006), *“The debris within the settling basin does not produce this odor during the drying process.”* When the debris is handled (e.g., removed from the settling basin), the underlying wetter material becomes exposed producing the musty odor, but this odor is not strong enough to be noticeable several feet from the debris. Water in the filter bed would not produce odors because it drains quickly through the filters.

Impacts and Mitigation Measures

There would be short-term impacts during the construction phases in the form of dust and exhaust emissions generated from construction vehicles and equipment including backhoes, trucks, pile driving equipment, generators, fuel tanks, etc., during construction. Mitigation of fugitive dust generated during construction would be handled with periodic site watering and applicable on-site BMPs. Additional measures as provided in Chapter 11-60.1, HAR, Air pollution control would also be followed and would include, but not be limited to, the following:

- The planning of project construction operations would focus on: minimizing the amount of dust-generating materials and activities; centralizing material transfer points and onsite vehicular traffic routes; and, locating potentially dusty equipment in areas of least impact;
- An adequate water source at the site would be provided prior to start-up of construction activities for dust control wet-down application;
- Disturbed soils will be stabilized as soon as possible by means of grassing, hydro-mulch, geo-fabric, or other methods of cover;
- Dust will be controlled by stabilizing ground conditions at project entrances to prevent dirt tracking onto adjacent access roads, and by covering or wetting down construction vehicles carrying dust-generating materials; and,
- Adequate dust control measures would be provided on weekends, after hours, and prior to daily start-up of construction activities.

Vehicle and construction equipment exhausts are a source of air pollution. Mitigation of potential adverse effects associated with use of construction equipment, fuel tanks, and vehicle exhausts would be handled through adherence to applicable Federal, State and County regulations. As required, all machinery and vehicles would be required to be in proper working order with appropriate use of mufflers. The proposed project is not expected to have long-term impact on air quality.

3.1.5 NOISE

Noise on the project site is moderate and derived mainly from nearby industrial activities, motor vehicles, with occasional noise from road use, maintenance and other urban activities. On the base yard, noise levels can be relatively high on an occasional basis from vehicle traffic to and from the DRM on Third and Fourth Streets, as well as, Second Street from the ASE and REFUSE.

During the construction, short-term noise impacts associated with the proposed project would be generated by use of heavy equipment and machinery such as bulldozers, backhoes, compressors, and vehicles.

Impacts and Mitigation Measures

Management of short-term noise impacts would involve use of mufflers and related noise reduction technologies. As required, construction equipment with mufflers in poor working condition shall be replaced or repaired. Adverse effects from construction noise

are not expected to pose a hazard to public health and welfare due to the temporary nature of the work, the absence of sensitive land uses in the surrounding area, and the application of mitigation measures that will be employed to minimize noise effects.

Construction activities would be required to meet Chapter 11-46, HAR, Community Noise Control. The contractor would be required to obtain a noise permit from State Department of Health (DOH) to allow the daytime noise level to be exceeded during the working hours of 7:00 AM to 6:00 PM, Monday through Friday. The proposed project is expected to close during weekday nights, holidays, and weekends.

Construction noise would cease at project completion. Long-term noise effects should be unchanged from existing conditions. Vehicles and equipment from the base yard are typically expected to leave the base yard at the start of the work shift and return at the end of the workday. There may be repairs and preventive maintenance which occur within a normal workday. No other mitigation measures are required or recommended.

3.1.6 NATURAL HAZARDS

Flood

According to Federal Emergency Management Agency (FEMA), Flood Insurance Rate Maps (FIRM), Panel 239, the majority of the property is in Flood Zone X, which means that the area has been designated to be outside of the 500- year flood plain. Approximately 5 percent of the corporation yard is in Flood Zone XS, where the area has been designated to be within the 500-year flood plain. This area is located at the low point of the corporation yard on the west end of the property. The DRM area is completely within Flood Zone X (see **Figure 3-4)**.

Tsunami

A tsunami involves the generation of a series of destructive ocean waves that can affect all shorelines. These waves can occur at any time with limited or no warning.

According to the O‘ahu Civil Defense Agency (CDA) Tsunami Inundation Map for O‘ahu, the project area is outside of the tsunami inundation zone. Nevertheless, in anticipation of future natural disasters, the O‘ahu CDA has identified Pearl City Elementary School as the closest emergency shelter.

Seismic Hazard

O‘ahu is in Seismic Zone 2A, which is characterized as being susceptible to earthquakes that may cause minor damage to structures. Zone 2A is based on the International Building Code (IBC), which contain six seismic zones, ranging from zero (no chance of severe ground shaking) to four (10 percent chance of severe shaking in a 50-year interval); Zone 2 is subdivided into two zones that correspond numerically to the effective horizontal peak bedrock acceleration (or equivalent velocity) that is estimated as a component of the design base shear calculation. Seismic Zone 2A has a Z-factor (seismic zone factor) of 0.15 and is not associated with a particular fault zone. Seismic Zone 2B has a factor of 0.20 and indicates an association with known crustal faults (DLNR, 2008).

FIGURE 3-4. FLOOD INSURANCE RATE MAP

MAP SCALE 1" = 500'

250 0 500 1000 FEET

NFIP

PANEL 0239G

FIRM

FLOOD INSURANCE RATE MAP

CITY AND COUNTY OF HONOLULU, HAWAII

PANEL 239 OF 395

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
HONOLULU, CITY AND COUNTY OF	150001	0239	G

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
15003C0239G

MAP REVISED
JANUARY 19, 2011

Federal Emergency Management Agency

NATIONAL FLOOD INSURANCE PROGRAM

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

Hurricane and Wind

The Hawaiian Islands are seasonally affected by Pacific hurricanes from the late summer to early winter months. The State has been affected twice since 1982 by significant hurricanes, ‘Iwa in 1982 and ‘Iniki in 1992.

During hurricanes and storm conditions, high winds cause strong uplift forces on structures, particularly on roofs. Wind-driven materials and debris can attain high velocity, cause devastating property damage, and harm to life and limb. It is difficult to predict these natural occurrences, but it is reasonable to assume that future events will occur. The project area is, however, no more or less vulnerable than the rest of the island to the destructive winds and torrential rains associated with hurricanes.

Impacts and Mitigation Measures

Construction work activities would occur on FEMA Zone X and are at very low risk for flood inundation. No adverse effects to human health or safety associated with flooding are anticipated.

Tsunami and tsunami related flooding in the project area are not anticipated due to the elevation of the project site and distance to the ocean.

In terms of any seismic or hurricane issues, the design and construction of the proposed project would be in accordance with all applicable State and City and County building standards. No other mitigation measures are required or recommended.

3.1.7 FLORA AND FAUNA

The project area is a highly modified urban environment which has been used as a base yard for many decades. The natural vegetation in the area, however, has been destroyed by clearing for industrial, commercial, and residential land uses. No trace of the original vegetation remains at the project site. Although no significant naturally occurring vegetation was observed on the project site several ornamental tropical trees/plants were observed that may support nesting of common bird species. The ornamental tropical trees/plants observed include:

- Monkey pod
- Mango
- Avocado
- Norfolk pine
- Plumeria
- Puakenikeni
- Coconut
- Ti leafs
- Several species of grasses

Within the project area, fauna is limited to birds and mammals that have adapted to urban environment. There are no endangered or threatened species occurring in the project area and no critical habitats within the project area.

Impacts and Mitigation Measures

This proposed project would remove several ornamental tropical trees/plants during the demolition and construction phases of project. In short, the action would not

significantly impact the flora or fauna at the site; therefore, no additional mitigation measures are required or recommended.

3.2 SOCIO-ECONOMIC ENVIRONMENT

3.2.1 LAND USE

The base yard is largely paved and used primarily for vehicle and equipment parking, storage of aggregate material for road maintenance, and offices. The south portion of the project area is shared by the AES and REFUSE divisions, while the majority of the project site is occupied by the DRM (see **Figure 2-1**). Currently parcel 10 is an unpaved and underutilized lot. The land use surrounding the subject project area consists of the following:

North: Commercial mixed with some single family residential
East: Single-family residential areas, beyond which is more residential mixed with apartments and commercial
South: Storage yards, beyond which is H-1 viaduct
West: A DOT drainage easement, beyond which is UH Urban Garden Center.

Historically, early residential and industrial development occurred within the vicinity of the Kamehameha Highway corridor. The proposed existing project is within an area zoned R-5. As a result, it is a nonconforming use. Additionally, redevelopment would require consolidation of two parcels (TMK (1) 9-7-23; portion of 009 & 010). Although the subject project is a nonconforming use, the proposed existing use is not expected to detract from or induce changes to the existing land uses on the surrounding properties. A more detailed discussion on the zoning is located in Section 4.6 City and County of Honolulu Zoning.

Impacts and Mitigation Measures

To mitigate short-term construction-related impacts, the Contractor would be required to follow applicable State and City erosion, air quality, and noise control regulations and implement appropriate BMPs. These impacts and proposed mitigation measures are addressed in their respective sections; therefore, no additional mitigation measures are required or recommended.

3.2.2 HISTORIC AND ARCHAEOLOGICAL RESOURCES

The prehistoric Hawaiian settlement pattern was based on the system of the *ahupua‘a* land division. Prior to the *Mahele* of 1848 O‘ahu was divided into six *moku* or *kalama* (districts): Ko‘olaupoko, Ko‘olauloa, Waialua, Waianae, Ewa, and Kona: these are said to be the same divisions established by the *ali`i Mailikukahi* around 1500 A.D. Within these six *moku* were 86 (known) prehistoric *ahupua‘a.* The *ahupua‘a* as described by Kirch (1985:2, Chapter11), ideally, is represented by a pie-shaped slice of an island or region, usually running from the mountains to the sea that contains adequate amounts of all the natural resources a Hawaiian island could provide (Keoniana, 2010).

The PCCY lies within the *ahupua‘a Mānana* in the *moku* (district) of ‘*Ewa.* The *Mānana ahupua‘a* extends from *Mānana* Peninsula (presently known as the Pearl City Peninsula), between the Middle and East Lochs of Pearl Harbor, to the headwaters of *Mānana* Stream, near

the crest of the *Koʻolau* Range. The inland portion of the *ahupuaʻa* was called *Mānanauka* ("upland *Mānana*") or *Manananui* ("large *Manana*), and the coastal portion was called *Mānanaiki* ("little *Mānana* ") (Handy 1940:81). The word *mānana* is translated as: "to stretch out," "to spread out," or "to protrude" (Pukui and Elbert 1971:218). This may be a reference to the *Mānana* Peninsula, which protrudes into Pearl Harbor. Other sources indicate the place name means "the meeting of land," and that it was named after the convergence of two lava flows in the Pearl City area (Ching 1996:1) (HHCTCP, 2008).

Loko Paʻauʻau was a large fishpond located on the western coast of the *Mānana* Peninsula. Pukui et al. (1974: 173) translate *pa ʻau ʻau as* "bath enclosure." *Paʻauʻau* was also the name of the *ʻili* (land division within an *ahupua'a*) surrounding the pond, and the name of the home of John F. Colburn, an early resident who had a home near the pond. There are two songs about *Paʻauʻau*, written by John U. Iosepa, which were first published in 1916. The first song, *Paʻauʻau* Hula, was dedicated to John Colburn and contains a reference to his wife, *Kuliakanu'u.* The song mentions the beauty of *Paʻauʻau*, bathing in the pool, and the "silent fish," or oysters, that could be gathered there. The second song, *Paʻauʻau* Waltz, also referencing the beauty of *Paʻauʻau*, mentions the pearl oysters, the trade winds (*moaʻe*), and the "sea of *Pōlea*." The Hawaiian word *pōlea* is translated as "blurred, as eyes of a diver" (Pukui and Elbelt 1971:312), which may refer to the murky waters of Pearl Harbor (HHCTCP, 2008).

The proposed project area and existing land use developments have been extensively modified. There are no known archaeological sites identified within the project site and development (agricultural, residential, and industrial in nature) has destroyed most archaeological sited on the area. No written records were found indicating culturally significant resources or traditional and cultural practices occur within the project site. No previous archaeology has been done in the project area.

Published archaeological and cultural surveys, past EA/Environmental Impact Statements were reviewed for pertinent information on archeological sites or traditional and cultural practices in the area in general. Archaeological research has been conducted on several parcels beginning with, an around the island reconnaissance survey in the 1930's by McAllister. Known sites in the *ahupuaʻa* or in the vicinity of the project area were identified by Scientific Consultant Services Inc.

- **Site 121** - *Puoiki heiau*, at the juncture of *Mānana* Stream, which flows into *Waiawa* gulches. The *heiau* crowned the top of a small oval knoll is about 50 feet high by 100 feet wide and 200 feet long. The sides of the knoll are perpendicular except for a steep and narrow neck on the mountainside. During the ceremonies, the people are said to have been at the foot of the knoll and surrounding the heiau. There are no remains.
- Land for *Mānana Kai* park (TMK 9-7-24:40), approximately 0.47 mile from the project area, was surveyed in 1980 by Robert D. Connolly for the City and County of Honolulu, Department of Parks and Recreation with no surface cultural features reported.
- David Tuggle did an archaeological survey for the *Mānana* Marine housing project (TMK 9-7-24:6), approximately 0.41 mile from the project area, was surveyed in 1982.

Research of archaeological reports and State Historic Preservation Division (SHPD) files showed no known sites in the general vicinity. A survey map prepared in 1800 by Monsarrat (State survey map #2081), showed no occupation around the present project area. The only feature reported by Tuggle was a deteriorated portion of a canal, thought to be historic. Research done in 1985 by Martha Yent for the State Parks at *Hale Mohalu* (TMK 9-7-19:35) indicated lands in that particular section had been divided between L.C.A.'s, Grants, and the Government. L.C.A.'s were claimed as *kalo* and *kula* lands. Testing was done with no definitive results.

- In 1991, the Applied Research Group, of the Bishop Museum located two formal platforms, some terraces, and a pit at the base of a ridge, above the confluence of *Mānana* Stream and *Waiawa* Gulch. On top of the ridge was an area enclosed by a piled stonewall constructed of basalt cobbles and boulders enclosing a pie-shaped section containing a small terrace paved with water worn pebbles. This feature, associated with others in the vicinity was thought to be the remnants of *Puoiki heiau.*

Based on the information from the previous archaeology, myths, and legends, oral history, and historical documents concluded that the pre-contact use of the project area was associated with *kula, loʻi*, (discussed in section 3.2.3) and habitation. The post-contact impact to the land included rice crops, sugar cane, and finally military activities. Because of these activities, there is little reason to believe significant historic sites remain in the project site.

Impacts and Mitigation Measures

Due to the complete historic modification of the land surface, it is unlikely that the proposed project would disturb any undiscovered subsurface features. The affected area would be on space constructed that has been significantly alter due to the construction of the existing buildings and facilities; therefore, no significant adverse impacts to archaeological or cultural resources are anticipated to result from implementation of the proposed project.

The proposed construction activities will utilize excavation or open cut trench construction methods, and all construction activities will occur entirely within the project site. With any construction project involving land disturbance and alterations, there is always the possibility that human burials or other potentially significant subsurface archaeological resources could be encountered. Therefore, the following measures will be implemented: For all construction subsurface features, unexpected archaeological resources, or deposits are encountered, which might be a native Hawaiian burial site, were uncovered during excavation activities, construction would cease immediately. The contractor shall immediately contact the SHPD of DLNR immediately at (808) 692-8015 to assess the significance of the find and recommend an appropriate mitigation measure, if necessary.

No impacts to cultural resources or practices are anticipated. Based on the aforementioned research, including the contributions received, it was determined that no culturally significant resources are present within the project site and no traditional and cultural practices or beliefs occur within the project site. Additionally, the proposed project is not expected to restrict access to any significant cultural resources or interfere

with any traditional and cultural practices or beliefs which may occur within the vicinity of the project site. No additional mitigation measures are required or recommended.

3.2.3 CULTURAL RESOURCES AND PRACTICES

Pearl City, which encompasses the project area, is associated with aquaculture and traditional agriculture (taro terraces and patches, or *lo'i kalo*, and other subsistence crops such as sweet potatoes, yams, and bananas) during the pre and post-contact periods. These practices continued through the late nineteenth century, when cash cropping (sugar cane, rice) dominated the area. In the late nineteenth century, the northern coastline of Pearl Harbor became the site of population growth. Government and military acquisition of lands in the area began at the turn of the century and much of the lands became utilized as military zones (Dega and O'Rourke, 2003).

Many streams, including Waiawa Stream, flowed into Pearl Harbor, bringing nutrients and life to native *gobi,* whose lifecycle included moving from the mountains to the sea for spawning/ mating, and to other endemic fish (HHCTCP, 2008). The ancient Hawaiians took advantage of the nutrient-rich areas by constructing networks of fishponds, or *loko*, to nurture natural resources. Most fishponds have been destroyed, dredged, or filled to accommodate urban expansion. However, the use of the project area for traditional or cultural practices is not expected based on the existing PCCY. The project area has been previously heavily modified with grading, paving, and base yard activities. Plants found at the site are primarily introduced, exotic species not normally associated with cultural gathering or use activities. As mentioned in Section 3.1.7, Flora and Fauna, the species found at the site commonly grown ornamentals such as; monkey pod, mango, avocado, norfolk pine, plumeria, *puakenikeni*, coconut, ti leaf plants, and several species of grasses.

The previously paved and otherwise developed condition of the project area is also not conducive to the presence of *wahi pana* (storied place) or other sites associated with the gathering of important native species that may include ti, flowering Hawaiian plants, or other species bearing fruit.

Impacts and Mitigation Measures

Based on the above, the potential for adverse effects to traditional and cultural practices is not anticipated. However, as noted in Section 3.2.2, any inadvertent finds would immediately result in the cessation of work and immediate reporting of the find to SHPD at (808) 692-8015 for further instructions. No additional mitigation measures are recommended.

3.2.4 SCENIC AND VISUAL RESOURCES

Existing scenic views of the project site are urban due to the location of physically dominating structures and buildings. The visual environment *makai* of the project site primarily consists of the viaduct (H-1), which is less than 150 feet from the closest point of project area to the H 1 (deck and columns); beyond that is Pearl Harbor. The visual environment *mauka* (toward the mountains) of the project site is dominated by other buildings such as the Public Storage and Home Depot to the northeast. Limited views of the Wai'anae mountains can be seen in the distance.

Impacts and Mitigation Measures

The proposed project is not expected to adversely affect scenic and visual resources in the project area. The five vertical structures proposed do not exceed 25 feet in height. The scale and massing of the proposed action is compatible with existing development in the area and would not visually compromise the urban character of the region. It is noted that the base yard would provide a vital maintenance function for the ʻEwa district. The visual environment of the base yard would still be dominated by the viaduct (H-1), such as its columns, and other buildings, such as the Public Storage and Home Depot to the northeast (see **Figure 2-1**). No adverse impacts to scenic and visual resources are expected and no mitigation measures are recommended.

3.2.5 FIRE, POLICE, AND MEDICAL SERVICES

Fire and Police protection service are provided through the Honolulu Fire and Police Department stations which are both respectively located within a 0.25-mile radius of the project site. The Kapiʻolani Medical Center at Pali Momi and Straub Pearl Ridge are located 2.25 miles away. The Leeward Health Center is located approximately 1,000 feet away and provides health care services.

Impacts and Mitigation Measures

The proposed project is not expected to have an adverse impact on fire, police, and medical services. Fire apparatus access would be maintained throughout the construction site for the duration of the project. The Fire Communication Center would be notified of any interruption in the existing fire hydrant system during the project. No adverse impacts to fire, police, and medical services are expected and no mitigation measures are recommended.

3.2.6 SOCIO-ECONOMIC CONDITIONS

By improving government services of the DFM, the proposed project would benefit public welfare in the ʻEwa area as well as the entire City and County. **Table 3-1,** provides information on the socioeconomic characteristics of Pearl City along with the State of Hawaiʻi as a whole for comparison, from the United States 2010 Census of Population.

Table 3-1 SELECTED SOCIOECONOMIC CHARACTERISTICS

2010 CENSUS CHARACTERISTICS	PEARL CITY CDP	HAWAI'I
Total Population	47,698	1,360,301
Percent Caucasian	16.00%	24.70%
Percent Asian	53.20%	38.60%
Percent Black	2.90%	1.60%
Percent Hawaiian and Other Native Pacific Islander	5.50%	10.00%
Percent American Indian and Alaska Native	0.30%	0.30%
Percent Hispanic or Latino origin	8.20%	8.90%
Percent Persons not Hispanic	14.20%	22.70%
Percent Two or More Races	21.00%	23.60%
Percent Under 18 Years	19.30%	22.30%
Percent Over 65 Years	19.40%	14.30%
Homeownership rate	70.70%	59.30%
Persons per Household	3.1	2.92
Median Household Income	$82,639	$66,420
Percentage of Population Below 100% of Federal Poverty Level	5.10%	9.60%

Source: (Census, 2012)

Impacts and Mitigation Measures

The proposed project would result in temporary, positive economic activity in the form of construction jobs and material procurements. No relocation of businesses or homes, disruption of local traffic patterns, effects to neighborhood character or integrity, or any other social impacts are involved in the proposed action, which is entirely confined to an industrial area. The proposed action would not have an adverse or significant effect on area demographics or economic conditions and no mitigation measures are recommended.

3.3 INFRASTRUCTURE AND UTILITIES

According to the *PCCY Master Plan*, the following sub-sections for the infrastructure and utilities are as follows.

3.3.1 TRAFFIC AND TRANSPORTATION SYSTEMS

The existing street network surrounding the PCCY is shown in **Figure 2-1**. Kamehameha Highway is the main arterial that allows connection to the Lehua Avenue, the main thoroughfare and the residential streets surrounding the project area. Ingress/egress points are located at Second, Third, and Fourth streets. The DRM's ingress/egress point is on Fourth Street. As such, the vactor and dump trucks currently enter the DRM base yard in the same manner as other maintenance-related trucks and vehicles (through Fourth Street). Operational and private

vehicles would continue to enter and exit the base yards several times a day. Very little or no activity occurs at night or on the weekends.

The proposed project would not only improve the pedestrian and vehicular circulation in and out of the DRM's compound but also the line of site, which is a security issue that would be addressed by demolishing and reconstructing the office and aggregate storage facilities (Phase 1). An optional item proposed would involve constructing a new egress point (exit only) on Third Street (see **Figure 2-1**), which is intended to alleviate base yard traffic conditions that presently occur during loading and staging actives (Phase 2). The driveway would only be accessible for DRM service crew trucks (gross vehicle weight 11,400 and 14,000 lbs).

Impacts and Mitigation Measures

On a short-term basis, construction-related traffic may be temporarily noticeable. Construction-related traffic is not expected to significantly alter the total volume of traffic. The contractor would be required to keep all construction vehicles in proper operating condition and ensure that material loads are properly secured to prevent dust, debris, leakage, or other adverse conditions from affecting public roadways.

No significant long-term increases in traffic associated with the proposed action are expected. Traffic generated by the base yard should not result in an adverse effect on the Kamehameha Highway level of service.

The proposed egress point on Third Street is expected to increase existing traffic to some degree through the residential area. However, it is not expected to significantly alter the total volume of traffic that already exists. As stated in the PCCY Facilities Master Plan, there are seven projected DRM vehicles that have a gross vehicle weight 11,400 and 14,000 lbs, which would be able to access the driveway. Prior to implementation of the proposed egress point the City and County, Department of Transportation Services and HDOT would be consulted with to discuss traffic impacts. It should be noted that new egress point is an optional item and dependent on Phase 2 funding. No other mitigation measures are required or recommended.

3.3.2 DRAINAGE SYSTEM

As discussed in Section 3.1.3, the stormwater runoff is collected from the DRM and surrounding parcels through the existing 30 inch storm drain line (owned by the City and County) and discharge in to DOT's drainage easement. Four drainage inlets exist within the DRM area along with a network of 18-24 inch drain pipes (see **A, Figure 3-5**). Filters were observed in the four existing drain inlets (CCH, PCCY MP, 2011). The NPDES improvements for AES and REFUSE areas include construction of a stormwater treatment system prior to discharge of collected site run-off are scheduled.

The proposed project will alter the drainage patterns of the corporation yard. Runoff from the site was calculated for the existing condition and post-development condition for a 10-year storm in accordance with the City and County, DPP, Rules Relating to Storm Drainage Standards dated January 2000. It was found that the post development peak flow was greater than the existing condition. This increase in peak flow is generally attributed to the increased impervious surfaces in the DRM area. As a result, an underground detention basin is proposed between the new

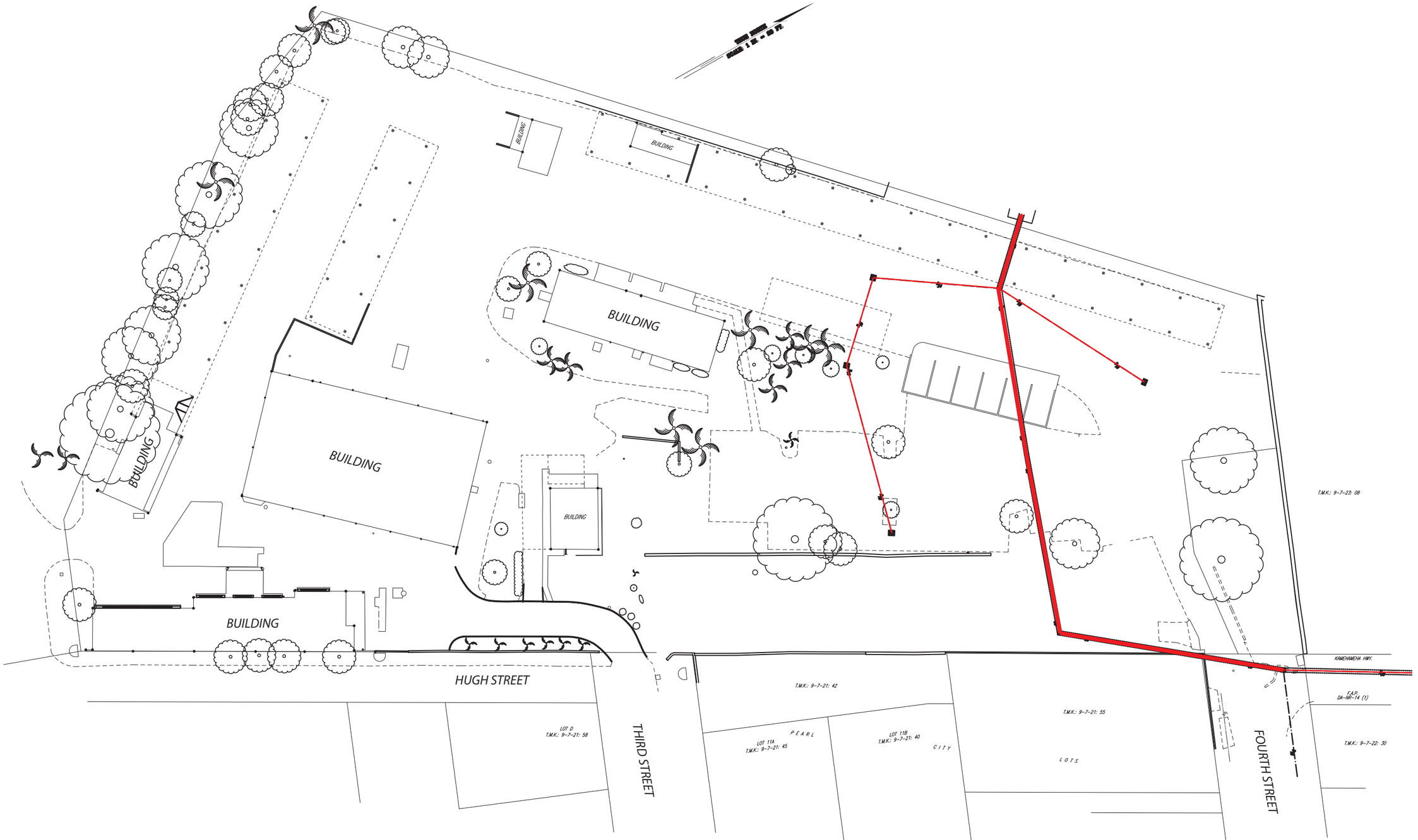


FIGURE 3-5. EXISTING DRAINAGE

CONTROLPOINT SURVEYING, INC.
1188 BISHOP STREET, SUITE 1205
HONOLULU, HAWAII 96813

TOPOGRAPHIC SURVEY MAP
C&C – PEARL CITY CORPORATION YARD
WAIAWA & WAIMANA, EWA, OAHU, HAWAII

PLOTTED:	MARCH 11, 2009
REV.	FINAL

SCALE	: 1 IN. = 20 FT.
TAX MAP KEY	: 9 – 7 – 23: 10
DATE	: JANUARY 6, 2009
DRAFTSMAN	: ECH
DRAWING	: 07220.DWG
JOB. NO.	: 07220
FIELD BOOK	: 2944, 2009
FB. PAGE	: FB. CERT.

carport and the aggregate storage bins (see map entitled Phase 2). According to the PCCY Facilities Master Plan, the basin may have perforated walls to allow stormwater to infiltrate into the ground while retaining the additional runoff. The basin was estimated to require a capacity of approximately 3,000 cubic feet. If the basin reaches its maximum holding capacity, the runoff will overflow into the DOT-owned drainage ditch as surface runoff. DFM and other City and County have a Memorandum of Understanding (MOU) as discussed in more detail below. In addition, a combination of swales and a network of drain inlets and 18 inch reinforced concrete pipes would be used due to site design constraints. Filter inserts, with the capability of filtering sediment and absorbing petroleum products, would be installed in the new and existing drain inlets. The project stormwater that runs off into the DOT drainage easement falls into the State highway drainage structure (a single system), considered a large municipal separate storm sewer system or what is referred to as an MS4 as defined by the Federal Clean Water Act (CWA); as amended. Hereinafter, this system will be referred to as the O'ahu MS4, and the DOT, is the owner and operator of this system.

On O'ahu, the regulations require both the DOT and the City to have NPDES permits for their respective municipal storm sewer systems. Because the DOT and City systems are interconnected, DOH regulations require that an interagency agreement between the DOT and the City and County or a MOU.

The MOU is specifically associated with the DFM and other City and County departments with provisions dated December 2001(see **Appendix A**). The MOU delineates policies governing interconnection and enforcement that will control the discharge of pollutants from the upper portions of DOT's MS4 into the lower portions of both DOT and City systems to waters of the United States.

Impacts and Mitigation Measures

The proposed project would exceed one acre, therefore a NPDES general permit coverage would be obtained from DOH for; 1) construction activities; 2) potential construction dewatering effluent disposal; and, 3) hydrotesting water disposal. Water quality testing would be performed as required to comply with requirements of the NPDES general permit. Discharge pollution controls will be required to be monitored and maintained by the contractor on a routine basis and immediately (within 24 hours) after each significant rain event (1/2 inch or greater rainfall within a 24 hour period). The contractor will be required to halt work and take action as necessary to protect the work site and stored materials from storm damage and erosion. Impacts will be mitigated by employing construction stormwater BMPs to prevent sediment or other pollutants from discharging in stormwater runoff from the site.

BMPs associated with NPDES:

Construction Management Techniques

(1) Clearing and grubbing shall be held to the minimum necessary for grading and equipment operation.

(2) Construction shall be sequenced to minimize the exposure time of the cleared surface area.

(3) Construction shall be staged or phased for large projects. Areas of one phase shall be stabilized before another phase is initiated. Stabilization shall be accomplished by temporarily or permanently protecting the disturbed soil surface from rainfall impacts and runoff.

(4) Erosion and sediment control measures shall be in place and functional before earth moving operations begin. These measures shall be properly constructed and maintained throughout the construction period.

(5) All control measures shall be checked and repaired as necessary, for example, weekly in dry periods and within twenty-four hours after any rainfall of 0.5 inches or greater within a 24-hour period. During prolonged rainfall, daily checking is necessary. The permittee shall maintain records of checks and repairs.

(6) The permittee shall maintain records of the duration and estimated volume of storm water discharge(s).

(7) A specific individual shall be designated to be responsible for erosion and sediment controls on each project site.

Vegetation Controls

(1) Pre-construction vegetative ground cover shall not be destroyed, removed, or disturbed more than twenty calendar days prior to land disturbance.

(2) Temporary soil stabilization with appropriate vegetation shall be applied on areas that will remain unfinished for more than thirty calendar days.

(3) Permanent soil stabilization with perennial vegetation or pavement shall be applied as soon as practical after final grading. Irrigation and maintenance of the perennial vegetation shall be provided for thirty calendar days or until the vegetation takes, root or whichever is shorter.

Structural Controls

(1) Storm water flowing toward the construction area shall be diverted by using appropriate control measures, as practical.

(2) Erosion control measures shall be designed according to the size of disturbed or drainage areas to detain runoff and trap sediment.

(3) Water must be discharged in a manner that the discharge shall not cause or contribute to a violation of the basic water quality criteria as specified in HAR, Chapter 11-54, Section 11-54-4.

(4) During construction, silt fences and other necessary erosion control measures will be utilized to prevent construction storm water runoff from entering nearby existing drainage inlets. No further mitigation measures are anticipated or required.

Industrial wastewater discharged from the project would be covered under the MOU 2001, the City and County and DFM shall be responsible for the provision provided **(see**

Appendix A). Prior to implementation DFM would consult with Department of Environmental Services.

Additional recommendations during the design phase include:

- Geotechnical engineer should confirm pavement recommendations
- Runoff calculations and detention basin sizing calculations would be verified
- Replace existing filtering systems with newer technologies that incorporate an absorbent within the below-grade system.

No additional mitigation measures are required or recommended.

3.3.3 WATER SYSTEM

The existing project area is served by the water system operated by the Honolulu Board of Water Supply. The proposed office and warehouse facilities, water recycling system, and the dewatering basin would be served by a new 2 inch waterline. The new 2 inch waterline would tap the existing 2 inch waterline near the Third Street entrance gate and routed throughout the corporation yard area to serve the office and warehouse facilities, water recycling system, and the dewatering basin. It was determined that the fixture count of the master planned improvements is similar to the existing condition; the need for a larger water meter is not expected.

The optional wash area for maintenance of the equipment, and make-up water for the water recycling system would use potable water (Phase 3). Potable water would be available at the dewatering basin to help rinse trucks and equipment in discharging its contents into the basin.

Impacts and Mitigation Measures

Construction activities would require use of water for dust control, vehicle wash down, concrete mixing, general housekeeping activities, and for pipe pressure testing. These uses would be intermittent and of short duration and would cease upon project completion. Quantities of water required for these uses are relatively minor. The specific source of water to be used for construction would be the responsibility of the contractor.

It is recommended that the water demand and system capacity be verified during design. The Honolulu Board of Water Supply would determine if the water demand and capacity are adequate for the proposed project. No additional mitigation measures are required or recommended.

3.3.4 WASTEWATER SYSTEM

The City and County Department of Environmental Services manages the municipal wastewater collection, treatment, and disposal system for the project area. The project area is served by the West Mamala Bay service area with outflows processed through the Honouliuli Wastewater Treatment Plant.

Office Building (Phase 1)

The proposed office building would be designed with the same number of plumbing fixtures as the existing DRM office (six showerheads, eight sinks, two urinals, and five water closets). Provisions have been made for a female locker/shower room (Phase 1), which is nonexistent in the current office building. The estimated wastewater flow generated from the new office building is 860 gallons per day (gpd) using wastewater generation factors provided in the HAR, Title 11, Chapter 62. Wastewater flow would be discharged into the existing sewer manhole via a new 4 inch sewer lateral.

Warehouse (Phase 2)

A service sink would be provided in the new warehouse. The estimated wastewater flow generated from the service sink is 600 gpd. Wastewater flow would be discharged into the same existing sewer manhole (as the office building) via a new 4 inch sewer lateral.

Wash Area and Water Recycling System (Phase 3 - Optional)

The wash area would be designed for exterior washing of vehicles and equipment only. A treatment system would be provided with the wash area for the treatment of the spent water and re-use of washing activities to minimize discharge to the sewer. A sewer connection would be required for the purposes of equipment blow off during maintenance activities or emergency overflows. Quantity of the discharge to the existing sewer is estimated to be minimal and infrequent.

Dewatering Facility (Phase 3)

Contents from vactors and street sweepers would be unloaded into the drying bed. The estimated wastewater flow that would be generated from the dewatering and drying basin is 50 gallons per minute. Effluent from the dewatering basin should be sampled and tested to ensure that an oil water separator is an appropriate pre-treatment component.

Impacts and Mitigation Measures

During construction, portable toilets would be provided for construction personnel. Wastewater discharge into the sewer would need to comply with requirements described in the Revised Ordinances of Honolulu (ROH), Chapter 14, Article 1. An application for a new sewer connection must be submitted to the DPP, Wastewater Branch to confirm that the existing collection system and wastewater treatment plant has adequate capacity to handle the flows. Sizing criteria and capacity calculations would be confirmed during design. No additional mitigation measures are required or recommended.

3.3.5 ELECTRICAL SYSTEMS

Hawaiian Electric Company (HECO) operates the electrical utilities servicing the project area which is subject to regulation by the State Public Utilities Commission.

Electrical (Phase 1 & 2)

The proposed DRM multi-building complex would require a new 120/208 volt three-phase electrical service. The new service would be provided from the existing HECO pad mounted

transformer to the new DRM complex. Proposed is a new outdoor type-metering switchboard with three circuit breakers that would be provided nearby the HECO transformer to intercept the existing three-phase services; two for the AES existing facilities and one for the new feeder to a new main distribution panel at the office building. The estimated load for the DRM complex is 100 Kilovolt-Ampere (based on 10 Volt-Ampere per square foot).

The new distribution panel would be located in an electrical room along with an automatic transfer switch located at the south end of the proposed DRM office building. The distribution panel would also provide utility power input to the new automatic transfer switch, which together with emergency input from a new diesel or LPG fueled generator, would provide power to essential loads for the DRM complex (office building, warehouse, vehicle and large equipment carport, aggregate bin storage, and paint storage shed.

Essential loads that would be provided with backup emergency power from the generator includes emergency lighting and communication equipment and computers in the office/ administration operations area, fire alarm system and other life safety equipment, closed circuit Television (CCTV) security system and selected exterior lights.

Exterior Lighting (Phase 1)

Exterior lighting is proposed for safety and effective lighting for CCTV camera surveillance of the base yard. Lighting would be located at the three gate entrances and along the building perimeters. In February 2006, the City and County passed Ordinance #06-06 requiring new city facilities over 5,000 square feet to be LEED Silver compliant beginning in fiscal year 2008. The following lighting types and locations are proposed:

- DRM buildings' perimeters - combination of high-pressure sodium shielded wall lights
- Gate entrances and parking lot (on poles) - high-pressure full cutoff shoebox luminaries

Communication, Fire Alarm, and Security (Phase 1)

Hawaiian Telcom operates the telephone services and Oceanic Cable operates the cable services for the project area. New underground service for Telephone and Cable Television (CATV) would be provided to the new DRM office building. Telephone and data outlets will be provided in the office areas and CATV outlet in the multi-purpose room. Telephone outlets are also anticipated for the warehouse building.

A new paging system and fire alarm system is proposed for the DRM corporation yard. The CCTV cameras are proposed to be mounted on poles at the gate entrances to enhance the overall security. The CCTV would be monitored at the proposed DRM office and caretaker's house. A digital video recording system (motion activated) at the office building would be provided to store the information from the cameras.

Impacts and Mitigation Measures

Electrical

HECO would determine if the capacity of the existing pad mounted transformer is adequate for the new DRM complex and the other two existing AES shop facilities. It is

recommended that the consolidation of the existing 3-phase meters for AES with DRM be re-studied in detail when the loads of the DRM complex are more accurately determined during the design phase.

Exterior Lighting

All exterior lighting would comply with ROH, Chapter 21, Article 4.100 - Outdoor lighting. The proposed types of luminaires should comply with LEED standards.

Communication, Fire Alarm, and Security

All communication, fire alarm, and security equipment would comply with State and City and County regulations. No additional mitigation measures are required or recommended.

3.3.6 SOLID WASTE DISPOSAL

Presently the solid waste generated by Pearl City residents is collected by both private vendors and by the City and County and disposed of at the Waimanalo Gulch landfill near ‘Ewa or the H-Power facility in Campbell Industrial Park.

Impacts and Mitigation Measures

Short-term construction activities would result in the generation of construction and demolition debris. Construction waste would be disposed of appropriately in accord with applicable City and County regulations.

The proposed project is not expected to result in significant increases in solid waste, and would not have an adverse impact on the solid waste disposal system. All solid waste generated by construction activities would be disposed of off-site by the project contractor in compliance with DOH regulations. No additional mitigation measures are required or recommended.

SECTION 4
RELATIONSHIP TO LAND USE PLANS AND POLICIES

4.1 THE HAWAIʻI STATE PLAN

The Hawaiʻi State Plan, adopted in 1978, and promulgated in Chapter 226, HRS, consists of three major parts:

> Part I, describes the overall theme including Hawaiʻi's desired future and quality of life as expressed in goals, objectives, and policies.
>
> Part II, Planning Coordination and Implementation, describing a statewide planning system designed to coordinate and guide all major state and county activities and to implement the goals, objectives, policies, and priority guidelines of the Hawaiʻi State Plan.
>
> Part III, Priority Guidelines, which express the pursuit of desirable courses of action in major areas of statewide concern.

The proposed project is consistent with the objectives and policies of the Hawaiʻi State Plan. Specifically, the proposed action would redevelop a maintenance base yard which would provide road repair and maintenance services for the ʻEwa district. Described below are sections of the Hawaiʻi State Plan's goals, objectives, and policies that are relevant to the proposed action.

> *§226-14 Objectives and policies for facility systems—in general. (a) Planning for the State's facility systems in general shall be directed towards achievement of the objective of water, transportation, waste disposal, and energy and telecommunication systems that support statewide social, economic, and physical objectives.*
>
> *(b) To achieve the general facility systems objective, it shall be the policy of this State to:*
>
> *(1) Accommodate the needs of Hawaiʻi's people through coordination of facility systems and capital improvement priorities in consonance with state and county plans.*
>
> *(2) Encourage flexibility in the design and development of facility systems to promote prudent use of resources and accommodate changing public demands and priorities.*
>
> *(3) Ensure that required facility systems can be supported within resource capacities and at reasonable cost to the user.*
>
> *(4) Pursue alternative methods of financing programs, projects, and cost-saving techniques in the planning, construction, and maintenance of facility systems. [L 1978, c 100, pt of §2; am L 1986, c 276, §13]*

The proposed project supports the State Plan objectives and policies related to facility systems in general. The proposed base yard provides the means to efficiently maintain the ʻEwa district road infrastructure so that cost of maintenance, repair, and upkeep are optimized over the long term.

4.2 HAWAI'I STATE FUNCTIONAL PLANS

The State Plan contains twelve separate Functional Plans addressing specific areas of concern. The 1991 revision of the Functional Plan for Transportation has several objectives, policies, and implementing actions that are relevant to this project including the following:

> *Objective I.A: Expansion of the Transportation System.*
>
> *Policy I.A.2: Improve regional mobility in areas of the State experiencing rapid urban growth and road congestion.*
>
> *Objective II.A: Development of a transportation infrastructure that supports economic development initiatives.*
>
> *Policy II.A.1: Support State economic development initiatives.*

The proposed project supports the Objectives and Policies of the Transportation Functional Plan. The proposed base yard provides a more convenient base of operations to maintain and repair roads in the 'Ewa district in an efficient manner. This effort supports the roadway purpose of improving the regional mobility in an area experiencing rapid growth. The improved PCCY would preserve the conditions of the roads and its ability to carry the intended traffic safely, comfortably and economically.

4.3 STATE LAND USE LAW

The State Land Use Commission classifies all lands in the State of Hawai'i into one of four land use designations: Urban, Rural, Agricultural and Conservation. The project site is located in the State Land Use Urban District. See **Figure 4-1**. Section 205-2, HRS, notes the following with regard to districting and classification of lands within the State Urban District.

> *Urban district shall include activities or uses as provided by ordinances or regulations of the county within which the urban district is situated.*

The proposed project is within the Urban District according to the State Land Use Commission. The proposed action is not contrary to the purposes of the State Urban District. No action from the State Land Use Commission is required to implement the proposed project.

4.4 CITY AND COUNTY OF HONOLULU GENERAL PLAN

The General Plan of the City and County of Honolulu (amended in 2002) is a statement of long-range social, economic, environmental and design objectives for the island of O'ahu. It also includes policies to meet these objectives.

The proposed project is consistent with the following policies and objectives of the General Plan:

I. Population

> Objective B - To plan for future population growth.
>
> Policy 1 - Allocate efficiently the money and resources of the City and County in order to meet the needs of O'ahu's anticipated future population.

V. Transportation & Utilities

Objective A - To maintain transportation and utility systems which will help O‘ahu continue to be a desirable place to live and visit.

Policy 1 - Give primary emphasis in the capital improvement program to the maintenance and improvement of existing roads and utilities.

V. Transportation & Utilities continued

Objective D - To create a transportation system which will enable people and goods to move safely, efficiently, and at a reasonable cost; serve all people, including the poor, the elderly, and the physically handicapped; and offer a variety of attractive and convenient modes of travel.

Policy 5 - Improve roads in existing communities to reduce congestion and eliminate unsafe conditions.

VIII. Public Safety

Objective B - To protect the people of O‘ahu and their property against natural disasters and other emergencies, traffic and fire hazards, and unsafe conditions.

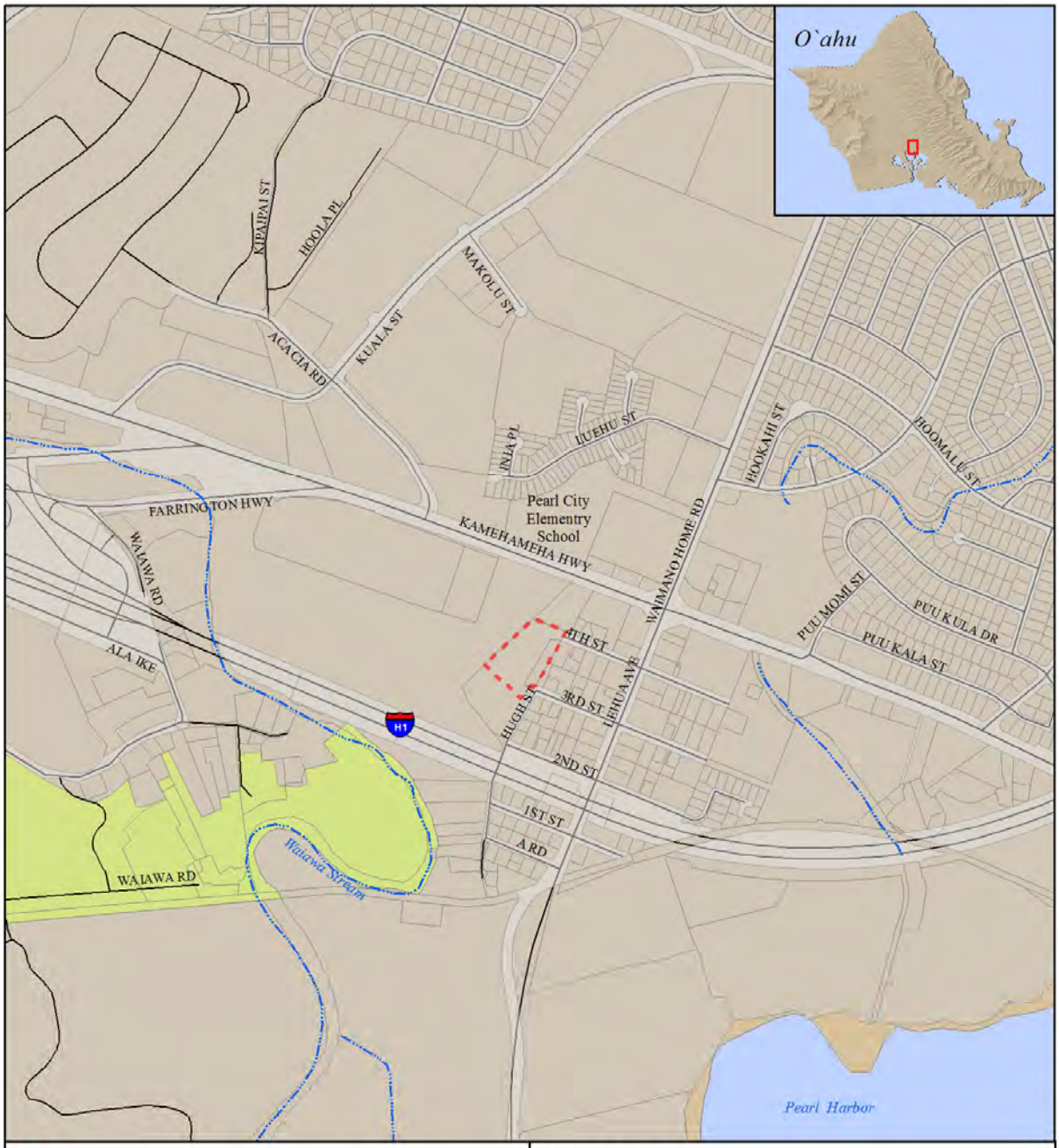
Policy 6 - Reduce hazardous traffic conditions.

Policy 9 - Design safe and secure public buildings.

XI. Public Safety

Objective A - To promote increased efficiency, effectiveness, and responsiveness in the provision of government services by the City and County of Honolulu.

Policy 1 - Maintain City and County government services at the level necessary to be effective.


O`ahu
KIPAIPAI ST
HOOLA PL
MAKOLU ST
ACACIA RD
KUALA ST
INIA PL
LUEHU ST
HOOKAHI ST
HOOMALU ST
FARRINGTON HWY
Pearl City
Elementry
School
KAMEHAMEHA HWY
WAIMANO HOME RD
WAIAWA RD
PUU MOMI ST
PUU KULA DR
PUU KALA ST
ALA IKE
11TH ST
3RD ST
LEHUA AVE
HUGH ST
H1
2ND ST
1ST ST
A RD
WAIAWA RD
Waiawa Stream
Pearl Harbor
Project Area
Agriculture
Urban
Sources: City & County of Honolulu, Hawai`i Statewide GIS
FIGURE 4-1
STATE LAND USE DISTRICT
Pearl City Corporate Yard, DRM Facility
Revelopment
Pearl City, O`ahu, Hawai`i
Feet
0 250 500 1,000 1,500 2,000
R. M. TOWILL CORPORATION

4.5 PRIMARY URBAN CENTER DEVELOPMEN PLAN

Due to changes made to the City Charter in 1992, the City and County DPP began to prepare conceptual plans for the eight planning areas on O‘ahu. Previous plans included parcel specific details. The proposed project is located in the PUC planning area. Because the General Plan directed high percentages of projected population and employment growth to the PUC, it is one of two planning areas subject to “development plans” (the other was the ‘Ewa planning area). The other six planning areas were designated for modest population and job growth. “Sustainable community plans” were prepared for these areas, which focused on maintaining and improving existing communities and the special qualities of each region.

The PUC Development Plan was adopted by the City Council on June 21, 2004. The planning area extends from Pearl City in the west to Waialae-Kāhala in the east, and contains almost half the island’s population and three-quarters of O‘ahu’s jobs. The overall vision is for the year 2025, which establishes a set of policies to shape growth and development. As noted above, the PUC is anticipated to accommodate a large percentage of population and economic growth on the island. The subject project (public structure) would help support growth through infrastructure improvements and maintenance; therefore, would be an appropriate land use within the PUC.

4.6 CITY AND COUNTY OF HONOLULU ZONING

The City and County, DPP regulates land use on State Urban classified land and certain State Agriculture classified land on O‘ahu in accordance with zoning, as specified in official zoning maps, and the Land Use Ordinance (LUO). Zoning maps and the LUO are used to encourage orderly development in accordance with adopted land use policies, such as the O‘ahu General Plan and development plans or sustainable community plans, and to promote and protect public health, safety, and welfare.

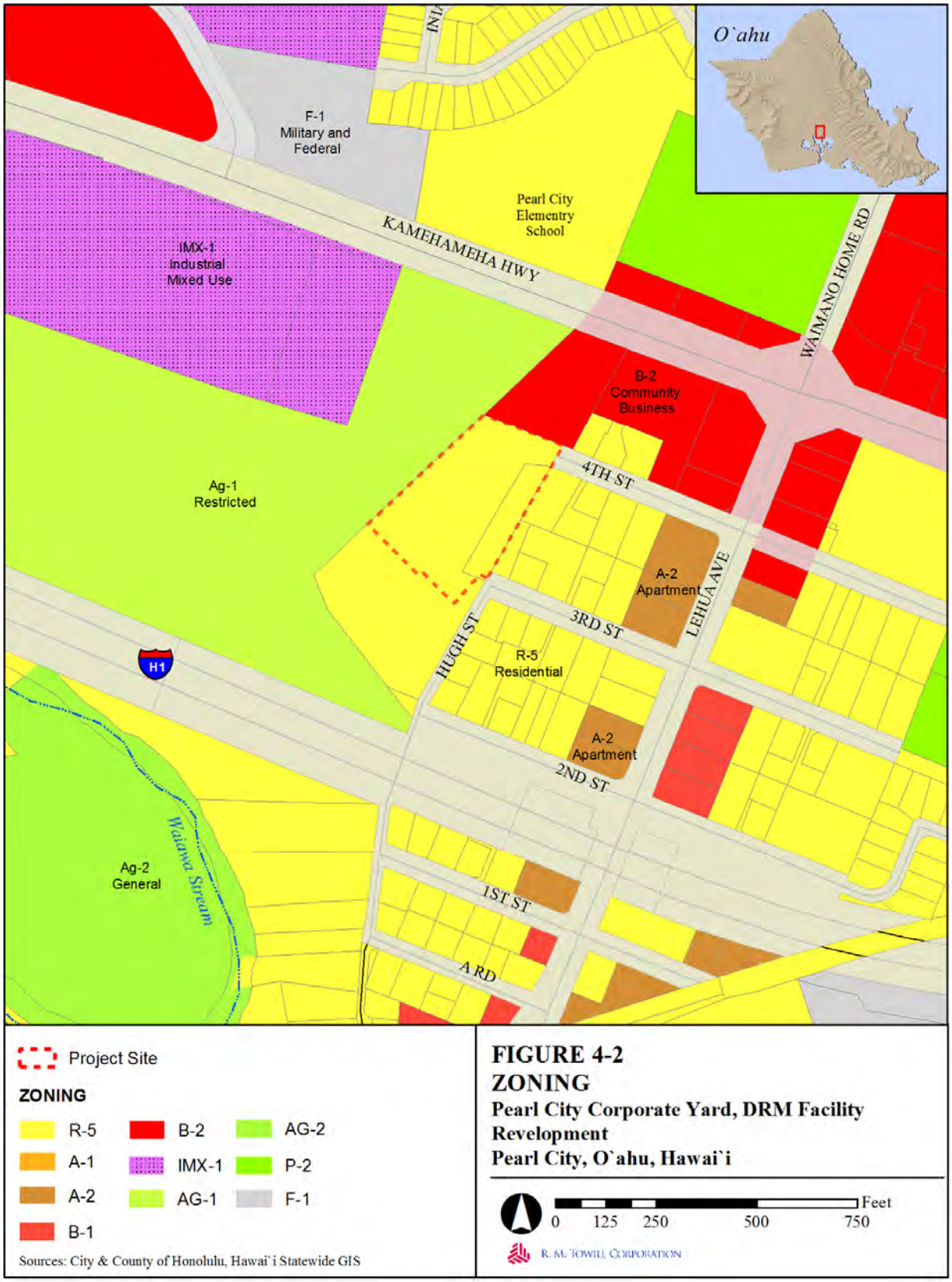
As shown on **Figure 4-2**, the area occupied by project site is zoned R-5 (Residential District). Areas to the west and south of the base yard, including the property occupied by UH Urban Garden Center, are zoned A-1. The parcels to the north are zoned for community businesses and to the zoned residential. The base yard would likely never be used for residential purposes because the property is needed by the City and County for roadway maintenance activities and because it is not appropriate for residential development. An application for a permit waiver would be submitted to the DPP for approval. Described below are chapters of the ROH that are relevant to the proposed action.

Chapter 14 - Wastewater Management Design Standards, relating to sewer services.

Chapter 21 - Land Use Ordinance

§21-2.130 - Waiver of requirements – The project is a “public use and/or structure” as defined in Article 10, development and design standards may be waived.

§21-4.110 – Nonconformities – The project’s base yard use conflicts with the R-5 zoning; compliance with regulations and requirements as defined would be necessary.


O`ahu
F-1
Military and
Federal
Pearl City
Elementry
School
KAMEHAMEHA HWY
WAIMANO HOME RD
IMX-1
Industrial
Mixed Use
B-2
Community
Business
4TH ST
Ag-1
Restricted
A-2
Apartment
LEHUA AVE
3RD ST
HUGH ST
R-5
Residential
H1
A-2
Apartment
2ND ST
Waiawa Stream
Ag-2
General
1ST ST
A RD
Project Site
ZONING
R-5
B-2
AG-2
A-1
IMX-1
P-2
A-2
AG-1
F-1
B-1
Sources: City & County of Honolulu, Hawai`i Statewide GIS
FIGURE 4-2
ZONING
Pearl City Corporate Yard, DRM Facility
Revelopment
Pearl City, O`ahu, Hawai`i
0
125
250
500
750
Feet
R. M. Towill Corporation

§21-6.1 – Off-street parking requirements – The project would comply with off-street parking requirements as defined in table 21-6.1.

§22-3.3 through 3.5 – Approval of subdivision or consolidation required – The project would involve consolidating parcel 9 and 10; compliance with regulations and requirements as defined would be necessary.

4.7 SPECIAL MANAGEMENT AREA (SMA) RULES AND REGULATIONS

The City and County has designated certain shoreline and inland areas of the Island of O‘ahu as being within the SMA. SMA areas are designated sensitive environments that should be protected in accordance with the State’s Coastal Zone Management policies, as set forth in Section 205A, Coastal Zone Management, HRS.

The project site located outside of the SMA, 0.42 miles from the Pearl Harbor shoreline.

SECTION 5
NECESSARY PERMITS AND APPROVALS

5.1 STATE OF HAWAI'I

Department of Health

- NPDES general permit coverage will be obtained from DOH for: 1) construction activities, 2) potential construction dewatering effluent disposal, and 3) hydrotesting water disposal.

Department of Planning and Permitting

- Plan Review
- Conditional Use Permit
- Sediment and Erosion Control Plan
- Grading and Building Permit
- Construction Plan Review

SECTION 6
ORGANIZATIONS AND AGENCIES CONSULTED AND TO BE CONSULTED DURING THE PREPARATION OF THE DEA

6.1 STATE OF HAWAI'I

- Department of Land and Natural Resources (DLNR), Land Division, Historic Preservation
- Department of Business, Economic Development and Tourism
- Department of Health
- Department of Transportation
- Office of Hawaiian Affairs
- Office of Planning
- University of Hawai‘i Facilities

6.2 FEDERAL

- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service

6.3 CITY AND COUNTY OF HONOLULU

- Department of Facility Maintenance
- Department of Environmental Services
- Department of Planning and Permitting
- Department of Transportation Services
- Board of Water Supply

6.4 UTILITY COMPANIES

Hawaiian Electric Company, Inc.
Hawaiian Telcom
Oceanic Cable

6.5 OTHER

State Representative s of District 32, 35 and 36
State Senator Clarence Nishihara, & David Ige
City Councilmember Breene Harimoto
Pearl City Neighborhood Board

SECTION 7
DETERMINATION

In accordance with the content requirements of Chapter 343, HRS, and the significance criteria in Section 11-200-12 of Title 11, Chapter 200, an applicant or agency must determine whether an action may have a significant impact on the environment, including all phases of the project, its expected consequences both primary and secondary, its cumulative impact with other projects, and its short and long term effects. In making the determination, the Rules establish "Significance Criteria" to be applied as a basis for identifying whether significant environmental impacts will occur. According to the Rules, an action shall be determined to have a significant impact on the environment if it meets any one of the following criteria.

7.1 SHORT TERM IMPACTS

The short-term impacts are expected to be limited and will last for only the duration of construction. The construction contractor will access the project site via Kamehameha Highway and noise will be generated from construction and related mobilization of equipment.

Construction equipment is expected to include a compactor, grader, bulldozer, backhoe, dump truck, front loader, asphalt paver, concrete mixer, delivery trucks, and power hand tools. All equipment will be muffled in accordance with standard engine operating practices. The work will be limited to weekday daylight hours and engine exhausts will be governed in accordance with applicable state and county regulations. Upon construction completion, noise levels will return to ambient levels.

Dust and associated nuisances problems are expected to be slight to insignificant due to the limited scope and scale of the project. Fugitive dust will be controlled with the use of dust screens and/or regular wetting of the soil by the contractor.

Construction activities will temporarily disturb soils. To minimize the soil erosion, silt fences, berms and other applicable erosion control devices will be utilized to prevent construction-related soil and silt from leaving the active work area. If required exposed soil will be covered with PVC sheet plastic or similar material to prevent inadvertent contact and mixing with the stormwater.

All necessary environmental permit applications and building permit approvals will be secured prior to initiation of construction activities.

7.2 LONG TERM IMPACTS

The proposed project will benefit the 'Ewa district by keeping road maintenance within the district in satisfactory operating condition for a longer period. The following describe the long term impact.

- The proposed action is expected to be used during normal business hours with very little or no activity occurs at night or on the weekends. Long-term noise effects should be unchanged from existing conditions. Vehicles and equipment from the base yard are typically expected to leave the base yard at the start of the work shift and return at the end

of the workday. There may be repairs and preventive maintenance which occur within a normal workday.

- The proposed action is not expected to adversely affect scenic and visual resources in the project area. The scale and massing of the proposed project is compatible with existing development in the area and would not visually compromise the urban character of the region. The visual environment of the base yard would still be dominated by the viaduct (H-1), such as its columns, and other buildings, such as the Public Storage and Home Depot to the northeast.
- The effect of project-generated vehicular traffic in the project area is expected to be negligible.
- The exterior of these facilities will be lighted at night for security and safety purposes. The brightness of the exterior lighting will not result in light spillage beyond the site. The proposed types of luminaires should comply with LEED standards.

7.3 SIGNIFICANCE CRITERIA

Based on the significance criteria set forth in Title 11, Chapter 200, HAR, Environmental Impact Statement Rules, the proposed project is not anticipated to result in significant environmental impacts. The recommended preliminary determination for the proposed project is a Finding of No Significant Impact (FONSI). The findings and reasons supporting this determination are summarized as follows:

1. Involves an irrevocable commitment to loss or destruction of natural or cultural resources;

The proposed project is not expected to adversely impact natural or cultural resources. There are no threatened or endangered plant species or wildlife that inhabits the project site or immediate area. Given the transportation-related use of the site, historic or archaeological sites are not known to be present; however, in the unlikely event of a discovery of significant historic or archaeological resources, the SHPD of DLNR will be immediately notified for appropriate action and treatment.

2. Curtails the range of beneficial uses of the environment;

The DRM's primary function is to support road maintenance in the ʻEwa district and other areas secondarily on Oʻahu. The proposed use will be contained entirely within the property. The City and County's preference is for implementation of three phases for funding and flexibility for sustaining DRM operations during construction. No adverse effects are anticipated to open space and view planes. No effects on urban activities in the region are expected. The proposed project will not result in the curtailment of the range of beneficial uses of the environment.

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

The proposed project is consistent with the environmental policies, goals and guidelines expressed in Chapter 343, HRS. Potential sources of adverse impacts have been identified and

appropriate measures have been developed to either mitigate or minimize potential impacts to negligible levels.

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

The proposed project is expected to enhance the future long-term stability of the State and County through the maintenance of basic public works infrastructure necessary to the health and welfare of the community and region. The construction of the facilities will be regulated in accordance with State and City and County regulations.

5. Substantially affects public health;

During construction, there will be minor impacts to air quality and noise levels. After completion of the construction work, there will be no long-term negative consequences relating to air quality and noise. The proposed project would not substantially affect public health.

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

Impacts on public facilities are negligible. The general region around the base yard consists of single-family residential and vacant land and open space. The redevelopment of the base yard will not cause significant population changes or effect exiting public facilities. The project will help keep the ‘Ewa district road maintenance in good operating condition.

7. Involves substantial degradation of environmental quality;

The proposed project will be developed in accordance with the environmental polices of Chapter 343, HRS. No degradation of environmental quality is, therefore, anticipated or expected.

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

The proposed project does not commit resources or energy for a larger action. There are no future phases of development. There is no further commitment to a larger action. There are no other effects on ecosystem resources and human communities from a cumulative effects perspective.

9. Substantially affects any rare, threatened, or endangered species or its habitat;

There are no endangered flora or fauna within the project site.

10. Detrimentally affects air or water quality or ambient noise levels;

As required, any potential impacts to air, water quality, or noise levels will be addressed through the implementation of appropriate mitigation measures described in this document.

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

The proposed project is located in an area designated as Zone X, an area outside the 500-year flood. The proposed action is not expected to have significant impacts on flood conditions. The site is not located in or affects a tsunami zone, beach, erosion-prone area, geologically hazardous

land, estuary, freshwater, or coastal waters. The site contains no especially sensitive environmental characteristics which would detract from proposed use for this activity.

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

The views to and from the project area will not be adversely affected. The project would not result in a significant change from the existing condition and would not be noticeable apart from other base yard structures or activities. The project would not substantially affect scenic vistas and view planes.

13. Requires substantial energy consumption.

Construction and daily activities associated with this project will not require substantial amounts of energy. In February 2006, the City and County passed Ordinance #06-06 requiring new city facilities over 5,000 square feet to be LEED Silver compliant beginning in FY2008.

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APPENDIX A
MEMORANDUM OF UNDERSTANDING

ORIGINAL

MEMORANDUM OF UNDERSTANDING

BETWEEN

THE DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION, STATE OF HAWAII

AND

THE DEPARTMENT OF ENVIRONMENTAL SERVICES AND
THE DEPARTMENT OF FACILITY MAINTENANCE
CITY AND COUNTY OF HONOLULU

I. Purpose

The purpose of this Memorandum of Understanding (MOU) is to define the roles and responsibilities of the State Department of Transportation, Highways Division, (DOT), and the City and County of Honolulu (City) Department of Environmental Services, (ENV) and Department of Facility Maintenance (DFM), as part of permit requirements on the control of illicit discharges and nonpoint sources of pollution into the DOT's municipal separate storm sewer system on Oahu, and the City's municipal separate storm sewer system.

II. Background

The goal of the National Pollutant Discharge Elimination System (NPDES) program is to effectively prohibit nonstorm water discharges into storm sewers by the use of measures to reduce the discharge of pollutants to the "maximum extent practicable" ("MEP") including best management practices, control technique and systems, and design and engineering methods deemed appropriate for the control of such pollutants. In Hawaii, the EPA has delegated NPDES permitting authority to the State Department of Health (DOH), which issues and enforces the requirements of NPDES permits.

On Oahu, the regulations require both the DOT and the City to have NPDES permits for their respective municipal storm sewer systems. Because the DOT and City systems are interconnected, DOH regulations require that an interagency agreement between the DOT and the City or a Memorandum of Understanding (MOU), be executed that delineates policies governing interconnection and enforcement that will control the discharge of pollutants from the upper portions of the municipal separate storm sewer systems into the lower portions of both DOT and City systems to waters of the United States.

III. Objectives

The objectives of this MOU are to: a) establish effective intergovernmental coordination between the DOT and the City; b) to clearly delineate the roles and responsibilities of each agency in an effort to minimize, to the maximum extent practicable, the discharge of any

pollutant from one municipal separate storm sewer system to the other municipal separate storm sewer system ; c) minimize duplication of effort; and d) ensure accountability through judicious application of best management practices, design and engineering methods, and periodic water quality monitoring.

IV. Responsibilities

A. The DOT, through the Oahu District Engineer, will

1. Attend regular scheduled meetings with the City to exchange information and improve communication.

2. Coordinate the processing of any DOT NPDES permit for the discharge of any pollutants or nonstorm waters with the Department of Health, State of Hawaii.

3. Implement a storm water monitoring program in conformance with the requirements of the DOT municipal NPDES permit, and provide analytical data of storm water discharges to the ENV whenever such discharges are conveyed into the City's municipal separate storm sewer system.

4. Upon request by the City, provide an inventory, location, and other available data of all municipal separate storm sewer system outfalls that are owned, operated, and maintained by the DOT .

5. Conduct regular scheduled maintenance of the DOT's municipal separate storm sewer system.

6. Conduct regular, scheduled highway sweeping to minimize the discharge of pollutants from the DOT's highway system into the storm sewer system.

7. Encourage ridership program(s) which will reduce vehicular traffic volumes on the DOT's highway system, thereby reducing the emission of air and other pollutants generated by vehicles.

8. Conduct timely maintenance on the DOT's highway system, including slope maintenance.

9. Inspect DOT highway construction projects and require implementation of erosion control measures and best management practices to the maximum extent practicable.

10. Implement a program to detect and eliminate illicit and improper discharges into the DOT's municipal separate storm sewer system on Oahu.

11. Investigate violations of and enforce compliance with NPDES regulations, to prevent illegal private drain connections to the DOT's municipal separate storm sewer system, as well as, illicit discharges and improper drainage into the DOT's municipal separate storm sewer system. The DOT will be responsible for all investigations of illegal discharges that first enter DOT facilities and flow to other systems, including the City's municipal separate storm sewer system.

B. The City and County of Honolulu, Department of Environmental Services (ENV) will

1. Attend regular scheduled meetings with the DOT and DFM to exchange information and improve communication.

2. Coordinate the processing of any City NPDES permits for the discharge of any pollutants or nonstorm water with the Department of Health, State of Hawaii.

3. Implement a storm water monitoring program in conformance with the requirements of the City's municipal NPDES permit, and provide, upon request, analytical data of storm water discharges to the DOT whenever such discharges are conveyed into the DOT's municipal separate storm sewer system.

4. Provide support for the educational program to encourage ridership on mass and/or rapid transit system(s) to reduce the emission of air and other pollutants generated by vehicles, which constitute a major nonpoint source.

5. Seek adequate funding and institute a program to promote public reporting of illicit discharges into the City's municipal separate storm sewer system, and noticeable water quality impacts from storm sewer discharges.

6. Implement a program for the collection of household hazardous wastes in conjunction with the State Department of Health's hazardous wastes disposal program.

7. Implement , through the ENV's Division of Refuse, an educational and public information program to inform the public on the proper management and disposal of used oil and toxic material.

8. Implement , with the assistance of the State Department of Agriculture, an educational program for the general public on appropriate pesticide and fertilizer application and disposal.

9. Implement a program to detect and eliminate illicit and improper discharges into the City's municipal separate storm sewer system.

10. Investigate violations of and enforce compliance with NPDES regulations, to prevent illegal private drain connection to the City's municipal separate storm sewer system, as well as, illicit discharges and improper discharges into the City's municipal separate storm sewer system. The City will be responsible for all investigations of illegal discharges that first enter City facilities and flow to other systems, including the DOT's municipal separate storm sewer system.

11. Conduct follow-up construction inspections and require effective erosion control measures for projects requiring grading or grubbing permits.

C. The City and County of Honolulu, Department of Facility Maintenance (DFM) will

1. Attend regular scheduled meetings with the DOT and ENV to exchange information and improve communication.

2. Upon request by the DOT, provide an inventory, location, and other available data of all municipal separate storm sewer system outfalls that are owned, operated, and maintained by the DFM upon request to the DOT.

3. Conduct regular, scheduled maintenance of the City's municipal separate storm sewer system.

4. Conduct regular, scheduled street sweeping to minimize the discharge of pollutants from City streets.

5. Conduct timely maintenance on City streets.

V. Other Provisions

A. This MOU does not alter the statutory authority and responsibilities or the respective permit requirements under the National Pollutant Discharge Elimination System (NPDES) of the DOT and the ENV. The intent of the MOU is to form a basis by which the aforementioned goals and objectives can be carried out by each agency in a cooperative manner.

B. It is agreed that interconnections between the DOT's municipal separate storm sewer system and the City's municipal separate storm sewer system are not considered private drain connections, and therefore do not require private drain connection licenses.

C. This MOU does not obligate any DOT, ENV or DFM funds. The DOT, ENV and/or DFM may contribute funds or in-kind services to any program which will mutually benefit any or all the parties.

D. The MOU may be amended or terminated at any time by mutual consent of the DOT, ENV or DFM. Additionally, the MOU may be terminated by any agency alone by giving sixty day written notice to the other.

DEPARTMENT OF
ENVIRONMENTAL SERVICES
City and County of Honolulu

12/19/01
Director Date

DEPARTMENT OF
FACILITY MAINTENANCE
City and County of Honolulu

27 DEC 01
Director Date

DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
State of Hawaii

2/1/02
Administration , Highways Division Date